Development of Social Media in Different Countries Media Revolution in the Era of Big Data

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Abstract: In the era of big data, social media play an essential role in communication and interaction, closely connecting the world. Social media in different countries also experience distinctive development processes. This paper will explore the synchronic and diachronic rules in social media development and analyze the innovative trend and advantages by conducting research, analyzing data, and reviewing the literature.

Keywords: social media, development, synchronic and diachronic study, metaverse

1. Introduction

The media is an integral part of society in any country of the world, reflecting the focus and interest of the public. It is widely believed that social media originated from the American scholar Antony Mayfield's e-book entitled *What is social media?* He believes that social media is a general term for various online media. These media are participatory, open, communicative, conversational, community-based, and connected, empowering everyone to create and distribute content [1]. We can get user preferences and social development trends by analyzing big data on social media. These changes and revolutions express much information during a country's development, which helps us better understand a country's values and culture.

Therefore, this paper will analyze the development of social media in different countries from the following four aspects: (1) the synchronic research of the current situation of social media, (2) the diachronic research of social media in different countries, (3) the technological revolution of social media, (4) the help social media offer in developing countries.

2. The Synchronic Research

According to statistics, this part will analyze the synchronic characteristics of social media in different countries in 2021.

2.1. Overview of Global Users

According to the *Digital 2021 July Global Statshot Report* by We Are Social and Hootsuite, global mobile users have reached 5.27 billion, accounting for 67% of the world's total population. And there are 4.8 billion Internet users, almost 61 percent of the world's population [2]. The number of social media users has grown by more than 13% since last year, with the latest figures showing an increase of more than 500 million users in just 12 months. There are currently 4.48 billion social media users

worldwide, equivalent to 57% of the world's population. By 2021, more than 1.3 million new users joined social media every day on average, which equates to about 155,000 new users every second. Therefore, with highly developed technology, social media has become more popular and prosperous worldwide.

2.2. Different Usage Habits among Countries

However, there are significant differences between countries regarding social media usage habits.

For social media screen time, the GWI has conducted statistics. According to the report, Filipinos remain the world's largest social media consumers, spending an average of four hours and 15 minutes a day using social platforms, which is a full half hour more than the second-ranked Colombians. Compared with the worldwide average social media time of two hours and 25 minutes, most countries above this level are developing countries, especially in Southeast Asia, Africa, and South America. For example, Colombia is followed by Brazil, Kenya, Nigeria, and South Africa. On the contrary, many developed countries in Europe and North America have less social media time. For example, American people have only two hours and seven minutes a day on social media, British people with one hour and 49 minutes, and Australians only one hour and 46 minutes. Japanese users say they spend less than an hour a day on social media, but the 51 minutes figure in 2021 is still 13% higher than what was reported for Japanese users in the same period last year.

This phenomenon is probably related to economic development, work intensity, and recreation in different countries. People in developed countries are more stressed at work and have various entertainment options, so they have less time and energy to use social media to kill time. Besides, from the perspective of Neil Postman, social media can consume people's fragmented time and reduce people's quality of life [3]. Thus, the more developed the country is, the more educated its citizens are, the more receptive they are to the idea, and the less time they will spend on social media.

2.3. Different Social Platforms in the World

GWI also collected the monthly active users of the world's most-used social platforms. Moreover, the top ten popular platforms are shown in Table 1.

Table 1: Ten most-used social platforms.

Social Platform	Monthly Active Users (in a million)
Facebook	2740
YouTube	2291
WhatsApp	2000
FB Messenger	1300
Instagram	1221
WeChat	1213
TikTok	689
QQ	617
DouYin	600
Sina Weibo	511

As shown in Table 1, there are at least six platforms with more than 1 billion monthly active users, three of which are above 2 billion. Facebook is the most well-known, followed by YouTube and WhatsApp, occupying a vast market. Among these top ten popular platforms, six are from the U.S.A,

and the rest are from China. Thus, the following part will mainly discuss the development process of these two countries as examples.

3.   The DiaCHronic Research

Although the term "social media" was coined only in 2007 and became a hot topic on the Internet in 2008, the concept and development of social media can be traced back to the 1970s. As of January 2021, the country with the most prominent social apps in the world is the United States, followed by China. In this chapter, the development processes of Chinese and American social media will be discussed as examples.

3.1.   Development of Chinese Social Media

In 1994, when China was first connected to the Internet, the National Intelligent Computer Research and Development Center opened Shuguang BBS (Bulletin Broad System), the birth of the earliest social media. BBS is a discussion forum based on topics whose appearance makes netizens gather and communicate without mass media for the first time. Besides, it also realized two-way interaction and communication. After this, netizens began to socialize around content, and social awareness of the Internet began to accumulate.

However, the BBS operates like a salon, which focuses on the whole "community" but ignores the individual status. The identity of the "individual" is highlighted until the blog's appearance. In the late 1990s, Weblog appeared, and on August 19, 2002, Fang and his group opened the blog China (www.blogchina.com), which entered a new stage of Internet communication in China. Blogs convey the concept of a "personal homepage", where individuals can set up their homepage for communication and discussion. For the first time, weblog realized that netizens themselves could lead mass communication, and the concept of "audience" began to move to "user". However, only a few users have enough energy to post blogs regularly and maintain a stable readership. Therefore, although Chinese blogs are for everyone, the user group is also very elite. Most ordinary people prefer to share information with only friends and family on platforms, so Social Networking Services (SNS) and instant messaging services emerged.

In fact, in February 1999, OICQ, an Internet-based instant messaging network tool independently developed by Tencent, took the first step of acquaintance social communication. OICQ was inspired by an international chat tool called ICQ ("I seek you"), with an "O" in front of it, meaning "Opening I seek you". In November 2000, Tencent launched QQ2000 version, and OICQ was officially renamed QQ.

In 2007, to meet users' needs to record and share anytime and anywhere, Wang Xing borrowed the simplicity of Twitter to create the "Fanfou website", which attracted many users as soon as it appeared. Thus the social public opinion platform took shape. However, Fanfou was forced to shut down temporarily due to the pressure of public opinion. Learning from the failure and borrowing the advantages, Sina seized the opportunity to launch a national phenomenon product—Weibo. The 140-character short blog satisfies users' desire to share and record, as well as redefines the way of Internet information dissemination. To cope with the various functions of Weibo and hold its edge, QQ implemented a reform and enriched applications. In 2010, it launched the new skin engine, QQ video, multi-question verification, and other human-computer interaction functions. Besides, QQ improved its visual design, making it more concise and livelier. In October of the same year, the number of simultaneous QQ users reached a record high of 120 million.

In 2010, a social networking app called "Kik" became an instant hit. Lei Jun and Zhang Xiaolong were bullish about its prospects and saw it as a godsend to enter the mobile Internet space, so they developed "MiChat" and "WeChat". Zhang's Wechat team successively launched "shake", "nearby

people," and other innovative functions and finally won the competition. As a result, the advent of WeChat has revolutionized how people socialize. Moreover, the launch of the WeChat Official Account platform has dealt a heavy blow to the paper media, and WeChat Pay has dramatically threatened the leading position of Alipay.

As the most influential social network in China, WeChat has five development stages: (1) the instant messaging stage, (2) the voice intercom stage, (3) the random chat stage, (4) the video chat stage, (5) the function enrichment stage. After continuous development, WeChat has become the third largest social platform worldwide, followed by Facebook and FB Messenger, with more than 1.2 billion users by 2022.

Apart from traditional chatting and sharing platforms, the rapid development of the video industry has led to the birth of many video and audio media. Moreover, as people live a faster and faster life, they become more impatient to watch a video that lasts more than 10 minutes, so short videos gradually become mainstream. To follow the trend, short video social platforms such as Douyin and AAuto Quicker have sprung up since 2011, and more and more young Chinese have started to follow the short video homepage as a way of socializing.

Generally speaking, the development of Chinese social media has experienced an extended period, from BBS to SNS, from instant messaging to multimedia platforms.

3.2. Development of American Social Media

Similar to the evolution of social media in China, American social media have also experienced four stages—BBS stage, Blog stage, Instant messaging stage, and Multimedia stage. However, unlike Chinese media, which specializes in drawing lessons and inspiration, American social media are always the pioneers, leading a particular trend and development direction. Till the end of 2021, the top 5 popular social platforms are all American—Facebook, YouTube, WhatsApp, FB Messenger, and Instagram, which all come from Meta company (Facebook company) and Google company.

Facebook was launched on February 4, 2004. Mark Zuckerberg, a Harvard computer science student, and his friends Eduardo Saverin, Dustin Moskovitz, and Chris Hughes created this social platform. It was initially an Intranet for Harvard students to rate each other's photos, and it gradually enjoyed great popularity and prestige worldwide. Facebook is a social tool for connecting with friends. Users can use it to interact with friends, colleagues, classmates and people, share unlimited uploaded pictures, and publish links and videos. Facebook's powerful and comprehensive features have attracted a steady stream of users, making it the world's No. 1 social network.

Moreover, as a genius businessman, Zuckerberg purchased two big instant messaging apps— WhatsApp and Messenger, continuously expanding the commercial scale. WhatsApp was born in 2013 and acquired by Meta in 2014. It is an app for communication between smartphones, available for both IOS and Android systems. The app uses a push notification service to instantly receive messages from friends, family, and colleagues. WhatsApp searches users' mobile contacts for people who are already user of the app and automatically adds them to the app's contact list. This saves the step of adding and applying for contacts, making it easier for acquaintances to interact and communicate for free.

Unlike WhatsApp, which aims to replace SMS and concentrate on simple communication, Facebook Messenger has more diverse functions, focusing on sharing and socializing. On August 9, 2011, Facebook developed its text and voice messaging app, Facebook Messenger, to make it easier for users to respond to social messages in a unified and fast manner. Through this app, users can send texts, pictures, animations, voice messages, videos, and multimedia messages (and even make phone calls) to other users via websites or mobile devices at no additional cost. FB Messenger currently has about 1.3 billion users.

Instagram, launched in 2010, is a simple app for filtering photos, uploading them, and waiting for friends to like them. However, it has become a hit among fashionable youngsters to share their life. The participant of Instagram fills the vacancy of the "picture social" and "short video social" for the Meta company.

Different from the above four popular platforms, YouTube is from Google company. As the most extensive video website since its launch in 2005, YouTube system processes millions of video clips daily, providing high-level video uploading, distribution, presentation, and viewing to users worldwide. Until July 2022, YouTube has at least 2.476 billion users worldwide. Thus, "video social" gradually became the mainstream, followed by many similar platforms like TikTok, Twitch, Likee, etc.

Therefore, Chinese and America have similar development stages because they both developed from BBS to blog to instant messaging and multimedia forms. However, some social media in China integrate numerous functions (chatting, photo sharing, video posting, online paying, etc.) and occupy a monopoly position in the market, like WeChat. But American social apps are more concise, and each has its focus and plays a different role in social communication.

4.   The Technological Revolution of Social Media

According to diachronic research, during the last few decades, social media's development mainly concentrates on various contents and functions. However, as we enter the era of big data, technological revolutions for social have taken place, leading to new ways of social interaction and user experience. Especially with the continuous reduction in the price of various intelligent sensor devices and the development of natural human-computer interaction technology, virtual reality (VR) technology has developed so that metaverse has become new way of socializing.

4.1.   Introduction of Metaverse

Metaverse, a combination of the prefix "meta" (implying transcending) with the word "universe", describes a hypothetical synthetic environment linked to the physical world. The word 'metaverse' was first coined in a piece of speculative fiction named Snow Crash, written by Neal Stephenson in 1992. Stephenson defines the metaverse as a massive virtual environment parallel to the physical world in which users interact through digital avatars [4]. Thus, it has a duality between virtual and reality. To achieve such duality, the metaverse development has to go through three sequential stages, namely digital twins, digital natives, and eventually co-existence of physical-virtual reality or surreality [5]. To be precise, the metaverse is not a new concept. It is more like the rebirth of a classical concept, which is the concept embodiment under the new technologies of extended reality (XR), blockchain, cloud computing, digital twin and so on.

Nowadays, more and more entertainment industries consider the metaverse as a new business opportunity. Furthermore, with the release of Steven Spielberg's film Ready Player One, people have begun to gain a deeper understanding and yearning for "metaverse social". Thus, many social media companies have started their revolution toward metaverse technology.

4.2.   Application of Metaverse in Social Media

The metaverse is blessed with unique characteristics, allowing the user to live in another parallel world and experience different lifestyles. Therefore, it has an inherent advantage for building social platforms.

In a move characterized by ambiguity, Facebook changed its name to Meta in October 2021, announcing a new era of social interaction enabled by the metaverse technology that appears poised to become the future center of gravity for online social interactions [5]. Meta aims to provide a more

digital, virtual, and augmented environment, but it also intends to remain the core offering of social community.

Besides, the world's biggest sandbox game Roblox is also bullish on the metaverse's potential. It is a mix of virtual worlds, casual games, and self-built content, and most of the games in it are created by users. Roblox leverages metaverse technologies such as virtual currency, 3D and VR, attracting more than 5 million teen developers worldwide. According to the characteristics of its platform, Roblox defines eight properties that the metaverse should have—Identity, Friend, Immersive, Low Friction, Variety, Anywhere, Economy, and Civility.

Not only in America but Asian countries also pay much attention to following the trends of establishing metaverse social communities. ZEPETO is an app launched by South Korean company SNOW on March 1, 2018, through which users can create their own "virtual image" by making their three-dimensional cartoon images and making friends with strangers in the virtual world with a virtual identity. Moreover, originated in a country where idol culture is prevalent, ZEPETO has attracted a large number of fans by posting featuring avatars of music videos of idol groups such as BLACKPINK and TWICE and holding virtual meet-up sessions. Chinese social platform Soul was launched in 2016, positioned as a product design based on interest mapping and gamified gameplay, which is a virtual social network for a new generation of young people. Then in June 2021, Soul changed its slogan to "Social metaverse for young people", making it more in line with the future of virtualization. In Soul's social metaverse, users need a virtual identity. They will firstly take a personality test to get a report on the avatar, which can be not consistent with reality. Then, users can use the identity and personality of their avatars to socialize, greatly reducing the social pressure between users and their real identities. Besides, Soul's platform community is realized through several themes, including chatting, sharing, gaming, debating, dating, etc., which helps it build more user traffic.

Generally speaking, the social metaverse is what social media platforms head. It allows users to experience a totally different life and realize more social interactions. However, mainstream technologies such as VR, AR and blockchain have yet to be developed, and platforms also need to be more innovative and secure.

5. Social Media in Country Development

After analyzing the current situation and the development process of social media, this part will explore the help they could bring to developing countries from three aspects.

From the perspective of the economy, social media play an important role in enhancing product visibility, promoting business cooperation, creating more employment, and improving a country's tourism development. With the popularity of short video platforms, Chinese "Internet celebrity economy" has developed rapidly, which greatly enhances product promotion and stimulates consumption. Many brands choose to cooperate with celebrities or streamers to promote their products and conduct sales on short video media such as DouYin, which let more people know about the products and stimulate consumption desire. Thus, Chinese e-commerce companies are booming, creating more job positions and employment opportunities for the public.

For political development and reform, social media are also essential. For example, with the development of social media like Facebook and Twitter, ethnic political relations in Ethiopia are deeply influenced, and social media provide a platform for the formation of a national "virtual community". However, every coin has two sides. Social media have also become a tool for the ultra-nationalist forces in Ethiopia to spread false information and hate speech and incite inter-ethnic conflicts [6].

Last but not least, social media are indispensable in cultural transmission for developing countries. Social media enables people from different countries to communicate freely, stimulating cultural

exchanges between countries around the world. For example, Li Ziqi, a popular Chinese video blogger, has more than 15 million followers on YouTube. She shares her life in rural China on social media to promote the traditional Chinese culture. Her popularity has made more and more people around the world know about the concept of tranquillity and traditional Chinese crafts and cuisines. In fact, there are numerous vloggers like Li Ziqi around the world, devoting their own power to spread their country's culture and realize cultural confidence.

6.   Conclusion

The development of science and technology has made more and more transnational communication possible, and innovative social platforms have greatly enriched people's ways of socializing. Nowadays, in the era of big data, social networks have become an inaccessible part of people's lives and continue to make steady progress towards virtual reality and the metaverse. However, at the same time, social media may also reduce face-to-face interaction between people, or create information cocoons, which is easy to make users more unsociable and radical. In the face of this double-edged sword, technicians should continue to innovate and increase supervision to build a stronger and safer social platform. Users should also improve their distinguish awareness and not let social media control their lives.

References

[1]   Mayfield, A. What is social media? http://www.antonymayfield.com/2008/03/22/what-is-social-media-ebook-onmashable/, 2013.

[2]   We Are Social, https://wearesocial.com/cn/

[3]   Postman, N., & Postman, A. Amusing Ourselves to Death: Public Discourse in the Age of Show Business, 2005.

[4]   Judy Joshua. Information Bodies: Computational Anxiety in Neal Stephenson's Snow Crash. Interdisciplinary Literary Studies, 2017, pp. 17–47. Publisher: Penn State University Press.

[5]   Kraus, Sascha et al. International journal of entrepreneurial behaviour & research: Facebook and the creation of the metaverse: radical business model innovation or incremental transformation?, 2022, pp. 52-77. Public: Emerald Publishing Limited

[6]   Li Yujie. West Asia and Africa: Role of Social Media in Development of Ethiopian Ethnic Politics and Its Impact, 2022, pp. 74-101.