

In the Post-pandemic and Internet 4.0 era, Cafes' New Operation Mode of Compound Space

Menghan Liu

Institute for Design Innovation, Loughborough University London, London E20 3BS, UK

Abstract: With the isolation policies of the epidemic and the development of the Internet, remote working / online working is becoming more and more popular among young people. Many freelancers, such as independent designers and writers, do not need to work in offices. Nowadays, the distance between people on the Internet is closer, but there is less communication in the real world. Under the rapid development of smart life and digital transformation, making technology serve the people, and strengthening people's connection in the real world, has become an important topic. The purpose of this dissertation is to reshape and expand the historical cafes' function as third space under the trend of digital transformation of the catering industry and improve the offline experience of consumers and enhance the competitiveness of cafes through the development of the new operation mode of compound spaces. This research analyzed the impact on the cafe market in the post-pandemic era and takes Starbucks as an example to explore the reasons for the depression of the coffee market. Through literature review and field research, this study verified that coffee shops, as a social place for work and study with a long history, were loved by many people. Compared with the library and home, freelancers and students preferred to work and study in a comfortable coffee shop. However, with the home isolation policies of the Covid-19 pandemic and the growing maturity of the shared offices in recent years, the business of both chain coffee shops, and local cafes had been affected.

Keywords: Post-pandemic, Cafes' function, New operation mode.

1. Introduction

1.1. Background

The outbreak of covid-19 pandemic has affected people's life and work styles, and mixed work has become a new normal. With the advent of the digital age, people can easily communicate, work, and study online. In the past, people often played the role of a member of the team, with a specified mission and direction. This kind of work usually appeared in a full-time manner. Now, more people begin to rely on their skills or skills to survive. This led to the emergence of joint office space. The fundamental reason is the change of the working mode of urban people from selling time to selling skills.

The change in urban space is closely related to the change in people's workstyle and lifestyles. Many consumers' behaviours, preferences, eating habits and shopping styles have changed significantly in this post-epidemic era. People are used to ordering food delivery, online shopping, and online classes. The traditional coffee consumption mode can no longer meet the diversified needs of today's consumers, and the coffee industry has started the digital transformation.

However, the development of the digital age is not all good for people. Teleworking not only improves the way of work and life, but also leads to people's isolation and marginalization (Vittorio & Linda, 1990). What people seek in urban space are both the social field and the space of solitude. The functions, such as work, social, rest and entertainment, undertaken by public space have become more and more. The boundary between the third space with home and the workplace becomes blurred. The third space is the extension of the home, and the extension of the workplace. It is the integration of work, life, and leisure. When the boundary between work and life becomes increasingly blurred, "extra space" becomes the space supply for people's

psychology.

1.2. Research Rationale

With the arrival of COVID-19 and the implementation of the home isolation policy, the physical coffee shop market has been greatly impacted. Even the situation of Starbucks, a chain cafe giant, is not optimistic after the pandemic. According to The Times reported in July, Starbucks was considering selling the UK market (Meddings, 2022). Although it has not started the process, its intention to sell the UK market is still very clear. Starbucks has been secretly screening "potential buyers". According to the annual report of Starbucks, due to the pandemic of COVID-19, the public was paying more attention to food safety and health. Starbucks' business was seriously affected by the exposure of potential food safety incidents caused by mechanical failures or human errors (Starbucks, 2022). From the financial report data of the Starbucks UK branches, it was not optimistic. In the financial year ending October 2021, the sales volume was £ 328 million, and the net loss in the financial year ending October 2020 was £ 40.9 million. Although Starbucks has made great efforts to turn the tide in 2021, its financial performance was still difficult to return to the level before the epidemic. It also showed from the number of stores opened in the global region by October 2021 that the UK market was only 298 (Starbucks, 2022).

Not only the UK market of Starbucks was influenced by Covid-19, but also the China market was shocked. Starbucks Reports Q3 Fiscal 2022 Results showed that in Q3 North America comparable store sales increased 9%, International comparable store sales decreased 18%, and China comparable store sales decreased 44% (Starbucks, 2022). The free coffee provided by the shared office also affected people's consumption in cafes.

On the contrary, the amount of compound cafes is rising in the Chinese coffee market. Compound space cafe refers to

those that combine furniture, art, clothing, books, and office. They combine different industries to meet different needs of customers. Such a concept of compound space operation, which combines coffee with other industries, is characteristic and diversified, and is quite popular with consumers. It is becoming popular in cafe operation modes.

1.3. Research Questions

Due to the direct impact of the epidemic and digital life on catering, the original advantage of the third space of cafes has been impacted. Besides the online digital coffee sales, whether the offline coffee shop is still important as the third space or not is a significant question. There is a further problem with coffee consumers if they still need physical cafes. The main problem is how to transform and expand cafes' functions and attract customers.

1.4. Research Aim and Objectives

This research will base on the theory of digital transformation, and mainly focus on how cafes can reshape and expand their functions as the third space, so that digital technologies can empower the third space, improve the customer experience, and enhance the competitiveness of coffee shops through the compound space. This research will explore the demand of potential coffee consumers for the various consumption places, the shortcomings of coffee shops compared with shared offices under the growing demand of consumers for remote working, and the reasons for new joint cafe cases.

2. Literature Review

2.1. Digital Upgrade of Coffee Shop

In the turbulent period caused by COVID-19, the structure of enterprises has fundamental changes. Companies' digital capabilities affected their business agility and performance (Saputra et al., 2022). According to the "Shanghai coffee rising star growth plan" released by Meituan Delivery, the comprehensive digitalization catering included not only "on-site food + food delivery", but also new scenes and channels such as self-take out, e-commerce retail, and supermarket retail.

2.2. Chinese Coffee Market

According to Deloitte's consumer research, the purpose of Chinese consumers for freshly ground coffee has evolved from the initial social demand to the functional demand. Most people rely on coffee because of physiological or psychological needs. Especially for consumers in first-tier cities, the main reason for them to drink coffee is the physiological reason caused by great work pressure. From "catching up with the fashion" to "extending the life of coffee", young consumers have gradually formed the habit of drinking coffee, and freshly ground coffee has become a daily drink (Alibaba, 2022).

2.3. Place Value of Cafe

The previous study supported that consumers pay more attention to the experience of products or services rather than satisfaction in cafes. The research showed that a good consumption experience could help enhance customers' loyalty to the brands (Vanharanta et al., 2015). This means that offline cafes in the coffee industry are irreplaceably important. Offline stores could reach consumers faster and

better, improve user experience and stickiness, and build brand influence. However, compared with online channels, the investment cost of offline stores is higher, and the requirements for store location, software and hardware facilities, staff skills and experience are very high. In the future, most offline cafe brands will not be confined to the "slow coffee" or "fast coffee" track but will open different types of shops for customers with various needs. Diversified store formats may be one of the directions for coffee shop brands to penetrate the market. The report indicated that the future position of offline coffee shops would be based on brand construction and highlight the differences between brands (Fu, 2022).

2.4. Research gap

It has become an urgent problem for cafes to seize the "extra time" of consumers other than their families and workplaces. Although previous studies have proposed the concept of commercial compound space, and such joint brand coffee shops and cross-border cafes have come up in China, there is a lack of sufficient theoretical support. Moreover, no relevant research has investigated how the compound commercial space can adapt to multiple demands and add value to the space based on the existing spatial scale. For coffee shops, it is necessary to study the different needs of potential customers for the third space, and how to use digital technologies to innovate the traditional third space and integrate multiple functions to meet the diversified spatial consumption experience.

3. Research Design

3.1. Data Collection

This research required to collect both primary and secondary data. Interpretivism methods usually used interactive interviews to investigate things that cannot be directly observed. Interviews could help to find out the interviewees' "thoughts, values, preferences, perceptions, views, feelings and perspectives" (Wellington & Szczerbinski, 2007). Field research could help to observe what people have not done, listen to what people have not said, and pay attention to the human-centered ideas with emotional design (Norman, 2005). The interpretivism approach would also obtain internal insights and relevant real information about the research object through case studies (Tuli, 2011). Therefore, this paper mainly used the field research method, interview method, and case comparative study method to collect data. Field research helped to understand the current operation status of coffee shops and shared offices. Interviews with coffee consumers showed their consumption trends. Case studies about the compound space operation modes and experiencing marketing modes of different coffee enterprises helped to understand the situation of offline coffee shops. Many previous studies on coffee shops used the data collection method of case study to investigate similar competitive products in the market and give the direction for future improvement.

3.2. Target Selection

To obtain accurate and direct data, the selection of research samples was also crucial. In the field research, Starbucks and WeWork were selected as typical research objects of cafes and shared offices, because Starbucks was the most famous coffee chain (Brennan, 2022) and WeWork was one of the Largest

Co-working Companies in 2021 (Wright et al., 2021). The comparison of them helped to observe and distinguish the actual use of their customers and analyze the advantages and disadvantages of cafes in providing office environments compared with shared offices. In the interview, the post-90s Chinese women were selected as the interviewees because they were the largest consumer group in the Chinese coffee market (Alibaba, 2022). Interviews with them positioned the consumer demand in the Chinese market. In the case study, compound space cafes, joint name cafes and cross-border cafes were selected as the target objects. Although the study was mainly aimed at the Chinese offline coffee shop market, the successful coffee shop marketing models in other countries had their reference significance.

3.3. Data Analysis

Since this was a synthesizing qualitative study, the collection of qualitative data often led to the accumulation of a large amount of information. The inductive method was generally used for qualitative data analysis. Induction can help to compress the original text data into a summary format; establish a clear link between the evaluation or research objectives and the summary results derived from the original data; and develop an infrastructure framework for experiences or processes that were evident in the raw data (Thomas, 2006). This study chose narrative analysis and thematic analysis. Narrative analysis was a method that emphasizes the stories that people told in interviews and other interactions with qualitative researchers. It was a unique strategy for analyzing qualitative data. In thematic synthesis analysis, reliable and effective results were obtained through secondary analysis of qualitative data about case studies (Bryman, 2012). The analysis of the field research results of Starbucks and WeWork directly reflected people's different usage situations for coffee shops and shared offices. The interview results were presented by the value proposition canvas, through which the findings showed the main needs of customers for the compound space cafe. Through the case comparison of different cafes, this paper used the stakeholder map to analyze the possible stakeholders. SWOT Analysis was used to analyze the market situation of compound space cafes.

4. Results and Findings

This chapter will present the research results, data analysis and key findings in detail according to the research design. According to the research gap in the literature review, the main purpose of this study is to study the compound space operation mode of cafes. To solve this problem, this chapter will first analyze the advantages and disadvantages of mainstream coffee shops and shared offices in the market through field research. Secondly, through interviews with post-90s female consumers in China, this chapter will represent the intention of consumers to compound space. Thirdly, the case comparison will analyze the different values of various forms of compound space for the future development of cafes and the promotion direction of digital technology.

4.1. Field Research Results

Starbucks

24th of June 2022 | 1:00 PM to 5:00 PM | WeWork in Westfield Stratford city



Figure 1. Field Research of Starbucks

Starbucks cafes were busy with many customers. Some customers were chatting with friends while individual customers were working with laptops. People brought laptops, books, and documents to coffee shops to work and study. Although the tables were small and became crowded after putting down customers' personal belongings, drinks and food, people seemed to like to stay there. Many freelancers and telecommuters preferred to work in a coffee shop rather than at home or in an office. Many college students chose cafes rather than libraries when they were reviewing at the end of the term or preparing for exams.

WeWork

1st of July 2022 | 4:00 PM to 6:00 PM | WeWork in London
8-14 MEARD St.

2 Sheraton St. Medius house.

9 Devonshire Square

15 Bishopsgate

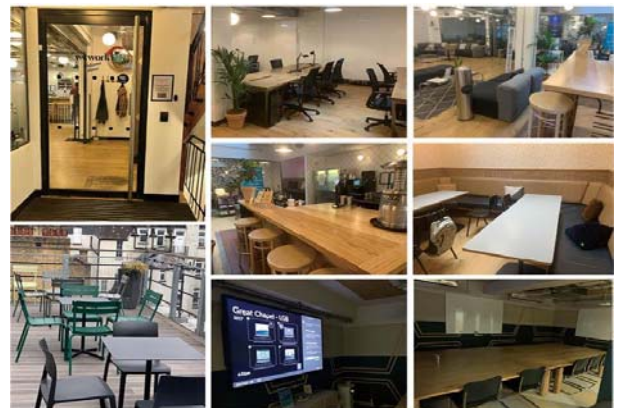


Figure 2. Field Research of WeWork

Through the field research of several WeWork offices in London, it was found that people working in WeWork rarely socialize or make friends, even though WeWork provides many activities. Since WeWork had food courts to provide free drinks, customers often rest there. Smoking, drinking coffee, and drinking beer together give some people the chance to make friends with their neighbours. WeWork saved the company the cost of furniture, maintenance, and food preparation for renting regular offices. In addition, music or chat did not affect users' attention. Most of the existing offices were rented by companies or groups and the fees were paid monthly. There were few temporary individual users, such as freelancers, independent designers, IT practitioners or students. There were few entertainment facilities and pets were forbidden.

Through the analysis of different usage of coffee shops and

shared offices, it was found that individual users were more likely to work or study in coffee shops, while remote office workers with companies or teams chose shared offices. This was because cafes provided free space and shared offices require rent, which was usually paid by the company. As a workplace, cafes and shared offices made users feel a sense of ceremony at work. The office environment of the cafe was not as good as the shared office. Although free Wi-Fi and charging were provided, the environment of the cafes was noisier, and the customer mobility was large. But even in such an environment, customers were able to concentrate, and the environment did not significantly affect work efficiency.

Whether in a coffee shop or a shared office, people preferred to be alone rather than make friends with people around them. Compared with the shared office, the cafe had the advantage of freedom and openness.

4.2. Interview Results

Through online interviews with post-90s Chinese female consumers, the research concluded the key answers to value propositions for cafes. (See interview questions in Appendices). Here is the Value proposition canvas from the answers of interviewees.

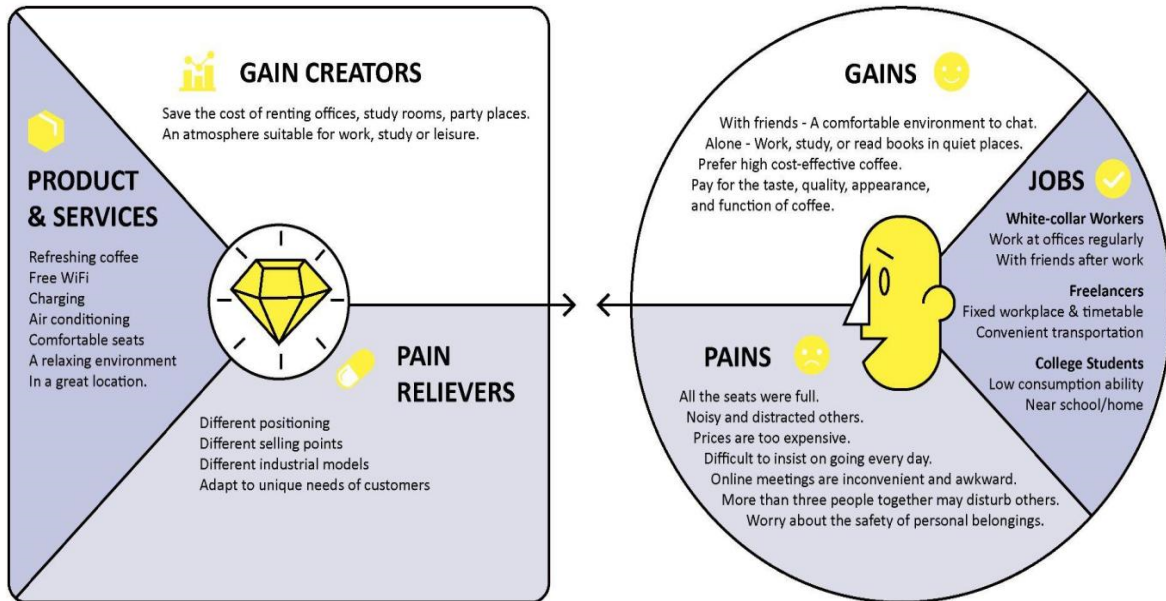


Figure 3. Value Proposition Canvas

Customer Jobs

The customer of cafes is mainly divided into three customer groups. First is the white-collar workers who work five days a week. They only go to cafes with friends after work or on weekends. The second group is freelancers, who need to work in places with no time limit and convenient transportation. The last one is the college students preparing for the test. They have low consumption ability and like to study with their classmates near the school or home.

Customer Gains

When going to the coffee shop with friends, customers hope to have a comfortable environment to chat with friends. When they go alone, they liked to work, study, or read books in quiet places. For the coffee itself, customers prefer highly cost-effective coffee. They are more willing to pay for the taste, quality, appearance, and function of coffee. For white-collar workers, when there is a demand for coffee consumption in scenes other than business and social networking, such as offices, homes, and commuting roads, they only want to pay for the coffee itself, and they need coffee brands with higher cost performance. For many students, on the one hand, need the refreshing effect of coffee; on the other hand, the improvement of living standards enables them to have stronger consumption power in leisure drinks than the previous generation. They have higher requirements for the taste and refreshing effect of coffee.

Customer Pains

In some fashion cafes, too many visitors make noise and distracted others. Or since there are too many customers to

order and all the seats are full. What's more, online meetings will be inconvenient and awkward when there are many people around. Generally, people come to the coffee shop themselves or with two or three friends. More than three people coming together will not choose to meet in the cafe, and they will feel that they would disturb others. When people go alone, they are worried about the safety of personal belongings. Some cafes have a good environment, but are too expensive. It is difficult to insist on going every day.

Products and Services

Most cafes provide refreshing coffee, free Wi-Fi, charging, air conditioning, comfortable seats, and a relaxing environment in a great location.

Gain Creators

Cafes help customers save the cost of renting offices, study rooms or party places. They create an atmosphere suitable for work, study, or leisure.

Pain Relievers

To target specific consumers, many independent coffee shops have different positioning and selling points and different industrial models to adapt to the unique site needs of customers. They let customers have a comfortable environment to rest on the way shopping or when they are accompanied. They let freelancers have a place close to home, a free place suitable for work. They let friends with the same interests have a meeting place.

The female consumers of the Z generation showed many new characteristics: personalization, self-pleasing consumption, higher consumption ability, network aborigines,

diversified aesthetics, circle differentiation, etc. Firstly, the consumption of the Z generation is more rational. Their consumption decisions are based on transparent information. They spend a lot of money and enthusiasm on their favourite brands. But for the products they do not like or need, they will pay nothing. In many consumption scenarios, whether coffee is used as a refreshing functional drink or a leisure drink to satisfy the appetite, no matter how moving the brand story of the coffee enterprise is, the Z generation only wants to pay for the value of coffee itself, such as taste, appearance, and effect. Secondly, the value orientation of the Z generation is more diverse, and their consumption needs were more personalized and different. It is difficult to label the Z generation with the aesthetic and value orientation of the previous generation. Generation Z is an undefined generation. They can be sweet, light, trendy and neutral. Their work is not only for money, but also for spiritual satisfaction. They know how to enjoy life better. The diversification of these value orientations enables Generation Z to examine the brands' personals more stereoscopically. Generation Z knows about the brand through the model images on the posters, the linguistic styles in the advertisements, the choices of the spokesperson, and the directions of product innovation. They want to know whether the brand is the same as theirs, and then decide whether to buy these coffee brands. Finally, Generation Z is not concentrated in one place. Due to the diversity of interest circles and the development of social media, traditional marketing methods and media channels cannot reach many Z generations. If the cafe wants to contact more customers, online and offline were both important. Coffee brands need to take the initiative to enter the online world, tell their brand concepts, and stick to their values.

4.3. Case Study Results

With the evolution of urban culture, young people with novel personalities not only choose large coffee chain brands such as Starbucks, but also stick to cheap and affordable coffee, such as Luckin Coffee. They also pursue quality and uniqueness. Some people with better life quality will choose high-quality cafes with a nice atmosphere. For this reason, more and more coffee shops sell creative products and establish diversified consumption scenarios in the hope that their coffee culture can penetrate younger groups. From the return of individuality to the focus on consumer demand, people's consumption concept has undergone a great change. Consumers no longer focus on brand and price, but on quality. Small but beautiful and high-quality things are gradually favoured by young people.

What's more, the design of cafes is gradually modernized. The rise of new cafes challenges the business model of traditional cafes. They have achieved great success in business through experience in marketing and design innovation. With the emergence of more and more niche cafes, many cafes have begun to find new ways of cross-border art. Coffee culture has penetrated the lives of normal people and is sought after by many young people. The consumption essence of cafes has changed slightly from the coffee itself to an attractive art scene. This change has given birth to a new consumption orientation, which is to guide other customers to follow the trend of consuming in famous cafes.

Through case studies of cafes in various consumption scenarios, this research analyzed their different experience marketing models from their position, price, products, services, style, and location.

Table 1. Cafe Case Study

	Chain	Bookstore	Co-Work	Gallery	Fashion	Health
Brands	Starbucks	Xinhua Bookstore	Writing Cafe	Plum	Gucci	Tongrentang
Position	Office people	Artistic young people, Students	Freelancers Teleworkers	Artistic young people, Artists	Brand customers	Pursue health, believe in traditional Chinese medicine
Coffee Price (RMB)	30+	15+	15+	40+	100+	30+
Products	Coffee, Snack	Coffee, Soft Drink, Books, Cultural & creative products	Coffee, Seats	Coffee, Wine, Soft drink, Artwork	Coffee, Tea, Dessert	Coffee, Dessert, Porridge, Traditional Chinese Medicine
Services	WiFi Seats Charging	Book signings, Lecture	Deadline manage	Exhibition Lecture Show	Convey brand concept	Medical advice TCM physiotherapy
Style	Business Casual	Quiet Literary	Simple Bright Warm	Relaxing Artistic Innovative	Fashion Romantic Elegant	Plain Folkloric Healthy
Location	Business offices, Shopping mall	Shopping mall	Residential area	Villa Art Park	Shopping mall	Business offices, Residential area

(See bibliography for the website link)

According to the results of the case study, the consumers of

the cafe can be white-collar workers, literary and artistic youths, artists, customers of fashion luxury brands, young people pursuing health and wellness, or freelancers, remote

workers and students looking for offices and learning places. Cafes also offer a variety of products and services. The coffee shop selects the products consistent with the tone according to its position, which is not only a part of the decoration, but also an auxiliary product. Besides good coffee and delicious desserts, the products in cafes include other drinks, cultural and creative products, books, and artworks. These products lead to different prices. Pricing is related to the target customers of coffee shops. Most coffee drinkers will not sacrifice quality because of the expensive price. The style of

the cafe represents the unique personality of each one. Since people are divided into groups, a fixed atmosphere can retain customers who like it and form a stable customer group. The locations of cafes are also varied. Some are traditional in commercial centres and office buildings, while some are hidden in communities, residential buildings, art parks, and even post offices.

Through stakeholder map analysis, the main stakeholders of the cafe can be divided into five categories: managing, co-producing, co-designing, consulting, and informing.

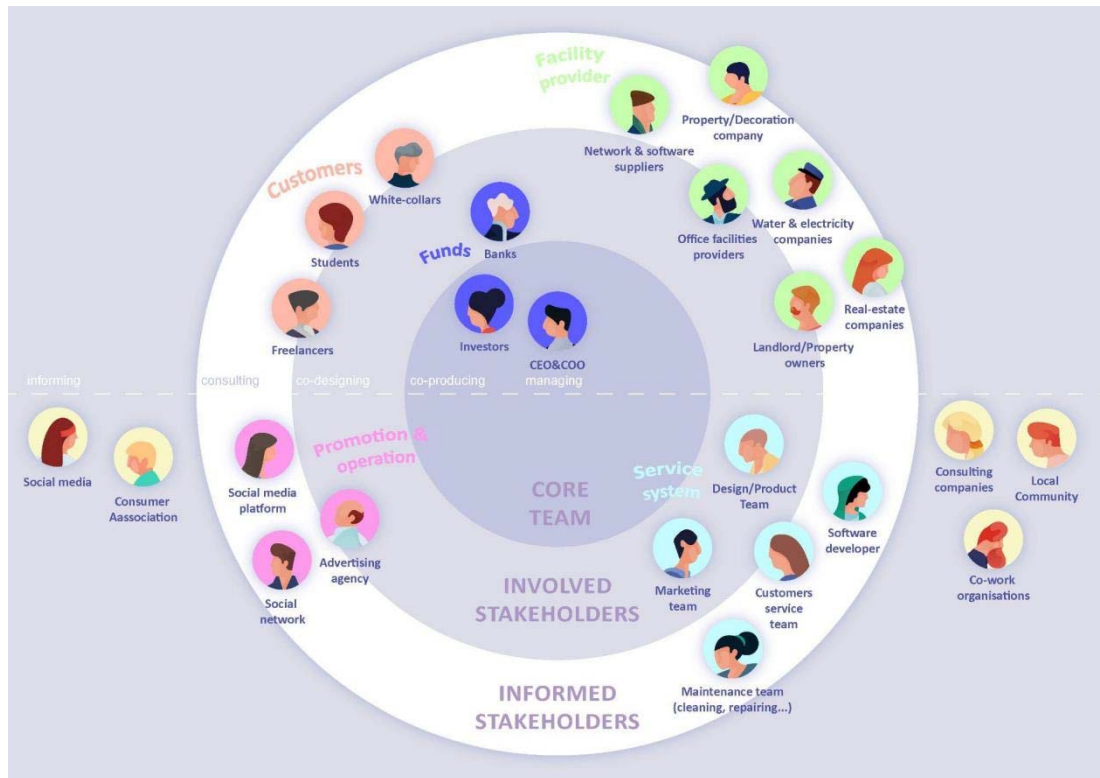


Figure 4. Stakeholder Map

Managing stakeholders have the greatest impact on cafes, and their activities and decisions will indirectly provide the most direct impact and value for cafes. Therefore, this part is the CEO and COOs of cafes. The investors represented by these people include banks and other capital investors, and they are stakeholders with great influence. Producing stockholders participating in Co-producing can generally provide all aspects of value directly for the company and organization to obtain operational support. For example, the design team creates service and product prototypes for cafes, the marketing department obtains more customers for cafes, and publicizes that the company produces higher popularity for cafes. Co-designing stakeholders are individuals and organizations. They all participate in the operation of the coffee shop and have a more direct influence on cafes. The people or organizations affected by these coffee shops will also shape the coffee shops in turn. The most common roles are consumers, employees, competitors, suppliers, etc. They can be divided into internal and external roles. Some external stakeholders, such as Starbucks' competitor Nestle, seem to have no direct connection between the central part, but they have participated in the joint design for a long time. Consulting is far away from the centre. These stakeholders have less time and interact with the coffee shop. They provide reference value and suggestions. For example, coffee shop partners, including social media platforms and social network

workers, mainly give feedback to cafes on consumers' preferences according to the popularity of the Internet. These stakeholders will not affect the development of the coffee shop owner's business. There is only some weak information exchange between Informing stakeholders and cafes. The information exchange between them and cafes is not based on the main business carried out by cafes, but more on an organization that establishes contact under special circumstances, such as the Consumer Association.

4.4. Summary

These results showed that the slow-paced consumption of cafes determined that they could not increase their profits by increasing the turnover rate. Guests often sit for half a day in the coffee shop with high requirements for products, services, and the environment. Cafes chose to innovate in added value to improve their competitiveness. From the characteristic business modes to the characteristic products, and then to the characteristic environment, cafes combined the compound space operation modes to provide consumers with a variety of consumption scenarios and strengthen the sensory experience, including vision, hearing, taste, smell, and touch. Consumers wanted freedom to choose the cafe they need to work, study, relax, or party. The compound space cafe with additional scene functions was more popular among young people. They were more likely to consume for the sake of beauty and

emotion, such as exquisite coffee packaging, stylish decoration, sentimental music, and tasteful limited products. The opinions of consumers and the spread of social media promoted the reform of cafes, so that the needs of consumers could be directly fed back to the coffee shop, and the new products of the coffee shop could be pushed to the target customers faster.

5. Discussions

This chapter will analyze and explain the results from chapter four combined with the theories in chapter two. This chapter will describe the operation modes of the compound space cafes, the experience consumption of cafe customers, and the commoditization of coffee. Also, this chapter will analyze the cafe market through SWOT Analysis, put forward suggestions on the future development direction of cafes, and indicate the limitations of these research results.

5.1. Synthetic Findings

Cafes added value through the operation mode of compound space to attract customers and seize the “extra time” of consumers. As mentioned in the basic concepts, as a kind of cultural space and leisure place, the compound space cafe met the needs of urban people for additional space (Jin et al., 2017). As a social space other than family space and workspace, cafes afforded people's spiritual needs for social interaction, creativity, and entertainment (Oldenburg, 1997). As the previous research from Fu (2022) mentioned, offline cafes played an important role in increasing brand influence and enhancing customer stickiness. In the future, the offline coffee shop brand should be diversified and create compound space with different positions to meet the customers' needs.

The research proved that compared with products, consumers paid more attention to the experience in cafes (Vanharanta et al., 2015). The subjective feeling of customers was a part of the value in the experience process and one of the characteristics of products and services (Charters, 2006). Humans not only paid for functions, but also bought products that they did not need because of beauty or emotion (Norman, 2005). In addition to the quality of the coffee itself, the visual experience brought by the decoration of the coffee shop and the atmosphere they create were part of the selling points. Nowadays, there were more and more coffee shops with personality. This kind of personality did not stop at appearance, but formed the perspective of design and management, injects understanding of human feelings and presented observation of life. In terms of the decoration style of cafes, the decoration styles of Chinese cafes were extremely diverse, including Japanese style (with logs, warm and friendly), industrial style (with cement and steel, dark and cool), Korean minimalist (pure white, clean, and simple, geometric style), American retro style (with antique soft clothes), Chinese style (with woods, Chinese ancient decoration, and Chinese appliances) and so on. And as consumers were trained to be pickier, the decoration style was increasing.

However, the high-end and elite characteristics of coffee were broken. It has become a consensus that good coffee should not be so expensive. Affordable coffee has entered people's daily life and become the demand of post-90s women (Alibaba, 2022). Similarly, telecommuting was no longer exclusive to high-end elites. Many ordinary white-collar workers and freelancers have joined the ranks of remote work. Besides, many college students who have not graduated yet,

like to go to cafes with their laptops. These customers do not have high consumption ability, but they are potential customers of cafes. Lowering the price of coffee consumption would enable students and young people who have just entered the workplace to afford it. Cafes were suggested to put down their attitude, abandon transitional packaging, reduce costs, and choose more automatic and digital equipment under the control of quality while ensuring the brand culture. The customer group of coffee has expanded, and the consumption capacity has decreased. The brand tone should be changed accordingly. These results followed the report from Alibaba (2022) on China's coffee industry: the potential coffee market is huge, and cafes are no longer exclusive to Beijing, Shanghai, and Guangzhou (Alibaba, 2022).

5.2. SWOT Analysis of Cafe Market

Strengths

Cafes are constantly updated iteratively. They created various consumption scenarios to meet different needs. Most cafes provide a good atmosphere and environment, such as bright light, soft music, large windows, and green plants. Customers can choose a leisure place or a workplace as they like.

Weaknesses

For customers who want to work in the cafe, there is a lack of essential amenities, such as spacious tables, plugs, battery chargers, self-service systems, and hand sanitiser. The unclear positioning of some coffee shops leads to the pricing exceeding the consumption level of consumers.

Opportunities

After the COVID-19 pandemic, with the development of science and technology, remote work has become more popular, and more people choose to work and study in cafes. People also pay more attention to mental and physical health and are willing to pay for the beauty and emotion of the offline experience.

Threats

Co-working offices have occupied most of the market of freelancers and startups. They provide professional amenities and an open office structure, replacing the original third space function of the cafe. What's more, milk tea shops, as a major industry of beverage, are competing with coffee shops in the consumer market.

5.3. Future Suggestions for the Cafe Industry

For offline cafe brands, digital capabilities can be used to innovate the traditional function of the third space, create different scenes with high technology, and provide customers with a diversified spatial consumption experience. Cafes can combine unique business models and unique artistic styles to create different scenes with internal space under specific themes, to stimulate people's imagination of space, love of culture, or nostalgia for the old times. By changing the use of space, cafes can connect cities and communities. With the change in usage and user groups, cafes can be used as studios and as activity spaces. Through simple changes in lighting, music, and smell, they can hold various activities.

Coffee brands can also be combined with other drinks, such as coconut milk, fruit juice, tea, etc., to achieve brand rejuvenation. Since coffee corresponds to young consumers, if brands want to be remembered by youth, they need to be driven by the trend culture popular among young people to empower these brands and enhance the user stickiness.

Whether it is Tongrentang or Xinhua Bookstore, it combines the traditional Chinese culture with the trend. This is a combination of traditional culture and modern culture to help the brand radiate to a younger audience and help the brand stand out. Cafes need to break the inherent cognition of consumers, integrate with the trend culture, and be closer to the life of young people. The content of healthy and charming packaging breaks the old impression of consumers on brand and improve the brand awareness. In the era of rapid development of new media, giving social attributes to coffee brands can provide topics and heat and drive the development of brands. The fast pace of updating products, high appearance, and topical marketing cause consumers to go to cafes, take photos and share with friends. The unique decoration of cafes can attract the attention of consumers.

6. Conclusion

6.1. Summary

The present research aimed to study the new operation of compound space cafes during the post-Covid-19 pandemic and the Internet 4.0 era. This study found that compound space cafes were built through the interaction of combining social places and consumer places. The results of cafe case studies showed that the rise of compound space cafes and the popularity of coffee culture were related to the increasing sophistication of cafes that had unique themes and carried the owners' understanding of life, culture, and art. One of the significant findings of the interview was that drinking coffee was no longer a luxury for literary and artistic youths or elites. It became a social phenomenon of taking photos in coffee shops and posting photos on social media. Customers loved reading, thinking, working, and negotiating business there. When it appeared frequently, going to cafes became a habit of some people, and formed a lifestyle.

6.2. Contributions

This paper was of great significance to understand the operation mode of commercial compound space. This new understanding should be helpful to study the development trend of the Chinese cafe industry. In recent years, with the advent of the entrepreneurship boom, and the rise of mobile offices and freelancers, more people used coffee shops as maker's space or joint offices. In the past, people often had a well-defined mission and direction as a member of the team. On the contrary, more freelancers lived on their skills. Many start-ups, small enterprises, and part-time jobs had their place in the market (Kojo & Nenonen, 2014). One laptop, one cup of coffee and a quiet environment allow a designer to work anywhere. The findings showed that the demand for free office places was increasing. The fundamental reason for the appearance of the shared workspace was the popularity of telework among urban people. Through various creative parks and shared spaces, creative talents with similar temperaments attracted each other and gathered. Cafes created opportunities for people who had no intersection in the city to reunite.

At the same time, this research helped to establish a new orientation and cognition for cafes facing public consumers. As a low-price consumption place, the cafe has been changing with the development of the city and the change in people's lives, which was also the important reason for its vitality. Urban public space, represented by cafes, was always in a dynamic process of continuous encoding and decoding of representation symbols, and gradually became the normal

code of culture and daily life. Urban public space refers to the enclosure of vertical and horizontal interfaces of various buildings and environmental elements in the city, which is often called open space (Tonnelat, 2009). Jane Jacobs (1961), a famous American urban planner, pointed out that the most basic feature of a city is human activities. The most dynamic place in a city is the public space of the city. Urban public space is not only physical space, or natural space, but also the carrier of cultural symbols. Based on a certain social identity and context, the producers of cultural symbols of public space give cultural representation in the context of urban public space consumption. The research approved that many coffee shops enhanced the connection between indoor space and the urban environment through exquisite design, to form a greater integrated sight. Reconstructing the structure of urban public space would lead to the return of the cultural attribute of urban public space.

References

- [1] Alibaba New Service Research Center, Ele Me, & Tmall Cafe. (2022) *New Wave of Chinese Coffee - 2022 China Coffee Industry Development Report*
- [2] Bernson, A. C. (2011) *The social space of the café: How service and physical design condition social performances*. Available from: <https://doi.org/10.14418/wes01.1.1662> (Accessed: 08 August 2022)
- [3] Bounfour, A. (2016) *Digital Futures, Digital Transformation: From lean production to acceluction*. Springer.
- [4] Brennan, S. (2022) '10 most famous coffee chains in the world (2022 update)', *Coffee Affection*. Available at: <https://coffeeaffection.com/most-famous-coffee-chains/> (Accessed: 04 August 2022)
- [5] Bryman, A. (2012) *Qualitative data analysis*. In *Social Research Methods* (pp. 594–599). essay, Oxford University Press, pp. 594-599.
- [6] Chadios, K. (2005) *The Urban Coffee Shop*.
- [7] Charters, S. (2006) 'Aesthetic products and aesthetic consumption: A Review', *Consumption Markets & Culture*, 9(3), pp. 235–255. Available from: <https://doi.org/10.1080/10253860600772255> (Accessed: 13 August 2022)
- [8] Cheng, J., Chen, W., Tao, F., & Lin, C.-L. (2018) 'Industrial IOT in 5G environment towards Smart Manufacturing', *Journal of Industrial Information Integration*, 10, pp. 10–19. Available from: <https://doi.org/10.1016/j.jii.2018.04.001> (Accessed: 12 August 2022)
- [9] Clark, T. (2007) 'Starbucked. New York: Little, Brown, and Company', *Coffee Futures*. *Coffee Futures Trader*, October 6. Available from: <http://coffeetrader.blogspot.com/2007/10/coffee-futures-historical-perspective.html/> (Accessed: 08 August 2022)
- [10] Creswell, J. W., & Creswell, J. D. (2018) *Research design: Qualitative, and mixed methods approaches*. London: Sage.
- [11] Cugurullo, F. (2020) 'Urban Artificial Intelligence: From automation to autonomy in the smart city', *Frontiers in Sustainable Cities*, 2. Available from: <https://doi.org/10.3389/frsc.2020.00038> (Accessed: 12 August 2022)
- [12] Cvetkovic, A. (2021) *A remote-first company goes hybrid*. WeWork.
- [13] Diao, L. (2017) 'Research on the marketing strategy of "Coffee Shop +" innovative experience space'. Guizhou University.

- Available from: DOI : CNKI:CDMD:2.1017.877762 (Accessed: 18 August 2022)
- [14] Estate, R. (2022) Top Wework Competitors In 2022. What Competitors. Available at: <https://whatcompetitors.com/wework/> (Accessed: 20 July 2022)
- [15] Euromonitor, (2019) 'Luckin Coffee and the Evolution of Coffee in China', Euromonitor International. Available at:
- [16] <https://www.euromonitor.com/luckin-coffee-and-the-evolution-of-coffee-in-china/report/> (Accessed: 14 August 2022)
- [17] Ferreira, J., Ferreira, C., & Bos, E. (2021) 'Spaces of consumption, connection, and community: Exploring the role of the coffee shop in Urban lives', *Geoforum*, 119, pp. 21–29. Available from: <https://doi.org/10.1016/j.geoforum.2020.12.024> (Accessed: 15 August 2022)
- [18] Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013) 'Embracing Digital Technology A New Strategic Imperative', MIT Sloan Management Review Research Report 2013.
- [19] Fu, J. (2022) 'Expansion and fierce competition: the "Crazy" coffee shop competition in 2021', *Global Brand Insight*. Available from: <http://www.c-gbi.com/v6/9999.html/> (Accessed: 20 August 2022)
- [20] Fuller, A., Fan, Z., Day, C., & Barlow, C. (2020) 'Digital Twin: Enabling Technologies, challenges and open research', *IEEE Access*, 8, pp. 108952–108971. Available from: <https://doi.org/10.1109/access.2020.2998358> (Accessed: 12 August 2022)
- [21] Hammersley, M. (2012) *What is Qualitative Research?* London and New York: Bloomsbury.
- [22] Hess, T., Matt, C., Benlian, A., & Wiesböck, F. (2020) 'Options for formulating a digital transformation strategy', *Strategic Information Management*, pp. 151–173. Available from: <https://doi.org/10.4324/9780429286797-7> (Accessed: 13 August 2022)
- [23] Jacobs, J. (1961) *The death and life of great american cities*. New York: Random House.
- [24] Jeon, M.-K. & Oh, J.-W., (2019) 'Study on listening to white noise of Nursing College students and improvement of concentration', *Medico-Legal Update*, 19(1), p.304.
- [25] Jin, L., Zhang, X., Dan, B., & Li, S. (2017) 'Design of O2O supply chain commission contract based on "offline experience + online retail" under cross selling', *China Management Science*, 11, pp. 33–46.
- [26] Kojo, I. & Nenonen, S. (2014) 'Evolution of co-working places: Drivers and possibilities', *Intelligent Buildings International*, 9(3), pp.164–175.
- [27] Lee, S.-Y., 2020. 'Study on digital transformation strategies: Starbucks case study', *Journal of Digital Contents Society*, 21(10), pp.1809–1816. Available from: <https://doi.org/10.9728/dcs.2020.21.10.1809> (Accessed: 23 August 2022)
- [28] Lu, Y. (2021) 'The current status and developing trends of Industry 4.0: A Review', *Information Systems Frontiers*. Available from: <https://doi.org/10.1007/s10796-021-10221-w> (Accessed: 12 August 2022)
- [29] Mack, L. (2010) 'The philosophical underpinnings of Educational Research', *Polyglossia*. Available at: https://www.academia.edu/en/36043663/The_Philosophical_Underpinnings_of_Educational_Research/ (Accessed: 22 August 2022)
- [30] Matt, C., Hess, T., & Benlian, A. (2015) 'Digital Transformation Strategies', *Business & Information Systems Engineering*, 57(5), pp. 339–343. Available from: <https://doi.org/10.1007/s12599-015-0401-5> (Accessed: 12 August 2022)
- [31] Meddings, S. (2022) 'Starbucks explores sale of Uk division', *The Times*.
- [32] Montgomery, J. (1997) 'Café culture and the city: The role of pavement cafés in urban public social life', *Journal of Urban Design*, 2(1), pp. 83–102. Available from: <https://doi.org/10.1080/13574809708724397> (Accessed: 03 August 2022)
- [33] Ng, C. F. (2016) 'Public spaces as workplace for mobile knowledge workers', *Journal of*
- [34] *Corporate Real Estate*, 18(3), pp. 209–223. Available from: <https://doi.org/10.1108/jcre-10-2015-0030> (Accessed: 03 August 2022)
- [35] Nielsen, E., G. (2015) 'The Coffee Shop Effect: Investigating the Relationship between Ambient Noise and Cognitive Flexibility', *Electronic Thesis and Dissertation Repository*. 3197. Available from: <https://ir.lib.uwo.ca/etd/3197/> (Accessed: 16 August 2022)
- [36] Norman, D. A. (2005) *Emotional design: Why we love (or hate) everyday things*. Basic Books.
- [37] Oldenburg, R. (1997) 'Our Vanishing "Third Places"', *Planning commissioners journal*. *plannersweb*. Available from: <https://www.plannersweb.com/wp-content/uploads/1997/01/184.pdf/> (Accessed: 16 August 2022)
- [38] Patch, J., Heeks, A., Luppino, K., Nims, M., Ortiz, M., Presutti, K., & Reid, C. (2021) 'Coffee + COVID: People, place, and pandemic', *Visual Studies*, 36(2), pp. 153–158. Available from: <https://doi.org/10.1080/1472586x.2021.1912635> (Accessed: 02 August 2022)
- [40] Rytel, T. (2010) 'Emotional marketing concept: The new marketing shift in the postmodern era', *Verslas Teorija Ir Praktika*, 11(1), pp. 30–38. Available from: <https://doi.org/10.3846/btp.2010.04> (Accessed: 17 August 2022)
- [41] Salzen, E. A. (1978) 'Social attachment and a sense of security — a review', *Social Science Information*, 17(4-5), pp. 555–627. Available from: <https://doi.org/10.1177/053901847801700404> (Accessed: 14 August 2022)
- [42] Saputra, N., Sasanti, N., Alamsjah, F., & Sadeli, F. (2022) 'Strategic role of digital capability on business agility during COVID-19 ERA', *Procedia Computer Science*, 197, pp. 326–335. Available from: <https://doi.org/10.1016/j.procs.2021.12.147> (Accessed: 12 August 2022)
- [43] Sofaer, S., (1999) 'Qualitative methods: What are they and why use them?', *Health services research*. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1089055/> (Accessed: 24 August 2022)
- [44] Song, W. (2022) 'Meituan Delivery released the "Shanghai coffee rising star growth plan" and invested 700 million yuan to help Shanghai coffee brands go nationwide', *Shanghai Securities News, China Securities Network*. Available at: https://news.cnstock.com/news_bwqx-202208-4934159.htm/ (Accessed: 16 August 2022)
- [45] Starbucks. (2022) 'Starbucks Fiscal 2021 Annual Report', Starbucks Corporation - Financial Data - Annual Reports. Available from: <https://investor.starbucks.com/financial-data/annual-reports/default.aspx/> (Accessed: 13 August 2022)
- [46] Starbucks. (2022) 'Starbucks Reports Q3 Fiscal 2022 Results', Starbucks Corporation -
- [47] Starbucks Reports Q3 Fiscal 2022 Results. Available from: <https://investor.starbucks.com/press-releases/financial->

- releases/press-release-details/2022/Starbucks-Reports-Q3-Fiscal-2022-Results/default.aspx/ (Accessed: 13 August 2022)
- [48] Sudono, A. (2019) Coffee Shop as a workspace in Bandung. Proceedings of the 1st NHI Tourism Forum.
- [49] Sutton, J. (2007) 'Sunk costs and market structure: Price Competition, advertising, and the evolution of concentration', The MIT Press.
- [50] Szajnfarber, Z., & Gralla, E. (2017) 'Qualitative methods for engineering systems: Why we need them and how to use them', *Systems Engineering*, 20(6), pp.497–511.
- [51] Thomas, D. R. (2006) 'A general inductive approach for analyzing Qualitative Evaluation Data', *American Journal of Evaluation*, 27(2), pp. 237–246. Available from: <https://doi.org/10.1177/1098214005283748> (Accessed: 23 August 2022)
- [52] Tonnelat, S. (2009) 'The Sociology of Urban Public Spaces', *Urban Planning Overseas*, 24(4), pp. 40–45.
- [53] Tucker, C. M. (2011) 'Coffee culture: Local experiences, global connections', Routledge.
- [54] Tuli, F. (2011) 'The basis of distinction between qualitative and quantitative research in social science: reflection on ontological, epistemological and methodological perspectives', *Ethiopian Journal of Education and Sciences*, 6(1). Available from: <https://doi.org/10.4314/ejesc.v6i1.65384> (Accessed: 23 August 2022)
- [55] Vanharanta, H., Kantola, J., & Seikola, S. (2015) 'Customers' conscious experience in a coffee shop', *Procedia Manufacturing*, 3, pp. 618–625. Available from: <https://doi.org/10.1016/j.promfg.2015.07.283> (Accessed: 13 August 2022)
- [56] Vial, G. (2021) 'Understanding digital transformation', *Managing Digital Transformation*, pp. 13–66. Available from: <https://doi.org/10.4324/9781003008637-4> (Accessed: 07 August 2022)
- [57] Vittorio, D. M., & Linda, W. (1990) Telework: a new way of working and living. *International labour review*. 129(5), pp. 529-554.
- [58] Wellington, J. J., & Szczerbinski, M. (2007) 'Research methods for the Social Sciences', Continuum International Pub. Group.
- [59] WeWork. (2022) Inclusion & Diversity at WeWork. Available at: <https://www.wework.com/info/inclusion/> (Accessed: 12 August 2022)
- [60] WeWork. (2022) Office Space for Rent in the United Kingdom | WeWork. Available at: <https://www.wework.com/en-GB/l/office-space/united-kingdom/> (Accessed: 12 August 2022)
- [61] Wiesböck, F., & Hess, T. (2019) 'Digital Innovations', *Electronic Markets*, 30(1), pp. 75–86. Available from: <https://doi.org/10.1007/s12525-019-00364-9> (Accessed: 08 August 2022)
- [62] Wright, B. et al. (2021) 'WeWork and the largest coworking companies in 2021', Upsuite Coworking. Available at: <https://www.upsuite.com/blog/the-largest-coworking-companies-wework-top-competitors/> (Accessed: 04 August 2022)
- [63] Yang, S. (2015) 'Research on Design of commercial compound space -- Analysis from three perspectives of behavior, function and interface [D]'. Nanjing University.
- [64] Zuberbühler, K. (2008) 'Audience effects', *Current Biology*, 18(5). Available from: <https://doi.org/10.1016/j.cub.2007.12.041> (Accessed: 12 August 2022)