Research on the Subway Station Environment
Humanized Design

Lei Cao¹, Jing Zhao²

¹ College of Art and Design, Nanjing Forestry University, Nanjing, Jiangsu, 210031
² Nanjing Institute of Railway Technology, Nanjing, Jiangsu, 210031

Keywords: Subway Station, Environment, Humanize, Design.

Abstract. The rapid development of the economy has led to the change of people's transportation mode. The way of transportation with the subway as the mainstream is replacing the traditional means of transportation and occupying the important position of people's life. Subway with its fast, convenient, accessible features by the majority of the people welcome. At the same time, in recent years, the rise of the major cities in the construction of the subway station boom, the design of human nature in line with people-oriented principle. Based on the current seven humanized design strategies, this paper combines the design of the subway with several major cities as a case, and provides a thorough analysis of the humanized design, which provides the basis for the majority of the subway design pattern.

Introduction

The development of the city has led to the diversity of people traveling the means of transport, the rapid expansion of the population makes the ground traffic tends to congestion, resulting in the inconvenience of people's lives. Subway to a new type of transportation, to space based on the network of structured design patterns, making people travel more way to another choice. However, due to the privacy of the underground space and the dark environmental characteristics, resulting in the majority of the people there is a certain degree of exclusion psychology. Strengthen the humanized design of the subway, improve the people's awareness of the subway and the degree of affinity is to enhance the quality of the subway approach. High-quality humanized design reflects the government managers for the humanistic care of passengers, people-oriented, from the development needs of human nature, based on a comprehensive design of the subway to provide a comfortable and natural transfer environment, bringing spiritual pleasure and Relax, so that passengers want to enjoy the time in the subway.

The Subway Station Structure Analysis

Subway, as the name suggests, is in the underground surface of the rail transport rail transport to light quickly known. Subway station's sense of position can be divided into two modes, namely, a large sense of orientation and a small sense of orientation. Large sense of position is the location of the entire subway in the city occupied by people walking in the subway, a clear understanding of where they are now in the city. Small sense of direction is in the subway to walk around, clearly know their own in the subway in which direction and location name. Master the subway sense of location is conducive to the location of the human design, improve the passenger's ability to feel and identify. For example, the Russian Red Gate subway station, the subway station to the entire road laying material for the red marble, bright and eye-catching, with the location of the personalized design logo. At the same time, the center of the station is divided into three sections, the "door" the words of the design, as the hall as a symbol and scale, people feel ingenuity, so that the subway station formed a direction. At the same time, the subway station function module analysis is conducive to understand its overall structure. Subway station is in accordance with the order of the car into the entrance, corridors, ticket mouth, ticket gate, the station and the vehicle and

Copyright © (2017) Francis Academic Press, UK
other different elements. For the different spatial structure of the detailed design is the implementation of human policy.

The Human Design Strategy

The closure of the subway structure from the psychological point of view will bring great dissonance to strengthen the understanding of the subway, and improve the internal environment of the subway is to improve the human way. At the same time, the subway in the transport process cannot be suspended and liquidity caused by the staff cannot be self-control, which is to bring the majority of passengers' uncertainty. In the subway design of human nature, should be a global departure, the establishment of a global awareness, unified spatial resource division and subway structure design.

The Design of Space. The subway is installed according to the different structure of the device, and there is a natural light source for the entrance, and the design of the entrance is added to enhance the mobility of the escalator and the color of the surrounding walls. The use of saturated colors makes people's psychology tend to a warm state can slow down from the natural light source into the artificial light source environment brought about by the incompatibility. For the underground space, to strengthen the use of lighting equipment, video equipment installation, real-time monitoring of the operation of the subway system functions. It is equipped with guards to carry out occasional patrols to enhance the psychological sense of security and trust passengers. For the customer's traffic flow to guide the design, to enhance the speed of transfer, reduce the passengers stranded in the subway station. At the same time, the use of point, line, surface way to guide the subway channel to create a good sense of direction and a sense of recognition. For example, the Moscow subway structure based on the central hall, the layout of the layout of the port design take an open space mode for transfer. This way the required transfer time is small and the transfer distance is short, suitable for people's high rhythm life needs.

The Characteristics of Design. Subway design not only requires the realization of the function of transportation, the design of good and bad also reflects the level of a city economic and cultural construction, reflecting the local characteristics. Strengthen the subway characteristics of the design can make the subway rich in human atmosphere, different, so that passengers really love the subway. In the subway space level, the establishment of the upper and lower layers of different echo structure, to the passengers to bring a different experience, the macro guiding effect. In a different platform for personalized settings, the use of local places of historic interest and scenic spots, to create a local architectural culture. For example, Chengdu Metro Line 1 site with cultural landscape as the station name, "Wenshu homes", "Tianfu Square", "Niuwang Temple" and other names as local characteristics. In each of the different sites for transfer, you can see the different subway station to the antique way to design, highlighting the cultural heritage, an increase of knowledge literacy. At the same time, different sites with different pictures to show, impressive, and very goodwill.

The Comfort Design. The characteristics of the subway running in the underground so that many people worry about their own safety, to strengthen the design of the subway comfort to facilitate the subway-based mode of transport promotion. To color, sound and light comfort adjustment, to create an open, bright ride environment, the comprehensive use of various decorations to adjust the feelings of passengers inside. Strengthen the subway hall of the decorations enrich the whole hall of the color and experience. Wuhan subway station is in the decoration of the Ming, the use of rich materials for the design, including the use of enamel steel, natural stone, porous aluminum, rare earth light-emitting luminescent new materials and other environmentally friendly materials to create a comfortable and not luxurious, green indoor environment. For example, the Russian subway station is famous for its good ventilation and fresh air. Subway station takes the way of mechanical ventilation for air extraction, every four hours to improve the frequency of the entire ventilation. The use of the wall, the top floor and the ground embedded in the way of ventilation and the ground of the air interconnection, so that the entire subway station to keep the air fresh.
The Color Design. Color psychology in the current architectural design in a more extensive use of different colors of the rich transformation mode prompted the color of the impact on people. Color to the existing model is divided into two colors, warm color and cool color, the use of different colors for the psychological effects of different psychological. Warm colors of the color to red, orange, yellow-based, the sun's light gives a warm and comfortable feeling. Cool color to blue, white, gray and other color-based, gives the psychological calm, calm feeling. Color design for different locations helps to comfort the passenger's heart. For example, between the Beijing Olympic Games, the Beijing subway Olympic branch line to the green Olympics as a concept, each site has taken the characteristics of green plants to mark bright colors marked people remember this subway line. At the same time, near the Olympic Park platform is the water cube, blue as a subway station marked, symbolizes a flexible concept of the sea, at the same time, in the subway station in the hall, with blue and white chandeliers for the entire subway decoration, Under the sparkling, attractive eye, the people into the water cube of the good feeling, an increase of passenger comfort.

The Light Design. Light is an indispensable condition for underground space, used to break the boundless darkness, is to re-shape the underground space. Chinese light design more direct use of the way, this way easily lead to human eye discomfort. Change the lighting mode, the amount of light on the road, slow down the artificial light to bring the damage. The use of soft light increase the body's comfort, reduce the light reflection material, enhance the human eye comfort and psychological endurance. For example, the Tianjin subway station with a new type of luminescent material - rare earth, as a supplement to the light source, this material can use its own structure continuous light up to ten hours, and light irradiation for a few hours later, will have this performance. Rare earth use not only saves the entire electricity consumption, at the same time, its light is very soft and the psychological comfort of the passengers to adjust the regulation has a certain guiding role.

The Supporting Facilities Design. Facilities are some of the tools for passengers to experience a good way to strengthen the subway signal coverage, so that the subway in the ground will not be affected, improve the passenger experience of the Internet. At the same time, for the toilet for human treatment, increase the number of female toilets, in line with the scientific point of view. Provide comfortable soft sofas for easy resting passengers to rest. Increase people's leisure space, easy to wait for the process of recreational activities. It is not only a way to promote a commodity, but also a healthy life and guidance of public welfare knowledge and enhance the ideological quality and ethical conduct of the passenger. For example, the Beijing Metro Line 5 facilities are very subtle, full to take a unified specification design, the use of electronic clocks to remind the time, all the equipment to take a unified streamlined design pattern, full of vitality and nice, highlight the deep modern atmosphere and a very good atmosphere and a good experience to the passengers.

The Management Humanize. Good human management is to enhance the quality of passenger services and service quality protection. For the subway staff regular training, improve service quality. Arrange the security personnel to carry out regular patrols to strengthen the physical safety of the entire subway environment. Maintain the subway station clean and tidy, so that various facilities can be maintained in a timely manner. Strengthen the installation of video surveillance equipment to ensure the safety management of various regions. At the same time, strengthen the construction of special channels to prevent emergency evacuation of passengers in a state of crisis. For example, the Los Angeles subway station to the local famous painting "dream of flying my horizon" as a cultural display, to wings flying attitude to tell people, everyone should dream, and strive to fly to the sky. Such a scene, always reminds yourself to work hard, do not lose heart, do not give up. Soothing people's tension enhances people's longing for life. At the same time, Wuhan Metro Line 2 at the beginning of the design is elevated way through a site, but taking into account the subway through the voice generated by the surrounding residents will have a great impact. Therefore, the elevated design to underground design, this design reflects the wisdom of managers. People-oriented design concept reflects the overall quality of managers, all the time to passengers as the center of the subway quality service upgrade is the ultimate goal of each subway designer.
Conclusion

Subway with its convenience and speed characteristics in the major cities to promote quickly, the subway design is to enhance the subway quality and enhance the way passengers experience a good experience. Humanized design concept reflects the subway managers of the majority of passengers care and thought as well, so that passengers with a more healthy, more optimistic attitude towards the transfer of subway tools. It is conducive for people to form a better code of conduct and a good sense of social service.

References

[1] Zhao Tingke. Evaluation and Strategy of Comprehensive Development of Subway Station Space in Guangzhou No.1 Line from the Perspective of Urbanization [J]; South China University of Technology, 2012

[2] Xia Tao. Urban subway station entrance and exit space humanized design research [D]. Nanjing Forestry University, 2011

