A Study on House Sharing in China's Young Generation—Based on a Questionnaire Survey and Case Studies in Beijing

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Abstract
Currently, house sharing is a popular residential choice of the young generation in China. This is due to the declining affordability of home ownership as well as delayed marriage and childbearing. This study targets young working people in Beijing. It employs a questionnaire survey and case study to examine the house-sharing conditions of the young generation in China, including the relation among house-sharing behaviors, their living habits and space requirements, and their attitudes on the sharing of living space and the residential environment. First, it was found that economic considerations are the most important motivation for the young generation to share housing, and residents are mostly unrelated singles. Second, simplified living habits and space needs with multiple requirements concerning space function are the main reasons for the popularity of house sharing among the group. Next, the group has adequate tolerance for sharing and interference with roommates following the coordination of living habits. Finally, compared with other living arrangements, house sharing generates a lower level of residential satisfaction, but the basic needs of the young generation from their residences are met, making house sharing a relatively stable residential choice.

Keywords: house sharing; young generation; residential satisfaction

1. Introduction
Due to imbalanced development between regions in China, an irreversible trend exists of large populations crowding into major cities under high-speed urbanization. This migration makes the housing problem caused by the unprecedented residential demand obvious and prominent (Wu & Wang, 2014). Meanwhile, college education makes interprovincial movement much easier for young people, making them an essential part of work- and house-hunting groups in cities (Ying et al., 2013). Many social changes such as the declining affordability of home ownership as well as delayed marriage and childbearing (Li & Li, 2006) make house sharing a popular residential choice for young people. In this paper, authors take young generation to represent those just starting their independent social life. They have the rigid demand of housing, but are facing the most serious affordability difficulty compared to other generations. Unlike in Western countries, students in China all live in dormitories or with parents. Their independent housing behaviors always start with working, when they are new entrants to a society at their initial stages of independent life. Their housing behavior is quite typical for analyzing housing issues in the new era under the rapid development of China's housing market.

How are China's young generation sharing housing? What do they feel about sharing? What are the key elements that determine their residential satisfaction? What do they think of their residential environment? Authors answer these questions by identifying the house-sharing conditions of the group. Therefore, the specific purposes of this study are as follows: (1) to investigate the reasons and types of house sharing among the young generation, (2) to understand their attitudes on sharing and interference, and what space they care about the most, and (3) to investigate whether they have a better quality in shared housing.

Consequently, three hypotheses were proposed at the beginning of this study:

Hypothesis 1: Shared housing is adopted to reduce housing expenses. Single young people are the main residents.
Hypothesis 2: Sharing and interference with roommates reduces satisfaction with house sharing
Hypothesis 3: The residential environment is worse than usual due to space limitations in shared housing

The rest of the paper is organized as follows:

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The next section reviews the research related to house sharing. The following section discusses the methodology adopted and the outline of the investigation. This is followed by a descriptive analysis of house-sharing attributes, the case study results of house-sharing classifications, and the lifestyles of residents. The subsequent section provides the results of the questionnaire survey, which comprehensively analyzes satisfaction with sharing and residential satisfaction. The final section summarizes the research findings and draws numerous conclusions based on these findings.

2. Literature Review

House sharing as a type of residential choice behavior of the young generation is influenced by various elements, such as individual socio-demographic characteristics, e.g., age, gender, income (Tan, 2008), trigger events such as the birth of children and changes in marital status (Bourassa & Yin, 2008; Dewilde, 2014), as well as housing attributes such as room type, area (Tu et al., 2005), and housing expenditure (Robst et al., 1999). Some individual psychological factors also exist, such as expected mobility (Schulz et al., 2014), eagerness for home ownership (Seko & Sumita, 2005), and anticipation of the housing market (Kraft & Munk, 2011).

House sharing is fairly common in Western culture. In the United States, as early as the 1980s, scholars examined house-sharing behavior and observed that people are willing to live with unrelated individuals when family income is low and housing costs are high, but the effects of income are insignificant. This type of house sharing is more common among single males (Leppel, 1987). Most young Americans spend a short period of their lives living with roommates after leaving their parents' homes. This frequently occurs during their college life (Erlandson, 2009). Sharing a house or an apartment is very common in Australia too, where some websites specialize in searching for roommates. Mcnamara and Connell (2007) examined house sharing in Australia by interviewing residents. They noted that besides economic considerations, house sharing primarily appears as a response to social factors, such as the attraction of a common lifestyle and providing a meaningful transition.

Few researches targeting house sharing in China can be found. Most previous studies were in a Western context, which is quite different from China both in terms of culture and the housing market. Authors locate our research a supplement of China's house sharing issue as a descriptive and exploratory study.

3. Methodology

A combined investigation of a questionnaire survey and case study was executed in Beijing from April to October 2012, targeting young working people. Authors employed interviews of the young generation in Beijing to find out the complete set of possible answers to a questionnaire; moreover, a repeated fill-in test is performed to ensure the questionnaire is representative. Questionnaires were sent out to the young generation in their working places, on the street, by home visit or via online communication tools with the help of 38 investigators. Three house-sharing cases were selected as typical examples. The questionnaire survey included 189 respondents who were house sharing with others. The information retrieved included personal information, shared housing attributes, house-sharing motivation, living habits, satisfaction with shared housing, and satisfaction with residential environment. In the data processing, a distribution analysis and cross-tabulation analysis were employed.

4. House Sharing in the Young Generation

4.1 Basic Attributes of House Sharing

Analyzing responses to the questionnaire survey, socio-demographic information of respondents, their relationships with roommates, marital and child status, and motivation for house sharing were investigated as general attributes (Table 1.).

First, authors found that there is no obvious gender imbalance (59.3%, 40.7%) among respondents. They are mostly (182, 96.3%) 20–30 years old. The most common (92, 48.7%) monthly income is 5000–10000 Yuan. Their rented area is mainly less than 20m² (102, 54.0%).

Then, it was observed that residents in shared housing are mostly single (165, 87.3%), which coincides with the rates in Western countries. However, the results also demonstrate that childbearing is nearly a trigger event that makes people move from shared housing because a certain percentage (9, 37.5%) of residents who are married and have a child still stay in shared housing.

As for relationships with roommates, residents of shared housing are typically unrelated to each other as they generally come from different families or even from different provinces all over China. According to the results, of the 189 respondents who have roommates, nearly half (88, 46.6%) are living with strangers, which is the most convenient way because they do not have to consider each other's renting requirements, although shared housing with acquaintances seems to be more comfortable. The second choice (50, 26.5%) is living with colleagues who are working in the same place. In this situation, house hunting can be arranged more easily since tenants care the most about the distance to work besides the expenditure. On the other hand, the proportion of young people living with relatives and friends is relatively low (37, 19.6%) because housing-renting needs are difficult to balance among all parties. Meanwhile, in this situation, once one roommate wants to move out for any reason, others will be influenced. Thus, sharing housing with acquaintances is not stable.
compared with sharing with strangers, a situation under which they do not have to care about others.

The most common reason for sharing housing is to reduce the cost of housing (157, 83.1%). By sharing their monthly rent, a group of people can achieve lower housing expenses at the cost of reduced privacy. This is particularly common in China where single-person, one-room apartments are rare, and the rent for two- or three-bedroom apartments is unaffordable for the majority. Another motivation is to gain the companionship of other people, either for a safer living environment (13, 6.9%) or for escaping loneliness (13, 6.9%).

Table 1. Basic Attributes of Respondents and their House Sharing (N = 189)

| Item                      | Frequency | Percentage |
|---------------------------|-----------|------------|
| Gender                    |           |            |
| Male                      | 112       | 59.3%      |
| Female                    | 77        | 40.7%      |
| Age                       |           |            |
| 20–25 years old           | 79        | 41.8%      |
| 26–30 years old           | 103       | 54.5%      |
| 31–35 years old           | 6         | 3.2%       |
| Older than 35             | 1         | 0.5%       |
| Monthly income            |           |            |
| Less than 3,000 Yuan      | 14        | 7.4%       |
| 3,000–5,000 Yuan          | 52        | 27.5%      |
| 5,000–10,000 Yuan         | 92        | 48.7%      |
| 10,000–20,000 Yuan        | 25        | 13.2%      |
| More than 20,000 Yuan     | 6         | 3.2%       |
| Rented area               |           |            |
| Less than 20m²            | 102       | 54.0%      |
| 20–40m²                   | 48        | 25.4%      |
| 40–60m²                   | 20        | 10.6%      |
| More than 60m²            | 19        | 10.0%      |
| Roommates                 |           |            |
| Strangers                 | 88        | 46.6%      |
| Relatives and friends     | 37        | 19.6%      |
| Colleagues                | 50        | 26.3%      |
| Others                    | 14        | 7.4%       |
| Marital status            |           |            |
| Single                    | 165       | 87.3%      |
| Married                   | 24        | 12.7%      |
| No children               | 15        | 62.5%      |
| One child                 | 9         | 37.5%      |
| Motivation for house sharing |         |            |
| For lower rent            | 157       | 83.1%      |
| For safety                | 13        | 6.9%       |
| For not being lonely      | 13        | 6.9%       |
| Others                    | 6         | 3.2%       |

4.2 Types of House Sharing

During the social survey it was found that among the 189 respondents, three house sharing types can be found as house sharing in private housing (HSP) (145, 76.7%), Qunzu in private housing (QP) (21, 11.1%) and Qunzu in informal urban village settlements (QUV) (23, 12.2%). The descriptions of each type are as follows:

1. House sharing in private housing

In this house sharing type, a private apartment is leased with its rooms as they were designed without any changes to the floor plan. The hallway, bathroom, and kitchen are usually shared spaces for all residents. HSP is a relatively high-expense living pattern; among the 145 samples, most (110, 75.9%) respondents are paying 1000–2000 Yuan for their residence, whereas the housing expenses of others are 2001–3000 Yuan (32, 22.1%) or more (3, 2.1%).

A case of HSP is illustrated in Fig.1. It is a typical old-style apartment in central Beijing, equipped with one bedroom and living room, shared by a couple and two girls. Besides the common shared space, the balcony is shared. For drying clothes, the couple has to cross the room of the two girls, which sometimes makes them feel uncomfortable.

(2) Qunzu in private housing

Qunzu is quite a common phenomenon in China's large cities where ordinary housing is unaffordable, making the word one of the 171 neologisms released by the Ministry of Education of China in 2007. It can also be interpreted as a group-oriented leasing. Its most important feature is a large number of tenants living together with a low rental price. In this situation, the larger room is always divided into several separate rooms by gypsum board partitions, and each has simple decoration and is equipped with basic furniture. The QP type is popular for its low rent; among the 21 samples, almost all (20, 95.2%) are paying less than 1000 Yuan as rent.

A case of QP is illustrated in Figs.2. and 3., where the large living room is divided into three rooms as No. 3, No. 4, and No. 5. Area, sunshine, and ventilation are key factors in determining the costs of each room. As rooms No. 4 and No. 5 have no sunshine and poor ventilation with only a small window, the rent is about half that of room No. 3.

(3) Qunzu in informal urban village settlements

Qunzu can also be found in urban villages. It costs less here as it is self-built housing. The rent of all 23 samples was found to be less than 1000 Yuan. A case of QUV is selected. The floor plan of one room shared...
by six people, the overall floor plan, and images of the shared space are indicated in Figs. 4. and 5. These informal settlements are built specifically for renting to young dwelling hunters. The inside layouts of such buildings are similar to student dormitories in Chinese colleges. Residents share bedrooms, washing space, and toilet—there is no kitchen or bathroom. The rooms are equipped with bunk beds to accommodate more.

4.3 Space Function Change

Due to space limitations in shared housing, the designed functions of spaces are always changed. Unlike family members living together, roommates seldom share private goods, leading to limited space and thereby coordinating the use of space. Drying and washing space are scarce resources. Consider the space changes in Case 1 as an example (shown in Fig.6.). The demand for washing space is first, and washing goods occupy the kitchen, focusing on the water tub. Following this, the kitchen goods are expelled to the hallway, and the informal space function is finally formed.

4.4 House Sharing, Living Habits and Space Requirements

The daily behaviors and related places were examined for one of the two girls in Case 1. The 24-hour behaviors and time distributions for both weekdays and the weekend are shown separately in Tables 2. and 3.

| Time   | Weekdays            | Weekend          |
|--------|---------------------|------------------|
|        | Behavior            | Place            | Behavior            | Place            |
| 0:00   | Sleeping            | Bed              | Sleeping            | Bed              |
| 1:00   |                     |                  |                   |                  |
| 2:00   |                     |                  |                   |                  |
| 3:00   |                     |                  |                   |                  |
| 4:00   |                     |                  |                   |                  |
| 5:00   |                     |                  |                   |                  |
| 6:00   |                     |                  |                   |                  |
| 7:00   |                     |                  |                   |                  |
| 8:00   |                     |                  |                   |                  |
| 9:00   |                     |                  |                   |                  |
| 10:00  |                     |                  |                   |                  |
| 11:00  |                     |                  |                   |                  |
| 12:00  |                     |                  |                   |                  |
| 13:00  |                     |                  |                   |                  |
| 14:00  |                     |                  |                   |                  |
| 15:00  |                     |                  |                   |                  |
| 16:00  |                     |                  |                   |                  |
| 17:00  |                     |                  |                   |                  |
| 18:00  |                     |                  |                   |                  |
| 19:00  |                     |                  |                   |                  |
| 20:00  |                     |                  |                   |                  |
| 21:00  |                     |                  |                   |                  |
| 22:00  |                     |                  |                   |                  |
| 23:00  |                     |                  |                   |                  |

Table 2. Daily Behavior on Weekdays and Weekend for Case 1

Fig.2. Indoor and Outdoor Image of Room No. 4 in Case 2

Fig.3. Floor Plan of Case 2 (Qunzu in Private Housing)

Fig.4. Floor Plan of One Unit in Case 3 and the Overall Layout

Fig.5. Shared Washing Space & Toilet

Fig.6. Space Function Change Found in Case 1

Hallway changed into kitchen  Kitchen changed into washing space
The resident spent 13 hours indoors on weekdays and 24 hours indoors on weekends. The insignificant periods of behavior, such as going to the toilet, were not considered. Her indoor activities were mainly in her room. Thus, the location of her behavior was marked by detailed facilities, such as bed, washing space, and bathroom (outside the room). Findings in this case were as follows: First, daily behaviors were identical on both weekdays and weekends, such as sleeping, washing, eating, and entertainment. Second, sleeping was the most significant behavior (69.2%) on weekdays, but entertainment (45.8%) took up the most time on weekends, either via television or laptop. This is partly because the girl buys most of her living goods online, including drinking water, snacks, and clothing, etc. Third, the girl never cooks, although there is available cooking space, and eats only take out or delivered food. She buys something to eat on her way to work for breakfast. Finally, her bed is the center of her living space, where she can sleep, sit, eat, and play on the laptop. Other frequently used spaces are the washing space and the bathroom.

5. Attitudes toward Sharing and Interference

To lower housing expenses, the residents in shared housing are given less privacy under the sharing of kitchens, bathrooms, or even bedrooms with others. The sharing status and residents' attitudes on sharing and daily interference with roommates are also investigated by different sharing type (Table 4.).

According to the results of the questionnaire survey, generally (N=189), shared kitchens (85.2%) and bathrooms (92.0%) are very common, but shared bedrooms are not (21.2%). With regard to different sharing patterns, except for the common points and as depicted above, QUV shows an unexpectedly low percentage of shared kitchens and bathrooms. This is because QUV is mostly built for rental using the Chinese students' dormitory pattern, which does not include a kitchen. Sometimes, a bathroom is not for people who share a room, but for all who share a building. As for satisfaction with sharing and daily interference, generally (N=189), extreme feelings such as "very dissatisfied" or "very satisfied" are small in proportion for satisfaction with sharing (15.4%), satisfaction with interference, and disputes with roommates (15.3%). On the other hand, a large proportion of shared housing residents indicate a neutral attitude on sharing (28.6%) and interference (31.7%), which demonstrates a tolerance for house sharing by the young generation. As for overall residential satisfaction in different house sharing type, only residents in QP express obvious (61.9%) negative feelings. To explain this tolerance, it was observed during the case study that the residents are usually of the same peer group. After a certain period of living together, their living habits coordinate to make good use of the shared space, e.g., to have different timetables for using the bathroom, they adjust their wakeup time in the morning for more harmonious queuing.

Concerning their attitudes on shared housing, authors also wanted answers to certain questions as follows: 1) among kitchen, bathroom, and bedroom, which room most influences their overall satisfaction with sharing? 2) What is the relationship between their satisfaction with the residence and their satisfaction with sharing? 3) Is the relationship with roommates the key element affecting satisfaction? To obtain the answers, a bivariate correlation analysis using the Spearman method was performed through SPSS among seven variables, separately indicating the overall satisfaction with the residence, sharing, interference, the relationships with roommates, and the sharing status of bedrooms, kitchens, and bathrooms. According to the results shown in Table 5., generally, significant correlations were found among the satisfaction of the young generation with the residence, sharing, and interference, showing identical attitudes among

| Table 3. Time Distribution of Behavior and Place for Case 1 |
|---------------------------------|---------|--------|
| Behavior and place             | Length  | Percentage |
| Weekday (13 hours indoors)     |         |          |
| Sleeping (bed)                 | 9       | 69.2%    |
| Eating (bed)                   | 0.5     | 3.8%     |
| Entertainment (bed)            | 1.5     | 11.5%    |
| Weekend (24 hours indoors)     |         |          |
| Sleeping (bed)                 | 10      | 41.7%    |
| Eating (bed)                   | 2       | 8.3%     |
| Entertainment (bed)            | 1       | 4.2%     |

| Table 4. Sharing, Interference, and Satisfaction |
|---------------------------------|---------|---------|---------|---------|
| Item                            | HSP     | QP      | QUV     | Total   |
| Sharing status                  |         |         |         |         |
| Shared bedroom                  |         |         |         |         |
| Yes                             | 12.4    | 38.1    | 60.9    | 21.2    |
| No                              | 87.6    | 61.9    | 39.1    | 78.8    |
| Shared kitchen                  |         |         |         |         |
| Yes                             | 89.7    | 95.2    | 47.8    | 85.2    |
| No                              | 10.3    | 4.8     | 52.2    | 14.8    |
| Shared bathroom                 |         |         |         |         |
| Yes                             | 95.9    | 90.5    | 73.9    | 92.6    |
| No                              | 4.1     | 9.5     | 26.1    | 7.4     |
| Satisfaction on sharing         |         |         |         |         |
| Very dissatisfied               | 8.3     | 14.3    | 17.4    | 10.1    |
| Dissatisfied                    | 33.1    | 33.3    | 21.7    | 31.7    |
| Neutral                         | 24.1    | 38.1    | 47.8    | 28.6    |
| Satisfied                       | 29.0    | 9.5     | 8.7     | 24.3    |
| Very satisfied                  | 5.5     | 4.8     | 4.3     | 5.3     |
| Satisfaction on interference    |         |         |         |         |
| Very dissatisfied               | 7.6     | 9.5     | 4.3     | 7.4     |
| Dissatisfied                    | 24.8    | 38.1    | 21.7    | 25.9    |
| Neutral                         | 29.7    | 28.6    | 47.8    | 31.7    |
| Satisfied                       | 29.0    | 19.0    | 21.7    | 27.0    |
| Very satisfied                  | 9.0     | 4.8     | 4.3     | 7.9     |
| Residential satisfaction        |         |         |         |         |
| Very dissatisfied               | 16.6    | 38.1    | 17.4    | 19.0    |
| Dissatisfied                    | 28.3    | 23.8    | 21.7    | 27.0    |
| Neutral                         | 29.7    | 19.0    | 39.1    | 29.6    |
| Satisfied                       | 24.8    | 19.0    | 13.0    | 22.8    |
| Very satisfied                  | 0.7     | 0.0     | 8.7     | 1.6     |
Table 5. Correlation Test between Satisfaction and House Sharing

| Satisfaction with interference (Total N=189) | Correlation Coefficient | Sig. (2-tailed) | Satisfaction with interference (HSP N=145) | Correlation Coefficient | Sig. (2-tailed) | Satisfaction with interference (QP N=21) | Correlation Coefficient | Sig. (2-tailed) | Satisfaction with interference (QUV N=23) | Correlation Coefficient | Sig. (2-tailed) |
|-------------------------------------------|-------------------------|----------------|-------------------------------------------|-------------------------|----------------|----------------------------------------|-------------------------|----------------|----------------------------------------|-------------------------|----------------|
| Shared bathroom (Total N=189)             | -0.214                  | 0.100          | Satisfaction with sharing (HSP N=145)    | -0.251                 | 0.000          | Satisfaction with sharing (QP N=21)    | -0.165                  | 0.000          | Satisfaction with sharing (QUV N=23)    | 0.148                   | 0.000          |
| Shared kitchen (Total N=189)              | -0.172                  | 0.040          | Satisfaction with sharing (HSP N=145)    | 0.475                   | 0.000          | Satisfaction with sharing (QP N=21)    | -0.974                  | 0.000          | Satisfaction with sharing (QUV N=23)    | -0.506                  | 0.000          |
| Shared bedroom (Total N=189)              | -0.547                  | 0.000          | Satisfaction with sharing (HSP N=145)    | 1.000                   | 0.000          | Satisfaction with sharing (QP N=21)    | -0.112                  | 0.000          | Satisfaction with sharing (QUV N=23)    | 0.609                   | 0.000          |

**. Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

respondents on the subject of house sharing. A positive correlation was detected between kitchen sharing and bathroom sharing because having one kitchen and bathroom is the common design of old-style private housing in China. Thus, sharing of these two is always simultaneous. Among the three shared rooms, only a shared kitchen was found to have a significant negative correlation with the satisfaction with both sharing and interference. The negative influence implies that kitchen sharing generates a higher level of satisfaction,
Table 6. Basic Residential Environment Index for House Sharing

| Residential environment index | HSP (N=145) | OP (N=21) | QUV (N=23) | Total (N = 189) | Satisfaction | Average Score (N = 429) |
|------------------------------|-------------|-----------|------------|-----------------|--------------|------------------------|
| Health                       |             |           |            |                 |              |                        |
| 1. Sunshine and ventilation   | IE 3.74     | 3.24      | 3.09       | 3.61            | Satisfied    | 3.69                   |
| 2. Supply of water, electricity, and gas | IE 3.68 | 3.48      | 2.83       | 3.55            | —            | 3.71                   |
| 3. Hospital and medical care center being nearby | EE 3.60 | 3.00      | 3.09       | 3.47            | Satisfied    | 3.56                   |
| Safety                       |             |           |            |                 |              |                        |
| 4. Housing quality           | IE 3.43     | 2.95      | 2.61       | 3.28            | —            | 3.42                   |
| 5. Alarm system for fire and gas | IE 2.92 | 2.71      | 2.43       | 2.84            | Dissatisfied | 2.96                   |
| 6. Safety of the community   | EE 3.79     | 3.38      | 3.00       | 3.65            | Satisfied    | 3.78                   |
| Convenience                  |             |           |            |                 |              |                        |
| 7. Convenience of buying basic living goods | EE 3.93 | 3.52      | 3.70       | 3.86            | Satisfied    | 3.95                   |
| 8. Gym and entertainment facilities being nearby | EE 3.31 | 3.00      | 2.48       | 3.17            | —            | 3.25                   |
| 9. Kindergartens and schools being nearby | EE 3.39 | 2.95      | 2.48       | 3.23            | —            | 3.34                   |
| 10. Bus or subway station nearby | EE 3.82 | 3.57      | 3.91       | 3.80            | Satisfied    | 3.83                   |
| Comfort                      |             |           |            |                 |              |                        |
| 11. Green status of the community | EE 3.42 | 3.19      | 2.61       | 3.30            | —            | 3.31                   |
| 12. Comfort of the interior environment | IE 3.31 | 3.24      | 2.61       | 3.22            | —            | 3.42                   |
| 13. Comfort of community environment | EE 3.43 | 3.05      | 2.57       | 3.29            | —            | 3.38                   |

which seems to be opposite to expectations. In fact, according to the findings of the case study, single young adults almost never cook, particularly in shared housing. Thus, one who uses the kitchen will feel satisfied as they will not have to share. On the other hand, the relationship with roommates is an important factor in house sharing. Strong correlations were discovered between the relationship with roommates and the three types of satisfaction, indicating that the closer the relationship with roommates, the more satisfaction there was with house sharing. As for each house sharing type, except for the HSP pattern, which has the same results with overall situation, correlations vary a lot. This is partially due to the small volume of respondents in these two house sharing types. For people in the HP pattern, a strong correlation can still be found between satisfaction with sharing and interference, indicating the identical attitudes towards house sharing in HP.

6. House Sharing and the Residential Environment

Residential satisfaction is an important indicator of life quality. It depends on the gap between the actual environment and the desired environment as expected by individuals based on their needs and objectives (Galster, 1987). Residential environment can be evaluated on the basis of four aspects: health, safety, convenience and comfort (Asami, 2006). In this study, the residential environment included both exterior environment (EE) and interior environment (IE) with the 13 most basic indices selected from the four aspects, as presented in Table 6. These indices are all basic items of each aspect that indicate fundamental satisfaction with the residence. Among them, comfort is a subjective feeling that can be judged from the IE and EE of a residence. The evaluation is based on a subjective scoring of respondents from 1 to 5, with 5 being the best and 1 being the worst. The score can also be treated as a Likert scale reflecting satisfaction levels on each environment feature with 1 as very dissatisfied, 2 as dissatisfied, 3 as neutral, 4 as satisfied, and 5 as very satisfied. Correspondingly, the overall satisfaction for each element was analyzed based on a mean score. More than 3 was a positive indication of satisfaction, and a value below 3 demonstrated dissatisfaction.

According to the results, generally, among the entire 13 indices, the only dissatisfaction was found in "fire and gas alarm systems". The mean scores of satisfaction were compared with a whole group of people in another residential to compare with other residential arrangements. Except for "safety of community"; all elements scored lower compared with the average level, indicating a comprehensive poor subjective evaluation of the residential environment of the dwellers compared with people in other residential types. On the other hand, the top three high-score items were "convenience of buying basic living goods," "proximity to bus or subway station," and "safety of the community". The lowest were "fire and gas alarm systems," "gym and entertainment facilities being nearby," and "comfort of the interior environment." It seems that residents in shared housing sacrifice their indoor environment for an easily accessible settlement. As for different house sharing types, residents of HSP, OP, and QUV have a decreasing satisfaction trend in almost all items. Exceptions can be found in QUV with higher scores in "Hospital and medical care center being nearby", "Convenience of buying basic living goods", and "Bus or subway station nearby", which indicate the reasons for living in QUV. Residents in QUV sacrifice almost all residential environments for an easily accessible residence.
7. Conclusion
Summarizing the results of the social survey allows several conclusions to be drawn.

Young adults living in shared housing are typically unrelated singles. They share primarily to pay less rent. It is rare for married couples or even those with children to have roommates. However, a discontinuity of living with roommates when they have children was not detected.

The unique living habits and space requirements of the group were described by a case study. The indoor behaviors of the young generation are simple, focusing on the basic activities of sleeping, washing, eating, and enjoying entertainment. Consequently, their basic requirements for indoor facilities are a bed, a washing space, and a computer that can give them access to entertainment and communication with friends. Multiple functions can be awarded to existing facilities to make good use of the space whether it is a bed or a desk. Thus, they do not need a clearly classified function for each room under such simplified living habits and space requirements in this transitional period of life. This explains why house sharing, particularly the Qunzu model, is quite acceptable to the group.

Although they sacrifice some of their privacy by living in shared housing, the sharing and interference between roommates does not bring dissatisfaction. A large number of residents indicated a neutral attitude on sharing and interference. This can be explained by the fact that in sharing the living space, all residents coordinated their living habits to make shared housing a harmonious arrangement. Space function changes always occur, and function to meet space needs when the amount of residents is beyond the designed capacity.

House sharing does deteriorate the residential environment when compared with other residential types, also at the expense of low rent, particularly in the QUV pattern. However, their basic needs such as daily convenience and easy commuting were met, which made house sharing a good short-term choice for the residents on their way to home ownership.

Authors described the house-sharing situation, discussed the attitudes and subjective feelings of the young generation on their residence, which are important when considering the housing issue among the group, and for further policy making on supporting the group in the housing market. Future studies should include a more detailed sharing requirement study for meeting the needs of the young generation for a better-designed and satisfying residence.

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