A HISTORICAL STUDY OF THE INCLUSION OF CHILDREN’S ROOMS DURING THE MODERNIZATION OF JAPANESE DETACHED HOUSES

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Abstract
In Japan, housing problems have been actively discussed at the civil level since the 1900s (the late Meiji Era). In particular, discussions were focused on the improvement of living spaces in traditional Japanese dwellings. Most plans for new houses were created for upper middle-class families. However, over time, Japanese houses gradually became Westernized and modernized. The design and positioning of children’s rooms began to appear in house plans. During the Edo Era, most Japanese traditional houses did not include children’s rooms. However, beginning in the late Meiji Era, the modernization movement increased the number of children’s rooms included in Japanese modern housing plans. This paper assumes that the inclusion of children’s rooms in Japanese housing plans expanded in relation to the modernization of housing. We examined changes in the positioning of children’s rooms in Japanese detached houses by analyzing housing plan books first published during a period that began in the 1900s (late Meiji Era) and ended in the 1940s (early Showa Era). This study revealed that (1) the earliest children’s rooms appeared during the late Meiji Era, although they solely appeared in a limited percentage of published house plans. The number of children’s rooms increased after the Taisho Era. (2) Many house plans published during the early stage tended to position children’s rooms on ground floors. (3) During the Showa Era, children’s rooms were connected to parent’s bedrooms and gradually positioned on upper floors.

Keywords: Children’s rooms, Master Bedroom, Middle-class Houses, Modernization

1. INTRODUCTION
In Japan, modern salaried workers first appeared during the late Meiji Era. These workers came from the comparatively wealthy classes. As their standard of living improved, they demanded cultural and modern innovations in urban areas. Therefore, modernization occurred in various fields. During this Era, detached houses known as “middle-class houses,” became popular. In my opinion, the inclusion of children’s rooms in middle-class houses was an innovation that occurred during this period. Prior to the Meiji Era, Japanese traditional residential spaces were determined by the patriarchal system. In general, the majority of families’ living spaces were planned by heads-of-household. (The term, Japanese traditional spaces, is used to describe rooms connected by Japanese sliding doors (i.e., *fusuma*).) These rooms were used for a variety of purposes. They offered very limited privacy during daily life. However, during the Meiji Era, these old habits changed. Attempts were made to

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transform the environments in which wives and children lived. In my opinion, I assume that the decision to include children’s rooms was made around this time. Only a limited number of studies have focused on the period during which children’s rooms (and their specific contents) began to appear. The time that the actual inclusion of children’s rooms occurred during the modernization of detached houses in Japan remains unclear. Therefore, this paper aims that to clarify the time of inclusion of children's rooms in Japanese detached houses, and that examine positional relationship of children's rooms at housing plan in that time. It will be relate to explore the meaning of the historical changes that occurred to residential spaces in Japanese houses. It will be expected to be able to clarify the actual state of the way of living of middle-class family at the time, and thinking of living space design at that time by examining to children's rooms mainly introduced newly at that time.

2. LITERATURE REVIEW

Over the past few decades, a considerable number of studies have focused on the modernization of detached houses in Japan. Many of these studies closely examined the historical development of house plans.

Norikuni Kimura (1960) stated that central corridor housing was proposed by architectural experts during the late Meiji Era. That particular type of housing was eventually transformed into housing that included central living rooms. Several studies described the modernization of middle-class houses in Japan.

Masao Aoki (1984-1986) objected to Kimura’s studies. Based on his review of house drawings, Aoki believed the expansion of housing that included central living rooms occurred after WW2 ended. However, those studies failed to mention the inclusion and relative
positioning of children’s rooms during that Era.

Yuki Jinno (1998) described the development of children’s rooms during the modern age. Based on her review of Japanese housing magazines, she described the inclusion of children’s rooms inspired by the modern children’s education movement. She suggested that the inclusion of children’s rooms seemed to increase during the Meiji Era. The inclusion of children’s rooms became more widespread during the Taisho Era.

I discovered that many points in Jinno’s report could be related to my study, even though Jinno’s report did not rely on a quantitative analysis and did not describe the positioning of children’s rooms in Japanese detached houses.

With respect to the relationship between children’s rooms and house plans, many studies have analyzed contemporary issues, such as children’s education and family communication. However, those studies did not focus on that period that began after WWII ended. Several studies focused on earlier periods.

3. METHOD

Based on the results of prior studies, the investigation period were determined that began during the late Meiji Era and ended during the early Showa Era (1901-1940). During this period, architects attempted to modernize Japanese residential spaces (Architects’ importance increased during this period.) Housing books published in Japan between 1901 and 1940 were necessary to analyzed because many residential drawings appeared in those books. Thus, these drawings might reveal architects’ plans for middle-class houses during that Era.

Japanese houses are measured in Tsubos. A Tsubo is a traditional Japanese unit of measurement. Roughly 3.3 m² is equivalent to the area of two tatami mats. Large-scale houses that measured 100 Tsubo or more were rarely included in printed residential drawings. Therefore, only drawings of houses whose scale were equaled the scale of middle-class houses (between 20 and 70 Tsubo) were extracted. It was necessary to define children’s rooms in order to eliminate the ambiguity of the other rooms. This room was defined as rooms only used by children. Moreover the presence of children’s rooms were determined based on room names that appeared in the drawings.

4. TENDENCY TO INCLUDE CHILDREN’S ROOMS IN DRAWINGS OF MIDDLE-CLASS HOUSES

Results of the survey, I reviewed 46 housing books. 1582 drawings were extracted from those books. 572 houses included children’s rooms were found from those drawings. They equaled 36.2 percent of the total number of houses.

Additionally, The percentage of houses that included children’s rooms during each decade to determine increased tendencies toward the inclusion of children’s rooms was calculated. (see Table 1). Table 1 lists the number of children’s rooms included between 1901
**Table 1:** Changes in the number of houses that included children’s rooms after 1901.

<table>
<thead>
<tr>
<th>Period (in years)</th>
<th>Number of books</th>
<th>Number of houses</th>
<th>Number of houses that included children’s rooms</th>
<th>Percentage of houses that included children’s rooms (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901-1910</td>
<td>3</td>
<td>77</td>
<td>5</td>
<td>6.5</td>
</tr>
<tr>
<td>1911-1920</td>
<td>9</td>
<td>402</td>
<td>44</td>
<td>10.9</td>
</tr>
<tr>
<td>1921-1930</td>
<td>18</td>
<td>484</td>
<td>256</td>
<td>52.9</td>
</tr>
<tr>
<td>1931-1940</td>
<td>16</td>
<td>619</td>
<td>267</td>
<td>43.1</td>
</tr>
</tbody>
</table>

※ The number of houses equals the number of housing plans published in architectural magazines, as shown in Table 1.

**Figure 2:** Changes in the rate of inclusion of children’s rooms in one-story houses.

**Figure 3:** Changes in the positioning of children’s rooms in two-story houses.
and 1910 (i.e., the late Meiji Era). However, this amount solely equaled 6.5 percent of the total number of houses. During the 1920s (i.e., the late Taisho Era), 52.9 percent of houses included children’s rooms, which was a rapid increase. Therefore, based on these calculations, Children’s rooms were primarily included in Japanese houses during the 1920s.

5. POSITIONING OF CHILDREN’S ROOMS

This section was examined the positioning of children’s rooms during the transition that occurred from two-story houses to one-story houses. Scholars generally agree that, currently, very few two-story houses are available, with the exception of some upper-class houses and merchant houses built during Japan’s previous modernization period. Whether the construction of one or two-story houses affected the inclusion of children’s rooms were examined.

Changes in the percentage of houses were calculated that included children’s rooms by dividing the subjects into two patterns: one-story houses or two-story houses (see Figures 2 and 3). With respect to one-story houses, children’s rooms were included at a rate that was almost half the rate of inclusion after 1920. Solely with respect to two-story houses, The positioning of children’s rooms to determine whether they were located on the first or second floors were examined. Similar to one-story houses, the number of children’s rooms included increased during the same period as the number included in two-story houses. However, I determined that more children’s rooms were included in two-story houses, rather than in one-story houses.

Therefore, It is assumed that the modern attempt to add second floors to Japanese houses could be related to the increased inclusion of children’s rooms in Japanese residential spaces. In addition, The floors on which children’s rooms were located were carefully examined. (see Figure 3). Between 1901 and 1910, only 8 percent of two-story houses included children’s rooms. However, It was confirmed that all of these rooms were positioned on second floors. In addition, all of these houses had Westernized interiors and exteriors.

During the 1910s, 14 percent of children’s rooms were positioned on first floors; 6 percent were positioned on second floors. Only a limited number of children’s rooms were positioned on first floors. In this period, It was confirmed some children's rooms that included at also Japanese house plans.

During the 1920s, 36 percent of children’s rooms were positioned on second floors. It was apparent that this ratio increased rapidly in comparison with the 1910s. In contrast, the positioning of children’s rooms on both the first and second floors occurred to a limited degree during that period (6 percent).

Houses that included children’s rooms positioned on both the first and second floors during the 1930s were very few. However, the ratio of children’s rooms positioned solely on second floors was the same as the ratio during the previous period. It was apparent that the
Table 2: Changes in the relationships between the positions of children’s rooms and other rooms in one-story houses.

<table>
<thead>
<tr>
<th>Room positions in one-story houses</th>
<th>Relationships between the positions of children’s rooms and guest rooms, living rooms, and master bedrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Guest Room</td>
</tr>
<tr>
<td>Positional relationship</td>
<td>Pattern A</td>
</tr>
<tr>
<td>1901-1920</td>
<td>0%</td>
</tr>
<tr>
<td>1921-1940</td>
<td>35.2%</td>
</tr>
</tbody>
</table>

Pattern A: (Guest Room/Master Bedroom/Living Room) was not included in the house plan
Pattern B: Positioned apart from other rooms or separated by wall(s)
Pattern C: Connected by door(s)

Table 3: Changes in the relationships between the positions of children’s rooms and other rooms in two-story houses (children’s rooms positioned on second floors)

<table>
<thead>
<tr>
<th>Room positions on second floors</th>
<th>Relationships between the positions of children’s rooms and guest rooms, living rooms, and master bedrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Guest Room</td>
</tr>
<tr>
<td>Positional relationship</td>
<td>Pattern A</td>
</tr>
<tr>
<td>1901-1920</td>
<td>0%</td>
</tr>
<tr>
<td>1921-1940</td>
<td>19.8%</td>
</tr>
</tbody>
</table>

Pattern A: (Guest Room/Master Bedroom/Living Room) was not included in the house plan
Pattern D: Planned to be positioned together on the same second floor
Pattern E: Not Planned to be positioned together on the same second floor

Table 4: Changes in the relationships between the positions of children’s rooms and other rooms in two-story houses (children’s rooms positioned on first floors)

<table>
<thead>
<tr>
<th>Rooms positioned on first floors</th>
<th>Relationships between the positions of children’s rooms and guest rooms, living rooms, and master bedrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Guest Room</td>
</tr>
<tr>
<td>Positional relationship</td>
<td>Pattern A</td>
</tr>
<tr>
<td>1901-1920</td>
<td>0%</td>
</tr>
<tr>
<td>1921-1940</td>
<td>20.2%</td>
</tr>
</tbody>
</table>

Pattern A: (Guest Room/Master Bedroom/Living Room) was not included in the house plan
Pattern F: Planned to be positioned together on the same first floor
Pattern G: Not Planned to be positioned together on the same first floor
inclusion of children’s rooms on second floors increased steadily during this period (i.e., the early Showa Era).

6. THE RELATIONSHIP BETWEEN THE POSITION OF CHILDREN’S ROOMS AND OTHER ROOMS

This section was discussed by analyzing the relationships between the positions of children’s rooms and other rooms to determine whether the positions of children’s rooms affected other rooms’ positions. The other rooms studied were guest rooms, living rooms, and master bedrooms. Based on this analysis, I will provide a more comprehensive discussion of how children’s rooms were gradually included in Japanese residential spaces during that period. Similar to the previous section, this section will focus on both one-story and two-story houses.

6.1 One-Story Houses That Included Children’s Rooms (Table 2)

First, one-story houses built during every 20-year period were examined. To confirm the positional relationships between children’s rooms and other rooms, these extracted one-story houses were divided into three patterns shown in the notes for Table 2.

The results of my analysis of the data shown in Table 2 revealed the following extracted features:

- An increased tendency in the ratio of houses that did not include guest rooms that did include plans for children’s rooms. (The percentage of guest rooms [Pattern A] increased from 0 percent to 35.2 percent over the second half of the period.)
- The number of houses that included master bedrooms decreased. (The percentage of master bedrooms [Pattern A] decreased from 92.6 percent to 51.3 percent during the second half of the period.)
- The number of houses that included living rooms and children’s rooms that were directly connected by doors increased. (The percentage of living rooms [Pattern C] increased from 21.9 percent to 44.2 percent during the second half of period.)

These three characteristics appear to be related to one another. In Japanese traditional residential spaces, particularly in the samurai class, guests were considered more important than family members were. Therefore, even in small houses, master bedrooms were provided for the exclusive use of guests. Therefore, it is inferred that, even if the inclusion of children’s rooms was planned, traditional customs continued to guide house planning during the first half of the period. However, the number of houses that included guest rooms decreased. The number of houses that included master bedrooms increased because parents’ bedrooms were separated from living rooms during the second half of period (1921-1940). This changed the original functions of living rooms. They became places where families gathered. It is assumed that these changes affected the relationships between living rooms and children’s rooms.
6.2 Two-Story Houses That Included Children’s Rooms (Tables 3 and 4)

Two-story houses built during a 40-year period were examined. Based on a similar analysis to the analysis used for section 6.1, to determine the relationships between children’s rooms and their positions on particular floors, these extracted two-story houses were divided into three patterns, as shown in the notes for Tables 3 and 4.

The results of my analysis of the data shown in Tables 3 and 4 revealed the following extracted features:

- The number of guest rooms and children’s rooms positioned together on second floors decreased. (With respect to children’s rooms positioned on second floors, the percentage of guest rooms [Pattern D] decreased from 45.5 percent to 16.1 percent during the second half of the period.)
- Regardless of the floors on which children’s rooms were positioned, in general, master bedrooms tended to be positioned on second floors.
- Living rooms tended to be positioned on first floors during the period.

These three characteristics can be summarized in the following manner:

1. During the first half of the period, house plans positioned guest rooms and children’s rooms together on the same second floors. However, eventually, guest rooms were positioned on first floors.

2. House plans increasingly included master bedrooms positioned on second floors. Regardless of the floors on which children’s rooms were positioned, master bedrooms tended to be positioned on second floors. Therefore, It was concluded that master bedrooms, rather than children’s rooms, had stronger relationships with second floors.

It was apparent that the positioning of children’s rooms could be divided into two patterns: (1) children’s rooms that had relationships with master bedrooms, or (2) children’s rooms that were positioned independently from master bedrooms on first floors. However, based on the results of Figure 3; it was apparent that a strong tendency existed to increase the number of children’s rooms positioned on second floors. Therefore, It was concluded that, over time, second floors became private spaces for families because master bedrooms and children’s rooms were positioned on second floors.

However, because a number of children’s rooms were positioned independently from master bedrooms on first floors, It can be considered that the plans for two-story houses did not yet conform to an established theory of the arrangement of several rooms that was similar to the theory applied to the planning of one-story houses.

7. CONCLUSION

This study was examined the tendency to include children’s rooms in the modernization plans for detached houses in Japan. With respect to the inclusion of children’s rooms, a limited number of children rooms were solely included in Westernized houses during the late
Meiji Era. However, by the late Taisho Era, the number of houses that included children’s rooms increased rapidly. Therefore, it is concluded that the inclusion of children’s rooms increased in Japanese middle-class houses during that 40-year period. With respect to transitions in the positioning of children’s rooms, my analysis confirmed that the positioning of children’s rooms tended to shift to second floors during the late Taisho Era.

It is concluded that the positioning of children’s rooms on second floors was caused by the relationships between the following factors: (1) an increase in the number of two-story houses, (2) the positioning of master bedrooms on second floors, and (3) a reduction in the number of available guestrooms. It was apparent that the tendency to position private spaces, such as master bedrooms and children’s rooms, shifted to the positioning of those rooms together on second floors. This tendency mirrors contemporary plans for detached houses in Japan. Based on the above discussion, it can be concluded that the inclusion of children’s rooms in Japanese detached houses occurred because of the modernization movement.

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REFERENCES