Reconstruction of Urban Public Space Situation Based on Digital Technology - Commercial Streets Reconstruction as Examples

Supervisor：Prof. Davide Fassi

Presenter：Wu Wenqi

ID: 10788868

Abstract

Under the influence of digital technology, three major changes have taken place in urban public space, reshaping people's relationship with the city and their way of life. The first is the phenomenon of excessive personalization of the way people participate in the city due to highly free personal choices and rapidly improving life efficiency; the second is that virtual communities and online social networking bring people to rethink their physical experience; the third is that it is easy to A new capital monopoly will be formed, giving birth to a larger consumption landscape. In this context, this paper attempts to reconstruct the festival situation and explore a method to reshape the urban public space, the body and the interpersonal communication through the intervention of spatial installations.

Aiming at the three spatial problems discovered, this paper conducts theoretical research from three aspects: Situationist International, Phenomenology, and Participatory Urban Public Space. Through the analysis of the situation, festivals, and game carnival, the Lantern Festival is selected as the cultural, festival and space-time background of the design, and the method of image and text analysis is used to carry out research on the symbols and situations of graphic materials, Ming and Qing novels.

The analysis of the city in this research focuses on the site survey. By analyzing the site, it summarizes the current problems of urban public space and puts into practice the theoretical solutions proposed in the theory of urban public space.

From the extraction and induction of the contextual content, physical senses, human-human interaction, and human-city interaction from the ancient paintings of the Lantern Festival and the novels of Ming and Qing Dynasties, combined with the case analysis of digital art installations, this research deduces The three systems of narrative, interaction and symbols become design strategies. At the same time, the research results are applicable to all commercial blocks. This paper selects specific Xidan and Wangfujing as examples. The purpose is to use digital technology to magnify the festival carnival situation, not only to reshape the short-term communication relationship between subjects and the participation of the body in public space. , and also through non-commercially oriented temporary games to weaken the excessive consumption atmosphere on the venue and realize the criticism of the excessively landscaped environment.

Keywords: *The construction of Situations; Lantern Festival; Body; Urban Public Space; Digital Technology*

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1.1 Research Background

Figure 1.1 App screenshot
available from:Edited by Wu Wenqi

Figure 1.2 Concept picture
available from:www.baidu.com

Figure 1.3 Tokyo commercial street
available from:www.baidu.com

We live in an era where digital media is pervasive. It penetrates widely and deeply into our daily life, body, and city, and has had a huge impact on the relationship between urban space and people.

This impact can be divided into three dimensions. The first dimension is the change in people's behavior. The way residents met and talked briefly on the street in the past is gradually disappearing. The old trust accumulation model is slowly fading, and new ones such as virtual communities, Virtual exchanges such as circle of friends, which are realized with the help of digital technology products, have become mainstream. There used to be fewer physical connections through direct, offline bodies. This is particularly evident in contact with strangers. The common topics that video game communities, NetEase Cloud Village, and social software can create seem to be more interesting than offline direct contact with people.

This has also brought about the emergence of a second dimensional phenomenon, a change in behavior that makes the way we participate in the city very different from before. Such as Bill Gates and Ma Huateng have described the picture of daily life in the city under the concept of smart city: the network, software and sensors greatly improve the efficiency of city operation, and the algorithm has become the intelligent assistant that understands our preferences best, helping us obtain surrounding information and recommend food. With a partner,

or even a companion. This approach almost subverts the identity of people in the city in the past. The city, especially the public space in it, is no longer the embodiment of the collective identity of the residents. Today, the way we look at a city and participate in a city has changed from our own actions. Starting from an individual, the urban public space has become an existence similar to a "market".

Urban public space has become a market, which has led to a change in the third dimension, that is, the public space that has been gradually monopolized by the Internet has become more and more personal, fragmented, and induced to consume new and wider landscapes. The social spectacle criticized by Guy Debord in the 1960s has also achieved rapid growth in the Internet age with the explosion of traffic, entering a "full development stage". In the early stages of the development of the spectacle, Guy Debord was keenly aware that the present revolution was no longer the form of war in the past, but took place in the field of daily life, which was more difficult to detect, and the life that capitalism exported in the spectacle. The way gradually numbs people, and the excessive commercialization and space-filled advertising slogans that induce consumption make people alienated. This structured daily life has long become a new political issue. At present, Internet products with traffic are driving the development of the landscape. Smart TV function columns, mobile app startup screens, and urban big screens that can be seen everywhere are filled with

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advertisements. The current landscape is suffocating.

This is also what people discovered later. The Internet can not only bring higher efficiency, but also form a new capital monopoly. The phenomenon of being manipulated by algorithms makes people more and more uncomfortable, and they question the attempts of digital technology to make people slide towards greater consumption. trap.

The Situationist International has made an in-depth criticism of this phenomenon. Although they announced their disbandment 50 years ago, their ideas have also profoundly affected all aspects of the field of art and design, especially in the areas seriously squeezed by capital and commercialization. In the public sphere, art has become a social gap that resists the social forces of the spectacle, fertile ground for social experimentation, and has nurtured many new relationships that focus on intersubjective communication and more openness.

In the Situationist initiative, festivals are seen as a backdrop for ideal situational construction as a special moment to interrupt the structured daily life and dissolve the boring routines. But in today's China, the Lantern Festival, which has the meaning of carnival in the historical tradition, the dazzling commercial advertisements during the festival continue to stimulate people's nerves, and the meaning of carnival is deconstructed into consumption. The meaning of such passion no

longer exists.

1.2 Questions

Based on this background, I have summarized three types of problems in urban space. One is over-personalization, and the choice of space is left to the algorithm; the other is that remote social interaction brings more virtual communication, which leads to people's awareness of embodiedness. The third is that excessive consumption guidance is disturbing.

Therefore, I put forward my research questions, can digital media be used rationally and become a means of reshaping the relationship between urban public spaces; and can a special situation be constructed to weaken the landscape social environment enhanced by digital technology?

1.3 Research Purpose & Significances

This paper hopes to achieve the following goals by studying the context construction of the body, festival, and urban public space in the context of digital media:

1. Through the application of new digital technology means, to achieve a more effective and interesting establishment of inter-subjective communication in urban public space, and to achieve a new intersubjective-based communication on the selected venue Xidan protocol.

2. Based on the game construction of the traditional Lantern Festival's time and space situation, the reconstruction of history and the reintroduction and emphasis of the spirit of the historical festival are realized to resist the isolation of the historical context by the illusory field mirror constructed by the landscape.

3. Construct a fleeting situation in urban public space that can make people immerse in strong emotions, and allow the environment and people's behavior to continuously interact and feedback, and re-enhance the social vitality of public space in a way of "exceeding expectations".

The research significance of this paper has three main points:

1. At a time when digitalization occupies an increasing share of daily life in cities and the virtual world develops rapidly, this paper attempts to provide a new spatial plan for shaping the relationship between people in the city from a material and embodied level, in order to reflect on the digital environment The convenience provided to the domination of the landscape and the destruction of the collective identity, the accumulation of trust in the public space.

2. How to define the translation and generation of traditional culture is an enduring proposition for discussing Chinese contemporary design. This paper attempts to define and interpret this issue personally from the perspective of situational construction, providing people with a non-utilitarian and non-commercial-oriented approach. A carnival, independent entertainment, and a "game" that can trigger the subject's thinking.

3. Situational reshaping of the way people participate in the public sphere and the environment in which they participate can help people get rid of the dullness of ordinary life in a short period of time, and can change or even eliminate the domination of class, capital, and power structures in a short period of time .

1.4 Research Contents

The research content of this paper is divided into five parts:

1. The values of Situationism towards daily life run through the whole text. By sorting out Situationism's criticism of the status quo of daily life, it organizes the internal relationship between the body, festivals and cities at the situational level.

2. Starting from the phenomenological methodology, research Merleau-Ponty's perceptual body and body schema, to Don Ide's technical body and the mediating relationship of technical performance. Through case analysis, the direct experience, intermediary experience and mutual communication relationship of people in the space are summarized and classified, and the design method of participating in the urban public space is obtained.

3. This research uses Ming and Qing novels and ancient paintings in traditional culture as the narrative source of context construction, so as to be alert to the isolation and erasure of the historical context by the landscape. Three classic novels, "A Dream of Red Mansions", "Golden Plum Plum" and "Water Margin" with detailed descriptions of the Lantern Festival were selected, and three nodes in the venues Xidan and Wangfujing Commercial Street were selected correspondingly to build a multi-dimensional game situation. Novels are the main research objects. In addition, combining the extraction, translation, and generation of spatial relationships, sensory atmosphere, ritual activities, visual symbols, and structural elements during the Lantern Festival in ancient writings and paintings, the formal source of the design scheme is formed.

4. By studying de Waal's intermediate form between communitarianism and liberalism, McGuire's participatory public space, Bryaud's relational aesthetics and analyzing design cases related to these ideas, combined with site research , critically proposes the reshaping of the physical environment, temporary installations, and human intersubjective behavior of the existing site, and realizes the concept of situational construction from the relational level.

5. The design strategy is oriented to all commercial streets. In this paper, two specific sites, Xidan and Wangfujing, are selected as examples, and the urban physical environment is analyzed by facade collage, temporary installations are used and purpose analysis, human behavior Phenomenal observations were made. Summarizes the typical commercial pedestrian street, after gathering urban residents, the performance of the public space part.
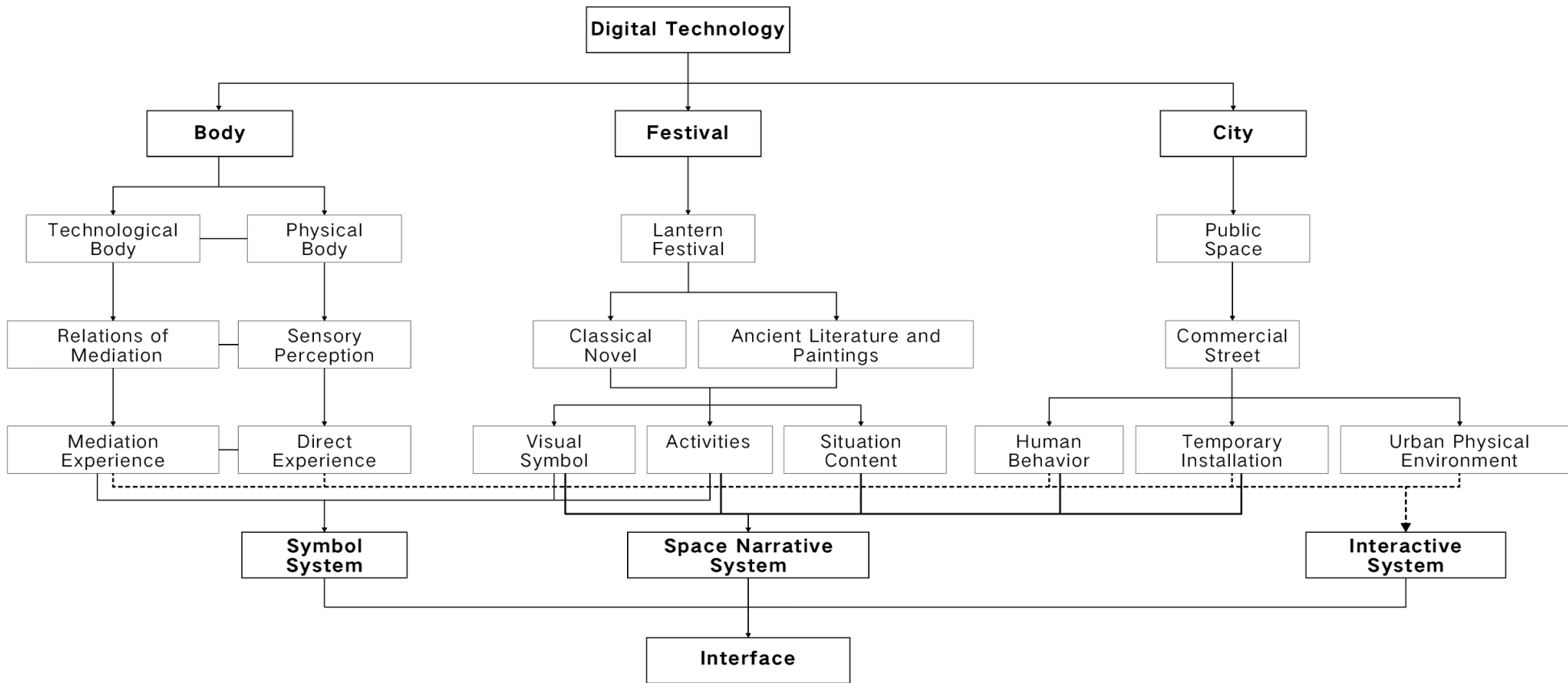
1.5 Research Structure


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                          ┌─────────────────────┐
                          │  Digital Technology │
                          └─────────────────────┘
        ┌──────────────────────────┼──────────────────────────┐
    ┌────────┐                 ┌─────────┐                 ┌────────┐
    │  Body  │                 │ Festival│                 │  City  │
    └────────┘                 └─────────┘                 └────────┘
   ┌──────┴──────┐                  │                          │
┌──────────┐ ┌─────────┐      ┌──────────┐              ┌──────────┐
│Technolog.│ │ Physical│      │  Lantern │              │  Public  │
│   Body   │ │   Body  │      │  Festival│              │  Space   │
└──────────┘ └─────────┘      └──────────┘              └──────────┘
     │            │          ┌──────┴──────┐                 │
┌──────────┐ ┌─────────┐ ┌──────────┐ ┌──────────────┐ ┌──────────┐
│Relations │ │ Sensory │ │ Classical│ │Ancient Lit.  │ │Commercial│
│of Mediat.│ │Perception│ │  Novel  │ │and Paintings │ │  Street  │
└──────────┘ └─────────┘ └──────────┘ └──────────────┘ └──────────┘
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Figure: Research structure

- Digital Technology → Body / Festival / City
- Body → Technological Body, Physical Body
  - Technological Body → Relations of Mediation → Mediation Experience
  - Physical Body → Sensory Perception → Direct Experience
- Festival → Lantern Festival → Classical Novel, Ancient Literature and Paintings → Visual Symbol, Activities, Situation Content
- City → Public Space → Commercial Street → Human Behavior, Temporary Installation, Urban Physical Environment

Lower level boxes:

- **Symbol System**
- **Space Narrative System**
- **Interactive System**

→ **Interface**

Figure 1.4 Research structure
available from:Drawing by author Wu Wenqi

**02
Contemporary Criticism
and Phenomenological
Methodology**

The impact of digital media

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Body and Situation

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Summary

Reconstruction of Urban Public Space Situation Based on Digital Technology – Commercial Streets Reconstruction as Examples

Reconstruction of Urban Public Space Situation Based on Digital Technology – Commercial Streets Reconstruction as Examples

2.1 The impact of digital media

2.1.1 Communitarianism and Liberalism

"Traditional urban public space has lost its most important function: contact and communication take place mainly in media networks, not in physical spaces."

——Martijn de Waal

[Martijn de Waal is a Dutch scholar who focuses on the relationship between digital media and urban culture, focusing on the study of public space. Currently, he is a theatre and public media major at the Amsterdam University of Applied Sciences. 's professor. The concept of this article about him comes from his 2014 book "City as Interface".]

In this ubiquitous world of digital media and mobile technology, as de Waal argues, the public has participated in and influenced the networks created by these systems in new virtual identities, generating new ways of interacting with the world around us : The boundaries of space are no longer important in the minds of some people, we appear all over the world in the form of virtual identities, the conceptual connection between the "container of the body" and space has become weak, and the urban public space has lost its original function. vitality.

The consequence of this expanded perception is, as Jane Jacobs describes it: "In this way the community members often meet in the street, greet each other briefly, and chat occasionally, and in this way a sense of trust develops over time" [[Netherlands] Martijn de waal, translated by Mao Lei and Peng Zhe. Cities as Interfaces: How Digital Media Changes Cities [M] China Construction Industry Press, 2018, P22 and Jacobs, The Death and Life of Great American Cities, P67.]

This model disappeared, replaced by various online communities that have sprung up around the world. In an interview with a classmate (Zhang), I learned that he and his best friend met through online games. Although the two have been friends for 8 years, they have never been masked, but they have nothing to say. The trust between them is in established in cyberspace. So in the era of WeChat video calls replacing face-to-face chats, what role does the traditionally defined public space play?

Regarding the relationship between people and urban space in the past, the scholar Martin de Waal called it the city under communitarianism. In the concept of communitarianism, the urban public space reflects a collective identity, and the architecture and The designs associated with it are all expressions of this identity, and people often participate in the space and the common culture through public events such as parades, festivals, commemorations, etc.

Figure 2.1 Discussion in the square
available from:www.baudu.com

Figure 2.2 Carnival
available from:www.baudu.com

Figure 2.3 Martijn de Waal
available from:Edited by author Wu Wenqi

And with the emergence of a large number of digital media, our lives are gradually filled with these things. Bill Gates once made a rhetoric [In 2017, he plans to build a "smart city" Belmont with a population of nearly 200,000.], for "smart cities" to transform people's lives, filled with sensors, software and networks that maximize the efficiency of traffic cycles and energy use. The algorithm recommends restaurants or products that meet personal tastes for users, and the smart map guides us to quickly reach the destination and understand the surrounding environmental information, such as product prices, evaluations, etc. [Bill Gates, 'The Enduring Magic of Software', InformationWeek 18 October 2000, http://www.informationweek.com/the-enduring-magicof-software/49901115]

As a result, some argue that the rise of digital and mobile media has provided great convenience and a range of aids, giving city dwellers more control over city life, thereby enabling deeper and more effective ties to their local communities. This is also the liberal city. In the liberal concept, the urban public space is the market. Cities are, by definition, composed of urban dwellers with different needs, who meet on the basis of the mechanics of supply and demand, regardless of their backgrounds and preferences. [[Netherlands] Martijn de waal, translated by Mao Lei and Peng Zhe. Cities as Interfaces: How Digital Media Changes Cities [M] China Construction Industry Press, 2018,

PVII]

It is not difficult to see that, with the continued emphasis on efficiency and individuality, proponents of liberal cities are increasingly treating city dwellers as individual consumers, adding a certain freedom that allows people to organize their lives according to their own opinions, but We can also see a result that these media also reduce the mutual participation of urban residents.

In general, a communitarian society emphasizes an explicit culture of sharing, in which the city is too coercive and provides only a small amount of individual freedom; in addition, the market as the main function of the city provides a lot of freedom, but this freedom is also Freedom from promises could ultimately lead to severe cultural and economic fragmentation and racial segregation.

2.1.2 Intermediate Forms and Situationism

Either communitarianism or liberalism alone will bring the city to a certain extreme in the social dimension. Is it possible to compromise and integrate these two concepts? De Waal called this eclectic idea the "republican" city [from the Latin res publica, referring to the public interest, rather than referring to the name of an American political party], which I prefer to call an intermediate form[3] Equivalent to de
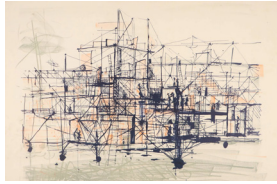
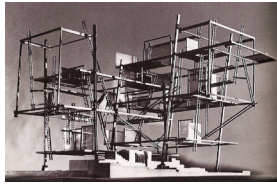Figure 2.4 Constant's "New Babylon" manuscript
available from:https://stichtingconstant.nl/new-babylon-1956-1974

Figure 2.5 Constant "New Babylon" model
available from:https://stichtingconstant.nl/new-babylon-1956-1974

Figure 2.6 La Société du Spectacle
available from:http://www.qjzx5.cn/guojixinwen/201911/1114865.html

Figure 2.7 Guy Debord
available from:https:Edited by author

Waal's term "republican" city, located in an eclectic manner between communitarianism and liberalism.].

The idea of republicanism is in the middle ground between the above two ideas: in the urban scene described by the liberal idea, urban residents of different backgrounds will gather in the urban public space, which becomes the place where they meet, but different from the liberal idea The point is that these spaces are not, in the republican ideal, irresponsible markets; on the contrary, these spaces provide a greater wholeness that absorbs the individual city dweller. Although there may be more or less differences between them, after the public space becomes a meeting place for urban residents, based on the real physical scene and the body present, people can develop trust on it, and conflicts can be resolved, because The reason for being there in person, where city dwellers ultimately have to try to connect with one another in one way or another.

That is to say, in the intermediate form created by the idea of republicanism, the city will still provide free choice, people can choose between different ways of life according to their own will, but at the same time they should also undertake some kind of responsibility for the city. overall responsibility.

Perhaps the space of the public part can be designed to be

"experienced", and city residents can feel that they are part of the collective rhythm of urban life through attachment.

Returning to observation of reality, events are held in public squares in many cities to increase people's living experience in the city and to shape urban cohesion. Shenzhen held a large-scale light show at the Lighting Festival in late 2019. On that day, the Civic Center Square was full of people, and everyone had great enthusiasm for the city-scale visual feast, which made people come from thousands of miles to watch.

Analyzing the relationship between people and the public space in this incident, it is not difficult to see that the role played by the people who came to the square is still a traditional spectator, a bystander can even be called a "small role", and the public is still here. A behavior with a strong purpose, coming from various places to a place due to a certain commercial or political propaganda call, and then taking pictures and watching the structured daily life of the three dots and one line that finally returns. And this kind of "managed idleness" is exactly Situationist International (Situationist International (1957-1972) in English).

Situationism is the abbreviation of Situationist International. They believe that "spectacle society" is replacing the commodity society of the past, and that the class struggle that pointed to the capitalist economic and political system in the past should now be transformed into a "revolution
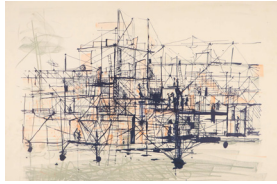
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Figure 2.4 Constant's "New Babylon" manuscript
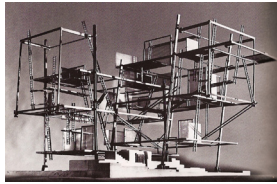available from:https://stichtingconstant.nl/new-babylon-1956-1974

Figure 2.5 Constant "New Babylon" model
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Figure 2.6 La Société du Spectacle
available from:http://www.qjzx5.cn/guojixinwen/201911/1114865.html

Figure 2.7 Guy Debord
available from:https:Edited by author

of everyday life". The representative figure is Guy Debord, a French philosopher and Marxist theorist.], what Guy Debord wanted to criticize and resist.

This kind of activity that does not generate new interpersonal, interpersonal and interpersonal relationships is also outside the intermediate form proposed by the idea of republicanism. It is essentially no different from going to the cinema to watch a movie. The experience is a one-way passive acceptance. , there is no influence between subjects, and the environment is not affected by subjects.

The "intermediate form" provides an intermediate form between communitarian collective responsibility and liberal individual will, a form that emphasizes on the one hand individual choices that provide functional solutions to supply and demand, and on the other, collective responsibility The focus is on a relationship and social connection. This can be seen from his understanding of Rafael Lozano-Hemmer [Rafael Lozano-Hemmer, the famous interactive installation artist who created the concept of "Relational Architecture" .] from the analysis of "Body Movies", he has a positive attitude towards the new installations and new relationships that are emerging in the current urban public space, and analyzes Homer from the theoretical perspective of Situationist International 's work discusses how to interpret the Situationists' "drift" and "deviation" by "going beyond expectations" in an intermediate form,

thus giving new meaning to the public sphere.

The creation of new participatory practices is precisely the purpose of the situationalists' "construction of situations". Situational construction needs to point to new action practices, that is, life. From here, the traditional identities of people as bystanders, minor characters and audiences mentioned above have disappeared, and the traditional viewing identity model in the theater is broken by alienation or alienation (alienation effect). Debord is more concerned with having self The art of situational construction takes place in an organized manner in the city, and the public, as the constructor of the situation, "lives in it".

Constant's experimental city, New Babylon, is a model for inhabitants to build cities, and in his description of this imaginary city, the inhabitants of New Babylon can live in scenarios of their own design and Together with other inhabitants, the city is constantly changing, and life in the city no longer appears as a continuum, but consists of a series of moments that have the ability to change their own function, nature and direction in real time.

The inhabitants of Neo-Babylonian cities are constantly searching for new experiences and new "situations" in the city, in the dynamic evolution, to free themselves from the constrained structures of the state or capital and commercialization. Although from the current

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point of view, the draft of New Babylon is vague and incomplete, but the significance of New Babylon is that it tries to become a platform: this platform, like Douyin, Bilibili, and YouTube, which are popular now, belong to UGC. (User Generate Contents) The model of "User Generate Contents", in the city's conception, Constant builds a platform framework, writes programs, and finally follows a certain protocol to continue to operate.

Neo-Babylon City embodies that architects can become "interface designers", and through specific programming, they can create unique situations beyond the daily boring life. [[Netherlands] Martijn de waal, translated by Mao Lei and Peng Zhe. Cities as Interfaces: How Digital Media Changes Cities [M] China Architecture and Construction Press, 2018, P73] As Architects , artists and designers, the important thing is no longer to design buildings that evoke specific emotions, but to guide people to construct "situations" (or interfaces) that can disrupt the status quo through their own ideas, so that city residents can realize They are in the repressive social structure of the city.

2.2 Body and Situation

2.2.1 Phenomenology and Daily Life Experience

Contemporary philosophy has different tendencies to change in different research fields, and the modern philosophy of art of life on issues such as modern realm and personal survival is also one of the main aspects of philosophy's transformation of reality. [Wang Jun. From Phenomenology to Philosophy of Art of Living [J]. Journal of Zhejiang University (Humanities and Social Sciences Edition), 2018, 48(01): 231-240. The philosophy of art of living mentioned in the article is Phenomenology]

Phenomenology, or Phenomenology, was pioneered in 1900 by Edmund Husserl, whose article in the German philosophical journal Logical Investigations officially announced the beginning of Phenomenology. By questioning some of the most basic principles in the development of Western philosophy, including the long-standing dualism between the mind and the body that dominated the time of Plato, to the later Heidegger, Merleau-Ponty For the development of phenomenology, Ti emphasized the central role of the body in participating in life and perceiving the world step by step.

In addition, since its inception, phenomenology has been concerned

with the unity of meaning that was originally rooted in the world of life and experience. In this sense, later phenomenology can be called the philosophy of art of living. Its function is to restore the meaning of our daily life, and to contingency To defend and bridge the gap between subjects, between people and cities, between individuals and times.

2.2.2 Perceptual Body

Both situational construction (see 2.1.2) and relational aesthetics (see 3.2.2), which will be mentioned later, emphasize the participation of the body in daily life. Since the 20th century, with the development of neuroscience and psychology , the body problem in philosophy and communication has become more and more important. Only by sorting out the relationship between the body and the world can we master more effective methods to shape the way the public participates and communicates in public spaces.

At the heart of Merleau-Ponty's phenomenology is that we cannot escape the fact that we are Embodied Entities, and he firmly believes that the "body" is our first way into the world. [[English] Jonathan Hale. Lei Yanhui, translated by Wang Qi [M] China Construction Industry Press. 2020.P1] It is precisely because Merleau-Ponty's perception of perception, "live body" The emphasis on such concepts provides architects, artists and designers with the idea of shaping the relationship
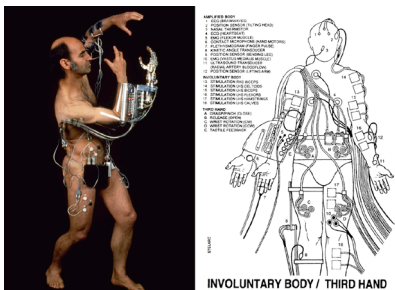

Figure 2.8 Stelarc "Third Hand"
available from:https://stelarc.org/_.php

Figure 2.9 Merleau-Ponty
available from:Edited by author Wu Wenqi

between people and space from the body, rather than from the created thing itself. It needs to be explained that the "body" in the terminology is not simply a static anatomical object, but a series of possibilities for behavioral activities, that is, all human experiences from the inside out.

The "Lived Body" provides us with a characteristic, form of Conscious Awareness that allows us to gain access to the world. [[English] Jonathan Hale. Lei Yanhui, translated by Wang Qi [M] China Construction Industry Press. 2020.P17] The repetition and merging of behaviors are the skills we "accumulate" and become the establishment of a behavioral model. This process is also known as "body mapping", and this concept of "incorporating the body" of new skills can be demonstrated in experiments conducted by Australian performance artist Stelarc. In the experiment, he installed a fake "third hand" on his body. This hand was controlled by nerve pulses, and the pulses came from electrodes attached to his thighs. Through repeated trial and error, he learned how to operate. The final device can get precisely controlled results. This is a good example of the interpenetration of boundaries between the brain, body and world.

The deeper truth revealed by this experiment is that the education and training that everyone has been experiencing from birth is similar to physical training, from swinging our limbs at will, to gradually learning how to Control and use them. Or even learn how to extend ourselves

Figure 2.8 Stelarc "Third Hand"
available from:https://stelarc.org/_.php

Figure 2.9 Merleau-Ponty
available from:Edited by author Wu Wenqi

and occupy other parts of the world in order to further expand our physical abilities.

This relationship can be described by one expression: new protocol → acquisition → body into the world → world into the body. That is, only after the body perceives and contacts the external object or world, can we truly perceive the existence of certain things and phenomena and become part of the world constructed by the body.

2.2.3 Intermediary Relations and Media Technology

However, we should also understand that the current digital media technology has already covered all aspects of daily life in modern urban society, changing the psychological and auditory space of individual human bodies, the private space of social families, the abstract space of nation-states, and even the ever-emerging world network. , when all kinds of relationships between living places, boundaries and subject consciousness are changed, can "mediation" and corresponding "direct experience" still be opposed, and can a new social relationship be formed from this?

Today's technology is no longer a tool, but a human world. In technology, experience constitutes itself, and the body constitutes the
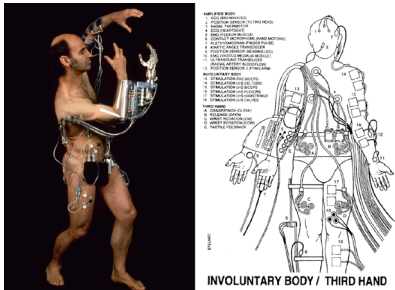
body of technology. [Yang Qingfeng. Material Body, Cultural Body and Technological Body—A Brief Analysis of Tang Ide's "Three Bodies" Theory [J]. Journal of Shanghai University (Social Science Edition), 2007(01):12-17.] The American philosopher Don Ihde [Don Ihde is an American philosopher of science and technology, professor and director of the "Technology Science Research Group" at Stony Brook University, USA] extended the dimension of phenomenology, and Learn the philosophy of technology and add your own thinking about technology. He generalizes Heidegger's and Merleau-Ponty's "ready-to-hand" relationship as an embodiment relation. Not feeling the presence of technology is like withdrawing and becoming a part of our body.

Embodied relationships can occur in any physical sense. Hearing aids are an embodied relationship to hearing. When people wearing hearing aids focus on the sound content fed back by the hearing aids, the hearing aids gradually fade out of our consciousness, achieving a transparent effect of "getting away". Just like the blind man's cane is incorporated into our body schema, after we get used to wearing glasses, the technical product of the lens slowly disappears when we perceive the world, so that our perception is extended and magnified.

These embodied relationships realized by technology will not be affected by the complexity of technology. Simple glasses and hearing aids have the same sensory type, and they only work on one body

sense. For techniques that involve whole body movement, such as driving a car, the relationship is much more complicated than just the embodied relationship. However, when the embodied relationship is relatively smooth, especially when an experienced driver is driving, the body can sense the distance between the car and the surrounding obstacles, and does not need the eyes to see it directly. The physical sensation mentioned in the previous section is therefore "extended" to the "body" of the car. The technology of the car has become an extension of its own body image, helping the body to participate in the perception of the world. Even though facing this technique requires a longer and more complex learning process, the tacit knowledge of the body required in it is perceptual-physical.

In technology as the intermediary between man and the world, in addition to the embodied relationship, there is another kind of relationship that he named hermeneutics relationship, and regards hermeneutics as a special interpretive activity in the context of technology. [[America] Don Ihde. Translated by Han Lianqing. Technology and the Living World - From the Garden of Eden to the Earth [M]. Peking University Press. 2012.P81]

The technical problem in hermeneutic relations is the connector between the tool and the referent, and the process of reading the tool is similar to how we used to read texts. Things like the readings

Figure 2.10 Don Ihde
available from:Edited by author Wu Wenqi

on the dials of thermometers used in modern times, the complex visual recognition patterns in thermal imaging and light-enhancing technology used by the military, the encoded language and alphabet images in spectrophotography and astronomy are all objects that require translation and interpretation to understand, while With the acceleration of the contemporary digitalization process, the proportion of such information in the field of perception will become more and more important. But at the same time, the flexible use of hermeneutic relationships is another challenge for current design. The digital transformation of information in the work "Solar Equation" analyzed above is wrapped in an intermediate process, and the final effect is a "direct" experience.

Regarding the impact of new digital media on people, on the one hand, the charm of media technology is that it allows us to break free from the limitations of the natural body and open up people's living space in a way of leaving, which creates a new development space for the world. On the other hand, media technology reconstructs the relationship between human beings and human society in a new embodied way. This dual perspective of disembodied/embodied media technology is also reflected in Guy Debord's "Society of the Spectacle". On the one hand, Debord criticized the "spectacle society" created by the media, but on the other hand, he also pointed out: "The landscape is not the accumulation of images, but the social relationship between

people mediated by images." [Rui Bifeng, Sun Shuang. From. From the body to the embodiment: the existential turn of media technology [J]. International Journalism, 2020, 42(05): 7-17] It emphasizes the shaping of the social environment and social relations by the media.

2.3 Summary

This chapter discusses the context of the rapid development of digital technology, the past single communitarian and liberal cities could not fully cope with the over-individuation of the way people participate in the city, the over-virtualization of the way of communication and the generation of the larger landscape. To this end, it may be possible to combine relatively eclectic intermediate forms ["intermediate forms" as Martin de Waal defined "republican cities"], an emphasis on bodily participation, and the practice of participatory action of situationist initiatives. way to try.

03
Situation Construction: Exploring Theoretical Solutions

Re-invigoration of Communication Spaces

&

Games, Festivals and Situations

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Summary

3.1 Re-invigoration of Communication Spaces

3.1.1 Participation in Public Spaces

The imagination of the city by Constant and Guy Debord described above (see 2.1.2) shows the use of the city by the residents, and the full freedom turns the city into a work of art. However, there are not many successful examples of participatory cities in history, and the achievements are very limited, so people can't help but question this "artistic". [[Australia] Scott McQuire, translated by Pan Ji. Geographical Media: The Future of Networked Cities and Public Spaces [M] Fudan University Press, P85] However, if the decision on space has no power Open to the public without reservation will inevitably bring about various problems, one of which is that the city is easily at risk of losing control, and the complete lack of depiction of the shape and details of the new city will easily make people lose a collective imagination.

The Situationist International's attitude of directly ceding all control proved to be an "extremely radical attitude", even an over-radical attitude, which is not entirely suitable for the current city and people. In the face of new imagination, new ways of thinking need to be extracted from new practices. That is to say, in the face of the advocacy of situationism, we still need a stage of "intermediate transition". The needs of the transition stage also force us to rethink the participation of public

Figure 3.1 Relational Aesthetics
available from:https://www.goodreads.com/
book/show/75263.Relational_Aesthetics

Figure 3.2 Nicolas Bourriaud
available from:Edited by author Wu Wenqi

spaces.

Participation is not a new concept and has always been a central element in shaping public spaces. If the space environment allows the public to change more or less, people will have a stronger sense of belonging and the space will be more attractive. Openness, for example, can reconfigure the experience of the space, and even introduce a sense of ritual (such as public seating that can be moved a little bit), and these actions can create a new way of being with others, which is very important for the experience. Nurturing our sense of belonging in public spaces has a positive effect.

The ultimate goal of "situation construction" is to generate new participation practices, and situation construction needs to point to new action practices, that is, our lives. And this has also affected the transformation of contemporary art, and artists have begun to constantly explore new "scenario" boundaries.

3.1.2 "Open" Works and Relational Aesthetics

Before the mid-1960s, although the Situationist International no longer saw art as a viable way to intervene in urban politics, Umberto Eco in the 1960s [Umberto Eco] Eco), a famous Italian writer and semiotician,

"Open Works" comprehensively analyzes contemporary art at that time.]'s "Open Works" and Nicolas Bourriaud in the 1990s [Nicolas Bourriaud, renowned French curator and art critic.]'s concept of "relational aesthetics" makes these ideas even more important today.
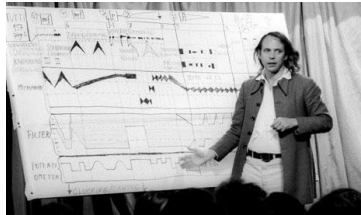
In Opera Aperta, art is more understood as open, procedural and "reprogrammable"; in Relational Aesthetics, contemporary art can produce situational of social interaction. [[Australia] Scott McQuire, translated by Pan Ji. Geographical Media: The Future of Networked Cities and Public Spaces [M] Fudan University Press, P85]

Eco first believes that "openness is not a new phenomenon unique to contemporary art", that the openness of contemporary art is only a different order than the tradition, and the limited openness of the tradition is replaced by a more unstable and infinite interpretation, such as Alexander Alexander Calder's moving art (see Figure 3.1) would leave room for the public to participate in the creation or leave part of it to a random chance [[A] Scott McQuire), translated by Pan Ji. Geographical Media: The Future of Networked Cities and Public Spaces [M] Fudan University Press, P87.].

The unfinished state also reflects that contemporary works of art are not composed of completed objects and images like in the past. The concept of "open work" presents the process of art moving towards a

more open, this process involves the participation, cooperation and joint efforts of their respective forms. creation.

By the 1990s, there were more and more examples of "participation" in artistic practice. Bryaud believes that the difference between contemporary art and the previous one lies in the great importance and attention paid to "the process of social interaction itself".

The function of a work of art is no longer to form an imagined utopian reality, but to actually become a way of life or a mode of behavior in the existing reality according to the scale and scale chosen by the artist. . . . occasions of gatherings, encounters, events and human-to-human collaborations, games, festivals and carnivals, in short, all forms of communication and relationship are now seen as aesthetic objects. [Bourriaud, N. (2002) Relational Aesthetics, trans. S. Pleasance, F. Woods with M. Copeland, Dijon: Les presses du reel (first published in French in 1998). 13, 28]

In his "Relational Aesthetics", Berry Ord proposes reflections on the form and nature of "interpersonal relationships" [Interview article between He Jing and Berry Ord, LEAP Biennale, August 2014], McQuarrie It is summarized into three characteristics:

The first is that the new art form will be based on intersubjectivity, and

"coexistence" is the most important theme.

The second is that this kind of art can create "free time and space", in contrast to the structured time and space of people's daily life.
The third is that the artist focuses on how to inspire new modes of social interaction. [[Australia] Scott McQuire, translated by Pan Ji. Geographical Media: The Future of Networked Cities and Public Spaces [M] Fudan University Press, P89, re-extracted according to the content of the book .]

This change in the focus of art shows that contemporary art is more and more committed to constructing a specific social scene and exploring a behavioral mode of coexistence with others in the scene. This kind of work is exactly in line with what Eco said is "open work", and this kind of work can create new social communication experience and practice, achieve the intermediate form mentioned above from the level of communication, and also belong to the level of practice. Situationism advocates "the construction of ephemeral, emotionally engaged and continuous feedback with the environment and people's behavior".

3.2 Games, Festivals and Situations

Games are often used strategies in the reshaping of urban spaces. By incorporating game theory [According to Libero's article: Architecture and Games, game theory is largely derived from Dutch linguist and historian Johan Huizinga's book The Man Who Plays.] radicalization as a revolutionary ethic that effectively establishes the distinction between play and business, art and everyday life. [Libero Andreaudi. Architecture and Games - Chronicle of Social Critical Theory, Vol. 7 [M] Jiangsu People's Publishing House]

A very important strategy for the carrier of the game in the situation construction is to create festivals in daily life, and to weaken the influence of the landscape on people in the carnival and breaking away from the shackles of commercialization.

"Constructing a situation would be the ongoing practice of a great, deliberately chosen game." [Asger Jorn, "Pour la forme," in Gerard Berrery, ed, Documents Relatifs à la Fondation de l'Internationale Situationniste (1948- 1957), Paris: Allia, 1985, pp. 413, 413, 413, 312, 750.]

How to eliminate the strong business atmosphere brought about by excessive consumption orientation is an issue that needs continuous discussion. In Guy Debord's 1957 article "If you want to be a

Situationist, try again", he believes that we should stand on the opposite side of the current culture, criticize the existing fields and integrate them into a dynamic space-time system of the game In order to achieve unity in form and content. [Guy-Ernest Debord, "Encore un effort si vouulezetre situationnistes," in Gerard Berrery, ed., Textes et Documents Situationnistes (1957-1960), Paris: Allia, 2004, pp.37, 115.]

Situationism advocates that not only architecture and living environment carry the function of realizing revolutionary situation construction, but also to use artistic means to continuously stimulate the daily life situation, making life a continuous festival, breaking through the bourgeoisie and establishing a new era in contemporary society. business jungle. The games here are not purely commercial entertainment or video games that are currently popular in the market, but games that appear for the sake of change and are not utilitarian-oriented. The temporarily established non-utilitarian game creates a sincere and direct connection between people, and the pure game behavior and inter-subject relationship eliminates the exchange value and brings about the game spirit of breaking free from the attachment of commodities.

It is in the carnival-like scene that our ordinary and boring daily life can be interrupted, and the hierarchical structure and authority relationship are also invalidated in this space-time situation. Therefore, the festival is

a typical urban game with a revolutionary color, a release of suppressed desires, and a subversion of the old daily order.

In modern society, festivals are separated from daily life, so their inherent emotional intensity and subversive power to power and order are also continuously lost, and the revival of festivals is imminent. The return of traditional festivals can awaken the energy contained in the festivals, and through the construction of spatial situations, games and festivals full of passion can be launched.

3.3 Summary

On the one hand, situational construction emphasizes the participation of the body in the special moments in the city and the activities in these moments, enhancing the connection between people and people and the city; on the other hand, the non-commercially oriented premise of special moments can weaken the influence of the landscape.

Situation construction is thus a theoretical project that connects special moments, bodies and cities. Based on these three aspects, the situation construction of this research is divided into three steps in terms of theoretical operation: 1. Establish a special moment with a background of traditional cultural meaning (this research chooses the Lantern Festival) 2. Design an open, participatory, Embodied play that reshapes relationships 3. Choose a site to weaken the landscape.

04
Extraction and Analysis of Multiple Spatiotemporal Situations

Festivals and Situations

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Body and Situations

&

City and Situations

4.1 Festivals and Situations

4.1.1 The Lantern Festival and the Current Situation

On festivals, I chose the historical Lantern Festival as my cultural background, festival background and space-time background.
The Lantern Festival is the first full moon day after the Lunar New Year. The main purpose of the original Lantern Festival was to worship Taiyi [(Ming) Zhang Han, "Pine Window Dreams": "Lantern viewing lanterns began in the Han Dynasty when Taiyi was worshipped. Today, viewing the lanterns in the Yuan Dynasty is his legacy.", p. 136 Page.], and later in the Sui Dynasty, it developed into a grand event celebrated by the whole country [(Northern Song Dynasty) Sima Guang, "Zizhi Tongjian · Sui Ji": "There are 5,000 steps around the theater, and 18,000 people are holding silk and bamboo. For dozens of miles, from fainting to dawn, the lights are on the sky and the earth, and the whole month is over, and the cost is huge.", Yuelu Book Club, 2009, p. 986]. The entertainment activities held during the Lantern Festival in the Sui Dynasty downplayed the concept of offering sacrifices to gods and gods during the Lantern Festival in the Han Dynasty. In the Tang and Song Dynasties, the very strict curfew system would be temporarily suspended on this day, and people could go out to the streets at night to join in the carnival. In the Tang Dynasty, lanterns were put on for three days, while in the Song Dynasty, the viewing time was extended

to five days, and in the Ming Dynasty it reached ten days. Amusement is a peaceful event, so the holiday is not worrying about New Year's Day, and it has been taken as an example.", p. 16.]. People go out one after another to enjoy the lights in the streets and alleys, and the city is full of vitality.

On the night of the ancient Lantern Festival, the temporary failure of the curfew system turned the city into a theater-like space. .]. (Urban Space Stage Theory) Streets, open spaces, markets and other public spaces are open to the common people. People of all kinds take to the streets to watch programs such as Aoshan Lanterns and Shehuo in a relaxed and lively urban environment, and even the monarch and the people have fun together. (See Figure 4.1) In ancient times, the strict curfew system made the carnival during the Lantern Festival especially precious. In a sense, classes, power systems, and social disciplines were briefly dissolved during this period.
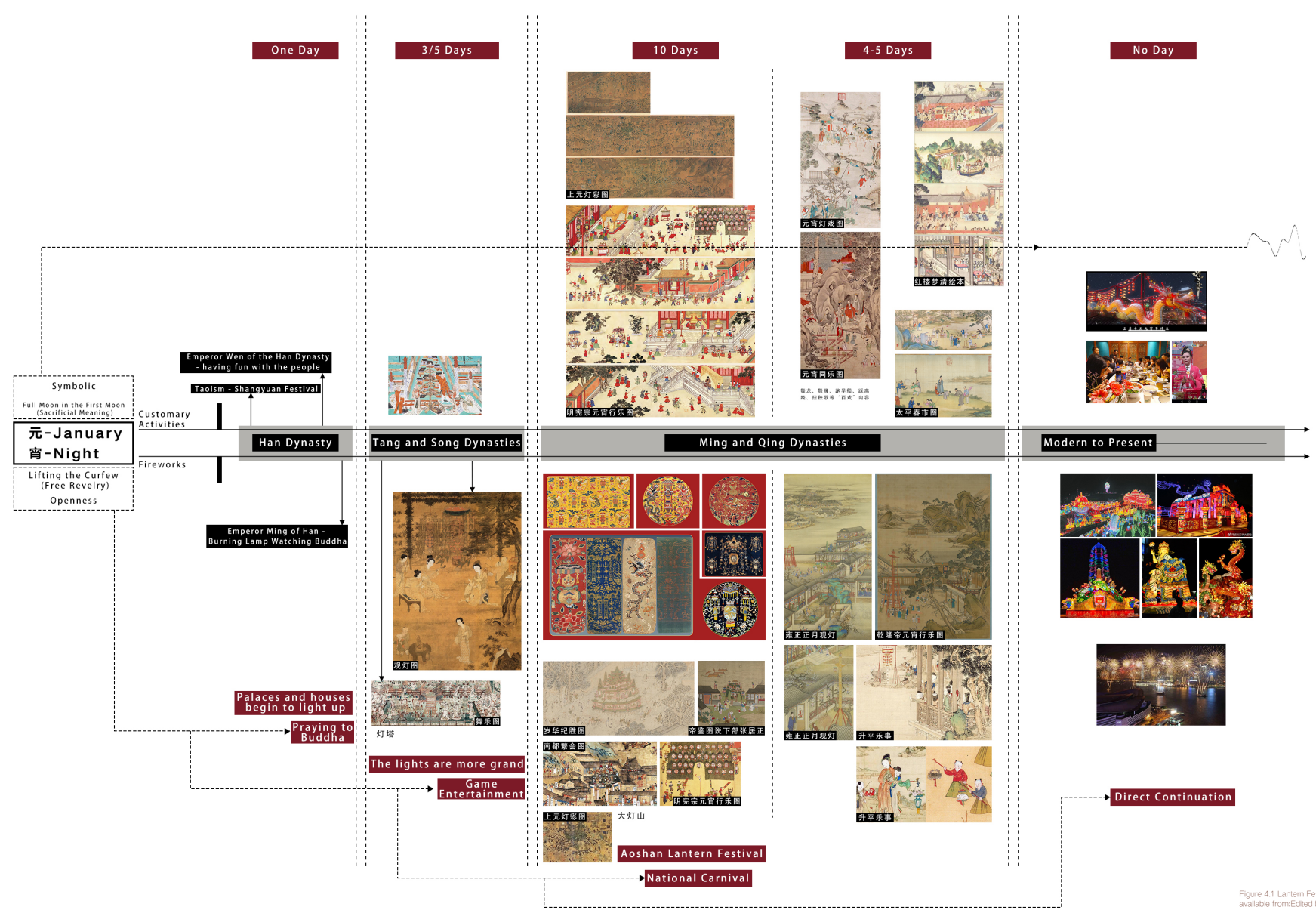
One Day	3/5 Days	10 Days	4-5 Days	No Day

上元灯彩图

元宵灯戏图

红楼梦清绘本

元宵同乐图

太平春市图

Symbolic

Full Moon in the First Moon
(Sacrificial Meaning)

元—January
宵—Night

Lifting the Curfew
(Free Revelry)

Openness

Customary
Activities

Fireworks

Emperor Wen of the Han Dynasty
- having fun with the people

Taoism - Shangyuan Festival

Emperor Ming of Han -
Burning Lamp Watching Buddha

Han Dynasty	Tang and Song Dynasties	Ming and Qing Dynasties	Modern to Present

观灯图

灯塔

舞乐图

明宪宗元宵行乐图

雍正正月观灯

乾隆帝元宵行乐图

雍正正月观灯

升平乐事

升平乐事

岁华纪胜图

帝鉴图说下部张居正

南都繁会图

上元灯彩图

大灯山

明宪宗元宵行乐图

**Palaces and houses
begin to light up**

**Praying to
Buddha**

The lights are more grand

**Game
Entertainment**

Aoshan Lantern Festival

National Carnival

Direct Continuation

The current Lantern Festival has lost this function. The Lantern Festival without statutory holidays is just an ordinary day in the daily life of the city. People need to go to get off work and get off work, and then allocate their limited free time. The streets of the Lantern Festival are apart from the pedestrians passing by and the warmth of the Spring Festival. In the past, the emperor and the people had fun together, the people carnival, and all kinds of lively environments full of romance and unique stories were gradually dissipated.

The relationship between the current situation of the Lantern Festival and the landscape described above is that, on the one hand, the Lantern Festival has lost the function of a traditional holiday and the role of a carnival to break the boring life. On the other hand, the expansion of the landscape in our daily life has also made history The context is slowly forgotten, and the lively cultural atmosphere gradually fades. The relationship with the body and the city is that the environment that once looked forward to walking on the streets, where you can personally experience the joy of festivals and sensory stimulation, is becoming less and less in cities that are over-adopting virtual connections and over-commercialized.

Therefore, in order to combat the above trend of urban development, in this practice, I chose Chinese classical novels and ancient paintings that recorded historical information on the axis of time and space, extracted

Figure 4.2 Lantern Festival Xidan&Wangfujin Street Behavior
available from:Photographed by author Wu Wenqi

the context of the Lantern Festival, and combined my research in Chapters 2 and 3. Theories of the city and the body are contextualized.

4.1.2 Situational Content - Ming and Qing Fiction

The reason why I choose Ming and Qing novels is that the novels describe more people's bodies participating in the city, interacting and interacting with other people in a longer time line and a wider space, and there are more comprehensive scenes in the novel's text. sensory stimulation, details that connect with the festive atmosphere in the city.

Compared with other literary genres, novels are characterized by a wider range of characters involved, more detailed descriptions of things, more complete timelines and clues, and more three-dimensional space construction. households, with extensive civil penetration. Therefore, the novels of Ming and Qing Dynasties in the prosperous period of classical novels are selected as the source of the story of the situation, and the moving core of the story is extracted.

According to the length and importance of the description of the Lantern Festival, and the different descriptions of the city and people and the relationship between people in the novels during the Lantern

Festival, I screened out "A Dream of Red Mansions", "Jin Ping Mei" and "Water Margin". The classic novels on the side of the festival are then sorted out, and then the three novels are sorted out by character relationship, storyline, behavior duration, and spatial displacement.
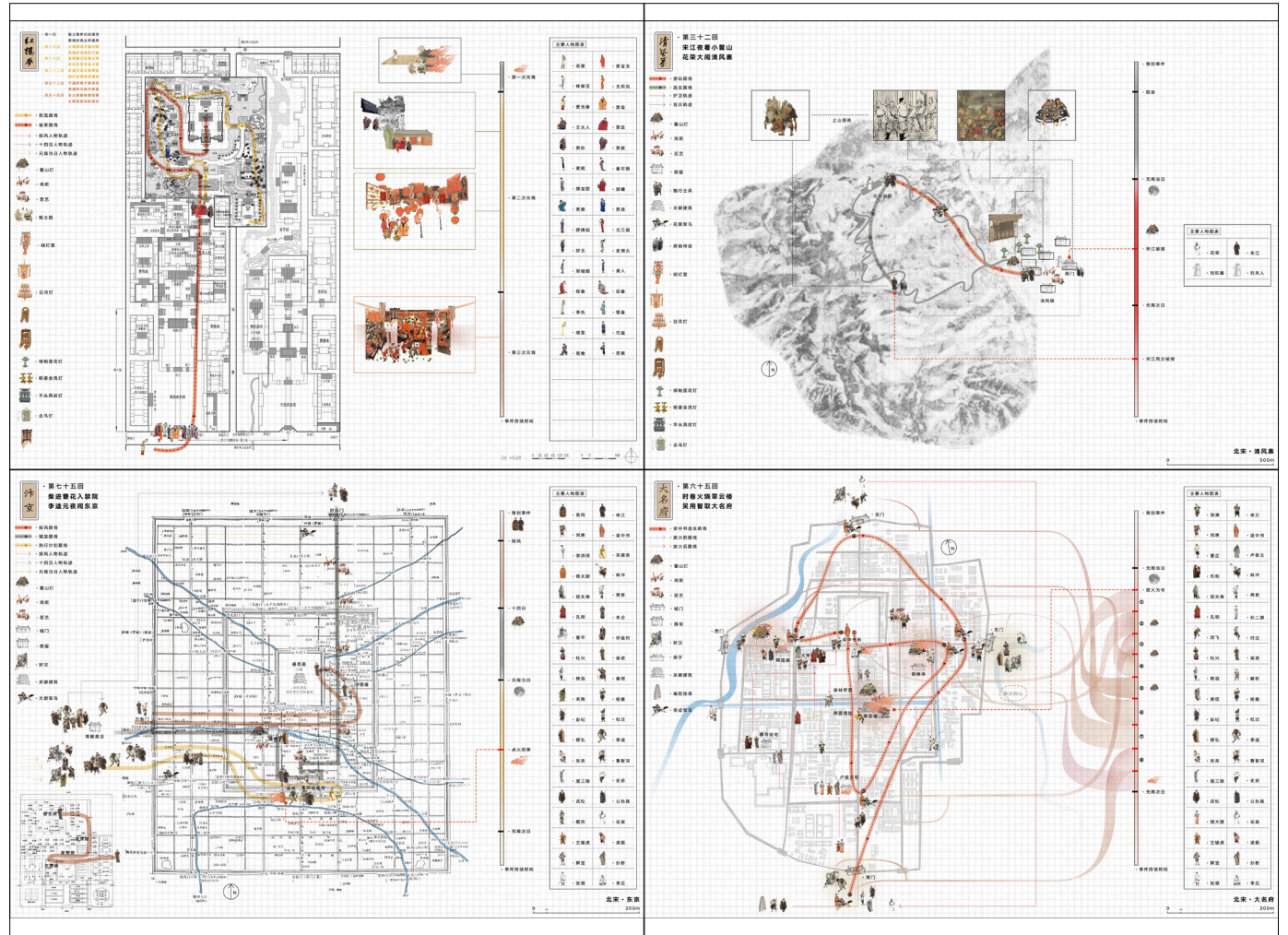

Figure 4.3 Novels
available from:Baidu.com

Figure 4.4 Situations Sorting
available from:Drawing by author Wu Wenqi

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Reconstruction of Urban Public Space Situation Based on Digital Technology － Commercial Streets Reconstruction as Examples

4.1.3 Visual Symbols - Lantern Festival Images

A lot of image information related to the Lantern Festival is recorded in the preserved ancient cultural relics. In addition to being directly recorded on the canvas, the images also exist on fabrics and utensils. Since the lantern is the most prominent and typical representative symbol of the Lantern Festival, the image records about lanterns are the most. On the basis of the classification method in Qing Jialu written by Gu Lu in the Qing Dynasty, I divided lanterns into five categories: figures, plants, animals, kitkat and others. Then the collected images are disassembled, and the representative form symbols related to the auspicious meaning are extracted.

Figure 4.5 Graphical Symbol Extraction
available from:Drawing by author Wu Wenqi

Aoshan Lantern is a unique form of lanterns. It is composed of thousands of lanterns of various forms, coupled with the construction technology of skilled craftsmen and various fairy legends, forming

a huge lamp mountain device. This Dengshan Mountain is a huge fairyland woven with lanterns, landscape pavilions, and immortal images, which reflects people's beautiful yearning for fairy life.
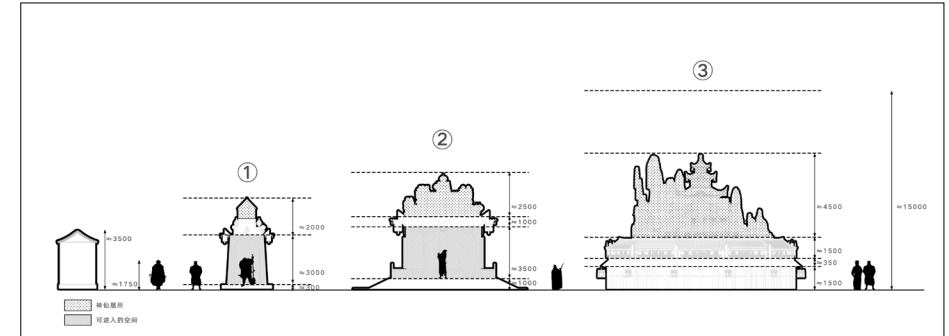

Figure 4.6 Analysis of Aoshan Lamp
available from:Drawing by author Wu Wenqi

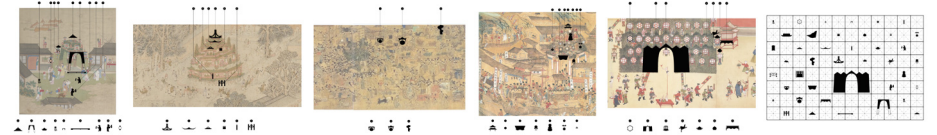
Figure 4.7 Aoshan Graphical Symbol Extraction
available from:Drawing by author Wu Wenqi

There are various forms of Aoshan lanterns (see Figure 4.10), "Dijian Tushuo Lower Zhang Juzheng" (see Figure 4.15), "Nandu Fanhui Tu" (see Figure 4.14), "Suihua Jisheng Tu" (see Figure 4.12) There are three different forms of Aoshan lanterns recorded in the book. Generally speaking, the smaller-scale Aoshan lanterns often appear in the countryside, with fewer buildings and fairy figures or even only lanterns. The larger-scale lanterns often appear in large cities, and are led by the government (Figure 4.10 from left to right).), in front of the Meridian

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Gate of Beijing City in the Ming Dynasty, the Aoshan lanterns stacked to the 13th floor [Lu Yanzhen. Aoshan lanterns on the Shangyuan Festival in the Ming Dynasty], according to legend, are about 15m high.

Aoshan lanterns generally form a three-layer structure. The bottom is a structural layer, which is made of wooden shelves. There are two forms that can be entered and cannot be entered. On the middle floor are lanterns and plaques with congratulatory messages. The top floor is the residence of the immortals, with landscape lanterns, pavilions and pavilions, immortal characters and various organs.

The symbols of the ancient paintings depicting Aoshan lanterns were extracted, and the parts of Aoshan lanterns with their own characteristics were extracted from four aspects: 1. The architectural environment symbolizing the residence of the gods (the structural parts of pavilions and pavilions, various types of Lamp Mountain Support Structure). 2. It symbolizes the characters in the fairyland (the immortal shapes on the Dengshan Mountain, the citizens in joy and happiness). 3. It symbolizes the natural environment (rockery, strange rocks and beasts) that gods enjoy. 4. Various lanterns that symbolize the vision of the common people and palace lanterns that symbolize wealth and status.
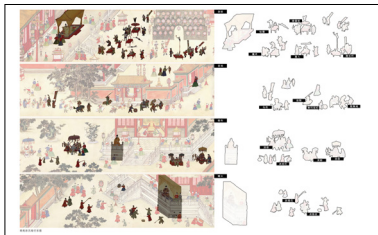

Figure 4.8 Behavioral activity analysis
available from:Drawing by author Wu Wenqi

4.1.4 Ritual Activities - Lantern Festival Text and Images

In the past, people celebrated Lantern Festival with various customs, and each place has its own characteristics. Listed according to the image information collected so far, mainly including reunion dinner, visiting the lantern market, eating Lantern Festival, giving lanterns, watching Aoshan, praying for blessings in Shangyuan, watching the moon, dancing dragon and lion, guessing lantern riddles, walking a hundred diseases (walking a hundred diseases) Ice), welcoming Zigu, walking on stilts, offering sacrifices to the door, and some other customs related to blind date begging for children or praying for blessings.

Figure 4.9 Behavioral activity analysis
available from:Drawing by author Wu Wenqi

4.2 Body and Situations

4.2.1 Direct Experience of the Body - M&Q Novels

It is the reflection on more and more virtual social activities and virtual activities that makes Merleau-Ponty's embodied perception of the body mentioned and discussed again. And I think the experience of bodily participation is indispensable, because of the existence of the body-pictorial relationship, we are able to continuously incorporate the world into our own body, so as to connect with the world.

According to the phenomenology of perception's emphasis on bodily senses, I conducted a sensory analysis of three selected Ming and Qing novel texts, corresponding to the direct experience gained by the material body. According to the text's description of the urban atmosphere when the characters travel in the city, it corresponds to the sights they see, the objects they touch, and the basic sensory experience of the body on the time scale.
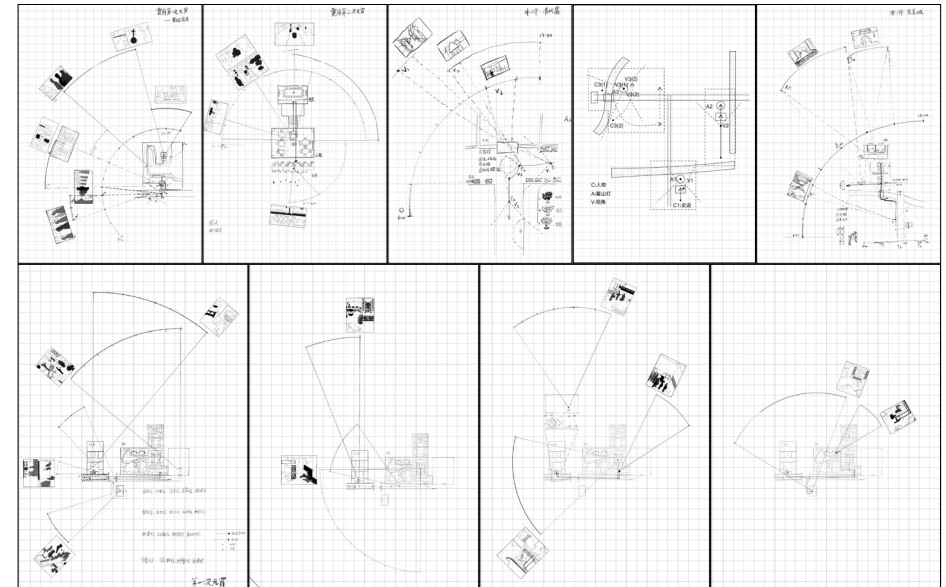

Figure 4.10 Physical experience analysis
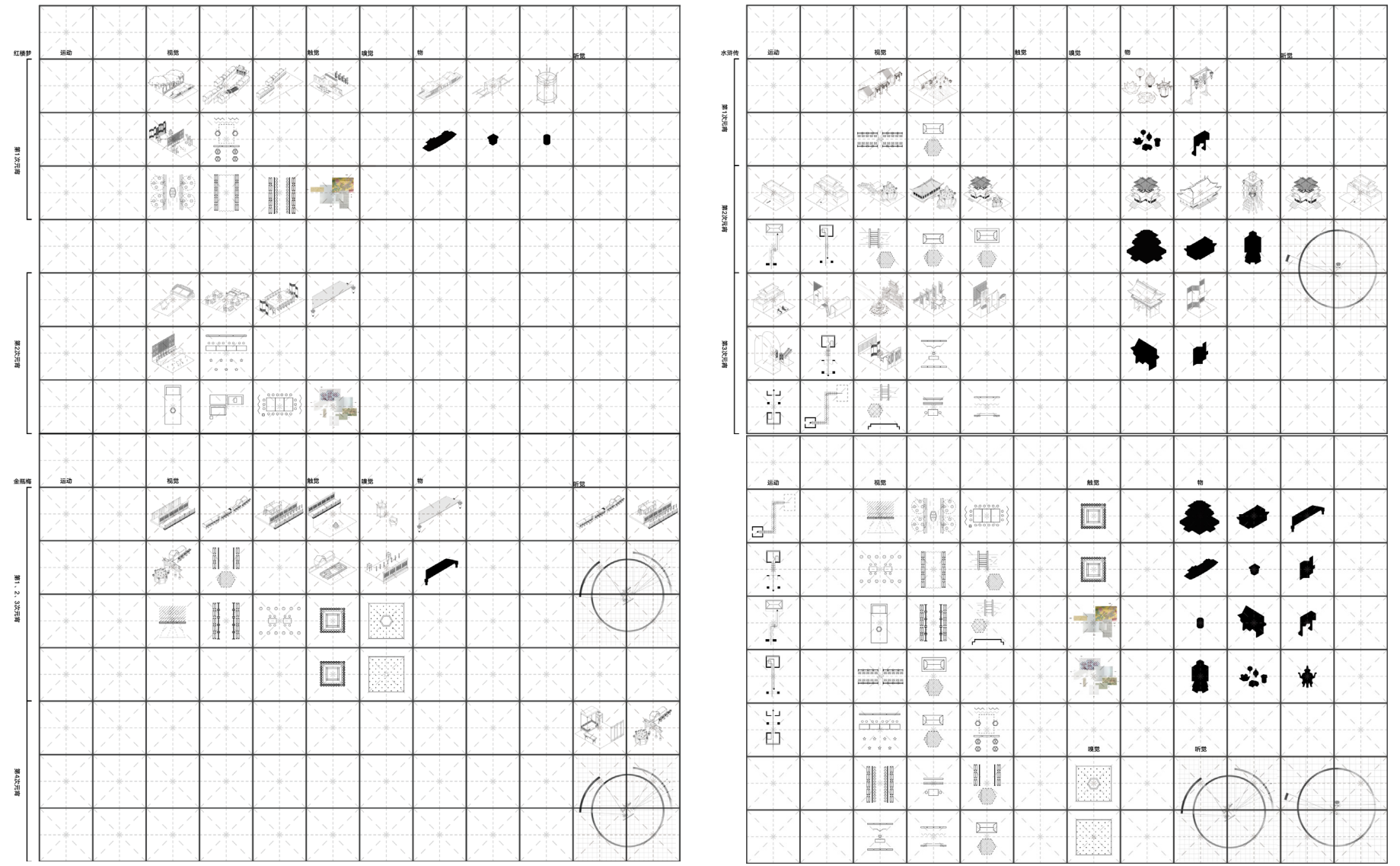available from:Drawing by author Wu Wenqi

Figure 4.11 Visualize and categorize sensory experiences available from:Drawing by author Wu Wenqi

4.2.2 Body's Mediated Experience

The analysis of the intermediary experience after technology participation, the main source and the contemporary digital technology installation cases, after collecting works in recent years, I have classified how the body participates in the interaction, according to the different behaviors that the body needs to operate, I divided into There are five categories, one is contact with technical products, immersive acceptance, one-way acceptance, data supply, and performance acceptance.
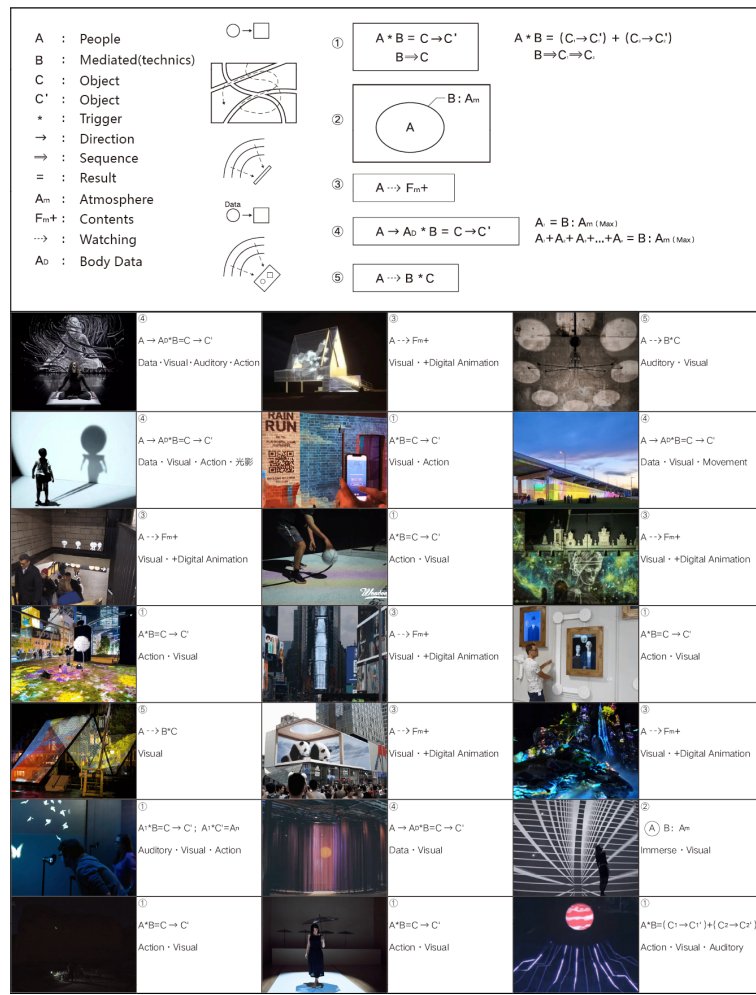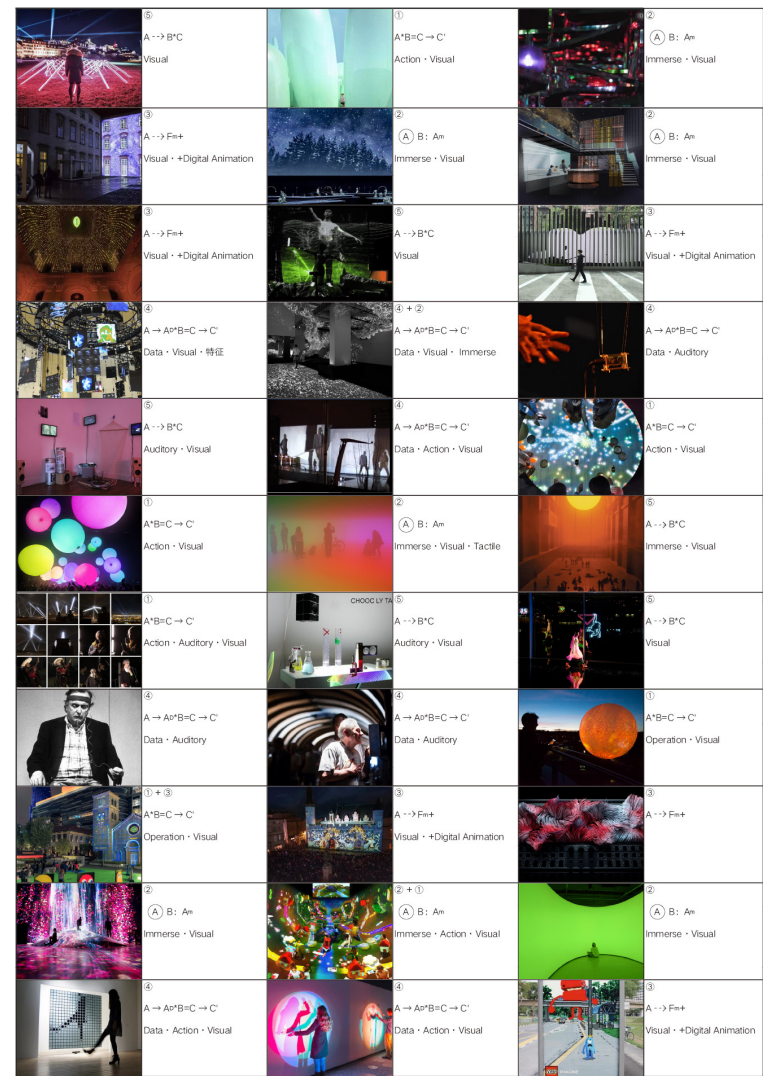
A	:	People
B	:	Mediated(technics)
C	:	Object
C'	:	Object
*	:	Trigger
→	:	Direction
⇒	:	Sequence
=	:	Result
A_m	:	Atmosphere
F_m+	:	Contents
⋯→	:	Watching
A_D	:	Body Data

① $A * B = C \to C'$
$B \Rightarrow C$

$A * B = (C_1 \to C_1') + (C_i \to C_i')$
$B \Rightarrow C \Rightarrow C_i$

② $B : A_m$ / A

③ $A \dashrightarrow F_m+$

④ $A \to A_D * B = C \to C'$
$A_1 = B : A_m$ (Max)
$A_1 + A_2 + ... + A_n = B : A_m$ (Max)

⑤ $A \dashrightarrow B * C$

Figure 4.12 Analysis of body interaction with past classic digital installations in the past 3 years
available from:Edited by author Wu Wenqi

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4.3 City and Situations

4.3.1 Interactive Relationship Case Study

In addition to the theoretical research and the extraction of the Lantern Festival situation, the analysis of classic cases is also an important part of this paper to improve the design strategy. The case selects two classic public interactive installations by Rafael Lozano-Hemmer to understand his term: Relational Architecture.

Rafael Lozano-Hemmer is a typical example of an artist experimenting with participatory public space practices. He coined his term "relational architecture" in 1994, which he defined as "the technical presentation of public spaces and buildings with alien memories. Designed to affect and Re-associate with a specific context, thereby changing the prevailing narrative of a specific architectural or urban setting.

Lozzaro Homer's interactive video installation at Schoberger Platz in Rotterdam, "Body Film", is a classic case of digital media intervention in physical space, de Waal said: "The playful element can play a role here. important role, temporarily suspending existing agreements and creating the basis for new interactions." In other words, the work creates new public dynamism, communicative relationships and non-trivial moments that are different from the routines of everyday life in a playful way.

Technically, Body Movie is projected on a 400- to 1800-square-meter (4,300 to 19,400-square-foot) plasma screen, using robot-controlled projectors to display thousands of photos, all pre-screened in Rotterdam Portraits taken on the street.

Content-wise, all portraits projected on the screen are only a light layer of color, blurry and unrecognizable. However, when a pedestrian walks past the projector and the shadow hits the screen, the portrait in the shadow becomes clear and bright. It is precisely because the outline of a person is irregular that the portrait presented on the screen is also cut irregularly by the outline. But the outline is not completely uncontrollable. To control it, it depends on three factors. One is the hardware limitation, limited by the screen, the range of the human outline is between 2 and 25 meters (6.6 to 82.0 feet); the second is the relationship between people and the ground. The distance between the powerful light sources on the square; the third is the various body postures that people take on the square.

At the same time, the content of the portraits is not unchanged. A video surveillance tracking system is set up in the square, which will trigger a new round of portraits after all the current portraits are exposed, and invite the public to use the new portraits to narrate again.

Figure 4.13 Picture of Body Movie
available from:www.lozano-hemmer.com

The body film uses the concept of "urban screen", but the screen in this work is not passive, but substitutes the participating people into the role of the extreme, passers-by can enter a short period of time, during which the establishment of They have established social relations with each other and become interactive media. From the concept of "platform-program-agreement", the agreement between existence and venue in the past has been disrupted, strangers in public places can "disturb" each other, and can stimulate people's willingness to participate in "interruption" .

How the screen is used determines the exact meaning of the experience people get from the public sphere: on the one hand the urban public can act around the media content on it, such as group watching concerts, football matches, but on the other hand, its presence is also very Easily linked to the commercialization of the public sphere, such as showing more and more advertising to attract consumers, Lozzaro-Homer uses projects such as body films to denounce this growing commercialization. The work also offers an alternative to the rise of global pop and commercial culture as a way to counter the consequences of globalization making all parts of the world look remarkably alike.

Lozzaro-Homer's goal is to make city dwellers see themselves and the city around them in a new way, to "liberate" them or at least provide

an alternative to the restraining mechanisms of a consumer society; to temporarily remove them from everyday life. liberate them from the city and invite them to do their own "reading" and "interpretation" of the city.

According to Lozzaro-Homer: "Every passing person may come into your life. The slightest movement is amplified into a sudden symbol of awareness. The surrounding space is no longer a neutral frame. It is filled with anticipatory gazes and leads to potential approaches", urban art interventions should be of a similar quality: the motto is "beyond anticipation," which derives from what the Situationists call "drift" and "heterotrack."

Another significance of body movies is that they do not show the image of heroes or celebrities, but are based on "ordinary people" living in the city. These people's body postures are also everyday, and they are often photographed when shopping or going out for a walk. These everyday images are then projected on the urban geography, providing a local context and a special identity for moments beyond the banal.

Lozzaro-Homer is concerned not only with the content of the projection, but also with the social interaction that his projects bring about. What is special about body cinema is that the public, who had been total strangers a moment before, briefly formed a bond around the installation; they briefly shared a lighthearted experience, based on their
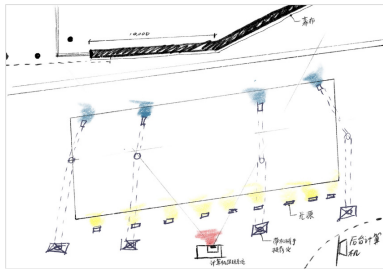

Figure 4.14 Plan analysis
available from:Drawing by author

Figure 4.15 Picture of Body Movie
available from:www.lozano-hemmer.com

The exchange and cooperation of many different group choreographers and influence the atmosphere of the surrounding environment. The concept of "coexistence" based on intersubjectivity proposed by Bryaud in relational aesthetics is embodied in this work, and new social relations are created.

At the same time this is an open work, several people can participate in the installation at the same time, their interaction plays an important role in the overall result, and unlike previous interactive works, the information input by the participants will not disappear in the democratic average middle. It is therefore necessary to distinguish Lozzaro-Homer's "relational architecture" from interactivity, since "interaction" is used to mean "reaction": the user operates a certain technology or performs a certain physical action, and then Produces some result according to the preset pattern, it is broad enough to represent anything, so it is meaningless most of the time in Homer's view. The purpose of the word "relationship" is to express the various relationships that the work can produce, which is more collective, communicative and participatory.

4.3.2 Technical Parameters for Building Urban Scenarios

From the listing and information collection of the cases mentioned in the theory, I extracted the technical means, technical parameters and technical equipment used to reshape the relationship between people and cities and between people through digital technology.

Technical Classification	Lighting			Projection		Induction System
Photos						
Interactive Photos						
Spatial Analysis						
Technical Principles	7KW xenon intelligent searchlight deal with digital encoder Microphone Interactive area 300 × 300 (275 × 275 meters)	7KW xenon projector*n Human contour range Distance between person and light source: 1~30 meters. Transparent film Projector height: 12m	12 sites Site: 10 colorful dominoes Dominoes: different voices (people, percussion, Orchestra) PE polystyrene + Iwai arduino sensor Architectural projection	3.3w lumen digital image projector *6 Handle *2 Map magnification: 25X Game App 3D Projection Mapping	Elevation Size 34 x 9.5m Christie roadster hd12k projector *2 Macpro runs provide player HD to Matrox triplehed2go	Elevation size 24m x 16M Infrared camera *n Infrared lamp *n Max, video projector, sound system

Figure 4.16 Technical parameter information collection of digital devices
available from: Edited by author Wu Wenqi

05
Design Practice: A Game Connecting Time and Space

Design Description

&

Design Strategy

&

Site Research

&

Three-node Space Design

5.1 Design Description

5.1.1 Design Area

The shopping street is a place where people meet and stroll at the city level. This time, the venues are Xidan and Wangfujing. There are three reasons: First, Xidan and Wangfujing are both located on the main traffic lines in the core urban areas of Beijing. Because the urban layout of Beijing is a centripetal ring, Xidan and Wangfujing are located in the center of the city, so that people in different parts of Beijing can reach them more conveniently and efficiently; second, the commercial structures of Xidan and Wangfujing are very Rich, there are not only large commercial shopping centers such as Xidan Shopping Center, Joy City, Wangfujing Department Store, etc., but also high-end shopping malls such as Galeries Lafayette, Intime, and Wangfu Zhonghuan, which make the target group positioning of Xidan business district clear and comprehensive, and it has become an attractive destination for Beijing. People of different consumption levels from all over the world go to play and meet places; thirdly, the business philosophy of Xidan and Wangfujing for the public corresponds to the concept of ancient markets. Create a relaxed and open business atmosphere. However, it is not difficult to find that excessive commercialization and activities aimed at stimulating consumption make it difficult for people to gain a sense of community participating in urban space, which is also not conducive to people's psychological connection with the city.

This scheme proposes a practical proposal for the theory with the help of the existing scale of Xidan and Wangfujing commercial streets and the cohesion of the city scope.

5.1.2 Design Concept

The final design adheres to three principles. The first is weak intervention. The design adopts temporary and detachable installations, and does not make permanent changes to the existing spatial layout and infrastructure of the site. It is related to the festival in terms of time. echo. The second is that the design of the installation is not business-oriented. Although the design content is located on the platform of the streets and shopping malls in commercial venues, the core value is to create a game for people to play, and to turn the city into a continuous festival public environment, with Offset and weaken the commercial atmosphere of the venue. The third is interactivity. The interaction of the installation is not only reflected in the interactive response between people and the installation, but also in the embodied experience of people and people, people and cities, either directly or mediated. People's bodies can participate in the space, affecting the installation and urban space, and at the same time, on the basis of the new "temporary rules" set by the space installation, with the urban environment and the people on the street, they can obtain short-term communication and shared urban experience.
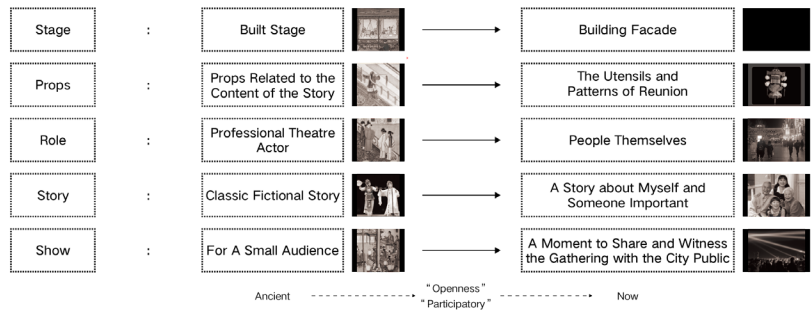
5.2 Design Strategy

5.2.1 Space Narrative System

Through the previous theoretical analysis, situation construction is the central idea of this project practice. Through the extraction of different time and space situations of the Lantern Festival in the previous chapter, a set of spatial narrative system is obtained. The purpose of this system is not to reproduce the plot of the novel that has already happened, but to extract the core images and relationships in the novel, to modernize it, and to re-tell the vision of the three Lantern Festivals.

Pray

The Golden Lotus · Lighting Scene
↓
Celebrate with People on the Street
↓
Fireworks
↓

Aoshan	Immortal Pavilion Landscape Lanterns Shelf	Central Organization to Design and Build		Freely Assemblable Modules	
		View and Worship the Fairyland from A Distance		Create "Wonderland" and Walk into "Wonderland"	
Lanterns	Person Plant Animal Ingenious Other	Constant Lighting Results		Changing Lighting Results	
		Demonstrate A Desire for Personal Prayer		Collective Aspirations	

(Symbol Extraction)   Ancient - - - - "Openness" "Participatory" - - - - Now

Reunion

A Dream of Red Mansions · Imperial Concubine
↓
Meet Again
↓
Watch A Play Together
↓

Stage	:	Built Stage		Building Facade	
Props	:	Props Related to the Content of the Story		The Utensils and Patterns of Reunion	
Role	:	Professional Theatre Actor		People Themselves	
Story	:	Classic Fictional Story		A Story about Myself and Someone Important	
Show	:	For A Small Audience		A Moment to Share and Witness the Gathering with the City Public	

Ancient - - - - "Openness" "Participatory" - - - - Now

Cooperation

Water Margin · Outwit the Daming Palace
↓
Arrange Arms and Embattle
↓
Conquer the City Together
↓

Place	:	Open Horizontal Physical Space		Building Facade and Virtual Space	
Participant	:	Acquaintances in the Organization		Strangers on the Street	
Plan	:	Clear and Definite Linear Steps		No Restricted Specific Steps	
Action	:	Exact Behavior		Co-operation in Negotiating Behavior with Others	
Tools	:	Mostly A Tool that Operates on Its Own		Tools for Collaborative Use	

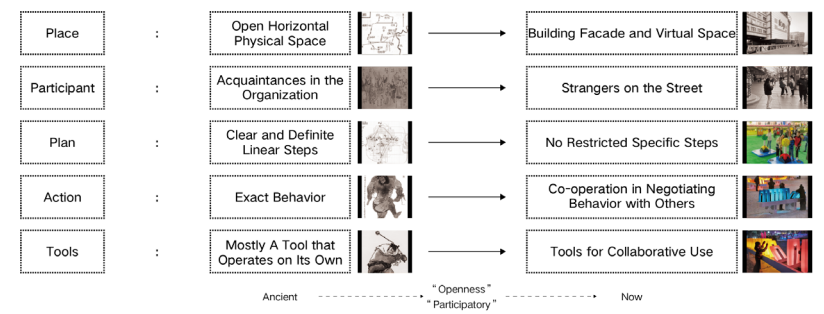Ancient - - - - "Openness" "Participatory" - - - - Now

Figure 5.1 Narrative transformation
available from:Drawing by author Wu Wenqi

5.2.2 Interactive System

Based on the rapid development of digital technology, new forms of situation construction have also emerged. Combined with the analysis of relevant cases, digital technology has brought a rich imagination space to reshape the relationship between people and cities and people, which can be easily and effectively It can achieve the relationship building that was difficult to achieve in the past, and can take place in the urban scale space.

The interactive system of this paper does not focus on digital technology on the advancement of technology, but on how to combine existing mature technology with new uses to produce interesting structures that can change public relations in space. According to the analysis of relevant cases in Chapter 3, the technologies used in the interactive system are mainly architectural projections, lights, urban screens and simple and effective sensor devices.

The interactive system maps the collected technical information to the available technical equipment based on case studies of intermediary experiences. In the design and practice plan, three technologies are mainly used to realize interaction, one is the lighting technology realized

by relying on 240w xenon lamp, the other is the projection technology realized by relying on 1.2w lumen projector, and the last one is the positioning induction realized by relying on infrared emitters technology.
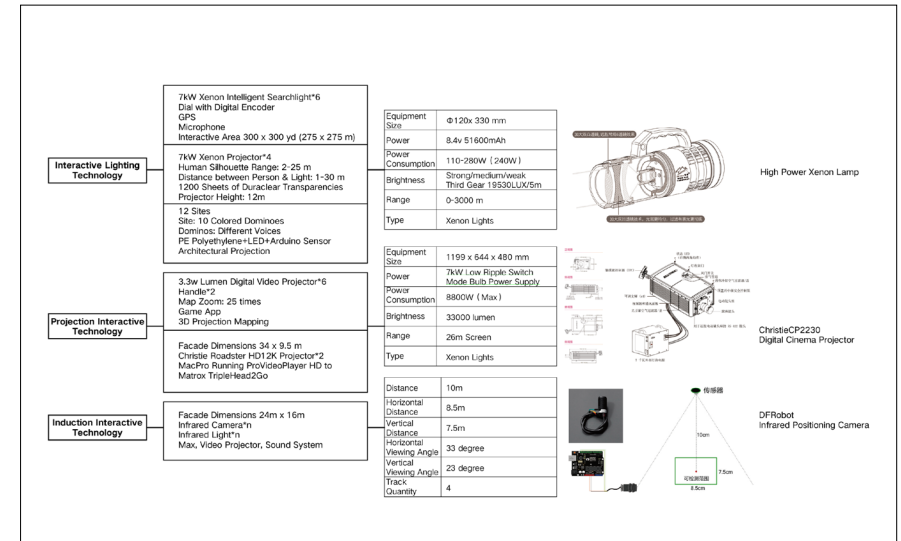
Figure 5.2 Three main digital technologies used
available from:Drawing by author Wu Wenqi

5.2.3 Symbol System

(1) Behavioral symbols
Since the Lantern Festival has been a national activity since ancient times, there are many related customs, and each place will produce some variants according to its characteristics. The scope of extracting behavior symbols here is limited to the Central Plains region, mainly based on the customs of the capitals of various dynasties, mainly referring to the ancient paintings that have been depicted.

The customs to celebrate the Lantern Festival mainly include reunion dinner, visiting the lantern market, eating Lantern Festival, giving lanterns, watching Ao Mountain, praying for blessings in Shangyuan, watching the moon, dancing dragon and lion, guessing lantern riddles, walking all diseases (walking on ice), welcoming Zigu, Walking on stilts, offering sacrifices to gates and households, and some other customs related to blind date begging for children or praying for blessings.

According to the criteria of "openness", "participation", "publicity", "embodiment", and the criteria that can be used to connect spatial narratives in design practice, the The following types of behavior symbols are used for translation and continuous application in subsequent design solutions:

1. Reunion dinner, watching a hundred operas and watching the moon
The reunion dinner takes place in a relatively fixed space. People who are related gather together to enjoy the food, enjoy the beautiful scenery, and share the joy of reunion. This vivid relationship between people and space was extracted by me and became the story of "Dream of Red Mansions". Contrasting customs of the "reunion" story in China. In the present moment, it is not about physically touching and watching movies and watching the moon together, but with the help of interconnected technologies such as video calls and photo uploads to regain the joy of shared reunion.

2. Send lanterns, watch Aoshan and visit the lantern market
No matter who the lanterns are given, whether they are others or themselves, the lanterns embody people's best wishes, and the same is true of Aoshan. The fairyland where the gods live is people's good yearning for the ideal life, and visiting the lantern market is immersing in The expectation of a prosperous and stable peaceful and prosperous world is a process of understanding the wishes of others and sharing one's own wishes at the same time. The creation, hope, and participation and viewing of lanterns are extracted, which echoes the thousands of blessings in the thunderous and bustling city in "Jin Ping Mei".

3. Dragon and Lion Dance

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The dragon and the lion are auspicious totems in the national implication. The bamboo and wood structure is pasted with yarn, the details are depicted in the shape, candles are lit, and a dozen people lift the wooden stick together to dance vividly. In addition to this common image, some coastal areas also have local customs such as the fish lantern dance, where many people work together to complete the Lantern Festival. This kind of communication relationship between people completing creation and performance through simple collaboration was extracted by me, which echoes the cooperation story of Liangshan heroes winning together in "Water Margin".

(2) Graphical symbols
There are two main sources of elements of graphic symbols: one is the ancient paintings involving Lantern Festival, lanterns, and Aoshan lanterns; the other is the key objects and scenes from the three novels, which are imagined and restored through text descriptions and related picture books, and then go further. Symbol extraction. The extracted symbols are screened according to the different spatial narrative content, and reorganized into the image basis in the design.

5.3 Site Research

Since the specific site was chosen, the analysis of the city fell on the site. The first venue, Xidan, is a famous commercial street in Beijing. The reason for choosing here is that there is sufficient physical space in the physical environment of the city, and because of the rich commercial-intensive formats, it is easier for people of all ages to gather here. In the space, the width of the street can be 23m at the widest, and the pedestrian system is relatively long. The length of the one-sided street is 950m. The three overpasses also allow people to walk freely on both sides of the street.

The second venue, Wangfujing, is another famous commercial pedestrian street in Beijing located 3 kilometers east of Xidan. There are three reasons for choosing this venue. The first is that, like Xidan, it has rich business formats, a large flow of people, and various types of people come here to shop. The two venues have something in common. The second is that Wangfujing has a business policy of creating traditional features. The archway, the structure and symbols of many traditional elements are the labels and characteristics of the venue, which is different from Xidan's main trend and the goal of targeting young people. Therefore, people who come here are not only For similar parts, there will be more out-of-town tourists, and the coverage of the crowd will be wider. The third point is that there is no roadway crossing the street, and the performance and spatial state of the installation can be compared in two different walking modes.

5.3.1 Urban Physical Environment

The analysis of the urban physical environment adopts the method of facade collage. The shape, color and material of the buildings on both sides of the street are based on the psychological experience of tourists walking on the street, and the existing environmental atmosphere of the site is presented as a whole.

Xinchang, Joy City, and two renovated department stores have attracted a large number of young people to come here to eat, date, and go shopping. Trendy brands and more fashionable restaurants make this place more and more prominent for the new generation. However, due to the long construction time of the building, it can be seen that most of the architectural styles still have a sense of age.

The positioning of Wangfujing is slightly different from that of Xidan. Due to the relatively more traditional elements and the earlier development, the architectural style is more formal than that of Xidan.

The building facades of the two commercial streets are filled with a large number of billboards, constantly showing various landscapes to tourists walking on the streets. People's bodies are surrounded by

images, images and music, except for unconditional watching and listening. , the body does not intersect with the architectural interface, and the public space on it only serves as a functional purpose for people to walk.
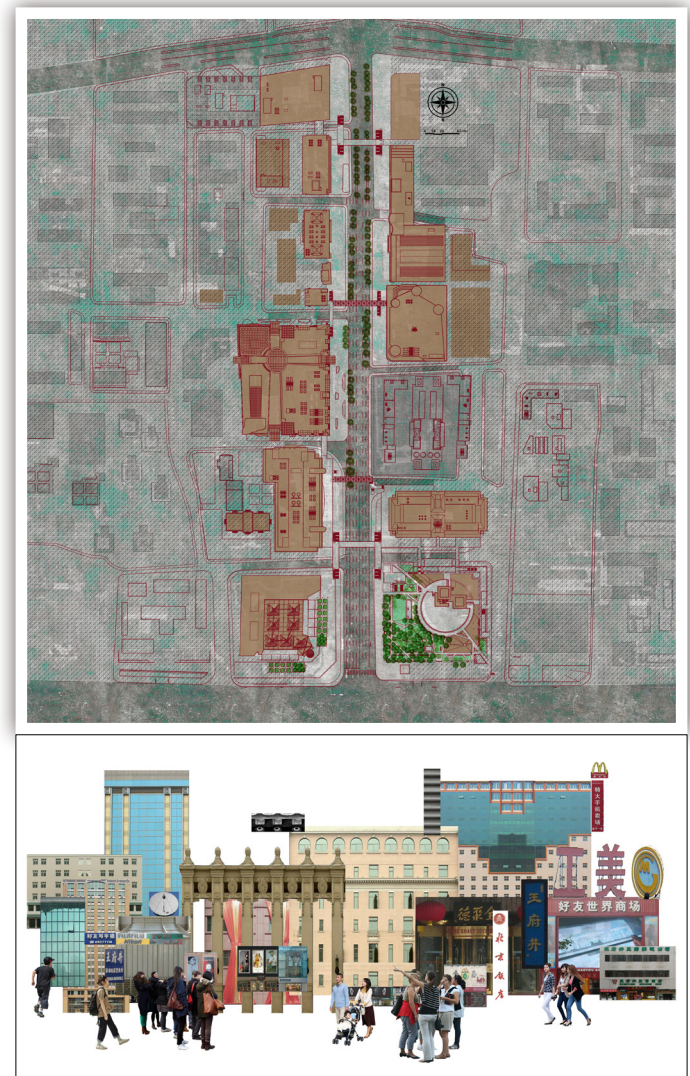

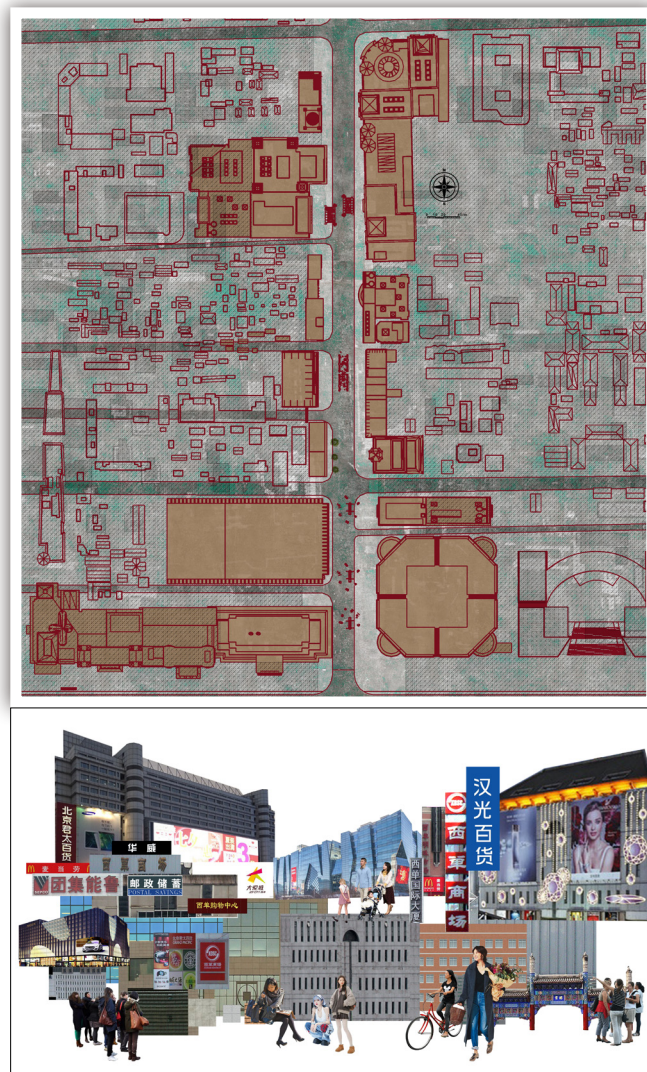Figure 5.3Wangfujin master plan
available from:Drawing by author Wu Wenqi

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Figure 5.4 Xidan master plan
available from:Drawing by author Wu Wenqi

5.3.2 Temporary Installation

During the Lantern Festival from September 2021 to February 15, 2022, the number of installations at the venue is fixed at 7. The existing installations at the venue can be divided into three categories. The first category is not related to the venue and is related to the major national events of the Winter Olympics. The related commemorative installations are located on the south and west side of Xidan Commercial Street, at the intersection of pedestrians and vehicles. Such installations at the entrance and main roads serve the publicity needs at the national level. The second category is funded and organized by shopping malls, serving the aesthetic promotion of shopping malls, seeking potential consumers with consistent aesthetics, and attracting passenger flow. The third category is the pop-up device built by the brand, introducing the brand's latest products or the brand's commercial advertisement for its own service and positioning.

5.3.3 Human Behavior

The author adopts the method of phenomenon observation, selects two time periods of day and night, and two different time backgrounds, festivals and weekdays, to analyze the behaviors of people in Xidan and Wangfujing commercial streets.

After analyzing people's behavior and the temporary installations on the existing site, it is found that the relationship between the body and the space is only a simple one-way relationship. There is no connection between people and people, people and the city. It is also a variety of commercial advertisements, and festivals have only become a gimmick for shopping malls to hold events to attract consumers. This is a place where consumption is excessively concentrated, and it is also the object of my criticism.

Figure 5.5 Xidan&Wangfujin Photos
available from:Photographied by author Wu Wenqi
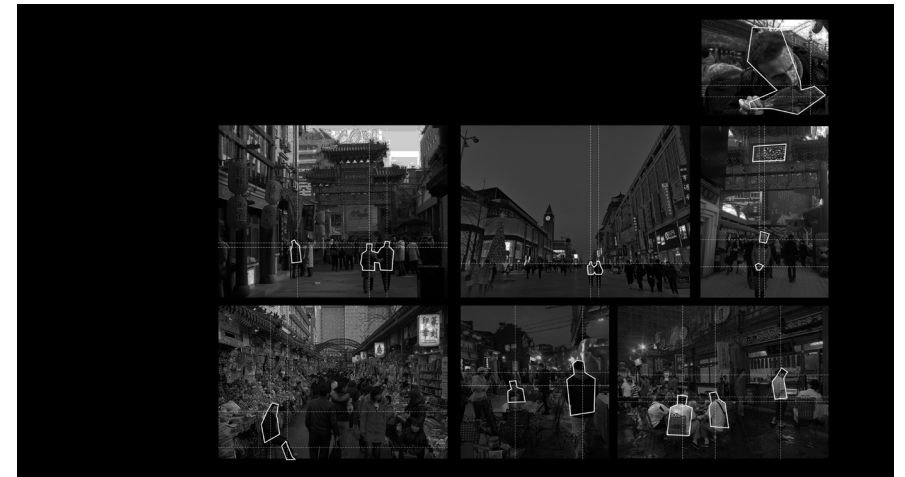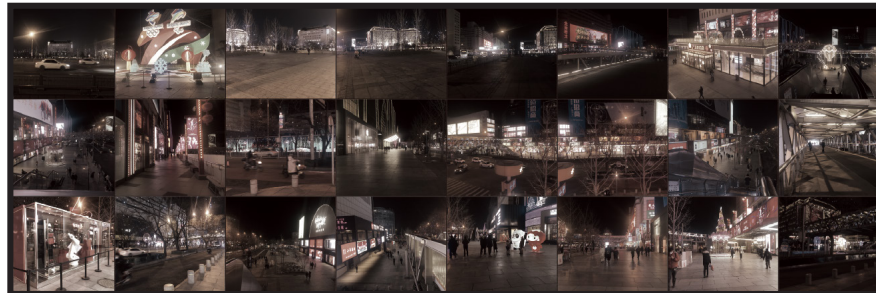
5.4 Three−node Space Design

5.4.1 Space Node No.1

The first node is located on both sides of the street at the southernmost side of the site and on the platform, creating six different spatial images by combining elements.

The six images are distributed on the sidewalks and platforms on both sides of the south side of Xidan and in the middle of the street on the south side of Wangfujing. The operations performed by people on the installation on one side will be projected on the screen on the opposite street. The size range of the six images is controlled within 2.5-4m in height, and within 3-6m in length and width, so that the body walks into the interface that guides the attention to the interaction during the movement of approaching the device, and the distance is 4.5- The complete outline of the installation can be seen 12m away.

1. Narrative system
The narrative system of space installation 1 tells a story of reunion, incorporating behavioral symbols formed by traditional activities such as watching a hundred opera performances, visiting relatives and friends, and reunion and watching the moon. Combining with the conditions of the existing large screen on the faϛade, the placement of modernity and openness, the body uses interaction through the screen to share

the joyful moment of gathering with others.
When watching a play, the stage of the past is transformed into the current building faϛade (see Figure 5.1).

2. Interactive system
In the interactive system, the design of the virtual space comes from the use of the existing urban large screen on the site. On the west side of the first node, Juntai Department Store has a large curved screen with a size of 71 × 21m and a height of 12m from the ground. The large screen provides a virtual space that can be operated. At the same time, in order to create a virtual space that can echo with the Hanguang Department Store on the east side of the site, a combination of cranes and projectors is used. Use the telescopic arm of the crane to lift the projector to the corresponding height (31m), and at the same time, use the steel cable to fix the platform on which the projector is placed for the second time.

The parameters of the projector refer to the product parameters of Christie-CP2230, the size of the device is within 1200 × 650 × 500mm, and the brightness can reach 33000 lumens of high-power xenon projector. Since the maximum size of the screen is limited to 26m, the size of the screen that can be hung in Hanguang Department Store is 43 × 22.5m, so it needs to be divided into three horizontal sections in length, and three projectors of the same model are required to project

three sections each.

The human interaction is through the connection between the mobile phone and the screen on the device, and the video call with the relatives is mapped on the surface of the object floating in the virtual space. Therefore, in addition to forming a visual installation, the six figures will also serve as carriers for cameras and touch screens. Objects floating in the virtual space correspond to the screens of different parts of the device, and the uploaded video images or photo images will be mapped on the surface of the objects in the virtual space to become dynamic materials, forming a linkage between virtual and reality.

Game step description:
① People walk to the interactive screen of one of the installations.
② Connect your phone to the screen.
③ Click to open a video call with relatives and friends or upload a photo with relatives and friends.
④ Look up at the screen or the floating device in the projection (the shape of the virtual space corresponds to the physical space one by one).
⑤ Videos or photos are mapped on the surface of the installation in the virtual space and displayed to everyone.

3. Symbology

The symbol system filters out the figures and objects with the image of reunion, as well as the symbols with auspicious meanings that appear in the novel. The moth is inserted obliquely, the light shirt is tried at first, and the free time is used to play. Thirty-six thousand nights in a hundred years, may it be this night. Moths have the implication that lovers look forward to being together for a longer time, and bees and butterflies have the implication that lovers get together and linger. A Dream in the Garden is a play that the imperial concubine and her relatives watched together after their reunion. The imagery of Chuan Yunbi was taken from the poems and garden activities that the imperial concubine and her relatives carried out, and she hoped that this reunion would be like a dream that would never wake up. Bandai Panchang has the meaning of many sons and many blessings, and the meaning of companionship; Taiping has the meaning of auspiciousness and peace; raising your head to look at the bright moon, bowing your head to think of your hometown, the moon rabbit, restaurant and immortal selected by the old man are all for the distant old man. The meaning of sustenance; the mother ape was heartbroken because she was separated from her son, so protecting the safety of her son is a story that expresses the wish of parents all over the world to protect their children and is unwilling to be separated from blood relatives.

The patterns on the surfaces of the six physical installations are palace lantern symbols with auspicious meanings. The decorative patterns and

graphic outlines can become the public sculptures of the venue during the day, and enhance the atmosphere of the Lantern Festival.

The material of the six images is made of GFRP glass fiber reinforced plastic. The reason is that first, it is convenient for plasticity, and the six images have unconventional and complex streamlined shapes in order to highlight their characteristics, so the plasticity of the material is required to be high; The installation needs to be placed on the site for 5-10 days, so the strength needs to reach the level of outdoor sculpture, and because it will be placed on the platform of the site, the quality is required to be relatively light; third, it has good weather resistance, and the outdoor site needs to be waterproof and moisture-proof, Able to be exposed to sunlight and changes in the temperature difference between day and night. After comprehensive consideration, GFRP fiberglass reinforced plastic was selected as the main structural material of the device.

Installation 1
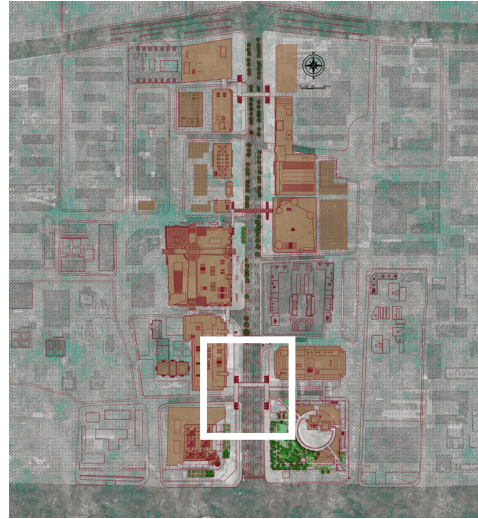
Figure 5.6 Xidan&Wangfujin plans
available from:Drawing by author Wu Wenqi
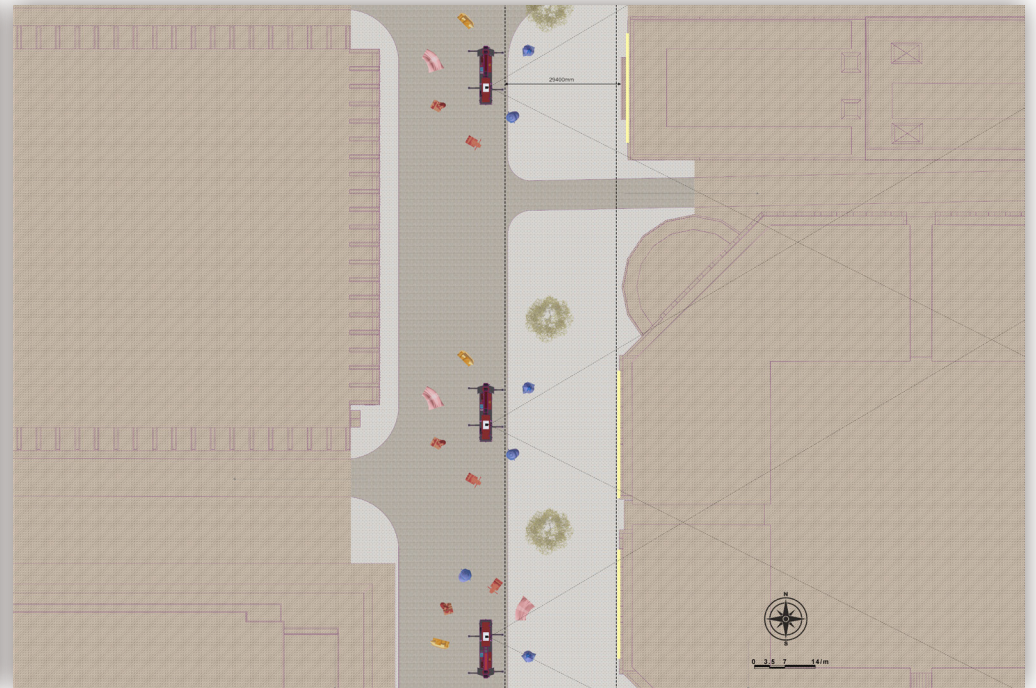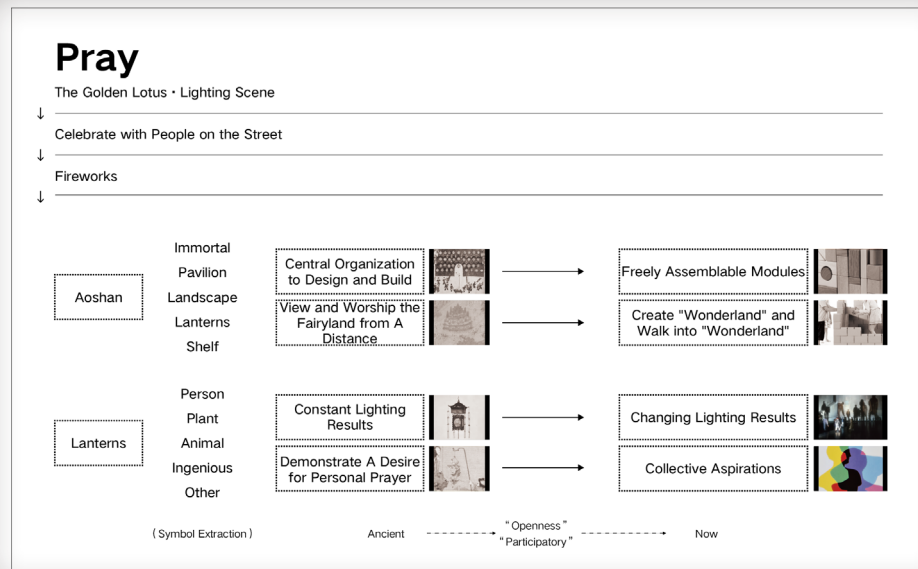
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Pray

The Golden Lotus · Lighting Scene

↓

Celebrate with People on the Street

↓

Fireworks

↓

Aoshan	Immortal Pavilion Landscape Lanterns Shelf	Central Organization to Design and Build → Freely Assemblable Modules View and Worship the Fairyland from A Distance → Create "Wonderland" and Walk into "Wonderland"
Lanterns	Person Plant Animal Ingenious Other	Constant Lighting Results → Changing Lighting Results Demonstrate A Desire for Personal Prayer → Collective Aspirations

（Symbol Extraction）   Ancient - - - "Openness"
"Participatory" - - - Now

Rich and Developed （Individual）								
Auspicious and Reunion （Family）								
Stability and Harmony （Society）								

Step 1 **Step 2** **Step 3** **Step 4** **Step 5**

① ② ③ ④ ⑤

1-1立面图

0 2 4 8/m

1-2立面图

0 2 4 8/m
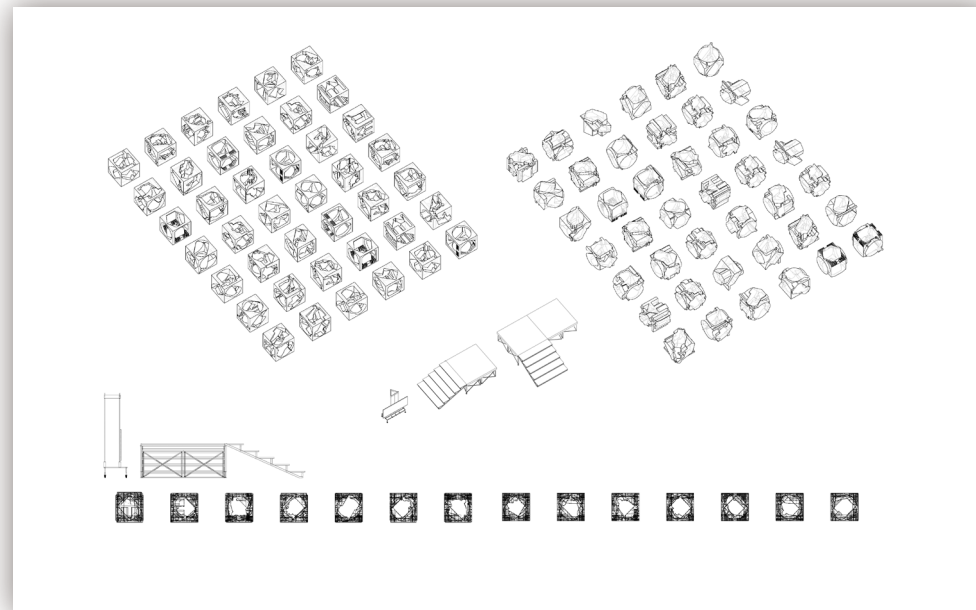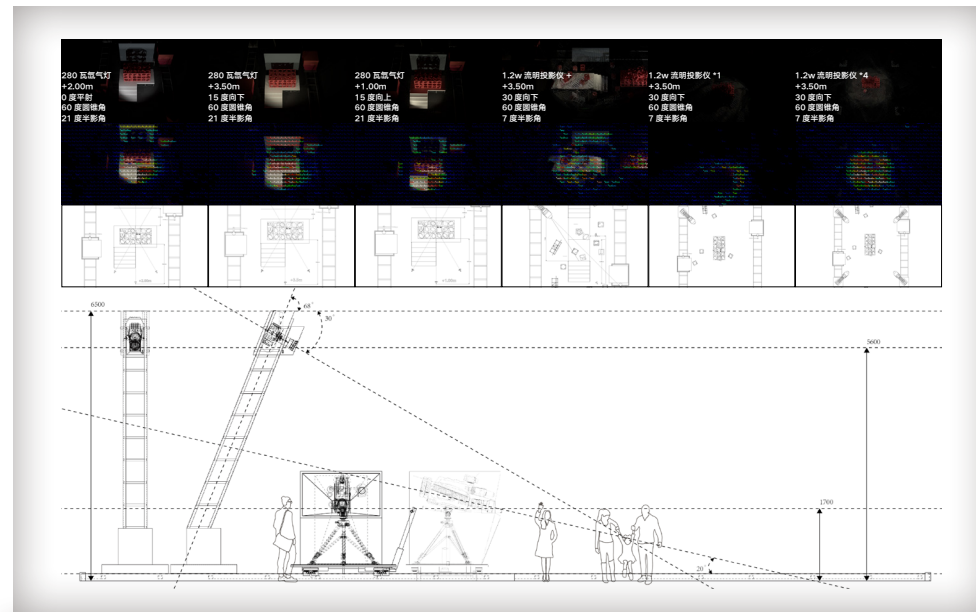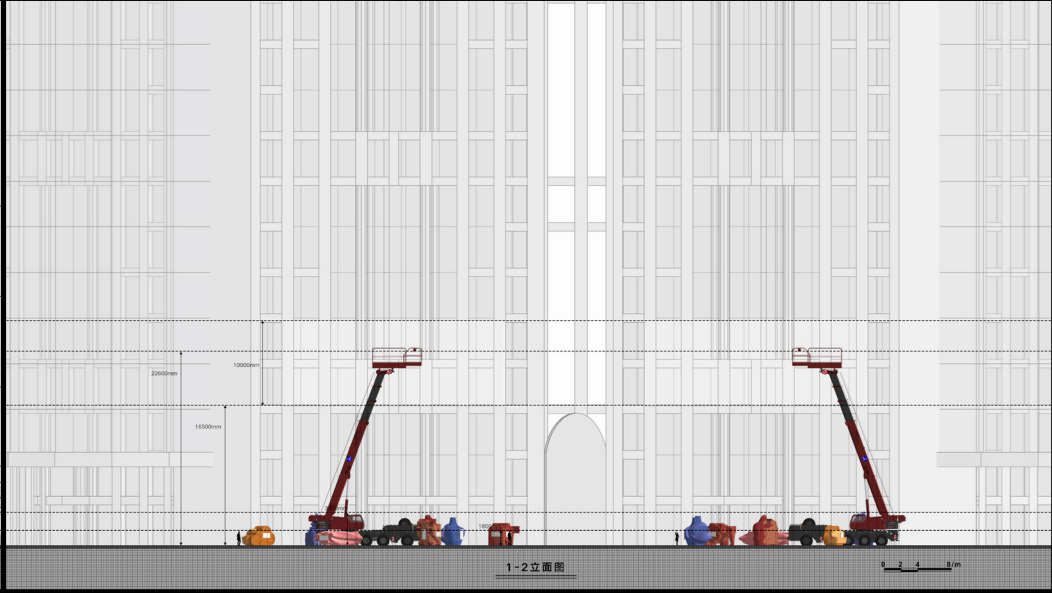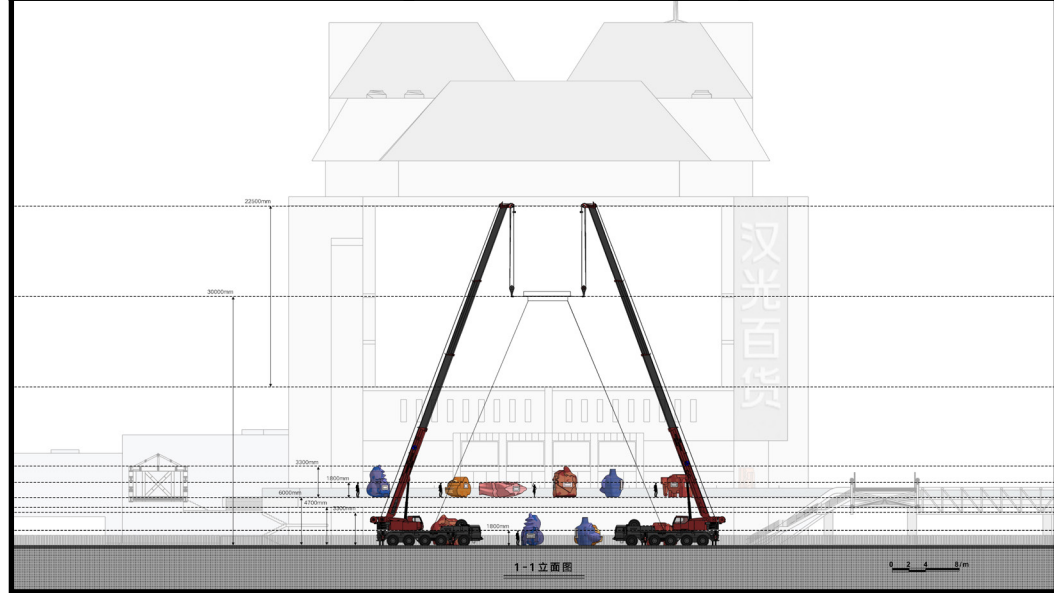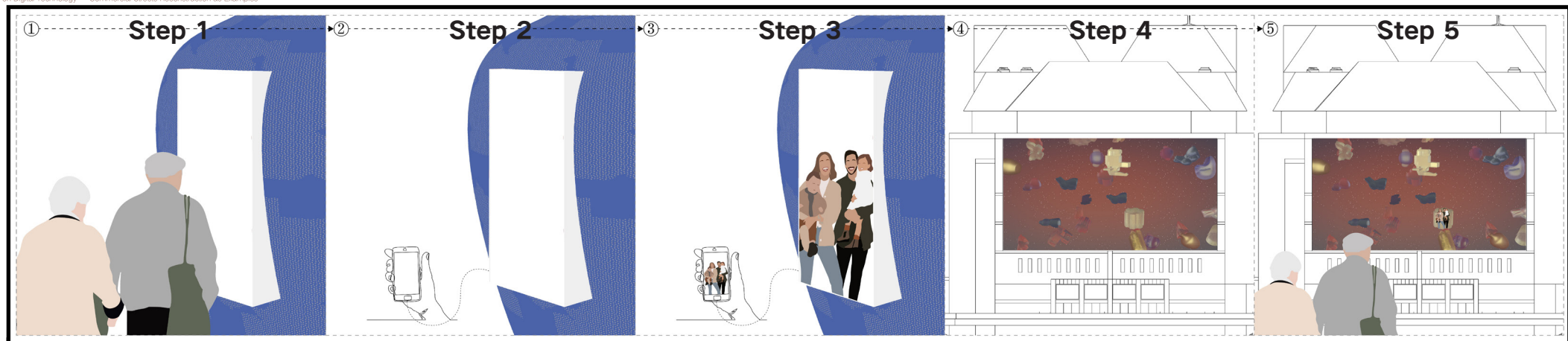
Figure 5.7 Xidan&Wangfujin Renderings
available from:Drawing by author Wu Wenqi

GFRP
Glass Fiber
Reinforced Plastics
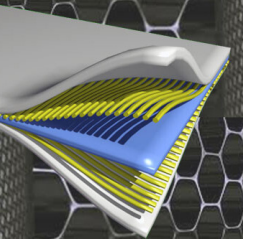
5.4.2 Space Node No.2

The second node is located on both sides of the street in Xidan and in the center of the street in Wangfujing. At this node, the graphic symbols related to people's good wishes are extracted, and the blocks that allow light to pass through are created through the interspersed combination of negative shapes. The size of each block is 600×600×600mm, and there are a total of forty-two blocks. Negative shape and forty-two positive shapes, the positive shape can become a seat on the site, and the negative shape can become a "brick" that forms a sky full of lanterns.

1. Narrative system

Narratively, this space tells a story of praying for blessings, and it is a space woven together by the good expectations of the people. At the same time, it also disassembles the components of the two scenes of hanging lanterns and Mount Ao in the past, and introduces the "openness" and "participation" in theoretical research, and discusses the relationship between contemporary people and cities, and between people. converted. The purpose is to bring the activity of prayer back to the contemporary city and stimulate people's new imagination for this ancient activity.

2. Interactive system

The interactive system uses lighting technology and projection technology, simulates lights through software, and controls the position, height and light intensity of the lights in the venue. The height of the movable xenon lamp is set at two meters, and the height of the projection is at an angle of 5.6 meters. is 30 degrees down.

The low camera is an interactive image programmed with processing, and the image is projected on the ground through a tall projector. The height of the camera is set at 1.7m and 20 degrees downward, so that people of different heights can participate in the interaction by changing the distance between the body and the camera position.

The technical code of the camera interaction comes from the open work "200601 Chinese Mosaic" in the open source website OpenProcessing, which can convert the pixels of the image into the specified text in real time, and assign different texts to the corresponding pixels by analyzing the light, shade and color captured by the camera. .

The difference between the camera position and the body posture will become the parameters that affect the projected image. People's bodies are decomposed into pixels, and the pixels are composed of the words "Lantern Festival Harmony, Reunion, Wealth, Fortune and Auspiciousness", which are combined into the interaction of people.

image.

Game step description:
① People walk up to the cameras and take pictures of themselves.
② The back-end operating system processes the captured images.
③ The projector casts the processed image to the ground.
④ People freely combine small squares, background boards, spotlights, and tables within the range of the projected image.
⑤ The body posture and the built scene form "Aoshan".

3. Symbology.
The symbol system is divided into three progressive dimensions. The first dimension is the wish for personal happiness, wealth and success, so elements such as praying to God, mansions, palace lanterns, cruise ships, and tops are classified here. The second dimension is facing others, mainly wishing for family unity and auspiciousness. Therefore, it includes the reunion images of jade rabbits, moths, elephants, etc. in the first space, and also includes lotus flowers, bottles, etc. related to group blessings. imagery. The third dimension is the social dimension, which is mainly to pray for environmental stability and social harmony. Therefore, there are collective wishes such as Aoshan and images of a wider audience such as plaques and crabs.

The space is bounded by rails on both sides, on which are projectors

and cameras, and in the middle are movable lantern blocks, background panels and small platforms that create height differences.

Although each figure is extruded only once, due to the Boolean combination of different models from three different directions, the final shape of 42 positive shapes and 42 negative shapes results in a very complex shape, which is difficult to pass. The construction is realized by traditional over-molding casting, so the material uses DSM 3D printed photosensitive resin, and the device is manufactured using 3D printing technology.
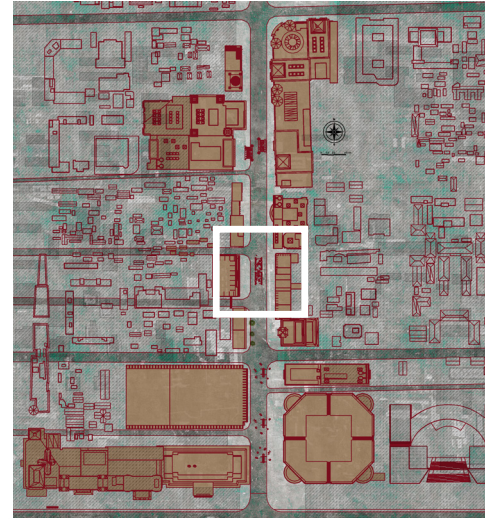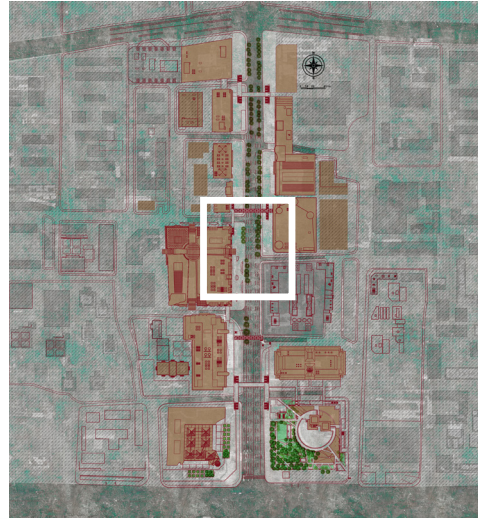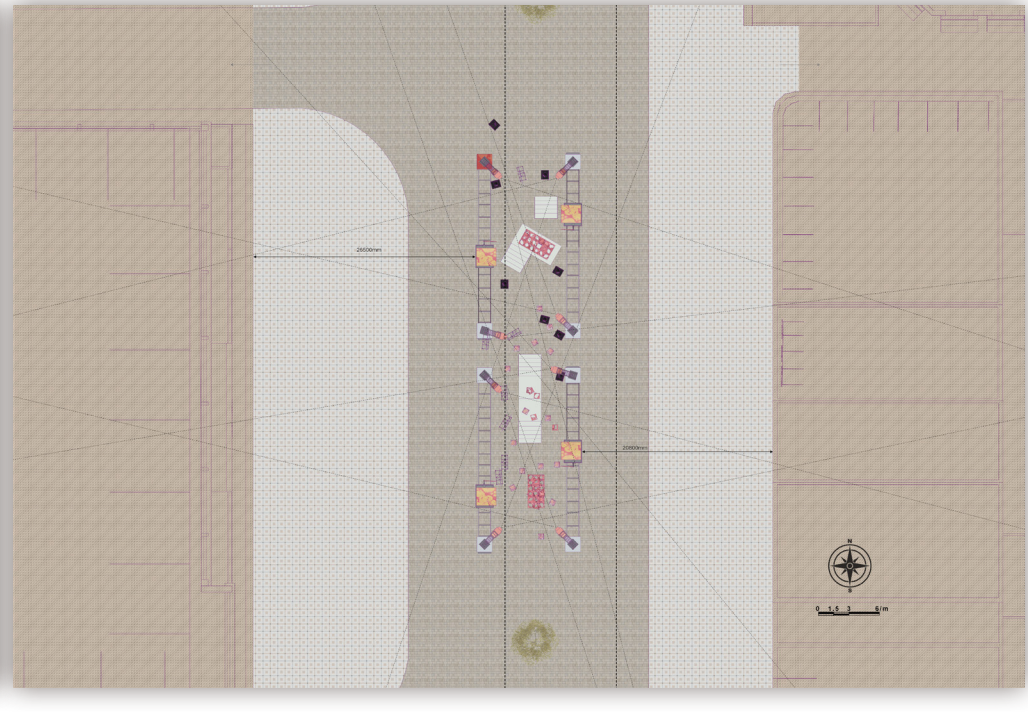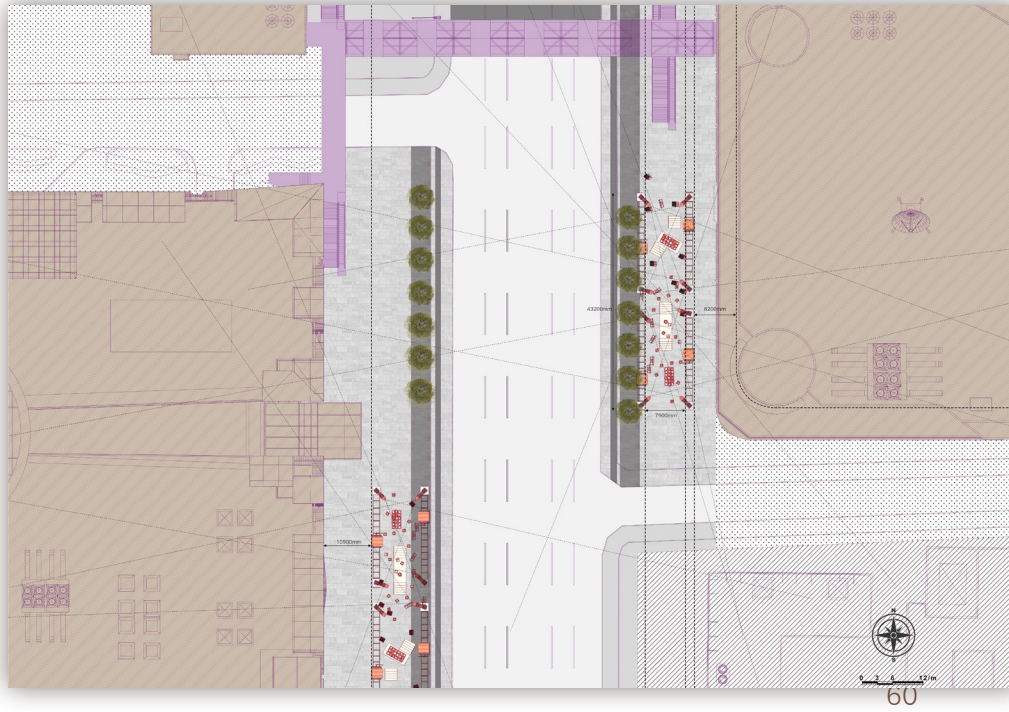
Installation 2

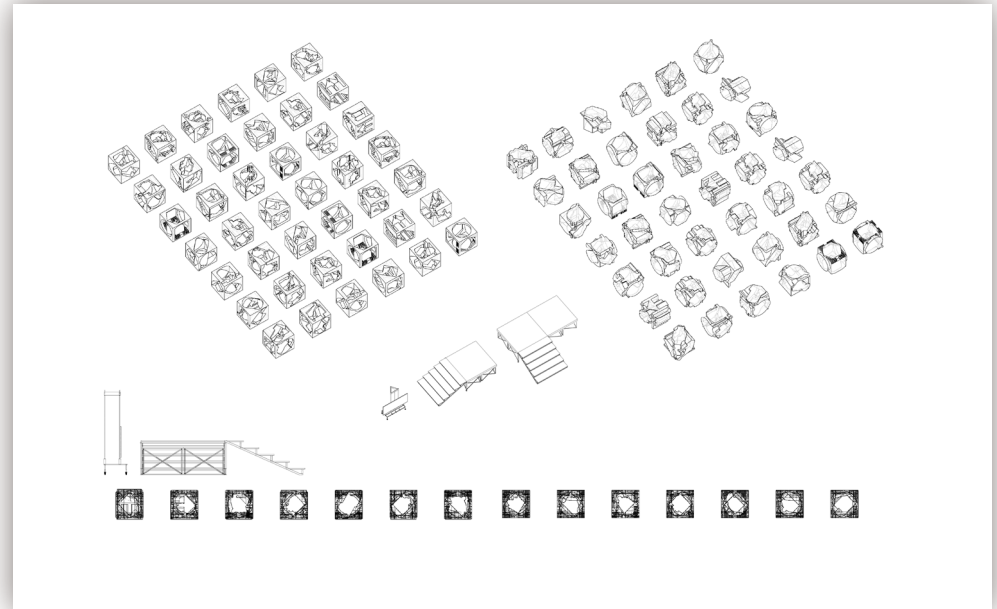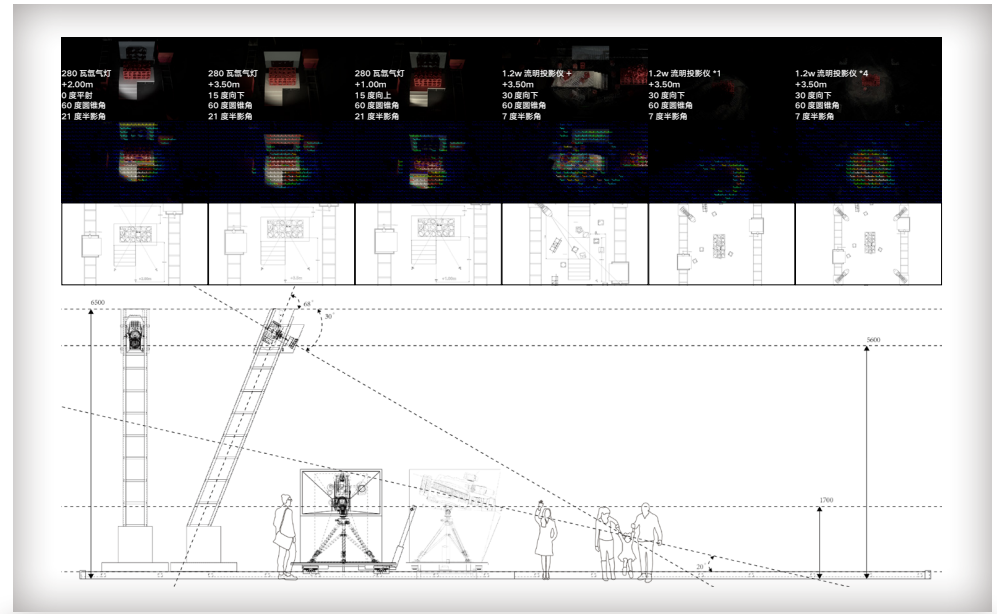Figure 5.8 Xidan&Wangfujin plans
available from:Drawing by author Wu Wenqi

Pray

The Golden Lotus · Lighting Scene

↓

Celebrate with People on the Street

↓

Fireworks

↓

Aoshan

- Immortal
- Pavilion
- Landscape
- Lanterns
- Shelf

| Central Organization to Design and Build | → | Freely Assemblable Modules |
| View and Worship the Fairyland from A Distance | → | Create "Wonderland" and Walk into "Wonderland" |

Lanterns

- Person
- Plant
- Animal
- Ingenious
- Other

| Constant Lighting Results | → | Changing Lighting Results |
| Demonstrate A Desire for Personal Prayer | → | Collective Aspirations |

（Symbol Extraction）

Ancient ------ "Openness" ------ Now
          "Participatory"

280 瓦氙气灯
+2.00m
0 度平时
60 度圆锥角
21 度半影角

280 瓦氙气灯
+3.50m
15 度向上
60 度圆锥角
21 度半影角

280 瓦氙气灯
+1.00m
15 度向上
60 度圆锥角
21 度半影角

1.2w 流明投影仪 *
+3.50m
30 度向下
60 度圆锥角
7 度半影角

1.2w 流明投影仪 *1
+3.50m
30 度向下
60 度圆锥角
7 度半影角

1.2w 流明投影仪 *4
+3.50m
30 度向下
60 度圆锥角
7 度半影角

Rich and Developed （Individual）								
Auspicious and Reunion （Family）								
Stability and Harmony （Society）								

① Step 1 ② Step 2 ③ Step 3 ④ Step 4 ⑤ Step 5

2-1立面图

0 1 2 4/m

2-2立面图

0 1 2 4/m

Openprocessing

63

Reconstruction of Urban Public Space Situation Based on Digital Technology - Commercial Streets Reconstruction as Examples
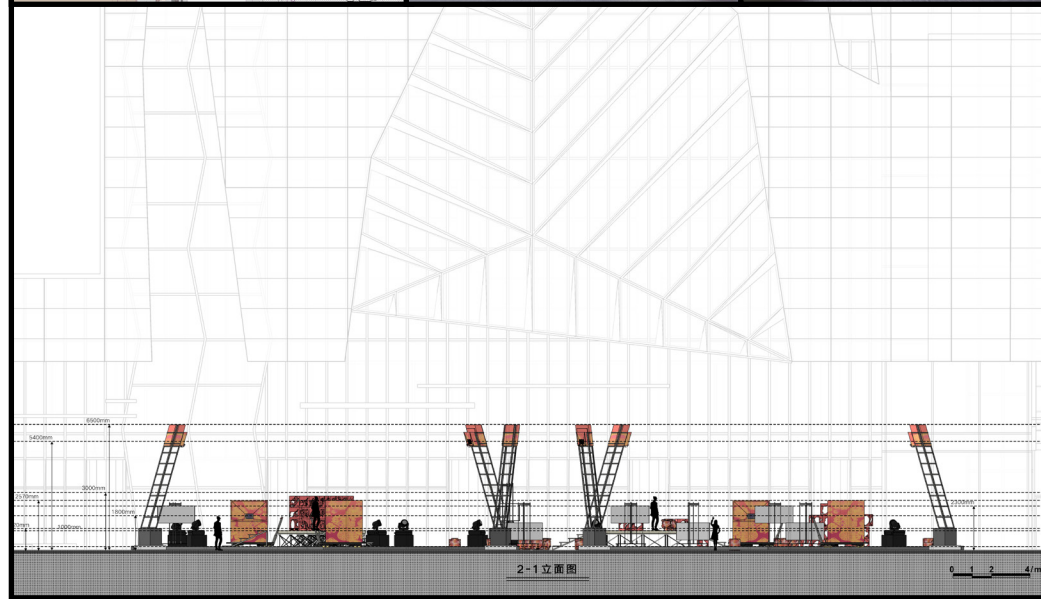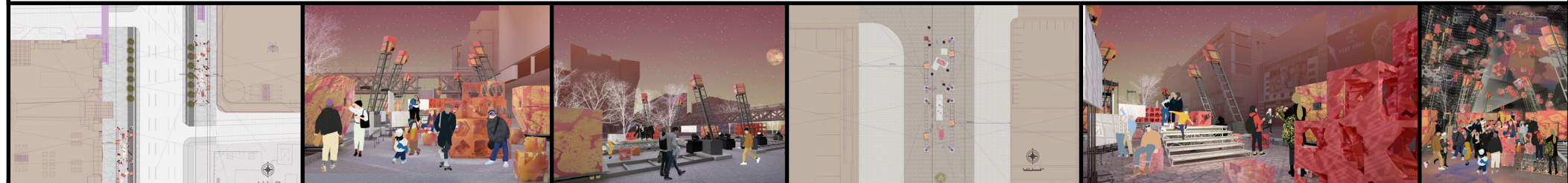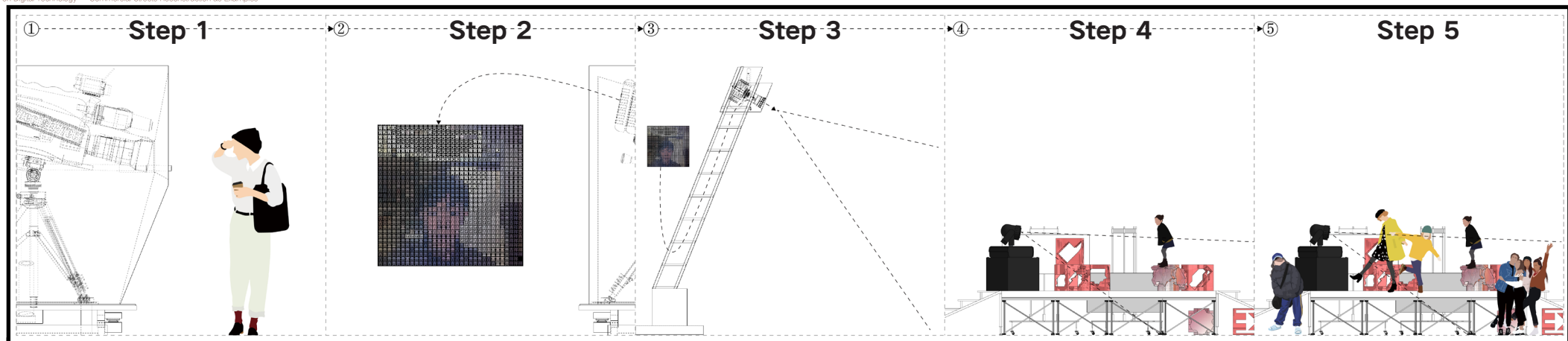
Figure 5.9 Xidan&Wangfujin Renderings
available from:Drawing by author Wu Wenqi

DSM UV
Photosensitive Resin

5.4.3 Space Node No.3

The third node is located at the northernmost end of the site, also on both sides of the street.

A chessboard, chess pieces and projection equipment are placed in this node. The form of the chess pieces above is derived from the Aoshan lantern. By dismantling the formal elements of the Aoshan lantern, animals, nature and plants, characters and architectural elements are distinguished. Both sides of the chessboard can be covered Infrared cameras throughout the chessboard area.

1. Narrative system
In terms of narrative, this node tells a story of unity and victory. In the prototype of the story, the final success of the participants is inseparable from the cooperation between individuals, and they can achieve their goals only after they cooperate with each other. Therefore, combined with the behavior symbols of chasing fish in the fish lantern dance and competing for colored balls in the dragon and lion dance, it is intended to design a game where people cooperate with each other and at the same time have a sense of competition.

The flat "arena" is folded to the building facade through projection

technology, and through the temporarily established game protocol, the strangers on the street are transformed into collaborators, and the steps of cooperation in behavior are discussed with others, and the provided on the venue is driven by the body. Complete a "Gladiator" round with tools used by multiple people.

2. Interactive system
On the interactive system, in addition to the projectors used by all three nodes, there are also infrared transmitters and infrared cameras. The infrared transmitter adopts the infrared positioning sensor produced by DFRobot. The infrared positioning camera is compatible with various controllers with I2C interface such as arduino. It is connected to the processing through the serial port, and the coordinate position and value of the detected target are displayed in real time.

In the processing, the positioning sensor can transmit the coordinate information to the back end through the camera. Each camera can pick up the coordinates of four points, and then according to the coordinate data, the top surface of the corresponding chess piece is projected onto the facade of the building.

The game mechanism is divided into two camps: red and white. The red target will disappear when it encounters the white pattern, and the white pattern of the same type will turn into white when it encounters the red

pattern at the same time. Blue is a special identity. , encountering any pattern will directly change their camp.

Game step description:
① People walk into the chessboard.
② Push the pieces, the pieces represent the white camp or the red camp.
③ The top surface of the chess piece is projected on the building facade.
④ Look at the projection screen and choose to touch or avoid other pieces.
⑤ Fight for victory for your faction, and the screen will play white fireworks or red fireworks.

3. Symbology
The symbol system is derived from the elements of Aoshan lanterns mentioned in Water Margin. The components of Aoshan lanterns are divided into wooden shelves, lanterns, structural decorations, pavilions, natural landscapes, gods and auspicious animals from bottom to top. After summarizing and sorting out, I divided the types of symbols into four categories: lamp body, animal, structure, nature and plant.

4. Elevations and perspectives
The chess pieces themselves form different height differences. The tall

chess pieces can block the line of sight, and it is impossible to directly see the pushed image. The purpose is to increase the interaction process and guide people to pay attention to the connection between the virtual space on the building facade and the real space on the plane.

A push-pull armrest is designed in the middle, and wheels are designed at the bottom. The transformative nature of movable and flat fasades also prompts people to think quickly about how to use their bodies to more effectively collaborate with others and drive route planning, ultimately winning.

The material is made of PE polyethylene thermoplastic light-transmitting resin. On the one hand, the thermoplastic characteristics can meet the modeling requirements of the design scheme, and on the other hand, the lightweight characteristics can make the device not need to consume too much physical strength in the process of pushing, reducing the participation rate. The experience expenditure of the user, and the characteristics of light transmission make the device have a lantern-like luminous effect.
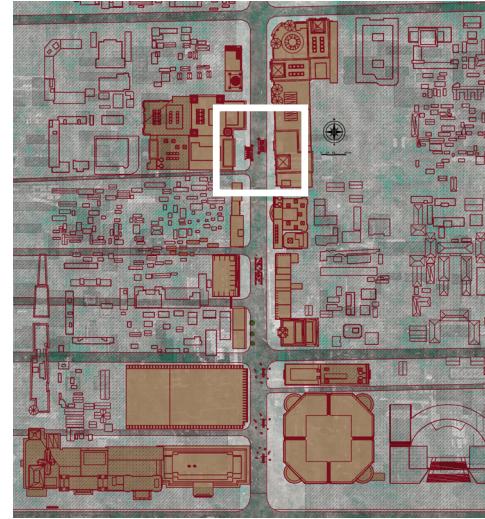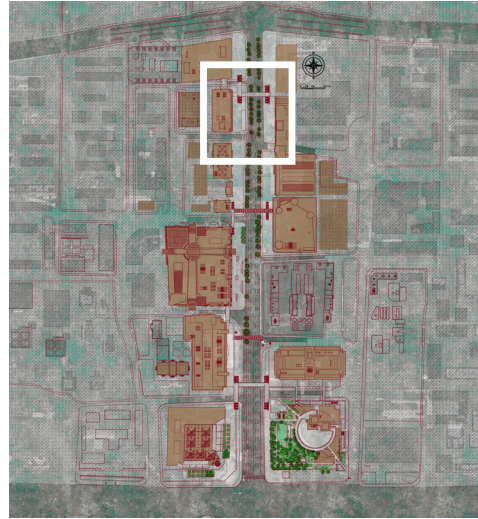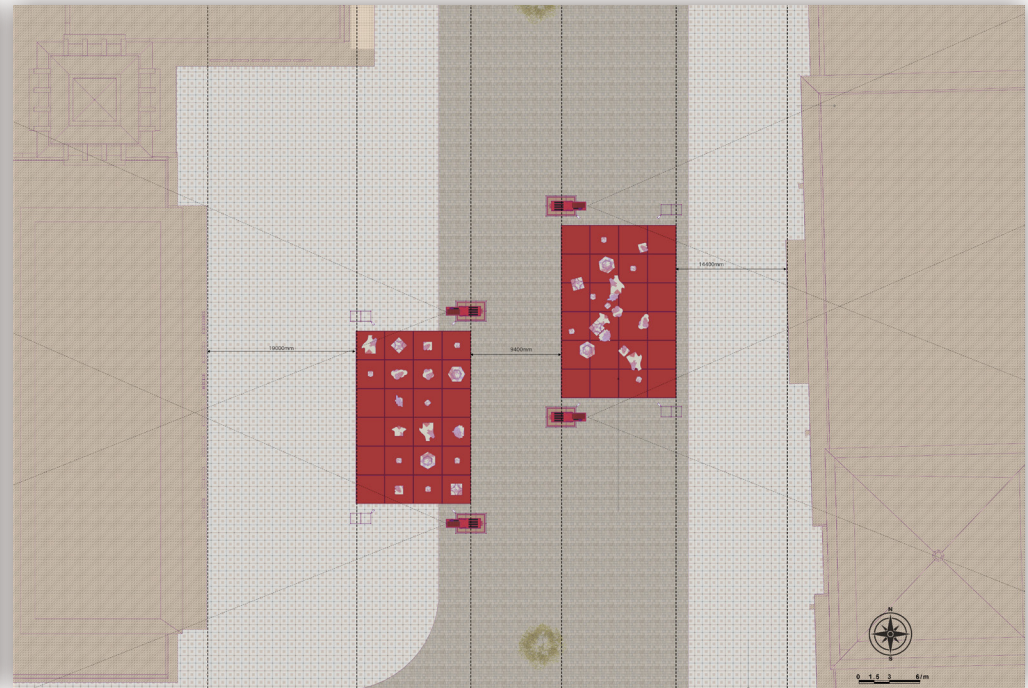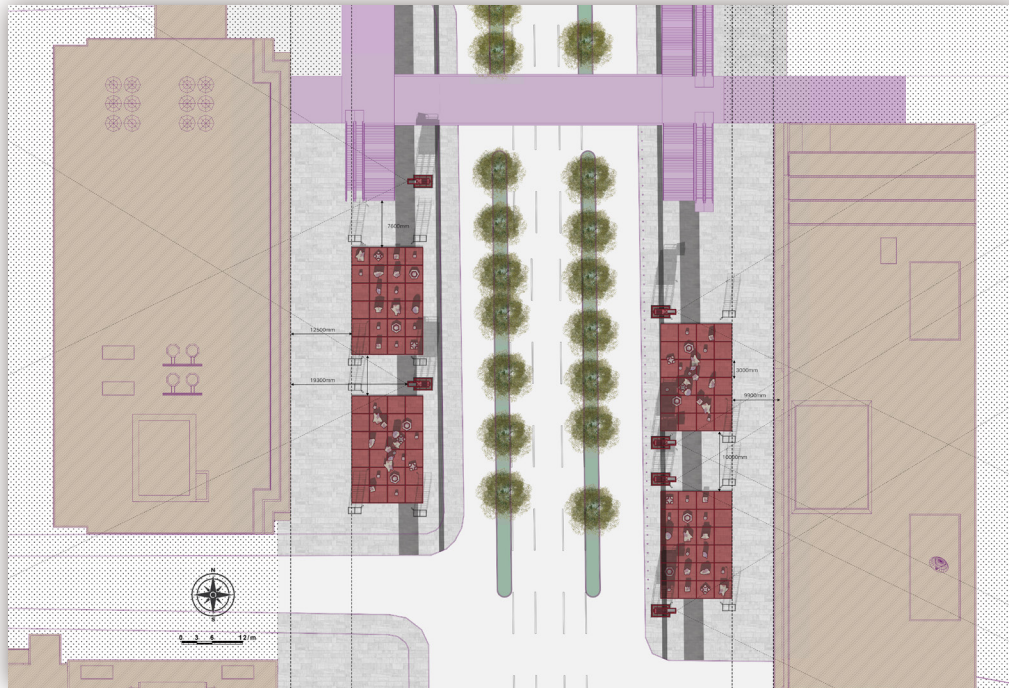
Installation 3

Figure 5.10 Xidan&Wangfujin plans
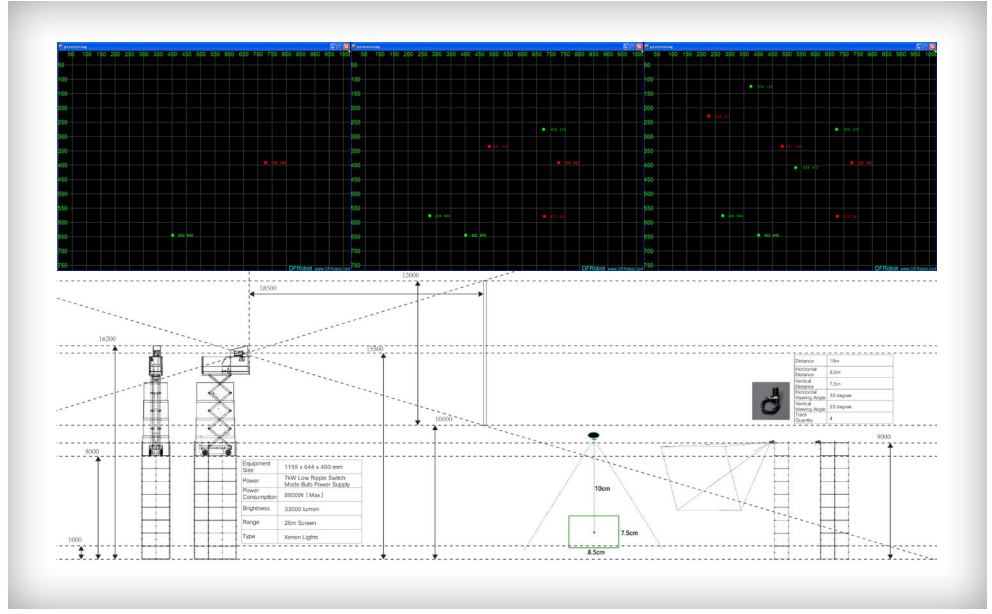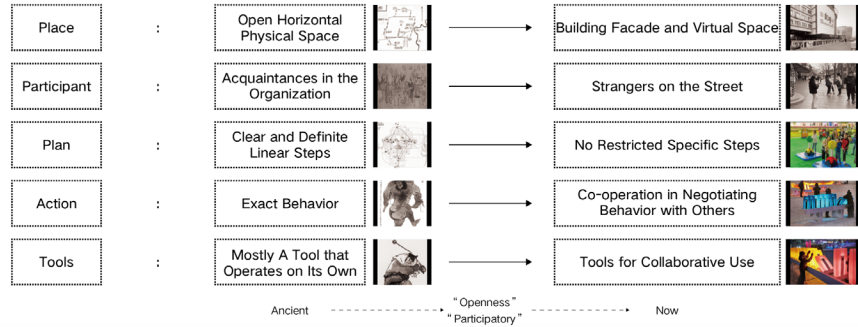available from:Drawing by author Wu Wenqi

· Narrative System ·

Cooperation

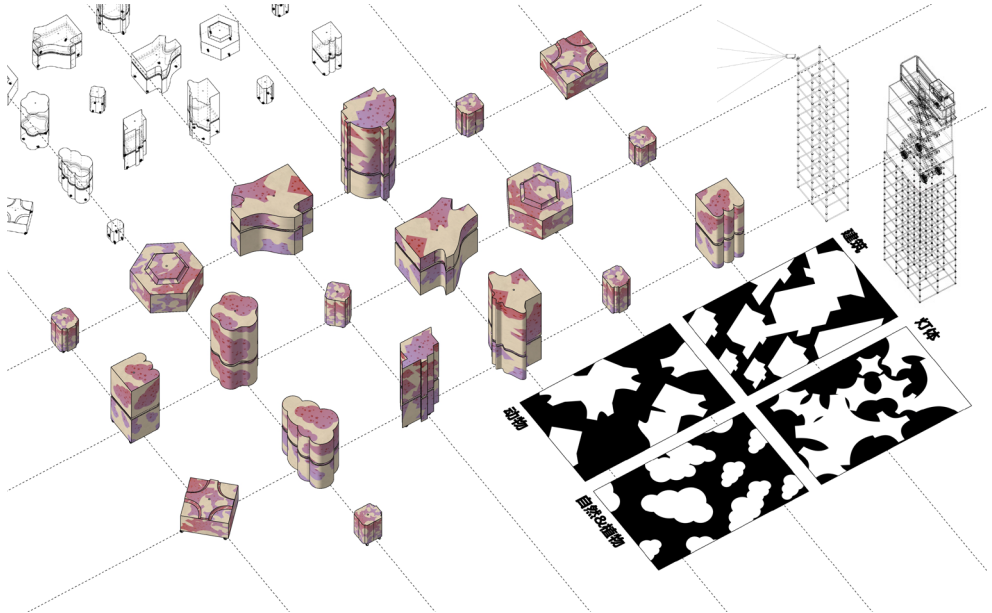Water Margin · Outwit the Daming Palace
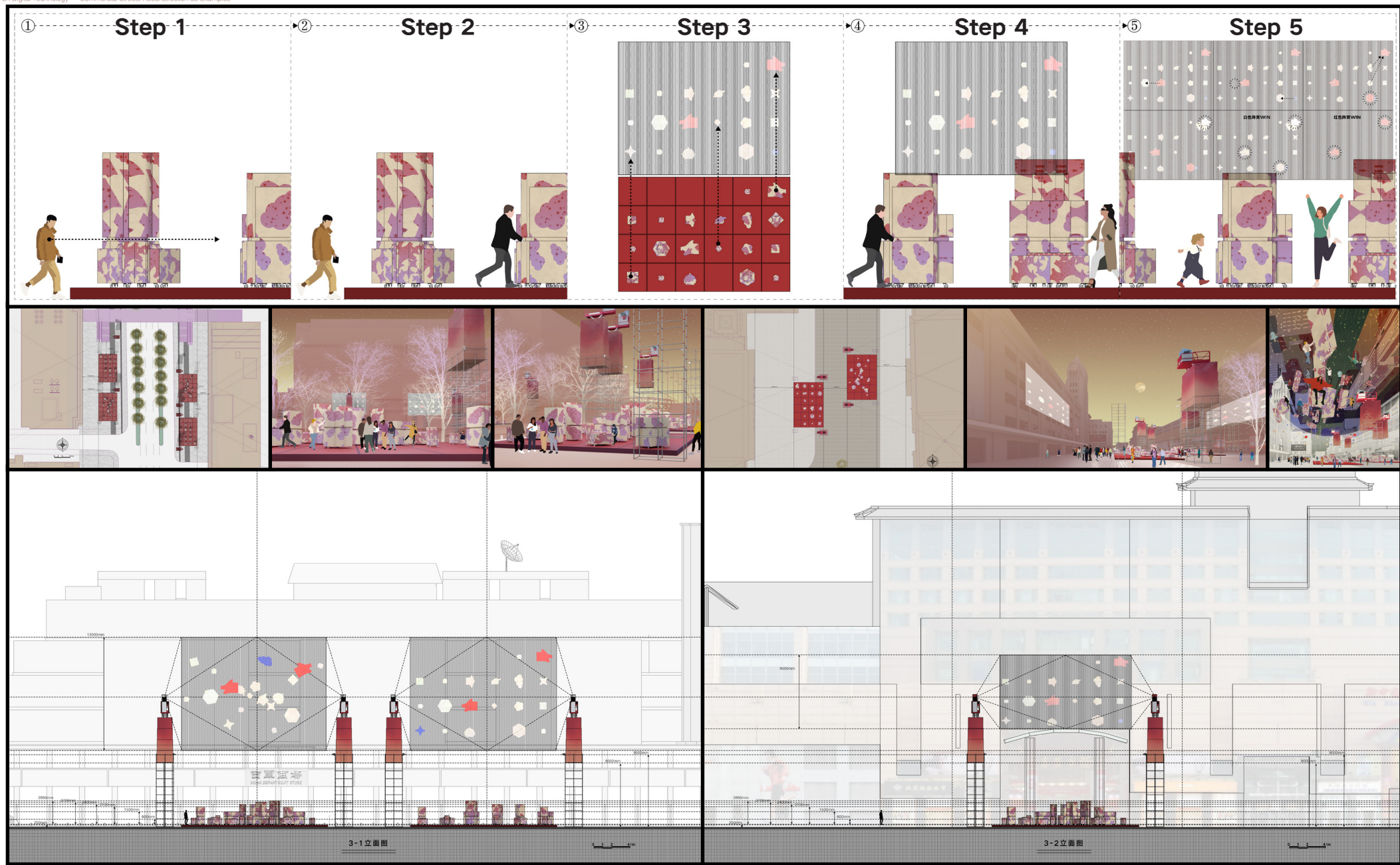
↓

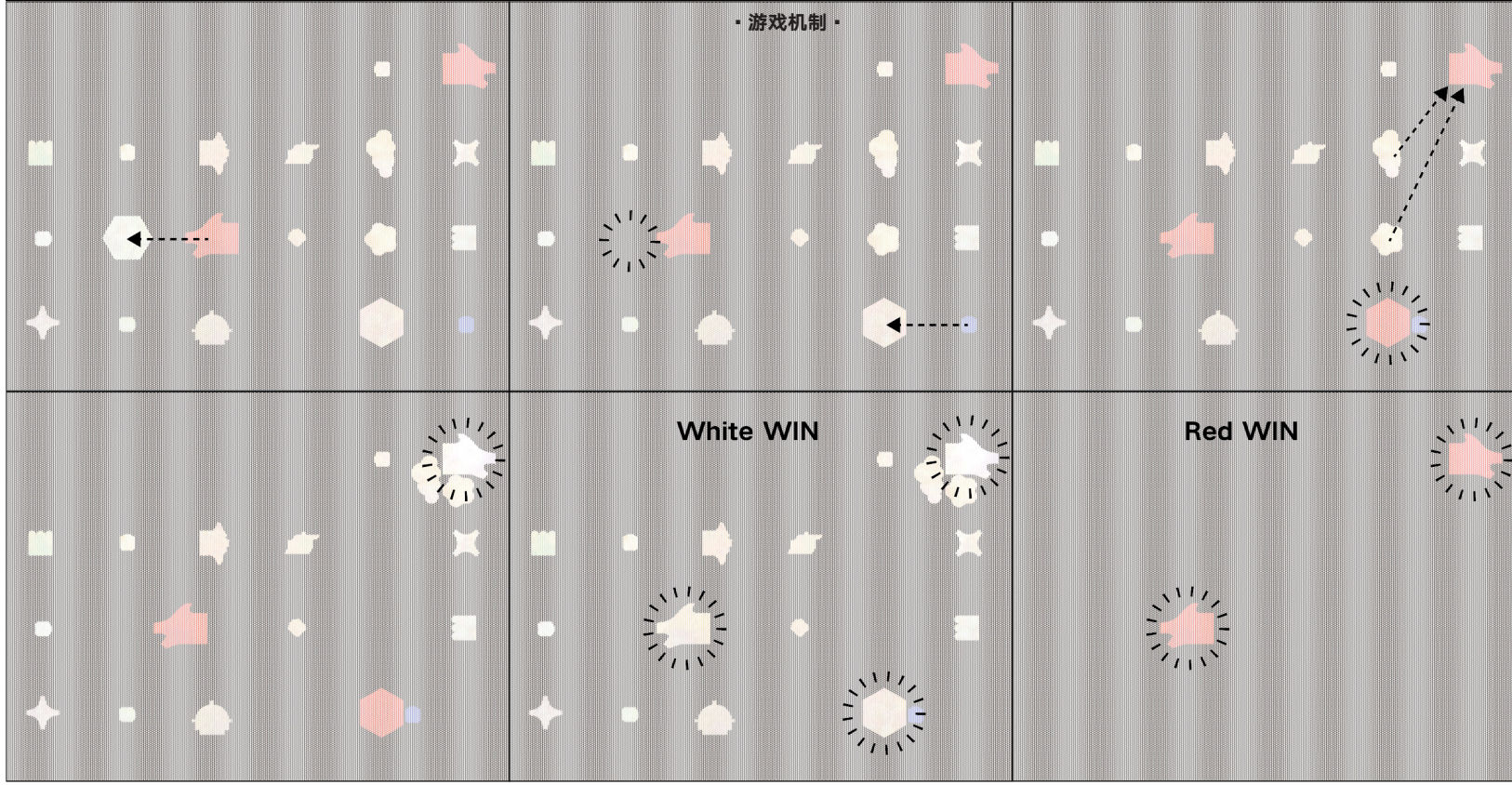Arrange Arms and Embattle

↓

Conquer the City Together

↓

Place	:	Open Horizontal Physical Space	→	Building Facade and Virtual Space
Participant	:	Acquaintances in the Organization	→	Strangers on the Street
Plan	:	Clear and Definite Linear Steps	→	No Restricted Specific Steps
Action	:	Exact Behavior	→	Co-operation in Negotiating Behavior with Others
Tools	:	Mostly A Tool that Operates on Its Own	→	Tools for Collaborative Use

Ancient   " Openness "   Now
              " Participatory "

· Interactive System ·

· Symbol System ·

	Hexagonal Lights	Ball Light	Palace Lantern	
Lantern Body			750 900 1050	
Animals & Architecture	Dragon Head	Moth	Restaurant	Decoration
Nature & Plants	Auspicious Clouds	Plum Bossom	Hibiscus	

Step 1

Step 2

Step 3

Step 4

Step 5

① ② ③ ④ ⑤

白色异常WIN   红色异常WIN

3-1立面图

3-2立面图

Step 1

①

Step 2

②

Step 3

③

Step 4

④

Step 5

⑤

白色异育WIN   红色异育WIN
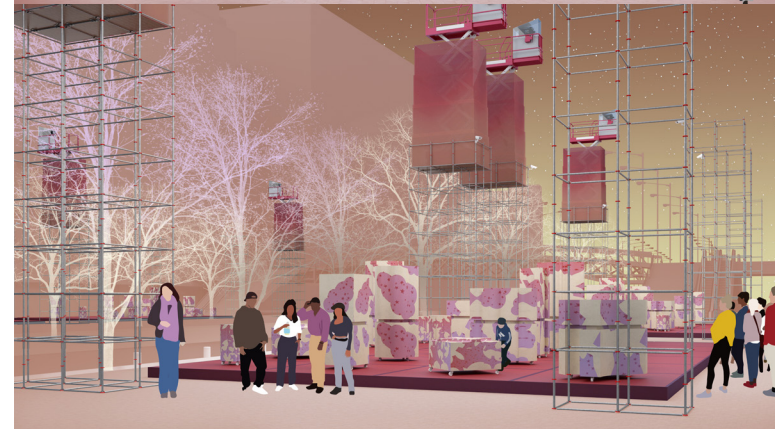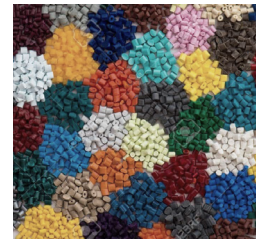
· 游戏机制 ·

White WIN

Red WIN
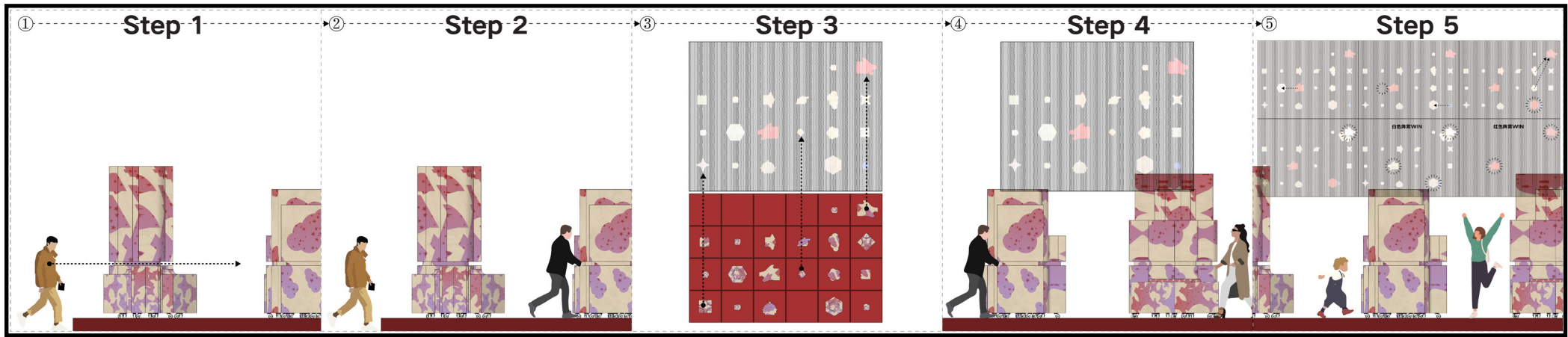
Figure 5.11 Xidan&Wangfujin Renderings
available from:Drawing by author Wu Wenqi

PE Polyethylene Thermoplastic Translucent Resin

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THANKS