

Changes in Information Dissemination Methods, Future Trends, and Their Impact

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Abstract:

The current issue of AI in media has attracted a large amount of attention. However, there is still a lack of knowledge on the risk associated and ways to overcome this challenge. This paper has analysed and focused on the evolution of different communication methods, impact and future trends with the rise of generative technologies. This paper has concluded each additional feature of information dissemination, future trends and challenge. Over centuries, communication media has evolved through four key stages: paper-based, television, online, and social media. Each form introduced distinct benefits and limitations, shaping how people access and engage with information. Currently, social media dominates, offering interactive features like comments and live streams, significantly increasing user engagement and reach. artificial intelligence (AI) is set to transform media further through personalization and immersive tools like AR and VR. However, this growth brings challenges such as AI-generated misinformation and information cocoons, where users are confined to narrow content ranges. To address these, recommendations include enhancing omni-media features, implementing government regulations on AI, and improving content diversity to ensure a balanced and trustworthy information environment.

Keywords: Information Disemmination; Omni-Media; Information Cocoon

1. Introduction

Media is the mean of communication. It is really important, contributing to providing people with the freedom to receive information and knowledge about the surrounding world. Throughout the centuries, the dissemination channel has experienced a rapid growth. Media has experienced 4 different forms of mean including paper-based communication, Tele-

vision communication, Omni communication and social media communication. The first stage occurred in the 80 decades. During this period, people only had access to information from newspaper television and radios [1]. As technology tools has become more advanced, omni media such as websites was developed between 2000-2010, becoming the trend of receiving information [1]. Later on, social media

communication was adopted until now. It includes all the useful characteristics of previous means of communication but more efficient in this developed world.

In the year of 2024 the number of social media users have increased by more than double the amount compared to 2017 [2]. There is also an Estimation that this population will continuously grow to approximately 6.05 billion users worldwide [2]. These data have effectively demonstrated the usefulness of social media. These different types of communication mean have also differently shaped how people receive, understand, and interact. Therefore, from researching and understanding the evolution of dissemination channel, it will be more beneficial in understanding consumers demand and developing a more satisfying channel in the future.

This essay is separated into 3 main sections. The first section will identify the evolution of communication, including characteristics, key benefits and drawbacks in each stage. The second section will explore the future trend of communication mean and some challenges it may that could occur. Lastly, recommendations will be given that is specific to each challenge identified.

2. The Evolution and Impact of Communication media

2.1 Paper Based Communication

The initial stage of media was the dissemination of news, data and information through paper-based newspapers. In ancient times, this was the primary method to receive and gather information about the world. Media is really important and essential. In 1998, 51% out of 75% of the population has received important information related to health from print media [3]. Although, it is important to acknowledge some drawbacks of this type of communication mean. Paper based Newspapers are mainly filled with black and white words rather than images, requiring effort to read and understand. During that period when newspaper was invented, many people did not take education therefore was not capable of understanding nor reading the content [4]. Furthermore, there were other concerns such as constraints. Certain news topics were only available and sold in certain areas and regions [5]. This meant that people were unable to gain full access to all the news around the world, such as paper news related to the weather was only sold in region A, whereas News about more serious topic such as criminals were mainly sold in region B. It was also identified that the style and the view of reporting the news was relatively similar [5]. With all points mentioned above, it could lead to issues such as readers losing interest and engagement.

2.2 TV Communication

In the following Centuries, technology has enabled media to develop started to develop and increase the efficiency. After the invention of television, News was then accessible through a more advanced platform: TV. This form of media provides the same function but is able to present information in a more engaging way, such as Images and videos [6]. Television was seen as a more open choice, providing more visual information to increase audiences understanding of the topic, whilst providing entertainment and space for imagination [7]. Especially towards people that is unable to understand or read words, images would be more effective and essential to encourage and support these subject matters to comprehend the storyline and the importance of the message the news is trying to spread. However, Television in ancient years was different compared to the ones used now with some noticeable differences. The old television was not fully accessible, there were specific time schedule in a day for channels to be played [8]. Therefore, even if they missed the broadcasting schedule, they had no access to re-play the news, potentially missing out on important information reported that day about the surrounding world.

2.3 Online Communication

Moreover, Television then experienced an evolution and introduced online media, a more common form of new media. Online media has developed a few characteristics that were not found in traditional media (paper-based newspaper). The first characteristic is full time access.

At this stage, Much news were put onto specific websites for people to access at any time [9]. This has provided sufficient beneficial as people were able to rewatch the news whilst having the option to share it with friends or families, potentially increasing communication and relationship from having common topics to explore as a group. Another characteristic that was not available previously is the increased efficiency in receiving the news [10].

As mentioned above, Traditional paper media requires time to print and send to suppliers. Television on the other hand had specific time periods where channel would play the news. Therefore, news viewers are likely to receive the information significantly later after the event actually happened. In comparison, through online media, people have the freedom to access and view the daily news at the same time it has happened. From receiving the news information directly, it could engage people further, increase in attention and encourage the process of deeper thinking about the situation in the upcoming following up news. However, in online communication, news readers are still known as audience and can only receive the assigned message and news placed on websites instead of being involved in it [10].

2.4 Social Media Communication

In the era of omni-media, many tools have become noticeably more advanced. During this period, social media has begun to offer new features such as “like” and “comments” towards information audience enjoy or have feedback on [10]. As well as this, other tools including online voting system and discussion in topics have promoted the interactions between them and the audience [9]. Media has been developing to enhance audience engagement in the process of spreading news to persuade people to read or watch the news fully. Thus, media has tried to spread information through new ways such as creating short videos and opening live stream [11]. This decision was made due to the recent population and trend in Short videos. Therefore, by interpreting this method to report news, not only is it able to engage audience but can also help people to understand the main message in the shortest period of time. Live streaming is also a new tool that have become relatively popular. Live streaming the news means that the information was reported immediately after the incident. Therefore, people are able to watch the most recent news. It also includes functions such as Live chat which is used by audiences to express their opinion and emotion related to the case. Through the comments, media platform will also be able to give instant feedback or answer questions immediately [11].

3. Future Trends and Challenges

3.1 Future Trends of AI

Recently, media outlets such as The Washington Post and The New York Times have interpreted AI technology in projects to increase efficiency [12]. The application of AI from well-known companies demonstrates the essentialness of this. This could suggest that in media, AI is likely to be the future trend. Not only is news media applying it, people may potentially also ask AI for daily news as it generates information at a fast pace. Currently, AI is helping news industries to target audience’s interests. This process is completed through searching into readers search history and spreading audiences into different segments based on their most searched topic [5]. AI’s other advanced tool such as AR and VR was also implemented in news. From AR audiences are able to experience the exact situation to enhance the understanding of the case [9]. Compared to reading, hearing or watching the news, AR can let the audience watch through the first persons perspective, increasing the accuracy of the storyline.

3.2 Challenges

3.2.1 AI generating fake information

The first potential challenge is producing fake information and misleading people. One type of AI is known as generative Ai. Generative AI can be really complex, forming information from simple instructions. However, it is common that fake information has been generated, including News [13]. AI relies on information previously available on the internet to produce the answer to peoples question. Although, many information on the internet may be out of date leading to misinformation [14]. In other cases if there was no information online on the topic, AI is likely to generate false information. This issue have continued and creating a “deepfake generation” where most AI conducted data, image and videos are not real but unable to be distinguished [15]. Therefore, Misinformation could lead to some serious consequences including losing social trust, threats to privacy and policy decision making [16].

3.2.2 Information cocoon

The second potential challenge is information cocoon. Information cocoon means that a person is only focusing and receiving the same type of information [17]. This suggests that people are not receiving other information, therefore not knowing what is happening in the surrounding world other than the interested topic the party is willing to research more about. As mentioned earlier, a large variety of platform now interprets AI to gather and personalize data, target at what each consumers enjoy suggesting related news and information to them. However, along with the person’s unwillingness of exploring more information and the function of AI, it can create negative impacts. Without the help of sending various kinds of information to users, it can lead to information bias and lack of knowledge which can be important [18].

4. Insights and Suggestions

4.1 Enhancing Features of Omni-Media

Omni media is the most recent type of media. However, certain features could be imposed and developed to enhance users satisfaction. AR is a tool used by platforms to increase customer’s experience. This tool can be further developed with new features such as the choice of choosing the perspective and angle to view the scenario in a News, also increasing users right for making its own choice. Furthermore, many news readers reflected opinion that the method of reporting and content of news is highly similar. Therefore, more research could be conducted to identify future trends such as short videos and apply it into Omni media. Currently in omni media, users can receive information as well as taking the role of uploading information on social media as well. However, despite this, there could be more activities developed to promote people in taking this role and posting news online to in-

crease communication.

4.2 Suggestions to Solving Deepfake

There has been concerns regarding generative ai conducting false information. To reduce this situation, government could be involved to regulate online AI systems, ensuring that information that is spread is accurate and true. On the other hand, government could also impose new policies and change the AI system such as chatGPT and Deepseek. The governments could restrict AI tools in answering questions that is important such as information tax rate, new country policies and financial information. This is because information provided by AI may be inaccurate due to out-of-date information and AI potentially leaking personal details creating privacy issues. However, despite this, people's behavior can be difficult to regulate. For conveniency, users may still decide to ask AI to receive quick answers. Therefore, government could also subsidies local schools to provide compulsory courses to all citizens on how to distinguish real and fake information generated by AI and educated on deeper literacy.

4.3 Reducing Information Cocoon

Based on previous information suggesting how news industries are using AI to send users information they are interested in, there could be some improvements and changes of the use of AI tool to potentially reduce the issue of Information Cocoon. The primary aim of news is it spreads information across the world and acknowledges people. Although platforms are trying to engage audiences in the suggested information so they are more likely to fully view the articles or video, it will be more likely to reach the primary target and aim if AI was used to suggest information users have minimal understanding. Through the use of AI for collecting data of users search history, AI could review News topics that were not viewed or searched by users and suggest that information to them. As a result, despite the chance the information will not be seen, AI is seen to be more effective in reducing current social issues: information cocoon. On the other hand, promoting interactions can also be effective. Not only can platforms send information, friends and families are also able to share the link of the subject to each other. This could also reduce information gap.

5. Conclusion

This paper has examined each stage of the dissemination method from print media developing towards television broadcasting, later introducing more technological mean from social media to omni-media. Key chartecteristic at each stage have been identified with analysis on the impacts to the audience and society. This paper has crit-

ically analyzed the communication method for receiving information through highlighting benefits and drawback at each stage and how the evolution has advanced and improved in the following stage. Moreover, Future trends have been investigated deeply including challenges that are associated with it. With the development of AI tools such as (AIGC), Communication has become more efficient. However, an increased number of risks were also present. Problems such as information cocoon, deepfake and Misinformation can all create negative external impacts to all parties.

The conclusions drawn has suggested many ways to support and overcome the main issues. These may include government intervention such as subsidizing education, providing compulsory lessons for children on differentiating AI generated and real information or controlling the fake generated information from being leaked through Government regulation to overcome AI related concerns.

In the future, information dissemination is likely to become more personalized and engaging. Platforms and social media are likely to develop more interactional tools using AI to enhance customer's experience. In addition, AI will become more intelligence, increasing efficiency of spreading the news and messages. Although there still may be some concerns including invasion of privacy, the benefits are most likely to outweigh the drawbacks in the future.

To extend to this paper, further research could focus on how to advance AR tools in the process of sending messages and how personalization can overcome information cocoon, receiving more information.

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