Exploring the Traditional Art Design in Urban Space Based on Interactive Media Arts: A Case Study of China

Yue Zhai[1,a,*]

[1]*Loughborough University London, Queen Elizabeth Olympic Park, London, E20 3BS, UK*
a. 243316850@qq.com
*corresponding author

Abstract: As a cultural communication medium, art needs to be developed and passed on. In an environment where traditional culture and art are gradually being forgotten, interactive media is particularly important. Compared with traditional media, interactive media is more guiding and interactive, and can also stimulate people's interest in traditional art and culture. The interactive media incorporated into modern urban design can better establish connections between traditional art culture, artists and the public, making traditional art culture truly come alive and integrated into urban space design. The addition of interactive media enables people to not only appreciate but also have a strong sense of participation. This article verifies the influence of interactive media in changing traditional culture and art by studying the impact of interactive media on traditional culture when interacting with the audience, and explores how interactive media art can be integrated into urban space design.

Keywords: Public Space Art, Traditional Art Culture, New Media Art Design

1. Introduction

1.1. Background

The urban spaces in China have been an embodiment of traditional art designs based on interactive media art with technological innovation. Technically and theoretically, interactive media art differs from traditional public art in that it demonstrates more accessibility, responsiveness, and even attractiveness since interactivity has become an increasingly prominent characteristic of public art in modern urban spaces [1]. The interaction of traditional public art design with interactive technology leads to the transfer of creative power and the transformation of skill value, and the interactive character of the artwork is no longer a choice but rather a need of the present era. Modern urban space design has become the embodiment of traditional art designs based on interactive media art in China to foster a strong feeling of engagement.

The uses of traditional art designs based on interactive media art in urban spaces establish a connection between the artist and the audience and provide a space for interaction [2,3-4]. The artist does not have complete control over the substance of the work; rather, the audience has some say in the creative process, which distinguishes it from other forms of public art in urban spaces. The traditional art design based on interactive media art will be made accessible for everyone to enjoy and same their feedback. Thus, understanding how interactive art design connects artists and audiences and how Chinese urban audiences see traditional art design based on interactive media arts

is crucial. The research aims to explore the traditional art design in the urban space of China based on interactive media art.

1.2. Research Questions

The following is a list of research questions that will help in the process of attaining the goal of the study:

• How does the use of interactive media art influence the traditional art design of urban spaces in China?

• How does the traditional art design base on interactive media arts in the urban spaces of China bridge the gap between artists and audiences?

• How does the Chinese audience perceive the use of traditional art design based on interactive media arts in urban spaces of China?

1.3. Research Objectives

The purpose of the research is to explore the traditional art design based on interactive media art in the urban spaces of China. The following objectives will help to better address the research questions of the research:

• To investigate the influence of interactive media art on the traditional art design of urban spaces in China

• To identify how traditional art design based on interactive media art bridges the gap between artists and audiences in urban spaces in China

• To examine the perception of Chinese audiences on the use of traditional art design based on interactive media arts in urban spaces in China

2. Literature review

Researchers are studying how interactive media art has influenced traditional culture. This research will look into traditional media art in Chinese urban spaces that are based on interactive media arts. In this way, it will add something distinctive and intriguing to the existing research literature.

2.1. Interactive media art influences traditional art design of urban spaces in China

Urban space design has been turned into interactive media art as a result of technological innovations in China. According to the findings of many studies, the connection between traditional art design and urban space in China has gradually shifted toward interactive art designs over the course of time [5]. In support, Yang [6] argued that technological innovation has resulted in the creation of a new conceptual framework for architecture and artists as a means for interactive planning utilizing traditional art design based on interactive media arts and connecting it with human behaviour. It indicates that traditional art designs have been transformed with the use of technology in the context of interactive media art in urban spaces. Traditional art designs became influenced by interactive media art design, which in turn transformed the manner in which people shared information and ideas as well as engaged with each other through the creative use of technology.

Interactive media art design has fundamentally altered traditional art designs in accordance with the change in human behaviour using lighting, graphics, images, etc. On the other hand, Choi and Chung [7] suggested that the use of interactive media arts like graphics, photographs, and other similar things might make the already established traditional art design of urban spaces increasingly problematic. In his support, [8] stated that interactive media art design's visual-audible interaction might challenge the audience's ideas of urban space and the development process to improve space-

people interaction. However, these studies have only focused on the negative effects that technological innovation has had on social cognition. They have ignored the positive effects, such as an improvement in people's ability to interact with one another and connect with the space, which limited the scope of these studies. In general, it is essential to have a thorough understanding of the influence that interactive media art has had on the traditional art designs of urban spaces in China.

2.2. Traditional art design based on interactive media art bridging the gap between artists and audience

The contemporary urban space in China seeks to use interactive media art in order to accomplish the engagement that is intended to take place between the user and the space. According to [9], interactive media art has been used by artists to guide users through the complex alterations made to the urban environment and relational design. In this support, Chen[10]stated that modern urban space design incorporates an understanding of the meaningful environment, the physical environment, and objects, as well as a grasp of objectivity and technology, in addition to being influenced by art and aesthetics. It signified that the artist of the interactive media art design has been taking into account social behaviour as well as the conceptual designing of many aspects of traditional art and culture when engaging in the design of urban spaces. Technology has expanded public interactive media art design. These advancements strive to balance the physical and natural harmony provided by all artist designs. Traditional art design based on interactive media art in urban places encouraged audience participation and interaction.

With this interaction, the traditional art designs based on interactive media art narrowed down the gap between the artist and the audience. However, scholars have argued that interactive media art in urban spaces based on the principles of audience engagement overlooks the viewpoint of the artists since the augmentation of audience involvement limits the scope for artists to convey their perspectives [11,12]. These findings have their own limitations as they were based on limited sample size. Hence, these findings cannot provide a broad perspective on a large audience. On the whole, the interaction that develops between the artist and the audience as a result of the use of interactive media art in urban spaces has to be examined.

2.3. Perception of the audience on traditional art design based on interactive media art in urban spaces of China

Traditional art design based on interactive media art in urban spaces has become a popular culture in China. The traditional design of urban space has been transformed into an all-encompassing expression of both the personality and the communal awareness of an artist as a result of interactive media art [13]. According to [14], the traditional art design based on interactive media art has become a comprehensive reflection of individual thought as well as community awareness. It makes an effort to integrate society, enlist the involvement of the audience, and redefine the consistency and variety of a range of issues that affected society through the creative uses of technology. The coexistence of various forms of information transmission has become quite widely manifested as a result of the influence of interactive media art in urban spaces of China. As an integral part of the city, the facilities in urban spaces have been reflecting urban growth and urban culture. It has been incorporated into a human–environment system with the urban environment and humans. Traditional art design based on interactive media art technology helped urban places and people build an interactive experience system based on user behaviour environment technology.

The manner in which people have been accepting information has become an increasingly broader and deeper form of communication. In addition, artists and audiences who possess a high level of creative culture and public awareness will also play a positive role in moulding the public space of

the whole city. In contrast, scholars have suggested that the design of interactive media art in the urban area ought to take into consideration both the practical and the aesthetic aspects [15]. In support, Markussen[16]argued that the people who live in the city space need to adjust to the cultural and geographical environment that surrounds them which includes adjusting to changes in the level of participation that have happened in areas such as receiving, identifying, storing, and processing information. However, these studies failed to explain how technological advancement has affected people's lives and how artists have used traditional and modern elements in their designs to attract audiences throughout time. Therefore, it is of the utmost importance to do research into the way in which the Chinese audience understands traditional art designs that are based on interactive media art in urban space.

There has been a significant number of research into interactive media art, traditional art patterns/design, and cultural practices. However, most of these studies focused on how traditional art and culture have influenced interactive media art. There is a lack of empirical study on traditional urban art designs that are based on interactive media arts in Asian countries like China. These gaps in the existing research will be addressed in this research.

3.   Research Methodology

3.1.   Research Theory

The collaborative framework of Moere and Hill asserts that the practical and aesthetic aspects of urban space designs must complement one another; Evan's analytical framework provides the framework to analyse the individuality, creativity, and perception of the artists based on their interactive media art artwork; and the theoretical framework of Yang et al., which links the design of a place to human behaviour. These three frameworks will be providing the major perspective to the study. The framework provides the basis for the current study as it evaluates the different aspects of interactive media art and develops the framework to explore the different aspects of interactive media art design in different spaces such as behaviourism, individualism, and perception. The framework will help in examining the influence of interactive media art on traditional art design, how interactive media art design provides a chance for the artist to present their individuality to the audience, and the perception of the audience on these interactive media arts in the urban space of China.

3.2.   Data and method

The aim of the study will be achieved using the qualitative approach. The method of a case study will be used in order to investigate the influence that interactive media art has had on the traditional art designs found in the urban spaces of China. The study will only take into account a total of 3 to 4 case studies, each of which will be focusing on the traditional art design based on interactive media art in China. Semi-structured interviews will be used to gather primary data on how traditional art design based on interactive media art in urban environments bridges the gap between artists and audiences and how Chinese audiences evaluate these designs. The interview of the audience will take place during the trip of the researcher to the interactive media art design site in urban places in China.

3.3.   Interpretative research

A qualitative method will be used to achieve the objectives of the research. The research will take the interactive approach as it explores the interaction between the design, artist, and audience in urban spaces of China. Case study and interview techniques will be used to gather the primary data for the research. The study will consist of 3–4 case studies on traditional art design based on interactive media art in China. The study will extensively evaluate each case study's relevance and validity. Only

case studies that integrate aspects of both traditional art design and interactive media art in urban spaces of China will be considered for the study. A total of 10-15 semi-structured interviews will be conducted with the artist and audience in the urban spaces in China with traditional art designs based on interactive media art. The researcher will be visiting the interactive media art design site in urban spaces of China to interview the audience and artist. Thematic analysis will be used to analyse the collected data. The respondents (audience) will be selected using the ramson sampling method to reduce the bias and enhance the reliability of the research. The sample will provide the researcher with a broad understanding of Chinese interactive media art-based traditional art design. Before recording or taking notes, interviewees will consent.

3.4. Technical part and Time Schedule

The first year of the course will be devoted to reading the different frameworks /studies, and the specifics of the research proposal; the second year will be spent doing framework and data collection; and the third and final year should be spent on analysis and writing the thesis. The proposed 36-months timeline shows the flexibility of the research.

Table 1: Research Time Schedule

Stages of the research	M- 1-6	M- 7-12	M-13- 18	M- 19-24	M- 25-30	M- 31-36
Extensive literature reading	■	■				■
Specifying the research proposal		■				
Developing the interview questions			■			
Conducting the interviews and data collection				■		
Data analysis and start writing thesis					■	■
Revision the chapters and final submission of thesis						■

During the first half of the research project, the researchers will devote an intensive reading of the relevant scholarly literature in order to identify the key ideas and conceptual frameworks associated with the creation of traditional works of art that are informed by interactive media art in the urban areas of China. Discussions with the instructors will take place over the first 7 to 12 months of the program to finalize the research project's specifications. While 13 to 18 months will be devoted to the process of formulating interview questions and choosing locations at which to carry out the interviews. The researcher will also make an effort to get in touch with artists that work with interactive media in order to get further information on the art's design. The process of collecting data will begin between 19 and 24 months from now. The researcher will make the trip to the location of choice in

order to conduct the semi-structured interviews and will then begin taking notes on the process. In the subsequent 25 to 30 months, the gathered data will start being analysed, and at the same time, the process of producing the thesis will commence. The chapters of the thesis will be handed to the professors for review between the ages of 31 and 36 months, at which point the final revised copy of the thesis will also be handed to the professor.

During the period in which the research for the study is being conducted, the researcher will be in need of some financial assistance from the university. The majority of the funds that have been allotted by the university will be used to carry out field research in the urban spaces of China, which will also include expenses for travel and lodging, as well as the acquisition of recording devices for the interviews and research materials for the study. Throughout the whole of the research project, collaboration from the university's academics, academic faculty, and several non-academic departments will be essential.

The current study will adhere to the ethical criteria for conducting research, which include minimizing possible dangers and discomforts, maintaining anonymity, encouraging participation on a voluntary basis, obtaining informed permission, and safeguarding data. Before beginning the interviews, the research's goals and objectives, as well as other background information, will be discussed with the participants in the study. Additionally, before the collection of data, consent will be sought from the respondents. The respondents will have the option of stopping the interviews at any moment, for any reason, and doing so will not have any negative consequences. The identities of the respondents will not be revealed to anyone except the researcher and chief professor. The information of the respondents such as age, gender, etc will be kept confidential throughout the course of the study. The collected information will be used in a manner that will not harm any individual or group of people.

After the information has been gathered, the researcher will give the respondent a one-of-a-kind code to associate with their responses. In addition, the audio and video files of the interviews, along with the researcher's notes from the interviews, will be saved on a device that requires a password to access. The researcher is the only one who will be able to access the data. The collected data will only be used for the purpose to fulfil the requirements of the study. After the conclusion of the analysis, the data that was collected will be destroyed from all the devices.

4. Conclusion and Research Significance

The research will provide a conceptual framework for the integration of interactive media design with traditional art design in the urban spaces of China. This research will help contribute to a better understanding of how traditional art design has been modified through interactive media art in contemporary China. The study will improve academic academics' understanding of China's urban interactive media art. However, data collecting issues, time restrictions, and a potential erroneous sample profile could limit this study. Despite these limitations, this study shows the interaction between artists and audiences, as well as Chinese audience perceptions of the use of traditional art design based on interactive media art in Chinese urban spaces.

References

[1] Tan, J., Yang, L., Grimmond, C. S. B., Shi, J., Gu, W., Chang, Y., Hu, P., Sun, J., Ao, X., & Han, Z. (2015). Urban Integrated Meteorological Observations: Practice and Experience in Shanghai, China. Bulletin of the American Meteorological Society, 96(1), 85–102. https://doi.org/10.1175/BAMS-D-13-00216.1

[2] Jiang, T. (2019). Urban public art and interaction design strategy based on digital technology. Cluster Computing, 22(2), 3471–3478. https://doi.org/10.1007/s10586-018-2194-z

[3] Luo, Y. (2021). Safeguarding intangible heritage through edutainment in China's creative urban environments. International Journal of Heritage Studies, 27(2), 170–185. https://doi.org/10.1080/13527258.2020.1780463

[4] Nikolic, P. K., & Cheok, A. D. (2019). Designing Behavioral Changes in Smart Cities Using Interactive Smart Spaces. In D. Cagáňová, M. Balog, L. Knapčíková, J. Soviar, & S. Mezarcıöz (Eds.), Smart Technology Trends in Industrial and Business Management (pp. 367–382). Springer International Publishing. https://doi.org/10.1007/978-3-319-76998-1_27

[5] Foth, M., & Caldwell, G. A. (2018). More-than-Human Media Architecture. Proceedings of the 4th Media Architecture Biennale Conference, 66–75. https://doi.org/10.1145/3284389.3284495

[6] Yang, L., van Dam, K. H., Majumdar, A., Anvari, B., Ochieng, W. Y., & Zhang, L. (2019). Integrated design of transport infrastructure and public spaces considering human behavior: A review of state-of-the-art methods and tools. Frontiers of Architectural Research, 8(4), 429–453. https://doi.org/10.1016/j.foar.2019.08.003

[7] Choi, K. W., & Chung, B. W. (2018). Engaged critical browsing: Hong Kong home culture presented in hypermedia. Qualitative Research, 18(2), 224–242. https://doi.org/10.1177/1468794117714304

[8] Li, Q., Luo, T., & Wang, J. (2022). The role of digital interactive technology in cultural heritage learning: Evaluating a mid-air gesture-based interactive media of Ruihetu. Computer Animation and Virtual Worlds, 33(3–4), e2085. https://doi.org/10.1002/cav.2085

[9] Lange, M. D., & Waal, M. D. (2016). Owning the City: New Media and Citizen Engagement in Urban Design. In Urban Land Use. Apple Academic Press.

[10] Chen, Y. (2018). Research on Prototype Design Methods and Systems of Interactive Media Art in Public Space. In C. Stephanidis (Ed.), HCI International 2018 – Posters' Extended Abstracts (pp. 162–168). Springer International Publishing. https://doi.org/10.1007/978-3-319-92285-0_23

[11] Macnamara, J. (2013). Beyond voice: Audience-making and the work and architecture of listening as new media literacies. Continuum, 27(1), 160–175. https://doi.org/10.1080/10304312.2013.736950

[12] Walmsley, B. (2016). From arts marketing to audience enrichment: How digital engagement can deepen and democratize artistic exchange with audiences. Poetics, 58, 66–78. https://doi.org/10.1016/j.poetic.2016.07.001

[13] Evans, G. (2015). Rethinking Place Branding and Place Making Through Creative and Cultural Quarters. In M. Kavaratzis, G. Warnaby, & G. J. Ashworth (Eds.), Rethinking Place Branding: Comprehensive Brand Development for Cities and Regions (pp. 135–158). Springer International Publishing. https://doi.org/10.1007/978-3-319-12424-7_10

[14] Teli, M., Bordin, S., Blanco, M. M., Orabona, G., & De Angeli, A. (2015). Public design of digital commons in urban places: A case study. International Journal of Human-Computer Studies, 81, 17-30.

[15] Moere, A. V., & Hill, D. (2012). Designing for the Situated and Public Visualization of Urban Data. Journal of Urban Technology, 19(2), 25–46. https://doi.org/10.1080/10630732.2012.698065

[16] Markussen, T. (2013). The Disruptive Aesthetics of Design Activism: Enacting Design Between Art and Politics. Design Issues, 29(1), 38–50.