

Interconnectivity of Management, Context, and Interiority of Coworking Spaces in Tokyo

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1. Introduction

In recent years, coworking space has grown in popularity as an alternative working space for independent and mobile workers. In Japan, especially Tokyo, the number of coworking spaces has risen as more people work in fields which do not require fixed space, and arguably because of the young entrepreneurs' inability to afford their own spaces. In order to adjust to the variation of working styles, and balancing the individual works and collaboration, the designs of coworking spaces have particular characteristics and mechanism. The aim of this research is to understand the way this mechanism works on coworking spaces in Tokyo. In order to achieve this aim, evaluation and investigation of three important aspects of coworking spaces: Management, Context, and Interiority, and its interrelationship were performed. This study explores the composition of programs and spatial elements, and its relation with the context and management system.

1.1 Background and Overview

The term 'coworking' was first used by Brad Neuberg to refer to multi-users space sharing working style. The first coworking space in Japan is located in Kobe and established in 2010. Later in the same year, Coworking Coop, an association which supports and facilitates coworking activities in Japan, was established. Following this, many coworking spaces could be seen growing in various places around Japan. As of now, there are approximately 120 coworking spaces in Tokyo listed in Coworking Coop.

Classified as one of the third work spaces, coworking spaces could be defined by using several attributes to differentiate it from other third work spaces. Coworking spaces are working spaces that encourage collaboration and physical connection. Nina Pohler, in her research on evaluating current coworking spaces, described coworking space as, "Every workspace with flexible structures that is designed for and by people with atypical, new types of work - that is not exclusively for people from one certain company". This definition and the aspects of community, collaboration, and self-identity concluded from several researches, articles, and manifesto, are the base for finding important factors in coworking spaces designs.

1.2 Framework and Methodology

In order to reach the aim of this research, deep analysis on particular case studies in Tokyo were performed. The first step was performing general analysis on coworking spaces in Tokyo. After basic comprehension had been achieved, using purposive sampling method, twenty-five case studies were selected. The parameter of the selection is the existence of free working space and communal

space for the reason that collaboration is an important factor in coworking space. Following this step, study on designed space was conducted. The analysis was based on the triangulation of Management, Context, and Interiority aspects of coworking spaces.

2. Management

In the Management aspect, based on Ownership type, the case studies are categorized into three types: Community, Company, and Flagship. The initial differences between these three types are derived from the basis of the space establishment. Coworking spaces under Community management category are created by a group of people or community that afterwards establish a company to run the coworking space. The characteristics of spaces under this type are that the membership plan prices tend to be on the lower side (Tab.1). Coworking spaces under Company and Flagship categories are basically created by companies which have the intention to establish coworking space as one of their projects. The difference is that Flagship type spaces have several branches under the same name, which in turn influences the space management system. From the interviews with several coworking spaces managers, it is found that there is a design guideline for coworking spaces under the same brand name, suggesting that the design orientation and program might follow the same standard. The other characteristic is that the prices are relatively higher compared to the two other types.

3. Context

The analysis on Context is based on the location and the building envelope of the coworking spaces. The majority of coworking spaces in the study has small size of area. It is found that almost all cases located in Residential area have space size lower than 300 m² (Tab.2). It should be noted that smaller space equals to closer proximity between users. In the interview, some of the users admitted to using coworking spaces more as a mean to meet new people rather than build new project with them. In addition, medium and large size coworking spaces are mostly located in Office area which are either allocated in Business or Business with Special Allocation plot. These large size coworking spaces are also inclined to be situated in skyscrapers. The majority of the coworking spaces also tend to have one single story to accommodate the interaction and simplify coworking space management, but it is also apparent that a particular number of smaller coworking spaces are organized in multiple stories setting.

4. Interiority

4.1 Program

In the Interiority aspect, analysis were done by focusing on

the characters of program composition and furniture. There are six programs, discovered from the preceding general research, which constitute typical coworking spaces: **Free Working Space**, **Communal Space**, **Support Space**, **Private Working Space**, **Secondary Working Space**, and **Additional Space** (Fig.1).

Among these programs, the composition of **Free Working Space**, **Communal Space**, and **Support Space** configures the core of coworking space. These spaces can be found in every coworking space and become the base of coworking space creation. **Free Working Space** is the main working space in coworking space. It is a space where people can either work on their own project alone or together with other users. The desks in this space are shared with multiple users. **Communal Space** is a space where users can engage in discussion, information sharing, or collaboration under more relaxed atmosphere. Typically, it can be identified by the existence of sofa, counter, low table, or front kitchen. **Support Space** is usually found as reception space. However in some coworking spaces that have no reception space, the existence of staff room or storage area is found instead. **Private Working Space** is a space that fulfills the necessity of concentration and individual oriented target of coworking spaces users. The desks here are used by specific individuals or groups. The attribute is its tendency to be isolated, commonly by using partition. **Secondary Working Space** refers to space that supports the working program, such as meeting space or communication booth. Lastly, as its name suggests, **Additional Space** does not have vital function compared to other programs. It adds some functions of recreation and relaxation (play space, library, gym, shower room), as well as commercial intention (gallery/showcase, event space for rent) which are not always directly related to coworking.

4.2 Furniture

There are two types of **Tendency of Furniture Composition** (Tab.9) based on the furniture attribute and layout: type A, associated to more formal and serious furniture composition, and type B associated to more informal and casual furniture composition. The attribute of the desk in coworking spaces with type A is identified by the Regular shape of the desk (Tab.5) and the use of Office chair (Tab.6), which are commonly found in case studies. In addition, from the two types of desk arrangement (Tab.7), there are three types of desk layout (Tab.8). The tendency of furniture composition can also be identified by these layouts: desks layouts which have Stand-Alone type tend to be connected to informal furniture composition than layouts with combination of Adjoined and Stand-Alone types, and only Adjoined types (Tab.9).

4.3 The Interconnections between Management, Context, and Interiority

The interconnections between Management, Context, and Interiority aspects can be seen from the distribution of **Program Patterns** based on the **Ownership type**, and **Space Size** (Tab.4). Based on the degree of complexity

Tab.1 Characters of Coworking Space based on Management

Ownership Type	Image	Price Range
Community (CM)		i
		ii
		iii
Company (CP)		i
		ii
		iii
Flagship (FS)		i
		ii
		iii
		iv

i: ≤10,000 yen,
ii: 10,000-20,000 yen,
iii: 20,000-30,000 yen,
iv: ≥30,000 yen

*Price Range for membership plan per person per month

Tab.2 Characters of Coworking Space based on Context

Space Size	Building Type	Number of Stories	Area Character + Allocation
A≤300 m ² Small (S)	Office	Multiple	Rs ●
	Multifunction	Single	Rs ●
	Office	Single	Rs ○
	Office	Single	Rs ●
	Office	Multiple	Of ●
	Office	Single	Of ●
	Office	Single	Of ●
	Office	Multiple	Cl ○
	Multifunction	Multiple	Cl ○
	Office	Single	Cl ○
	Office	Single	Cl ○
	Office	Multiple	Cl ○
300<A≤600 m ² Medium (M)	Office	Single	Rs ●
	Office	Single	Rs ●
	Office	Single	Of ●
	Office	Single	Of ●
	Office	Single	Of ●
	Office	Single	Of ●
	Office	Multiple	Of ●
	Office	Single	Of/Cl ○
	Skyscraper	Single	Cl ○
	Office	Multiple	Of ●
	Office	Single	Of ●
	Skyscraper	Single	Of/Cl ○
600m ² <A Large (L)	Apartment	Single	Of/Cl ○
	Skyscraper	Single	Of/Cl ○
	Skyscraper	Single	Of/Cl ○
	Skyscraper	Single	Of/Cl ○

Rs: Residential Area
Cl: Commercial Area
○ Non-Business Plot
● Business Plot
● Business with Special Allocation Plot

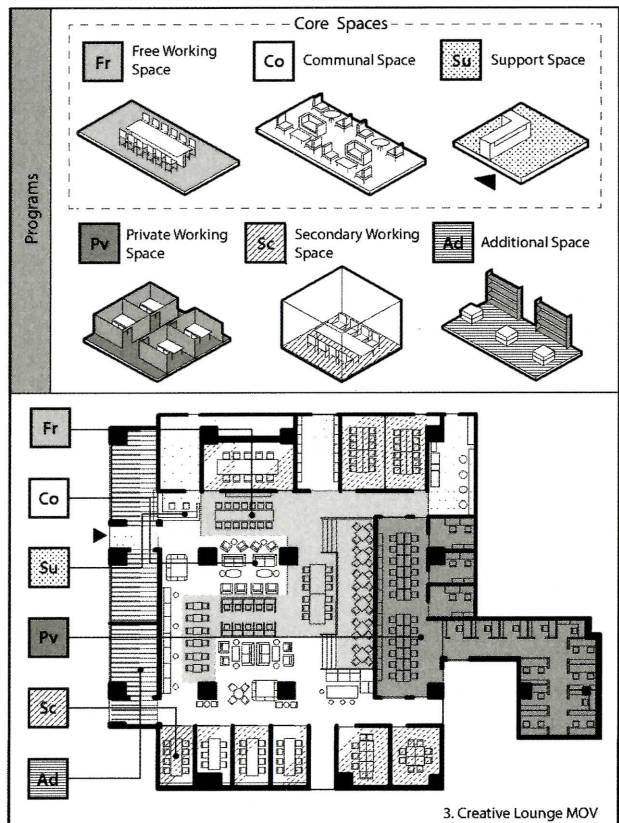


Fig.1 Example of Program Composition

Tab.3 Program Patterns

Pattern	Programs Composition
I	Fr Co Su (2)
	Fr Co Su Sc (3)
	Fr Co Su Sc Ad (2)
II	Fr Co Su Pv Sc (10)
III	Fr Co Su Pv Sc Ad (8)

():the number of cases

Tab.4 Distribution of Program Patterns related to Management and Context

Ownership Type	Space Size	Program Pattern	Program Composition
Community	S	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad
	M	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad
Company	S	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad
	M	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad
Flagship	S	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad
	M	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad
L	III	I	Fr Co Su Sc
		II	Fr Co Su Pv Sc
		III	Fr Co Su Pv Sc Ad

and the existence of **Private Working Space** and **Additional Space**, the combinations of the programs can be divided into three patterns. Pattern I (7 cases), a program constitution for coworking spaces that do not have any **Private Working Spaces**, only appears in small coworking spaces (Pattern I with S size) and can be found in all types of Ownership system. Pattern II (10 cases), consists of all programs with the exception of **Additional Space**, can also be found in all ownership systems of coworking spaces. In pattern III, there is **Additional Space** which indicates the intention of the owner to add commercial programs or more relaxation programs in the coworking space. Large scale coworking spaces incline to have more programs: medium size coworking spaces in the case studies have either pattern II or III and large ones all have pattern III.

By analysing the **Density** (Tab.11) of coworking space in the core space, the range of density can be simplified into three ranges. The first density range, which is less than 4 square meter per person is the most common among the case studies. All the case studies under Community type has the inclination to be more compact. Most of the case studies that have higher density are also arranged in smaller size of coworking space. The area distribution of these coworking spaces are varied, from Residential area to Commercial area. Meanwhile, Company and Flagship types coworking spaces have no solid inclination towards the degree of compactness. It can also be seen that larger coworking spaces give more room per person. Thus, rising the price of the coworking space usage fee. It should also be noted that the majority of case studies have high density of Free Working Space, presumably in order to attempt a collaboration between the users. Moreover, coworking spaces that are less dense also tend to have more programs due to the more area that these coworking spaces have.

Considering **Core Space Function** (Tab.11), the inclination of coworking spaces that focus on working or creating balance between working and collaborating can be seen. Community type coworking spaces in the case studies tends to give more space for working program. On the other hand, more Flagship type coworking spaces, especially the ones with larger scale, incline to have a balance between Communal Space and Free Working Space. It means that quite a big portion of the space is designated as space for collaborating. Therefore, most of the time, it does not affect working activity and gives more comfort and focused atmosphere for the working space.

Related to the **Tendency of Furniture Composition** (Tab.11), the findings show that coworking spaces that are both high in density and focus towards working program incline to have more formal furniture attribute, such as Office Chair and Adjoined type of desk. Meanwhile, the larger and more balanced proportion between working and communal program ones have furniture with more informal attribute, such as Non Office chair, Irregular shaped desk with layout of all Stand-Alone desk.

From the interview with several coworking space managers, the **preference of users** for each coworking are revealed to have relation with the original intention of the coworking space. While most coworking spaces are open to diverse background of professions, coworking spaces that are large in size and have program pattern number III are found to be offered mostly for businessmen. It suggests that coworking spaces for specific users have tendency to be in similar setting.

Furthermore, from the analysis in **Working Spaces Proportion** (Tab.12), it is apparent that the majority of coworking spaces that have **Private Working Space** in it allocate more area for it rather than to Free Working Space. The tendency is higher in Flagship type coworking spaces rather than in Community and Company types coworking spaces. The common furniture attribute for isolation in this program is using Room type of partition to isolate the **Private Working Space** (Tab.11 and Tab.12). There are also coworking spaces that make use of other types of partition to isolate itself from the rest of the spaces. Such cases can be found in all Ownership type, but Flagship type coworking spaces noticeably use bigger type of partition, such as Enclosing Fit or Enclosing Big. Similar to **Private Working Space**, it is found that **Free Working Space** tends to also have isolation attribute on the desks and/or have some of the desks placed attached to and facing the boundary, such as wall or window, to fulfill the needs of concentration space. In sequence, this isolation attribute is more visible in Community type and Company type coworking spaces compared to Flagship type, for the reason that in that type there are enough **Private Working Space** area for users to concentrate on their individual works.

5. Conclusion

This study shows that the majority of coworking spaces were designed to be more dense and focus on working program. Furthermore, even though Free Working Space is one of the core spaces, isolated working space is also important. The findings indicate that coworking spaces furniture composition can be distinguished from the management system and function inclination of program composition. On the other hand, it is not necessarily influenced by the program composition and the size of coworking spaces. Comparably, the composition of program has significant relation with the size of coworking space and also considerably related to the management system it is under and its location. The interrelations and settings of Management, Context, and Interiority in shaping coworking spaces design are evidently catered to suit the pre-established target users. The differences in the interconnections between these aspects are the structure that build coworking spaces characters.

References

- 1) Uda, T. 2013. What is Coworking? A Theoretical Study on the Concept of Coworking [pdf]. Sapporo: HUSCAP. Available at: <http://hdl.handle.net/2115/53982/>. Accessed February 15, 2017;
- 2) Pohler, N. 2011. Coworking 101: A New Definition. <http://www.deskmag.com/en/coworking-spaces-101-a-new-definition>. Accessed February 22, 2017.

Tab.5 Shape of Desk

Shape of Desk	
(21)	(4)
Regular	Irregular

Tab.6 Chair Type

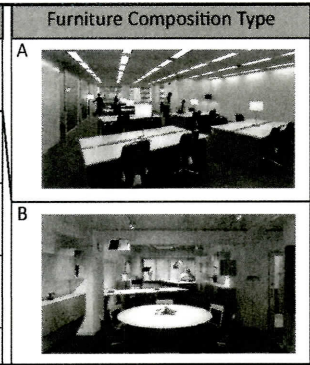
Chair Type	
(9)	(16)
Office Chair	Non Office Chair

Tab.7 Desk Arrangement

Desk Arrangement	
Stand-Alone	Adjoined

Tab.9 Tendency of Furniture Composition

Shape of Desk	Chair Type	Desk Layout
Regular	Office Chair	
	Non Office Chair	
Irregular	Office Chair	
	Non Office Chair	
Legend		



Tab.8 Desk Layout

Desk Layout		
(10)	(12)	(3)
[SA] Stand-Alone	[SSA] Stand-Alone+Adjoined	[AD] Adjoined

Tab.10 Categorization of Coworking Spaces based on Density of Free Working Space and Core Space

Core Space Function Inclination			
Working Space domination (Fr:Co more than 2:1)		Working Space as majority (Fr:Co approximately 2:1)	Balance between Working and Communal Space (1:1)
Free Working Space Density	less than 4 sqm/person	(10)	(1)
	between 4-8 sqm/person	(3)	(3)
	more than 8 sqm/person	(1)	(2)
<p>8 S I I A Cl</p> <p>11 S I B Cl</p> <p>23 S I A Rs</p> <p>19 S I I A Rs</p> <p>6 M I I B Of/Cl</p> <p>Community</p>		<p>20 S I A Of</p> <p>18 S I A Of</p> <p>22 S I I B Cl</p> <p>Company</p>	<p>25 S I A Rs</p> <p>25 S I A Rs</p> <p>Flagship</p>
<p>17 M I I B Rs</p> <p>5 S I B Cl</p> <p>24 S I I B Rs</p> <p>Company</p>		<p>4 S I I B Of</p> <p>21 S I A Of</p> <p>10 M I I B Of</p> <p>Company</p>	<p>14 M I I B Of</p> <p>9 L I I B Of</p> <p>Flagship</p>
<p>15 L I I A Of/Cl</p> <p>Flagship</p>		<p>13 L I I B Of/Cl</p> <p>Company</p>	<p>16 L I I B Of</p> <p>12 M I I B Of</p> <p>Flagship</p>

Tab.11 Partition Types

Partition Type	
[Ecl Big] (3)	[Ecl Fit] (4)
Enclosing Big	Enclosing Fit
[Top] (1)	[Top] (2)
Top Partition	Top Partition
[No P] (2)	[Spr] (1)
No Partition	Separating
[Ro] (12)	
Room	

Tab.12 Proportion of Working Spaces and Furniture Attribute Tendency

Ownership Type	Working Spaces Proportion	Furniture Attribute in Private WS	Furniture Attribute in Free WS
Community	(2) (1) (2)	(2) (1) (1) (1)	(3) (1) (1) (1)
Company	(4) (2) (3)	(4) (1) (1) (2)	(4) (1) (1) (2)
Flagship	(7) (2) (2)	(6) (2) (3) (1)	(2) (1) (3) (1)
Total	(13) (5) (7)	(12) (3) (4) (4) (2)	(5) (3) (5) (4)
Legend	<p>(A) the total</p> <p>(a) the number of subjects</p> <p>(B) the total</p> <p>(b) the number of subjects</p>		