NICHE DYNAMICS OF KOREAN CIVIC ORGANIZATIONS: 1981~2003

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This study tried to examine the development of civic organizations in Korea in terms of their changing membership niche. Based on the idea of Blau space proposed by McPherson (1984, 2004), we applied the theory of organization ecology (Hannan and Freeman, 1989; Caroll and Hannan, 2000) to the development of Korean civic organizations.
We measured and examined the trend of niche width of civic organizations to see if growth in numbers of civic organizations was accompanied by the expansion of niche width. The results show that width of membership niche have increased in terms of occupation but not in terms of educational background. The results for the age niche are mixed in that the membership niche of labor union and vocation organization expanded while that of ryonko *and religious organization shrank over time. we also calculated the degree of niche overlap over time and examined the trend. The results show non-linear trend of initial rise and slight decline toward the end of observation period. The rise of niche overlap implies that civic organizations face potential competition for recruiting members.*

Key Words: *Niche overlap, Civic organizations, Blau space*

INTRODUCTION

Civic organizations are voluntary social groups of the membership is based on common interests and concerns. In this respect, civic organizations are clearly differentiated from work organizations. The purpose of these organizations are to share friendships, hobbies, and activities or to provide voluntary services for the community or the society in general.

Civic organizations Have drawn research attention since the beginning of the modern society. Tocqueville suggested that active civil participation and the development of civic organizations had laid a cornerstone in the foundation of American democracy (1844, [1990]). Durkheim also found the hope for recovering the ethical order of society disrupted by division of labor in the development of civic organizations with vocational orientation

(1893, [1933]). Civic organizations had been acknowledged as an important basis of civil society thereafter. The emphasis on civic organizations was rekindled as non-governmental organizations (NGO), non-profit organizations (NPO), and the third sector took more part in social development and social welfare, whereas the role of private enterprises decreased gradually (Powell, 1987). Many researchers argue that social capital might serve as a crucial key to the solution of societal disruption and conflict and the new interation of society (Putnam, 1993). Social capital of the society in general can only be mobilized through these civic organizations.

The present study explores how the civic organizations in Korea have changed in terms of their membership niche. Two main questions of this research mostly concern the idea of niche width and the niche overlap.

First, have the niches of Korean civic organizations expanded or diminished or remained constant? If the niche width has remained constant or diminished, it means that the participation rate of the individuals with the same or even more specified characteristics increased. If the niche width has expanded, it signals that the organizations recruited new group of people who had not been included in the past. The niche width expansion can be seen as a generalist strategy, while the niche width reduction can be seen as a specialist strategy.

Second, if there are changes in the organizational niches, what kind of change will it bring on the niche overlap between organizations and ultimately on the growth prospect of the organizations? If the civic organizations expand the niche width via generalization strategy, it will increase the size of the niche in Blau space defined as intersection of various dimensions of socio-demographic characteristics of members, and intensify the degree of niche overlap and also the niche overlap. The increase in the niche overlap will intensify the competition and confine the growth of these organizations. If the civic organizations aim at specialization, it will decrease the possibility of the niche overlap, which will consequentially lower the level of competition.

THE EVOLUTION OF SOCIAL ORGANIZATIONS AND SOCIAL RELATIONS

People have existed in small hunter-gatherer social systems for tens of thousands of years since the dawn of history. These groups were continuously moving and were composed of ten to fifty individuals. The division of labor was based on age and sex. Social contacts, in such small systems were multiplex in that all connections among the people in the community had
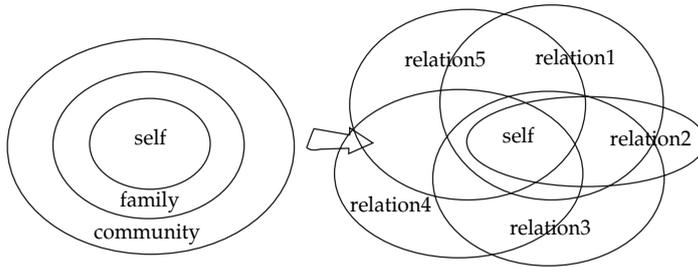
FIGURE 1. CHANGES FROM MULTIPLEX RELATIONSHIPS TO SIMPLEX RELATIONSHIPS

multiple components. They were simultaneously based on kinship, acquaintanceship, exchange, sustenance, sociality, and all other relations necessary to the survival of a small society.

With the increase of the societies in scale, these small multiplex social networks differentiated into separate simplex networks spanning more people. The development of the division of labor also diversified the base of social relations. The face-to-face contact and multiplex relationships performing several functions siumltaneously broke into simplex and separate relationships. Accordingly they were spread over larger and larger numbers of contacts and evolved into the relationships with specific purpose. The development of traffic and communication expanded the radius of social relationships and precipitated the expansion of simplex relationships. The changes in society and social relationships as the result are illustrated in Figure 1.

Many of major figures in Sociological theory proposed explanations and theories for this transition. Durkheim (1933) spoke of the change in dynamic density due to the shift from mechanical to organic solidarity. Toennies ([1887], 1940) explained based on the transition from gemeinschaft to gesellschaft. Simmel (1950) argued that the quality of the web of connections between individuals changed with the increases in system size. Weber (1947) interpreted the growth of bureaucratic systems in terms of the shift from individual control to rational control.

The most important consequence of the change from the primal dense multiplex networks to sparse simplex nets based on increasingly specialized interactions is that the separation of the relations into their constituent parts produces dimensions of social life in which the management of social diversity becomes problematic for society. Thus, social order that depends on the unique history of interaction between small numbers of people in isolated bands is replaced by social order based on generalized dimensions of social esteem, rank, and sociodemographic characteristics.

Blau (1977) used this idea to explore the proposition that the relations among individuals in modern industrial societies are shaped by properties of this space of socio-demographic dimensions. When the dimensions are strongly correlated, social relationships are constrained. When the dimensions are less correlated, society is more diverse. One cannot predict one set of social characteristics from another. When K dimensions are perfectly correlated, they operate as one. When K dimensions are uncorrelated, each dimension allow social differentiation along a new axis. As multiplex relations based on small intensely focused groups give way to specialized relations spanning larer and larger systems, the proliferation of these specialized relations generates Blau space — the dimensions in which social differentiation occurs.

HOMOPHILY BASED ON DEMOGRAPHIC CHARATERISTICS

In Blau's property space, each individual occupies a point in a multidimensional coordinate system defined by the demographic variables such as education, occupation, and age. The positions individuals occupy throughout the multidimensions show us the correlation of the dimensions at the system level. If the configuration of these points appears to be linear on a two dimensional coordinate system, the two dimension has a linearly dependent relationship. If the distribution of the points are scattered out, it indicates that the correlation between the two dimensions is weak, and that there is more room for social differentiation.

Social network researchers argue that social relationships between individuals are not random and tent to be formed based on common characteristics, tastes, or backgrounds. For example, men are more likely to associate with men while women associate with women in workplace. People with similar socio-economic status make friends each other more easily. The probability of contact between two people declines as a function of distnace in Blau space (McPherson and Smith-Lovin, 1987; Marsden, 1987). Homophily occurs frequently because communication is more effective when source and receiver are homopilous. When two individuals share common meanings, belief, and mutual understandings, communication between them is more likely to be effective (Rogevs and Bhownib, 1972). Aside from naturally occuring homophily through interaction, individuals strategically pursue contacts with homophilous partners. They share common interests and try to achieve their common goals. They can also gain access to helpful information through each other (Ibarra, 1992).

The most interesting implication of this model is that the connections that

do not exist determine how the system behaves. Given the characteristics of modern industrial society with sparse simplex networks, points in the network will be connected to only a very small proportion of the whole possible ones. So each individual face the problem of choice among the many possible alternatives as a contact. Here the principle of homophily takes the role of simplifying the otherwise complex decision making. Homophily becomes more powerful determinants in choosing transactions in the system as the size of the network increases. Since the networks are homophilous, activities that involve the mobilization of multiple individuals through the network will tend to be localized, since it is only locally that the network is dense enough to sustain the coordination of many individuals (McPherson & Ranger-Moore, 1991).

NICHES OF CIVIC ORGANIZATIONS AND COMPETITION BETWEEN ORGANIZATIONS

Since the social relationships are localized through homophily, Blau space ultimately specifies distinctive niches for civic organizations or ryongo organizations dependent on social networks. The distribution of socio-demographic characteristics of individuals intimately interact with the distribution of organizations, which can be understood as the duality of individuals and organizations (Breiger, 1974). The duality means a relationship in which one defines the other and the vice versa. This relationship of duality comes from the fact that individuals are the most important and focal resources for organizations, especially for civic organizations. There are various resource needed for the survival of organizations. In economic organizations, financial and techinical capital play a central role. However in civic organizations, individuals and their commitment to invest in time and efforts for the organization are indispensible. In modern industrial societies, the change from the primal dense multiplex networks to sparse simplex nets positioned individuals in many, separate relationships. This situation forces individuals to set priorities among various relationships in social network and organizations they belong. Therefore individual commitment to organizations and relationships becomes not only important but also scarce resource.

Concerns and commitments as scarce resource are localized in Blau space and form niches for civic organizations. So civic organizations requiring more concerns and commitments are distributed along the demographic characteristics of individuals at risk for membership in Blau space. If two organizations attempt to consume the resources of the people with similar demographic characteristics, they are located in the same niche. In other

words, if two organizations are located close to each other in Blau space, there are niche overlap between these organizations. Niche overlap plays an important role in determining the inter-organizational relationship. Niche overlap increases the possibility of competitive interactions. When two organizations are located in the same niche, their attempts to consume the finite resources of the same people leads to competitive exclusion over time (Gause, 1934).

Ecological competition is distinctive in various respects. First, the competition doesn't need to be conscious. Even if the competing organizations are not conscious of each other as competitors, competition exists in reality. Ecological competition, in this respect, is differentiated from antagonistic competition, where competitors are conscious of each other and react to the other's move. Second, competition is not associated with the activities inside the organizations. If two heterogeneous organizations recruit their members from the same population simultaneously, competition might arise between them. For instance, labor union and factory compete for employees in the factory. Third, competition unfolds over the time dimension. Only when there are time overlap between the organizational activities, there are direct competition between the organizations. However, since time resources are finite, indirect competition can exist between the two organizations without time overlap. If the employees are required to work overtime and on weekends at their workplace, civic organizations of which activities occur mostly after work and on weekends will suffer from low
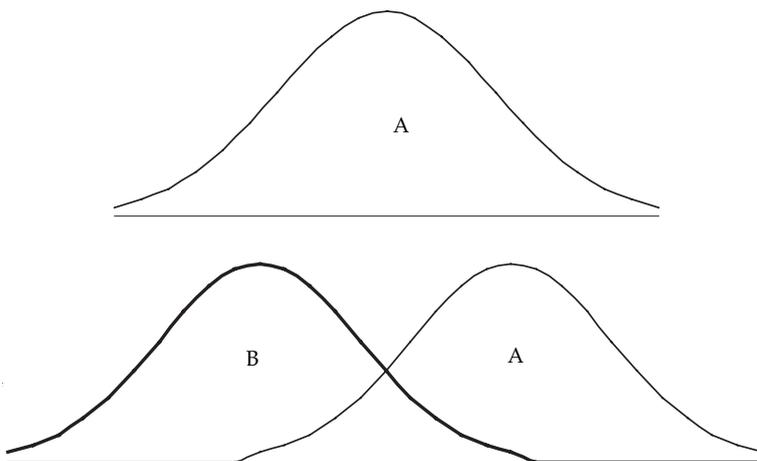

FIGURE 2. THE FUNDAMENTAL NICHE(UPPER) AND THE REALIZED NICHE OF ORGANI-
ZATION A (AT THE BOTTOM)

participation rate.

ORGANIZATIONAL ENVIRONMENT AND NICHE DYNAMICS

Inter-organizational competition is closely associated with their niches. The niche itself is not stable but change and evolve over time. McPherson and Ranger-Moore (1991) described the organizational niche as a landscape where resources were distributed the in a multidimensional space, and the niche dynamics as dancing landscape. The niche changes with both its endogenous and exogenous processes from outside the organization.

We'll first look into the niche change induced by endogenous process. Ecologists conceptually differentiate fundamental niche from realize niche (Hutchinson, 1957; Hanna and Freeman, 1989). Fundamental niche is determined by the resource distribution required by the organization when there is no competitive interaction between organizations. When organizations compete each other, however, an organization can not capitalize on all the resources it needs due to the inter-organizational relationships. If organization A is excluded from its niche as a result of competition, the realized niche of the organization A will become reduced than its fundamental niche. In Figure 2, the upper distribution form shows the fundamental niche of the organization A. The area under the bell-shaped line corresponds to the size of the fundamental niche. The form of the line takes a bell shape, since it is assumed that the members' characteristics are normally distributed. The figure at the bottom shows the diminished size of the niche of the organization A. The realized niche of the organization A is diminished because of the competitive exclusion as a result of the competition between the organization A and the organization B. If the organization B predominates (as the thick line shows), the niche of the organization A is reduced by the overlapping area. However, we can only observe the realized niche and not the fundamental one. Since it is impossible to independently measure the fundamental niche ignoring the existence of competitive interaction in reality. Sometimes it seems like that there are no competition between two organizations, which results from the confined size of the realized niche. When the realized niche is very small and narrow, the underlying cause might be severe competition.

As described above, the niche of an organization changes as a function of the competitive interaction with other organization. As more organizations appear and surround one organization in Blau space, competitive interaction becomes more severe and the niche width of the organization becomes smaller. Conversely as competing organizations disappear, the niche width

of the organization expands. The niche distribution defines the possiblity and the strength of competitive interaction. But it changes the niche width in turn, which constitutes a kind of feedback system between competition and niche.

It is not only the endogenous proccess induced by competition that brings about niche dynamics. The niche changes with the outside influence. A big societal fluctuation affecting the society in general never fails to influence the niche of organizations. Changes in socio-demographic distribution of individuals will also directly bring about change in the niche. Social development and modernization englarged the educational opportunity in general, which then increased the education level of individuals. Stinchcombe (1965) argued that the decreases in illiteracy rate and the increases in intellectual level of individuals facilitated the rapid development of organizations in modern society. On the other hand, post-industrialization, knowledge accumulation, and the growth of service industry changed the structure of industry and work, and ultimately the distribution of work. In the industrial society, the period of employment and work hour used to be fixed and consistent. In post industrial society where service industry predominates, the period of employment is varied (long-term and short-term) and work hour is diversified into part time and flextime (Gershuny, 2000). Given the varied work hour, the time allocation to civic organization should be varied, which results in the niche change.

THE MEASUREMENT OF THE NICHE OF CIVIC ORGANIZATIONS USING THE SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE MEMBERS

The distribution of individuals in the civic organizations is determined by their socio-demographic characteristics. Using the duality between individual characteristics and the organizational niches, we can measure the niche width and the niche overlap between the civic organizations. Let's go back to the organizations A and B illustrated in Figure 2. Let's say that the organization A is an alumni association, while the organization B is a clan association. If the main axis is age, the members of an alumni association is lower than the members of a clan association. But there will still be an overlap where the individuals have dual memberships. The organizations A and B will compete each other on those individuals.

Figure 3 expanded the idea into two dimensions. The two axes are age and education. For this illustration, we used a part of the data used in this study (specifically the year of 1998). The members of the alumni associa-
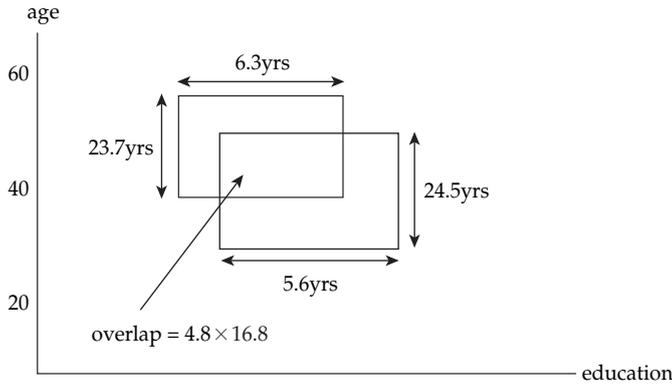
FIGURE 3. THE MEASUREMENT OF NICHE WIDTH AND OVERLAP OF TWO ORGANIZA-
TIONS IN THE TWO DIMENSIONAL SPACE

tions are higher in education and lower in age than those of the clan associa-
tions. However, there is an overlap in terms of age and education between
the two organizations. What are overlapping here are not the individuals
themselves but their education and age characteristics. The rectangles in the
Figure 3 representing each organization show the organizational niches on
two dimensions. And the overlapping area between the two rectangles rep-
resents the niche overlap.

This way of niche measurement can easily be generalized into nth dimen-
sion. We can measure the niche width and overlap by drawing a polyhe-
dron on multi-dimensions based on the members' characteristics. The main
variables included in the present empirical analysis were age, education,
and occupational prestige.

First we investigated the distribution of the demographic characteristics
of the members by the type of organizations. With the distribution, we mea-
sured the nich overlap for each pair of organizations from different organi-
zation categories. If we compare n organization types, the whole number of
pairs compared amounts up to n(n-1)/2. The niche overlaps on age, educa-
tion, and occupational prestige dimensions were measured and then multi-
plied to compute the general niche overlap between the organization types.
If the niches of the two organization types overlap completely, this index
will become 1. If there is no overlap, the index will become 0.

To compare with the niche overlap between organization types, we also
calculated the membership overlap between organization types. The mem-
bership overlap measurement was performed in the same way as in social
network analysis, where the quasi-network was induced by using the joint

involvement data. The relationships of n individuals participating in *m* type organization are represented as m × n matrix X. The matrix X is multiplied with the transposed n × m matrix X to produce m m matrix. This m × m matrix represents the degree of the membership overlap between two different types of organizations. The membership overlap index was normalized with the number of members of each pair of organization types. This normalized index varies from 0 to 1 like other indexes, where 0 means no overlap between the two organization types and 1 means complete overlap.

DATA AND METHOD

The data used in this research was the social survey data on voluntary affiliation over time. It included the World Value Survey data in the years 1981, 1990, and 1995 and the survey data from the Institute for Social Development and Policy Research (Seoul National University) in the years 1998, 2001, and 2003. The respondents were asked to report on their memberships in each type of voluntary associations. Information on the age, education and occupational prestige of the members of each type of organization provides an estimate of the niche location of the organizational type for the year.

First, we measured the niche width in Blau space by calculating mean ± 0.75 × standard deviation for continuous variables such as age and years of schooling, and by calculating the index of dissimilarity for discrete variables such as occupation. The niche overlap can be measured by multiplying the overlapping area in Blau space, but in the present study we used a more direct method. We first produced member-sharing matrix of organization type × organization type from the affiliation matrix of person × organization type. Then we extracted the ratio of off-diagonal cells in the member-sharing matrix to the diagonal cells, which indicates the degree of membership overlap among different types of organization.

After measuring the niche width and overlap for each organization type, we drew a niche map using multi-dimensional scaling (MDS) method. In this graph, organizations having a large number of members with diverse characteristics, in other words generalist organizations. will be located at the center, while specialist organizations recruiting members from narrow area in Blau space will be located at the periphery. Also being near to each other implies that high degree of niche overlap between the pair of organization types in terms of membership.
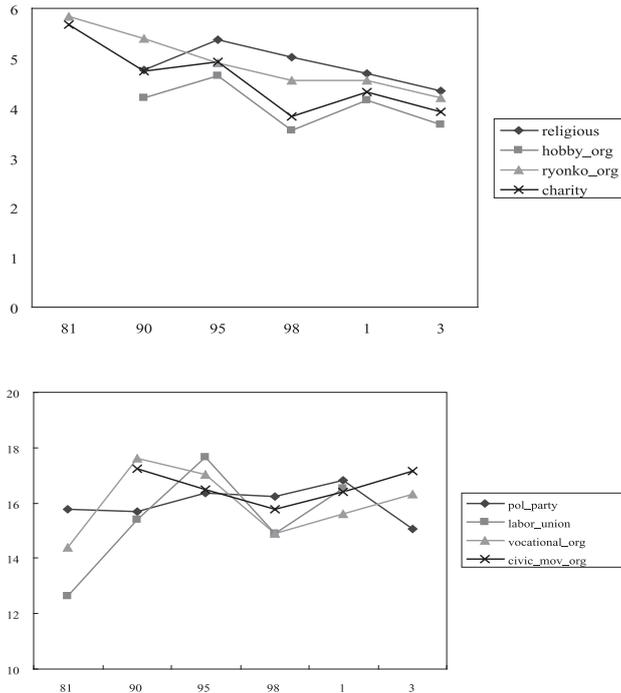
FIGURE 4. TRENDS OF AGE NICHE WIDTH

RESULTS

Figure 4 to 6 show the changes in niche width on Balu space for each type of civic organizations in terms of age, years of schooling, and occupations.

In terms of age, distinct trend is pronounced for *ryonko*, religious, vocational organizations and labor unions. Both *ryonko* and religious organizations experience reduction in the age niche width. Both organizations become more specialized on elderly age groups. On the other hand, niche width of labor unions and vocational organizations shows increasing trend over time. In other words, both types of organizations came to attract members from more diverse age groups.

From figure 5, we can see that except for labor unions and vocational organizations niche width tends to decreases as a whole for civic organizations. It could mean that Korean civic organizations have increasingly attracted members from narrower pool of people in terms of educational background. Considering the fact that overall educational level in Korea has been rapidly elevated during the same period, it could be an artifact of
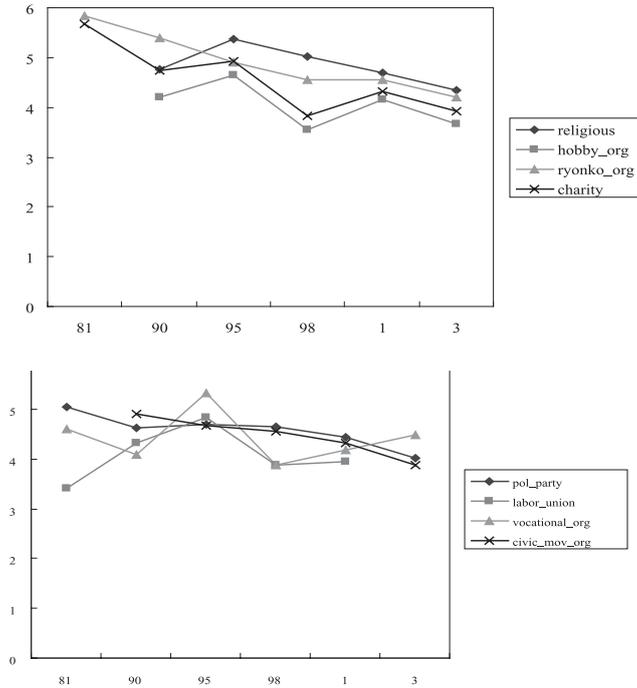
FIGURE 5. TRENDS OF EDUCATIONAL NICHE WIDTH

decreased dispersion in years of schooling. Constancy of niche width for labor unions and vocational organizations may reflect the fact that membership of these organizations are based on occupations, which is highly correlated to educational attainment.

Figure 6 graphically shows trend of occupational niche width for each type of organizations measured with dissimilarity index. As dissimilarity index represents the level of heterogeneity in terms of discrete variable, the rise in the index would mean more heterogeneity and therefore broader niche width the vice versa. The graph shows that except for charity and religious organizations, the occupational niche width for civic organizations have expanded, implying that they attract members from more diverse mix of occupations.

Figure 7 shows changes in the average number of organizations in which respondents participate and the overall degree of membership overlap among civic organizations. The lines are broken as the types of organizations used in calculating the measures differ between the years from 1984 to
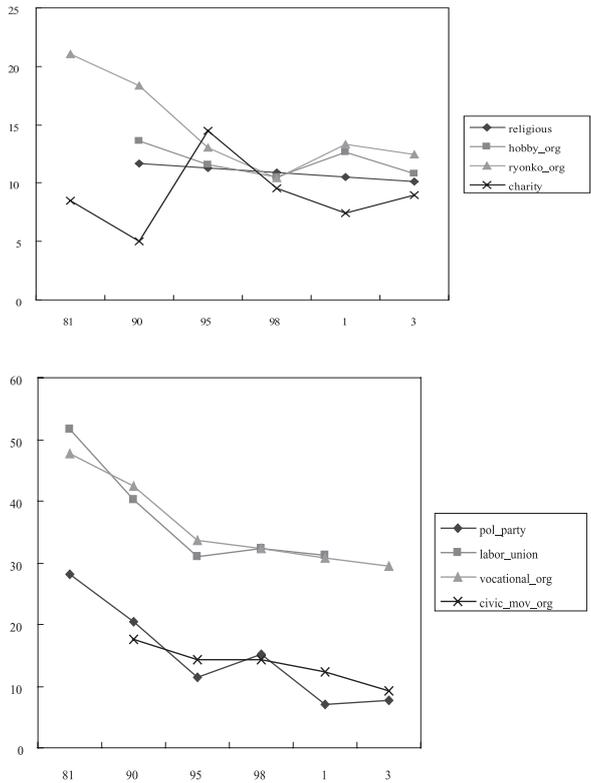
FIGURE 6. TRENDS OF OCCUPATIONAL NICHE WIDTH

1995 and from 1998 to 2003. We can see from the graph that both graphs show parallel trend. The average number of participating organizations and the level of membership overlap rise initially but decline slightly after 2001. It implies that the rapid increase in the number of civic organizations during 1980s and 1990s intensified potential competition among these organizations for membership.

Figure 8 shows the multidimensional scaling graph of organizations in terms of membership niche for the years 1984, 1990, and 2003. X and Y axis of graph don't have substantive meaning and only provide basis for coordinates calculated relative distances among organizations. The graph show that while such organizations as vocational organization, labor union, hobby organization, and religious organization appear as specialists in terms of membership, civic movement organization and charity organization tend to occupy generalist position. We can see by comparing graphs
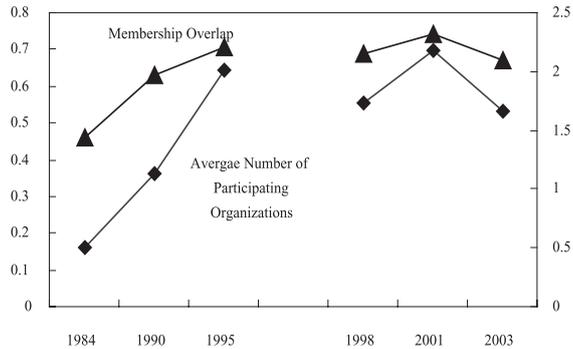
FIGURE 7. TRENDS IN AVERAGE NUMBER OF PARTICIPATING ORGANIZATIONS AND MEMBERSHIP OVERLAP

that political party and hobby organizations have made significant shift in their position. They have become more specialist in terms of membership niche.

SUMMARY AND DISCUSSION

In this paper, we have tried to examine the development of civic organizations in Korea in terms of their changing membership niche. Based on the idea of Blau space proposed by McPherson (1984, 2004), we applied the theory of organization ecology (Hannan and Freeman, 1989; Caroll and Hannan, 2000) to the development of Korean civic organizations.

We measured and examined the trend of niche width of civic organizations to see if growth in numbers of civic organizations was accompanied by the expansion of niche width. The results show that width of membership niche have increased in terms of occupation but not in terms of educational background. The results for the age niche are mixed in that the membership niche of labor union and vocation organization has expanded while that of *ryonko* and religious organization has shrunk over time.

To test the niche overlap theory against Korean civic organizations, we calculated the degree of niche overlap over time and examined the trend. The results show non-linear trend of initial rise and slight decline toward the end of observation period. The rise of niche overlap implies that civic organizations face potential competition for recruiting members. We have yet to see if the slight decline in niche overlap after 2001 is a consequence of competition among civic organizations. Further study may tell whether it is
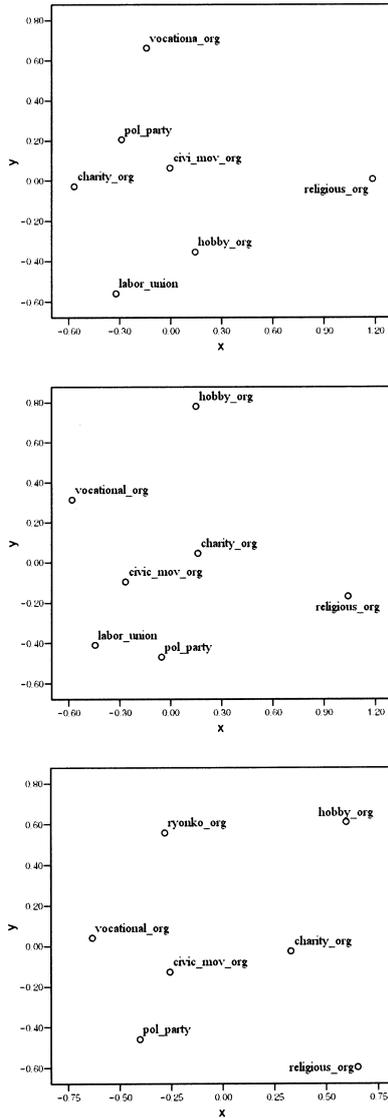
FIGURE 8. MDS GRAPH OF NICHE MAP FOR 1981, 1990, AND 2003 (TOP TO BOTTOM)

just a transitory phenomenon or not.

Multi-dimensional scaling of civic organizations in terms of membership characteristics provides relative niche positions of these organizations. Comparing the niche positions over time, we found the evidence for the dif-

ferentiation of civic organizations into generalists and specialists in terms of niche strategy. While charity organization and civic movement organization occupy generalist position, other types organizations are located at the specialist position. We could also see political party and hobby organization move to more specialist position over time.

Although this study shows niche dynamics of civic organizations in Korea over the period of their rapid development, it suffers from the following methodological limitations. Fist, we used national sample survey data to extract information on civic organization participation. However the participation rates for these organizations are generally low. Therefore we were not able to fully utilize the information from these surveys. Second, this study relied entirely on the individual level data to study organizations. This strategy is useful for studying niche at the level of organizational population. But if we want to examine the effect of niche overlap and competition more directly, we have to rely on organization level data additionally. Linking individual and organization level data would be ideal for studying the evolution of civic organizations on the Blau space.

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