

# Housing Succession and Satisfaction of the Residential Environment

- Focusing on the Downtown Area in Kwangju -

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## Introduction

The development of housing sites in suburban areas and the continuous decrease in population and neighborhoods in the city center have brought about various social problems<sup>1)</sup>, accompanied by a feeling of city center emptiness. As the cities have become industrialized and commercialized, and the city population has moved to new housing districts in suburban areas, the city population has been steadily decreasing.

Generally changing residences occurs in age groups of the expanding and formative periods.<sup>2)</sup> The causes of movement are various, however as some residents become attached to their homes, the continuous inheritance of homes over generations has been found.

Those who inherit their homes seem to an index of residential environment, amenities, quality level of streetscape, or the stability of community. It seems that they are even reluctant to become attached to their residential area than those who move into the suburban areas.

To recover the residential function of the city center, the residential condition and factors should be examined, focusing on inherited residence.

This study examines and analyses housing succession inheritance, residential perception, and residents' satisfaction of the residential environment, focusing on the chungkum-dong area in Kwangju. *AutoCAD MAP* & *SAS* were used for this analysis, as well as to provide useful data for the recovery of residential function, and to define factor of the residential environment which would prevent the continued movement of residents out.

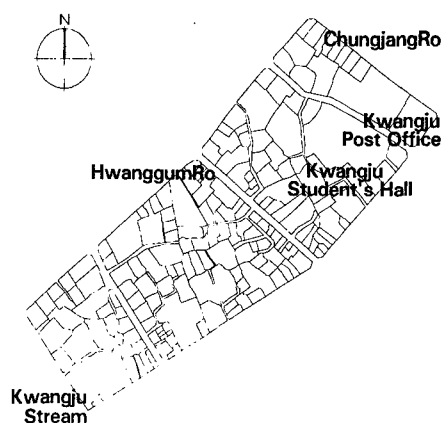


Figure 1. Outline of Area Investigated

## Physical Conditions of Area Investigated

### Land Use

The area investigated is called the General Commercial Area around Chungjangro and Kumnamro. Commerce, business, and recreation facilities are concentrated here. However, 34,915.27m<sup>2</sup>(65.1%), of 53577.08m<sup>2</sup>, is the commerce & business area. 8,687.59m<sup>2</sup> (16.22%) is used for both residential and commerce. 5,298.22(9.89%)m<sup>2</sup> is for independent houses, 4,675.99m<sup>2</sup>(16.22%) is for roads and 14,236.73m<sup>2</sup> is empty area. In terms of space structure, the closer the space is to the edge of road, the less combined area of residential commerce there is but there is more area for commerce and business. (See Figure 2, 3)

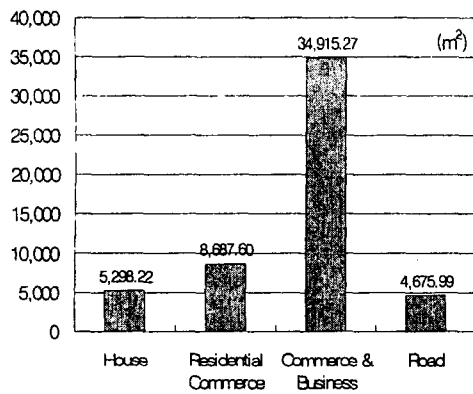


Figure 2. Constructive Form of Buildings

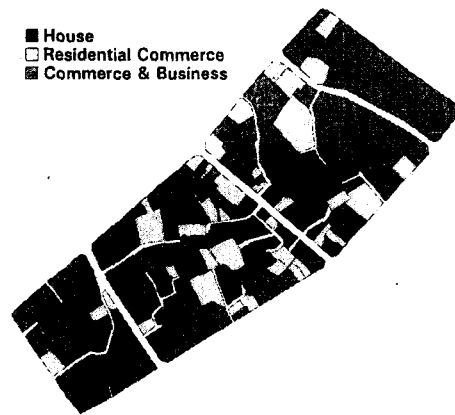


Figure 3. Space Structure Depending On Condition of Land Use

### Area of Land and Buildings.

The lot area with less than 150~300m<sup>2</sup> is 33.70%, land with less than 70~150m<sup>2</sup> area is 30.43%, land with more than 300m<sup>2</sup> area is 23.37% and the lot area with 70m<sup>2</sup> is 12.5%. In the building to land ratio, less than 60/100 is 49.46%, less than 70/100 is 20.65%, less than 80/100 is 14.67% and more than 80/100 is 15.22%. In capacity, 64.34% area has less than 100%, 21.74% has less than 200%, 14.13% has less than 400% and 1.09% has less than 700%. (See Table 1)

In types of buildings,

Table 1. The Ratio of Building Coverage and Volume to Lot

		Houses*	Residential commerce*	commerce & business*	total
building coverage	below 60/100	74.29	45.95	42.86	49.46
	~ 70/100	11.43	27.03	21.43	20.65
	~ 80/100	8.57	16.22	16.07	14.67
	above 80/100	5.71	10.81	19.64	15.22
rate of building volume to lot	below 100%	94.29	59.46	54.46	63.34
	~ 200%	5.71	18.92	27.68	21.74
	~ 400%	0.0	18.92	16.96	14.13
	above ~ 700%	0.0	2.70	0.89	1.09
lot area	below 60m <sup>2</sup>	20.00	5.41	8.04	9.78
	~ 70m <sup>2</sup>	2.86	8.11	0.89	2.72
	~ 150m <sup>2</sup>	34.29	37.84	26.79	30.43
	~ 300m <sup>2</sup>	31.43	27.03	63.61	33.70
	above 300m <sup>2</sup>	11.43	21.62	27.68	23.37

note : In computation of building to land ratio, all buildings are included.

\* column percent

houses are 18.48%, buildings of residential commerce are 20.11%, and buildings for business & commerce are 61.41%. Wooden houses are 91.18% and wooden buildings for business and residence are 54.04%. In case of buildings for commerce & business, reinforced concrete buildings are 43.36%. A constructive form of residential buildings is not stable, compared with that of commerce & business buildings. (See Table 2)

In terms of space structure, in the Chungjangro area, where recreational facilities are concentrated, there are many reinforced concrete buildings, while many of the wooden buildings are found in the direction of the Kwangju stream. This implies that commerce & business function is making inroads into the residential area. (See Figure 4)

Table 2. Constructive Form of Buildings

	Frequency Row Pct Col Pct	Houses	Residential commerce	commerce & business	total
Wooden structure	31 36.47 91.18	20 23.53 54.05	34 40.00 30.09	85 46.20	
Masonry structure	3 10.34 8.82	4 13.79 10.81	22 75.86 19.47	29 15.76	
Reinforced concrete	0 0.00 0.00	12 19.67 32.43	49 80.33 43.36	61 33.15	
Steel structure	0 0.00 0.00	1 25.00 2.70	3 75.00 2.65	4 2.17	
Steel assembly structure	0 0.00 0.00	0 0.00 0.00	5 100.0 4.42	5 2.72	
total	34 18.48	37 20.11	108 61.41	184	

note : Barns and annexed buildings are excluded.

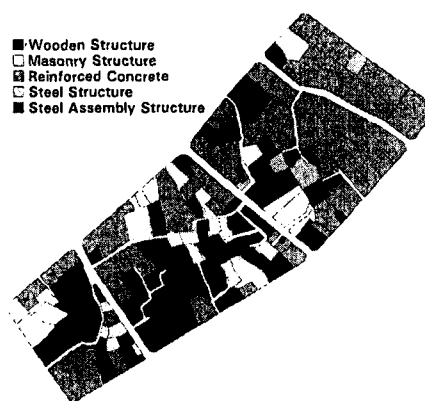


Figure 4. Space Structure Depending On Condition of Building Structure

## Housing succession and Residents' Perception

### General Property of Subjects

#### Questionnaires

were distributed to the heads of families who live within the area surveyed and 71 cases were used for analysis in order to find the current trends in housing succession and the intention to stay. In terms of gender of the head, there were 32 males and 39 females.

Table 3. Demographic Characteristics of the Sample

Variable	Mean	SD
Age of respondent	45.58	8.60
Family monthly income(won)	293.80	148.44
Length of residence	6.13	5.81
Floor of residence	2.54	0.10

	f	%		f	%
Gender	32	45.1	others	10	14.8
Female	39	54.9	Type of house	23	32.4
Education	9	12.9	house	23	32.4
below high school	30	42.3	residential commerce	11	15.5
high school	32	45.1	non-residence	14	19.7
above college	50	70.4	others	42	59.2
Job	2	2.8	Child existence	29	40.8
white color worker	5	7.0	Renovation of houses	35	49.3
professional	14	19.7	yes	36	50.7
others	37	52.1	Residence	30	42.3
Type of tenure	24	33.8	yes	41	57.7
own house			no		
key money					

The average age was 45.58 (SD=5.81). The average monthly income was 2,938,000won (SD=148), and the average length of residence was 6.13 years (SD=5.81). The average height of the residences was 2.54 (SD=.10)

The heads with college education were 47.9% and 70.4% had their own business in downtown. 52.1% owned their own houses and 32.4% of the houses were used for both residential commerces. In 40.8% of the families, parents and children lived together. 50.7% had intentions to expand or renovate their homes. 42% expressed an interest in staying in the city. Almost 58% expressed desire to move. (See Table.3)

#### *Housing succession and Intention*

38.0% of residents in the sample expressed a desire to inherit their homes. The  $\chi^2$ -test was performed to analyze when their houses were inherited, whether they want to stay in the city and renovate their houses, and to examine whether their age, income and personal properties have influenced their inheritance. No significant result is shown in terms of age, education, job, income, types of houses and child existence. The significant differences were shown according to whether they own their own houses or rent, whether they want to renovate their houses or not, and whether they want to stay permanently in the city.

Residents who inherit their homes want to stay in the city, which means that those who own their own houses have more intentions to renovate. Therefore, residents who stand to inherit have a greater influence on the improvement and renovation of the city environment.

Table 4. Result of  $\chi^2$ -test

		succession		movement		$\chi^2$			succession		movement		$\chi^2$
		f	%	f	%		f	%	f	%	f	%	
Age	30's	9	33.33	9	20.45	2.561	Type of tenure	own house	22	81.48	15	34.09	15.227*
	40's	13	48.15	20	45.45			key money	3	11.11	21	47.73	
	above 50's	5	18.52	15	34.09			others	2	7.41	8	18.18	
Education	below high school	2	7.41	7	15.91	1.095	Type of house	house	9	33.33	14	31.82	.068
	high school	12	44.44	18	40.91			residential commerce	9	33.33	14	31.82	
	above college	13	48.15	19	43.18			non residence others	4	14.81	7	15.91	
Job	business	17	62.96	33	75.00	1.164	Child existence	yes	15	55.56	27	61.36	.234
	others	10	37.04	11	25.00			no	12	44.44	17	38.64	
Family monthly income (won)	below 1million	5	18.52	11	25.00	.091	Renovation of house	yes	25	92.59	10	22.73	32.676*
	1-2 million	11	40.74	16	36.36			no	2	7.41	34	77.27	
	2-3 million	5	18.52	10	22.73		Keep living	yes	20	74.07	10	22.73	
	above 3 million	6	22.22	7	15.91			no	7	25.93	34	77.27	18.080

note : % means column percent each item., \* p<.001

## Satisfaction of City Residents

#### *The Factors of Satisfaction*

19 items of the Likert measure were distributed and their factors were

analyzed to measure the satisfaction about their residential environment. 17 out of the 19 items were rotated and then 5 factors showing a proper value of more than 1 were drawn. The factors with the highest value were called: the neighboring environment factor, the housing factor, the neighborhood factor, the child-related factor and the property factor.

### Factor Satisfaction

Residents' satisfaction with their residential environment was relatively low (2.99). The satisfaction with the neighborhood environment was the lowest (2.72). In terms of surrounding environment, the dissatisfaction value was the highest because of noise, poor recreational facilities, crime and a poor hygienic system. Most of the residents were satisfied with the safety against traffic accidents because the area surveyed belongs to a pedestrian-only passage, where the passage of cars is not allowed.

In terms of housing accommodation, satisfaction was below average (2.77). Residents were dissatisfied with exterior design, types of houses and poor equipment although they were usually satisfied with the size of the houses.

In relationships with neighbors, satisfaction was a little higher than the average. Residents were satisfied with communication with their neighbors and were attached to their houses. The value of satisfaction with the neighborhood was average. The value of the child-related factor was above average because schools were located near their residences and the area had a good educational environment.

The property value factor had the highest value (3.78), compared to the other factors. This means the real estate value is very high and good for investment purposes. (See Table 4)

Table 5. Results of Factor Analysis

	Mean	SD	factor1	factor2	factor3	factor4	factor5	Mean	SD
Surrounding Environment	2.28	1.17	0.83725	0.02461	-0.05843	0.08209	-0.17936		
Hygiene	2.86	1.00	0.80836	-0.14929	-0.06297	-0.05709	0.13263		
Safety against crime	2.68	1.67	0.69248	0.04883	0.18670	0.18761	-0.13884		
Noise	2.63	1.02	0.64240	0.39914	0.04346	0.12455	-0.08294	2.72	1.14
Safety against traffic accident	3.20	1.17	0.59370	0.11448	0.18136	0.34808	0.24517		
Park and Walk	2.66	1.21	0.51327	0.25469	-0.19240	0.18166	-0.21041		
Area of house	3.20	1.08	-0.05107	0.72332	-0.08769	0.24657	0.10761		
Equipment	2.96	1.02	0.24145	0.68084	0.12398	0.07545	0.12334		
Type of houses	2.69	1.06	-0.15587	0.60456	0.03332	-0.45143	0.18111	2.77	1.06
exterior design	1.93	1.01	0.40972	0.55285	0.25956	0.09913	-0.21739		
Plane structure	3.08	1.11	0.44255	0.52893	-0.20825	0.04561	0.39221		
Neighborhood	3.04	1.10	-0.07051	0.31097	0.78696	0.03303	-0.03371		
Communication	3.58	1.18	-0.00975	0.03316	0.69234	0.03050	0.57032	3.43	1.17
Attachment to residence	3.66	1.24	0.13905	-0.39056	0.68854	0.17522	-0.03707		
Access	3.48	1.04	0.06231	0.07196	0.02786	0.79568	0.16710	3.28	1.08
Educational environment	3.07	1.11	0.29739	0.15379	0.16756	0.74407	-0.14981		
Property value	3.78	1.13	-0.16674	0.20085	0.03469	0.03628	0.82627	3.78	1.13
Eigenvalue			4.3569	2.4042	1.9903	1.1819	1.1096		
Proportion			0.2563	0.1414	0.1171	0.0695	0.0653	2.99	1.12
Cumulative			0.2563	0.3977	0.5148	0.5843	0.6496		

### Conclusion

The steady decrease in number of residents and the expansion of business and commercial function in downtown core have caused many social problems. Therefore, in order to provide the basic data needed to recover the residential

function there, the residential conditions and residents' satisfaction with the environment were examined. The specific results of the study are as follows:

The land and buildings surveyed are used for commerce & business. Most of the buildings were made of wood and were not safe against fire.

In the center of each block, many houses and buildings related with the residential commerce were located, while along the edge of the street, buildings for commerce & business were found. This means that the business community function is making inroads into the residential community. Also, to get useful data on whether residents intend to stay permanently, the  $\chi^2$ -test was performed. The reaction of residents differs significantly according to their type of tenure, their intention to renovate and whether they want to stay in the city.

If residents inherit their homes, they are more willing to stay in the city and to renovate their houses.

The satisfaction value of residents in the city was a little lower than the average. Five factors were analyzed: neighborhood environment factor, house-related factor, neighborhood factor, child-related factor and property value factor.

The satisfaction value of the neighborhood environment and the house related factors were below the average, but the neighborhood factor, child-related factor and the property value factor were found to be above the average.

## Notes

- 1) 大江守之 外(1995), 都心住居高齢者との家族の住居継承に関する研究, 第30回日本都市計划學會學術研究論文集, p.73.
- 2) Yoon, Hyo-Jin(1986), *A Study on Residence in Seoul and Development*, A thesis for master's degree, p.101.

## References

1. Kum, Woo-Suk(1995). *A Study on Residential Function of City Center*, A thesis for master's degree in Soo Won University Graduate School.
2. Kim, Hye-Chung(1992) *A Study on Residence Movement Period Model*, A thesis for doctor's degree in Yeon Se University Graduate School.
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