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Descriptive Finding

Are parents and children coresiding less than before? An analysis of intergenerational coresidence in South Korea, 1980–2015

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Contents

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Abstract

BACKGROUND
Intergenerational coresidence has important consequences for care provision for the young and the old. Given the rising concerns about population aging in South Korea, understanding intergenerational coresidence is very relevant.

OBJECTIVE
This research describes evolving intergenerational coresidence patterns in South Korea between 1980 and 2015 through the lens of fertility decline, increased life expectancy, and changing marriage patterns.

METHODS
The 1% micro data in the Korean census were used to describe changing co-residence patterns, and Sullivan's method was used to estimate the length and proportion of intergenerational coresidence.

RESULTS
Coresidence with parents decreased over time due to an increase in the proportion of older people. After controlling for age structure, the prevalence of parent coresidence increased due to a reduction in sibling size and delay in marriage. Coresidence with children changed little due to a decrease in the proportion of young people. After controlling for age structure, the prevalence of child coresidence decreased substantially due to fertility decline and delay in marriage. Whereas the proportion of lifetime coresidence with parents decreased modestly between 1980 and 2015, the proportion of lifetime coresidence with children almost halved.

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CONCLUSION
As the nuclear family has become the dominant family household form, multigenerational coresidence has become less common. Demographic changes partly offset the trend of decreasing parent coresidence but amplify the trend of decreasing child coresidence.

CONTRIBUTION
This research shows the importance of demographic changes to changing family configurations in South Korea. As well as familial changes, fertility decline and rising longevity affect the patterns of intergenerational coresidence.

1. Background

1.1 Demographic change and intergenerational coresidence

This study examines how intergenerational coresidence has changed in South Korea (henceforth Korea) by focusing on demographic change. Parents and children usually provide special care at the beginning and end of life respectively, and intergenerational coresidence facilitates care provision at these stages (Hrdy 1999; Bianchi et al. 2008). The prevalence of intergenerational coresidence depends on family norms. As the nuclear family becomes the standard household form, married adult children are less likely to coreside with their elderly parents (Ruggles and Heggeness 2008), leading to a reduction in the prevalence of intergenerational coresidence. However, changes in family norms regarding intergenerational coresidence depend on various factors. We may expect that elderly parents want to live independently as they become wealthier (Bethencourt and Rios-Rull 2009; Klinenberg 2012), leading to a negative association between parental wealth and intergenerational coresidence. In Korea the patterns are U-shaped, suggesting that there are heterogeneous reasons for intergenerational coresidence. While the elderly poor tend to live with their children to reduce living costs, the children of the elderly rich may receive greater benefit from living with their elderly parents (Hwang and Lim 2020). Hence, norms and preferences regarding intergenerational coresidence can differ by country and social class.

Demographic changes also affect intergenerational coresidence. Seltzer and Bianchi (2013) provide a detailed review of the implications of demographic changes for intergenerational coresidence. For example, as marriage is delayed, children leave the parental home later. As mortality declines, vertical family relations expand, and children are exposed to the 'risk' of longer intergenerational coresidence. As fertility declines, horizontal family relations shrink. Parents have fewer children with whom to coreside

and each child has a higher probability of being chosen as the coresiding child for their parents if parents live with children. Urbanization tends to lead to a reduction in intergenerational coresidence due to children migrating to cities. In sum, patterns of intergenerational coresidence are expected to transform fundamentally due to demographic changes. The current study analyzes changes in intergenerational coresidence patterns in Korea and discusses the implications of demographic changes, focusing on delayed marriage, reduced fertility, and rising longevity in Korean society. More specifically, we examine how the age patterns of intergenerational coresidence have differed by gender and the perspective of children and parents.

1.2 The perspective of parents and children

Goode (1963) emphasized the growing importance of the conjugal family in industrialized societies, and family studies have long presumed that in such societies, multigenerational coresidence fades as the dominant household form. In most industrialized societies the share of three-generational households has decreased, and this trend is projected to continue in the future (Zeng, Vaupel, and Wang 1997; 1998; Zeng et al. 2014). While decreasing multigenerational coresidence can be observed from the household perspective, patterns of intergenerational coresidence may differ if the phenomenon is observed from the individual perspective. Watkins, Menken, and Bongaarts (1987) showed that the demographic transition fundamentally altered the length of having living parents and children. Recently, Song and Mare (2019) showed that fertility and mortality changes are essential in shaping the likelihood of "three-generational survival."

To describe intergenerational coresidence patterns, it is important to distinguish between the perspective of parents and of children. While increasing longevity increases the number of years that both parents and children can coreside with each other, the implications of fertility decline differ for parents and children. From the parental perspective, fertility decline reduces the number of available children with whom to live, shortening the length of coresidence with children. By contrast, a reduction in the number of siblings increases the 'risk' of coresidence with parents because parents have fewer choices regarding which child to live with. Watkins, Menken, and Bongaarts (1987) showed that in the United States the length of time with surviving parents increased substantially during the 20th century, but the length of time with living children fluctuated with fluctuating fertility rates.

2. Data and methods

2.1 Data and measures

In this study we used two sets of data. The first is the 1% micro data from the Korean census, 1980–2015. The Korean census is conducted every five years, and micro data are available from 1960. The 1980 census was used as the starting point because the codes used in previous censuses for "relationship to household head," required for the identification of intergenerational coresidence, are not comparable with those in later censuses. All individuals who have valid information on age, sex, and relationship to household head are included in our analytic sample. We define measures of coresidence with parents and coresidence with children using the information on relationship to the household head. For example, a person who is the father of a household head is coded as "living with children." "In-laws" include parents and children. If grandparents of a household head are not listed in the household, the household head is coded as "not living with parents." Age is measured in 5-year intervals, and marital status is measured as four categories: never-married, currently married, divorced, and widowed.

Second, we used life table estimates, person-years lived (L_x) and remaining life expectancy (e_x), from the Korean Statistical Information Service (www.kosis.kr) for the same period. As we will discuss in the methods section, we examine length of intergenerational coresidence as well as probabilities of intergenerational coresidence. Person-years lived (L_x) are used to estimate the length of intergenerational coresidence combined with the 1% micro data from the census.

2.2 Methods

Because the survival of both parents and children is a prerequisite for intergenerational coresidence, demographic changes fundamentally structure the prevalence of intergenerational coresidence and have different implications for parents and children. This can be expressed in the following equations, where parents and children include "in-laws."

2.3 Coresidence with parents

$$P_x(C_p = 1) = P_x(S = 1) \times P_x(C_p = 1|S = 1) \quad (1)$$

$$L_{cp} = \sum L_x \times P_x(C_p = 1|S = 1) \quad (2)$$

where $P_x(C_p = 1)$ is the probability of a person at age x coresiding with at least one parent; $P_x(S = 1)$ is the probability of surviving at age x; $P_x(C_p = 1|S = 1)$ is the probability of a person coresiding with at least one parent given that he/she survives to age x; and L_x is the person-years lived. L_{cp} is the average length of coresidence with at least one parent, measured in years.

2.4 Coresidence with children

$$P_x(C_c = 1) = P_x(S = 1) \times P_x(C_c = 1|S = 1) \quad (3)$$

$$L_{cc} = \sum L_x \times P_x(C_c = 1|S = 1) \quad (4)$$

where $P_x(C_c = 1)$ is the probability of a person at age x coresiding with at least one child; $P_x(S = 1)$ is the probability of surviving at age x; $P_x(C_c = 1|S = 1)$ is the probability of a person coresiding with at least one child given that he/she survives to age x; and L_{cc} is the average length of coresidence with at least one child.

Here, the distinction between $P_x(C_p = 1)$ and $Px(C_p = 1|S = 1)$ or ($P_x(C_c = 1)$ and $P_x(C_c = 1|S = 1)$) is important. The probability of a person coresiding with parents or children, ($P_x(C_p = 1)$ or $P_x(C_c = 1)$), depends on the individual's own survival probability, ($P_x(S = 1)$), and the likelihood of coresidence with a parent or children given one's own survival, ($P_x(C_p = 1|S = 1)$ or $P_x(C_c = 1|S = 1)$). Cross-sectional data, including census data, provide information for $P_x(C_p = 1|S = 1)$ and $P_x(C_c = 1|S = 1)$. This is the case because a census only includes survivors. To estimate the length of life spent coresiding with parents, estimates for $P_x(S = 1)$ were required.

First, we analyzed the probability of coresidence with parents ($P_x(C_p = 1)$) or children ($P_x(C_c = 1)$) using the 1% micro data from the Korean census. In this analysis we examined observed probabilities of intergenerational coresidence and expected probabilities after controlling for distribution of age and marital status. We included people aged 15 and over in this analysis. Second, we applied Sullivan's method (Sullivan 1971) to compute the expected length of intergenerational coresidence using Korean 1% micro census data and life table estimates. Sullivan's method is used to estimate state-specific life expectancy when information on transition rates is unavailable. The method yields unbiased estimates for state-specific life expectancy if mortality does not depend on states (Imai and Soneji 2007). However, this may deviate from the real-life situation. Nonetheless, estimates derived from Sullivan's method describe the general trend of intergenerational coresidence while taking mortality into account. We conducted all analyses separately for men and women using a 5-year age interval.

3. Results

3.1 Intergenerational coresidence trends

Table 1 contains the key descriptive statistics from the 1% micro data in the Korean census, showing the general trend of intergenerational coresidence. The prevalence of coresidence with parents monotonically decreased for both men and women between 1980 and 2015 (a 25 percentage point decrease). By contrast, coresidence with children increased until 1995 and then decreased modestly. This diverging trend can be explained by demographic changes. The country experienced rapid population aging during this period. The median age for both men and women increased by 21 years, and the proportion of people aged 65 and over increased by more than 10 percentage points. Because the likelihood of older people having their own living parents is low, coresidence with parents decreases as population aging proceeds. Marriage also matters, because single people are more likely to live with parents than married people. For both men and women, the prevalence of the never married decreased while the prevalence of the currently married increased. Given that marriage is delayed in Korea for men and women (Park and Lee 2017; Park, Lee, and Jo 2013), the changing age structure is responsible for this change. In addition, the proportion of young people decreased due to fertility decline, leading to a reduction in the proportion of the never married who are likely to live with their parents. Therefore, demographic changes are closely related to overall changes in the prevalence of intergenerational coresidence.

Table 2 presents observed and adjusted prevalence of intergenerational coresidence among people aged 15 and over by year and sex. The analysis was restricted to people aged 15 and over in order to observe the implications of marriage on intergenerational coresidence. The proportion of people living with children monotonically increased when those younger than 15 years were excluded from the analysis, confirming that the fluctuating patterns of coresidence with children reported in Table 1 reflect a reduction in the number of young people. Interestingly, the prevalence of coresidence with parents was slightly higher in 2015 than in 1980, when the age structure for subsequent years was assumed to be the same as that of 1980. This shows that a decrease in the relative amount of young people due to fertility decline was an important reason for the reduction in the overall prevalence of coresidence with parents. We speculate that fertility decline also contributed to decreasing coresidence with parents because of the reduction in sibling size. By contrast, holding marital status distribution constant had the opposite effect. Coresidence with parents would have been even lower if marital status distribution remained the same as that of 1980. This is the case because people left the parental home later due to marriage delay.

Table 1: Descriptive statistics

Male							
Year	Sample size	% Parent coresiding	% Child coresiding	Median age	% 65+	% Never married	% Currently married
1980	173,221	63.5	38.4	21.0	3.0	58.6	40.0
1985	187,476	59.5	40.2	24.0	3.4	55.7	42.9
1990	196,350	55.1	41.9	27.0	3.9	51.8	46.5
1995	208,264	50.6	42.0	30.0	4.6	48.6	49.2
2000	214,480	48.1	41.4	32.0	6.1	46.5	50.6
2005	214,429	44.4	38.7	35.0	9.1	44.5	51.4
2010	223,800	41.7	36.6	39.0	11.7	42.5	52.5
2015	222,717	38.0	34.0	42.0	14.6	40.9	53.1
Female							
Year	Sample size	% Parent coresiding	% Child coresiding	Median age	% 65+	% Never married	% Currently married
1980	177,122	56.2	45.1	23.0	4.9	50.5	40.1
1985	193,106	51.7	46.8	25.0	5.5	47.3	43.4
1990	203,451	47.8	47.8	28.0	6.4	44.0	45.7
1995	215,860	43.8	47.6	31.0	7.5	40.8	48.1
2000	222,926	40.9	46.8	33.0	9.4	38.6	49.3
2005	226,016	37.3	43.9	37.0	13.1	36.3	49.4
2010	238,396	34.8	41.9	41.0	16.3	34.2	49.7
2015	236,352	31.6	39.4	44.0	19.0	32.4	50.4

Table 2: Intergenerational coresidence among age 15+ by sex, %*

	Living with parent(s)					
	No control		Age controlled		Age & marital status controlled	
Year	Male	Female	Male	Female	Male	Female
1980	42.7	34.1	42.7	34.1	42.7	34.1
1985	40.4	31.7	41.4	33.1	40.9	32.3
1990	38.1	30.8	41.6	33.8	40.1	31.8
1995	33.8	28.0	40.6	33.7	38.2	30.9
2000	32.5	26.4	42.2	34.9	38.2	30.7
2005	30.2	23.9	43.7	36.3	37.6	30.4
2010	29.8	23.4	45.3	37.7	37.7	30.7
2015	27.8	21.9	44.9	37.7	36.0	29.9
	Living with child(ren)					
	No control		Age controlled		Age & marital status controlled	
Year	Male	Female	Male	Female	Male	Female
1980	60.8	68.1	60.8	68.1	60.8	68.1
1985	59.8	66.6	59.1	65.5	59.9	66.9
1990	58.2	63.9	55.2	61.3	57.4	64.3
1995	56.6	61.4	50.3	56.2	54.1	60.7
2000	54.2	58.5	45.5	51.3	51.7	58.0
2005	49.0	53.6	38.0	44.3	47.6	53.9
2010	44.3	49.3	32.8	40.0	44.8	51.5
2015	39.6	45.1	28.6	36.3	42.5	49.3

Source: 1% micro data from the Korean census.
Note: * Controlling means holding the distribution of age and marital status the same as that of 1980.

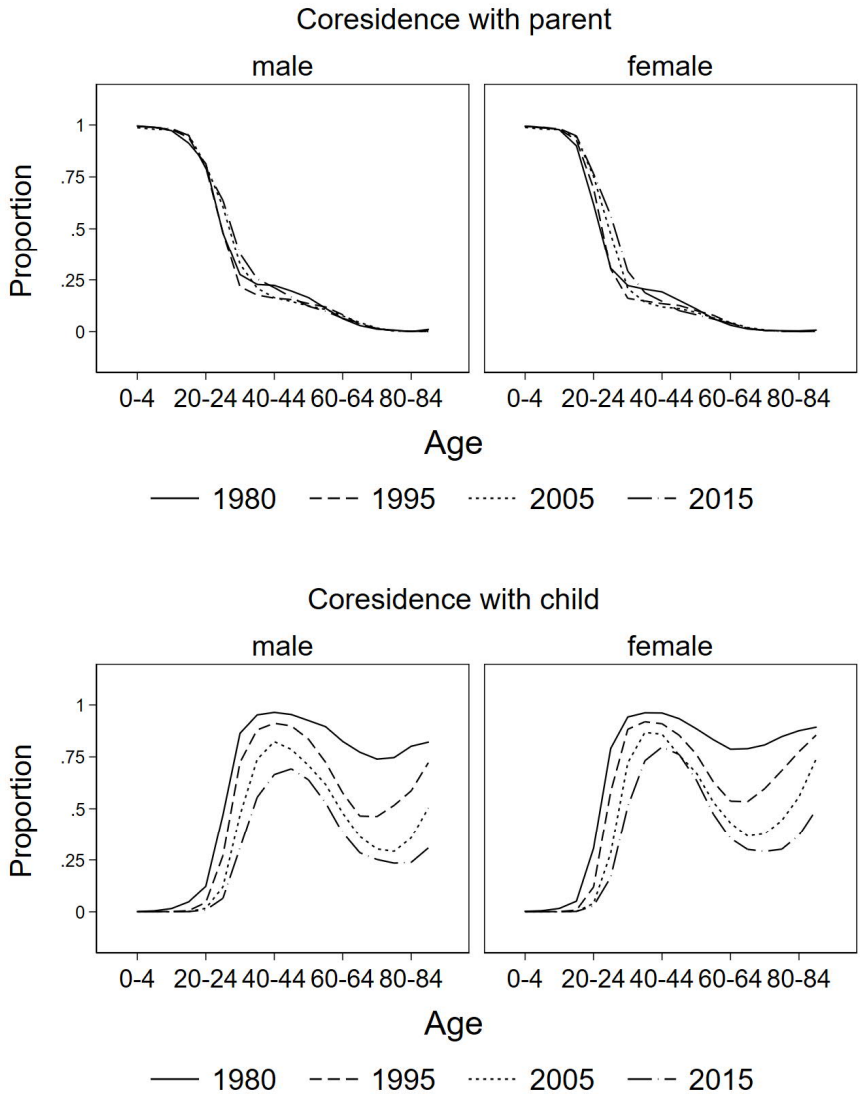
By contrast, the prevalence of coresidence with children decreased even further after controlling for age structure. This suggests that a decrease in the proportion of young people with a low likelihood of living with children prevented the prevalence of coresidence with children from becoming even lower. Controlling for marital status distribution offset the implications of age structure. Due to later marriage, more people remained childless until later, leading to a reduction in coresidence with children. Without this change, the prevalence of coresidence with children would have been higher, and changes in the timing of marriage, combined with fertility decline, affected the likelihood of coresidence with children.

3.2 Changing age patterns of intergenerational coresidence

Figure 1 shows intergenerational coresidence by age and sex in the selected years. Several patterns are noteworthy. First, gender difference in intergenerational coresidence persists. Coresidence with parents sharply decreased in the 20s and 30s, and the rate of change was faster for women than for men. Transition to marriage is responsible for this pattern, and the higher age at marriage of men compared to women explains this gender difference. By contrast, women are more likely than men to live with children throughout the life course. In the early life stage, the difference in marriage timing is responsible for this gender difference. In the late life stage, gender differences in mortality and grandmothers caring for grandchildren may be responsible for this pattern.

Second, the pattern of intergenerational coresidence changed. While coresidence with parents did not change substantially, it increased modestly in the 20s and the 30s, reflecting the delay in marriage. In addition to the delay in marriage, the reduction in the number of siblings may be responsible for this change, as fewer siblings could live with their parents. By contrast, coresidence with children decreased substantially for both men and women in all age groups, reflecting the decrease in the number of three-generation households. Older people became less likely to coreside with adult married children as household arrangements among the elderly diversified. Fertility decline also played a role in this decline. We speculate that fertility change was more important than changes to household structure, given that no substantial changes in the pattern of coresidence with parents were observed. If the decreasing tendency among the elderly to coreside with adult children was the main reason for a reduction in coresidence with children, decreasing coresidence with parents would have been observed. However, this was not the case.

Figure 1: Intergenerational coresidence, 1980–2015 (selected years)



Source: 1% micro data from the Korean census.

3.3 Life years of intergenerational coresidence

The analysis thus far has shown patterns of intergenerational coresidence among survivors. To fully describe changing intergenerational coresidence, mortality must also be accounted for. Table 3 presents the results for the changes in life years of intergenerational coresidence using Sullivan's method. Life expectancy increased constantly, with greater improvements among men. Consequently, the life years of living with parents increased by approximately three years between 1980 and 2015 for both men and women. Despite improvements in longevity, the life years of living with children decreased by more than ten years during the same period. The change in coresidence with children was more dramatic than the change in coresidence with parents. For men, the share of a lifetime living with parents decreased from 48.2% in 1980 to 41.9% in 2015. Coresidence with children declined from 53.1% to 28.5% during the same period. The pattern of change for women was similar. Fertility decline and delayed marriage tended to increase the likelihood of living with parents because of the reduction in sibling size and more extended residence in the parental home, partly offsetting the influence of the prevalence of nuclear family on reduction in coresidence with parents. By contrast, the same demographic changes amplified the influence of the nuclear family, with later and less childbearing shortening the time spent coresiding with children.

Table 3: Life years of intergenerational coresidence and its share

Male					
Year	e_0	Life years, parent coresiding	Life years, child coresiding	Share (%), parent coresiding	Share (%), child coresiding
1980	62.8	29.8	32.9	48.2	53.1
1985	64.9	29.9	33.5	46.3	51.9
1990	67.5	30.5	32.9	45.2	48.8
1995	69.7	30.3	31.0	43.5	44.5
2000	72.3	31.2	29.8	43.2	41.2
2005	74.9	32.0	26.7	42.8	35.6
2010	76.8	33.0	24.4	42.9	31.8
2015	79.0	33.1	22.5	41.9	28.5
Female					
Year	e_0	Life years, parent coresiding	Life years, child coresiding	Share (%), parent coresiding	Share (%), child coresiding
1980	71.6	27.2	42.5	38.7	60.4
1985	73.6	27.3	42.6	37.3	58.2
1990	75.9	27.9	41.9	36.8	55.2
1995	77.9	28.0	39.6	35.9	50.9
2000	79.7	28.6	37.3	35.9	46.8
2005	81.6	29.4	33.6	36.0	41.2
2010	83.6	30.4	31.5	36.3	37.7
2015	85.2	30.7	29.3	36.0	34.4

3.4 Life years of intergenerational coresidence during adulthood

The results presented in Table 3 show how the life years of intergenerational coresidence changed. In these analyses, intergenerational coresidence includes coresidence with minor children and coresidence with parents before adulthood. This provides a complete description of intergenerational coresidence for the entire life course. Because intergenerational coresidence during adulthood is an important issue in the context of population aging, we also analyzed the data by restricting the sample to those who were aged 20 and over. Table 4 presents the changes in the remaining life expectancy at age 20 (e_{20}) and in the share of intergenerational coresidence during adulthood. For both men and women, total adult years (e_{20}) increased substantially. The share of adult life years spent living with parents and elderly parents (aged 60 and over) decreased modestly. While in 1980 24.8% of adult years among men were spent living with parents, this figure had decreased to 22.9% in 2015. We can see that for men the length of time spent coresiding with parents increased from 11.3 years in 1980 to 13.6 in 2015, and the same pattern was observed for women. By contrast, the share of adult life years spent living with adult children decreased substantially. While for women in 1980 almost half of adult life years (48.9%) were spent living with adult children, this figure had dropped to 27.1% in 2015. The changes were smaller among men than women. We can see similar patterns for coresidence with elderly parents and with adult children after age 60. In sum, the prevalence of coresidence with adult children decreased substantially, while the patterns of parental coresidence during adulthood remained relatively stable. From the parental perspective, the reduction in the number of children contributed to decreasing coresidence with children. From the children's perspective, the reduction in the sibling size to some extent countervailed the decreasing trend of intergenerational coresidence.

Table 4: Share of life years of intergenerational coresidence during adulthood (aged 20+), %*

		Male			
Year	e_{20}	Adult life years, parent coresiding	Adult life years, elderly parent coresiding	Adult life years, adult child coresiding	Adult life years, adult child coresiding after age 60
1980	45.6	24.8	13.2	27.0	13.4
1985	47.2	23.7	12.9	27.8	14.2
1990	49.3	23.1	12.2	27.6	14.4
1995	51.1	21.7	11.2	26.0	13.1
2000	53.2	22.4	11.1	25.4	12.8
2005	55.5	22.9	11.0	22.5	11.4
2010	57.4	23.7	11.1	20.0	10.6
2015	59.4	22.9	10.8	18.0	9.8

Table 4: (Continued)

		Female			
Year	e_{20}	Adult life years, parent coresiding	Adult life years, elderly parent coresiding	Adult life years, adult child coresiding	Adult life years, adult child coresiding after age 60
1980	54.3	19.3	11.6	48.9	30.7
1985	55.8	18.2	11.0	47.9	30.3
1990	57.5	17.8	10.3	46.7	29.2
1995	59.1	17.2	9.0	43.2	27.0
2000	60.5	17.5	8.5	39.3	24.8
2005	62.2	18.0	7.9	34.1	21.4
2010	64.1	19.2	8.2	30.7	19.7
2015	65.5	18.9	7.7	27.1	16.8

Note: * See the text for the definition of different adult life years in each column.

4. Summary and implications

In this study we examined how intergenerational coresidence patterns changed in Korea between 1980 and 2015 from the separate perspectives of parents and children. The analyses lead to the following conclusions. First, coresidence with parents decreased due to an increase in the proportion of older people. After controlling for age structure, the prevalence of parent coresidence increased due to a reduction in the number of siblings and delayed marriage. Second, coresidence with children changed little due to a decrease in the proportion of young people. After controlling for age structure, the prevalence of child coresidence decreased substantially due to fertility decline and delayed marriage. Third, there was a diverging trend in the lifetime proportion of intergenerational coresidence. Whereas the lifetime proportion of coresidence with parents decreased modestly between 1980 and 2015, that of coresidence with children almost halved. This is because demographic changes partly offset the trend of decreasing parent coresidence but amplify the trend of decreasing child coresidence.

Because intergenerational coresidence can function as a form of care provision for elderly family members, it is important to understand patterns of intergenerational coresidence in rapidly aging Korea. While the rise of the nuclear family is an important driving force in intergenerational coresidence trends, this study shows that changes in fertility, mortality, and marriage are also crucial in explaining changing intergenerational coresidence. This is the case because the availability of parents and children is structured by demographic changes (Seltzer and Bianchi 2013). Mortality decline increased the possible length of intergenerational coresidence because of the improved survival of both parents and children (Watkins et al. 1987). We show that fertility decline reduced the chance of coresiding with children from the parents' perspective, while the opposite was confirmed from the children's perspective. This illustrates the complexity of the

relationship between demographic changes and intergenerational relations in aging societies.

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