

Features of Design Intention Regarding Common Area in Gathering Living Space

Subtitle: Using Works Published in Architectural Magazine "SHINKENCHIKU" as Examples

Kim, Yunsoo * Simizu, Tadao ** Sato Kiminobu***

** graduate school of chiba university
Chiba, Japan, kimyuns@hotmail.com
** Design studio TAD
Chiba, Japan, tad@tadaoshimizu.jp
*** graduate school of chiba university
Chiba, Japan, kiminobu@faculty.chiba-u.jp*

Abstract: In this paper, we researched the design intention regarding common area in work examples of gathering living space published in "SHINKENCHIKU", over two-year periods at ten-year intervals of 1986-1987, 1997-1998, and 2006-2007. The designers' descriptions of common area in gathering living space were generally classified into matters regarding: "action on psychological aspects," "community promotion and communality," "spacial aspects," "functional aspects," "involvement with nature," and "matters regarding diversity of inhabitants." In particular, "matters regarding involvement with nature" was consistently emphasized regardless of the year. Based on these, interrelations and features of design intention for common area in gathering living space were studied by type III quantification and cluster analysis. As a result, we have found that the features intend by designers when designing common area in gathering living space were to: (1) introduce elements related to greens as space representation, (2) introduce elements related to landscape to expect impact on psychological aspects, (3) give consideration to community formation between inhabitants and safety of inhabitants, (4) give consideration to diversity of inhabitants and safety, (5) give high regard to space convenience, (6) give consideration to spacial connectivity, and (7) give consideration to functional aspects of space.

Key words: *Common Area, Gathering living Space, Architectural Magazine*

1. Introduction

1.1. Background and Object of the Research

In this time of rapidly falling birthrate and aging population, with families becoming smaller and concerns for increase in crimes targeting children and the elderly growing, the role of housing complexes as a housing format is attracting attention. In a research of Association of Urban Housing Sciences, applicants of housing complexes, which are housing forms inhabited by multiple households, are increasing, and in particular, households of the generations in their 50s and 60s wish to live in housing complexes as their last home [note 1]. In response to these trends, housing complexes are being built one after another in recent years. Architectural magazine, "SHINKENCHIKU" have featured multiple articles on various gathering living spaces since 2005.

In a gathering living space where diversity of people live, the existence of common area recognized and utilized by inhabitants as shared area outside of their dwelling units are important to support living in housing complexes, along with enhancement of each dwelling unit. It is thought to have a large role in fulfilling life outside of dwelling units, as well as promoting community formation of inhabitants. Design examples that consider such a common area can often be seen these years.

In these trends, to set out environment design of common area in gathering living space, it is necessary to find out the consciousness and behavior of inhabitants/users towards common area, as well as to understand what was considered by planner/designer of existing gathering living space when the common area was planned and designed.

In light of the above, this research aims to find out the intention the planners/designers of existing gathering living spaces had when the common areas was planned/designed, by using works published in an architectural magazine as examples, prior to conducting a survey of consciousness and behavior on inhabitants/users of gathering living spaces.

1.2. Subject and Method of the Research

The subjects of this research are works concerning gathering living space published in a major Japanese architectural magazine "SHINKENCHIKU" to clarify the characteristics and year-on-year trends of common area in gathering living space published in the magazine. Gathering living space in this paper will mean a form where multiple households live, and includes not only residences but also long-term housings such as congregate housings for the elderly and rest homes or company residences and dormitories.

The target years are two-year periods at ten-year intervals of 1986 and 1987, 1997 and 1998, and 2006 and 2007. Works concerning gathering living space were selected, and literal samples in the descriptions of the designers' design intention related to the works that refer to common area were extracted. These samples were classified by a method similar to KJ-method, type III quantification was applied and interpreted, cluster analysis was performed, and interrelations and features of design intention for common areas in each gathering living space were observed.

2. Design Intention for Common Area in Gathering Living Space

The number of works concerning gathering living space published in the architectural magazine over the two-year periods at ten-year intervals during 1986 to 2007 drastically increased as time progressed. Residences such as apartment/condominium types and residential complex types dominate the nature of gathering living space, while other classifications consist of facilities and dormitories such as congregate housings for the elderly and rest homes (Table 1).

Table.1 Number of works and kind of gathering living space

	1986	1987	1997	1998	2006	2007	
The entire number of works	204	216	225	204	220	198	
The gathering living space number of works	5	9	17	18	40	44	
percent	2%	4%	8%	9%	18%	22%	
Kind of gathering living space	housing	4	3	5	13	39	42
	facility	1	5	11	2	1	2
	dormitory	0	1	1	2	0	0

In the present survey, only residences were taken as subjects of the survey because less works exist for facilities and dormitories and also because their characteristics are different.

Among the gathering living space works published in the architectural magazine "SHINKENCHIKU," 106 residence cases were selected, and 245 literal samples in the description of the designers' design intention related

to the works that refer to common area were extracted. Then, to understand design intention regarding common area, the above samples were further segmentalized into 422 words, and classified by a method similar to KJ-method [note 2].

2.1. Classification and Year-on-Year Change of Design Intention for Common Area in Gathering Living Space

Each of the samples were classified to understand the design intention for designing the common area from texts related to common area in gathering living space. As a result, design intentions for common area in gathering living space were classified into 21 categories. The 21 categories were further organized into six items including "matters regarding action on psychological aspects," "matters regarding community promotion and communality," "matters regarding spacial aspects," "matters regarding functional aspects," "matters regarding involvement with greens and nature," and "matters regarding diversity of inhabitants." When the 80s, 90s, and 2000s were observed as a whole, "matters regarding involvement with nature" had the tendency to rank high among the items. It can be said that this is the point that is consistently emphasized when common area in gathering living space is designed by designers, regardless of the change in year (Figure 1).

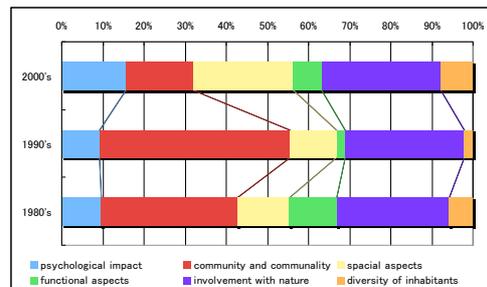


Figure1. Comparison according to fiscal year

3. Characteristics of Design Intention for Common Area in Gathering Living Space by Type III Quantification

Based on the aforementioned result, type III quantification was used to analyze the relationship between each gathering living space and design intention for common area. As a result, axes representing the relationship between each gathering living space and design intention for common area were obtained. Among the axes obtained, those with relatively high contribution ratio values were focused, and Axis 1 through Axis 3 were interpretable. Axis 1 was named: "consideration target discrimination axis" towards common area in gathering living space, Axis 2: "diversity of space discrimination axis" in common area in gathering living space, and Axis 3: "effect discrimination axis" on physical elements in common area in gathering living space.

4. Groupings of Gathering Living Space by Cluster Analysis and Their Features

Cluster analysis was performed to inspect the interrelations and features which the matters of design intention for common area in each gathering living space are to be grouped with. The method was as follows: for each gathering living space, sample scores for interpretable axes Axis 1 through Axis 3 obtained from type III quantification of matters of design intention for common area were used, cluster analysis by Ward method and Euclidean distance was applied, and then grouping was performed.

4.1. Axis 1: "Consideration Target Discrimination Axis" x Axis 2: "Diversity of Space Discrimination Axis"

As a result of cluster analysis of Axis 1: "consideration target discrimination axis" and Axis 2: "diversity of

space discrimination axis," five groups having similar features were obtained (Figure 2).

Samples of gathering living space belonging to Group I are concentrated near the graph origin, as apparent from Figure 2. Accordingly, neither features of considerations for "inhabitants/people" and "space," nor effects of "representation" and "utilization" were found. In Group II, when each sample belonging to the same group published in the magazine were viewed based on specifically described texts, texts such as space connection, unite, and access were often found. This group will be designated "group of samples that gives consideration to connecting space." In Group III, texts such as sharing a space, approachway, layout, protecting privacy, and as private space were often found. It can be said that this group was designated "group of samples with high regard for convenience of space." Group IV contained many texts such as balcony as escape route or barrier free, playing environment for children, sustainability, and consideration to global environment. It can be said that this group was designated "group of samples that gives consideration to diversity of inhabitants and safety." Finally in Group V, texts such as covered by screen-like ivy, like walking in the woods, surrounded by fence, stair hall full of greens, and incorporating green-rich environment can be seen, indicating that elements related to greens were utilized as space representation when the designer designed common area in gathering living space. Group V was designated "group of samples that incorporates elements related to greens as space representation."

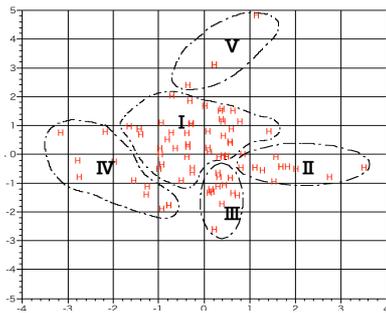


Figure2. Axis 1 × Axis 2

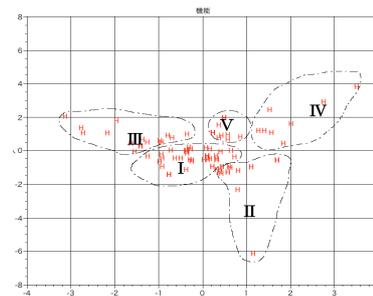


Figure3. Axis 1 × Axis 3

4.2. Axis 1: "Consideration Target Discrimination Axis" x Axis 3: "Effect Discrimination Axis"

From cluster analysis of Axis 1: "consideration target discrimination axis" and Axis 3: "effect discrimination axis," five groups with similar features were obtained (Figure 3.)

As apparent from Figure 3, Group I and Group V were located near the graph origin, and no features were found. By observation based on texts of gathering living space samples belonging to Group II, numerous descriptions regarding psychological impact such as text regarding landscape including differing scene, scenery, close view and distant view, and unique landscape as well as protecting privacy and private area were found. It can be said that in Group II "group of samples that expect impact on psychological aspects by introducing elements related to landscape." Group III contained many texts related to for example community between inhabitants, natural community formation as well as escape route, barrier free, and security. It can therefore be seen that designing was done giving consideration to community formation between inhabitants or safety of inhabitants such as escape and security, when designing common area in gathering living space. This group was designated "group of samples that gives consideration to community formation between inhabitants and safety of inhabitants." In Group IV, a great number of texts related to functionality of gathering living space such as freely accessible space, amount of space, and sense of scale or distance were contained. This group was

designated "group of samples that gives consideration to functional aspects of space."

5. Conclusion

Examining works concerning gathering living space published in the architectural magazine "SHINKENCHIKU" over the two-year periods at ten-year intervals during 1986 to 2007, the number of works increased as time progressed. The descriptions related to common area in gathering living space by the designers were generally classified into "matters regarding action on psychological aspects," "matters regarding community promotion and communality," "matters regarding spacial aspects," "matters regarding functional aspects," "matters regarding involvement with nature," and "matters regarding diversity of inhabitants." In particular, "matters regarding involvement with nature" was consistently emphasized regardless of the year.

Next, to find out the relationship between each gathering living space and design intention for the common area, type III quantification followed by cluster analysis were applied, and each group was examined. As a result, features of design intentions for common area in gathering living space included (1) introducing elements related to greens as space representation, (2) introducing elements related to landscape to expect impact on psychological aspects, (3) giving consideration to community formation between inhabitants and safety of inhabitants, (4) giving consideration to diversity of inhabitants and safety, (5) giving high regard to space convenience, (6) giving consideration to spacial connectivity, and (7) giving consideration to functional aspects of space.

As discussed above, it will be important in the future, when working out environment design of common area in gathering living space, to not only value introduction of elements related to greens and landscape as well as action on psychological aspects using these components, but to further have emphasis on promotion of community formation between diversity of inhabitants and to ensure safety and convenience. In the next report, we plan to find out specific keys for environment design of common area in gathering living space based on actual observation surveys of gathering living space or questionnaire surveys to inhabitants.

6. Notes

[note 1] Association of Urban Housing Sciences, ed.: TOSHI JUUKYO NO MIRAI, Gakugei Shuppansha, page 96, 2005, 1959 survey targets were internet users in their teens or higher, 2002.

[note 2] The task was carried out by four graduate students in doctoral courses of Designing major. 422 literal samples having high relativity were organized together, and their comprehensive meanings were determined under common assent in an effort to maintain objectivity.

7. References

[1] Hiroko Saito: A Study of Green Planning in Public Spaces of Residential Areas and Residents' Participation to Green Management, Architectural Institute of Japan, Collection of Planning Reports, No. 525, 11, 1999

[2] Hiroko Saito: A Study on Landscape and Community Development through Green Management of Common Spaces in Detached Housing Areas, Architectural Institute of Japan, Collection of Planning Reports, No. 528, 2, 2000

[3] Junji Koike, Yukio Tuboyama, Shinji Sato, Naofumi Fukuda: A Study on Space Composition of the Architecture and Water Part1- The Classification on the Concepts, Architectural Institute of Japan Conference Proceedings, 9, 2001