Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 1721 – 1734
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.6558

Generative AI, its Use and People's Interest: Comparison of First Three Months and Implications to its Future in East Asia

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Abstract

Role and importance of Generative Artificial Intelligence (GAI) are now well recognized. Starting from 2014, the GAI has evolved strongly over past ten years, and a good data set helps it to be more robust, as well as popularize it with wider users. After its launch in November 2022, ChatGPT has drawn global attention. In this paper, the analysis covers the submissions related to ChatGPT during the three-month period from 1st of December 2022 to 28th of February 2023 in three East Asian Countries: China, Japan and Korea. There is differential momentum of number of users in the studied countries, which are attributed to role of media and governance system in popularizing ChatGPT. Analysis shows certain level of commonalities in the interest of the users. Technology is possibly the common interest area in all three countries. Chinese users are more interested in innovation, while Korean and Japanese users were more interested in business. Japanese users also showed interest in entertainment. Keeping the current growth and future potentials of GAI, the paper also discusses the importance of ethical dimension of use of GAI, especially on its role in mis- and dis-information. People's awareness and governance mechanism are also very critical for appropriate use of GAI in future.

Keywords: *Generative AI, Chatgpt, China-Japan-Korea, Mis- And Dis-Information, Innovation.*

Introduction

Generative Artificial Intelligence (GAI) describes the algorithm where new contents including, text, image, audio, video can be created. Artificial Intelligence (AI), as the name says, is the practice of getting machines to mimic human intelligence to perform a task through data and algorithm. Machine learning is considered as one type of AI, where practitioners develop the system to learn from data patterns without human direction. This is especially helpful for the large volume of data management. The AI evolution has seen special momentum in last 10-12 years, when personalized assistance like Siri, Google Now, Cortana use speech recognition to answer questions and perform simple tasks. In 2014, Ian Goodfellow comes up with Generative Adversarial Network (GAN). In 2016, AlphaGo beats professional Go player Lee Sedol (Rios-Campos et al. 2023). The rapid advances of LLM (Large Language Models; i.e., the models which uses billions or even trillions of parameters) have open up a new era of Generative AI using multiple media like text, image, video etc. In 2017-2018, Google researchers came out with paper on AI, and published BERT, which was trained on more than 3.3 billion words can automatically learn the relationship between words in sentences, paragraphs etc. in 2018, OpenAI releases GPT (Generative Pre-trained Transformer), which paves the way of chatbots and language translation (Lawton 2023). In 2021, OpenAI introduced Dall-E which can generate image from text prompts. In 2022, OpenAI released ChatGPT in November which provides a chat-based interface to its GPT 3.5 LLM. It attracts over 100 million users over 2 months representing fastest ever consumer adoption of a service.

While there are different benefits of the GAI in different fields like language translation, education, certain aspects of healthcare, financial issues, content creation etc., there are already negative impacts like deepfake videos which, in many cases created social and political turmoil. The recently published Global Risk Report of Word Economic Forum (WEF 2024) has identified AI generated mis-information and dis-information as one of the top risk in next 2 years. This will continue to be top 5 risks in next 10 years. It is expected that the foreign and domestic actors alike will leverage Misinformation and disinformation to further widen societal and political divides. Several part of the world with undergoing or upcoming elections (with an estimated population of 3 billion) in next two years, this is considered as a critical risk to polarize and

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infiltrate public discourse. This is the first time that mis- and dis-information becomes top risk in the global risk landscape. This is also related to social polarization and other technological issues like adverse outcomes of frontier technologies, power concentration, cyber insecurity, adverse outcome of AI technologies etc. During early 2020, when the COVID-19 was spreading globally, the term "*infodemic"* became quite prominent. Hua and Shaw (2020) discussed the issue of *infodemic* through data lens analyzing the social media posts in East Asia. It seems that the similar issues of mis and disinformation is becoming a critical risk through generative AI.

In this perspective, and in the popularization of ChatGPT from 2022 November, the current paper analyzes the usage and interest in East Asia (China, Japan, Korea) in first three months. With the analysis, the study clarifies the current status of social interest in generative AI.

Literature Review

It is no doubt that Generative AI has made the largest impact in the society in recent years with ChatGPT drawing largest attention, followed by release of GPT-4 and other similar AI competitors like OpenAI, Meta AI, DeepMind, Google BERT, Runway, NVIDIA etc. Rios-Campos et al. (2023) have made systematic literature analysis of 10 years of Generative AI between 2014 to 2023, including scientific articles, review articles and website information. At its simplest form, AI (article intelligence) is a field, which combines computer science and robust dataset to enable problem solving. It is not only text-based AI anymore, but attempts have been made to make the image from text (Gozalo-Brizuela and Garrido-Merchan 2023), and also to 3D images. Similarly, there has been attempt to interpret image to text as well. Through its evolution, experiments are ongoing for different models like text to video, text to audio, text to science etc.

Through its evolution, the ethical dimension of the AI has been discussed strongly with UNESCO coming up with four core values of AI as follow (UNESCO 2023):

- "*Respect, protect and promote human rights and fundamental freedom and human dignity*
- *Live in peaceful, just and interconnected societies*
- *Ensure diversity and inclusiveness and*
- *Ensure flourishing of environment and ecosystems*"

Generation AI (GAI) can quickly create contents based on the inputs from the users, which is different \from the AI machine learning models. Therefore, it is important to ensure transparency and accountability in generated contents and avoid potential use of misuse such as deepfake videos or spreading misinformation. GAI has been used significantly for drug discovery, especially to focus on generative modelling (Walters 2020). It has also high impacts on ecology and human development (Schuengel and Heerden 2023). It can also enhance creative learning and can create an environment for computational thinking. There has been mixed feeling among educators on the use of GAI in the education and learning process. In one way, it can foster personalized tutoring, automated essay grading, language translation, interactive learning and adaptive learning (Baidoo-Anu and Ansah 2023). On the other hand, it can reduce human interaction in education, may cause limited understanding, may have bias in training data, reduces the creative potential, enhances dependence on data, lack of contextual understanding and limited ability to personalize instruction, and may affect privacy issues. In this growth trajectory of the GAI, it is important to use it with some level of care, especially in the field of education and learning. Michel-Villarreal et al. (2023) also expressed similar concern in use of GAI in higher education, and highlighted some of the key factors which prohibits the universities to use GAI for higher education, like lack of awareness, technological barriers, resistance of change, ethical and privacy concern, academic rigor and quality, resource constraints, legal and regulatory consideration, and lack of interdisciplinary collaboration. There

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needs to be proper policy development, education and training, research and development, ethical review process and continuous monitoring and evaluation process.

Any technology which is used for social goods can remain for long (Saetra 2023). In an interesting analysis, Saetra (2023) have focused on three different levels of generative AI in the society: macro level, which may influence politics and democracy, labor markets, status quo and societal changes and environmental cost. At meso level, it can focus on changed power relation, can influence extraction and exploitation and impact bias and discrimination. At micro level, it can possibility focus on cognitive atrophy, can influence persuasion and manipulation and affect human relationship.

Through a detailed review of the development of GAI models Cao et al. (2018) have come up with six specific issues which need to be addressed in future:

- High stakes application: the areas like healthcare, financial issues, automated vehicles, science discovery are some of the immediate high-stake application, which needs to be kept in mind.
- Specialization and generalization: A better understanding of diverse dataset and cross domain representation is required for specialized application of GAI.
- Continual learning and retraining: A flow of continuous and dynamic learning and retraining is essential.
- Reasoning: Robust reasoning is the key component of GAI.
- Scaling-up: From a specific model-based output to scaled up product needs a critical pathway.
- Social issues: Different ethical and social components need to be addressed properly.

In course of future development of the GAI, it is important to have a more responsible framework. Beswick and Gandhi (2023) proposed RAFT framework (reliable, accountable, fair and transparent) for responsible AI, which can be applied for both traditional and generative AI. While there has been proposal for values of responsible AI by various organizations and governments, there is hardly any consensus on this issue. The RAFT framework argues for reliable and secure issue through enhancing reliability through entire lifecycle. The accountable and governed issues are related to ownership and oversight and control mechanisms. Fair and human centric is to minimize bias against individual and support human determination and choice. The final one transparent and explainable is focused disclosure to end users and explaining the methods, parameters and data used in AI system. There are many risks which can be considered for use of GAI in enterprises, like: toxicity (in terms of output), polarity (unfair biasness), discrimination, human computer interactions, disinformation data privacy, model security and copyright infringement. To reduce these risks, there needs to be: 1) a proper feedback mechanism, 2) transparency on the use of AI for outputs, 3) explanation for given responses, and 4) education on limitation of the models.

In summary, there are different fields where GAI can have future emphasis and contribution like business, education, healthcare, content creation, and several other technological domains. However, there needs to be ethical and social considerations with needs to be emphasized in due course. While it is important to make technology deep dive to enhance the quality of the GAI, it is equally important to make transparent and accountable policy framework for the implementation of GAI in different fields. Enhanced awareness and education on the appropriate use of GAI is also critical.

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Methods

Identifying Subjects

The study was conducted through analyzing: 1) Social media approach, and 2) Mass media approach.

Targets in Social Media Approach

For the social media approach, we first examined the media to be analyzed. The criteria for source selection in social media analysis include the following points:

- Controversiality, i.e., whether enough information on the subject is included,
- Concentration, i.e., whether the density of relevant information is high,
- Timeliness, i.e., whether the information is current, and
- Authority, i.e., whether the information is trustworthy.

The following criteria are used as references for the selection of sources for social media analysis. The target was short-text posting social media, which is one of the places where a lot of communication takes place. The short-text social media fulfills the criterion of controversiality in that many news articles and comments related to ChatGPT are posted, and it is also considered suitable for comparison in that similar forms of media exist in various countries. In addition, the short-text social media are highly real-time, and thus meet the criteria from the viewpoint of concentration.

The number of users and the authority of each service were taken into consideration. In this study, we analyzed posts on Twitter for Japanese and Korean and Weibo for Chinese as short text posting services that have a large number of user and are used in many countries. The Twitter API for academic research was used to retrieve Twitter posts, and scraping was used to retrieve Weibo posts. The analysis covers the submissions related to ChatGPT during the three-month period from 1st of December 2022 to 28th of February 2023. Table 1 shows the search keywords and the number of retrieved postings.

Table 1. Acquisition of Analysis Data for Analysis Target

	Target Media	Keyword	Number of submissions
Chinese	Weibo	ChatGPT	44,374
Japanese	Twitter	ChatGPT lang:ja	352,889
Korean	Twitter	ChatGPT lang: 챗 GPT ko GPT	28,825

Targets in Mass Media Approach

The approach from the mass media also started with a consideration of the media to be analyzed, since it is necessary to grasp the social interest and topicality of ChatGPT in Japan, China, and Korea, respectively. In selecting the mass media, we picked up articles from newspapers related to information communication and economics in each country that frequently deal with the AI industry. In Japan, we selected "Nihon Keizai Shimbun" and "Nikkei Bulletin News"; in China, we selected "People's Post and Telecommunications News" (a state-run newspaper of information and telecommunications), "Telecommunications Industry News" (a general newspaper of information and telecommunications), and "21st Century Economic Report" (a general economic newspaper) to avoid bias by including both newspapers with and without political backgrounds, because it was necessary to avoid political bias. As the interest in newspapers did not appear much in Korea, we selected "ChatGPT General Column" of "ZDNET Korea ", an Internet newspaper specialized in IT without political bias regarding ICT and economy, and collected ChatGPT for report contents for 3 months,

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as stated above.

Techniques

Methods in Approaching from Social Media

The analysis method consists of two stages: analysis of the number of postings and analysis of the content of postings. In the analysis of the number of submissions, the number of submissions is visualized as a time series, and the characteristics of each language are clarified. In the analysis of the contents of the postings, we compare frequently occurring words among languages, set up 13 classification rules from social and technological viewpoints, and consider commonalities and differences among languages in the postings related to ChatGPT through coding. For content analysis, we used KH Coder (Higuchi 2017), a software for quantitative text analysis. Within the software, each language was analyzed using the morphological analyzerMeCab for Japanese, the Stanford POS Tagger for Chinese, and Handic for Korean, a dictionary for modern Korean analysis available at Handic MeCab.

Methods in Mass Media Approach

In the analysis of mass media, we collected, categorized, organized, and compared information from the three countries, CJK. We collected ChatGPT-related reports from newspaper databases and Internet newspapers specializing in IT from a more neutral perspective, and compared the timelines, topicality, linkage with social media posts, support measures in the industrial sectors mentioned, and commonalities and differences in the industrial and social interests covered in ChatGPT reports in CJK. and the similarities and differences in the industrial and social interests covered.

Results and Analysis

Analysis from Social Media

Looking at the number of posts on China Japan Korea (CJK) social media (Figure 1), it can be seen that Japan has been the country with the highest number of posts from start to finish. It is worth noting that even though the number of submissions differs among Japan, China, and Korea, they are concentrated around the same time of the year as in the three countries. Looking at the daily distribution of the number of posts, the most significant characteristic of Japan is the high level of buzz immediately after the release of ChatGPT in November 2022. Although the number of postings calmed down after that, it increased again from the beginning of 2023, reaching a high (13,537 postings) on February 20, 2023. On the other hand, both China and Korea have seen an increase in the number of submissions since February 2023. China reached a major peak in early February 2023. Since IP addresses and cell phone numbers within China (including Hong Kong and Macau) were not allowed to register with ChatGPT, Chinese people had to use VPNs (Virtual Private Networks) and other means to use the service. As a result, the service was mainly used by some of the more literate classes. On February 7, 2023, Baidu, a major Chinese search engine, announced that it would release its AI chatbot service " ERNIE Bot ". The announcement by the digital humans caused a huge stir in China, resulting in a spike in postings on February 7, 2023.

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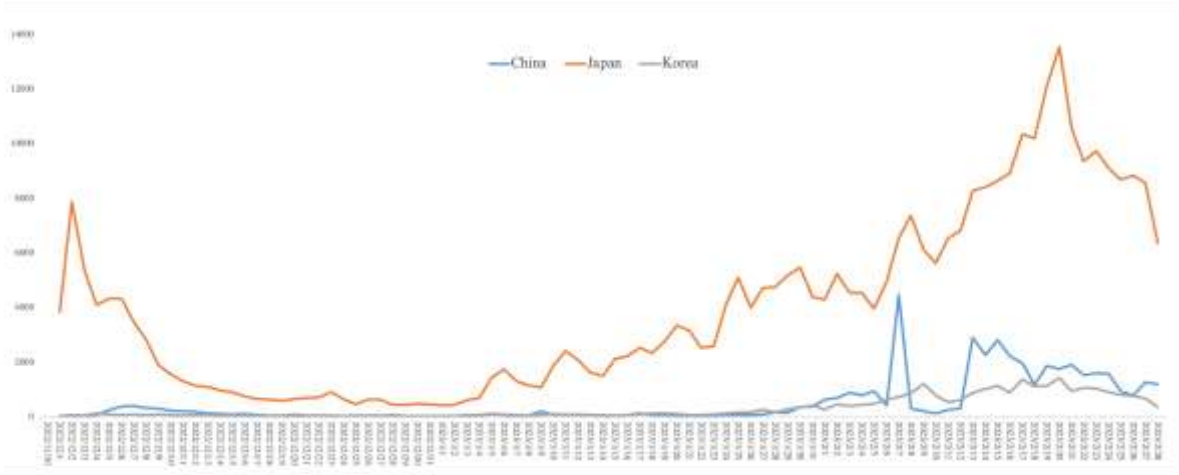

Figure 1. Trends In Chatgpt-Related Posts in CJK Social Media

Frequently Used Words

The distribution of the number of submissions was found to be concentrated in early December, late January, and mid-February. Hua and Siratstuchi (2023) made an interesting analysis of use of top five key words in CJK in ChatGPT by examining frequently appearing words in early December, late January, and mid-February, when the number of postings was concentrated in Japan, China, and Korea.

- Early December:

- China: AI ability, enquiring, AI potentials, authenticity, AI capacity
- Japan: AI, answering, enquiring, perspectives, questions
- Korea: Usage, writing, ability, similarity, AI

- Late January

- China: AI, ability, robot, speaking, company
- Japan: AI, usage, enquiring, thinking, writing
- Korea: AI, usage, writing, programming, ability

- Mid February

- China: AI capacity, people, AI potentials, spaking, utility
- Japan: AI, enquiring, use, thinking, speaking
- Korea: AI, investment, NFT, ability, utility

The key point here is the use of the words “investment”, “NFT” in Korea, which is not found in the China and Japan. This trend became even more pronounced in Korea in mid-February, with the "possibility" of "investment" in "artificial intelligence"-related industries and terms with a sense of new areas such as the digital economy, such as "NFT," "language," "fields," "language technology revolution," "blockchain," and "virtual currency" ranking high in relation to ChatGPT.

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Comparison of CJK Topics Through Coding

In the previous section, we limited our discussion to the three periods when social media postings are concentrated and examined the content of discussions on ChatGPT by CJK. Then, a comparative analysis by coding is conducted to understand the overall change in topics throughout the three-month period from December to the end of February. For the details of coding, please refer to Hua and Siratstuchi (2023). In total, thirteen codes are identified as: educational effectiveness, business support, sense of fun, Google, Microsoft, Japan Tech, China Tech, Korea Tech, Japan Big Tech, China Big Tech, Korea Big Tech, stocks and investments, investments and Digital Economy.

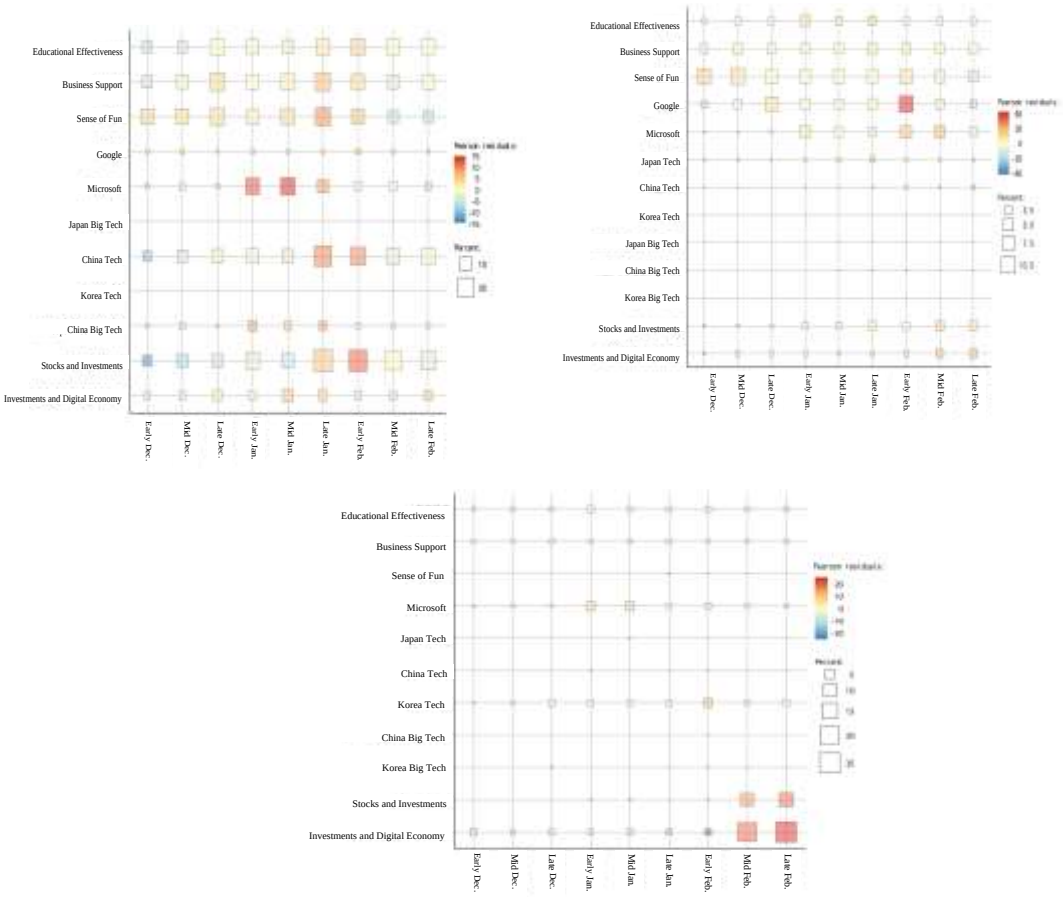

Figure 2. Differences in Codes in China (Top Left), Japan (Top Right) And Korea (Botton).

Figure 2 shows the difference of the codes in CJK. From the viewpoint of social characteristics of ChatGPT, there are many similarities between Japan and China in terms of educational effectiveness, business support, and sense of play among the three countries. Although "play" was the most frequently used word in Japan, we found that a certain number of Chinese respondents also contributed to the sense of play in the past three months. Although educational effectiveness and business support in Korea have also maintained a certain number of postings since the early days of the spread of ChatGPT, they began to cool off around mid-February, and the number of postings in China has been increasing since the mid-February period. It also confirmed the point that the sense of play was only discussed by a very small number of people. Regarding Google and Microsoft, Japan has been sensitive to the emergence of Google's Bard and Microsoft's Bing, while China has been paying attention even earlier, starting with Microsoft's additional investment in OpenAI in early January. While interest in Google is low due to its unavailability in China, Microsoft's announcement of Bing, a search engine with integrated chat AI technology, and an upgrade of its Edge web browser, followed by reports that it will add AI functionality to its Office app, generated a large surge of related posts in early to late January 2023. The number

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of posts related to this topic increased significantly from early to late January. It is also interesting to note that while there is a small amount of attention to Microsoft in Korea as well, there are zero posts related to Google.

Turning to the CJK tech codes, we first find a commonality in that all countries basically show little interest in tech other than their own. While Japan has a small number of CJK Tech and BigTech contributions, China's CJK Tech and BigTech contributions and Korea's CJK Tech and BigTech contributions are all zero. For new areas such as money, stocks and investments, and the digital economy, while interest in all three countries tends to gradually increase, the timing of this attention has not yet reached its peak. The difference is observed in the following two regions: Japan and Korea start in mid-February, while China starts in late January. Japan and Korea are seen from mid-February onward, while China is seen from late January onward. Cross-tabulation results (Figures 2) and the characteristics of early December, late January, and mid-February, when contributions are concentrated in each country, show that the topics that are most frequently posted in Japan are the three social characteristics: educational effects, business support, and new areas such as money, stocks, investment, and digital economy in the sense of fun and games. In China, the topics are social characteristics in general and China Tech in particular. the topics are social characteristics in general, Chinese tech, money, stocks, and investments, and new areas, while in Korea, the topics are social characteristics other than the sense of fun, Korean tech, money, stocks, and investments, and new areas.

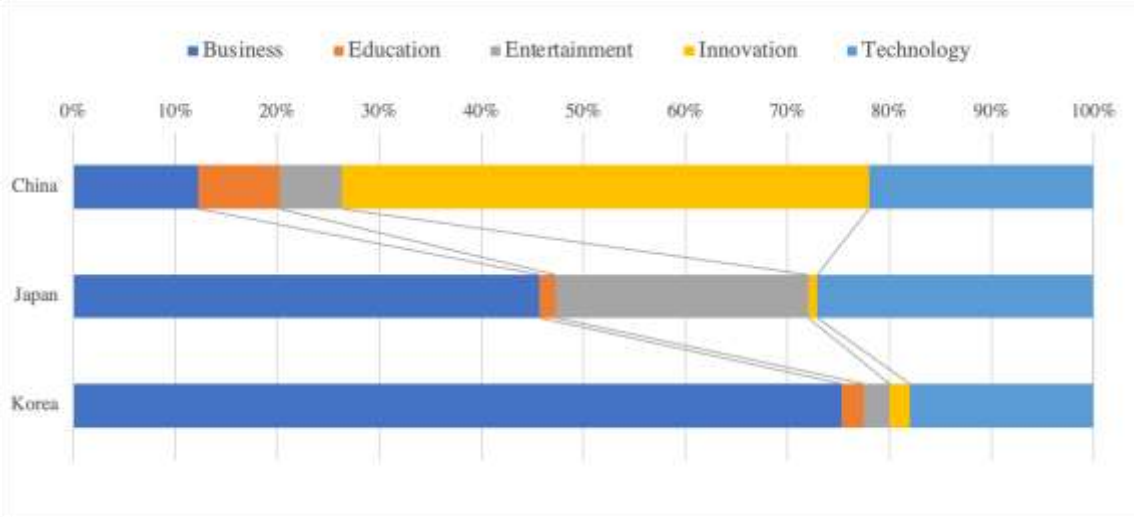

Figure 3. Percentage of Posts of Chatgpt in CJK Social Media

Figure 3 shows the percentage of codes in CJK. The commonality between CJK is interest related to technology for 20-30% of the total, indicating that the degree of technological interest in ChatGPT is similar. On the other hand, there are differences in the level of interest in other codes. In China, interest in innovation for about half of the total, suggesting that the Chinese view of generative AI as a national innovation project is attracting social interest. In Japan, topics related to play for about 20% of the total, and interest is focused on having fun with ChatGPT, a new technology. In Korea, business interest is overwhelmingly high. Thus, the interest in ChatGPT as a generative AI, while sharing a commonality of technological interest, differs according to the situation in each country. Figure 4 presents the tropicality of ChatGPT in CJK social media with timeline. A distinct variation is observed in early, mid and late February.

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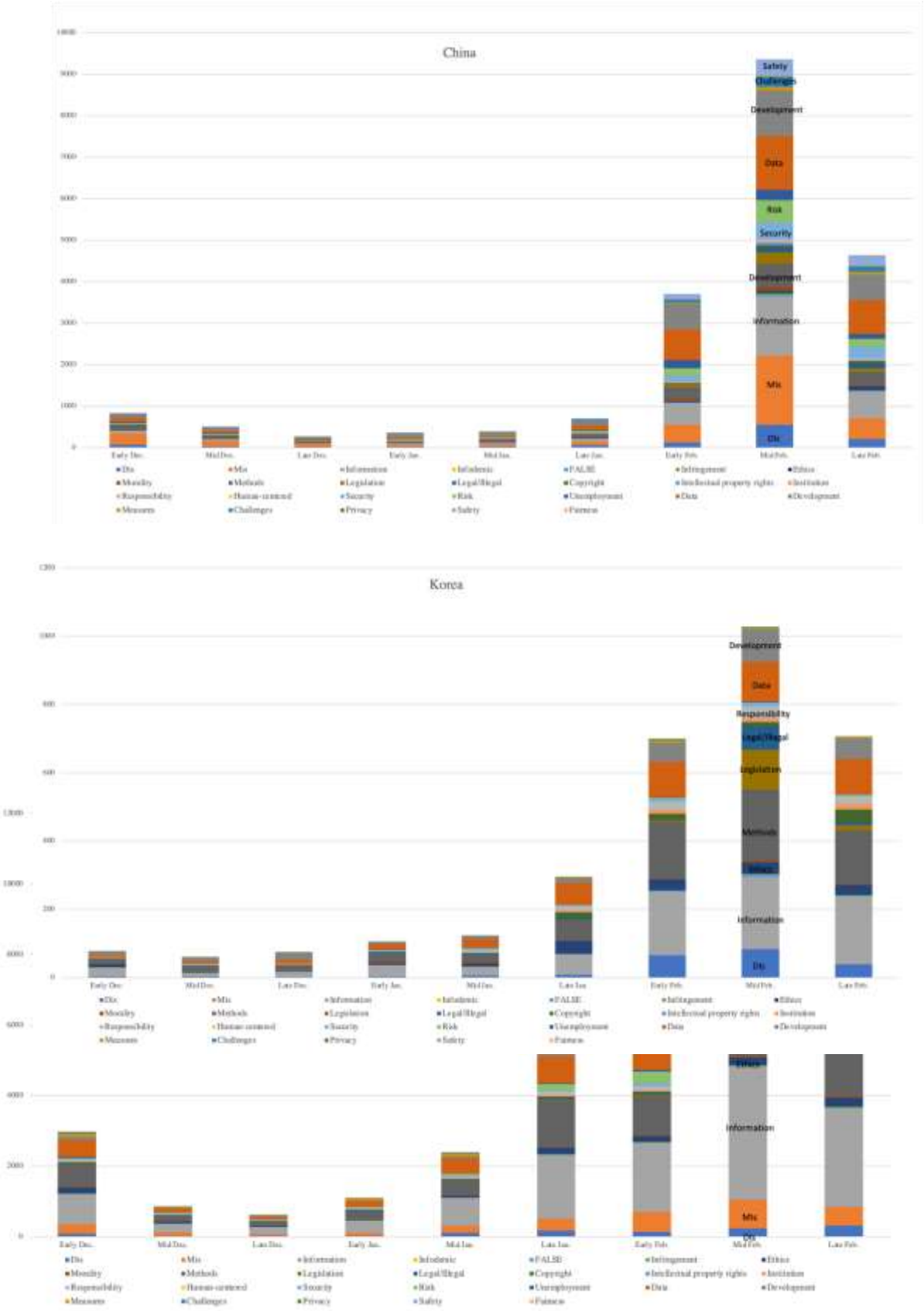

Figure 4. Topicality of Chatgpt in Cjk Social Media

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Chatgpt's Buzz from the Mass Media

Chatgpt's Press Timeline

The ChatGPT service started on November 30, 2022, but looking at the order of coverage in the mass media in China, Japan, and Korea (Figure 5), Korea is the earliest with December 7, 2022 (ZDNET Korea), China is the earliest with December 8, 2022 (21st Century Economic Press Bulletin News) and Japan is the earliest with December 9, 2022 (ZDNET Korea). Japan was listed as December 13 (Nikkei flash news). Thereafter, the AI discussion and related stories from the January 17, 2023 Davos meeting in Switzerland. Both South Korea and China have been making a big deal about the issue, but Japan has been the first country to take up the issue in January. The ChatGPT's discussion of school education on the 28th had only 10 words. Regarding Microsoft's official announcement of Bing on February 6, Japan reported it on the same day, while Korea reported it on January 5, and China reported it on February 7. The report was picked up on January 6, a month earlier than in Japan (Figure 5). The timeline of ChatGPT coverage suggests that Korea and China are constantly watching overseas trends and reacting in more timely manner.

Linkage Between Mass Media Topic and Social Media Posts

When the number of reports by the mass media is divided into the upper middle and lower half of each month (Table 2), there are large differences among countries: mid-January in Japan, early February in China, and early February in Korea. The number of articles from December 1, 2022 to February 28, 2023 shows that, except for the articles about ChatGPT's functions, the top topics in Japan were Google, Microsoft, and investment in big tech, in China what ChatGPT can do, possible areas of application, new issues in science and technology, and investment in the ChatGPT industry, and in Korea, the top topics were about the use of ChatGPT for companies and general users. In China, the top topics are what ChatGPT can do, possible application areas, new problems in science and technology, and investment in the ChatGPT industry, while in Korea, the top topics are the use of ChatGPT for companies and general users.

Table 2. Number of Articles Reported in Country in the Specific Time Period

Time	Early Dec.	Mid Dec.	Late Dec.	Early Jan.	Mid Jan.	Late Jan.	Early Feb.	Mid Feb.	Late Feb.	Total
China	1	0	1	0	0	0	32	57	23	114
Japan	0	1	1	1	6	16	21	32	46	124
Korea	1	1	2	11	11	18	27	23	21	115

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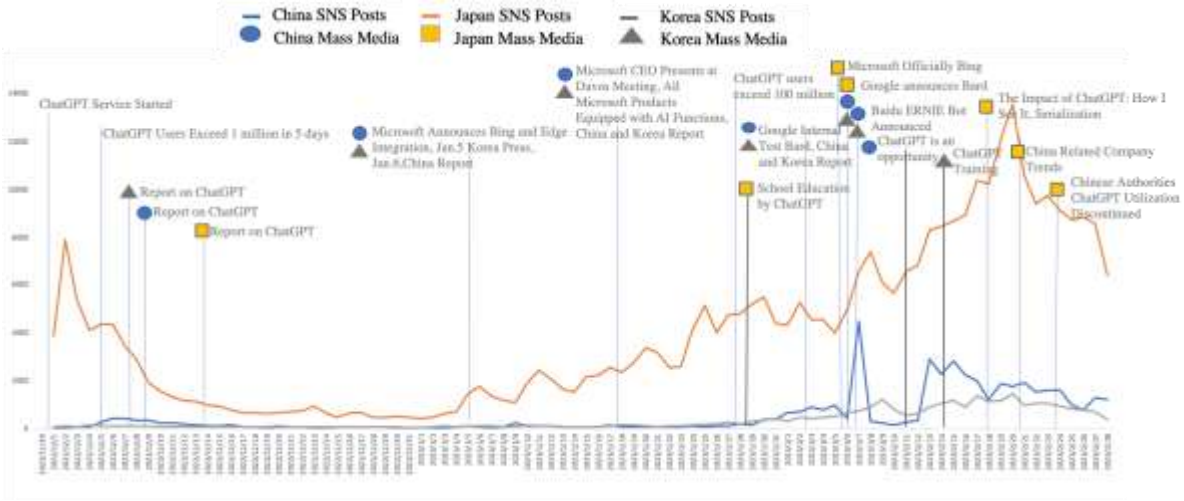

Figure 5. Timeline and Topicality of Chatgpt in CJK Social Media and Mass Media

Comparing the timeline of mass media coverage with the number of social media posts (Figure 5), it is clear that social media are more sensitive to ChatGPT than mass media, especially in Japan, and the service has already generated a great deal of excitement on December 2, 2022, just three days after its launch in the US. The Nikkei Shimbun's "The Impact of ChatGPT" shows that the number of postings piled up again immediately after its launch, and on February 6 and 7, 2023, similar services were announced by Microsoft, Google, and Baidu one after the other, and a sharp increase in the number of postings can be seen in common among the CJK countries.

Industrial Interest in Mass Media

The Japanese mass media has been rather passive to ChatGPT from beginning to end: after two articles in December, they have reported on Microsoft's additional investment in OpenAI, ChatGPT's "threat" to Google, Google's announcement of a "competing" service, "fake articles," "comparison with Bing," and "the use of ChatGPT in the Internet. Comparison with Bing. From February 16 onward, a series of objective reports by AI experts, businesspeople, IT critics, lawyers, and others in the series "The Impact of ChatGPT: How I See It" continued (Figure 5). Both the Chinese government and industry have shown a positive attitude toward ChatGPT. In the "Beijing Artificial Intelligence Industry Development White Paper for 2022," the top companies (Beijing AI, 2022) have expressed support for the development of large-scale language models with ChatGPT as the goal. The director of China's Ministry of Science and Technology has also pursued the technological advantages of ChatGPT at newspaper press conferences and at the 14th National People's Congress, the equivalent of the National Assembly, and has clearly expressed support for ChatGPT-like research by Chinese companies. Industry expects this to be a "game-changing" time for the search giant to reinvent itself, as OpenAI is "having difficulty getting certain countries to operate in a way that is consistent with our mission". However, there is a growing debate that this is a "business opportunity" for Chinese companies such as Baidu. While Korea is also stimulated by the strong movement to promote the power of next-generation AI technology domestically, there are many reports that the country is focusing on self-development of services competing with ChatGPT. Search engine Naver plans to launch SearchGPT equipped with generative AI in the first half of 2023, and Kakao plans to launch a service for industry using the "KoGPT" AI model with Korean characteristics. Investment topics surrounding these industrial trends are also heating up. In South Korea, the market is expected to be traded through stock prices, coins, and virtual currency from around 2021. The topic of the government taking over the debt after the coin's fall was a big one. In the case of ChatGPT, there are many editorial-like articles on where to invest, as it is a supergiant AI.

Social Interest in Mass Media

Other than the industrial discussion of ChatGPT, the first topics to come up, as in China, Japan, and Korea,

Journal of Ecohumanism
2025
Volume: 4, No: 2, pp. 1721 – 1734
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v4i2.6558

were all related to education. Japan was the first to raise the issue of ChatGPT's impact on school education on January 28, 2023. China, however, has high expectations for the potential of ChatGPT and its use in education, and the negative and positive discussions surrounding the banning of the use of ChatGPT by U.S. universities and the University of Hong Kong have been frequently discussed. The February 12, 2023 statement by the Shanghai Municipal Education Commission chief that "the emergence of ChatGPT is a great opportunity for educational reform" and "the quality of learning can be further enhanced if learning tools such as ChatGPT are used for educational reform" have attracted attention. The education sector moved most quickly in Korea. In addition to introducing ethical issues and precautions for using ChatGPT, the Busan City Office of Education announced on February 15, 2023 a "ChatGPT use training class" and curriculum for fifth- to ninth-grade elementary school students (Figure 5).

Discussion

Based on the spatio-temporal axis, this study has identified social interest in the East Asian region in generative AI from both social media and mass media. While there is a lot of agreement in the CJK's interest in the characteristics of the social world, there are significant differences in the timing and aspects of interest among countries in new areas such as tech-related, money, stocks, and investments, and the digital economy. To summarize the analysis of mass media, Japan is more sensitive to ChatGPT in social media than in mass media, Korea and China respond to overseas trends in a timely manner, the AI industry and major companies in China and Korea are currently competing to seize commercial opportunities, and the industrial interest in ChatGPT is followed by educational interest. The effects of ChatGPT on education were also discussed extensively in common among the three countries. It is important to note that the social interest in ChatGPT reflects only the aspects that are likely to be posted on social media on the part of the general public. The analysis of the mass media was based on the industrial and social interest in ChatGPT, which was based on the content of news reports within a short period of time, until the end of February 2023. For the aspects that were not seen in this study, we will continue to collect research data and conduct research through other approaches, such as interviews and fieldwork surveys, in order to gain a more three-dimensional understanding of social interest in the new innovation of generative AI, and to clarify the social acceptance process. We would like to clarify the social acceptance process through a more three-dimensional understanding of social interest in the new innovation of generative AI.

There have been substantial changes over last several months, in terms of Generative AI use in general, and more specific to CJK. The key issue to use GAI is to make it a responsible AI (to promote implementation of AI through regulatory reforms). China is in the midst of rolling out some of the world's earliest and most detailed regulations governing artificial intelligence (AI). These include measures governing recommendation algorithms—the most omnipresent form of AI deployed on the internet—as well as new rules for synthetically generated images and chatbots in the mold of ChatGPT. China's emerging AI governance framework will reshape how the technology is built and deployed within China and internationally, impacting both Chinese technology exports and global AI research networks (Sheehan 2023). Japan's proposed AI guidelines call for actions to mitigate an undue reliance on AI. There are two parts of the guidelines: regulation on AI (to manage risks associated with AI), and regulation for AI. The guidelines stress the importance of avoiding biased data when utilizing AI for machine learning and maintaining comprehensive records of interactions with AI (Habuka 2023). In Korea, the Ministry of Science and ICT (MSIT 2023) has also announced its vision for "Trustworthy AI for everyone", where threefold strategies are chalked: create an environment for trustworthy AI, lay the foundation for safe use of AI and spread AI ethics across society. For all the three countries, new legal framework urges for responsible AI, as well as call for its ethical use.

As previously mentioned, mis and disinformation are considered as one of the critical global risk (WEF 2024) for the next two years, and one of the critical issue if AI generated mis- and disinformation. Currently, this is the second highest risk (after extreme weather) and may have a significant impacts on social polarization in next 2 years due to current geo-political situation as well and changes which may arise due to several elections in different parts of the world. There can be distrust of information, which may eventually pose a question on the reliability of AI generated information. In the recent January 1, 2024 Nobi Peninsula Earthquake and Tsunami, the fake news on "Artificial earthquake" has been twitted and re-twitted more than 370,000 times in Japan, which has also caused significant panic among the people. Therefore, during disasters (both natural hazards and human induced hazards), the mis and disinformation regulation also becomes a critical challenge.

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Innovation in AI is also raising questions about how copyright law principles such as authorship, infringement and fair use will apply to contents created or used by AI. This is specially critical for GAI, and United States Congress has discussed the Generative AI Copyright Law in September 2023 (US 2023). Similarly, several other countries are also getting sensitive about the global use of copyright law for the contents generated and used by GAI. During the Bletchley AI Safety Summit in November 2023, international leaders came together to discuss the vast potential of AI models in promoting economic growth, propelling scientific advances, and providing a wide range of public benefits. They also underscored the security risks that could arise from the irresponsible development and use of AI technologies (UK 2023). The assessment of UK (2023) says that the AI will almost certainly increase the volume and heighten the impact of cyber attacks over the next two years. However, the impact on the cyber threat will be uneven.

Conclusion

This paper analyzes the interest of people of East Asia (China, Japan and Korea) in Generative AI at the initial stage after its launch. The initial usage, numbers of users also vary in the country based on its governance system as well as role of media in propagating the GAI ChatGPT launch case. Thus, there were differential momentum in generating interest of the people. There were new interests of role of ChatGPT among these three countries, especially in new areas such as tech-related, money, stocks, and investments, and the digital economy. While China was more interested in innovation, Japan and Korea were more interested in business. Future of GAI will depend on governance mechanism of the country, and role of mis- and dis-information will play a critical role. Therefore, ethical use of the GAI related technology, proper copyright issues and enhanced awareness among people on the usage of GAI is also important.

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Volume: 4, No: 2, pp. 1721 – 1734
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