

# Analysis of the Design of Subway Commercial Complex Based on the Concept of Cophysiology

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**Abstract:** With the rapid development of China's national economy, in the process of rapid urbanization, urban transportation is becoming more and more perfect, urban rail transit and prosperity of buildings coexisting symbiotically has become a unique feature of the city landscape, under the influence of this landscape, urban commercial complex also emerged. Subway tracks are closely related to urban buildings, and together they have built a rich and efficient travel route, which further accelerates the process of urbanization and presents a unique spiritual outlook of the city.

**Keywords:** Cophysiology; Subway; Commercial Complex; Design Analysis

**Methods:** Based on the concept of cophysiology, this paper mainly discusses the basic principles of the design of subway commercial complex, and focuses on the analysis of the design of the existing subway commercial complex in China under the concept of cophysiology. **Result:** The commercial complex is a trend of zero integration, it cleverly uses the urban space layout to provide people with a variety of functions of life and entertainment venues and channels, for businesses with a steady stream of people and huge market, with the diversion of traffic, optimize the image of the city, rational layout of urban space and improve and maintain the urban environment and other functions. **Conclusion:** Based on the concept of cophysiology, this paper examines the construction and design of commercial complex from many angles, and further explains the coordination, optimization and environmental protection function of subway commercial complex constructed under the concept of cophysiology.

## 1. Based on the concept of cophysiology, the basic principles of subway commercial complex design

Generally speaking, the subway commercial complex is usually built in the area of bustling, heavy traffic of the central subway, it mainly connects a city's main and secondary roads, functions and types are also very complex, multi-functional interests in the process of common physiological concept design is very obvious. Therefore, in the design principle must make full use of all kinds of subway channels, as far as possible shuttle pedestrian streets, large shopping malls or convenience stores, not only to meet people's travel needs, for business profits to bring sufficient traffic, but also to meet the past crowd to stay and rest humane needs. In addition, in the design and interspersed with surrounding facilities in the process of shopping malls, supermarkets to be as dispersed as possible arrangements, to avoid shopping malls, supermarkets too concentrated to lead to the effective evacuation of traffic, or in other slightly remote areas can not meet the shopping needs of consumers. Should focus on attracting traffic to different floors, such as clothing stores divided into one and two floors, restaurants, three or four floors, the implementation of functional classification can allow consumers to find the target site faster and better, reduce unnecessary waste of time, thereby enhancing consumer favorability and recognition of the entire building. Of course, fire-fighting facilities and management areas on each floor must be carefully designed, fire-fighting standards must be met, and the overall realization of integrated functions must be effectively promoted.

## 2. The design analysis of subway commercial complex under the concept of cophysiology

At present, the biggest problem in the construction process of China's subway commercial complex is that the high-intensity, high-density development track along the area, will directly affect the surrounding urban transportation public facilities and the effective integration of buildings, will lead to a large number of people too concentrated in a certain traffic point or large-scale construction, can not effectively integrate the flow of people. If the overall planning of the initial consideration of the surrounding transportation facilities and buildings distribution characteristics and nature, the use of urban morphological changes, unique modeling and integrated configuration of the integration of the surrounding environment, the surrounding facilities functions to effectively complement each other, so that people can separate underground, ground and above-ground space transfer, perfect realization of different levels, different functional facilities interspersed, can avoid the above problems, effective realization of urban functions.

Subway commercial complex is a new thing derived from the concept of common physiology, it can not only effectively integrate the surrounding resources, the urban area of spatial division and layout, mutual benefit and reciprocity, thus forming a powerful, systematic perfect, reasonable layout of the urban complex, as far as possible to meet the various needs of various types of facilities and buildings in the city, so that the symbiotic unit through effective and reasonable development and utilization of healthy competition

and cooperation, and ultimately achieve the sharing of resources and interests.

The subway complex is a reflection of urban culture and life, and it is a landmark building of a city. It is a postcard and pronoun of the city. Therefore, the functions and characteristics of the subway complex must be accurately positioned according to the urban style to avoid appearing in the design process. The problem of popularization and simplification presents the characteristics of uniqueness, individualization and innovation. For example, Guangzhou Nansha Passenger Transport Station. Guangzhou is one of the four major first-line and economically developed cities. Its unique urban culture and Guangzhou characteristics are deeply rooted in the hearts of the people. Metro construction is also one of the best in China. Among them, Nansha is the most creative and characteristic. The Passenger Terminal Station is also rated as one of the ten most beautiful subway stations in China.



Figure 1 Guangzhou Nansha Passenger Transport Port Station

As shown in Figure 1, when you walk into Guangzhou Nansha Passenger Terminal Station, you will see the ocean-themed blue space. The entire subway station is pure and beautiful in azure blue. With the ocean as the theme, you feel like you are here. In the aquarium, travel carefree in the ocean world and feel the joy and relaxation brought by the ocean. Coupled with exquisite lamps, the layout of the entire subway station has a sense of design and beauty. Standing in the middle of the subway station, a huge treasure ship gives people a strong sense of visual impact. The shape of this treasure ship is based on the prototype of Zheng He's voyages to the West. The bow is a treasure ship device and the hull is embedded in two rows. There are 20 back-to-back automatic ticket vending machines, and a convenience store at the stern, which sells various daily necessities and snacks, which brings great convenience to passengers. Through the integration of the treasure ship cultural sculpture in the shape of the bow and the ticket vending machine in the station hall, a cultural display artistic conception rich in "Maritime Silk Road" is created.

The reason why Guangzhou Nansha Passenger Port Station uses the ocean theme is because it is close to Nansha Passenger Port, so it is fully integrated into the ocean, treasure ships, seagulls, waves and other elements for innovative design. The passageway uses stainless steel spirals from the ceiling, floor and wall. Strip shape, the entire column adopts a unique design of light treatment, the lights on the ceiling are mapped to the column, the change of light and shadow gives people a wonderful visual enjoyment, outlines the traversing and dreamy scenes, and is accentuated by the continuous spiral shape. Just like the time channel, it will bring you a "dream journey".

Commercial complex is a trend of breaking up into parts. It uses spatial structure and functional classification to provide people with a place to rest and entertain. It allows people with a fast-paced life to relieve various pressures in life and work. It also serves various businesses. Bringing a steady flow of passengers to promote local economic growth, responsible for distracting the crowd, enhancing the image of the city, improving the urban environment, optimizing the urban layout, etc., based on the concept of symbiosis to rationally design the subway commercial complex, which can maximize the subway commercial integration. The economic value and environmental function of the body.

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