A Comparative Study on the Concept of Space in Gana Art Center and Whanki Museum
- Focused on Prospect and Continuity -

Kim, Kwang-ho¹, Koo, Young-min¹ and Ye, Mi-ra²

¹Professor, Department of Architecture, Inha University, Korea
²Graduate Student, Department of Architecture, Inha University, Korea

Abstract
The purpose of this study is to analyze the concept of "prospect and continuity" in spaces of Gana Art Center and Whanki Museum in Korea. This thesis can be summarized as follows:

First, based on monism, Gana Art Center forms fluid and organic spaces, which means that obscurity caused by inconclusive outlines and transparency through glass walls form the concept of prospect by the coincident experiences between the subjects and objects.

Second, the dominant concept of Whanki Museum, the dualism shows the sequence having mobility and sense of direction through lights and objects. Especially, the frames of vertical axises forming the picturesque prospect and users eyes dispersed in all directions emphasize on the separation of subjects and objects by frames.

Keywords: prospect; continuity; monism; dualism

1. Introduction
1.1 Background and Purpose
The concept of space in museums which have developed as a showcase of various ideas of architecture since modern architecture has resulted in contrasts depending on the interpretation of relationship between man(subject) and nature(object). This concept of space reveals the aspect of development mainly through mental conflict and harmony of interaction of human psychology between Romanticism and Rationalism. The former is experienced as continuity of overlapping of space and organic combination, and the latter as the space containing a picturesque prospect by the continuous arrangement of separated space in units and movement of visitors. In this way, the prospect and continuity of contrastive concepts of space provide architectural vocabulary with various aesthetic experiences through different techniques, e.g. circulation, construction of window, and details.

This study which starts from this background will consider the concept of prospect and continuity in the museums of Korea since '90s and consider spatial trends and characteristics of these museums. Therefore this study will give Gana Art Center and Whanki Museum for example and aims to provide theoretical grounds by comparing and analyzing the concept of prospect and continuity of these museums on which other researchers can explore complimentary aspect of the different space concepts.

1.2 Scope and Method
First of all, the concept of prospect and continuity includes not only visual continuity conceived physically, but also, and more broadly, cultural context of a site. This broadened concept can be represented in following term, that is “continuity.” In addition, prospect is related with the view of subject and can be conceived as total phenomenon of user’s aesthetic cognition of natural or artificial sight.¹

This study, in the first place, will compare the concept of prospect and continuity in the two modern architects, Frank Lloyd Wright and Le Corbusier, and consider characteristics of the concept of space reflected on the relationship between each plane and each mass. Secondly, from the view point of prospect, this study will consider how the Western ideas and regional, empirical side of the East can be combined and realized when the architects of European and American background try to develop a concept of design on site of the same organic geography of Korea in application of the similar museum building program. This study will compare the spatial characteristics of two museums through analysis on the principle of prospect and continuity of emotional elements of Korean traditional architecture reflected on each main

Contact Author: Kim, Kwang-ho, Professor, Department of Architecture, Inha University
#253 Yonghyun-dong, Nam-ku, Incheon, 402-751 Korea
Tel: +82-032-860-7596  Fax: +82-032-866-4624
e-mail: 200022@inha.ac.kr
(Received May 7, 2002; accepted September 10, 2002)
concept of design.

2. The Concept of Prospect and Continuity of Two Modern Masters

It is not until post-modern architecture that the space of modern architecture grounded on various kinds of cosmology developed under influence of Romanticism and Rationalism. This concept had a great effect on forming the space of contemporary architecture. Modern architecture especially has been developed by masters such as Frank Lloyd Wright and Le Corbusier. The contrary ideas represented by them developed the concept of space while contrasting each other. Therefore the following characteristics can be found in the two masters’ concept of prospect and continuity which influenced forming of the space in modern architecture.

Firstly from the viewpoint of prospect, Wright, on the one hand, develops his space concept grounded on his monism, which considers architecture as a part of nature. His space can be conceived as a whole unified with natural elements by extension of all directions vertical or horizontal, and his idea of space forms the prospect of refuge. That is, it is the monistic experience of subject and object that the prospect of his architecture stresses as dynamic space concept through contrasts between openness and closeness, which can be compared to the interior and exterior of a cave. On the other hand, the prospect of Le Corbusier’s architecture is based on his dualistic thinking. And “the device unifying interior and exterior through user’s movement and viewing”2 induces the picturesque prospect.3 In other words, his space concept fixes chaotic and dynamic nature by frame, and stresses the concept of detachability of human areas from those of nature, while constraining vision within the limit of the particular areas through the framed exterior.

Second, Wright’s buildings, from the viewpoint of continuity, have continuity which emphasizes simultaneous experience. A good example can be found in Wright’s Falling Water. The liberation of the horizontal, open cantilever and corners unifies the architecture with its surroundings. The low and extended cantilever deepens mutual insertion of the interior and exterior, and forms the prospect like that of a cave. The continuous experience of the exterior is emphasized by enlargement of view through corner windows which deepens successiveness between man and nature. On the other hand, Le Corbusier forms the space through arrangement of independent functions and repetition of combinations. As a user experiences in Villa Savoy, the tight connection is formed by arrangement of each space in the interior, which is private area, and by inducing changes and fluidity through circulation linked by lamps to a roof garden, which is public. In the two museums of Korea is contrastively reflected the influence of Romanticism and Rationalism in modern architecture.

3. Gana Art Center

Wilmotte, Jean-Michel. 1998

3.1 Successiveness of Unit Space

Gana Art Center is a good example of ‘picturesque architecture’ which is sensitive to physical elements (natural surroundings) and expands infinitely on a slanting hill so far as it merges with land.4 This trend influences the entire space of Gana Art Center dominantly so that the user can recognize specific characteristics of the museum.

![Fig.1. Gana Art Center – 1st Floor Plan](image1)

![Fig.2. Gana Art Center – Façade](image2)

Screens divide rooms that are arranged asymmetrically around the void. However, these screens stand weakened rather as the medium of fluidity and connection among rooms than as vision/noise-proof for independent functions. The curtain wall covering the entire inner space especially maximizes visual transparency and continuity between the interior and exterior, the interior and interior.

The free arrangement as such has an effect on mass, and the main bisection of mass allows natural fluidity through a gap by deconstructing corners where two walls meet. The user will conceive this characteristic as the process of space forming, and the interior as the process of open and flowing space forming.

3.2 Experiences of Space and Circulation

The entire circulation of Gana Art Center has not been defined exactly. The arrangement and plane of space foregrounds the ambiguous boundary. The void in shape of ‘U’ facing the southern road of 6m length is accessible from all directions. The user can freely enjoy his view in an atmosphere where the boundary between the museum and the exterior is not definitely recognized.
In addition, simultaneous vision is formed by the void of the ambiguous boundary between the interior and the exterior, and the curtain walls with horizontal enforcement, which broadens the visitor’s vision from all directions up and down as well as horizontal. Therefore the free circulation and the ambiguous boundary make the interior and exterior insert each other mutually through the simultaneous experience and fluidity.

In case of the exterior, especially, the void is connected to ‘the cantilever of a lubber, though horizontal, on 2nd floor for offices which reminds of the traditional eaves of Korea,’ and forms the dynamic vision inserting the interior and exterior mutually.

3.3 Composition of Window
(Introduction of Prospect) – Corner Window

A similarity can be found between the dominant element of Gana Art Center and the monistic space concept in Falling Water. By weakening every corner of mass and emphasizing horizontal frame, two buildings freely broaden the user’s visual field wide enough to make him experience the fluidity of space. This trend emphasizes the simultaneous experience of the interior and exterior, and can be found also in the side frame window liberating corners which weakens the boundary between the interior and exterior and stresses monistic experience by broadening the visitor’s visual scope horizontally.

3.4 Material – Introduction of Peculiarities of Site

Gana Art Center visualizes images of natural surrounding as an important design element by continuously applying them to architectural elements. That is, making use of its locality in the foot of Bookhan Mt., it emphasizes harmony with surrounding scenery and draws the image of Bookhan Mt. through pine trees planted around it, massive granite, and exterior materials. Again, the ambiguous boundary and transparency dominantly rule here, and this characteristic of two spaces doubles the continuous experience of the interior and exterior.

4. Whanki Museum
Woo, Kyu-sung. 1992

4.1 Successiveness of Unit Space

Whanki Museum divides its main building into collective forms of several buildings on the sloped site in Buamdong.

As shown in the picture, the entire mass is a perfect cubic with 2 vault ceilings. In the arrangement of the interior, each independent space is arranged around the circular staircase. The designer forms the space, which is meaningful as a complete collective group that, though divisible functionally, has tight interdependence by repetitively arranging spaces of different functions. Namely the change and fluidity are induced by the repetition of strict division and separation in units, which are the most important element of the interior construction.

4.2 Experience of Space and Circulation

The inner part of Whanki is formed around the cubic void of each 8m length. From the interior, employing the concept ‘a building in a building’ or ‘a house in a house,’ the void penetrating the center of the museum doubly intensifies the interior, and through the stairs around the void the user enters the exhibition room. Each wall divides the inner space here, and the introduction of light from the ceiling is similar to ‘a central generalized light’ as in Louis Kahn’s buildings. That is, the depth of space is formed by the ascending feeling, which is aroused from variable natural light through horizontality of the void and diffusing light in the interior.
On the other side, in case of the exterior, the circular promenade around the entire building guides user’s circulation, and the hierarchical and continuous arrangement of the void such as continuity of elements of the concealed and the exposed arouses the user’s interest and, again, forms the dynamic prospect. The circulation through stairs as such leads the user through the interior-exterior-interior, and forces him to complete his circulation.

4.3 Composition of Window

(Introduction of Prospect) -- Picture Window

The circulation of Whanki completes the interior view in the project gallery on 2nd floor, and the last circulation ends in the exterior Courtyard. When the user goes in exhibition room on 3rd floor passing through the circular promenade of the exhibition building, the connected Courtyard, and stairs, he will see composition of symmetrical space of the vault and an opening between them. This provides the user with visual sequence in process of movement, and allows him to feel the exterior scene as a picture and to recognize it as a settled form. The picture window, however, emphasizes the binary division of the interior and exterior.

4.4 Material – Introduction of peculiarities of Site

In the arrangement of Whanki, the mass in shape of box unifies the axis of valley and the building, and shows the arrangement of interior as hierarchical as traditional architecture is. That is, the arrangement of space centered on the axis is unified with the circulation towards the exhibition room on top floor, and brings out sensation of movement. This arrangement in this kind of movement stresses spatial hierarchy. In addition, the designer expresses regionality by exploiting traditional concepts as design elements. As shown in the picture no. 10, the part of facade touching ground was built with bricks following the traditional house style, the upper part with stone, and the roof with lead-plated copper.
5. Conclusion

The result of this study shows that two museums share the similar physical conditions, but they form spaces different from each other in their process of design. The result can be summed up as Table 1.

First, based on monism, Gana Art Center forms fluid and organic spaces, which in turn forms the space penetrating the interior and exterior. In other words, the museum forms the prospect emphasizing the simultaneous experience between subject and object in process of creating space through the ambiguous boundary and transparency through curtain walls.

Second, the dominant concept of Whanki Museum, i.e. dualism, shows the sequence with mobility and sense of direction through lights and object. Especially, the frames of vertical axises forming the picturesque prospect and the visitor’s eyes distracted in all directions emphasize the separation of subject and object by frame. This study has shown that the concept of prospect and continuity can have each and different result according to the interpretation of relationship between human being (subject) and nature (object). This study expects that this contrastive space concept can provide the studies on space of museums slanting towards experimental variety with complimentary alternatives for pluralistic space of contemporary architecture.

Notes
1. Kim, Kwang-ho. A Comparative Study on Concept of Prospect in Frank Lloyd Wright and Le Corbusier’s Works. Journal of the Architectural Institute of Korea Planning & Design Section, Vol. 18 No. 1, January 2002, pp.91-98.
2. Park, Ju-won. A Study on Unification of Interior and Exterior in Alvar Aalto. Proceeding of Architectural Institute of Korea, 2001 Spring, pp.341-344.
3. Wolfflin defines ‘picturesque’ as ‘a thing arousing a sense of movement,’ and Le Corbusier uses this as a device for concentrating vision in a particular area.
4. Especially, “it is a trend of the phase in the ambiguous boundary caused by inconclusive outline in emphasizing the mass of irregularity and dispersed silhouette which appear in the picturesque

Table 1. Comparison of Concept of Space in Gana and Whanki

| Continuity | Gana Art Center | Whanki Museum |
|------------|----------------|---------------|
| Successiveness of the interior unit space | Continuous and fluid: recognizing spaces not as completed space but process of forming | Discontinuous: forming reiterative space around the strict cubic void in discontinuous form |
| Circulation system | Arbitrary stroll (ambiguous boundary): allowing users to stroll arbitrarily through the void with the boundary between the interior and exterior | Obligatory circulation: guiding users through the circulation of the interior-exterior-interior, and the arrangement of the circular promenade around the exhibition building |
| Material (the introduction of characteristics of site) | Friendly relation with nature: visualization of the image of Book-han Mt. not only using stone and wood as exterior materials but also drawing concrete natural elements into the void of ambiguous boundary by planting pine trees | Abstract: Forming hierarchy by the unification of axises and stage processing in application of the structural techniques of traditional architecture expressing the identity of land by applying conceptual vocabulary |
| Experience of the exterior | Mutual penetration of the interior and exterior: the simultaneous experience by the void of the ambiguous boundary between the interior and exterior | Continuous arrangement: Making users recognize sequence by forcing them move ceaselessly following stairs around the void |
| Composition of window (the introduction of prospect) | Corner Window: forming experiential scenery penetrating mutually the interior and exterior by liberating corners and emphasizing horizontal vision of wide frame | Picture Window: viewing abstract scenery through a picture window which is a settled frame and continuously changing sequence according to user’s movement around vertical axis of void |
| Ideology of architectural thought | Monism – unification of subject and object (related with the romantic concept of space in F.L.Wright) | Dualism – division of subject and object (related with the rational concept of space in Le Corbusier) |

Notes
1. Kim, Kwang-ho. A Comparative Study on Concept of Prospect in Frank Lloyd Wright and Le Corbusier’s Works. Journal of the Architectural Institute of Korea Planning & Design Section, Vol. 18 No. 1, January 2002, pp.91-98.
2. Park, Ju-won. A Study on Unification of Interior and Exterior in Alvar Aalto. Proceeding of Architectural Institute of Korea, 2001 Spring, pp.341-344.
3. Wolfflin defines ‘picturesque’ as ‘a thing arousing a sense of movement,’ and Le Corbusier uses this as a device for concentrating vision in a particular area.
4. Especially, “it is a trend of the phase in the ambiguous boundary caused by inconclusive outline in emphasizing the mass of irregularity and dispersed silhouette which appear in the picturesque
architecture in England.” Jung, Man-young. The Visibility and Tangibility in the Architectural Space of Le Corbusier and Louis Khan, Journal of the Architectural Institute of Korea Planning & Design Section, Vol. 14 No. 1, January 1998, pp.149-158.
5. Architecture and Environment (Monthly Magazine), Korea, 1998, 10, pp.98.
6. Prospect is produced not only in the ceiling adjusted low by scale and in the cantilever expanding horizontally, but also in the visual expansion dispersed by corner windows through tension and relaxation.
7. Ojeda, R. Oscar. Ed. Whanki Museum-Kyu Sung Woo, Rockport Publishers, Inc. 1999, pp.20.
8. Lee, Young-han. Contemporary architects. Seoul National University of Technology Press, 1988, pp.231.

References
1) Zevi, Bruno. The Modern Language of Architecture, University of Washington Press, 1978
2) Ojeda, R. Oscar. Ed. Whanki Museum-Kyu Sung Woo, Rockport Publishers, Inc. 1999
3) Lee, Young-han. Contemporary architects, Seoul National University of Technology Press, Korea. 1988
4) Zevi, Bruno. Architecture as Space. Horizon press, N.Y. 1974.
5) Architecture and Environment (monthly magazine), Seoul, Korea. 1998, 10
6) Kim, Kwang-ho. A Comparative Study on Concept of Prospect in Frank Lloyd Wright and Le Corbusier’s Works. Journal of the Architectural Institute of Korea (Planning & Design Section), Vol. 18 No. 1, January 2002
7) Park, Ju-won. A Study on Unification of interior and exterior in Alva Alto, Proceeding of Architectural Institute of Korea, Spring 2001, pp.341-344.
8) Jung, Man-young. The Visibility and Tangibility in the Architectural Space of Le Corbusier and Louis Khan, Journal of the Architectural Institute of Korea (Planning & Design Section), Vol. 14 No. 1, January 1998