

A Comparative Study of Housing and Neighborhood Satisfaction between Korea and the US

한국과 미국의 주거만족도 비교에 관한 연구

남수연 서울대학교 지역개발·조경연구소 연구원(제1저자)
Nam SouYeon Researcher, Institute of Regional Planning and Landscape
Architecture(Primary Author)
(snam@worldbank.org)

이성우 서울대학교 지역정보전공 부교수(교신저자)
Lee SeongWoo Associate Professor, Program in Regional Information
Seoul National Univ.(Corresponding Author)
(seonglee@snu.ac.kr)

Contents

- I. Introduction
- II. Background
- III. Methodology
- IV. Data
- V. Variables
 - 1. Dependent Variables
 - 2. Independent Variables
- VI. Findings
 - 1. Descriptive Analysis
 - 2. Results of Ordered Probit Methods
- VII. Conclusion

※ Earlier version of this paper has been presented at the presentation at the Annual Meeting of the Western Regional Science at Newport Beach, CA, USA, February 21-25, 2007. This work was supported by Korea Research Foundation Grant funded by Korea Government(MOEHRD, Basic Research Promotion Fund)(KRF-2005-079-BS0157).

I. Introduction

Residential satisfaction is a complex compound combining both the objective environment and subjective perception; however, determining the degree of residential satisfaction depends upon the ratio of objective and subjective characteristics that may vary among individuals. What level of residential environment is 'good' to live in? On which criteria does one evaluate the circumstance to be 'good'? Does everyone feel identically in the 'good' environment? What determines the similarities or differences of residential satisfaction? Because of the perceptive nature of residential satisfaction and actual differences in residential quality, individuals from diverse ranges of social backgrounds and stages of life have varying degrees of residential needs.

Findings from the previous residential satisfaction studies provide useful information regarding human behavior and residential quality that can help establish residential policy and improve regional planning. For this reason, many studies from various academic domains have explored residential satisfaction in an attempt to identify the determinants of residential satisfaction. For example, regarding the factors for differentiating degrees of residential satisfaction, some studies have demonstrated the relevance of life cycle (Rossi, 1955; McAuley and Nutty, 1982; 1985) while

others have investigated tenure and housing differences (McHugh et al. 1990; Elsinga and Hoekstra, 2005). However, few studies have ever explored epistemological effects on the differences of residential satisfaction.

The present study seeks to fill this void in the literature regarding residential satisfaction. We suggest the possibility of using epistemological differences as a means to further differentiate residential satisfaction, particularly among societies from different cultures. Epistemology stems from the Greek words *episteme*, meaning knowledge, and *logos*, meaning word or speech, and refers to the branch of philosophy directed toward theories of the sources, nature, and limits of knowledge (Jun, et al. 2006). Different societies have inherently dissimilar norms, values, and cultural and objective environments, and thus analyzing the discrepancies of housing may be reflective of more fundamental societal differences. The thought processes and knowledge bases from different societies may promote different ways of thinking, which may in turn shape human perceptions such as residential satisfaction.

Drawing upon the notion of differing housing problems postulated by Wirth (1947), the present study hypothesizes that residential satisfaction and its components vary among different cultures and strata of society. The main objective of the present study is to show the differences in residential satisfaction and its determinants between

Korea and the US. We argue that epistemology is one of the major factors behind the differences of residential satisfaction, and thus attempt to explain such differences from an epistemological point of view. To achieve this objective, we analyzed two national samples from Korea and the US. We speculate that dissimilarity in residential satisfaction and its determinants between the two countries are due to the differing epistemological backgrounds of Confucianism in Korea and Pragmatism and Individualism in the US.

The paper is organized as follows: Section 2 introduces several important concepts regarding residential satisfaction. Section 3 provides details of the ordered probit model that incorporates residential satisfaction and its subsequent outcomes. In sections 4 and 5, we describe the data and variables used for the present study. After providing the empirical results of the estimation and major findings in Section 6, we conclude our study in Section 7.

II. Background

Residential satisfaction refers to the estimation of an individual regarding residential environment, and consists of three essential elements: neighborhood, house, and neighbors (Amérigo and Aragonés, 1990); however, there are many inconsistencies in the literature concerning the components of

residential satisfaction. Some researchers have focused their studies on satisfaction about neighborhood and neighbors to identify factors affecting residential satisfaction (Oh, 2003; Barcus, 2004; Paris and Kangari, 2005; Sai, 2005), while others have simultaneously considered both housing satisfaction and neighborhood satisfaction (Morris and Winter, 1978; Galster, 1987; McHugh, et al. 1990; Lu, 1999; Parkers and Kearns, 2003; Molin and Timmermans, 2003). On the other hand, Sirgy and Cornwell (2002) have shown that neighborhood features affect quality of life through housing and neighborhood satisfaction.

Evaluation of residential surroundings depends primarily on subjectivity. Specifically, the values or perception of an individual determines how he/she accepts the environment, and different individuals may not share identical feelings regarding an invariant objective environment. Morris and Winter (1978) describe such subjectivity as 'norms', and the failure to meet the needs of a family as 'deficits'. They argue that normative deficits of a residential environment, defined by an individual or a family, can explain most of the relationships between dwelling and household characteristics and satisfaction. An individual estimates their objective dwelling condition according to their own perception, which in turn is shaped by a complicated process reflecting constitutional characteristics,

family environment, and social propensity. For this reason, most of the literature on residential satisfaction combines socio-demographic variables and residential attributes in order to identify the determinants of residential satisfaction(Lu, 1999; Speare, 1974; Landale and Guest, 1985; McHugh, et al. 1990; Jagun, et al. 1990; Amérigo and Aragonés, 1990; Tran and Nguyen, 1994; Basolo and Strong, 2002; Molin and Timmermans, 2003; Barcus, 2004, to name a few).

In exploring the relationship between housing complaints and mobility, the notion of a housing deficit is consistent with Rossi's(1955) space stressor. Residential deficits include space, tenure, structure-type, quality, and expenditure, while neighborhood depends on changes of norms over the life cycle(Rossi, 1955; Morris and Winter, 1978; McAuley and Nutty, 1985). It is intriguing that neighborhood deficits and dissatisfaction do not necessarily have negative impacts on neighborhood satisfaction, as shown by Woldoff(2002), who argued that neighborhood deficits such as social disorder and crime can be overcome by way of facilitating cooperation among

residents.

The gap between one's aspiration or needs and estimation about objective residential attributes may generate residential dissatisfaction(Campbell, et al. 1976; Morris and Winter, 1978; Galster, 1987; Barcus, 2004) that can result in mental, psychological, or physical problems. For example, Schwanen and Mokhtarian(2004) have dealt specifically with the determinants for dissonance between reality and preference of neighborhood type, which is consistent with the definition of dissatisfaction. As Wolpert(1965) explained in his stress-threshold theory, when normative deficits exceed levels one is willing to accept, an individual or a family responds with migration¹⁾ in order to reduce or eliminate the dissatisfaction.

Amérigo and Aragonés(1990; 1997) divide the literature concerning residential satisfaction into two facets: residential satisfaction as a criterion of residential quality and predictor of behavior. In the present study, we classify prior studies into three categories according to the objectives of the researchers: first, being to predict the migration, second, to identify the determinants of residential satisfaction, and

1) Migration and residential dissatisfaction are not able to completely explain each other. Migration can result in an decrease of residential satisfaction when an individual moves because of a job change or could not gather enough information about new residence. In addition, Michelson(1977) showed empirically that residential choice of an individual is not necessarily consistent with the direction to resolve the problem that she/he had in previous residence. He also noted one can improve housing condition through repair, parking, or changing number of rooms in case the housing is owner-occupied(see also Amérigo and Aragonés(1990)). This shows migration is not the only method to respond one's residential dissatisfaction.

lastly, to reflect in the policy or planning perspective.

The first category consists of studies on residential satisfaction as a catalyst for moving. Speare(1974) regarded residential satisfaction as an intervening variable of mobility, claiming that housing and neighborhood attributes with socio-demographic characteristics of individuals determine the degree of residential satisfaction and their subsequent mobility. Studies by Morris. et al.(1976), Morris and Winter(1978), Michelson(1977), Newman and Duncan(1979), McHugh. et al.(1990), Landale and Guest(1985), McAuley and Nutty(1982), Oh(2003), Parkers and Kearns(2003) have also shed light on the relationship between residential satisfaction and the mobility process. Further, Clark and Ledwith(2006) extended their study to minority households in a diverse range of ethnic settings, exploring the role of housing and the neighborhood stability.

The primary goal of the second category is to identify the determinants of residential satisfaction with an emphasis on different regions or social strata. Such studies include Jagun. et al.(1990) for urban black adults, Amérigo and Aragonés(1990) for residents in council housing, Tran and Nguyen(1994) for Indochinese refugees, Lu(1999) for American citizens, Sirgy and Cornwell(2002) for Virginia residents, Molin and Timmermans(2003) for western European city

dwellers, Paris and Kangari(2005) for multifamily affordable housing residents, and Sai(2005) for university students in Hong Kong. Some studies explored this issue by comparing different groups, which in turn yielded further implications. Champman and Lombard(2006) studied neighborhood satisfaction determinants between gated communities and non-gated communities. Elsinga and Hoestra(2005) compared housing satisfaction for citizens of eight European countries, while Ross. et al.(2000) showed that neighborhood attributes such as stability could have a differentiating impact on residents' stress between affluent and poor neighborhoods. Barcus(2004)'s approach was also interesting in this regard, as he argued that residential satisfaction is not a static notion, but rather a dynamic one, capable of reflecting both positive and negative changes.

The last category concerning residential satisfaction is one that explicitly attempts to find implication for specific policy or planning. For example, the research finding of Basolo and Strong(2002) directly provide information to Community Development Corporations. Additional examples can be found in Heywood(2004) and Ng. et al.(2005), who revealed the needs of housing attributes for the disabled and their families and conducted their study to elaborate urban renewal design in Hong Kong.

All the previous studies have a common feature, in that they place a great deal of

emphasis on perceptual variables and a lesser degree on objective residential attributes. Indeed, variables concerning individual evaluation or awareness can be found in all the literature on residential satisfaction. Development of theories and their application on diverse subjects has contributed significantly towards the identification of residential preferences and problems, predicting human behavior, and the formulation of more appropriate residential policies. Nevertheless, the findings of these studies are strictly limited to the residential scope, and are not useful for demonstrating the overall features of a society. Indeed, few studies have ever questioned what engendered differences of factors are responsible for determining residential satisfaction. Does epistemological interpretation of social difference give us more insights on residential satisfaction studies?

This study compares the residential satisfaction of Korea and the US. The purposes of this comparison are twofold: first, to demonstrate the discrepancies of residential satisfaction of Korea and the US, and second, to explain how this difference may stem from epistemological background of the two different cultures.

III. Methodology

In the present study, both housing and neighborhood satisfaction were measured

through five Likert-type scales in order to express the degree of satisfaction of each household member. For responses with ordered categories, the scale consisted of very satisfied(VS), satisfied(ST), neutral(NE), dissatisfied(DS), and very dissatisfied(VD). Because of the inherent loss of information, rather than incorrect estimation, OLS type regression analysis was inappropriate for responses with an ordinal level of dependent variables, (McKelvey and Zavonia. 1975). Further, multinomial logit or probit models would also fail to capture the ordinal nature of the dependent variables (Liao. 1994; Greene. 2003), and thus, only an ordered probit or logit model could be adopted, considering their wide use in analyzing ordinal data (McKelvey and Zavonia. 1975; Maddala. 1983; Liao. 1994; Greene. 2003). The present study utilized an ordered probit model that McKelvey and Zavonia (1975) and Marcus and Greene (1985) estimated for voting behavior of Congressmen and job assignments, respectively.

To begin, we have an equation defining the regression relationship $Y^* = X'\beta + \epsilon$, where Y^* is an unobservable continuous variable representing housing and neighborhood satisfaction of an individual, β is a vector of k regression parameters, and ϵ is a random error term. Since our dependent variables of housing and neighborhood satisfaction have five categories, the observed is reported as five degrees of satisfaction (Equations from Liao.

1994). The equation then becomes:

$$\begin{aligned}
 Y &= 1 \text{ if } Y^* \leq \mu_1 \quad (\mu_1 = 0), \\
 &= 2 \text{ if } \mu_1 < Y^* \leq \mu_2, \\
 &\quad \vdots \\
 &= 5 \text{ if } \mu_4 \leq Y^*, \quad <1>
 \end{aligned}$$

where μ s represent thresholds between two degrees of satisfaction among five, which would originally vary among individuals. These are ceiling and floor restrictions that place limits on the intensity of satisfaction. μ_1 has a value of '0' through the process of normalization, meaning the lowest cut-points of degree of housing and neighborhood satisfaction. With the assumption of $\epsilon \sim N(0,1)$ denoting VS=Very Satisfied, ST=Satisfied, NE=Neutral, DS=Dissatisfied, VD=Very Dissatisfied, the probabilities of satisfaction are as follows:

$$\begin{aligned}
 Prob(VD|X) &= \Phi\left(-\sum_{k=1}^K \beta_k x_k\right), \\
 Prob(DS|X) &= \Phi\left(\mu_2 - \sum_{k=1}^K \beta_k x_k\right) - \Phi\left(-\sum_{k=1}^K \beta_k x_k\right), \\
 Prob(NE|X) &= \Phi\left(\mu_3 - \sum_{k=1}^K \beta_k x_k\right) - \Phi\left(\mu_2 - \sum_{k=1}^K \beta_k x_k\right), \\
 Prob(ST|X) &= \Phi\left(\mu_4 - \sum_{k=1}^K \beta_k x_k\right) - \Phi\left(\mu_3 - \sum_{k=1}^K \beta_k x_k\right), \\
 Prob(VS|X) &= 1 - \Phi\left(\mu_4 - \sum_{k=1}^K \beta_k x_k\right). \quad <2>
 \end{aligned}$$

where Φ represents the standard normal cumulative density function, and $0(=\mu_1) < \mu_2 < \mu_3 < \mu_4$.

An issue derived from such an

ordinal-outcome model is the parallel lines assumption also known as the equal slopes assumption in the probit model(Liao, 1994). In the present study, this means odds ratios of an explanatory variable should be invariant in every satisfaction category(e.g. the effect of gender is supposed to be constant in very satisfied, satisfied, neutral, dissatisfied, and very dissatisfied categories). We tested the null hypothesis $\beta_{1m} = \beta_{2m} = \dots = \beta_{km}$ ($m=1,2,..,5$) to determine whether our data satisfied the equal slope assumption of the ordered probit model.

IV. Data

Individual samples were drawn from the 2001 and 2004 Social Statistical Survey(SSS) for Korea, and the 2001 and 2003 American Housing Survey(AHS) for the US. Fortunately, both data sets contained housing and neighborhood satisfaction variables. Collection of the former data set has been conducted by the Korea national statistical office every year since 1977 and covers three sectors among twelve possible sectors including family, consumption, labor, education, health, housing, and so on. Each sector is collected every four year for approximately 30,000 households; the two most recent housing sector surveys were performed in 2001 and 2004. The objective of the Social Statistical Survey was to understand the changes in overall society and quality of life such that they could be

considered during the development of diverse government social policies.

The US Census Bureau has conducted the American Housing Survey every odd-numbered year since 1973. The contents of the data range from apartments, single-family homes, family composition to housing, and neighborhood quality. With fixed sample sized of 53,000, the American Housing Survey provides more housing specific data than is provided by the general census alone. The 2001 and 2003 American Housing Survey is comparable with the 2001 and 2004 Social Statistical Survey of Korea for determining the differences and changes in housing and neighborhood satisfaction between the two countries.

Hereafter, we refer to the Social Statistical Survey as the SSS, and the American Housing Survey as the AHS. Samples were restricted to householder members aged 18 years and over. Further exclusion was made for households living in non-traditional forms of shelter such as manufactured(mobile) home. Most of the explanatory variables used in this study consisted of different numbers of categories, depending on the data source(SSS or AHS). To make the variables from the two data sets comparable, we regrouped diverse exogenous variables to have consistent categories, as have done with our dependent variables.

V. Variables

1. Dependent Variables

In the SSS, questions regarding housing and neighborhood satisfaction were as follows: "How are you satisfied with your current housing(neighborhood)?" This was followed with five possible responses in a likert-type scale, 'very satisfied', 'satisfied', 'neutral', 'dissatisfied', 'very dissatisfied'. In the case of the AHS, the question was, "On a scale of 1-10, how would you rate your unit to live?"(rating 10 was the best, 1 was the worst).

As the categories of the satisfaction variables were not identical between the SSS and the AHS, the satisfaction levels of both data sets were adjusted such that they would have the same dimensions comparison for the two countries. To make the same range for our dependent variables, we regrouped the categories of the 2001 and 2003 AHS satisfaction variables into five. We designate the categories of the AHS as follows: '10,' as 'very satisfied', '9' as 'satisfied', '8' as 'neutral', '6-7' as 'dissatisfied', and '1-5' as 'very dissatisfied.' The different coding schema has been made to adjust the difference of the distributions two data have.

2. Independent Variables

Housing satisfaction can be explained by neighborhood satisfaction variables and vice versa(Morris. et al. 1976; Galster. 1987; Basolo and Strong. 2002). This makes sense,

considering the close relationship between housing satisfaction and neighborhood satisfaction(Lu. 1999). The process to convert discrete satisfaction variables into numerical variables is simple, and consists of giving even numbers to increasing satisfaction levels from 10 to 2. Specifically, a score of 10 would fall in the 'very satisfied' category, 8 in 'satisfied', 6 in 'neutral', 4 in 'dissatisfied', and 2 in the 'very dissatisfied' category.

A review of the previous literature revealed that the determinants most often adopted for investigating residential satisfaction were: number of rooms per person, tenure, structure type, duration of residence etc. for housing satisfaction, and sense of safety, social disorder, social tie, awareness of crime rate, distance from public facilities, school etc. for neighborhood satisfaction. Of course the satisfactions are also closely related to such socio-demographic factors as age, education, job, income, race, gender, number of children, marital status etc. Since not all these variables are available in our data sets, we selected only the following key variables that were available in both the SSS and the AHS.

Householder's age(HHERAGE) is adopted as an explanatory variable. This variable is used widely in almost every residential satisfaction study. In general, older residents are more likely to be satisfied with their residential environment(Speare. 1974; McAuley. 1985; McHugh e. al. 1990; Lu. 1999). However, that was not true in some studies(Basolo and

Strong. 2002; Jagun. 1990). Rather than household composition, we adopts the effect of gender(GENDER), which was also expected to demonstrate differing residential satisfaction, which would be reflective of the different expectations of gender roles in Korean and the US. Household types(HHTYPE) is about marital status. The result of marital status, which we believe would affect an individual's psychological stability, is speculated to show some relationship with housing and neighborhood satisfaction.

As postulated in previous studies, educational attainment of a householder(EDU) plays an important role in residential satisfaction, (Speare. 1974; Galster. 1987; Jagun. et al, 1990; Amérigo and Aragonés. 1990; Lu. 1999; Basolo and Strong. 2002). Results of the education variable(EDU) should be very interesting, considering the implications that they provide. First, as one's educational level increases, the possibility of residing in better housing and neighborhood also increases. Second, education variables are used to supplement data regarding income and status of occupation, of which information have been unavailable or incomplete in our data. As one of the three components of the socio-economic index-education introduced by Butler et al.(1970) introduced, the only available variable of education could be interpreted as a proxy of socio-economic status of respondents. Lastly, comparison of the

Table 1 _ Explanation of Variables

Variables	Description
Dependent	
HL_SATI	housing satisfaction
(housing model only)	VS, ST, NE, DS, VD
N_SATI	neighborhood satisfaction
(neighborhood model only)	VS, ST, NE, DS, VD
Independent	
NEIGHSAT	rating of neighborhood as place to live
(housing model only)	VS=10, ST=8, NE=6, DS=4, VD=2
HOUSSAT	rating of unit as place to live
(neighborhood model only)	VS=10, ST=8, NE=6, DS=4, VD=2
YRMOVE	duration of residence in year
HHERAGE	age of householder(>18)
GENDER	gender of householder 1=male, 0=otherwise(ref.)
Education	educational attainment of householder
EDU_1	below or equal high school diploma(ref.)
EDU_2	below bachelor's degree
EDU_3	bachelor's degree
EDU_4	graduate school and over
Household Type	marital status of householder
HHTYPE_1	never married
HHTYPE_2	married
HHTYPE_3	widowed/divorced(ref.)
HOUSTYPE	structure type of housing unit 1=apartment, 0=otherwise(ref.)

Source: Korea-The Social Statistics Survey(2001, 2004),
The US-American Housing Survey(2001, 2003)

Note: VS-very satisfied, ST-satisfied, NE-neutral,
DS-dissatisfied, VD-very dissatisfied.

educational effects on housing satisfaction between the two countries is expected to reveal the degree of how well the educational

level determines a person's perception, as well as physical well being. The EDU variable consists of four categories, and as a reference group for the variable, EDU_1 represents the lowest level-'high school diploma and below.'

How does duration of residence(YRMOVE) affect residential satisfaction? Housing conditions can become inadequate over time as construction and duration of residence may have negative impacts on housing satisfaction. While housing satisfaction over time may not exhibit a difference between Korea and the US, the issue of neighborhood satisfaction over time may require another framework, given the presence of existing but inconsistent results, even from the same culture(McHugh, et al. 1990). The result of the effect of duration of residence on residential satisfaction could be quite interesting, given the socio-cultural differences between two countries. In addition, the importance of tenure type(TENURE) in residential satisfaction is omnipresent in almost every study, generally attesting to the positive contribution of homeownership on residential satisfaction (Speare. 1974; McAuley and Nutty. 1985; Galster. 1987; Lu. 1999; Basolo and Strong.. 2002; Elsinga. et al. 2005).

Nevertheless, arguments by McHugh et al.(1990) indicate the complexity of the issue of residential satisfaction. Moreover, superiority of homeownership on residential satisfaction is a very controversial issue. Kemeny(1986) raises question regarding the

intentions of homeownership policies, and Barcus(2004) shows that tenure shift from ownership to rent increased residential satisfaction in cases of urban–rural migration, even though in the US. Structure, the type of housing unit(HOUSTYPE) is expected to reflect diversity in preference of individuals or physical condition of housing units depending on regional context. The different meanings of multi–family housing and single–family housing with respect to residential satisfaction between Korea and the US is also explored in the present study, with apartments coded as 1 and other structure types coded as 0.

VI. Findings

1. Descriptive Analysis

1) Residential Satisfaction Level

Henceforth, VS denotes ‘very satisfied’, ST ‘satisfied’, NE ‘neutral’, DS ‘dissatisfied’, and VD ‘very dissatisfied’. With regards to the housing satisfaction level <Figure 1>, we compared the percentage of the 2001 SSS & the 2001 AHS(a), and the 2004 SSS & the 2003 AHS(b). Unlike the US, which experienced little change between 2001 and 2003, Korea demonstrated a relatively significant change between 2001 & 2004 with a 1.94% increase in ST, a 1.59% increase in DS, and 5.16% decrease in NE. This change may be reflective of the difference in housing market conditions

between two countries.

The neighborhood satisfaction level <Figure 2> is depicted in a manner similar to the comparison of housing satisfaction levels. There were no significant changes between(a) and(b), indicating that the condition of neighborhood satisfaction in both countries was relatively stable during the survey periods. One notable point of the neighborhood satisfaction levels was the percentage of DS, displaying a higher frequency of VD in the US than that of Korea.

The overall tendencies of Korea and the US were similar in both housing and neighborhood satisfaction level, with the NE category holding the largest proportion. An exception to this tendency was the rate of VS and ST, the proportions of which were much higher in the US than for Korea. Two likely explanations of the remarkable contrast between VS and ST of Korea and the US are as follows. First, the situation might be explained by actual physical differences of housing and neighborhood condition between Korea and the US. In general, the U.S. provides better housing and neighborhood facilities and environments such that residents in the US express greater residential satisfaction than those in Korea. A second explanation for the contrast may lie in the difference of how individuals in the two countries express their feelings or inconsistencies in the countries epistemological backgrounds. Koreans are

Figure 1 _Housing Satisfaction

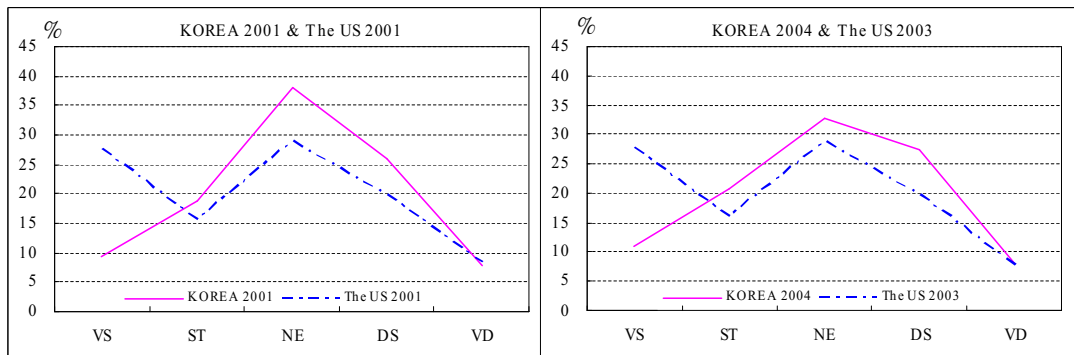
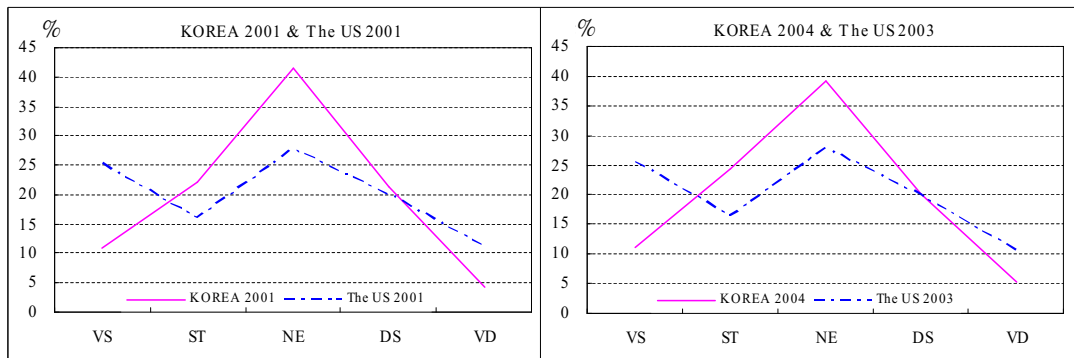


Figure 2 _Neighborhood Satisfaction



educated in such a way that they are be modest in expressing their thoughts and feelings, allowing them to not stray from the opinion of the majority, a practice originating from community centered traditions of Confucianism. Conversely, Americans are encouraged to be honest regarding their feelings and often do not to hesitate to show such feelings, especially in positive way(Nisbett. 2003). Such a practice may stem from the traditions of self-reliance and positivism of Pragmatism and Individualism.

2) Sample Characteristics

To illustrate the sample features of the present study, we present some statistics of the independent variables by each satisfaction level. On average, householders in Korea were slightly older than the US by 1.77 years in 2001 and 1.33 years in 2004(US 2003). The duration of current residence(YRMOVE) in Korea has decreased from 10.04 years in 2001 to 8.48 years in 2004, while the US experienced little change between 2001 and 2003(11.4 and 11.16 years, respectively). VS holds the longest duration of residence in every models indicating possibility that long residence has positive relationship with housing and neighborhood satisfaction.

Table 2 _ Sample Characteristics for the Housing Satisfaction Models

Variable	Korea						The US					
	2001						2001					
	Total	VS	ST	NE	DS	VD	Total	VS	ST	NE	DS	VD
Mean HHERAGE (year)	47.65	52.81	49.27	46.84	46.16	46.22	49.42	54.72	50.36	48.31	44.57	44.94
Mean YRMOVE (year)	10.04	14.50	11.34	8.75	9.29	10.27	11.04	13.32	11.39	10.84	8.87	8.43
% GENDER (Male)	76.44	79.08	77.11	75.77	76.96	73.16	58.35	57.24	61.01	59.60	58.61	52.22
% EDU_2	9.31	7.22	9.15	9.57	10.20	7.97	28.18	25.95	27.55	28.73	30.65	29.05
% EDU_3	13.44	14.07	16.24	12.75	12.70	11.74	17.57	14.78	21.57	18.74	18.85	12.33
% EDU_4	2.84	3.61	4.16	2.46	2.62	1.39	9.82	9.12	12.56	10.70	9.13	5.69
% HHTYPE_1	10.02	6.07	8.49	11.74	10.09	9.95	18.15	11.10	15.73	18.08	25.68	28.52
% HHTYPE_2	74.71	78.12	76.30	72.82	75.96	71.82	56.30	60.51	60.21	57.69	50.67	43.70
% TENURE	56.35	79.12	66.44	51.62	51.40	44.00	66.96	78.42	75.51	68.79	54.40	36.64
% HOUSTYPE	28.37	28.81	35.18	29.76	25.06	15.86	24.70	16.42	20.01	23.65	33.47	43.70
Variable	2004						2003					
	Total	VS	ST	NE	DS	VD	Total	VS	ST	NE	DS	VD
Mean HHERAGE (year)	48.26	53.46	50.27	47.16	46.29	47.26	49.59	54.95	50.34	48.37	44.79	45.39
Mean YRMOVE (year)	8.48	11.01	8.96	7.60	8.17	8.41	11.16	13.21	11.53	10.99	9.12	8.74
% GENDER (Male)	75.24	76.27	75.22	75.39	75.93	70.87	57.22	55.25	60.21	58.85	58.09	49.88
% EDU_2	8.98	6.64	8.68	9.67	9.60	8.06	28.42	26.48	27.64	29.02	30.96	28.33
% EDU_3	16.33	15.02	17.77	16.36	16.56	13.50	18.39	15.92	22.27	19.66	18.93	13.09
% EDU_4	3.36	4.59	4.12	2.81	3.25	2.30	10.10	9.55	13.72	10.69	8.77	5.82
% HHTYPE_1	9.05	5.84	7.10	11.26	9.02	9.59	18.23	12.17	14.81	18.23	25.76	27.74
% HHTYPE_2	73.72	76.07	75.19	71.57	75.62	69.02	56.29	59.20	62.31	57.09	50.74	44.65
% TENURE	59.97	78.91	69.99	55.38	55.37	42.87	67.44	78.12	76.81	69.12	54.55	36.58
% HOUSTYPE	37.75	34.54	43.91	40.33	36.04	21.68	25.11	18.01	18.88	24.15	33.28	45.99

Note: VS=Very Satisfied, ST=Satisfied, NE=Neutral, DS=Dissatisfied, VD=Very Dissatisfied.

Source: Korea—The Social Statistics Survey(2001, 2004); The US—American Housing Survey(2001, 2003).

In Korea, the fact that the percentage of men(GENDER) among householders was much higher than in the US may reflect remnants of Confucianism regulating men's dominance at home, demonstrated in one virtue of the three bonds defining the hierarchy of husband and wife(夫婦有別). The general education level(EDU) exhibited a significant discrepancy between Korea and the US. A low level of educational attainment among householders

in Korea is consistent with the difficult times experienced by householders born in 1950s, a time when Korean War had just finished.

In both Korea and the US, the residential satisfaction of the group of householders with bachelor's degree or higher(EDU_3, EDU_4) had a high proportion in satisfied or very satisfied. Taking the 2001 housing satisfaction of EDU_3 as an example, householders with bachelor's degree in Korea

Table 3 _ Sample Characteristics for the Neighborhood Satisfaction Models

Variable	Korea						The US					
	2001						2001					
	Total	VS	ST	NE	DS	VD	Total	VS	ST	NE	DS	VD
Mean_HHERAGE (year)	47.65	53.34	49.37	46.95	44.97	44.27	49.42	54.30	49.88	48.82	45.77	45.48
Mean_YRMOVE (year)	10.04	15.52	11.63	8.90	8.12	8.28	11.04	12.92	10.98	10.99	9.52	9.58
% GENDER (Male)	76.44	75.57	75.79	75.34	79.32	78.36	58.35	57.31	61.36	59.96	59.26	50.79
% EDU_2	9.31	7.16	8.93	9.33	10.50	10.65	28.18	25.27	28.33	28.37	30.60	29.71
% EDU_3	13.44	14.61	14.82	11.61	14.70	14.68	17.57	15.06	21.55	18.68	18.81	12.52
% EDU_4	2.84	3.97	3.48	2.37	2.64	2.27	9.82	9.07	12.60	10.80	9.49	5.70
% HHTYPE_1	10.02	5.37	8.51	11.90	10.28	10.32	18.15	12.01	15.23	17.56	23.86	27.41
% HHTYPE_2	74.71	75.73	74.90	71.97	78.74	77.68	56.30	59.06	61.40	58.34	52.18	45.18
% TENURE	56.35	74.67	62.52	50.89	52.85	47.48	66.96	74.55	73.53	69.97	58.98	47.36
% HOUSTYPE	28.37	30.99	33.12	27.20	26.32	18.62	24.70	17.73	19.92	23.24	31.28	39.09
Variable	2004						2003					
	Total	VS	ST	NE	DS	VD	Total	VS	ST	NE	DS	VD
Mean_HHERAGE (year)	48.26	52.93	49.71	47.95	45.14	45.91	49.59	54.35	50.12	49.00	45.95	45.64
Mean_YRMOVE (year)	8.48	10.86	9.07	8.10	7.35	7.87	11.16	12.79	11.33	11.12	9.79	9.60
% GENDER (Male)	75.24	74.67	74.54	73.95	78.70	76.11	57.22	55.46	60.35	59.24	57.49	50.76
% EDU_2	8.98	7.05	8.59	9.01	10.52	8.84	28.42	26.43	28.20	28.49	30.38	29.74
% EDU_3	16.33	16.88	18.21	14.54	17.44	15.58	18.39	16.00	21.99	20.01	19.06	13.03
% EDU_4	3.36	5.03	4.15	2.55	3.26	2.53	10.10	9.40	13.49	10.90	9.36	5.82
% HHTYPE_1	9.05	5.82	7.75	10.48	9.08	11.19	18.23	12.60	15.98	17.55	23.60	27.04
% HHTYPE_2	73.72	75.34	74.56	70.65	77.82	73.65	56.29	59.05	61.06	57.45	51.89	47.40
% TENURE	59.97	74.90	66.14	55.67	55.50	49.04	67.44	74.56	74.21	70.49	59.70	46.11
% HOUSTYPE	37.75	38.46	44.12	35.79	36.33	26.90	25.11	18.57	20.15	23.22	31.56	41.51

Note: VS=Very Satisfied, ST=Satisfied, NE=Neutral, DS=Dissatisfied, VD=Very Dissatisfied.

Source: KOREA-The Social Statistics Survey(2001, 2004); The US-American Housing Survey(2001, 2004).

accounted for 13.44% of the whole education group, and 14.07% in VS satisfaction category, 16.24% ST, 12.75% NE, 12.70% DS, and 11.74% VD level. On the other hand, residents with bachelor's degree in the US were responsible for 17.57% of the education group, and consisted of 14.78% VS, 21.57% ST, 18.74% NE,

18.85% DS, and 12.33% VD. Married respondents(HHTYPE_2) expressed higher levels of housing and neighborhood satisfaction, although this trend was more evident in Korea. Homeowners were especially satisfied with their current residences and neighborhoods. Respondents with

homeownership(TENURE) accounted for 79.12%(2001) and 78.91%(2004) in the highest level of housing satisfaction, and 74.67%(2001) and 74.90%(2004) in the category of very satisfied neighborhood satisfaction. In the US, the percentages of very satisfied homeowners were 78.42% in 2001 and 78.12% in 2003, while 74.55% in 2001 and 74.56% in 2003 expressed a VS level of neighborhood satisfaction. This difference between Korea and the US may indicate the strengthening effect of homeownership on residential satisfaction. Apartment residents(HOUSTYPE) in Korea underwent a remarkable increase between the two years, rising from 28.37% to 37.75%; US residents maintained a level around 25%. This demonstrates the dynamic housing condition of Korea, along with an increase in homeownership. While more residents of apartments in Korea expressed satisfied feeling regarding their residential environment, residents of multi-family housing in the US appeared to be more dissatisfied with their housing and neighborhood. Such a trend is consistent with the observation that people in Korea, in general, prefer to live in apartments and that more than 50% of apartments belongs to owner. Conversely, multi-family housing in the US is composed largely of rental housing.

2. Result of Ordered Probit Methods

The major purpose of this study is to determine whether there are differences in the level of residential satisfaction between Korea and the US. For the purpose of this comparison, we discuss the determinants of housing satisfaction and neighborhood satisfaction in Korea and the US., applying the ordered probit model as explained previously.

1) Determinants of Residential Satisfaction

(1) Housing Satisfaction

The housing satisfaction models of both countries partially confirmed the conclusions of previous housing satisfaction studies as well as our expectations. The degree of housing satisfaction was notably differentiated among gender(GENDER), education(EDU) and housing type(HOUSTYPE) variables between Korea and the US. The remaining variable, however, exhibited a similar trend as presented in <Table 4>. The level of housing satisfaction tended to increase with higher neighborhood satisfaction(NEIGHSAT). As expected, a longer duration of residence(YRMOVE) in a dwelling unit diminished housing satisfaction in both counties, a trend that was consistent with the previous findings(Onibokun. 1976; Galster. 1987; McHugh. et al. 1990; Américo and Aragonés. 1990). Studies demonstrating the direct relationship between recent mobility and housing satisfaction(Morris. et

Table 4 _Models for Housing Satisfaction

Variable	2001				2004(The U.S.2003)			
	Korea		The U.S.		Korea		The U.S.	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
NEIGHSAT	0.2913***	0.0035	0.3043***	0.0025	0.2801***	0.0032	0.3190***	0.0025
YRMOVE	-0.0040***	0.0006	-0.0024***	0.0006	-0.009***	0.0010	-0.0037***	0.0006
HHERAGE	0.0048***	0.0006	0.0072***	0.0005	0.0084***	0.0006	0.0081***	0.0005
GENDER	0.0368**	0.0186	-0.0726***	0.0124	0.0507***	0.0175	-0.0646***	0.0123
EDU_2	0.0588**	0.0231	-0.0193	0.0138	0.0644***	0.0227	-0.0253*	0.0139
EDU_3	0.0867***	0.0197	-0.0445***	0.0162	0.0341*	0.0177	-0.0351**	0.0162
EDU_4	0.1640***	0.0389	-0.0391*	0.0202	0.0965*	0.0344	-0.0336*	0.0202
HHTYPE_1	0.2113***	0.0313	0.0554***	0.0198	0.2110***	0.0296	0.0629***	0.0199
HHTYPE_2	0.0590***	0.0228	0.0780***	0.0154	0.0432**	0.0209	0.0715***	0.0154
TENURE	0.2870***	0.0155	0.4068***	0.0169	0.3158***	0.0149	0.4272***	0.0173
HOUSTYPE	0.0806***	0.0156	0.0167	0.0173	0.0585***	0.0139	0.0610***	0.0177
CONSTANT	3.8940***	0.0452	3.3763***	0.034	3.8837***	0.0426	3.5636***	0.0349
μ_2	0.9179***	0.0434	0.5723***	0.0332	0.9263***	0.0409	0.6047***	0.034
μ_3	2.0835***	0.0419	1.6014***	0.0319	1.9239***	0.0397	1.6543***	0.0325
μ_4	3.2136***	0.0416	2.6565***	0.0315	3.1087***	0.0392	2.7468***	0.0321
Sample Size	28314	-	38310	-	30829	-	43357	-
-2 Log Likelihood	-	-	-	-	-	-	-	-
Intercept only	82416.63	-	115663.95	-	91977.91	-	114242.64	-
With covariates	73852.73	-	96062.69	-	82504.43	-	93769.81	-

note: * p<0.10, **p<0.05, ***p<0.01

al. 1976; Bross. 1975) may be explained in a similar manner.

Older respondents expressed more satisfied feeling regarding their housing than younger residents(HHAGE). Two explanations appear relevant for understanding this positive relationship between ageing and housing satisfaction. The first relates to an individual's conformism or acceptance of their residential environment with increasing tolerance for deficiencies as time passes(Galster. 1987; Lu. 1999). Older people exhibit this tendency not only in housing satisfaction, but also in overall satisfaction

with life(Campbell. et al. 1976). A second explanation appears to lie in the relationship between age and socioeconomic status, as postulated by Morris(1978), who argued that socioeconomic status increases steadily with age and may result in an increasing amount of money that can be spent on housing, which in turn can cause a rise in the quality of housing.

Korea and the US showed opposite sign in gender on housing satisfaction. One plausible explanation for this phenomenon is the difference of gender roles in the two countries. Traditional socialization processes

of different societies determine a person's gender specific perspective of self and life according to cultural background(Tran and Ngyue. 1994). Further, gender acts as a master of status, often limiting one to particular roles and shaping interactions(Hughs. 1945; Angrist. 1969). Confucian philosophy and ethics continue to strongly influences Korean family life where wives are expected to assume full responsibility for the household tasks(Lee. et al. 2004). As women generally think of their instrumental activities, i.e. rearing children and taking care of the dwelling unit, as frustrating(Gove. et al. 1973), we can assume that the burden of housekeeping impedes housing satisfaction of Korean women. One of the contributions to high status of American women compared to that of Korean women may be the concept of instrumental truth and morality in Pragmatism²⁾. Sex equality was demanded by women in order to adjust to the social change and difficulties of the industrial era following the Great Depression(Herman, 1944). The relatively liberal atmosphere of society and balanced sex role in the US may have further contributed to the rise of women's housing satisfaction relative to men.

The inconsistent signs of the EDU coefficient in the two countries are somewhat puzzling. With higher educational attainment,

the odds of being satisfied with one's dwelling unit is increased when compared to 'high school graduate and below' group in Korea. The education effect on housing satisfaction in the US, however, exhibited a reverse outcome, i.e. the lowest education level group expressed the greatest housing satisfaction. Jagun et al.(1990) and Basolo and Strong(2002) illustrate similar cases to our result for the US. What Schorr(1966) denoted as 'paradoxical findings', which indicates that residents dwelling in relatively low level of surroundings express higher satisfaction despite a physically inappropriate environment, appears to be valid only in the US for the present study. Perhaps one of the appropriate explanations of the effect of education in Korea was offered by Morris 1978), who noted that most individuals and families adjust to their housing quality and expenditures according to their socioeconomic status.

The inconsistent results of Korea and the US may also reflect differences in the meaning of education of the two societies. Americans are not concerned with abstract disciplines, knowledge for the sake of knowledge, verbal solutions, and useless questions, but rather hold education as a practical value(Herman. 1944). In Pragmatism, education is more critical for improving intelligence acquired through inquiry, experience, and science for

2) Truth and Good were not fixed, but the man-made adjustment to problems of experience through scientific method (Herman. 1944).

growth of an individual or society, rather than as a tool for achieving higher socioeconomic status or to recover goodness of human nature by realizing the Ultimate(極) in Confucianism as explained in the Analects of Confucius(論語)(Lee, 2001). A high level of educational attainment does not necessarily lead to pragmatic results; to the contrary, it often produces opposite results. Further, belief in the incompleteness of knowledge and the subjectivity of the pragmatic view may contribute to the formation of unexpected levels of housing satisfaction within the lowest educational attainment group. A more plausible explanation regarding the incongruence of the educational effect is the actual and physical variance of housing quality of the two countries. In the US, the general quality of housing is higher and its variance according to socioeconomic status is smaller compared to that of Korea. Therefore, the degree of housing satisfaction of the lower socioeconomic group in the US could very well be higher. Likewise, the hierarchy of educational attainment in Korea strongly determines the quality of residential environment compared to the US.

In both the US and Korea, married(HHTYPE), single homeowners(TENURE) or residents in multi-family housing(HOUSTYPE) tend to be more satisfied with their housing than those who are unmarried, renters or people living in single-family housing in both countries.

Hoekstra(2005) reported that owner-occupied housing is likely to be of a higher quality than of tenant-occupied housing, which could be an explanation for the aforementioned trend. And, a preference for homeownership and an accordingly higher housing satisfaction may necessarily be true for every country, as observed by Elsinga and Hoekstra(2005). Attachment to homeownership is a dominant phenomenon, especially in English-speaking countries, and this is explained by Saunders(1990) accentuating individualism and concern for private property in the western society. Homeownership as a norm has permeated American history and housing policy, especially with regards to financing and tax policies(Morris, 1978; Kemeny, 1986). Attainment of homeownership is so attractive to Americans that people often choose to own multi-family housing which is perceived to be inferior to single-family housing in cases of a lack of affordability(Lee and Myer, 2003).

The homeownership preference may be stronger in Korea than in the US. Regarded in the same light as mother, earth is one of the two universal symbols that are necessary for the establishment of family and society according to The Book of Changes(周易)(Keum, 2000). Family is considered the center of an individual's life, and land serves as its concrete basis through which ancestors and descendants are connected. As a result, one might expect a high preference of homeownership of Koreans by the fact that

Koreans traditionally have a strong will to possess land of their own. Most of the literature on housing satisfaction reports that single-family housing is highly preferred over multi-family housing or apartments (Michelson. 1976; Michelson. 1977; Moris. 1978; Jagun. et al. 1990; Lee. et al. 2003), a concept that was inconsistent with results obtained from US, although the 2001 data appeared insignificant. Multi-family housing or apartment is believed to have unfavorable aspects such as limited living space, shared space with non-family members, and are sometimes associated with restricted access to the outdoors. These deficiencies imply the significance of both Individualism and land availability of the US. Reluctance to share living space with others reflects individual-centered ideology and a strong will to protect privacy, as presented by Dewey in addressing the dark side of modern interdependency of society(Shannon. 1996). With respect to the housing market, the US has a greater availability of land for housing compared to Korea, which may have enabled housing suppliers to provide more spacious and decent single-family housing in suburban areas rather than to pile up quality-degraded housing necessitated by a lack of space and high land prices in central urban districts. Housing has directly related to psychological stress and thus, the undesirable characteristics of multi-family housing or apartments should have engendered

dissatisfaction.

The unexpected findings regarding housing structure(HOUSTYPE) may also be explained by the “paradoxical findings” of Schorr(1966). The higher housing satisfaction among multi-family housing dwellers in the US has been shown to be inconsistent with that of Korea; however, the concept and quality of multi-family housing or apartments is in general superior to those of single-family housing in Korea. Therefore, the results require another explanation in terms of housing policy. With the rapid urbanization and modernization of Korea augmenting housing demands, the construction industry has been fostered into one of the momentums of Korean economic growth. The focus of housing supply has shifted from quantity to quality(Kim. et al. 2005) as the housing shortage has been mitigated and the standard of living has improved. In addition, the primarily developed structure has been the “apartment building,” with approximately 5.2 million units accounting for 47.73% of the residential buildings in Korea according to the 2000 Korean Census 2000(Kim. et al. 2005). Provided that the housing policies of this period in Korea have primarily benefited the middle and higher income groups(Kim and Suh. 1994; Kim. 2000), and that newly constructed housing is of higher quality, the preference for the “apartment building” as a dwelling unit can be easily justified in the Korean context. Why people in multi-family

housing are more satisfied than people in single-family housing in the US is mysterious and further investigations are needed.

(2) Neighborhood Satisfaction

In general, most results in neighborhood satisfaction models also appeared to be statistically significant. However, the results showed contrary effects on neighborhood satisfaction with respect to duration of residence(YRMOVE), gender(GENDER), household type(HHTYPE_2), and housing structure type(HOUSTYPE), as presented in <Table 5>. Comparison between housing

satisfaction and neighborhood satisfaction on key variables was conducted in this section as well. As shown in the literature and earlier parts of this study, higher housing satisfaction(HOUSSAT) is closely associated with increased neighborhood satisfaction. As in housing satisfaction model, older individuals were more likely to be satisfied with their neighborhood, possibly because they were more inclined to develop social bonds, as reported by Oh(2003), or because of an increased acquisition of assets over time leading to greater affordability for a better suited-living environment, similar to the

Table 5 _Models for Neighborhood Satisfaction

Variable	2001				2004(The U.S.2003)			
	Korea		The U.S.		Korea		The U.S.	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
HOUSSAT	0.2775***	0.0033	0.3130***	0.0025	0.2633***	0.0030	0.3291***	0.0026
YRMOVE	0.0078***	0.0006	-0.0035***	0.0006	0.0089***	0.0010	-0.0032***	0.0006
HHERAGE	0.0079***	0.0006	0.0060***	0.0005	0.0070***	0.0006	0.0057***	0.0005
GENDER	-0.0173	0.0187	0.0254**	0.0123	-0.0637***	0.0175	0.0167	0.0122
EDU_2	0.0118	0.0233	-0.0141	0.0137	0.0428*	0.0228	0.0016	0.0138
EDU_3	0.0202	0.0198	0.0517***	0.0161	0.0855***	0.0177	0.0543***	0.0161
EDU_4	0.1162***	0.0391	0.0572***	0.0200	0.1953***	0.0346	0.0519***	0.0200
HHTYPE_1	-0.0003***	0.0315	-0.0290***	0.0197	0.0377	0.0297	-0.0100	0.0198
HHTYPE_2	-0.0959***	0.0230	0.0374**	0.0153	-0.0137	0.0210	0.0317**	0.0152
TENURE	-0.0539***	0.0156	-0.0823***	0.0169	-0.0106	0.0150	-0.0920***	0.0173
HOUSTYPE	0.1655***	0.0157	-0.1582***	0.0173	0.1412***	0.0140	-0.1833***	0.0176
CONSTANT	3.4989***	0.0439	3.1840***	0.0334	3.4521***	0.0412	3.2809***	0.034
μ_2	0.9594***	0.0422	0.6035***	0.0326	1.0274***	0.0395	0.6258***	0.0331
μ_3	2.2448***	0.0408	1.5523***	0.0314	2.2322***	0.0383	1.6005***	0.0319
μ_4	3.4870	0.0414	2.4756***	0.0311	3.3270***	0.0386	2.5485***	0.0316
Sample Size	28314	-	38310	-	30829	-	43357	-
-2 Log Likelihood	-	-	-	-	-	-	-	-
Intercept only	79504.86	-	118108.37	-	88467.59	-	116589.15	-
With covariates	70744.33	-	99878.70	-	79235.04	-	97444.99	-

note: * p<0.10;**p<0.05;***p<0.01

inferences made by Campman(2006). The latter explanation is exactly identical with that provided for the effect of age on housing satisfaction, demonstrating again the closeness of housing satisfaction and neighborhood satisfaction. Previous studies have shown that longer duration of residence in the same place improves community ties, owing to the accumulation of social and psychological bond, which consequently results in increased neighborhood satisfaction (Speare. 1974; Morris. et al. 1978; McAuley and Nutty. 1985; McHugh. et al, 1990; Lu. 1999). While this argument supports the effect of duration of residence(YRMOVE) in Korea, it fails to explain the effects seen in the US. Even though it is true that neighboring increases over time in the US as well, recent changes in social interactions(Philipson et al., 1999) through “lost” or “mitigated” community ties(Guest. et al. 1999; Putnam. 1995) may have helped to shape the effect differently. McHugh. et al.(1990) suggested similar findings with the US result of the current study in terms of the cumulative stress hypothesis of Huff and Clark(1978), who argue that residential stress increases over time as a household grows out of sync with their overall neighborhood environment. This contradicting result between the two countries could also be construed through the frame of epistemology: community of Confucianism in Korea vs. self-reliance of Individualism in the US.

While men(GENDER) tend to be more satisfied with their neighborhood in the US, the opposite is true in Korea, where women are more likely to feel satisfied with their neighborhood than men. Higher levels of education(EDU_3, EDU_4) are associated with an increased probability of expressing high neighborhood satisfaction identically in Korea and the US, a finding that is consistent with those of Lu(1999) and Basolo and Strong(2002). What is conspicuous regarding this finding is the opposite tendency of the education effect on housing and neighborhood satisfaction of the US. Higher education groups feel less satisfied with their housing and more satisfied with neighborhood. As postulated by Wirth(1947), this may be due to sensitiveness of the US citizens towards the issue of social status, standard of living, racial and ethnic composition of their neighborhood. Thus, the highly educated group of the US may invest more on residential environment for the sake of housing quality with the budget constraints. Married(HHTYPE_2) couples in Korea appeared to have a lower probability of expressing high neighborhood satisfaction compared to those who are divorced or widowed, whereas couples in the US express a higher probability of neighborhood satisfaction. This tendency of Korea is somewhat extraordinary, considering the conventional belief that the married generally have a higher level of dwelling attributes as

shown in previous studies(Jagun. et al. 1990; Galster. 1987).

The evidence of Campbell. et al.(1976), which demonstrates the negative relationship between neighborhood satisfaction and married status, is consistent with this result, but a proper explanation seems to require another rationale related to the aforementioned factor of education. In his study to explore the historical development of 'educational fever', Choi(2000) explained that one of the methods to express appreciation for one's parents(孝) is to make his(mainly 'his' because of the man-centered ethics of Confucianism) name well renown(立身揚名). The only path that one can be bureaucratic of Chosŏn was to pass the civil service examination following hard academic training in an educational institution established during the early period of Chosŏn. From this tradition, as we have uncovered through residential satisfaction until this point of the present study, education appeared to be more decisive in Korea than in the US, since, in general, educational attainment determines quality of later life more significantly in Korea than in the US(Shin, 1986). Thus, the 'educational fever' of Korean parents for their children is so remarkable that expenditure on education in Korea accounts for 7.1% of its GDP, ranking the highest among the members

of the OECD(OECD. 2003). The problem in Korea is that the quality of education, and thus educational performance and attainment, varies according to districts. For example, 'Kangnam' represents a decent living environment, a quickly increasing rate of housing prices, high price of housing, and better quality of education,. Kim(2002) reported that residents of the than twice the size of the other districts in Seoul³⁾, parents with average incomes who wish to provide a high quality of education to children cannot move into 'Kangnam'(Choi. 2004). Indeed, discrepancies between such aspirations and the reality of married couples may be a considerable source of their neighborhood dissatisfaction in Korea.

Compared to homeowners(TENURE), renters in both countries displayed a higher probability towards feeling satisfied with their neighborhood. This may reflect the stress-threshold theory of Wolpert(1965), which explains that the residential environment can influence a given household in such a way as to create stress. Renters have a greater flexibility to move to an improved neighborhood environment than do homeowners when they encounter the residential stress that Speare(1974) replaced with residential dissatisfaction in his migration theory. Michelson(1977) explains

3) Comparison of land prices has been conducted based on OARLP(Officially Assessed Reference Land Price) which is assessed every year by Korea Association of Property Appraisers and announced by Ministry of Construction & Transportation of Korea.

this in the view of housing satisfaction through a reverse fashion: although homeowners feel powerless about their location and size, they have much more freedom than renters to modify their housing through repairs or remodeling. Thus, homeowners are often more satisfied with their housing and less so with their neighborhood, which is invariant in Korea and the US. On the other hand, regional differences in rent represent compensating differentials and can be used as a proxy of environmental quality (Greenwood et al. 1991). The contradicting results of TENURE on housing and neighborhoods may reflect that renters of the two countries place more value on neighborhood environment than housing quality. Occupants in multi-family houses tended to express satisfaction with their neighborhood in Korea, as expected. However, the fact that multi-family housing ownership is regarded as a bridge to access single-family housing ownership in the US (Lee et al. 2003) implies that a higher level of financial stability is required to reside in single-family housing. Accordingly, residents in multi-family housing often have neighbors with lower socioeconomic status and inferior physical residential environments. Putnam (1995) claims that, in general, poor neighborhoods lack self-help, mutuality and trust. This may explain the decreasing neighborhood satisfaction among multi-family housing dwellers in the US.

Epistemological difference between independent individualism and interdependent Confucianism may have contributed to the varying preference of housing structure types as well.

VII. Conclusion

This study has attempted to examine how evaluation of one's residence differs according to the diverse perceptual and physical background between Korea and the US. Most of the determinants included in our housing and neighborhood satisfaction models appeared to be relevant predictors of residential satisfaction in both Korea and the US. These findings confirmed previous results regarding several variables; however, some of the variables were incongruent, offering valuable insight on residential mobility, housing situation and society.

An intriguing feature identified in the present study was the difference between Korea and the US regarding the expression one's feelings. This difference may stem from the discriminating process of socialization, which reflects dissimilar epistemological background, or actual discrepancies of residential quality of the two countries. Higher level of housing satisfaction was related to greater neighborhood satisfaction in both countries. Regarding housing satisfaction, married, older homeowners and people in multi-family housing with shorter

duration of residence expressed more satisfied feelings with their residential environment in both countries.

However, we also found that the satisfaction level for gender and education is quite contrary between two countries. The outcome of neighborhood satisfaction models were not necessarily congruent with that of housing satisfaction, rather, they generated considerable discrepancies. Older renters with a higher level of education were positively correlated with greater neighborhood satisfaction in Korea and the US as in the housing satisfaction models. Longer duration of residence increases neighborhood satisfaction only in Korea. Female residents in Korea tended to be more satisfied with their neighborhood, a finding that was contrary to the US. Higher levels of education had a positive influence on neighborhood satisfaction, a finding that was inconsistent with the outcome of housing satisfaction models of the US. Married, and single-family housing dwellers were the least satisfied with their neighborhood in Korea while those groups in the US were more satisfied. We also demonstrated that the effect of education on residential satisfaction was much more significant in Korea than in the US.

The statistical significance of most variables of the variables, as well as the incongruence of its effect on housing and neighborhood satisfaction, provided meaningful insights into the nature of

residential satisfaction. That is, the determinants of housing and neighborhood satisfaction were similar; however, their influence was varied between the two models. As we have already enumerated, differences in epistemology, the situation of the housing market, housing policy, social relations, social strata, and many other culture-specific propensities may have helped to shape the differences in residential satisfaction of Korea and the US. This, in turn, provides significant support for the hypotheses of the present study, that housing research is a relevant method for analyzing society and its differences, and that existing differences in residential satisfaction between Korea and the US are caused partly due to epistemological differences.

Although the importance of subjective perception in determining residential satisfaction has been emphasized in the literature, relatively few studies have provided empirical evidence. The research of the present study has demonstrated the significance of this concept empirically. In this paper, we have extended classic works on residential satisfaction by comparing two countries with dissimilar epistemological backgrounds. In addition, this expansion provided valuable insights into investigating society. Despite the usefulness of the present study, it has failed to include important determinants of residential satisfaction such as overcrowding, level of income, job type,

neighborhood facilities, urban-rural difference, etc., because of limited available information. Controlling for these variables in a model could provide results that yield improved and insightful implications and thus additional research regarding this matter is warranted. It is hoped that the findings of the present study help enlarge the scope of housing studies in such a way as to be able to better investigate society as a whole, and to shed new light on residential satisfaction studies that explore more fundamentally influencing factors.

Reference

- Amérigo, M., and Aragonés, J. I. 1990. "Residential Satisfaction in Council Housing". *Journal of Environmental Psychology* vol. 10. pp313-325.
- Amérigo, M., and Aragonés, J. I. 1997. "A Theoretical and Methodological Approach to The Study of Residential Satisfaction". *Journal of Environment and Psychology* vol. 17. pp47-57.
- Angrist, Shirley. 1969. "The Study of Sex Roles". *Journal of Social Issues* vol. 25. pp215-232.
- Barcus, Holly R. 2004. "Urban-rural Migration in the USA : An Analysis of Residential Satisfaction". *Regional Studies* vol. 38, no. 6. pp643-657.
- Basolo, V. and Strong, D. 2002. "Understanding the Neighborhood: From Resident's Perceptions and Needs to Action". *Housing Policy Debate* vol. 13, no. 1. pp83-105.
- Bross, C.A. 1975. *Normative Housing Deficits and Residential adaptation*. M.S. thesis Iowa State Univ.
- Butler, E.W., Van Arsdol, M. D. Jr., and Sabagh, G. 1970. "Spatial mobility differentials by socioeconomic status, intergenerational, and career social mobility". *Paper presented at the American Sociological Association Meeting* August-September 1970. Washington. D.C.
- Campbell, A., P.E. Converse, and W.J. Rogers. 1976. *The quality of American life : Perceptions, evaluations, and satisfaction*. New York : Russell Sage Foundation.
- Champman, D.W., Lombard, J.R. 2006. "Determinants of Neighborhood Satisfaction in Fee-Based Gated and Nongated Communities". *Urban Affairs Review* vol. 41, no. 6. pp769-799.
- Choi, Bong Young. 2000. Characteristics and Historical Process of Educational Fever. In *Socio-cultural Structure of Educational Fever*. Kyöngi : The Academy of Korean Studies.
- Choi, Eun Young. 2004. "The Differentiation of Reproductions of Educational Capitals and the Formation of the Gated City". *The Journal of the Korean Geographical Society* vol. 39, no. 3. pp374-390.
- Clark, W.A.V., Ledwith, Valerie. 2006. "Mobility, Housing Stress, and Neighborhood Contexts: Evidence from Los Angeles". *Environment and Planning A* vol. 38 pp1077-1093.
- Elsinga, M., and Hoekstra, J. 2005. "Homeownership and housing satisfaction". *Journal of Housing and the Built Environment* vol. 20. pp401-424.
- Galster, George C. 1987. *Homeowners and Neighborhood Reinvestment*. Durham and London, NC : Duke University Press.
- Gove, W.R., J.F. Rudor. 1973. "Adult Sex Roles and Mental Illness". *American Journal of Sociology* vol. 78. pp812-835.
- Greene, W.H. 2003. *Econometric Analysis. 5th ed*. Upper Saddle River. NJ. : PrenticeHall.
- Greenwood, M.J., Hunt, G.L., Rickman D.S., Treyz G.I. 1991. "Migration, Regional Equilibrium, and the Estimation of Compensating Differentials". *American Economic Review* vol. 81, no. 5. pp1382-1390.
- Herman, Thelma. 1944. "Pragmatism: A Study in Middle Class Ideology". *Social Forces* vol. 22, no. 4. pp405-410.
- Heywood, Frances. 2004. "Understanding Needs: A Starting

- Point for Quality". *Housing Studies* vol. 19, no. 5. pp709-726.
- Hoekstra, J.S.C.M. 2005. *Connecting Welfare State Regimes, Tenure Categories and Dwelling Type: In Methodologies in Housing Research*. eds. Vestbr, D., Hürol, Y. and Wilkinson, N. Gateshead. The Urban International Press.
- Huff, J.O., Clark, W.A.V. 1978. "Cumulative Stress and Cumulative Inertia: A Behavioral Model of the Decision to Move". *Environment and Planning A* vol. 10. pp1101-1119.
- Hughs, Everett. 1945. "Dilemmas and Contradictions of Status". *American Journal of Sociology* vol. 50. pp353-359.
- Jagun, A., Diane R., Brown, N. G. Milburn, and Lawrence E. Gary. 1990. "Residential Satisfaction and socioeconomic and Housing Characteristics of Urban Black Adults". *Journal of Black Studies* vol. 21, no. 1. pp40-51.
- Jun, Eunha, Cho, KyuYoung, and Lee, SeongWoo. 2006. "Implications of Korean Traditional Epistemology in Planning Theory: Focusing on the Pragmatic Philosophy of Silhak". *Korea Journal* vol. 46, no. 4. pp168-191.
- Kemeny, Jim. 1986. *A Critique of Homeownership, in Critical Perspective on Housing*. eds. Rachel G. Bratt, Chester Hartman, Ann Meyerson. Philadelphia : Temple University Press.
- Keum, Jang Tae. 2000. *Confucianism and Korean Thoughts*. Seoul : Jimoondang Publishing Company.
- Kim, H. A. 2002. *Analysis on Kangnam Housing Market*. Construction and Economy Research Institute of Korea.
- Kim, Jae Hong. 2000. "An Analysis of Demand for Living Space by Housing Tenure type in Korea". *International Review of Public Administration* vol. 5, no. 2. pp143-152.
- Kim, Kyung Hwan and Suh, Seung Hwan. 1994. *Urban Economics*. Seoul : Hongmunsa.
- Kim, S.S, Yang, I.H, Yeo, M.S, Kim, K.W. 2005. "Development of a housing performance evaluation model for multi-family residential buildings in Korea". *Building and Environment* vol. 40. pp1103-1116.
- Korea National Statistical Office(<http://www.nso.go.kr/nso2005/index.jsp>).[2008.1.1]
- Landale, N.S., Guest, A.M. 1985. "Constraints, Satisfaction and Residential Mobility: Speare's Model Reconsidered". *Demography* vol. 22, no. 2. pp199-222.
- Lee, Kwang Ja, Chae Chung Um, Susie Kim. 2004. "Multiple Roles of Married Korean Women: Effect on Depression", *Sex Roles* vol. 51. pp469-478.
- Lee, S.W., Myers, D. 2003. "Local Housing Market effects on Tenure Choice". *Journal of Housing and the Built Environment* vol. 18. pp129-157.
- Lee, Young Chan. 2001. *Confucian Sociology*. Seoul : Yemoonseowon.
- Liao, T. F. 1994. *Interpreting Probability Models : Logit, Probit, and Other Generalized Linear Models*. Thousand Oaks, CA : Sage Publication.
- Lu, Max. 1999. "Determinants of Residential Satisfaction: Ordered Logit vs. Regression Models". *Growth and Change* vol. 30. pp264-287.
- Maddala, G. S. 1983. *Limited-Dependent and Qualitative Variables in Econometrics*. Cambridge : Cambridge Univ. Press.
- Marcus A., and W. Greene. 1985. *The Determinants of Rating Assignment and Performance*. Working Paper CRC528. U.S. : Center for Naval Analysis.
- McAuley, W. J., and Nutty, C. L. 1982. "Residential Preferences and Moving Behavior : A Family Life-Cycle Analysis". *Journal of Marriage and the Family* vol. 44, no. 2. pp301-309.
- McAuley, W. J., and Nutty, C. L. 1985. "Residential Satisfaction, Community Integration, and Risk across the Family Life-Cycle". *Journal of Marriage and the Family* vol. 47, no. 1. pp125-130.
- _____. 1990. "Determinants of Short- and Long- Term Expectations for Home Owners and Renters". *Demography* vol. 27, no. 1. pp81-95.
- McKelvey, R.D., and Zavonia, W. 1975. "A Statistical Model for the Analysis of Ordinal Level Dependent Variables". *Journal of Mathematical Sociology* vol. 4. pp103-120.
- Michelson, W. 1976. *Man and His Urban Environment : A Sociological Approach*. Reading, MA : Addison-Weseley.
- Michelson, W. 1977. *Environmental Choice, Human Behavior, and Residential Satisfaction*. New York : Oxford Univ. Press.
- Molin, E. J. E., Timmermans, H. J. P. 2003. "Testing

- Hierarchical Information Integration Theory: The Causal Structure of Household Residential Satisfaction". *Environment and Planning A* vol. 35. pp43–58.
- Morris, Earl, Mary Winter. 1978. *Housing, Family, and Society*. New York : John Wiley & Sons.
- Morris, Earl, Sue Crull, and Mary Winter. 1976. "Housing Norms, Housing Satisfaction and the Propensity to Move". *Journal of Marriage and the Family* vol. 38. pp309–320.
- Newman, S.J. and Duncan, G. S. 1979. "Residential Problems, Dissatisfaction, and Mobility". *Journal of American Planning Association* vol. 45. pp154–166.
- Ng, Sik H., Kam, Ping K., Pong, R.W.M. 2005. "People Living in Ageing Buildings: Their Quality of Life and Sense of Belonging". *Journal of Environmental Psychology* vol. 25. pp347–360.
- Nisbett, Richard E. 2003. *The Geography of Thought*. New York : Free Press.
- Oh, Joong-Hwan. 2003. "Social Bonds and the Migration Intentions of Elderly Urban Residents: The Mediating Effect of Residential Satisfaction". *Population Research and Policy Review* vol. 22. pp127–146.
- Onibokun, A.G. 1976. "Social system correlates of residential satisfaction". *Environment and Behavior* vol. 8, no. 3. pp323–344.
- Organization for Economic Co-operation and Development. 2003. Education at a Glance 2003. Sep. 6.
- Paris, D. E. and Kangari, R. 2005. "Multifamily Affordable Housing : Residential Satisfaction". *Journal of Performance of Constructed Facilities* vol. 19, no. 2. pp138–145.
- Parkers, Alison and Kearns Ade. 2003. "Residential Perceptions and Housing Mobility in Scotland : An Analysis of the Longitudinal Scottish House Condition Survey 1991–96". *Housing Studies* vol. 18, no. 5. pp673–701.
- Phillipson, C., Bernard, M., Phillips, J. and Ogg J. 1999. "Older people's experiences of community life: patterns of neighbouring in three urban areas". *The Sociological Review* vol. 47, no. 4. pp716–743.
- Putnam, R.D. 1995. "Bowling Alone: America's Declining Social Capital". *Journal of Democracy* vol. 6 pp65–78.
- Ross, Catherine E., Reynolds J. and Geis K.J. 2000. "The Contingent Meaning of Neighborhood Stability for Residents' Psychological Well-Being". *American Psychological Review* vol. 65. pp581–597.
- Rossi, P. H., 1955. *Why Families Move*. Glenco IL : The Free Press.
- Sai Leung Ng. 2005. "Subjective Residential Environment and Its Implications for Quality of Life Among University Students in Hong Kong". *Social Indicators Research* vol. 71. pp467–489.
- Saunders, P. 1990. *A Nation of Home Owners*. London : Unwin Hyman.
- Schorr, A.L. 1966. Housing and its effects, In *Slums and Social Insecurity Research Report* no. 1. pp7–31. Washington D.C. : U.S. Department of Housing and Urban Development.
- Schwanen, Tim, Mokhtarian, P. L. 2004. "The Extent and Determinants of Dissonance between Actual and Preferred Residential Neighborhood Type". *Environment and Planning B : Planning and Design* vol. 31. pp759–784.
- Shannon, Christopher. 1996. *Conspicuous Criticism : Tradition, the Individual, and Culture in American Thought, from Veblen to Mills*. Baltimore and London : The Johns Hopkins Univ. Press.
- Shin, Doh C. 1986. "Education and the Quality of Life in Korea and the United States : A Cross-Cultural Perspective". *The Public Opinion Quarterly* vol. 50, no. 3. pp360–370.
- Sirgy, M. J., Cornwell, T. 2002. "How Neighborhood Features Affect Quality of Life". *Social Indicators Research* vol. 59. pp79–114.
- Speare, A. Jr. 1974. "Residential Satisfaction as an Intervening Variable in Residential Mobility". *Demography* vol. 11, no. 2. pp173–188.
- Tran, Thanh V., Nguyen Thang D. 1994. "Gender and Satisfaction with the Host Society among Indochinese Refugees". *International Migration Review* vol. 28, no. 2. pp323–337.
- U.S. Department of Housing and Urban Development. 2005. *Codebook for the American Housing Survey*. ed. the Office of Policy Development and Research, U.S. Department of Housing and Urban Development. Public Use File: 1997 and later. Version 1.78
- US Census Bureau(<http://www.census.gov/hhes/www/housing/ahs/ahs.html>).[2008.1.1]
- Wirth, Louis. 1947. "Housing as a Field of Sociological

- Research". *American Sociological Review* vol. 12, no. 2. pp137-143.
- Woldoff, Rachael A. 2002. "The Effects of Local Stressors on Neighborhood Attachment". *Social Forces* vol. 81, no. 1. pp87-116.
- Wolpert, Julian. 1965. "Behavioral Aspects of the Decision to Migrate". *Papers of the Regional Science Association* vol. 15. pp159-169.

-
- 논문 접수일: 2008.10.16
 - 심사 시작일: 2008.10.21
 - 심사 완료일: 2008.11. 7

ABSTRACT

A Comparative Study of Housing and Neighborhood Satisfaction between Korea and the US

keyword: Residential Satisfaction, Housing, Neighborhood, Ordered Probit Model, Epistemology

What determines the similarities or differences of residential satisfaction? Because of the perceptive nature of residential satisfaction and actual differences in residential quality, individuals from diverse ranges of social backgrounds and stages of life have varying degrees of residential needs. The main objective of the present study is to show the differences in residential satisfaction and its determinants between Korea and the US. The present study seeks to find determinants of residential satisfaction incorporating epistemological differences as a means to differentiate residential satisfaction, particularly among societies from different cultures. We collected data from Korea(Social Statistical Survey) and the US(American Housing Survey) and applied ordered probit model to test housing and neighborhood satisfaction for both countries. We found that higher level of housing satisfaction is correlated with greater neighborhood satisfaction in both countries. Regarding housing satisfaction, married, older homeowners and people in multi-family housing expressed more satisfied feelings than their counterparts in both countries did. However, the results of neighborhood satisfaction are not consistent with such variables as gender and education between two countries. We speculate that dissimilarity in residential satisfaction and its determinants between the two countries may be due to the differing epistemological backgrounds of Confucianism and Pragmatism and Individualism as well as different housing market conditions between Korea and the US.

한국과 미국의 주거만족도 비교에 관한 연구

주제어: 주거만족도, 주택, 구역, 순위형 프로빗 모형, 인식론

주거만족도의 차이점과 공통점을 결정짓는 것은 무엇인가? 서로 다른 사회-경제적 배경을 가진 개인 및 가구는 상이한 주거욕구를 가지게 마련이다. 본 연구의 목적은 한국과 미국의 주거만족도와 그 결정요인의 차이를 비교-연구하는데 있다. 두 국가의 주거만족도 차이를 결정짓는 요인으로 본 연구에서는 서로 다른 문화를 지니고 발전해 온 두 사회의 사회적 배경의 차이에 주목한다. 본 연구에서는 주택 및 주거만족도에 관한 선행연구의 사례는 물론, 한국의 경우 유교, 미국의 경우 실용주의를 적용하여 양국 간 주거만족도의 차이를 인식론적 시각으로 해석하고 있다. 실증분석을 위해 사용된 자료는 한국의 경우 사회통계조사, 그리고 미국의 경우에는 American Housing Survey가 이용하였고, 계량모형은 Ordered Probit Model이 사용되었다. 분석결과 주택 및 주거만족도는 양국 모두에 있어서 개인 및 가구의 특성이 비슷한 방향으로 영향을 미치는 것으로 나타났다. 하지만 가사부담의 차이 및 지역공동체 형성에 대한 친밀감의 차이 등과 같은 문화적 차이는 양국 간 주택 및 주거만족도에 차별적인 영향을 미치는 것으로 드러났다. 본 연구의 결론에서는 연구의 한계와 향후 주택만족 및 주거만족에 대한 연구의 필요성을 제기하고 있다.