ELDERLY POPULATION DISTRIBUTION
AND
IT’S EVOLUTION IN KOREA

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Abstract
The purpose of this article is to analyze the changing regional patterns in elderly population in South Korea in the period from 1980 to 2000. Specifically, this article examines characteristics of spatial distributions of the aging population and the change of the spatial aspects of those elderly peoples establish to clarify by the choropleth map in the cartographic science. The data are based on the Population Censuses of Korea in 1980, 1990, and 2000. The elderly will increase more rapidly and as time goes. The problem of elderly population will be more serious in rural areas(villages) than metropolitan cities. The aging population of rural areas(province=do) decreases, but that of metropolitan cities increase continuously. The distribution of aging population in Korea is affected factors, but some are prominent, that is life cycle, the urban development process by governments, housing market etc. Korea is faced with new challenges, perhaps less immediate than others but more serious in the longer run.

INTRODUCTION
Decreases in mortality, improvement in nutrition and family planning have resulted in an increasing number of the elderly in Korea. Because of the increasing number of elderly, expansion of the nuclear family, deficiency of family support system and lack of government investment in social and familial welfare support, the elderly problem is very serious(Kim,1988; Chough,2001; Kim, 1997).

The elderly will increase more rapidly and as time goes. The problem of elderly population will be more serious in rural areas(villages) than metropolitan cities. The Great 7 metropolitan cities in Korea has almost 49 percent of national total population. The total population of Korea is stable but the elderly population of Korea continues to grow steadily. The aging population of rural areas(province=do) decreases, but that of metropolitan cities increase continuously. The distribution of aging population in Korea is affected factors, but some are prominent, that is life cycle, the urban development process by governments, housing market etc.
The purpose of this article is to analyze the changing regional patterns in elderly population in South Korea in the period from 1980 to 2000. Specifically, this article examines characteristics of spatial distributions of the aging population and the change of the spatial aspects of those elderly peoples establish to clarify by the choropleth map (Peet and Rowles, 1974; Son, 2001; Wiseman, 1978). The data are based on the Population Censuses of Korea in 1980, 1990 and 2000.

BACKGROUND

Adjustments in metropolitan cities elderly concentrations, that is, change in the percentage of 65 years of age and older, are a function five processes that cause changes in the age distributions populations in geographic areas: fertility, mortality, aging-in-place of the areas nonelderly(labor force ages 20 to 59) population (Warnes, 1982). Fertility and mortality have become less important in explaining variations in the aging of local populations because mortality and fertility rates have been conversing since 1940(Jackson et al., 1981; O'Connell, 1981; Sauer, 1974). When fertility and mortality rates are geographically invariant over an extended period(several generations). In the absence of migration, convergence occurs in the age structure results(Heaton, 1983; Lee, 1997).

There is ample evidence of a spacial restructuring of both elderly and nonelderly migration in the United States in the last two decades. In the 1950s and 1960s, migration flows of the young and the elderly populations had similar spacial change; both were origin extensive and destination intensive. Rural areas with net out-migration for the young or the elderly populations were many and were geographic extend(Flynn, 1980; Lockwood, 1995; 1980; Roseman, 1977; Vining and Strauss, 1977).

THE STRUCTURE OF KOREAN POPULATION

In South Korea, the proportion of population 65 years and older increased by 3.4 percent between 1980 and 2000(from 3.9 to 7.3%). The growth rate of the aging population was higher than that of the total population. The crude birth rate decreased from 22.7 in 1980 to 13.6 in 2000 and total fertility rates decreased from 2.83 in 1980 to 1.47 in 2000. Life expectancy increased from 66.2 in 1980 to 76.5 in 2000.
Table 1. Population change

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>0-14</td>
<td>12,655,775*</td>
<td>11,134,215</td>
<td>9,638,756</td>
<td>-23.8</td>
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<tr>
<td></td>
<td>33.8**</td>
<td>25.7</td>
<td>21.0</td>
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<tr>
<td>15-64</td>
<td>23,304,926</td>
<td>30,093,920</td>
<td>32,972,859</td>
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</tr>
<tr>
<td></td>
<td>62.3</td>
<td>69.4</td>
<td>71.7</td>
<td>41.5</td>
</tr>
<tr>
<td>65 세 이상</td>
<td>1,446,114</td>
<td>2,162,239</td>
<td>3,371,806</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.9</td>
<td>5.0</td>
<td>7.3</td>
<td>133.2</td>
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<tr>
<td>total</td>
<td>37,406,815</td>
<td>43,390,374</td>
<td>45,985,289</td>
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</tr>
</tbody>
</table>

* number of population  
** rate per total population

Table 2. Fertility rates

<table>
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<tr>
<th>vital statistics</th>
<th>1980</th>
<th>1990</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBR*</td>
<td>22.7/1000pop</td>
<td>15.4/1000pop</td>
<td>13.6/1000pop</td>
</tr>
<tr>
<td>total fertility rates**</td>
<td>2.83</td>
<td>1.59</td>
<td>1.47</td>
</tr>
</tbody>
</table>

* CBR : crude birth rate  
**Average number of live births per a woman during the period of potential pregnancy

Table 3. Life expectancy

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>males</td>
<td>62.3</td>
<td>67.7</td>
<td>72.8</td>
</tr>
<tr>
<td>females</td>
<td>70.5</td>
<td>75.9</td>
<td>80.0</td>
</tr>
<tr>
<td>total</td>
<td>66.2</td>
<td>71.7</td>
<td>76.5</td>
</tr>
</tbody>
</table>
AGING POPULATION

Korea has fast become an aging society in recent years, especially the rate of the aging population was considerably high in rural areas than urban areas. The proportion of the aging population in urban areas increased from 2.6% in 1980 to 5.5% in 2000. The proportion of the aging population in rural areas increased from 5.6% in 1980 to 14.7% in 2000.

Table 4. Aging population in rural and urban areas

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>rural areas</td>
<td>897,213*</td>
<td>1,003,669</td>
<td>1,370,465</td>
<td>52.7</td>
</tr>
<tr>
<td></td>
<td>5.6**</td>
<td>9.0</td>
<td>14.7</td>
<td></td>
</tr>
<tr>
<td>urban areas</td>
<td>548,901</td>
<td>1,158,570</td>
<td>2,001,341</td>
<td>264.6</td>
</tr>
<tr>
<td></td>
<td>2.6</td>
<td>3.6</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>1,446,114</td>
<td>2,162,239</td>
<td>3,371,806</td>
<td>133.2</td>
</tr>
<tr>
<td></td>
<td>3.9</td>
<td>5.0</td>
<td>7.3</td>
<td></td>
</tr>
</tbody>
</table>

* number of aging population
** rate per total population

This is particularly important for officials in rural areas undergoing rapid and significant changes in either the absolute number or the relative proportion, concentration, of the aging population. In this context, it is important to distinguish aging population concentration from aging population growth, change in the absolute size of the aging population.
fig.1. Spatial distributions of the aging population in the period of 1980

fig.2. Spatial distributions of the aging population in the period of 1990

fig.3. Spatial distributions of the aging population in the period of 2000

fig.4. The changing regional patterns in elderly population in the period from 1980 to 1990

fig.5. The changing regional patterns in elderly population in the period from 1990 to 2000

fig.6. The changing regional patterns in elderly population in the period from 1980 to 2000
CONCLUSIONS
Characteristics of spatial distributions of the aging population in South Korea were resulted from regional differentials in fertility and mobility rates, by the increase in life expectancy, and by such social and economic factors as the movements of the younger adult-age cohorts and the elderly cohort caused by industrialization and urbanization, and the movements of the elderly themselves. It was low in metropolises and their suburban areas and in industrial areas where a large number of younger people migrated on rural areas, by contrast, it was high in rural areas, where have suffered from migration of the young age group. The increase in the absolute number and the rate of the aging population could cause many problems of the elderly.

REFERENCES
BIOGRAPHY
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I here certify that the above mentioned are correct and true to the best of my knowledge.

Date: April 23, 2005

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Date: April 23, 2005

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