

Public Art Design in Subway Space Based on Emotional Appeal

Ziqi Yang

Huzhou University

Huzhou, China

Pukyong National University

Busan, South Korea

Jounghyung Cho

Pukyong National University

Busan, South Korea

Abstract—Public art design works that satisfy people's emotional appeals can not only relieve the psychological depression brought by subway space, but also disperse people's tension and discomfort in subway, making the travel easy and pleasant. This paper discusses the emotional appeal design of public art in subway space from the aspects of regional culture, technological experience, humanistic care and aesthetic form.

Keywords—subway space; public art design; emotional appeal; humanistic art

I. INTRODUCTION

With the development of society, the urban transportation hub, which performs the function of public transportation, carries increasing significance and plays a vital role in people's life. As an extension of urban public space, public transportation provides people with space for cognition, travel and appreciation. Bus stations, subway stations, railway stations, airports, wharves and other transportation hubs, as the symbol of urbanization development to a certain extent, are also a display platform of the city's artistic level, which bears more the responsibilities of enriching urban culture and becomes the artistic label of displaying urban culture. Countries and cities that attach importance to culture will take the transportation hub as a window to display cultural images, and such cultural displays with different personalities are mainly realized through public art.

II. RESEARCH BACKGROUND

As an important means of transportation in modern cities, subway is one of the public spaces with the highest population density, mobility and utilization rate. Subway transportation is not only a symbol of the development of a country and a city, but also extends people's living space to the underground. The expansion of urban public space is bound to drive the extension of public art to the subway space and to become an important way to improve the image of a city. The public art of subway should pay attention to the coordination and unified planning, so as to improve the quality of subway space and transfer the "functional" subway to the "humanistic artistic" subway. [1] This can not only make people willing to take the subway and meet their visual needs, but also exert subtle guidance from the spiritual and

cultural level to promote the development and prosperity of urban culture.

However, through field research and related literature review on the public art in subway stations, the author finds that most of the art design in the current subway station public is unsatisfactory.



Fig. 1. Jagalchi Station of Busan Subway.



Fig. 2. SeoMyeon Station of Busan Subway.



Fig. 3. Sydney Trains Station, Australia.

The overall design of subway space only focuses on the basic behavioral functions of people's travel and transit, but ignores the attention to people's emotional demands. Since the emotional appeal design is mainly reflected in the humanistic art of public art works, therefore attention should be paid on its spiritual and cultural functions. For example, the public art design of Jagalchi Station and SeoMyeon Station of Busan Subway, western subway station (see "Fig. 1" and "Fig. 2") and the Sydney Trains Station in Australia (see "Fig. 3") do not take people's physiological and psychological experience needs as the starting point, nor do they grasp the aesthetic tendency of the public so they cannot meet people's emotional demands for transportation hub space. Of course, this is true in every country. In order to change this reality, to design excellent subway public art design works and to give the public a relaxed and pleasant ride environment, the designers have a long way to go.

III. EMOTIONAL APPEAL OF PUBLIC ART DESIGN IN SUBWAY SPACE

A. Emotional Appeal Design

Emotion is people's mood, feeling or experience generated by people's attitude towards things. Usually the kind of object that can satisfy a person's certain needs will cause positive emotional experience, such as satisfaction, joy, pleasure, etc. On the contrary, that cannot cause negative emotional experience, such as dissatisfaction, worry, fear, etc. [2] appeal is people's request or request for a certain thing or environment space. Emotional appeal emphasizes emotional experience and emotional needs satisfaction.

B. Emotional Appeal of Public Art Design in Subway Space

Donald Norman, professor of computer science and psychology at Northwestern University in the US, said, "It's important that the product works well and is easy to use, but more importantly, it's important that the product should be enjoyable." Of course, public art design works in subway space, as products satisfying human behavior or spiritual needs in public environmental space, they have the function of enabling people to have pleasant physical and psychological artistic experience, feeling the humanistic and artistic atmosphere created by space, and relieving travel fatigue in a short journey. So this is people's emotional appeal to the public art design of subway space.

Subway space public art involves sculpture, murals, wall decoration, overall space modeling, installation art, public facilities and other aspects. It should reflect the public spirit and public interests of the society, and its mode and process should be implemented, participated and assisted jointly by decision-makers, creators and beneficiaries and be open to the non-specific group of the social public. This is exactly the cultural characteristics and inner spirit of it. In addition, the underground space of public art should also reflect its artistic expression.



Fig. 4. Entrance to a German Subway Station.

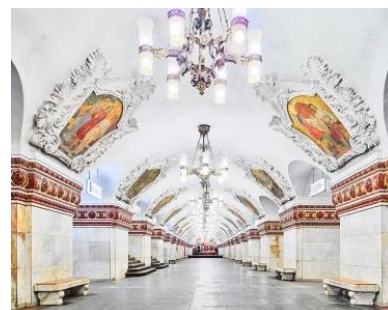


Fig. 5. A Subway Station in Russia.



Fig. 6. A Subway Station in Stockholm.

It needs to express or meet the thoughts and feelings of travelers who go through the subway space through in the form of visual aesthetic, including the degree of perfection achieved by the nationality of artistic works, diversity of artistic treatment, epochal character of the visual aesthetic and etc. (see "Fig. 4", "Fig. 5" and "Fig. 6")

IV. EMOTIONAL APPEAL DESIGN OF SUBWAY SPACE PUBLIC ART

In emotional appeal design, functionality and purpose are its essential attributes. The myriad emotions of human beings are their way of expression, as well as the artistic and aesthetic design of human emotions. This is also the content of the research and discussion on the emotional appeal design of public art in subway space, which is mainly manifested in the following aspects.

A. Regional Culture

1) *The relationship between regional culture and urban culture development:* Regional culture should be the humanist spirits that play a role in the social process based on the region, with history as the main line, scenery as the carrier and reality as the representation (see "Table I"). Reflecting the urban development process, regional culture

is the basis of urban culture development. The cultural characteristics of a city formed in a certain period of time tend to accumulate and remain, becoming the symbol of urban culture and further strengthening the characteristics of urban regional culture. [3] The continuation of a city's

traditional culture largely depends on the continuation of regional culture and especially when the material environment of the city changes dramatically, regional culture shows relative stability and vitality.

TABLE I. REGIONAL CULTURE OF XI'AN, HANGZHOU AND HARBIN

city	regional cultural content
<i>Xi'an</i>	Shaanxi opera (popular in the northwestern provinces), imperial capital, Terra-Cotta Warriors, Huashan Mountain, the silk road, cave dwelling, the Banpo Remains, revolutionary traditions, Rougamo (marinated meat in baked bun)...
<i>Hangzhou</i>	West Lake, the Southern Song Dynasty, Liangzhu Culture, the Grand Canal from Beijing to Hangzhou, silk, poetic drama (poetic drama set to music, flourishing in the Yuan Dynasty), ceramics, vinegar fish, Dragon Well tea, traditional Chinese medicine...
<i>Harbin</i>	colonial architecture, Saint Sophia Cathedral, European cultural heritage, industry, ice and snow, ukleba, red sausage...

2) *Application of regional culture in public art design of subway stations:* The regional culture of every city contains rich and unique emotional attributes. Applying it to the public art design of subway space will show the vivid artistic spirit and profound inheritance value, from which passengers will also experience and feel the feeling, mood and artistic conception. For example, the "Great Shaanxi Opera" in the Xi'an Subway Station of China, (see "Fig. 7"), through colored drawing full of interest and charm, depicts the typical figures in Shaanxi opera, such as Laosheng-role, Wusheng-role, Huadan role and DaChou role, etc., showing the charm of Shaanxi opera in Xi'an. On the artistic stone bench in Hangzhou Subway Station of China (see "Fig. 8"), is painted the most representative scenic spots of the city, showing the local customs well. These works have rich and strong regional cultural emotional appeal. The design of deep expression of regional cultural emotions makes people feel the unique local culture and art, and stimulates more emotions, thus creating unforgettable experience.



Fig. 7. Xi'an Subway Station.



Fig. 8. Hangzhou Subway Station.



Fig. 9. Harbin Subway Station.

In order to show the influence of European architecture on urban architecture and its long history and culture of Jin and Yuan dynasties, Harbin subway station, from the entrance design of the subway station (see "Fig. 9") to the design of railings, fully considers the integration with regional culture and makes subway the representative of urban culture, which contributes to the display of urban regional culture and the inheritance of historical culture.

B. Technology Experience

1) *Necessity of computer technology in public art design of subway stations:* In the digital background, the rational use of technological emotional experience is the mainstream trend of design. New media technology and interactive means have gradually become the manifestation of modern public art. The interactive metro public art in the future should be comprehensively considered and explored in an innovative way in by combination with interactive space mode, full information art design, interactive media narrative and digital emotional experience and other design strategies. [4] While attracting passengers to participate in more experiences, this will further improve the technology and artistry of subway public art.

2) *Relationship between computer technology and traditional art forms in public art design of subway station:* Computer technology can make effect that is difficult to achieve in traditional art forms, often showing unexpected effects, but in the creation computer technology cannot be completely relied on. After all, the public still needs the real

sense of space. Therefore, in the design, only by organically combining the traditional art expression technique and computer technology, can the design art develop to a higher and better direction and create more perfect and novel visual experience space for people.

3) *Public art design in the University of Naples Subway Station in Italy:* The University of Naples Subway Station in Italy is a public space that pools many cultural elements. In order to shape the subway station in the new digital era, the designer adopted innovative design concepts and language to realize the application of the so-called "third technological revolution" in the subway station (as shown in "Fig. 10", "Fig. 11", "Fig. 12"). Entering the subway station from the square, people will walk through an inner space covered with earthenware pipes, each inscribed with a new word created in the last century. The color and pattern of the space are very striking, while the lenticular image of the hall is in a constant flux of colors, which makes it very interesting.



Fig. 10. The University of Naples Subway Station in Italy.



Fig. 11. The University of Naples Subway Station in Italy.



Fig. 12. The University of Naples Subway Station in Italy.

The abstract syosis sculpture simulates nodes and projections in the brain. On the wall in the platform art works that are lighted, presenting a continuous soft lighting. Digital artworks bring vivid artistic expression to the people on the vehicle as it passes by. Although the subway station is a

temporary space in transition, passengers can still have a new experience in the short moments before getting on the train, which is a major theme for the designers.

C. Humanistic Care

1) *The necessity of humanistic care in public art design of subway station:* Pross, an American designer, said, "people always think that design has three dimensions: aesthetics, technology and economy, but the more important one is the fourth dimension: humanity." The "humanity" mentioned here refers to humanistic care. Since the subway station is a restricted and unique space, the public's humanistic care is also an indispensable factor in the design. Therefore, in the public art design of subway station space, the design and creation of public art cannot only focus on the visual effect and the emotional expression of the author. More importantly, it is necessary to pay attention to the needs of people passing by, take the feelings of "people" as the basic starting point of the design, meet the psychological needs of people, pay attention to the aesthetic taste of the subject, and pay attention to the construction of place spirit, so as to build the subway space into a beautiful "humanistic" place.

2) *Spatial relationship of subway stations and public art design:* Researches have shown that, in large space, 20-25m is the scale that people feel the most suitable and intimate, beyond which the sense of repetitive rhythm, or change in material or color is supposed to be produced. This scale was taken into full consideration at the beginning of the design of the public art work "Variety" (as shown in "Fig. 13") at Xi'an Subway Station of China. The change and repetition of the figure in color, shape and size in line with human physiological characteristics was used to dispel the tedium of long distance and fill the long and narrow platform with vitality and vigor.

The channel mural of Daan Forest Park Subway Station in Taipei is composed by green, white, yellow, pink and other blocks in colors of high purity. Bright and friendly, it successfully eliminates the negative psychological effects bringing to people. A courtyard style is adopted in the waiting area in the station to create the effect of natural landscape people can see outdoors. The bronze frog sculpture has a darling shape and lively look, enhancing the intimacy between people and space, and effectively reducing the psychological pressure of people.

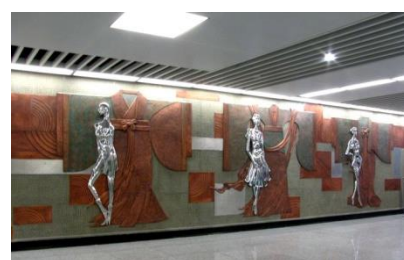


Fig. 13. Xi'an Subway Station.

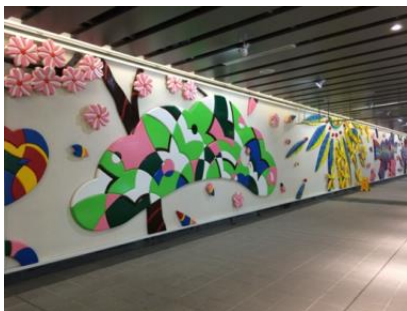


Fig. 14. The Daan Forest Park Subway Station in Taipei.



Fig. 15. A car in the Hangzhou Subway.

3) *Public facilities*: The public works of art that most embody humanistic care are the practical public facilities. Works should advocate functional design, green design and life extension design. That is, the material used should not only be environment-friendly and lasting, but it should also not lose its luster because of the passage of time, more unique instead, which makes it the classic in the future. This is the best embodiment of the artistic value the subway space public facilities carry. Aimed at different age groups, six stations in the total 21 of the Wuhan Metro Line 2 of China adopt personalized decoration. The stations are equipped with passenger orientation system, with art walls, sculptures, children's paintings and designs of other different content. In addition, a series of humanized facilities, such as rest chair, public telephone, automatic book borrowing machine, drinking machine, braille and toilet for the disabled, realize the concept of convenient service for the people and fully reflect the humanistic care.

D. Aesthetic Form

1) *Aesthetic value of public art design of subway station*: Aesthetic principle is a general rule in design field. Excellent urban subway station public art design works have a high aesthetic value. Their artistic characteristics and aesthetic effect can not only guide the aesthetic of the citizens, but also make people produce pleasant emotions and spiritual satisfaction. Shape, color, material and light are the basic elements of the aesthetic form of public art works, which have certain symbolic and expressive characteristics and can cause people's complex psychological activities and even physiological reactions. Of course, these essential elements, if standing alone, have only the possibility of beauty, not the actuality of it. The aesthetic value can only

be obtained through the ingenious conception and combination of beauty's principles of form.

2) *ABC Health and Happiness Train in Hangzhou, China*: The ABC Health and Happiness Train, jointly built by Hangzhou Metro Corporation of China and ABC that is a famous personal care brand, has five 3D themed trains specially designed for white-collar women (as shown in "Fig. 15"). The main concern is that subway has become the first choice for urban white-collar workers to go to work as it is gaining the popularity, and the dreary carriage environment makes people accustomed to using mobile phones to kill time, creating many sub-healthy "phubbers". Creative 3D paintings are used to attract "phubbers" to raise their heads, so that they can learn to relax themselves after busy work, wake up the enthusiasm of life, and devote themselves to work and life in a more energetic state. In the era of great aesthetic economy, the aesthetic requirements of the public are getting higher and higher. Therefore, guiding the correct aesthetic concept of the public has become one of the subjects that public art design must face, especially guiding the correct aesthetic concept in the face of multi-culture has far-reaching significance to improve the level of the public aesthetic and reshape the mainstream aesthetic values.

V. CONCLUSION

Public art involves knowledge of aesthetics, sociology, architecture, communication and other disciplines, thus public art works as an important carrier of urban media, should take into account people's visual, psychological, physical and spiritual needs, combine with the mainstream of the times and people's aesthetic needs, and reflect the aesthetic tendency of most people. Successful public art works should emphasize humanistic spirit, reflect humanistic feelings, fully consider people's emotional demands, pay attention to the sense of belonging and identity of people in a specific environment, and expect to interact with the audience through public art. This is not only the desire of the public, but also the direction and purpose of the design and creation of the contemporary public art.

Of course, no matter how many highly technical and rational factors emerge in the public art design of urban subway space, the importance of emotional appeal design cannot be changed or replaced. When people enter the subway space, the closed space limits people's vision. Yet, through theme, shape, material, color, light, sound, interaction and other ways public art can optimize people's visual experience. It can not only relieve the psychological repression brought by underground space, but also break people's tension and discomfort in the subway, making the travel pleasant and interesting.

REFERENCES

- [1] Zhou Lin. Public art development of subway space [J]. Art Education, 2016.02. (in Chinese)

- [2] Han Shujin. Interpretation of emotional appeal in modern design art [D]. Xi'an Academy of Fine Arts, 2009 (in Chinese)
- [3] Shan Jixiang. Regional culture is the foundation of urban cultural development [J]. Cultural Relics in Southern China, 2007. 02 (in Chinese)
- [4] Shu Yue. Research on design strategy of interactive subway public art [J]. Packaging Engineering, 2016.12. (in Chinese)