

EXPLORING AN ANALYTIC MODEL OF URBAN HOUSING STRATA*

JEONG-HEE PARK
Kyung Hee University

An analytic model of urban housing strata based on Morris's and Winter's 'Housing Adjustment Model' is examined to investigate housing conditions and housing behavior of urban families. Family-related variables as well as physical conditions of housing are incorporated into the model through the concept of housing norm which is expected to vary with family characteristics. Housing strata are grouped by collapsing housing strata scores into four categories: upper, upper middle, lower middle, and lower strata. Housing strata are highly correlated with respondents' housing characteristics and socioeconomic attributes such as husband's and wife's education and family income, but not highly associated with family characteristics. This study suggests that the housing stratum is more useful than other status variables in explaining housing behavior.

INTRODUCTION

With the urban population growth under rapid industrialization since the 1960s, large cities in Korea, especially Seoul, have suffered from serious housing shortages. Continuous urbanization and family nucleation have aggravated the situation. The housing policy, however, has been inefficient in providing appropriate dwelling units to those who need them. Furthermore, real estate speculation in the midst of the urban development process has widened the gap between those who possess their own house and those who do not.

Even under this severe urban housing condition, most urban families make their efforts to own a house from the very beginning of their marriage. And having once possessed a house, they try to move to a bigger and better one. It goes without saying that one's social status is likely to be judged by the level of his or her housing conditions. It is by no means exaggerating to say that a house usually occupies the largest portion of wealth for ordinary urban families.

Over the last twenty years the concept of the 'housing stratum' as distinct from the 'class' term — starting with the concept of 'housing class' (Rex and

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Moore 1967)—has been a frequent subject in discussions among British sociologists. In this study, the concept of housing stratum is introduced as a variable for explaining housing behavior. The social class variable has often been used to explain housing-related behavior, but it appears that the social class variable is not sufficient for explaining housing behavior. Housing strata have been identified by sociologists in terms of housing tenure type or residential segregation. But they tend to adopt only physical variables to explain housing strata while family-related variables are rarely taken into consideration. Identification of housing strata requires information on their formation process and the occupants as well as housing tenure type, the physical conditions of the house, and the location.

This study attempts to explore an analytic model of urban housing strata and thereafter to apply the model to empirical data to better understand the concept of housing stratum. To this end, family-related variables are used as well as physical housing variables such as housing tenure, size and residential area on the grounds that housing conditions cannot be explained solely by physical variables. This research adopts Morris's and Winter's (1978) 'housing adjustment model' as an analytic scheme in which housing behavior occurs when the family experiences a housing deficit as defined by the gap between the actual housing conditions and the housing norm.

THEORETICAL OVERVIEW

On Housing Classes

Structured social inequality, the main focus of stratification studies, is viewed either from Marxian or Weberian standpoints. For Weber, classes are formed based upon economic power in commodity and labor markets. Although Weber concurs with Marx in defining classes as objectively constituted social formations with an economic base, he differs from Marx in the sense that classes could arise in any market, not merely in the antagonistic relation between wage labour and capital. Thus, he drew the distinction between the property class and the acquisition class. The members of the property class share common class situations by virtue of their command over the forms of property which could realize income in the market, whereas the acquisition class is contingent upon the degree of marketable skills.

According to Weber, the differences in life styles are distinguished from the differences in properties that induce the differences in life chances. The differences in life styles are the main factor that causes social exclusiveness among different status groups (Tumin 1967). Weber's emphasis on the distribution of life chances in the market as the criterion of class membership

was echoed by Rex and Moore (1967) in their study of the housing market in an inner-city area of Birmingham, England. They argued that competition over scarce and widely desired housing could be analyzed in terms of a struggle between different property or housing classes, each commanding a different degree of power in the housing market.

Housing strata have combined the features of property class and status or strata in the Weberian sense. A stratum has to possess a stratum consciousness of its members in order to have a social significance. Bell (1977), for example, tried to find out whether it is possible to identify housing class consciousness. There are four main elements involved in stratum consciousness, as he asserts, which could act as guides for an empirical exploration of class consciousness.

In a similar vein, Rex and Moore indicated that many people define their housing situation in terms of status rather than class, and consequently think of themselves as being in a 'graded' social situation rather than in a structural conflict. This led them to expect housing mobility or a 'housing career' which weakens the growth of housing class consciousness.

The housing class model proposed by Rex and Moore is based on the assumption that there is a unitary value system concerning housing. That is, the movement of households between housing situations is seen as typically 'upwards and outwards' — upwards in the scale and outwards from the center to the suburbs. They assumed the existence of conflict because of the 'owning ideal' and the 'suburban ideal'.

Treating class as a relational concept, Bell states that, using the concept of housing class, it has not always been clear who is exploiting whom and what relational aspects are involved. He suggests that housing class conflict in urban areas is likely to be observed within each class rather than between classes. Thus, it is more plausible that the housing class is treated as an objective category, since conflict between housing classes is not clear in light of exploitative relationships (Hong and Kim 1988).

Against these views, Clark and Ginsburg (1975) view the potentially conflicting relationship between landlord and renter around housing subjects as an aspect of class struggle, and suggest that there might exist a housing class struggle.

While class solidarity means the degree to which the members of a class are united when they act to achieve their common goals (Tumin 1967), housing class solidarity emerges when housing class members act together to earn material or psychological gains.

Related Variables and the Housing Norm

Housing tenure type was treated as the major variable in earlier studies on housing strata. Rex and Moore (1967) classified six housing situations according to the status values of British society. The six categories are: the outright owner of a whole house, the owner of a mortgaged whole house, the council tenant, a whole house owned by a private landlord, the owner of a house bought with short-term loans who is compelled to let rooms in order to meet his repayment obligations, and the tenant of the rooms in a lodging house.

After Rex and Moore, Dunleavy (1979) and Saunders (1984) examined political propensity by home ownership. Ineichen (1972) found that home ownership led to different life styles. Residential segregation has been regarded as an indicator of the strata division. As is well known, Burgess (1925) depicted residential segregation by social class with the concentric zone theory. Also, Hoyt (1939) proposed the sector theory. Research on residential segregation has been abundant. With special reference to the Korean case, for example, Lee (1980) showed residential concentration by social strata in Seoul.

Besides housing tenure type and residential area, Nishiyama (1981) included social class of occupants, family variable, structure type, and size in analyzing housing strata. Hong and Kim (1988) suggested housing tenure type, structure type, floor size and residential area as factors for the housing strata division. Most of the variables which have been examined as indicators of housing strata division until now are only housing variables, but not family variables.

Housing Norm and Housing Deficit

A housing norm is detected when over 60 percent of respondents agree on certain housing related issues. Hence it is a very useful tool for evaluating which type of housing behavior or conditions are socially desirable in a specific situation (Morris and Winter 1978). By Morris's and Winter's definition, the housing deficit is a deviation above or below the norm in housing situation. It is formally defined as:

$$a = b - c$$

where *a* is the value of the housing deficit,
b is the actual housing conditions, and
c is the housing norm.

Any value less than zero indicates that the current situation is within an undesirable range while a positive value refers to an undesirable/desirable surplus. The value of the housing deficit means one's housing condition.

Here it must be pointed out that the housing norm is the sole evaluating basis which could be commonly applied to all social classes or strata. There have been debates over whether the same norm can be applied to all social classes. There are some studies (Rossi 1955; Gans 1962; Rainwater 1966) supporting the application of the same norm to different classes. Morris, Winter and Sward (1984) showed that the housing norm is the same when a society is culturally integrated, and if it is not the same, it is in part due to misreports from respondents.

Morris and Winter (1978) proposed dimensions of the housing norm which could well represent housing characteristics, such as structure type, tenure type, size (space norm), quality, expenditure and neighborhood. Among them, the norm for expenditure is not appropriate for evaluating the housing conditions, but the rest of them can be used as housing strata variables because they have been used for evaluating the housing conditions.

DATA AND METHOD

This study explores an analytic model of housing strata and investigates the housing norm by family characteristics as a scale for evaluating actual housing conditions. After proposing an analytic model of housing strata using the housing norm, this study tests the usefulness of the model.

For data collection, interviews were conducted with household heads or their spouses aged 20 or over from all classes in Seoul in July, 1991 except from one-person households. While data were collected from 800 households, the total number of usable cases was reduced to 667 after taking family life stage and housing structure type into account. Through the consideration of the residential area, this study tried to be as representative of the households in Seoul as possible, but the upper class seems somewhat overrepresented in the sample.

A MODEL OF HOUSING STRATA

Criteria

The housing norms by family characteristics were analyzed as criteria for a model for housing strata.

1. Housing Structure Type

It is analyzed that single detached house or row house with private yard is the most preferred structure type, which is, the housing structure norm. But with such housing structure norm, it is difficult to say whether or not an objective housing deficit exists for one's housing conditions. Since the quality of multi-unit housing such as an apartment is better than the other housing type on the average, it is generally viewed more valuable in Korea. Therefore, there exists a pseudo-cultural norm of apartment preference.¹ That is, it is difficult to evaluate one's housing conditions by housing structure type.

Housing behavior, however, is explained mainly through housing structure type, and we cannot exclude the housing structure variable from housing strata variables. Thus, the housing structure type is used only for classification purposes, not for calculating housing strata scores.

2. Housing Tenure Type

Regarding housing tenure type, there obviously exists a housing norm for ownership because over 85 percent of respondents prefer home ownership regardless of family characteristics. Despite this housing ownership norm of respondents, the proportion of those who own a house in Seoul barely exceeded 40 percent according to the 1985 Population and Housing Census. Moreover, there are differences in actual tenure type by family life stage, number of family members, and family type.

If the gap between the actual housing conditions and the housing norm is tremendous, we could not use that housing norm directly for evaluating the actual housing condition. Therefore, this study adopts the actual conditions of housing tenure type as a criterion for determining housing strata: the rental house is a norm for younger generations while ownership is more likely to be a norm for older generations and/or the three-generation family.

3. Floor Size

About ideal floor size, the respondents of this study answered 33.2 *pyong* (110 m²) in case of single detached house, and 33.6 *pyong* (111 m²) in case of multi-unit housing.

The floor size norm varies by the number of family members and the family life stage. Respondents want more floor size of about 3 *pyong* (10 m²) per two family members, and the range of preferred floor size by family life stage is from 31.7 *pyong* (105 m²) to 33.7 *pyong* (111 m²). But the differences

¹Hong (1986) defines a pseudo-cultural norm as a tentative norm induced by the gap between an ideal housing norm and the real world. Thus, the housing norm can be accurately measured only when actual restrictions disappear.

by the number of family members and family life stage are much smaller than expected. Considering the optimum floor space according to the number of persons, the differences by the number of family members and by family life stage are too small. So we can conclude that there exists a floor size norm of about 30 *pyong* (99 m²) regardless of family characteristics.

4. Physical Quality

Quality is the most difficult concept to measure among the six areas of the housing norm. Many studies have often defined and measured the housing quality through the subjective reaction of families to the objective attributes that constitute quality. The market value of a dwelling unit has also been dealt as a direct index of housing quality. However, a problem with market value as a measure of quality is that the value is often community-specific, or even neighborhood-specific.

To increase the usefulness of an analytic model of housing strata, I use physical quality proxy measures of what have been used in the Population and Housing Census: the type of heating facilities, kitchen, toilet and bathroom. Regarding the housing quality norm, this study did not collect the respondents' answer, but analyzed the actual conditions by frequencies.

As for heating facilities, the proportion of the high quality fuel — oil, gas, and electricity and central heating systems is 73.7 percent of the respondents. This indicates that the physical quality norm of the heating facilities of high-quality fuel has already existed among residents in Seoul. Also the modern type kitchen, flushing toilet, and hot-water bathroom are norms, since 88.9 percent of respondents possess flushing toilets and 73.2 percent have hot-water bathrooms.

5. Residential Area

The relations of residential area and social status of residents have been discussed by many researchers. The location of a dwelling unit and the nature of its surrounding area are major determinants of the family's ability to accomplish such non-housing goals as the quality of the children's education and the prospects for social and economic security in the future.

Residential segregation has been more conspicuous in Seoul, and thus, one's social status is more easily judged by the place where one lives. The location is more likely to be related to family preference by the circumstances where each family lives.

Because of these reasons, residential areas preferred either by individual families or by society in general must be considered equally as a residential norm. Then when we evaluate one's housing conditions, the criteria should be whether the actual residential area is in accord with the area preferred by

his family or not, and whether one lives or does not live in the area preferred by society in general.

In the results of this study, the proportion of respondents whose actual residential area is in accord with the area preferred by their family is 46.2 percent, which is slightly less than the percentage of respondents whose actual residential area is not in accord with their preferred one. The residential area most preferred by respondents is Kangnam-ku (24.3%), followed by Soch'o-ku (13.2%) and Chongno-ku (10.9%). This result is very similar to Chung's (1984) study which examined preferred area by *dong* in Seoul in 1984.

6. Number of Rooms

In literature, among objective housing characteristics (i.e., the number of persons per room, housing tenure type, housing price, housing structure type, and year built), the persons per room is most highly related with overall housing satisfaction (Campbell 1976), and the number of rooms used is the most important variable which affects overall housing satisfaction.

The number of rooms needed for each family is determined by the bed sharing norm in society at large. The bed sharing norm includes sex separation to maintain standards which have been customary in a society, and age separation to eliminate frictions which may be caused if persons in widely different age groups share the same bedroom.

When asked about the number of rooms needed for each family, 45 percent of the respondents answered 3 rooms, and 34 percent 4 rooms. The number of rooms needed differs by the number of family members. Respondent families want more rooms by an average of 0.5 room per two persons.

Calculating the Housing Strata Score

Based upon the aforementioned six housing norms, the housing deficit of each housing characteristic is calculated. The housing deficit score is obtained by subtracting the housing norm from the actual housing conditions. The value 0 indicates that one's housing condition is equal to the housing norm, and a negative value refers to the situation that one's housing condition is below the housing norm, and a positive value refers to the condition over the norm.

Each housing deficit value is weighted and then all are added up. The weight is assigned according to the priority of six housing strata variables. This added score is the total housing deficit score and this will be the housing strata score.

Table 1 shows the way in which the housing strata score is calculated.

TABLE 1. CALCULATION OF THE HOUSING STRATA SCORE

Variable	Calculating Method		Range	Weight
Structure Type	Not used for calculating deficit scores		—	—
Tenure Type	NUCLEAR FAMILY	THREE-GENERATION FAMILY		4
	<i>Establishment Stage</i>		-2~+2	
	Owner	+2		
	Rent (deposit)	0	Owner	0
	Rent (monthly)	-1	Rent	
	<i>Child Bearing & Rearing Stage:</i>		(deposit or monthly)	
	Owner	+2	-2	
	Rent (deposit)	0		
	Rent (monthly)	-1		
	<i>Other Stages:</i>			
	Owner	0		
	Rent (deposit)	-1		
	Rent (monthly)	-2		
Size	More than 45 <i>pyong</i>	+2	-2~+2	2
	35~45 <i>pyong</i>	+1		
	25~35 <i>pyong</i>	0		
	15~25 <i>pyong</i>	-1		
	Less than 15 <i>pyong</i>	-2		
Physical Quality ¹⁾	<i>Heating</i>	<i>Toilet</i>	-2~0	2
	Gas, oil, electricity, central heating	Flushing	0	
	Others	Others	-1	
	<i>Kitchen</i>	<i>Bathroom</i>		
	Modern type	Hot water	0	
	Others	Others	-1	
Residential Area	Equal to preferred residential area	0	-2~+2	2
	Not equal to preferred residential area	-2		
	If Chongno, Soch'o, Kangnam,	Add 2		
Rooms Occupied ²⁾	More than 2	+2	-2~+2	1
	1 room	+1		
	0 room	0		
	-1 room	-1		
	-2 room	-2		

Notes: ¹⁾Adding four items and dividing by 2.

²⁾Subtracting the number of rooms needed from the number of rooms occupied.

The total housing deficit score (TD) is calculated as the following:

$$TD = 4*DT + 2*DS + 2*DQ + 2*DN + 1*DR$$

- where TD: housing deficit score
 DT: deficit of tenure type
 DS: deficit of size
 DQ: deficit of physical quality
 DN: deficit of residential area
 DR: deficit of number of rooms

The total housing deficit score ranges from -22 to $+18$. But the housing strata score in this study is not only a relative term which is used for comparing among urban residents but also an absolute term which indicates whether one's housing condition is over or below the ideal of urban residents. So a negative score means that one's housing conditions are below the housing norm, and we can expect that they would try to alter their housing conditions.

Classification of Housing Strata

In classification of housing strata using the housing norm, it is important to divide housing strata into two groups: the group over the housing norm and the group below the housing norm, i.e., the group whose housing strata score is 'plus' and the group whose score is 'minus'. We can also suppose that there are two groups in the group where the housing strata score is 'minus': the group whose housing conditions would tend to be equal to or over the housing norm sooner or later and the group whose housing conditions would not turn better in a short period of time.

So this study stratified housing strata into four groups: one group whose housing conditions are clearly over the housing norm, one group almost equal to the housing norm, and two groups below the housing norm (Table 2).

According to this analytic model, housing strata score ranges from -22 to

TABLE 2. DISTRIBUTION OF HOUSING STRATA
 Unit: % (N= 330)

Classification	Housing Strata Score	%
Upper	Equal or more than +3	10.3
Upper Middle	-2~less than +3	34.5
Lower Middle	-8~less than -2	42.2
Lower	Less than -8	13.0
Total		100.0

+18. The findings that two-thirds of the family sample possess negative scores suggest that housing conditions in Seoul are not satisfactory.

Housing strata is significantly related with the education of husband and of wife, and family income, but not with the occupation of husband as shown in Table 3. The group in the higher housing strata tends to have a higher proportion of college education and the upper housing stratum is most importantly represented by the highest family income group.

This study reveals that the relationship between housing strata and family characteristics is not statistically significant except for family life stage. The family in the establishment stage is likely to be in the upper housing strata. It is not because housing strata is systematically related with housing life stage, but because the family in that stage is likely to get more of the housing strata score in this analytic model. In this analytic model only the respondents in the establishment stage and child bearing and rearing stage could get a positive deficit score of tenure type which takes the largest portion of the total housing deficit. That can be also pointed out as a shortcoming of this analytic model.

It appears that those families with less than 2.5 members is likely to be in

TABLE 3. RELATIONSHIPS BETWEEN SOCIOECONOMIC STATUS AND HOUSING STRATA
Unit: %

SES	Housing Strata				Significance	
	Upper	U. Middle	L. Middle	Lower		
Education of Husband	Middle Sch.	—	10.5	10.9	9.5	$\chi^2 = 12.58^*$ df. = 6
	High Sch.	18.2	15.2	24.2	35.7	
	College	81.8	74.3	64.8	54.8	
Occupation of Husband	Professional	23.5	20.0	19.0	18.6	$\chi^2 = 22.23$ df. = 15
	Managerial	26.5	22.7	14.6	14.0	
	Clerical	17.6	30.9	38.7	30.2	
	Service/Sales	20.6	11.8	10.2	18.6	
	Crafts/Labor	—	3.6	10.9	4.7	
	Others	11.8	10.9	6.6	14.0	
Family Income (1,000 won)	Less than 700	6.3	9.0	18.0	27.5	$\chi^2 = 27.13^{**}$ df. = 9
	700~1000	18.8	36.9	33.1	30.0	
	1000~1800	25.0	30.6	23.3	35.0	
	More than 1800	50.0	23.4	25.6	7.5	
Total (N)		100.0 (34)	100.0 (111)	100.0 (137)	100.0 (43)	

*P < .05 **P < .001.

the upper housing strata, and those with 3~4.5 members to be in the upper middle housing strata, and those with over 5 members to be in the lower middle housing strata. But these patterns are not statistically significant. Family type is not significantly related with housing strata, either. Therefore, we can say housing strata is not related with family characteristics.

Housing strata are very significantly related with housing structure type, tenure type, size and number of rooms. While the row house and the multi-family house is likely to be in the lower housing strata and high-rise apartment is likely to be in the upper, the single-detached house is distributed evenly in four housing strata.

So it can be said that housing strata are likely arranged from upper to lower in the order of high-rise apartment, single-detached house, row and multi-family house. According to tenure type, the percentage of ownership is high in the upper, upper middle, lower middle groups of housing strata, and the percentage of rents on a deposit basis and with monthly payments is high in the lower group of housing strata.

Relationships between housing strata and housing size and number of rooms are very significant. The proportion of the housing under 18 *pyong* and two rooms is higher in the lower housing strata than any other housing strata and that of the housing with 19~32 *pyong* (63~106 m²) and three rooms is higher relatively in the middle housing strata (Table 4).

HOUSING STRATA AND HOUSING BEHAVIOR

It will be examined how useful housing strata stratified by the analytic model is in explaining housing behavior. We have often used social strata variables to explain housing behavior. But it has proved that housing behavior cannot be explained sufficiently by social strata variables. While property, education, occupation, and income are often used as socio-economic status variables, this study used socio-economic status score which is calculated from a regression equation using education and income (Hong 1983).²

To analyze housing behavior by housing strata, 'propensity to move' and 'housing satisfaction' are analyzed. Those variables are thought to reflect well the characteristics of housing strata as an independent variable. Therefore, they are also important for anticipating one's future housing choice and behavior in the future. The variable of 'propensity to move' is a continuous variable composed of 'expected period to live' and 'residing period', and the housing satisfaction variable is a continuous variable ranged from one to nine.

² $\hat{Y} = -4.60 + 0.39X_1 + 2.89X_2$, where \hat{Y} is socio-economic status score, X_1 is income and X_2 is education.

TABLE 4. RELATIONSHIP BETWEEN HOUSING CHARACTERISTICS AND HOUSING STRATA

Unit: %

Housing Characteristics	Housing Strata				Significance	
	Upper	U. Middle	L. Middle	Lower		
Structure Type	Detached H.	44.1	34.8	44.2	45.0	$\chi^2 = 58.08^{**}$ df. = 12
	Row house	8.8	9.8	11.6	15.0	
	Multifamily H.	8.8	5.4	10.1	32.5	
	Low-rise Apt.	2.9	7.1	13.0	—	
	High-rise Apt.	35.3	42.9	21.0	7.5	
Tenure Type	Owner	87.9	83.2	63.2	17.9	$\chi^2 = 75.79^{**}$ df. = 6
	Rent (deposit)	9.1	15.0	34.6	61.5	
	Rent (monthly)	3.0	1.8	2.2	20.5	
Size (pyong)	Less than 18	5.9	4.4	26.6	53.5	$\chi^2 = 94.46^{**}$ df. = 9
	18-32	14.7	43.0	51.1	32.6	
	33-46	38.2	32.5	14.4	7.0	
	47 or over	41.2	20.2	7.9	7.0	
Rooms Occupied	1	2.9	3.5	7.2	14.0	$\chi^2 = 100.75^{**}$ df. = 12
	2	14.7	14.9	35.3	67.4	
	3	23.5	60.5	47.5	16.3	
	4	32.4	17.5	7.2	2.3	
	5 or over	26.5	3.5	2.9	—	
Total (N)	100.0 (34)	100.0 (114)	100.0 (139)	100.0 (43)		

**P < .001

Multiple regression analysis is used to test to what extents the independent variables — housing strata, social strata, and family life stage — explain housing behavior. As family life stage is an important family characteristic which affects housing behavior, it is also employed as a dependent variable. The result of regression analysis of housing satisfaction as a dependent variable is shown in Table 5.

The multiple R of this regression analysis is .13, and the explanatory power of these three variables is somewhat low. Among three independent variables, housing strata variable most significantly explains housing satisfaction, whereas the general social strata variable cannot explain housing satisfaction significantly.

The result of regression analysis of propensity to move as a dependent variable is shown in Table 6. For explaining propensity to move, family life stage is the most useful variable among the three followed by housing strata

TABLE 5. MULTIPLE REGRESSION ANALYSIS OF HOUSING SATISFACTION
(N= 289)

Independent Variables	Unstandardized Coefficient (b)	Standardized Coefficient (beta)
Family Life Stage	0.265*	0.180
Housing Strata	0.110*	0.319
Social Strata	-1.250	-0.016
Constant	5.354	
R ²	0.131	

*Coefficient at least twice its standard error.

TABLE 6. MULTIPLE REGRESSION ANALYSIS OF PROPENSITY TO MOVE
(N= 289)

Independent Variables	Unstandardized Coefficient (b)	Standardized Coefficient (beta)
Family Life Stage	3.193*	0.391
Housing Strata	0.579*	0.300
Social Strata	-0.075*	-0.159
Constant	7.706	
R ²	0.251	

*Coefficient at least twice its standard error.

variable. Seeing these results, the housing strata variable explains housing satisfaction much better than the social strata variable. So we may conclude that the analytic model of housing strata in this study is very useful.

SUMMARY AND CONCLUSION

This study has explored an analytic model of urban housing strata, and then applied the model to empirical data in an attempt to better understand the concept of housing strata by using the case of Seoul. Most research in sociology and geography has dealt with the issue of housing class paying attention only to housing variables such as housing tenure, size and residential areas. This study, however, has adopted family-related variables as well on the ground that housing conditions cannot be explained solely by housing

variables. This research uses Morris's and Winter's 'housing adjustment model' as an analytic scheme in which housing behavior occurs when a family experiences housing deficits as defined by the gap between the actual housing conditions and the housing norm. Here, the housing norm indicates the ideal situation of various aspects of housing.

The housing norm is operationally defined as the situation that over 60 percent of respondents, although the cutting point looks somewhat arbitrary, agree on certain housing related issues. As expected, the housing norm varies by family characteristics such as the number of family members, family life stage and the family type. Housing conditions are evaluated by housing structure type, tenure type, floor size, physical quality, residential area and the number of rooms.

Housing strata are grouped into four categories by housing strata scores: upper, upper middle, lower middle and lower. Using 'propensity to move' and 'housing satisfaction' as the housing behavior variables, this study examined the explanatory power for housing behavior of the housing stratum. As a result, the study shows that the housing stratum has more explanatory power for housing behavior than other social status variables. The analytic model proposed in this study turns out to be useful in explaining the housing behavior of Seoul families.

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JEONG-HEE PARK received her Ph.D. in home economics from Kyung Hee University, and is a lecturer in the Departments of Home Economics, Kyung Hee University and Duck Sung Women's University.

SPATIAL DISTRIBUTION OF THE MIDDLE CLASSES IN SEOUL, 1975-1985*

DOO-SEUNG HONG
Seoul National University

This paper examines the degree of inter-class residential segregation in urban Korea by looking at the middle class concentration in Seoul during the period of 1975-1985. Discussion is focused on how the pattern of distribution of the middle class households changed during this period. Using the 2 percent sample of the Population and Housing Censuses, spatial distribution of the middle class is explored. Recognizing that sharp residential segregation by social class is a more recent phenomenon, this paper implies that segregation deepens the gap between housing classes and the gap in turn may facilitate the segregation of residence.

INTRODUCTION

In social stratification research less attention has been devoted to the spatial distribution of strata or classes than temporal changes in their composition. Topics on the former have been rarely tapped in stratification studies except for a few (e.g., Urry 1981; Kang 1991). Rather the topics have been dealt with in other fields such as urban sociology and urban geography (e.g., Kim and Park 1984; Thrift 1987; Han 1989; Kim 1992). In urban sociology, for example, much has been discussed on residential segregation of different groups since the 1920s (e.g., Burgess 1925; Duncan and Duncan 1955). Yet research carried out in Western societies has been more concerned with segregation by ethnic or racial groups than with segregation by social strata or classes. It is in part because ethnic or racial segregation has been more conspicuous than inter-stratal or inter-class segregation, and in part because ethnic or racial segregation is often overlapped with class segregation. Recently, the geographical concentration of the urban poor draws much attention from the social science community (Massey 1990; Massey and Eggers 1990). These studies portray that a small number of the middle class move out to suburban areas leaving the core of the city to poor ethnic groups. This line of research reveals that ethnic and racial segregation is important for

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explaining the emergence of the urban lower class.

Research on housing and residential environments in Korea reports that the gaps between housing classes have been widening in large cities since the 1970s. Particularly, it is suggested that the construction of apartment building complexes has facilitated inter-class residential segregation. For example, Lee (1980, 1982) argued that the construction of large-scale new residential areas in the 1970s aggregated the households with similar socioeconomic attributes, and thereby accelerated class division based on housing and consequently, restructured urban society itself. In the similar vein, Hong and Kim (1988) viewed the spatial relocation process during the period after the 1960s as the process of class segregation. In the period after the mid-1970s, they argue, middle-class apartment complexes formed homogeneous clusters, and physical segregation emerged more clearly between the middle class and the other working and/or lower classes than it had been. Hypotheses or descriptions addressed by them, however, remain to be more carefully assessed and empirically verified.

This paper attempts to observe the degree of inter-class residential segregation in light of the middle class concentration in urban Korea, during the period of 1975-1985 in Seoul. Discussion will be focused on how the distribution of the middle class households changed during this period. Segregation is often regarded as a counter-concept of concentration, but concentration on an area does not necessarily imply a homogenization of the area since the concentration may accelerate heterogenization within the area as well. The concentration of the middle class households in a specific administrative unit may be regarded as internal similarity within the unit, but at the same time it is probable to accompany within-unit heterogeneity. To illustrate, the 90 percent concentration of the middle class households may bring about social as well as spatial cleavages from the remaining 10 percent. Therefore, concentration is presumed a more appropriate term than segregation.

This paper concerns how densely populated middle class households are in a specific administrative unit within the city. It is assumed that if the proportion of the middle class in every unit is equal to the city average, class concentration is minimal whereas if the proportion of the middle class is either 100 percent or 0 percent in a unit, the maximum concentration would result.

DATA AND METHOD

Data

Data on which this paper is based are the 2 percent¹ sample of the 1975

and 1985 Population and Housing Censuses taped for public use purposes. Data on the economic activity of individuals and on the housing of households are combined into a single file. Class status of each household is defined by the occupational status of the household head.

The unit of analysis adopted in this study is an administrative unit called *dong*. In 1975 there had been 343 *dongs* in the City of Seoul and in 1985 they were expanded to 453. But the administrative units that did not appear in the sample or those with under 30 cases were excluded from the final analysis. In this way, information from 292 *dongs* (51 *dongs* omitted) for 1975 and 449 *dongs* (4 *dongs* omitted) for 1985 is used. In 1975 the omission of 51 *dongs* was mostly from either central business districts in Chongno-ku and Chung-ku or newly developed areas in Kangnam-ku. Especially, Chamsil-2-dong and Chamsil-3-dong were demarcated as administrative units but nobody lived there at that time. I presume that the omission of these units will not distort the whole picture.

Definition of the Middle Class

The *middle class* consists of the old middle and the new middle class. In the category of the old middle class included are self-employed wholesale and retail traders and caterers, and self-employed workers. Such occupations are also added as wholesale or retail managers, sales supervisors, technical sales workers and catering business managers with the exclusion of self-employed production workers.

On the other hand, the *new middle class* consists of white-collar workers such as professional, technical and related workers, administrative and managerial workers, and clerical workers. For a more precise definition of the term, information about employment status is necessary, but unfortunately we cannot find it from the 1985 population census. Since most of these workers are presumed in the status of employee, the omission hardly makes any serious bias. Here the new middle class is so widely defined as to absorb the upper middle class (Hong 1983). By this criterion, included in the new middle class category are: business top executives and high-ranking government officials who may be classified as the upper class, and self-employed technical or lower professional workers who often fall in the category of the old middle class.

FINDINGS

The questions are asked of how the new middle class is spatially distributed

¹It is roughly 2.6 percent sample of the whole population.

TABLE 1. DISTRIBUTION OF THE NEW MIDDLE CLASS HOUSEHOLDS BY YEAR

% of NMC ¹⁾	Unit: N (%)	
	1975	1985
- 9.99	39 (13.4)	26 (5.8)
10.00-19.99	91 (31.2)	138 (30.7)
20.00-29.99	77 (26.4)	162 (36.1)
30.00-39.99	46 (15.7)	67 (14.9)
40.00-49.99	20 (6.8)	24 (5.4)
50.00-59.99	14 (4.8)	23 (5.1)
60.00-69.99	3 (1.0)	8 (1.8)
70.00-	2 (0.7)	1 (0.2)
Total	292(100.0)	449(100.0)

Note: ¹⁾NMC refers to the new middle class.

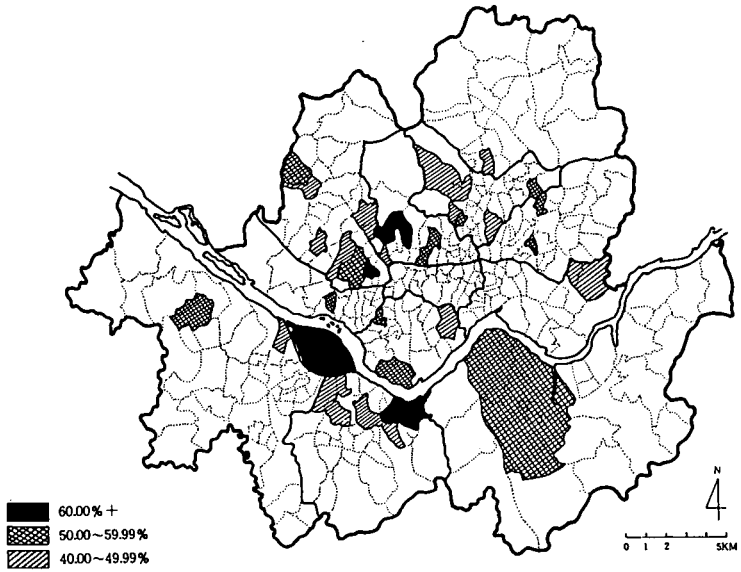
and how the pattern of distribution changed during the period of 1975-1985. As Table 1 shows, in 1975 the *dongs* where the proportion of the new middle class households exceeds 60 percent were 5 (1.7%). Ten years later in 1985 the figure increased to 9 (2.0%). On the other hand, 39 *dongs* (13.4%) which had less than 10 percent in 1975 decreased to 26 (5.8%) in 1985.

In order to visually present the geographical distribution of the new middle class, its proportion is grouped into three levels as depicted in Figure 1. On average, in 1975 white-collar workers constitute 24.3 percent of the total household heads in Seoul. The mean proportion plus one standard deviation is 38.3 percent, plus two is 52.2 percent, and plus three is 66.2 percent. Equivalent in 1985 are 25.5 percent, 38.4 percent, 51.2 percents, and 64.1 percent, respectively. If we take the 40, 50, and 60 percentages as a criterion for grouping, the range of 40-50% is one standard deviation more than the mean, 50-60% is two standard deviations more than the mean, and 60% and over is three standard deviations more than the mean.

On the map we could find easily that during the decade from 1975 to 1985 there was a great change in geographical distribution of social classes. On the northern part of the Han River the number of *dongs* where the new middle class had occupied over 40 percent of the total household heads was 27 in 1975. It decreased to 12 in 1985. On the southern part, on the other hand, twelve in 1975 increased to 44 in 1985. The most remarkable increase was found in Kangnam-ku and Kangdong-ku (as of 1985) where the figure changed from 3 to 38.

If we look at the middle class all together, the pattern becomes more distinct. In Table 2, during the period the number of *dongs* where the pro-

(A) 1975



% of the New Middle Class Households

(B) 1985

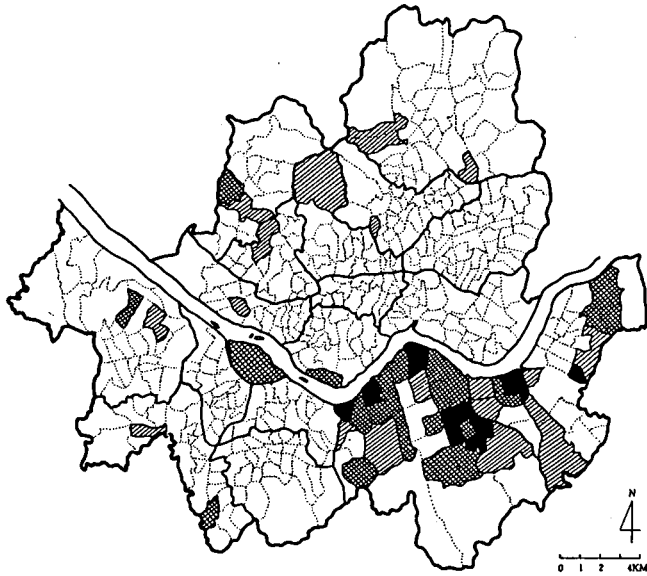


FIGURE 1. DISTRIBUTION OF NEW MIDDLE CLASS HOUSEHOLDS BY *DONG*

TABLE 2. DISTRIBUTION OF THE MIDDLE CLASS HOUSEHOLDS

% of NMC	Unit: N (%)	
	1975	1985
- 9.99	4 (1.4)	- (0.0)
10.00-19.99	25 (8.6)	3 (0.7)
20.00-29.99	26 (15.7)	44 (9.8)
30.00-39.99	65 (22.3)	138 (30.7)
40.00-49.99	50 (17.1)	144 (32.1)
50.00-59.99	59 (20.2)	74 (16.5)
60.00-69.99	28 (9.6)	30 (6.7)
70.00-79.99	13 (4.4)	13 (2.9)
80.00-	2 (0.7)	3 (0.7)
Total	292(100.0)	449(100.0)

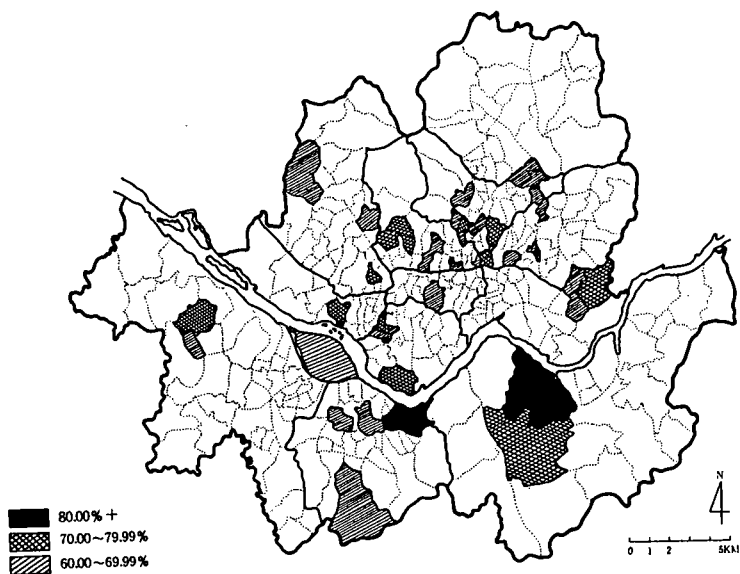
portion of the middle class household is less than 20 percent was 29 (10.0%) in 1975 decreased to 3 (0.7%) in 1985. On the other hand, the areas with over 70 percent change from 15 (5.1%) to 16 (3.6%). In 1975 two *dongs* show over 80 percent (Ch'ongdam-dong 86.6%, Dongjak-dong 82.9%) whereas four *dongs* show under 10 percent change (Myongil-dong 8.8%, Sindorim-2-dong 8.5%, Naegok-dong 8.4% and Sungin-1-dong 7.7%).

Mapping of the middle class distribution is shown in Figure 2. As did with the new middle class, three different groups are identified. The number of *dongs* where the proportion of the middle class households is over 80 percent was 2 in 1975 and 3 in 1985. Comparing (A) and (B) of Figure 2, the number of *dongs* in 1975 where the middle class households was over 60 percent was 34 on the northern part of the Han River in 1975. It decreased to 5 in 1985. On the other hand, in Kangnam-ku and Kangdong-ku the figure increased from 2 to 37. In short, the northern part of the Han River where old settlements of the city were, has lost middle class residents. This is offset by the gain of the southern part that has been newly developed for business and residential areas.

The areas of the middle class are overlapped with those of apartment complexes as Table 3 shows. In 1985, the correlation between the proportions of apartment residence and of college graduation is .723 and the correlation between apartment residence and the new middle class is .678. Apartment residence also shows a high correlation with the ownership of housing ($r = .681$) and thus, more tenants live in separate dwelling units than in apartments.

In 1985, no other dwelling units are found in 8 *dongs* than apartment complexes. This trend suggests that physical concentration of the middle class

(A) 1975



% of the Middle Class Households

(B) 1985

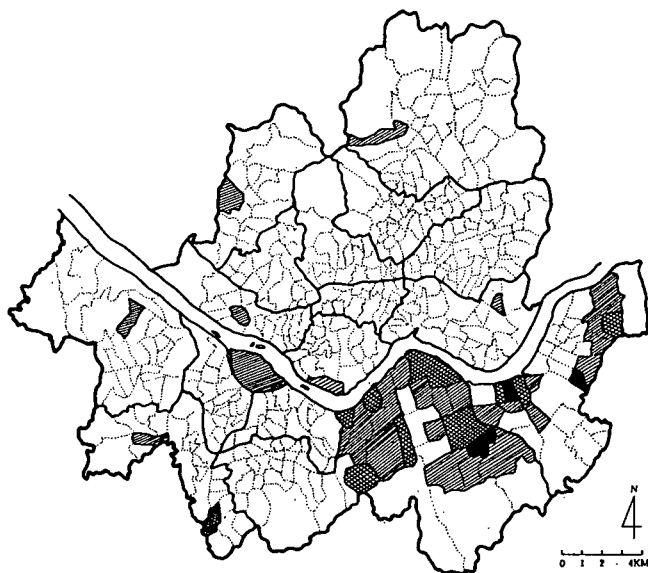


FIGURE 2. DISTRIBUTION OF MIDDLE CLASS HOUSEHOLDS BY *DONG*

TABLE 3. CORRELATION MATRIX OF VARIABLES BY YEAR

	1975 ¹⁾					\bar{X} (s.d.)
	Housing	College	New Middle	Middle Class	Apart.	
1985						
Housing Own. (%)		.477	.486	.377	— ²⁾	44.7 (14.0)
College Grad. (%)	.751		.878	.769	—	16.8 (15.4)
New Middle C. (%)	.723	.921		.849	—	24.3 (13.9)
Middle Class (%)	.673	.869	.905		—	41.9 (16.6)
Apartment (%)	.681	.723	.678	.636		—
\bar{X} (s.d.)	40.6 (10.9)	19.4 (15.0)	25.5 (12.8)	43.5 (12.1)	12.1 (23.2)	

*All coefficients significant at .01 level.

Notes: ¹⁾Figures in upper right are for 1975 (N = 292) and lower left for 1985 (N = 449).

²⁾Data not available.

has proceeded with an increase in scale of the collective housing area. The middle class households with higher education form a class group around apartment complexes. Of course, the same unit may consist of diverse strata. Therefore, it is difficult to argue that homogeneity is solely contingent upon the high proportion of the middle class households. Eighty percent middle class households may alienate the other 20 percent of non-middle class households.

DISCUSSION

Up until the early 1960s, when the city boundary was still narrow, residential segregation was not so conspicuous. People of diverse strata lived together in physically adjacent, mixed environments. But the process of space relocation after the 1960s has brought inter-class segregation. Such segregation has become more apparent, particularly between the middle and the non-middle class, with the construction boom of apartment buildings in the 1970s and 1980s. This study supports Lee's (1980, 1982) earlier hypothesis that the construction of large residential complexes in Seoul facilitated stratal differentiation based on housing by aggregating homogeneous socioeconomic groups.

The process of housing construction and parcelling-out has provided objective conditions for residential homogenization, and the middle class exerted efforts to maintain their homogeneity. In a normative sense, it has been controversial among housing policy planners whether residential areas are to be made homogeneous or heterogeneous. Those who are sympathetic with

the heterogeneous setting tend to emphasize the advantages of diverse composition. Mixed living makes residents be exposed to other people's life and accept sociocultural differences, and therefore, could reduce political conflicts that might arise between different strata. but the unplanned neighborhood tends to be homogeneous through natural selection process. That is, those who want to purchase a housing unit are gradually absorbed into appropriate areas by considering such factors as land and housing prices, level of neighbors' living, and others' perception of the area.

Since social association is determined by physical proximity and homogeneity, homogeneity has been positively assessed despite its dysfunctions. In Korean society, efforts to maintain homogeneity has to do with status-seeking behaviors. The middle class residents tend to protect themselves from the intrusion of lower classes pursuing homogeneity in the process of housing purchase as well as in daily life. They are often consolidated for the protection of their property. Unlike a resistance of urban poor or squatters for survival, the self-protection strategy of the urban middle class is a struggle for protection of the status quo or their vested interests.

The middle class tries to reproduce their socioeconomic status already secured by intergenerational upward mobility or status transmission. One reason for rapid urbanization in Korean society is due to an expectation for better education in cities for their children, particularly in Seoul. Overheated aspiration for education is triggered by middle class parents. After equalization of secondary schooling, parents try to move to "good" school district areas. As a result, housing prices got to be determined by school districts. In the case of Seoul, schools located in the Eighth School District in the Kangnam area had marked good performance in college entrance examinations, and so this area is favored by parents. Therefore, housing prices are higher there compared to other areas.

This paper implies that the concentration of the middle class may enhance their paucity in the core of the city, something which has been already witnessed in advanced industrial societies. The exodus and concentration of the middle class does not suggest its isolation from other strata, especially from the urban poor, nor deepening poverty as suggested in earlier studies. Nevertheless, physical agglomeration of the middle class may imply the probability of class or status crystallization by not sharing life space with other classes.

Residential segregation deepens the gap between housing classes, and inversely, the gap itself may facilitate segregation of residence. Discussion in this paper has implicitly assumed that it is preferable for diverse social classes to share daily life boundary. Residential concentration of the middle class is likely to consolidate internal solidarity based upon group or individual self-interests. Class or stratum formation is further consolidated by securing inter-

nal homogeneity, and segregation obviously leads to inter-class discord. But it is not yet conclusive to argue that residential mixture is more preferable to segregation from social policy perspective.

In urban Korea, sharp residential segregation by social class is a more recent phenomenon. In the 1960s and 1970s, urban redevelopment plans expelled illegal squatters from their living quarters and forced them to resettle in areas distant from the central business district. In the 1980s, they had to vacate these dwelling areas again to move farther out for the sake of urban renewal with the vacated areas consequently occupied by middle-class households. This process characterizes the space relocation pattern of the period after the 1960s as a shift from class mixture to class segregation. We have noticed that middle-class families show a group solidarity as long as they find it necessary to unite for their rights and interests with regard to property and living environments.

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DOO-SEUNG HONG is Professor in the Department of Sociology and Director of the Population and Development Studies Center at Seoul National University.

