Four Sources of Trust and Life Satisfaction for Korean Elders*

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Abstract: This research investigates the roles of four major trust sources, including their mutual influences, in explaining life satisfaction of Korean elders by analyzing a survey data. It uses voluntary organization membership, network, community trust, and institutional trust as major trust sources influencing life satisfaction based on a theoretical reformulation of previous empirical conclusions.

According to analysis results, voluntary organization membership and community trust positively affect life satisfaction among the four trust sources in addition to generalized trust, through direct and indirect paths. Network and institutional trust turned out relatively ineffective or statistically not significant in so doing.

Analysis on the mechanism of mutual influence among the trust sources also suggests the institutional factor is less effective in enhancing life satisfaction. Network influences life satisfaction only indirectly, through voluntary organizational membership or community trust in most analyzed subcategories of the surveyed elders. Overall, community trust shows strong effects on life satisfaction. Based on the results, suggestion of further research and policy implications are mentioned.

Key words: trust, life satisfaction, voluntary organization, network, community trust, institutional trust, elders

Ⅰ. Introduction: Research Questions

As Korea is aging extremely rapidly ─ for instance the population of age 65 years or over will be 15.6% in 2020, and 38.2% in 2050 according to a projection (Korea National Statistical Office, 2006), it is an important task to investigate the elderly's life satisfaction[1.] from diverse perspectives. This research aims to contribute to the tradition of studying social determinants of life satisfaction (e. g., Bjørnskov et al., 2008) by empirically addressing the relationship between trust, as an important dimension of social capital, and life satisfaction of Korean elders, with an emphasis on the function of trust in enhancing life satisfaction (e. g., Helliwell and Putnam, 2004).

A general characteristic of the elderly is that their economic power weakens as most of them get economically inactive upon retiring. Considering so, studying noneconomic sources of life satisfaction is more meaningful with elders than with the other age groups. Especially, as social sciences increasingly focus on actors'relationships rather than their attributes as used to, effects of trust or social capital have recently drawn many researchers' attention.

More specifically, this paper deals with the following two questions to further identify diverse and possibly complex-structuredeffects of trust sources on life satisfaction.

Question 1: What kind of trust sources affect life satisfaction for the Korean elders? The following two conclusions from previous research contribute to formulate this question.

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1. Unless otherwise mentioned, following the current academic and public conventions, this paper treats life satisfaction, quality of life, and happiness as interchangeable concepts.

One conclusion is that trust is the only component affecting life satisfaction among multiple components of social capital. While research on social capital and its conceptual ramifications and practical effects has been burgeoning, Bjørnskov's finding (2006) that trust, as one of the multiple facets of social capital, affects life satisfaction provides good ground on which further questions like this may occur. Some recent studies still vaguely define relevant concepts only to conclude various sources of social capital commonly enhance life satisfaction. For instance, Helliwell and Putman (2004) conclude that, as different forms of social capital, marriage, family, personal and communal ties, individual and collective civic engagement, trustworthiness, and trust are all correlated to happiness and life satisfaction, which practically fails to deepen our understanding of the conceptual delicacy of social capital. In contrast, following a theoretical discussion that social capital consists of trust, norms, and associational activity as its separable dimensions, Bjørnskov (2006) shows that trust alone explains life satisfaction based on empirical analysis. This suggests that, as social capital may be divided into multiple sources, trust empirically remains to be the most relevant or — the only — factor explaining life satisfaction.

The other is that trust in turn has multiple determinants according to Delhey and Newton (2003). They provide six categories of trust sources, which are supported by, what they label, the 'individual' and 'social' theories. This research uses factors regarding what they categorize as voluntary organization, network, community-based, and society-wide, which all belong to their social theory, to test whether and how they affect life satisfaction. Such specification is useful in identifying the sources of trust considering that much confusion is present with the meanings of trust (McKnight and Chervany, 2001).

Question 2: How do diverse trust sources ─ while affecting life satisfaction as discussed above ─ affect one another, for Korean elders?

This question is about mutual influences among the above mentioned trust sources, each of which may take a different role in generating trust, in addition to affecting life satisfaction. Accepting the diversity of trust sources raises a motive to pose this additional question because it is worthwhile asking how they affect one another to better understand the relational mechanism between trust sources and life satisfaction. Given the functions of trust as the only dimension of social capital in explaining life satisfaction (Bjørnskov, 2006), analyses in this paper adopt the above-mentioned four relevant trust sources from Delhey and Newton's social theory (2003) as a set of independent variables explaining life satisfaction and also investigate the structure of their mutual influences.

Ⅱ. Review of Previous Research

1. Aging, Trust, and Life Satisfaction

This section presents a review of previous research based on non-Korean data but is theoretically more relevant to the questions to be dealt with. Studies on the relationship between trust or social capital and life satisfaction in the context of aging have used diverse perspectives and show a range of conclusions, raising several issues for further research. While many forms of social action concern trust, regardless of what specific aspect of trust individual research focuses on, most research concludes that at least one trust-related factor affects life satisfaction positively. Such conclusions, however, seem disagreeing on what is the truly functioning factor in enhancing life satisfaction mainly because most studies 1) partially measure trust or social capital and 2)

disregard the possibility of inner stratifications within both concepts.

Some studies on the trust-related determinants of life satisfaction are interesting in the sense that they attempt to differentiate the role of individuals' relational attributes in explaining life satisfaction. For example, Palmore and Luikart (1972) in the relatively old study of 502 middle- and old-age Americans hypothesize organizational activity and the number of total social contacts as relevant factors influencing life satisfaction along with self-rate health, belief in internal control, etc. Although both organizational activity and total social contacts are considered sources of trust and social capital by more recent perspectives, according to their analysis, only organizational activity is significant while total social contacts and other demographic factors such as age, sex, and marital status, and intelligence are not. Meanwhile, some studies reach quite a definite conclusion that trust positively affects life satisfaction. Barefoot and others (1998) find that trust, when measured by the Rotter Interpersonal Trust Scale—which measures the generalized expectancy that other people can be relied on—is significantly associated with life satisfaction and longevity using a data set of 100 people who are in the group of age 55-80. This is one of the typical empirical studies clearly demonstrating the effect of trust in explaining successful aging in terms of life satisfaction.

Part of previous research briefly touches upon the mutual influence of multiple trust- or social capital-related factors shedding light to the above presented second question of this research. Abu-Bader and others (2002), in their study discussing the importance of social support for life satisfaction for frail elders, point out that previous research indicates that volunteer work functions to receive social support as it helps build social networks (e. g, Aquino et al., 1996). This kind of discussion is quite interesting as, while social support somewhat naturally enhances

life satisfaction because social support is *by definition* beneficial to the recipient, it alludes to mutual influence among various sources of social capital. For instance, if the results of the two studies are combined as are, one could hypothesize that volunteer work builds social network, which increases life satisfaction through social support. From similar perspectives emphasizing the role of network, the importance of subjectively evaluated or felt social network, closeness, and connectedness as causes of happiness or well-being is discussed by many other studies (Lai and McDonald, 1995; Levitt et al., 1986; Newsome and Schulz, 1996; Revicki and Mitchell, 1986).

2. Korean Research on Trust and Life Satisfaction of Elders

Korean data-based previous research also raises similar theoretical and methodological issues pointed out above. Although it is about the general population, in the context of discussing the relationship between trust and quality of life using a Korean data set, Park (2002) finds that, among the sources of social capital, familial support, public trust, and generalized trust show positive effects with significance while other factors such as organizational membership and friends'support remain not significant. This result, while contributing to differentiate the role of diverse aspects of trust in relations to life satisfaction, is only limitedly applicable in understanding the case of elders.

Most of all, for Korean elders, a systematic line of research is yet to be accumulated by the concept of trust and social capital. Some reviews of the most relevant research outcomes are as follows.

Some studies focus on the network aspects of social capital. For instance, Kim and Park's study of diverse family networks and life satisfaction (2004) finds that inter-spousal relationship is the most important in explaining elders' life satisfaction, and sug-

gest that further research is necessary to investigate the effect of extra-familial relational factors, which this research focuses on. This particular research uses the Philadelphia Geriatrics Center Morale Scale (or PGCMS) as the measurement for life satisfaction, and concludes only from elders living in Seoul only. Some network studies go beyond the boundary set by family relations. For instance, Yi (2005) looks into Korean elders to investigate the effect of social and cultural capitals on life satisfaction. According to the result, social capital functions as a kind of capital in terms of its effect on economically weakening elders' income, and affects their life satisfaction positively. Yet, in the research, life satisfaction is on a 5-point scale and social capital measures interpersonal networks only.

Some studies widen the concept of social capital to include various activities. Kim and Lee (2008), partly drawing on the activity theory and using the PGCMS as an index of life satisfaction, show that living together with spouse and children, participating in various organizations, and some other demographic characteristics turn out significant. Religious activity, however, shows no significance in their analysis for some reason, which is further study-worthy.

3. Basic Hypothesis on the Relationship between Trust Sources and Life Satisfaction

The above review shows that further research on the relationship between trust and life satisfaction would require a view on trust- or social capital-related factors that is more systematic and definitive than the ones in previous research. To meet this need, as mentioned at the beginning, borrowing from and reformulating the findings of Delhey and Newton (2003) and Bjørnskov (2006) this research basically hypothesizes that: Voluntary organization membership, personal network, commun-

ity trust, and institutional trust, as four trust sources, affect life satisfaction positively. Each of the trust sources corresponds respectively to the voluntary organizations theory, the social network theory, the community theory, and the societal theory, as termed by Delhey and Newton (2003) in discussing trust determinants. Regarding the relationship between trust sources and life satisfaction, more specific hypotheses are below presented with the regression and path models to be analyzed and discussed.

Ⅲ. Data, Variables, and Methods

1. Data

The data set to be analyzed here is of 1,019 randomly select Korean elders living in Seoul and Chuncheon as of January and February 2007. The descriptive statistics of its general characteristics are as follows.

Table 1. Descriptive Statistics of the General Characteristics of the Data

Variable		Freq.	%
Sex	Male	413	40.53
	Female	606	59.47
Religion	No religion	361	35.81
	Has a religion	647	64.19
Marital Status	Unmarried	486	47.69
	Married	533	52.31
Employment	Unemployed	791	77.63
	Employed	228	22.37
Environment	Urban	658	64.7
	Rural	359	35.3
City	Seoul	483	47.45
	Chuncheon	535	52.55

Variable	N	Mean	SD	Min	Max
Life Satisfaction	1013	59.324	22.055	0	100
Age	1019	74.824	5.546	65	96
Years of Education	845	5.778	5.021	0	19
Monthly Income	983	2.681	1.159	0	5.994
Generalized Trust	1015	0.433	0.496	0	1
Voluntary Organization	1019	0.838	0.525	0	2.398
Personal Network	1019	2.243	2.474	0	7.678
Community Trust	1007	21.057	3.954	9	31
Institutional Trust	988	20.544	5.178	8	40

The noteworthy merit of this data set is enabling access to several different measurements of trust or social capital for comparative purposes, as mentioned in the above review. As most previous research clings to data that contain one or unsystematic few measurements for trust or social capital, such evidence is most of all inadequate in analyzing multiple sources of trust and their effects on other factors. Also the fact that this data set deals with elderly populations of a megalopolis (Seoul) and a relatively small and practically semi-rural city (Chuncheon) of Korea enables researchers to touch on the diversity of many, if not most, Korean elders who have experienced rural life in their early years and rapid urbanization afterwards. A limitation set by this kind of data set, however and of course, is inability to generalize the results on the general population of the Korean elderly.

2. Variables

Dependent variable
Overall life satisfaction is asked through the following ques-

tion: "How is the degree of overall life satisfaction now? If the most satisfied state imaginable is '100' and the most dissatisfied state imaginable is '0', what score would you give for the degree of overall life satisfaction considering everything of your current situation?" This kind of measurement of life satisfaction has long been used by previous research (Cummins, 2003), and is treated as a continuous variable hereafter.

Independent variables

Age, years of education, and monthly income are basic demographic and socio-economic variables that are considered continuousin the following analyses. Monthly income is operationalized as monthly wage for the employed, and as monthly allowance for the unemployed. One of the main reasons not using household income for respondents' economic power is because it has a tendency of incorrectly representing elders' own situations whilst an increasing number of Korean elders' chooses to live independent of their grown-up children's regular support. This variable is ln-logged for correlation, regression, and path analyses due to its right skewedness in distribution. Sex, religion, marital status, employment, environment, and city are binomial variables as described in the table and are dummy variables as shown in the relevant analyses.

Each of the following trust-related variables is relevant to its corresponding factor in the social theory for trust sources (Delhey and Newton, 2003).

The generalized trust variable is also a binomial variable, by which the 0 means most people cannot be trusted while the 1 means can be trusted. This is practically equivalent to the property and structure of question 2.1. of the World Bank questionnaire (Grootaert et al., 2004), which many previous trust researchers have utilized. In the tradition of trust research, this is one of the most often used conceptualizations (e. g., Brehm and

Rahn, 1997; Claibourn and Martin, 2000). This research, however, forwards primary attention to the other sources of trust that specify clearer objects as the conceptual simplicity of generalized trust carries too much vagueness.

The voluntary organization variable is the number of memberships to religious congregations, alumni meetings, town acquaintance association, clan/kin meetings, voluntary services, civil organizations, elders' pavilion get-together, adult day care, interest groups, leisure clubs, cultural organizations, and sports clubs. This measurement is also very popular among trust researchers (e. g., Glanville, 2004; Stolle, 1998). The sum showed clear right-skewedness thus is ln-logged for analyses. Many of these options many be considered Korean applications of the options of question 1.1. of the World Bank questionnaire (Grootaert et al., 2004).

The personal network variable consists of the following properties: number of people that respondent trusts (pnv1) frequency of active — respondent taking action towards the trusted — visits (pnv2) frequency of active correspondences (pnv3) frequency of passive — the trusted taking action towards respondent — visits (pnv4) and frequency of passive correspondences (pnv5). The frequency options are 'every day,' 'several times a week,' 'once a week,' 'once a month,' 'several times a year,' 'once a year,' and 'less than once a year'. The frequency questions specified to exclude family members or the ones living together as including them could end up with the 'every day' option for many respondents only to jeopardize the intention of the inquiry in terms of distribution. For analytical purposes, an operation of 'p1 * (p2 + p3 + p4 + p5)' is done as an elaborated application of what some previous research did (e. g., Yi, 2005). Doing so generates an index on which those who trust more people and contact them more frequently score higher than those who do otherwise. The result of the operation also showed right-skewedness thus is

ln-logged for analyses. Major surveys such as the World Value Survey, the General Social Survey, etc. use similar questions to measure various aspects of *personal-level* networks, which many researchers look into as a proxy of trust (e. g., Zaheer et al., 1998).

The community trust variable is the sum of values of eight questions asking about the degree of trust towards respondents' village/neighborhood, which are 2.2.A-D, 2.4., 2.5., and 2.6.A and B from the World Bank questionnaire (Grootaert et al., 2004). This kind of trust is also often studied for various effects (e. g., Greenberg, 2003; Sampson et al., 2002). Some answers are re-verse-coded for summation.

The institutional trust variable is the sum of 5-point trust degrees towards the following eight macro-level nationwide/local institutions: political parties/national assembly, central judicial power, central administration, local administration, voluntary services, interest groups, civil organizations, and labor unions. This variable may be considered a Korean application of so-called institutional confidence factors as previous used by many other researchers (e. g., Han, 2004), which is applicable to various mac-ro-institutional objects such as formal organizations, the market, etc. (e. g., Adler, 2001; Huff and Kelley, 2003).

3. Methods

Besides what the above tables presents as descriptive sta-tistics, correlation, regression and path analyses are used to screen the determinants of life satisfaction and probe into the structure of mutual influences among trust-related sources. Specific models and their results will be presented in self-ex-planatory manners in the form of tables and figures.

Ⅳ. Analysis

1. Correlation Analysis of the Variables

Table 2 below shows the result of pairwise correlation analysis of the variables to be analyzed. As most variables turn out significantly correlated with many other variables, the following regression analyses use all of the variables to answer the research questions.

Table 2. Correlation Analysis

	Life Satisfac- tion	Age	Female (female =1)	Religion (has a religion =1)	Years of Education	Marital Status (married =1)	Employ- ment (emplo- yed=1)	Monthly Income	Environ- ment (rural=1)	City (Chun- cheon=1)	Gener- alized Trust	Voluntary Organiza- tion	Personal Network	Com- munity Trust
Age	-0.092 ** 1013	1 1019												
Female (female=1)	-0.134 *** 1013	0.066 * 1019	1 1019											
Religion (has a religion=1)	-0.008 1002	0.034 1008	0.220 *** 1008	1 1008										
Years of Education	0.223 *** 839	-0.155 *** 845	-0.502 *** 845	0.015 834	1 845									
Marital Status (married=1)	0.161 *** 1013	-0.292 *** 1019	-0.548 *** 1019	-0.130 *** 1008	0.377 *** 845	1 1019								
Employment (employed=1)	0.143 *** 1013	-0.231 *** 1019	-0.291 *** 1019	-0.137 *** 1008	0.068 * 845	0.235 *** 1019	1 1019							
Monthly Income	0.236 *** 977	-0.224 *** 983	-0.291 *** 983	0.024 972	0.382 *** 817	0.199 *** 983	0.315 *** 983	1 983						
Environment (rural=1)	0.058 + 1011	-0.069 * 1017	-0.018 1017	-0.197 *** 1006	-0.238 *** 845	0.053 + 1017	0.230 *** 1017	-0.086 ** 981	1 1017					
City (Chuncheon=1)	0.149 *** 1012	-0.114 *** 1018	-0.072 * 1018	-0.189 *** 1007	-0.108 ** 844	0.149 *** 1018	0.150 *** 1018	0.015 982	0.693 *** 1016	1 1018				

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14
Generalized Trust	0.217 ***	-0.100 **	-0.141 ***	-0.021	0.068 +	0.157 ***	0.107 **	0.107 **	0.205 ***	0.239 ***	1			
(N)	1012	1015	1015	1004	841	1015	1015	979	1013	1014	1015			
Voluntary Organization	0.219 ***	-0.138 ***	-0.245 ***	0.130 ***	0.207 ***	0.199 ***	0.244 ***	0.253 ***	0.221 ***	0.267 ***	0.187 ***	1		
(N)	1013	1019	1019	1008	845	1019	1019	983	1017	1018	1015	1019		
Personal Network	0.152 ***	-0.172 ***	-0.124 ***	0.097 **	0.267 ***	0.149 ***	0.081 *	0.224 ***	-0.101 **	0.009	0.155 ***	0.212 ***	1	
(N)	1013	1019	1019	1008	845	1019	1019	983	1017	1018	1015	1019	1019	
Community Trust	0.277 ***	-0.203 ***	-0.134 ***	-0.094 **	0.002	0.203 ***	0.170 ***	0.086 ***	0.346 ***	0.435 ***	0.336 ***	0.244 ***	0.201 ***	1
(N)	1004	1007	1007	996	835	1007	1007	972	1005	1006	1006	1007	1007	1007
Institutional Trust	0.053 +	0.135 ***	0.106 **	0.036	-0.113 **	-0.036	-0.056 +	-0.092 **	0.041	0.088 **	0.210 ***	0.021	0.057 +	0.122 ***
(N)	986	988	988	977	818	988	988	954	986	987	987	988	988	982

Correlation coefficient, significance (; + p < .1; * p < .05; ** p < .01; *** p < .001), and the number of observations.; Two cells at the extremes of the diagonal omitted.

2. Regression Analysis of Life Satisfaction

Table 3 below summarizes the results of multiple regression analysis of life satisfaction on diverse trust sources. From Models 1 to 8, the number of independent variables increases as their scope is expanded from demographic variables to trust-related ones.

Table 3. Multiple Regression Analyses of Life Satisfaction

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Age	0.142 (0.157)	0.178 (0.154)	0.170 (0.159)	0.174 (0.157)	0.252+ (0.153)	0.108 (0.160)	0.260 (0.159)	0.279+ (0.157)
Female (female=1)	4.278+ (2.294)	4.809* (2.260)	5.166** (2.279)	4.262+ (2.290)	4.666* (2.250)	4.229+ (2.314)	5.551* (2.279)	5.941** (2.275)
Religion (has a religion=1)	0.017 (1.646)	-0.243 (1.627)	-1.562 (1.701)	-0.229 (1.657)	-0.093 (1.611)	-0.120 (1.671)	-1.492 (1.702)	-1.524 (1.690)
Years of Education	0.899*** (0.192)	0.870*** (0.192)	0.829*** (0.192)	0.857*** (0.193)	0.944*** (0.185)	0.950*** (0.194)	0.928*** (0.189)	0.907*** (0.191)
Marital Status (married=1)	3.316+ (1.989)	2.826 (1.985)	3.159 (1.939)	3.178 (1.990)	2.126 (1.968)	2.743 (2.031)	1.809 (1.960)	1.670 (1.971)
Employment (employed=1)	5.344** (1.910)	5.109** (1.875)	4.502* (1.915)	5.299** (1.904)	4.821** (1.837)	5.997** (1.913)	4.688* (1.847)	4.650* (1.843)
Monthly Income	2.743*** (0.752)	2.610*** (0.733)	2.469** (0.749)	2.606** (0.748)	2.475*** (0.710)	2.915*** (0.778)	2.491** (0.740)	2.455** (0.728)
Environment (rural=1)	-1.922 (2.217)	-2.737 (2.204)	-2.760 (2.238)	-1.503 (2.225)	-2.531 (2.167)	-1.694 (2.268)	-3.057 (2.269)	-3.655 (2.261)
City (Chuncheon=1)	8.285*** (1.891)	7.240*** (1.912)	7.031*** (1.885)	7.998*** (1.892)	4.259** (1.995)	7.696*** (1.963)	3.314 (2.029)	3.282 (2.032)
Generalized Trust		7.967*** (1.465)						5.554*** (1.547)
Voluntary Organization			5.755** (1.672)				4.613** (1.693)	4.278* (1.709)
Personal Network				0.531+ (0.305)			0.041 (0.305)	-0.033 (0.303)
Community Trust					1.444*** (0.219)		1.318*** (0.222)	1.173*** (0.226)
Institutional Trust						0.383* (0.159)	0.241 (0.154)	0.140 (0.156)
constant	27.656* (13.183)	23.089+ (12.909)	23.477+ (13.468)	24.890+ (13.275)	-7.777 (13.910)	22.173 (13.473)	-13.228 (14.325)	-11.149 (14.176)
N	799	798	799	799	792	778	773	772
R^2	0.121	0.150	0.135	0.124	0.171	0.132	0.186	0.198
Difference of R^2 with Model 1	0.000	0.029	0.014	0.003	0.050	0.011	0.065	0.077

+ p < .1; * p < .05; ** p < .01; *** p < .001; ( )'s contain robust standard errors.

The basic model

Model 1 is to explain life satisfaction only with variables that are unrelated to trust, such as demographic characteristics, socio-economic status variables, area-related information, etc. to see how life satisfaction could be understood before considering trust as a cause. According to the result, years of education, job status, income, and living in Chuncheon turn out statistically significant and positively affecting life satisfaction. Herein, the first three variables' functions correspond to the common-sensical findings of previous research as it is to a degree just natural that more institutionalized education, employment, and greater income bring greater life satisfaction in most industrialized economies including Korea. The last Chuncheon factor could be interpreted such that the elderly may find relatively small- or medium-sized cities better than crowded urban areas as seen in the trend that most retirees at least seriously consider moving out of the urban settings where they have long resided. While this Model 1 serves as the basic model without trust-related variables, the following Models 2 to 6 respectively add each of them thereto for extended testing.

Having a religion turns out not significant with the surveyed Korean elders. This result is consistent with previous work that also practically negates the relationship between religion and life satisfaction (e. g., Kim and Lee, 2008; Lewis et al., 2005), but different from some work that does not (e. g., Blazer and Palmore, 1976; Ferriss, 2002; Francis et al., 2004). As such inconsistencies may come from differences in the operationalization of being religious or, more fundamentally, in the characteristics of the studied population, the relationship between religion and life satisfaction cannot be too carefully generalized.

Generalized trust

Generalized trust turns out statistically significant in affect-

ing life satisfaction as in most previous research. The result of Model 2, which has generalized trust as the only additional variable to what already turned out important from Model 1, presents the female dummy and generalized trust as additionally significant and positive in explaining life satisfaction. In fact, although the female dummy is negatively correlated with life satisfaction in the correlation analysis reported above, the causal relationship between the two in this regression model is positive. This means that being female per se may indirectly affect life satisfaction positively through other factors including trust-related ones while its direct effect remains technically negative. Generalized trust in Model 2 is significant and positively effective, which means, despite being a simple measurement, it empirically matters for life satisfaction supporting the argument for trust and social capital as sources of life satisfaction in the case of Korean elders.

Although this result agrees with Park's finding (2002) from the general population of Korea too, this type of trust seems a bit too general and even abstract when it comes to its object. To avoid possible causal redundancy, the path analysis models will exclude generalized trust as the four trust sources operationalize it more tangibly.

Specific sources of trust leading to life satisfaction

Each of Models 3 through 6 in turn adds one trust-related variable from the theories of voluntary organization, social network, community trust, and institutional trust, to the basic model explaining life satisfaction. Except for the institutional trust variable, the three variables turned out significant and positively correlated with life satisfaction in the above presented correlation analysis.

The voluntary organization theory appears to hold for the Korean elders' life satisfaction. The result of Model 3, which adds

the voluntary organization variable to Model 1, shows that membership to voluntary organizations indeed matters in support of the voluntary organization theory while conserving the statistical significance of the influential factors in Model 2. This means that, the more organizations one has membership to, the happier s/he could be for the Korean elders.

The network theory, however, seems inapplicablein explaining life satisfaction. In Model 4, again, what Model 1 presents as significant and positive remain the same. Yet, the newly added independent variable for personal network, turns out relatively not significant (.05 < p < .1) for life satisfaction, partly supporting some previous research (e. g., Palmore and Luikart 1972; Park, 2002). This model also reports the female dummy variable to be not statistically significant unlike in Models 2 and 3, implying that the effects of social network and being female are absorbed into other variables' influences and their mixed effects on life satisfaction in this particular model.

The community trust turns out significant and effective in explaining life satisfaction. By Model 5, trust towards community, which is the only additional trust-related variable to the basic model, turns out significant and positive for life satisfaction. In the same model, the female dummy variable turns out statistically significant and positively effective in addition to the other significant and influential variables in Model 1. Also, the impact of the city dummy variable relatively weak in this particular model, which may mean that the reason Seoul elders are less satisfied with their lives is partly but significantly due to their low community trust. These results tell that, for Korean elders, trusting the neighbors of their own community is also an important source leading to life satisfaction.

The societal or institutional theory also seems applicable for life satisfaction. The result of Model 6 shows that institutional trust, more specifically the trust towards various macro-level so-

cial institutions, when added to the basic model, too counts for life satisfaction with both statistical significance and positive effect.

Tentatively summarizing, Models 3 to 6 support the roles of the voluntary organizations, community, and societal theories in explaining life satisfaction, but not that of the network theory. This is inconsistent with the result of the pairwise correlation analysis in terms of statistical significance as the regression analyses additionally contain the aggregate influence of multiple variables as in each model and causality assumption therewith. Education, employment, and income remain significant and effective throughout all models testing each of the trust effects while dummy variables such as being female or a Chuncheon resident turn out not significant in some including the full models to be discussed below.

The full models
The last two models are full in the sense that they have four or five trust-related factors as independent variables simultaneously, in addition to the basic background variables from Model 1.

The voluntary organization and community theories turn out working and the network and societal/institutional theories do not when all of the four theories are tested together as in Model 7. Among the basic variables, the Chuncheon variable turns out not significant while the rest remain unchanged. Compared with the results from Models 3 through 6, this new finding shows that the influence of the institutional factor disappears when it is considered at the same level with the other variables. Generalized trust turn out effective in addition to the voluntary organization and community trust factors when all trust sources are posed as independent variables as in Model 8, the fullest model.

3. Path Analysis of Trust Sources and Life Satisfaction

The basic hypothetical path model

A hypothetical path model is constructed as below assuming that 1) all of the four trust sources influence life satisfaction and that 2) they all affect one another, further suggesting a possible metastasis of trust among different levels, e. g., from the interpersonal situation to the community level. The first assumption is supported by the theories reviewed and tested above. The second assumption is, however, to a degree exploratory in the sense that research has yet to continue much more on such mutual influences among diverse trust sources as most previous studies provide with unsystematic or insufficient ground for specific hypothesis building. Generalized trust is excluded in the path models as the four trust sources function as its components.

Most previous research was unable to study such relationships because few data sets included multiple trust sources suggested by Delhey and Newton (2003). The hypothetical model will be tested as is and, afterwards, the data set will be divided into two by binomial characteristics such as sex, employment status, and city, which were statistically significant in the regression analyses, to understand if there is any subgroup-specific characteristics that such divided path models may further reveal.

Figure 1. Path Analysis Hypothesis and Result
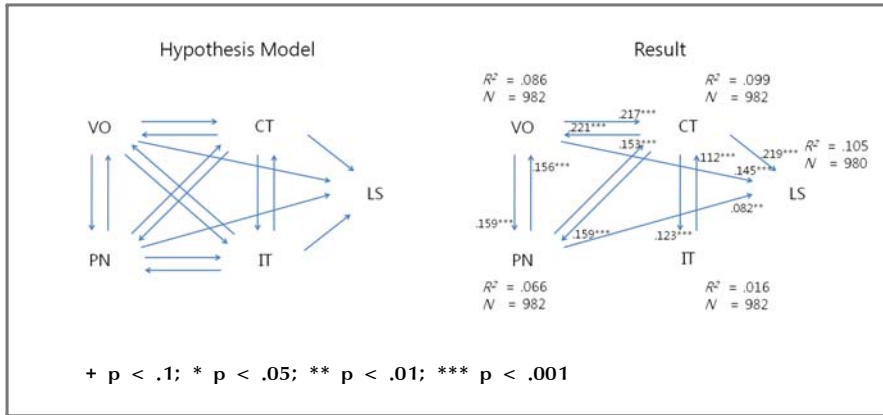
Institutional trust turns out to lack direct relationships with life satisfaction and the voluntary organizations and social network factors making community trust the only one directly linked thereto (see Figure 1). The relationship between voluntary organization participation and personal networks (Abu-Bader et al., 2002; Aquino et al., 1996) shows up in this Korean elders' data too. The result also shows that direct causality from and to institutional trust disappear except for with community trust suggesting that community trust functions as an important medium between institutional trust and the others.

This most of all suggests that, for Korean elders, trust in macro-level institutions should be transitioned into community trust to influence life satisfaction. As their aged life is somewhat more detached from national and local institutions than when they were younger and hard-working for monetary gain, career, etc., how they regard official institutions as seems to matter little for their overall life satisfaction unless it is translated into their attitude towards the community they reside. Additionally, activities such as participating in voluntary organizations and keeping

connections with the ones they personally trust also turn out not directly relevant to institutional trust. Such activities, although they may be understood as social actions due to the actor's inevitable involvement with others, at least do not relay the influence of institutional trust as community trust acutely does. In this regard, such factors may be taken as personal―rather than social―actions that do not affect the thoughts on larger social institutions.

By sex

For male elders, social network directly influences life satisfaction while their social networks are not directly related with community trust (see Figure 2). This is most likely because male elders tend to socialize outside their residential community and to maintain keen attention on larger institutions, compared with female elders.

In contrast, female elders' social network and institutional trust lack direct function for life satisfaction, but has direct relations with community trust. This kind of gender difference appears to stem from female elders'tendency of living in a relatively community-centered manner. For them, unlike male elders, social networks and institutional trust need be translated first as something of community trust to be a source of life satisfaction. This means that, for female elders, their neighborhood is the field where both social networks and institutional trust materialize to increase their happiness.

Figure 2. Path Analyses by Sex
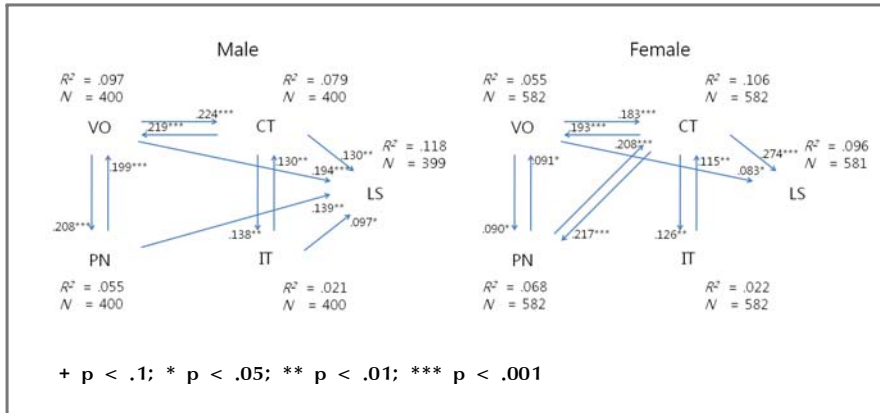
By employment status

The most conspicuous difference between the two groups by employment status is that institutional trust is significant only for unemployed elders and that it is linked to community trust only (see Figure 3). For them, in fact, the structure of the paths is very similar with that of female elders. The only newfound direct path is the one from social network to life satisfaction. This means unemployed elders also utilize community trust as an important channel translating the voluntary organizations factor, social network, and institutional trust into the source of life satisfaction. Particularly, community trust, as a community-based factor, would count more for the unemployed than the employed as the former would naturally spend more time home and in the neighborhood.

Figure 3. Path Analyses by Employment Status


+ p < .1; * p < .05; ** p < .01; *** p < .001
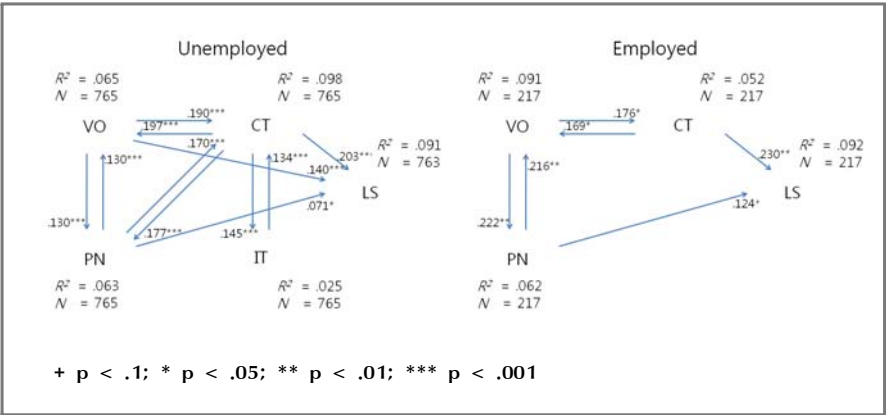
Employed elders' path analysis shows quite a different pattern. Institutional trust does not remain as a significant factor at all, and social network influences life satisfaction only directly, not via community trust. This appears to represent that, for the employed, social network functions beyond the boundary of their residential community, unlike the cases of female or unemployed elders, as an immediate source of life satisfaction. The link from the voluntary organization factor to life satisfaction disappears as well. It seems to mean that, for the employed, the factor is related to social network or community in the personal sphere, not necessarily serving as a direct reason for life satisfaction unlike the case of the unemployed.

By city

Institutional trust explains main differences when path analyses are done for Seoul and Chuncheon elders respectively (see Figure 4). For Seoul residents, institutional trust is directly linked with voluntary organizations and community trust, which in turn directly influence life satisfaction. With institutional trust,

the voluntary organization factor is negatively related in both directions, which would mean that some of those who joined the voluntary organizations are critical of social institutions — or even society itself. Social network and institutional trust, which are unconnected to each other directly, forms paths to life satisfaction only through the other trust sources.

Figure 4. Path Analyses by City

+ p < .1; * p < .05; ** p < .01; *** p < .001
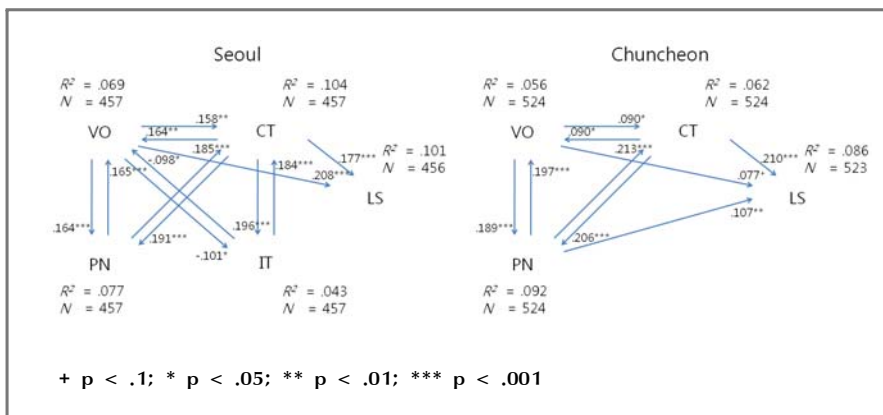
In the case of Chuncheon residents, however, the only difference is that institutional trust turns out not significant, forming no links with the other factors. It seems because Chuncheon elders think of the kind of official institutions asked about as primarily related to larger and central cities, but not to small cities like theirs. Most likely for this reason, for them, it probably operates independently, neither with relations to personal and regional trust sources, nor as a source of their life satisfaction. This may be rather considered a problem of cultural alienation, which residents of many other small- or medium-sized cities of Korea share.

Ⅴ. Summary and Discussion

1. Summary of Major findings

The main purpose of this research was to clarify the respective roles of multiple trust sources in affecting life satisfaction of select Korean elders by reformulating the suggestions of Delhey and Newton (2003) and Bjørnskov (2006). The analysis started off with a categorization of trust sources into voluntary organization membership, network, community trust, and societal/institutional trust as an effort to clarify what each means for life satisfaction and how it operates with the other trust sources in terms of mutual influence.

For Korean elders' greater life satisfaction, joining more voluntary organizations and developing trust towards their neighborhood are advisable in addition to trusting others in general when all trust sources are considered at the same level. Compared with such efforts, maintaining the relationship with the ones they trust by visiting and correspondence, and also trusting macro-social institutions seem ineffective in enhancing life satisfaction. As a conclusion, in addition to the already widely discussed positive role of generalized trust, voluntary organizational membership and community trust positively influence life satisfaction.

The mechanism of mutual influences among trust sources also suggests the institutional factor is relatively unimportant for life satisfaction. Societal/institutional trust, moreover, remains *not* directly related to the voluntary organization and interpersonal network factors in most cases. While community trust, in any case, seems important at least as a mediating factor, there are however differences by sex, employment status, and where they live. Voluntary organization membership functions to mediate network and community trust factors bilaterally. Network factors

influence life satisfaction only indirectly, through voluntary organizational membership or community trust in most subcategories of the surveyed Korean elders.

2. Discussion and Implications

The finding that voluntary organization membership is a valid source of trust for life satisfaction advises that elders belong to various organizations as many as possible. Overall, this kind of result appears to support the activity theory (Bengtson and Schaie, 1998: 445; Bond, 2007: 174; Matcha, 1997: 53-54) that basically stresses the positive function of group activities in explaining life satisfaction. Compared with Korean previous research, the situation of the herein analyzed elders may be different from that of the general population (Park, 2002), for whom organizational membership did not significantly affect life satisfaction. This appears to suggest that studies on life satisfaction need be further specialized for the elderly population with an emphasis on its age-caused difference from the general population.

For future research, what kind of organizational membership is effective in enhancing life satisfaction may be suggested to develop a more practical guide for elders. Also, the mechanism it is related to social/interpersonal network and community trust, as the path analyses revealed, is also worth follow-up research. The fact that voluntary organization membership is a positive cause for network is relatively easy to understand as organizational activities naturally lead to personal relationships. It being a reason to enhance community trust, yet, requires more investigation as the kind of organizations, in which elders participate, are not necessarily neighborhood-confined these days.

Personal network being a relatively not significant factor for life satisfaction leaves room for more inquiry as it is somewhat contradictory to some previous research on Korean elders (e. g.,

Yi, 2005) although the architectures of tested models are different. The result that the network factor indirectly affects life satisfaction through organizational membership or/and community trust draws attention for further research as it implies that, as in the case of voluntary organizations' effect, network may have a yet-unfound latent function for community trust as such networks often exist outside elders' immediate neighborhood. This research would serve as an interesting start point if future research confirms that network functions more diversely as a preceding factor for other elements directly affecting life satisfaction.

Community trust positively affects life satisfaction by all the models utilized in this research with impact that is more direct and greater than any other sources of trust as specified in the result of the path analysis. This means that elders' attitude towards their immediate geographic surroundings and living environment is important in explaining their life satisfaction. Then, elders cannot be too careful in deciding where they spend their later life. Besides personal-level efforts, local governments and social workers—especially of small- or medium-sized cities such as Chuncheon—should be ready with specific details if they by any chance want to design a retirement community in their areas. In this sense, further research may continue to study what kind of element helps elders feel enough trust in their immediate neighborhood.

Not only this particular result, but previous research also finds that elders'living environments affect their happiness. For instance, Kozma and Stones (1983) suggest that determinants of happiness differ between urban/institutional and rural persons. Such environmental factors—and their effects—need be further studied as many elders tend to experience changes in them for instance as they move to less urban environments or serviced institutions as they retire, which often accompanies physical and psychological adjustment disorders. Policymakers should develop

working ways to minimize them.

Institutional trust, when considered with other trust sources, seems almost irrelevant with life satisfaction except possibly as a preceding factor for community trust. As it lacks direct influence on life satisfaction according to most analytic models, follow-up examination on its causality directions with community trust is also necessary. If the irrelevance of institutional shown here correctly represents the sentiment of Korean elders, it would be due to apathy or alienation. In either case, considering that the aged population is projected to continue growing for the next several decades in Korea, policymakers should pay heed to this phenomenon to develop a long-term solution as the potentially vulnerable population need to be interested in the system that will develop and execute new policies inevitably affecting their everyday life, from pragmatic perspectives.

References

Abu-Bader, Soleman H., Anissa Rogers, and Amanda S. Barusch. 2002. "Predictors of Life Satisfaction in Frail Elderly." *Journal of Gerontological Social Work* 38.

Adler, Paul S. 2001. "Market, Hierarchy, and Trust: The Knowledge Economy and the Future of Capitalism." *Organization Science* 12:215-234.

Aquino, Juan A., Daniel W. Russell, Carolyn E. Cutrona, and Elizabeth M. Altmaier. 1996. "Employment Status, Social Support, and Life Satisfaction among the Elderly." *Journal of Counseling Psychology* 43:480-489.

Barefoot, John C., Kimberly E. Maynard, Jean C. Beckham, Beverly H. Brummett, Karen Hooker, and Ilene C. Siegler. 1998. "Trust, Health, and Longevity." *Journal of Behavioral Medicine* 21.

Bengtson, Vern L., and K. Warner Schaie. 1998. "Handbook of Theories of Aging." New York: Springer.

Bjørnskov, Christian. 2006. "The Multiple Facets of Social Capital." *European Journal of Political Economy* 22:22-40.

Bjørnskov, Christian, Axel Dreher, and Justina Fischer. 2008. "Cross-Country Determinants of Life Satisfaction: Exploring Different Determinants across Groups in Society." *Social Choice and Welfare* 30:119-173.

Blazer, Dan, and Erdman Palmore. 1976. "Religion and Aging in a Longitudinal Panel." *Gerontologist* 16:82-85.

Bond, John. 2007. *Ageing in Society: European Perspectives on Gerontology*. London; Los Angeles: Sage Publications.

Brehm, John, and Wendy Rahn. 1997. "Individual-Level Evidence for the Causes and Consequences of Social Capital." *American Journal of Political Science* 41:999-1023.

Claibourn, Michele P., and Paul S. Martin. 2000. "Trusting and Joining? An Empirical Test of the Reciprocal Nature of Social Capital." *Political Behavior* 22:267-291.

Cummins, Robert A. 2003. "Normative Life Satisfaction: Measurement Issues and a Homeostatic Model." *Social Indicators Research* 64:225-256.

Delhey, Jan, and Kenneth Newton. 2003. "Who Trusts? The Origins of Social Trust in Seven Societies." *European Societies* 5: 93-137.

Ferriss, Abbott L. 2002. "Religion and the Quality of Life." *Journal of Happiness Studies* 3:199-215.

Francis, Leslie J., Yaacov J. Katz, Yaacov Yablon, and Mandy Robbins. 2004. "Religiosity, Personality, and Happiness: A Study among Israeli Male Undergraduates." *Journal of Happiness Studies* 5:315-333.

Glanville, Jennifer L. 2004. "Voluntary Associations and Social Network Structure: Why Organizational Location and Type Are Important." *Sociological Forum* 19:465-491.

Greenberg, Michael. 2003. "Was 1992-2000 the Best of Times for American Urban Neighborhoods?" *Geographical Review* 93:81-96.

Grootaert, Christian, Deepa Narayan, Veronica Nyhan Jones, and Michael Woolcock. 2004. "Measuring Social Capital: An Integrated Questionnaire." in *World Bank Working Paper.*

Han, Joon. 2004. "Social Capital, Post-Materialism and Institutional Confidence in South Korea: 1981-2003." *Development and Society* 33:165-183.

Helliwell, John F., and Robert D. Putnam. 2004. "The Social Context of Well-Being" *Philosophical Transactions: Biological Sciences* 359:1435-1446.

Huff, Lenard, and Lane Kelley. 2003. "Levels of Organizational Trust in Individualist Versus Collectivist Societies: A Seven-Nation Study." *Organization Science* 14:81-90.

Kim, Young-Bum, and Joon-Shik Park. 2004. "The Family Network and Life Satisfaction of Elderly in South Korea." *Journal of Korea Gerontological Society* 24:169-185.

Kim, Young Bum, and Seung Hun Lee. 2008. "Social Participation and Subjective Wellbeing of Elderly in Seoul and Chuncheon Area." *Journal of the Korean Gerontological Society* 28:1-18.

Korea National Statistical Office. 2006. "Population Projections." Pp. Dependency ratios & aged-child ratio, edited by KQ0109. xls: Korean National Statistical Office.

Kozma, Albert, and M. J. Stones. 1983. "Predictors of Happiness." *Journal of Gerontology* 38:626-28.

Lai, Wing-Leung D., and J. R. McDonald. 1995. "Life Satisfaction of Chinese Elderly Immigrants in Calgary." *Canadian Journal of Aging* 14:536-551.

Levitt, M. J., T. C. Antonucci, M. C. Clark, J. Rotton, and G. E. Finley. 1986. "Social Support and Well-Being: Preliminary Indicators Based on Two Samples of the Elderly." *International Journal of Aging and Human Development* 21:61-77.

Lewis, Christopher Alan, John Maltby, and Liz Day. 2005.

"Religious Orientation, Religious Coping and Happiness among Uk Adults." *Personality and Individual Differences* 38:1193-1202.

Matcha, Duane A. 1997. *The Sociology of Aging: A Social Problems Perspective*. Boston: Allyn and Bacon.

McKnight, D. Harrison, and Norman Chervany. 2001. "Trust and Distrust Definitions: One Bite at a Time." Pp. 27-54 in *Trust in Cyber-Societies*.

Newsome, Jason T., and Richard Schulz. 1996. "Social Support as a Mediator in the Relation between Functional Status and Quality of Life in Older Adults." *American Psychological Association* 11:33-44.

Palmore, Erdman, and Clark Luikart 1972. "Health and Social Factors Related to Life Satisfaction" *Journal of Health and Social Behavior* 13:68-80.

Park, Gil-Sung. 2002. "Social Capital and Quality of Life." *Asia Research* 45:109-139.

Revicki, Dennis A., and Jim Mitchell. 1986. "Social Support Factor Structure in the Elderly." *Research on Aging* 8:232-248.

Sampson, Robert J., Jeffrey D. Morenoff, and Thomas Gannon-Rowley. 2002. "Assessing "Neighborhood Effects": Social Processes and New Directions in Research." *Annual Review of Sociology* 28:443-478.

Stolle, Dietlind. 1998. "Bowling Together, Bowling Alone: The Development of Generalized Trust in Voluntary Associations." *Political Psychology* 19:497-525.

Yi, Gihong. 2005. "Cultural Capital and Social Capital of the Korean Elderly." *Journal of the Korean Gerontological Society* 25:1-21.

Zaheer, Akbar, Bill McEvily, and Vincenzo Perrone. 1998. "Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance." *Organization Science* 9:141-159.