Shampoo girls and the digital divide: A Study on the relationship between mobile phone ban system and the knowledge growth of marginalized groups

[*]Yinheng Liu
Shanghai University, Shanghai 200444, China
[*]Corresponding author E-mail: liuyinheng@shu.edu.cn

Abstract: Under the background that digital media has become the "infrastructure" of the current society, some marginalized people have poor digital access, resulting in a "digital divide" between them and the community. The author notices the rejection of the mobile phone, a tool that links the digital society, to the particular type of shampoo girl at work. Firstly, it introduces how the unique mobile phone ban system affects the generation of the digital divide and then examines how the digital divide deepens and solidifies. Finally, the reflection on the digital divide faced by the particular group of shampoo girls is put forward. The innovation of this paper is to notice the multiple impacts of the digital divide faced by special marginalized groups on their work and life.

Keywords: Shampoo girls, Digital divide, Marginalized group, Mobile phone ban system

1 Introduction

Entering the information age, digital media has become the “infrastructure” of the current digital society. The media no longer acts as the “intermediary” of information but interacts with the social structure and constitutes a kind of “system” (Stig Hjarvard, 2018). Suppose the accessibility of this "infrastructure" is understood in terms of the medium's materiality. In that case, the bridge between people and the digital media platform, the networked device, becomes an important consideration. The availability of this device determines a person's, the accessibility of a group, and digital media

platforms. If the device is disconnected, people will lose contact with the digital society, which is more likely to cause a "digital divide". According to the statistics of CNNIC's 49th "Statistical Report on China's Internet Network Development", as of December 2021, the number of netizens in my country reached 1.032 billion, and the proportion of Internet users using mobile phones went 99.7%, far ahead of other Internet-connected devices. Mastery is an essential hallmark of participating in a digital society. However, there are still many groups who are isolated from the use of mobile phones. The shampoo girls who live in the city and work in the service industry are a particular case. In this article, the author will start with the particular mobile phone ban system of shampoo girls, examine how it affects the generation and curing of the digital divide, and put forward reflections on the digital divide of this marginalized group.

2 Literature review

2.1 Research on the digital divide

The digital divide evolved from the early "knowledge gap" hypothesis, first proposed by the American scholar Ticino. According to the theory, "people with high socioeconomic status generally have faster access to information than those with lower socioeconomic status. And the more information mass media conveys to society, the greater the knowledge gap between the two groups." (P. J. Tichenor, G. A. Donohue, C. N. Olien, 1970) On this basis, Katzman proposed the information gap theory and introduced a technical perspective to examine its position in disseminating and distributing social information (Natan, Katzman, 1974). In 1977, American scholars Attima and Klein proposed the ceiling effect hypothesis. This view is different from the previous ones. They don`t believe that the individual's specific knowledge increases unlimitedly but has a ceiling. The concept of the "digital divide" began to gain traction in the National Telecommunications and Information Administration's (NTIA) report "Lost in the Network: Defining the Digital Divide."

China is a developing country. Scholars have multiple perspectives on issues related to the "digital divide". Today, the digital divide is still a concern by many scholars, and their research focuses on new issues in the mobile Internet era. For example, Liu Dehuan and Zheng Xue pointed out the phenomenon of the digital divide on the mobile Internet. They believed using mobile phones is essential in the new Internet

environment (2011). Hu Yong divides the digital divide into three categories: missing links, wasteland, and alien societies, which represent three categories of problems: access difficulties, technical difficulties, and structural difficulties caused by social inequality (2020). The current research on the digital divide has been refined to issues such as using health kits, digitizing national culture, and e-reading.

2.2 Research on the digital divide of marginalized groups

Marginal groups refer to one or more groups outside the mainstream society, which are relatively stable and dynamic, and are easy to be ignored by mainstream centers. Research on marginalized groups has become a hot topic in sociology, anthropology, and other fields. There are various studies on marginalized groups in related research at home and abroad, usually focusing on different groups. Some scholars have found through the analysis of cultural pavilions of digital media, such as online museums and galleries, that such online cultural products do not increase audiences' diversity but reproduce or expand the current inequality (Sabina Mihelj, Adrian Leguina, John Downey, 2019). An Ohio State University study of patients' use of intelligent hospitalization systems in digital health care found that older and African-Americans had lower rates of medical website usage than younger and white patients (Ohio State University, 2019).

Most domestic scholars also analyze the Internet usage rate of marginalized groups from multiple perspectives, focus on migrant workers, ethnic minorities, and the elderly, and believe that digital technology can maintain interpersonal relationships among marginalized groups, promote employment development, and promote integration into cities. They need to make it easier to use digital technology to solve the digital divide problems.

2.3 Questions raised

The current research on various marginalized groups is developing towards the trend of subdivision. However, this will also cause blind spots of concern in the study on different marginalized groups. Looking at the current research trends, although scholars focus their research on cities, they do not pay enough attention to shampoo girls with insufficient soft knowledge. This group has its particularity. Firstly, they are

not engaged in purely manual labor like the migrant workers and other groups that scholars focus on in most studies. Their work even “looks more decent” to a certain extent, and the contact with various groups of people in the city makes them seem to have a direct communication channel with the outside world. The digital divide problems of this group are more challenging to see, and their situation is hidden, which makes the research on them have practical significance. Secondly, compared with groups such as customer service girls who are also young girls, because of the mobile phone ban system, they tend to use fewer electronic products to communicate with the outside world, and their problems are unique. The reflection of this can have practical significance for solving the digital divide of the group of shampoo girls in the future. Therefore, the author proposes the following research questions:

RQ1: As a marginalized group, why can't the shampoo girl gain more knowledge through the use of mobile phones?

RQ2: What specific objective structural constraints hinder their learning?

RQ3: How about their subjective initiative? Can it play a role in their knowledge acquisition?

3 Research methods

To answer the above research questions, we conducted a 2-month ethnographic study (June 2021 to July 2021). During this period, the author conducted a one-week participatory observation in a chain barber shop in the suburbs of Shanghai as a "shampoo boy", supplemented by the research method of in-depth interview method, trying to answer the above questions.

3.1 Ethnography

Ethnography is a research method that has attracted attention quickly and is full of controversy (de Seta, 2020). An important economic center, taking advantage of its unique service industry advantages, produces a "siphon" effect, attracting many rural laborers to come to work. On the other hand, the relatively standardized business model and management strategy of large chain barber shops, as well as the network communication and marketing methods adopted in response to the covid-19 pandemic, also help the author to observe the marginalized role of the shampoo girl in

typical scenarios such as they still use the interpersonal communication sales model, which provides a more conflicted field space. The shampoo workers are relatively simple to enter, and their work is relatively low-tech. Whether it is a large or a small store, the roles and responsibilities of the shampoo girl are the same. It also provides a research basis for choosing a shampoo girl in a large chain barber shop in the suburbs of Shanghai as the research object. In a 2-month field investigation, based on the respondents' informed consent, in-depth interviews were conducted with the above-mentioned store staff, and it was hoped that in such a way, the digital gap and knowledge acquisition barriers have a deeper understanding. At the same time, to protect the staff's personal privacy, all the interviewees have a pseudonymity.

3.2 In-depth interview method

3.2.1 Interview outline

The interview questions are divided into three parts.

The first part mainly involves the basic information of the respondents, including their age, years of work, and current income. In the second part, the research questions are reduced to interview questions, including their views on the relevant systems of the workplace, the main content of the current work, the current time of using mobile phones, and their knowledge structure. The third part, preparation, mainly involves issues that may be dug deeper. If the interviewee is unwilling to answer questions or dissatisfaction during the interview, they can keep silent or withdraw halfway. Interview materials that the respondents stated that they did not want to be made public were not included and cited in this study.

3.2.2 Selection of interview subjects

This study conducted semi-structured in-depth interviews of about 30-60 minutes with 11 shampoo girls and 2 store managers working in large chain hair salons. Interviews begin in June 2021 and end in July 2021. According to the maximum sampling principle of qualitative research methods, when 13 respondents were collected in this study, all the interview contents were sufficient to answer the research questions, and the sample collection was cut off.

The interviews were conducted by WeChat voice interviews/one-to-one face-to-face interviews. The interview results were organized into verbatim transcripts, with a total of 106,702 words in the interview transcripts. The basic information of the respondents is shown in Table 1.

Table 1: List of basic information of the interviewees in this paper

No.	Name	Sex	Age	Educational experience	Years of employment	Contact method
1.Shampoo girls						
1	Shu	Female	17	technical secondary school	2 months	observation
2	Cindy	Female	16	junior high school	1 year	observation
3	Yiyi	Female	18	drop out of secondary school	1.5 years	observation
4	AA	Female	18	technical secondary school	2 years	observation
5	Gigi	Female	17	drop out of secondary school	2 years	observation
6	Sky	Female	18	technical secondary school	2 years	WeChat
7	Lily	Female	18	technical secondary school	1 year	WeChat
8	Cici	Female	17	technical secondary school	4 months	WeChat
9	EE	Female	18	junior high school	1 year	WeChat
10	Double	Female	19	technical secondary school	3 years	WeChat
11	Joy	Female	20	drop out of junior school	5 years	WeChat

2. Managers						
1	Tom	Male	22	drop out of secondary school	7 years	observation
2	Baby	Female	22	technical secondary school	6 years	observation

4 Research findings and discussion points

4.1 Creation of the divide: the rejection of mobile phones

Sociologist Giddens predicted that "the age of immigration has come" (2015), and the job of shampoo girls is favored by rural women who have entered the city because of the lower entry barriers and skill requirements. Shu told me, “Many girls from our rural hometown went to the city before graduating from junior high school because they couldn’t make much money at home. Although they can only do some jobs that do not require high academic qualifications and skills in Shanghai, the wages they get are lower than Home is much better."

However, the job of a shampoo girl is not as easy as it sounds. It's hard to do a simple shampoo well. After the author applied for the position of "shampoo boy", Shu taught the author to wash the hair of the guests. "The length, strength, and how to avoid water rushing into the ears of the guests are all important." Selling products is also an important job task for shampoo girls. The manager will ask questions about product selling points at any time to check their business proficiency, and the marketing strategy centered on interpersonal communication is a "core skill" that they must learn outside of shampooing. With so heavy and detailed job tasks, the mobile phones used by urban white-collar workers are regarded as "forbidden items" in the work of shampoo girls. The mobile phone ban system is written into the "Employee Handbook" as a store policy so shampoo girls can only use mobile phones during lunch and dinner breaks. At the same time, the shampoo girls themselves do not have the desire to use mobile phones. "In my spare time, I have to recite the selling points of products, so as to better recommend products to customers. Then I can make more money by selling them." "Sales champion" Yiyi said.

Song Hongyan divided the digital divide faced by Chinese migrant workers into

four major gaps: “access gap, skill gap, content gap, and aspiration gap” (2016). The mobile phone ban system has brought the shampoo girls to focus on their work, but at the same time, they have lost their access to the Internet. Long hours of work (9-12 hours) have made them lose their desire to use mobile phones. Their skills in using the Internet are lacking. Invisibly, there is a digital divide between the shampoo girl and the society.

Does the rejection of mobile phones really bring about an increase in sales of shampoo girls? To what extent does this digital divide affect the career development and knowledge acquisition of shampoo girls? The author continues to conduct related research.

4.2Deepening of the divide: "Lost in the network"

Yiyi has won many "sales champions". As the author's "master", she held a product brochure and introduced the standard process of their sales, and "When customers enter the store, it’s important to understand how do you grasp the needs of customers and how to use the words to 'transform' purchases." However, Yiyi also admitted that there are fewer and fewer new customers who can transform into regular customers in the store now, "You have to maintain a good relationship with your regular customers, many of my bills are referred by a previous business owner." The marketing theory mastered by the shampoo girls is the face-to-face basis of traditional brick and mortar stores. Offline interpersonal communication is an essential means of communication. The core point of the theory is that the "development of relationships with customers may be the most effective way to establish unique, sustainable, and difficult for competitors to imitate" (Battle, 2009).

At present," the granularity of data shapes the behavior of individual particles" (Christopher Cookrick, 2017). By digital tools, many merchants can use extremely refined data for user portraits, insight into customers' personalized needs, design marketing strategies, and attract consumers to experience purchases. After the Shanghai epidemic in 2021, the daily life of the shampoo girls began to interact more deeply with the Internet. First, the original on-demand service model of the barbershop has changed to an appointment system through a small program, " The basics of making an appointment are old customers and new customers generally don’t make an appointment to wash their hair here.” Yiyi said that the

appointment system made them weak in expanding their customer base. In addition, AA said, "The epidemic has caused us to suspend business for two months, and now there are fewer and fewer people willing to spend much money on (shampoo) packages. However, "the hair stylists in our store still make much money, and they are shaking. Sound, many people (who come here because of their names) ask them to do their hair. "

However, the hair stylists of this store are allowed to use their mobile phones during work breaks. Baby, the store manager, said, "About 60-70% of customers come to the store due to advertisements on Douyin and Xiaohongshu." Hair stylists' posts on Douyin and Xiaohongshu are examples of hairstyles that they designed for customers, and they can also reply to questions raised by fans on social platforms in their spare time. For instance, the hair stylist Tom can obtain the preference data of users who browse his video posts through the "Creation Center" of Douyin and Xiaohongshu, then he can optimize his next hairstyle design and shooting works accordingly. Hair stylists have been able to use digital marketing tools to break through the customer circle confined to the surrounding neighborhoods and reach more potential customers. Unlike the shampoo girl, Tom can earn more than 10,000 yuan a month under the power of digital marketing. However, the shampoo girls are still firmly restricted by a digital divide due to the strict mobile phone ban system. They cannot use digital tools to gain insight into the preferences of potential customers, cross-market marketing, and thus achieve sales performance improvement. These shampoo girls are trapped in the digital divide in the digital marketing era, "behind the Internet".

4.3 The solidification of the gap: they are in a "different society"

McLuhan argues that "changes in the scale of the medium affect human representation and even culture"(1997). The covid-19 pandemic has accelerated the process of social digitization. The digitization process of shampoo girls is not only blocked by the mobile phone ban system but also hinders their interest and confidence in using mobile devices. The digital divide thus established has gradually put them in a "different society" (Hu Yong, 2020) that is entirely different from the customers and even from the more senior barber colleagues in the same store.

This "different society" is first reflected in the low-frequency use of mobile phones. After 12-hour work, they still have to cook, wash dishes, clean and do other housework when they return home. That makes them have no free time to use their mobile phones.

At the same time, there is a big difference in the content of the information they obtain through their mobile phones. People's "domestication" of digital technology (Silverstone & Hirsch, 1992) has made the use of mobile phones by the shampoo girl after work an essential field of observation for the author. Through the statistics of "screen time" via the mobile phone, the author found that the software most commonly used by shampoo girls, in addition to the basic WeChat, is short video social platforms such as Douyin and Kuaishou. When it comes to the types of short videos that the girls like to watch, we find a situation of extreme homogeneity - the videos recommended for them are primarily random shots of rural life, followed by dynamic songs and dances, and social news. By observing the process of shampooing girls using Douyin, the author found that the advertisements recommended to them are also highly homogeneous, with "educational improvement" as the main content. The reason that shampoo girls mostly graduated from secondary schools. When the author asked some younger sisters with more extended working experience why they didn't change jobs, "We only have this education, and we can't do other (jobs)." Sky, who came to the barber shop and started shampooing at the age of 16, told us this. They are also very clear about the importance of improving their education in finding higher-paying jobs. Many shampoo girls have expressed that they have tried to "enhance their education", but "I don't usually use mobile phones (attending online courses). How can I still have time to attend classes after coming back in the middle of the night"(Lily)? "These online courses cost ten to twenty thousand to study, but we have no money" (Double). In such a "different society", mobile phones are not a tool for these girls to acquire knowledge and achieve improvement.

5 Reflections on the divide: marginalized people in a digital society

"The Internet has brought convenience to life and work of migrant workers to a certain extent, but the utilization rate of the Internet is still insufficient. Even the younger generation with higher education and higher media application ability than the older generation of migrant workers. Migrant workers, they also have many problems in the use of media." (Zhou Yue, 2021) Shampoo girls have always been an essential member of the vast group of "migrant workers". We use observation, in-depth interviews, and other research methods to do research on the "digital divide" faced

by shampoo girls. Through theoretical research on the "mobile phone ban system" in shampoo girls' workplaces, we try to answer the problem of the formation of the digital divide of shampoo girls.

The study found that as a marginalized group, shampoo girls failed to acquire more knowledge through mobile phones, which is detrimental to their future development and more likely to solidify their marginalized status. The "mobile phone ban system" and the maximum daily working time of 12 hours makes them seldom have spare time to use their mobile phones to obtain knowledge, and the "digital divide" has gradually formed. In the workplace, they are the only group in the entire barbershop where cellphone use is banned. Although they have the subjective will to jump up the ranks and become office ladies when they come to the cities, their long working hours have hindered them from learning. These caused them to ignore the knowledge acquisition through mobile phones, and eventually, they were trapped in the "digital divide", and the social class was gradually solidified.

This study puts forward the digital divide of shampoo girls, pays attention to the different manifestations of the digital divide among migrant workers, and aims at the "mobile phone ban system" and the knowledge gap that shampoo girls face. The specificity between acquisitions is explained. At the same time, the author also provides a reasonable imagination for the digital divide problems of marginalized people in the context of the rapid development of modern digital society. This study also found that the digital divide faced by shampoo girls is quite specific in the field of barbershops. Compared with hair stylists in the same store, the digital divide faced by shampoo girls makes them unable to master the relevant knowledge of digital marketing and still stick to the traditional marketing model based on interpersonal communication, and their income will be hugely affected. The digital divide has made shampoo girls "lost in the network", a more severe problem in today's digital society.

Unfortunately, due to the limited space of this study, there are still some problems in the research's depth and breadth. At the same time, the author has not been able to explore the solution to this problem through powerful means. In future research on the digital divide, researchers in the field of media sociology may need to pay more attention to the particularity of the digital divide faced by marginalized groups and to expand research and practice based on the digital divide rescue plan for marginalized groups.

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