Art of "Space Reservation" in Architecture

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Abstract—This paper analyzes application of the Chinese traditional art concept of "space reservation" in architecture from the perspective of design method and describes several manifestation patterns of "space reservation" and the role it plays in architectural design.

Keywords—space reservation; architectural space

I. "SPACE RESERVATION" IN TRADITIONAL ART

"Space reservation" is a universal phenomenon in Chinese traditional art. It originates from cosmology in Chinese traditional philosophy—the Vientiane world consists of two parts: "yin" and "yang" and their mutual transformation is the power of everything's change. In the world, there are both solid and virtual things, and entities and blanks, from which the aesthetic category of "space reservation" derives with different manifestations in different art fields.

For example, "ventilation" weighs a lot in traditional landscape painting. Painters intentionally leave a blank in paintings to depict water, clouds, fog and other images arousing daydreaming in order to achieve the interest and charm of "false or true complement" and the effect of "lifelikeness", giving people a large imagination space.

Space reservation is mainly reflected as structural "blank" in traditional calligraphic art. Lines and other entity parts are dense while the blank part without lines is sparse. They contrast with each other and produce brightness. Sudden irregular blanks—"hollow strokes" in full and delightful dark ink make calligraphic works interesting and dynamic.

There are only two colors on Chinese traditional seal surface, namely red and white. Creators rack their brains on layout of "blank" to match red and white well and achieve a balanced layout of lines and blanks with variable density. Although the painting is static, its image can be expanded in an interesting and charming way, namely "The universe can be seen from an inch of land".

Different from static painting, calligraphy and seal art, dynamic traditional opera achieves the effect of "space reservation" through virtual stages and formula performances —Swaying horsewhips in the hand of performers symbolize flying horses and a couple of running soldiers and flags symbolize marching troops etc. The lively scenes in people's mind only originate from simple props and a small number of performers on stage, namely "Nothing is better than something here".

II. "SPACE RESERVATION" IN TRADITIONAL ARCHITECTURE

Traditional architecture, a vertical art, has the similar "space reservation" technique with plane traditional Chinese painting, and the technique is mainly used in the following several ways:

A. Courtyard in Architectural Complex

"Courtyard" or "patio" can be interpreted as "space reservation" in architectural complex—The relation of regular courtyard or patio and architecture is just like that of seal's red and white; irregular courtyard and patio are like the free space segmented by calligraphic lines; small patios produced by occasional separation of long corridors and enclosures and crab eye patios existing in civilian residence of southern Yangtze River universally are like hollow strokes in calligraphy, and they form vivid and meaningful blanks. Blanks in architectural complex create an appropriate spatial density allowing ventilation, air change and good light to make the architecture more livable. Spacial interest is produced in intersection of light and shade because of interpenetration of indoor and outdoor spaces.

B. Ornamental Perforated Windows in Enclosure

Chinese traditional gardens boast excellent walls which are different in height and material to prescribe a limit to outdoor space in order to create different spacial atmosphere. Enclosures in various forms aren't totally closed. Instead, they have holes of various shapes — ornamental perforated windows or door openings, like "hollow strokes" in calligraphic dark ink, which make the monotonous wall interesting and the enclosed space lively and effectively promote layering of landscape.

C. Colorless Outer Wall

Chinese traditional folk dwelling's outer wall takes gray and white as its keynote and shows a "colorless" state. Huistyle civil residence's white wall adopts a kind of typical "space reservation" of color—The lily-white outer wall almost loses its weight and it seems that the dark roof is just suspending over it. They look like dark ink lines and blank pictures, reflecting back falling shadows of green leaves, red flowers and scenery and forming a vivid picture. Although colorless and blank, these walls go together with various kinds of colorful surroundings and objects well and appear abundant and interesting.



III. "SPACE RESERVATION" IN MODERN ARCHITECTURE

As to typical examples of "space reservation" in China's modern architecture, nothing is better than China Academy of Fine Arts Xiangshan campus in Hangzhou, through which Architect Wang Shu shows the traditional "space reservation" concept incisively and vividly.

A. "Space Reservation" in Architectural Complex

Architecture complex on Xiangshan campus spreads surround natural mountains, like calligraphic lines. Architectural plane can be square or twisted, enclosing outdoor space in different sizes and forms – similar to traditional courtyard and patio in spirit. The "blank" space "Fig. 1", "Fig. 2", "Fig. 3" and "Fig. 4" brings excellent ventilation and daylight to the inside of architecture, forming an intimate relation with nature and a spatial level with alternation of light and shade. Thus, the space feels more abundant and interesting, exactly the same as traditional architecture.



Fig. 1. Overlook of Xiangshan campus in the first-stage construction.

Pictrue source: Xiangshan campus first-stage construction overlook. Wang Shu, Lu Wenyu. China Academy of Art Xiangshan Campus. Architectural Journal, 2008 (09): 54



Fig. 2. Courtyard space on Xiangshan campus.

Pictrue source: Courtyard space on Xiangshan campus. Wang Shu, Lu Wenyu. China Academy of Art Xiangshan Campus. Architectural Journal, $2008 \ (09): 51.$



Fig. 3. Site-plan of Xiangshan campus.

Pictrue source: Site-plan of Xiangshan campus. Wang Shu, Lu Wenyu. China Academy of Art Xiangshan Campus. Architectural Journal, 2008 (09): 52.



Fig. 4. Patio on Xiangshan campus.

Pictrue source: Patio on Xiangshan campus. Author photography

B. "Space Reservation" in Wall—Cucoloris of Taihu Stone

As to architecture on Xiangshan campus, the irregular hole in the wall is also spectacular and full of "personality". Among these holes, some are like "hollow strokes" in dark ink and full of occasionality and some boast disordered outlines, arousing the imagination of Taihu stones in different postures in traditional gardens. These holes enhance the architect's crystalistic sense and intensify the relation between outdoor and indoor space of the architecture, producing an interesting visual effect shown in "Fig. 5" and "Fig. 6".



Fig. 5. Long view of holes in outer wall on Xiangshan campus.

Pictrue source: Long view of holes in outer wall on Xiangshan campus. Author photography.



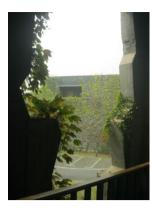


Fig. 6. A closer look at the hole in outer wall on Xiangshan campus.

Pictrue source: A closer look at the hole in outer wall on Xiangshan campus. Author photography.

C. "Space Reservation" in Color—Gray White Outer Wall

Like traditional Chinese residence, the architecture on Xiangshan campus appears in a "colorless" state. On Mountain North campus, the architecture is traditional white and gray—gray tile roof and white outer wall, and the keynote of architecture is totally gray—direct mix of old gray tiles collected from places all over the country and exposed modern bare concrete with occasional reveal of some irregular kermesinus old bricks in a small area in "Fig. 7".



Fig. 7. Outer wall of architecture on Xiangshan campus.

Pictrue source: Outer wall of architecture on Xiangshan campus. Wang Shu, Lu Wenyu. China Academy of Art Xiangshan Campus. Architectural Journal, 2008 (09): 57.

Totally different from the universally westernized red campuses in China, the cleanly white hue of architecture on Xiangshan campus doesn't reduce its elegant demeanour at all. The architecture complex shows a harmonious and low-pitched state and lives in harmony with trees, flowers, grass and the abundantly colorful environment, reflecting the Chinese traditional philosophical thought of "unity of heaven and man".

IV. CONCLUSION

It has become an undeniable fact that "globalization" is a "double-edged sword". Two-sidedness of "globalization" is more evident in cultural field: Western film, music, diet, fashion, costume and architecture reach every corner of the world rapidly by means of speedy modern transportation and advanced media, bringing joviality or stimulation to appreciators' nerves. What accompanies it is gradual

similarity in appearance of city and architecture in various places and gradual erosion of native culture which almost doesn't have a tiny bit of land and even totally disappears. It is undoubted that current ideas of regionalism, localization and sustainable development people take delight in talking about are crisis awareness produced by cultural convergence and rational reflection on globalization.

This kind of reflection prompts people to pay greater attention to their traditional native culture. The reflection of Chinese traditional artistic "space reservation" philosophy in modern architecture adequately proves traditional culture's timeless charm and modern value.

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