THE ELDERLY'S CO-RESIDENCE WITH CHILDREN: A STUDY OF JAPANESE HOUSEHOLDS

THE ELDERLY'S CO-RESIDENCE WITH CHILDREN: A STUDY OF JAPANESE HOUSEHOLDS

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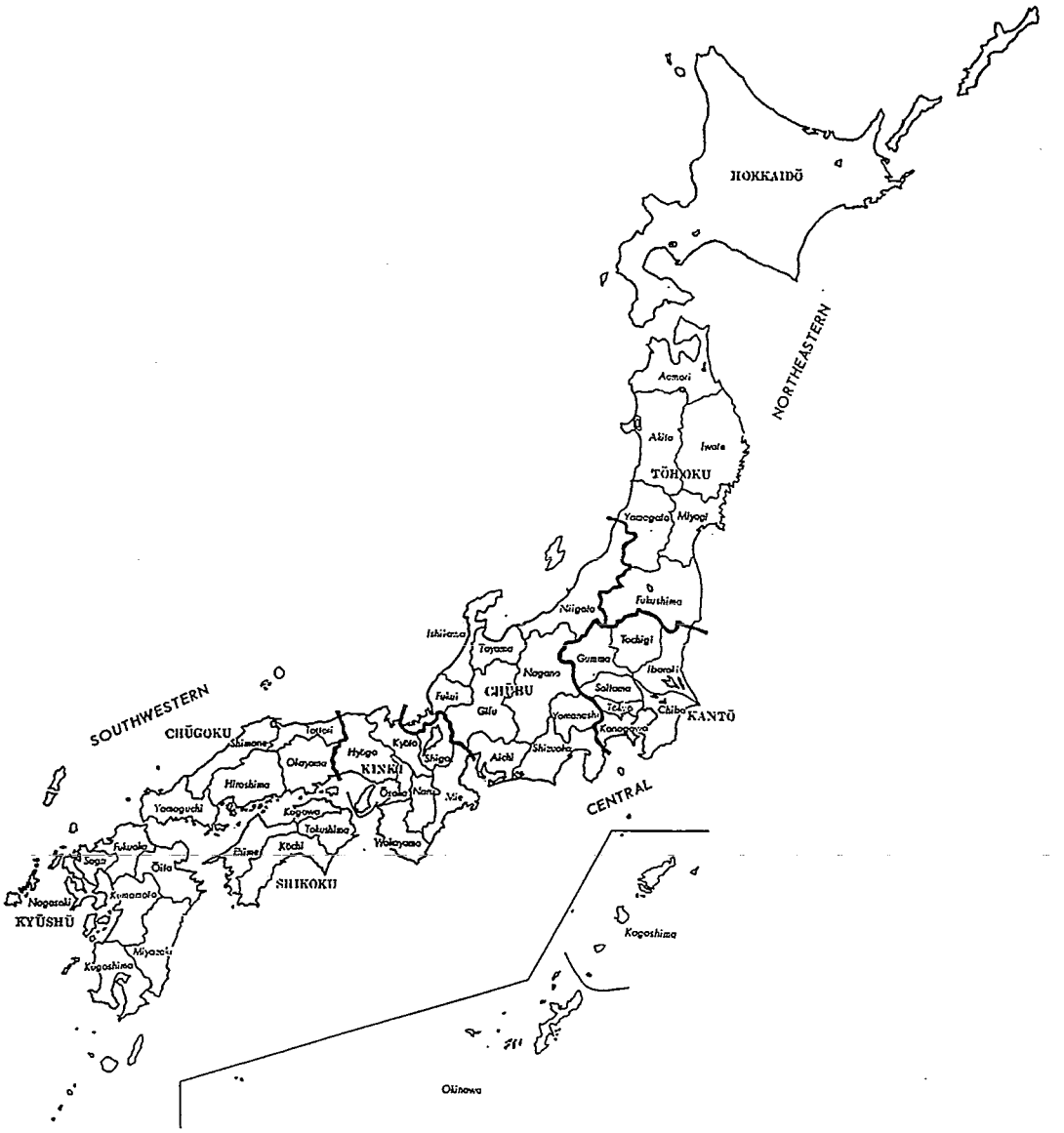
MAP OF JAPAN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"When I am in grief

And there is no help for it,

I would run away,

I would vanish, but the thought

Of my children makes me stay"

-Yamanoue no Okura

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ABSTRACT

The impact of modernization has prompted demographic changes which have led to the dramatic aging of populations throughout the world. The aging of a population affects many aspects within societies, including household structures like co-residence. The overall theme of this study is an examination of the co-residence of Japanese households in 1986. Two different perpsectives are employed - that of the elderly and that of the household heads who are the adult children of elderly parents. In both perspectives of the study, hypotheses are proposed and explanatory factors are selected based on the nature of the micro data being used. These factors are statistically evaluated by a multivariate binomial logit model.

For the elderly perspective of co-residence, the most important factor affecting an elderly individual's propensity to co-reside with child is occupation. Family-oriented types of work have a strong positive relation to co-resident households. Female elderly are more prone to co-residing than male elderly but this adherence becomes very small when their spouses are still alive. Increases in age also tend to increase the elderly's co-residence tendency. Better educated elderly and those who are more mobile (non-natives and foreign born) have a much weaker propensity for co-residence. Cultural regions are also significant in identifying the residential patterns of household structures among the elderly.

For the household head perspective, sibling status is the most important determinant for co-residence with elderly parents. Surplus children are very weak candidates for sharing living arrangements with parents. Non-natives and better educated household heads also share a negative co-residence tendency. The existence of spouseless parents strongly enhances the co-residence propensity especially when these parents are mothers. As parents' age(s) increases, so does the household heads' propensity for co-residence. When both household heads and their spouses are employed in family-oriented work, the co-residence propensity strengthens.

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Special thanks to my parents who never stop supporting my 'pursuits' for knowledge. As I worried and agonized over my work, they continued to give me so much for which to be thankful. This is just a small token of my gratitude.

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CHAPTER 1

INTRODUCTION

Although population geography is predominantly concerned with migration and spatial variation, it also spreads its net more widely to encompass population composition and structure (Johnston 1992, p. 356). The age composition of a population is one such area that continues to receive attention from population geographers. This is because of the inevitable biological process of aging which has emerged into one of the most important concerns occupying societies around the world.

The concern over aging is often the greatest in developed nations where increases in life expectancy combined with decreases in fertility have led to the dramatic aging of individuals within the aging of their societies. However, decreases in fertility are occurring much more rapidly in many third world nations which are expected to experience greater increases in aging than in the developed world. Thus, in both the developed and developing world, aging is regarded as a fairly serious problem. Not only does it imply the major reallocation of society's resources but it is also closely linked to the structure of future households. An interesting way to examine the impact of aging is to look at the co-residence aspect of household structure.

This study focuses on the co-residence of Japanese households by identifying the factors that both contribute to and hinder its endurance. We define a co-resident

household as that which consists of at least one parent (parents or a single parent) living with an adult child. Since family structure refers to kinship, co-residence operationalizes the concept of family structure (Martin & Culter 1983). Ultimately, this research is an attempt to examine the familial aspect of the Japanese culture within the context of modernization.

1.1 THE CONTEXT

Japan is a country small in territorial size (378 000 km^2), yet its high population density (330 people/km^2) makes it the densest among the most developed countries in the world. Its large population size (124 million) ranks it as the seventh largest population in the world. Despite its geographical limitations, Japan has succeeded in becoming the first non-Western country to prosper from economic development. Hence, these rapid economic changes are indeed indicative of the forces of modernization that are quite rampant in Japanese society.

Despite their country's modernization status, the Japanese strongly adhere to widespread traditions. In fact, it is common for the Japanese to maintain an idealistic view of modernization as the process that has been (or should be) based on and effected by a combination of the Japanese spirit and western knowledge (Nakane 1985, p. 119). Nonetheless, the adherence to tradition could be a product of the more realistic notion that modernization in Japan has been carried out not by changing the traditional structure but by utilizing it.

One product of modernization is population aging which poses a problem for many modernized societies. For Japan in particular, the pace of aging is faster than in any other developed nation. Modernization often causes a decrease in status and integration of elderly individuals which entails the subsequent separation of adult children from their older parents and an eventual break-up of the stem or co-resident family system. This results in the formation of nuclear family households which consist of a couple and their children, regarded in most developed nations as the basic social unit.

In Japan, the co-resident household is still considered an ideal living arrangement in light of the proposed effects of modernization on family structure. It is representative of the parent-child relationship constituting the core of the Japanese family, both in ancient and modern times. However, despite this adherence to traditional ties, one cannot help but wonder just how common it is for Japanese families to continue to live in co-resident households. As an insightful observer of her own culture, Nakane (1985, p. 132) has even acknowledged the emergence of a new Japanese family ideology resembling the nuclear family form. The confrontation between modernization and tradition leads us to surmise that Japanese co-residence may be more controversial in nature than in scope.

1.2 THE STUDY

The overall theme of this study is an examination of the extent to which the Japanese continue to live in co-resident households in 1986. We do this by assuming two

separate perspectives: the elderly, and the household heads who are the adult children of elderly parents. This will allow us to achieve a more comprehensive understanding of the co-residence aspect of family structure.

The study is outlined as follows. Chapter 2 reviews literature on the elderly. The main postulates of the modernization theory are presented in order to observe the link between modernization and aging. Empirical findings are used to examine the impact of modernization on household structures (including co-residence) involving the elderly.

Chapter 3 describes the nature of the raw data, the creation of input data files, and the formulation of the statistical model. Chapter 4 presents the results of the overall data analysis for the elderly perspective of the study while chapter 5 presents the results for the household head perspective. In both results chapters, hypotheses are proposed and explanatory variables are selected. The testing of these hypotheses (via statistical procedure) and the subsequent relevance of the variables is also discussed. Chapter 6 concludes the study by summarizing the main results and by providing suggestions for further co-residence studies.

CHAPTER 2

A REVIEW OF THE LITERATURE ON THE ELDERLY

2.1 INTRODUCTION

An aging population is the inevitable product of modernization. The social and economic changes of modernization often cause individuals to examine their relations to elderly family members. This will often involve the reassessment of household structures like co-residence. Hence, the strong link between aging and changes in household structure is clearly evident.

A review of the literature on the elderly is needed in order to secure the theoretical framework for this study and to select the variables that will be explored with respect to their influence on the Japanese co-residence situation. In addition, a review also serves to identify areas of co-residence that have not been fully developed. Section 2.2 presents a general definition of aging and important statisitics of the worldwide aging phenomenon. In section 2.3, the modernization theory is introduced with reference to its effect on aging and the aged as well as household structures. Section 2.4 examines how various societies are regarding the aging situation and elderly in general through policies that assume both negative and positive positions. In section 2.5, we look at the situation of the elderly through household structure or living arrangements which are determined by specific attitudes that govern family relations. It is important to note that

the term co-residence relates to extended households, multi-generational households, and stem families.

2.2 DEFINITION AND STATISTICS

An aging population is the natural consequence of the Demographic Transition. In its pre-modernized phase, a society will experience a high birth rate and high death rate both of which will decrease after the onset of modernization. As a result, it is unavoidable for a modern society to undergo population aging. Since the mid-eighteenth century, a growing number of nations have experienced this population phenomenon.

The definition of old age varies across and within countries, as well as over time. It may be a function of health, sex, labour force participation, and socioeconomic status (Martin 1990). A person is classified as old at an earlier chronological age in primitive societies than in modern societies (Cowgill and Holmes 1972, p. 322). In most modern societies in the world, the standard age at which an individual is considered elderly is 65 and over.

In 1986, 10.6 percent of the Canadian population was aged 65 and over. In 2026, the elderly proportion of the Canadian population is expected to increase to 22.0 percent. This proportion is fairly representative of other developed countries in the world. In Japan, however, the aging of the population is estimated to be much more rapid than in any other developed country. The older population is expected to grow

from 12 million in 1985 to 27 million in 2010 - from 10.3 percent to over 20 percent of the total population in twenty-five years (Hirosima 1993).

In 1981, the total proportion of elderly in the developed countries was 12 percent. In contrast, the elderly population constituted only 4 percent of the total population of the developing countries of the world. Developing countries are in the pre-modernized stage of the demographic transition in which fertility levels are high while developed countries are equipped with the tools of modernization that cause mortality to decrease or life expectancies to increase.

The low proportion of elderly people in the developing nations, compared with the developed nations, tells only part of the story of aging in these countries.

> In the future, a rapidly growing majority of aged persons will be found in the less developed countries, and Asia will contain a sizeable proportion of them. (Martin 1988, p. S99)

This is because of the rapidity of the demographic transition in which population aging is occurring at an unprecedented pace, without parallel in Western experience (Martin 1991). In South Asia for example, the older population will grow 174 percent from the year 1980 to 2000 (Novak 1988, p. 44). The United Nations has projected that the share of the world's elderly living in the less developed regions will increase to 61 percent by the end of the century (Treas and Logue 1986). In 1980, the less-developed nations made up nearly 75 percent of the world's population and currently, the large population growth rate (2.10 percent per year) of these nations will allow them to maintain their large contribution to the world population.

As these developing societies become better and better acquainted with modernizing forces that act on improving health and medical care, a greater number of people will survive to old age. In fact, many third world countries have already seen an increase in recent years in the 'oldest old' (80 and above) segment of their populations. Hence, when these increases are combined with the high percentage of older people in developed nations, the world will experience a large expansion in its aged population.

2.3 MODERNIZATION THEORY

The theory of modernization addresses

> a process of social change resulting from the diffusion and adoption of the characteristics of expansive and apparently more advanced societies through societies which are apparently less advanced. (Johnston 1992, p. 302)

Such a change involves a transformation in economic, social, and political organization as well as in human personality (Treas and Logue 1986). Cowgill and Holmes (1972; 1974; 1986) were among the first gerontological researchers to link the theory of modernization to aging by speculating that the status of the elderly declines with modernization.

There are four aspects of modernization that relate to aging (Gubrium 1974, p. 141; Treas and Logue 1986). First, modern health and/or medical technology fosters longevity of the population which extends the aging process. As populations age, intergenerational competition is enhanced in the labour force and retirement becomes the ultimate method for curbing this competition. Second, economic technology creates new

urban occupations suited for youthful leaders so that the skills of the aged become obsolete. Third, urbanization entails social and geographic mobility of the younger generations resulting in both residential and social segregation of the aged from younger generations. Finally, education involves literacy which is the basis for opportunities like mass education and technical training. This makes children better educated than their parents, creating an inversion of status and intellectual segregation between the generations. Education also promotes modern values like the work ethic and the glorification of youth which lead to moral segregation of the elderly. Like Cowgill and Holmes (1972; 1974; 1986), other researchers (Gubrium 1974, p. 141; Treas and Logue 1986) assert that these modernization forces lead to a decline in status of the elderly.

Mason (1992) discusses these aspects of modernization with respect to their effect on the co-residence of elderly in Asian societies. Increases in migration cause a physical separation between the generations which in turn, reduces the possibilities for multi-generational households. Industrialization, urbanization, and migration all contribute to a shift in production from the family to the industry, thereby transferring resources and power from the parental generation to the younger generation. This shift in economic conditions gives the younger generation the opportunity to choose not to reside in a multi-generational household (Ruggles 1987, p. 27). On a more personal level, the younger generation is more prone to choosing its own mate. This personal attraction in mate selection leads to an increase in the mate's contribution to family decisions, such as the decision to have parent(s) coresiding. Ultimately, a breakdown

of co-resident households may occur.

Industrialization often causes an increase in the labour force participation of wives. As a result, co-resident households may no longer be the inevitable option for many elderly parents because women become less available to care for elderly family members. However, Mason (1992) also looks at this effect of modernization from the other side of the coin. When wives are employed outside of the home, senior family members may play significant roles as child minders and domestic helpers.

As education levels increase, decreases in fertility occur, thereby creating a shortage of familial care-givers in the younger generation. Increased schooling may also breakdown traditional values and norms related to children's obligation to support and care for their elderly parents. Once again, these forces act against the formation of co-resident households.

Mason (1992) notes that modernization also gives the elderly an opportunity to choose not to live in a co-resident household. Industrialization causes an increase in per capita income which would increase the financial independence of the elderly who can then purchase greater privacy and care. Overall, Mason (1992) suggests that modernizing forces challenge the prevalence of co-resident residence so that a shift toward nuclear residence is unavoidable. Nuclear residence, given its mobility and flexibility, is better suited to the new socioeconomic setting as well as to the hypothesized loss of traditional values (Martin 1989).

The theory of modernization is useful in explaining the contradictory role

played by the forces of modernization in a society. Not only do modernization efforts promote aging through increases in life expectancy but they also work to repress the aged - those who are supposedly fortunate enough to live longer. Modernization also introduces financial securities that allow for improved support of the stem family system yet these changes cause the disintegration of the co-resident family.

2.4 POLICIES RELATING TO THE ELDERLY

Modernization has forced many nations to implement or change policies relating to the elderly. For the developing countries that are struggling with the introduction of modernization forces, aging is a fairly new concern which is being treated with control tactics. On the other hand, the developed nations consider aging an issue that is so ingrained in modern society that the many policies directed towards the elderly are representative of its dominating presence. In both developing and developed societies, the elderly are regarded with mixed emotions. The following two sections present the negative and positive views regarding the elderly in different societies in the world.

2.4.1 THE ELDERLY AS IMPEDIMENTS: REJECTING THE ELDERLY

Treas and Logue (1986) offer perspectives of modernization that influence development policies and programs in developing countries. Three of these perspectives recognize negative impacts of modernization on the elderly in these societies. The first perspective asserts that the elderly are a low priority. Family members perceive the

elderly as a constraint on decisions and investments relating to work and education, and policymakers view the problems associated with aging populations as comfortably far in the future and overshadowed by current crises. In South Asia in particular, the problems of poverty and the pressing need to provide for the still growing number of young people, force governments into making difficult choices as they allocate their resources (Martin 1990). As a result, the needs of the elderly are unlikely to take priority (Martin 1988).

The second perspective considers the aged as obstacles to development because they consume more than they produce and their belief systems and adaptive capacities are unfavourable to development. The third perspective focuses on the elderly as victims of modernization who experience a decline in status with the development of society. In other words, this perspective is related to the way in which modernization forces (health and economic technology, urbanization, education) tend to diminish the relative status of the older person in society (Cowgill and Holmes 1972; Gubrium 1974; Treas and Logue 1986). Although modernization in and of itself does not necessarily contribute to a lowering of the status of the elderly, its contribution to greater poverty is what reduces the well-being and status of the elderly in developing societies (Martin 1990).

Several East Asian countries, like Cambodia, Laos, Malaysia, and Singapore are attempting to establish somewhat of a balance in the age composition of their populations by reversing population aging through the enactment of pronatalist policies

(Martin 1991); even Japanese policymakers are beginning to consider encouraging a higher birth rate among more-educated women. As an alternative to pronatalist policies, some countries like Singapore, Hong Kong, South Korea, and Taiwan have 'embraced the immigration strategy' to reverse population aging (Martin 1991).

Hence, East Asian countries are the first among the currently less developed nations to have to accommodate aging populations (Martin 1988). However, many elderly people are viewed as a low priority in most Asian countries, especially those that are less developed. In terms of financial support for the aged, only the governments of the economically and demographically more advanced countries of Asia have recognized the productive capabilities of elderly people and have begun to institute programs to encourage their continued employment. Japan, having the most aged population in Asia, provides incentives for older Japanese to continue working. In most countries of Asia, only the urban elite receive pensions, and for the vast majority of Asians, pensions are not available. In Asia, Japan is the most advanced in its development of pension programs for its elderly.

According to Martin (1988), the adequacy and accessibility of health care for elderly Asians is uneven:

> those who are destitute are most likely to be covered, whereas elderly persons living in rural areas are least likely to be covered. (p. S107)

In many South Asian countries, there is also an undersupply of health services for all age groups and special health programs for the elderly are almost non-existent (Martin 1990).

Nevertheless, in all Asian countries, including Japan, health planners have placed an increased emphasis on primary health care and preventive medicine due to the high costs of hospital-based programs. However, the elaborate medical care often provided to elderly people in the developed countries is viewed as inappropriate in Asia:

> The idea of spending more money on health care in the last month of life than in all the previous years is not one whose time has come in Asia. (Martin 1988, p. S109)

Although institutionalization is widely viewed as a last resort in Asia given the traditional and important role of the family in the care of elderly persons, it is recognized that more homes for the aged are needed in many of the countries of Asia.

In the United States, policies addressing the problems associated with aging are often times plagued with 'ageism' which Binstock (1983) defines as

> the attribution of the same characteristics and status to a heterogeneous group that has been artificially homogenized, packaged, labeled, and marketed as 'the aged'. (p. 136)

Such scapegoating has serious implications on American society. Not only is it engendering intergenerational conflict but it also diverts society's attention from longstanding issues of reform involving policies that provide adequate and equal benefits to older persons. Binstock (1983) lists three axioms - examples of 'tabloid thinking' - that have contributed to the scapegoating of the aged:

> Axiom #1: The aged are well off; they have been lifted out of poverty
> Axiom #2: The aged are a potent, self-interested political force
> Axiom #3: Demographic changes mean that the aged will pose an unsustainable burden on the American economy.
> (p. 137-139)

In order to combat these and other consequences of scapegoating the aged, Binstock (1983) asserts that it is necessary to have public policy framed within a non-ageist political context in which the heterogeneity of older persons is recognized. In order to achieve this context, he argues that leadership should be given to aging-based organizations that have mass membership because they have ready access to national media platforms and to public officials. One such organization is the Gray Panthers whose philosophy is focused on age relations in particular, and more generally on a sensitivity to the human condition.

> The Panthers cast older people in a new and dramatic role as social critics and activists who fight to improve life for young and old. (Novak 1988, 328)

Clark's (1985) view regarding the allocation of health care resources to the elderly in the U.S. reflects Binstock's (1983) third axiom. Clark (1985) questions whether it is economically rational for the U.S. to spend considerable amounts of health care dollars on the elderly. Alternatively, he echoes Martin's (1988) discussion of the age versus need issue in Asia by suggesting a change in perspective regarding the societal obligation to the elderly. If a new frame of reference is adopted, namely, the lifespan of the individual, then health resources can be allocated over the course of an individual's

lifespan in consistency with his/her own interests and life plans. He believes that this approach represents a shared concept of social justice and also recognizes that social and health care services should add life to the elderly as opposed to years to their lives. His model also draws attention to the central importance of values as opposed to facts defining the problem of health care delivery to the elderly.

Preston (1984) also sees truth in the second axiom addressing the scapegoating of the elderly. Like Binstock (1983), Preston (1984) asserts that demographic changes have been intimately involved in the dramatic improvement of conditions for the American elderly. However, he believes that these changes have had unfortunate consequences for the alternative group of age dependents - the children. In using poverty as the indicator of well-being, he found that children experience more poverty than the elderly. These changes in well-being have resulted from the role that demographic variables have played in the three arenas of family, politics, and industry, each of which have created an unfavourable environment for the well-being of children and a favourable environment for the elderly.

Like Clark (1985) in the U.S., Marzouk (1991) is concerned over the fiscal burden created by the high utilization of health care resources by the elderly in Canada. He found that increased utilization levels and not the demographic impact of aging have put greater pressures on health care resources. And unlike demographic shifts, these utilization patterns can be controlled by examining the size and source of increase in utilization levels. Greater deterioration in health status among the elderly and a general

age-related shift in the mode of intervention by the health care system are the main sources of increased utilization of health care services by the elderly. He contends that if the size of utilization continues to increase, it may be necessary to institute appropriate policies to combat the problem.

These high utilization levels may stem from the fact that elderly Canadians are familiar with constant professional care. This may be apparent in Canada's high rate of institutionalization of the elderly - one of the highest among the industrialized countries of the world (Marshall 1980, p. 189). Marshall (1980) identifies several reasons for the high rate of institutionalization of Canada's elderly. First, there is a general tendency in this country to institutionalize, at excessively high rates, so-called 'deviant' groups, whether criminals or invalids, young or old. Also, Canada's deficiency in home-care services as compared to other countries also contributes to excessive institutionalization.

Another reason for the high institutionalization rate among Canadian elderly is Canada's general lack of sophistication in evaluating problems of the aged which results all too frequently in misdiagnoses and inappropriate institutionalization. This is quite evident in Marzouk's (1991) assessment of the increased utilization of health services by the elderly. Such utilization does not result in reduced morbidity that would have otherwise emerged but is more associated with 'salvage' activities and therapies of questionable effectiveness.

2.4.2 THE ELDERLY AS ASSETS: ACCOMMODATING THE ELDERLY

From a more positive standpoint, due to the relatively early stage in policy development for the elderly population in most of the countries of Asia, there is opportunity for Asian policymakers to consider some very broad issues with regard to designing aging programs (Martin 1988). In some of the less developed societies, policies and planning strategies are drawing attention to the ways in which the elderly can be a resource by contributing to social and economic progress (Treas and Logue 1986). Older generations often contribute to household production and they may even prove pivotal in cultural revival movements that knit people together in respect for traditional values, arts and handicrafts. Modern workers often need to consult the aged for their expertise and in some nations, the elderly are deliberately drawn on as a reserve labour pool.

Martin (1991) also found that some East Asian countries are focusing on ways to accommodate aging and reduce the impacts on economic growth and public expenditure. These countries have recognized the productive capabilities of elderly people and have begun to institute programs to encourage their continued employment (Martin 1988). Japan has already experienced the problems associated with an aging labour force (Martin 1982). Older workers' wages decrease due to the change in the number of older workers relative to the number of younger workers and also due to the increased educational attainment of the younger labour force relative to the older labour force. However, despite this higher educational attainment of the younger Japanese,

Umetani (1977) found that much of the college trained labour force in Japan has not been accommodated in those occupational groups requiring higher education. This may be due to the lifetime employment system under which

> workers typically remain with the same enterprise and enjoy guaranteed employment until they reach a certain age limit (known as the 'teinen' age). (Seki 1980, p. 257)

However, when workers reach the teinen age, their employment contracts are automatically terminated, leaving the workers in a state of decreased income and status, not to mention the underutilization of the workers' skills.

To alleviate this and other problems associated with an aging labour force, Japan and Singapore provide financial incentives to older Japanese employees to stay in the labour force longer (Martin 1991). Both Kii (1979) and Martin (1988) found that in Japan, many industries have been pressured by labour unions and the government to extend their retirement age. Many companies are encouraged to have at least 6 percent of its work force aged 55 and older (Martin 1988). Generous wage subsidies are also provided to firms that hire older workers through public employment offices (Martin 1982).

With respect to health and long-term care policies, Japan has introduced home care programs in order to reduce the high costs of hospital care for the elderly (Martin 1991). Due to the decrease in co-residence in countries like Japan, South Korea, and Taiwan, Asian policymakers are worried about the role of the government versus the family in caring for elderly people (Martin 1988). Erosion of the role of the family and

expansion of the role of the government is viewed as a Western phenomenon.

> There is the recognition that once the responsibility of caring for elderly persons is taken from the family, it will be virtually impossible to give back. (Martin 1988, p. S110)

Martin (1991) found that governments in Japan, China, and Singapore try to preserve the role of the family somewhat by offering various incentives for families to continue to care for their elderly relatives. As a result, family policies in Japan and Singapore offer tax rebates and housing programs as incentives for co-residence as a means of supporting elderly parents.

Martin (1988) discusses the dilemma of 'age versus need' with respect to designing elderly programs. This is an issue which Asian countries share with their U.S. counterpart. Neysmith and Edwardh (1984) argue that programs for the elderly in less developed countries maintain an already unequal distribution of income and opportunity. Thus, it would be more reasonable to design programs on the basis of need so that poor elderly could also benefit from what programs do exist for the elderly (Martin 1988). Martin (1988) is optimistic that such programs may receive political support by middle-aged adults due to their concern about the care of their own parents, as well as self-interest in the future care of themselves.

2.5 HOUSEHOLD STRUCTURES INVOLVING THE ELDERLY

Many studies on aging consider the living arrangements of elderly in various societies throughout the world. Wister (1989) regards living arrangement as the

household configuration or with whom one lives. Especially in Asia, policymakers are concerned about the extent to which the generations live together (Martin 1988). Household structures involving elderly individuals are the product of cultural influences as well as modernization forces. The majority of household structures are based on the family, which Kuznets (1978) defines as a group of persons related, to a specified degree, through blood, adoption, or marriage. In sections 2.5.1 and 2.5.2, different household structures are examined with respect to the opposing attitudes that have influenced their existence. Section 2.5.3 focuses exclusively on Japanese household structure as unique in comparison to other societies in the world.

2.5.1 INDIVIDUAL INTERESTS

Ruggles (1987) believes that from a demographic perspective, the rise of the extended family makes sense:

> The only plausible demographic regime capable of supporting a higher frequency of extended living arrangements would be one of extremely low mortality, like that found in mid-twentieth century industrial societies. (p. 207)

Therefore, he considers the low frequency of extended families in twentieth century England and America as abnormal. This abnormality can only be explained by a dramatic change in residential preferences. Ruggles (1987) states that in recent years, the English and Americans have shown strikingly little desire to prolong their family connections.

Even in colonial and nineteenth century America and nineteenth century

England, the preferred residence for older persons was not with their children (Nydegger 1983).

> There is little question that in American history, the elderly and their children valued the independence of separate residence as much as present day Americans do and that many elderly persons were not cared for by their families if other alternatives, such as institutions or hired help, were available. (Nydegger 1983, p. 27)

Both Ruggles (1987) and Nydegger (1983) assert that the decision to co-reside apparently was determined, as it still is, by economic conditions. For example, during the nineteenth century, the high frequency of elderly co-residing with their married children was due to increased economic demands being imposed on young couples, such as housing shortages and the employment of working mothers.

Independent living is a very common living arrangement for many American adults, both young and old. Michael et al. (1980) view the decision to live alone as a reflection of an economic demand for privacy or autonomy. Mutchler and Burr (1991) believe that individuals in later life prefer to live with nuclear family members (i.e., spouse and minor children) or alone. In making living arrangement choices, the elderly take into account their economic resources, health, and kinship. Economic considerations often guide household living arrangements while health dominates non-household decisions, like institutionalization.

In the United States, living alone is the preferred living arrangement for the majority of female elderly (Wolf and Soldo 1988). However, Freedman et al.'s (1991) study found that when intergenerational transfers such as co-residence are examined from

the elderly mother's perspective, the prevalence of co-residence is high. However, from the adult child's perspective, the prevalence is much lower. In other words, elderly mothers report that co-residence with their children is a common form of living arrangement, whereas their children claim that co-residence with mothers is not very common.

Many studies have found that personal income has a positive effect on the probability of independent living among female elderly whereas, age, family size, and disability have a negative influence (Wolf and Soldo 1988). Wolf and Soldo (1988) found in general, that if older women are confronted with the choice of recruiting a child with whom to co-reside, they would most likely choose, when available, an unmarried son, relative to any other type of child. Cantor (1991) cautions that such a choice may indeed materialize since it is becoming increasingly apparent that elderly women, more than men, depend on children, other relatives, or formal service providers for social care.

Wolf (1984) differentiated between unmarried and never-married women in examining the living arrangements of elderly females in the U.S.. For unmarried and never-married women without children, income is not related to decisions regarding co-residence with living siblings and/or parents. For never-married women, home ownership is strongly related to living with siblings or parents. This relation may be associated with greater residential stability and a more likely setting for the care of an elderly parent or dependent sibling. The propensity for co-residence is strongest among

unmarried black women who tend to live with relatives other than siblings, parents, or children, and with unrelated people, as well as available kin.

The Netherlands is among many developed countries in Europe and North America, which has experienced an increasing prevalence of solitary living arrangements within the elderly population (Wils and Wolf 1992). A

> distinctive feature of the situation of the elderly in the Netherlands is the existence of social-welfare policies which have enhanced the housing choices available to the elderly (Wils and Wolf 1992, p. 183).

Income policies have provided financial support for the elderly in the form of Old Age Pensions and Public Assistance while housing policies have been geared specifically to elderly people's housing. However, at present,

> the tendency is to concentrate not on housing but on allowing the elderly to continue to live where they are and to provide 'open-care' -- household help, neighbourhood nurses, social activities, and so on. (Wils and Wolf 1992, p. 183)

In the Netherlands, as in many other countries at present, the problem of old age is still to a large degree a problem of unmarried single and widowed women (Wils and Wolf 1992). Older women in the Netherlands, like older women in the U.S., prefer independent living arrangements which have been encouraged by policies promoting specialized dwellings for the elderly. In situations where co-residence is apparent, Wils and Wolf (1992) found the majority of children living with their elderly mothers to be unmarried sons - a preference which was also observed by Wolf and Soldo (1988) among older females in the U.S.

Like most of the elderly in other developed countries, elderly Canadians value their privacy and independence and prefer to live alone (Wister 1989). Current housing polices are attempting to accommodate these preferences as well as reduce the rate of institutionalization. One policy approach focuses on housing alternatives like granny flats, accessory apartments, and shared living programs which have responded to the heterogeneous needs of older Canadians. The 'aging in place' policy direction is tied to the recognition that many older Canadians want to stay in their own homes and remain integrated into the neighbourhood and community. As a result, underlying this housing policy is a

> strong emphasis on the role of community services. In particular, home support programs and home repair programs are considered to be integral components of this policy (Wister 1989, p. 31).

Canadian elderly females, just like American and Dutch elderly females, largely contribute to the proportion of elderly who prefer independent living arrangements. In fact,

> the large number of older widows in Canadian society has led to a new trend in living arrangements for women: elderly women now make up the largest group of people who live alone. (Novak 1988, p. 274-276)

The proportion of older women living alone in Canada is expected to increase in the future.

2.5.2 FAMILY RESPONSIBILITY

The elderly play a central role in historical and theoretical discussions of the family, since it is their presence in a household that signifies multi-generational living (Martin 1989). In many Asian countries,

> co-residence even under circumstances of good health and economic independence of the elderly is viewed as a form of insurance against future need. (Martin 1989, p. 627)

In many third world countries in South Asia, the majority of elderly live in rural areas and co-reside with their offspring, although co-residence varies by region, caste, and socioeconomic status (Martin 1990).

Although intergenerational conflict is quite common within many third world co-resident households, it is often overlooked because of the overall importance of older parents in caring for property and children to allow both parents to work because low wages mean that family units need several incomes to survive (Neysmith and Edwardh 1984). This may also contribute to the more significant role of grandparents (relative to parents) in the socialization of the children in the household (Cowgill 1986, p. 176).

In rural Bangladesh, more elderly live adjacent to, as opposed to with, their sons due to the dispersed patterns of settlement (Cain 1986). In both Bangladesh and India, the elderly will only live with a married daughter if there is no surviving son. 'Reproductive failure' - which is the

> failure to produce a son who survives and is able and willing to assume responsibility for parents who are no longer able to care for themselves (Cain 1986, p. 376)

- is more common among the countries' elderly population who are poor. In Bangladesh, the material consequences of reproductive failure are more severe for women who are devalued if they are divorced, and who are left impoverished in widowhood.

The majority of elderly in Fiji, Korea, Malaysia, and the Philippines, live with their children (Martin 1989). For those elderly who reside in the urban areas of these countries, the modernization theory proves weak with respect to its related economic hypotheses of increased ability to purchase privacy. This is because residence in these urban areas tends to increase the tendency to co-reside with children. However, the survival of a spouse reduces living with children, while the availability of a child reduces the possibility of living with a spouse only because an alternate living arrangement is available.

Martin (1989; 1988) argues that the extent of living in multi-generational households in Asia is decreasing. Modernization influences in many Asian countries have had an effect on the family's traditional role of caring for their elderly. Due to social changes such as migration, urbanization, and increased female labour force participation, family care has been difficult to maintain. As a result, the government has assumed a greater role in supporting the elderly.

Since the 1950s, China has experienced a decrease in multi-generational families due to the abolishment of feudal land ownership (Zeng 1986, p. 677). However, the three-generation family unit remained important from the mid-1950s to the early 1980s. This was due to declines in fertility that led to a decrease in previous family

sizes while mortality declines stabilized this decrease so that family size did not decrease substantially. As a result, co-residence of parents and one married child remained stable during this time period. However, the nuclear family has become the dominant family form in China. Fei (1982) attributes this change in family structure to the strained relations between generations.

Zeng (1986) lists two categories of socioeconomic factors which affect co-residence in China. The following factors reduce the propensity for co-residence: modernization, increased housing construction in urban areas, increased rural to urban and urban to urban migration, and urbanization's role in increasing the elderly's dependence on government funded pensions. In contrast, others factors will act to sustain the propensity for co-residency among Chinese households. First, the responsibility system has made the larger family size the source of improved economic efficiency and profitability. Second, due to the slow progress of the pension system reaching rural China, many elderly peasants still depend economically on their children. Third, the Chinese government favours the maintenance of the three-generation family in order to maintain a Chinese cultural tradition. In addition, this family type enables the state to spend less on old-age care. Coupled with this is the continuing importance of the role inherent within the ethical tradition of respect and care for the elderly. Finally, housing shortages may force many rural-urban and urban-urban migrants to live temporarily with their urban relatives. Fei (1982) also mentions child care problems in Chinese cities as an additional factor tending to keep families together.

Zeng (1986) believes that the actual changes in Chinese family structure will be determined by the balance of these two sets of opposing factors. The proportion of nuclear families is expected to increase slowly, given that the propensity for co-residence will not decline dramatically. However, at a later stage in China, the dominant nuclear family form will become even more prevalent:

> further reductions in fertility seem likely to intensify the effect of a gradually decreasing propensity for co-residence in increasing the proportion of nuclear families. (Zeng 1986, p. 694)

Freedman et al. (1982) conclude that the future of the co-residence aspect of Taiwanese society is still an open question. They found that a large majority of Taiwanese, including the best educated couples, still live in co-resident households despite the overall decrease in co-residence patterns. They reason that co-residence patterns in Taiwan might merely be lagging - changing more slowly than other aspects of society - so that more complete convergence is only a matter of time. They also mention that the strong maintenance of co-residence may also be an indication that the Chinese factors which act to sustain co-residence propensities are quite strong in Taiwan.

Both Angel and Tienda (1982) and Michael et al. (1980) recognize that blacks and/or non-whites in the United States have a lower propensity to live alone and are thus more prone (than whites) to being part of an extended household/family structure. Co-residence is common among many Hispanic households due to cultural traditions governing their living arrangements (Angel and Tienda 1982). However, in contrast to other minority groups, co-residence among many Central/South American households is

related to political reasons not economic necessity. Extended households unite many Central/South American families and secure the immigrant status of these individuals.

Extended households are the most stable, enduring family structures for many low-income Blacks in America because their economic deficiencies militate against the establishment and maintenance of nuclear households (Allen 1979). Elderly black mothers, in particular, are nearly twice as likely as white mothers to co-reside with their children (Freedman et al. 1991). Cantor (1991) seems to challenge the existence of the conventional family structure (the nuclear family) in America by stating that multi-generational families are becoming the norm in American society. She insists that by the year 2020, the typical family will consist of at least four generations. A primary reason being, multi-generational households are one of the many trends in family structure which may affect the continued ability of families to provide caregiving for their disabled elders.

It is interesting to observe the living arrangements of the elderly in both the developing and developed countries in the world. In general, the formation of household structures in many developing societies is influenced by family responsibility. As a result, co-resident households continue to be the product of traditional values and/or cultural norms. In developed societies, however, the dominant forces of modernization have enacted strong attitudes of self-interest so that nuclear households have become the preferred living arrangement. Given the great extent to which modernization forces act in Japan, we should expect the living arrangements of the elderly in Japanese society to

be the same as those elderly in other developed countries. However, many studies have shown otherwise, indicating a pattern that matches that of the developing countries.

2.5.3 JAPANESE FAMILY RELATIONS

In this section of the review, we focus exclusively on the living arrangements of the elderly and household and/or familial structure in Japan. Many empirical studies have indicated that change is indeed taking place within Japanese household structure and/or co-residence. Accordingly, we will begin by reintroducing the theory of modernization as it pertains to the Japanese situation.

The figures in Table 2.1 are representative of the changes that have occurred in the economic structure of the Japanese population from 1960 to 1985. In terms of the number of households employed in specific occupational categories, we see in the first and second sections of the table, that the occupational composition of the Japanese population has clearly shifted away from primary related work towards non-primary employment. This is indicative of the increasing forces of modernization that have created changes in the country's economic structure. Similarly, the third and fourth sections of the table show that in 1960, more household members were employed in primary work whereas 1985 saw less of these members in primary areas and an increasing number in non-primary forms of employment.

The final section of table 2.1 shows that a decrease took place between 1960 and 1985 in household size among households of every type of employment. However,

Table 2.1: Household Characteristics by Occupation, 1960-1985

ECONOMIC ACTIVITY	1960	1965	1970	1975	Ordinary 1980	Ordinary 1985	General 1980	General 1985
				Number of Households (1,000 units)				
OVERALL TOTAL	19,571	23,092	27,071	31,271	34,106	36,479	35,824	37,981
Agriculture, Forestry, Fishing	3,574	2,993	2,334	1,731	1,352	1,206	1,360	1,213
Part-time Primary	2,479	2,456	2,644	2,300	2,131	1,957	2,131	1,957
Non-Primary Workers	12,767	16,555	20,652	24,785	27,460	29,043	28,971	30,412
Non-Primary Employees	8,944	12,284	15,237	19,022	21,041	23,214	22,530	24,570
Unemployed	739	1,063	1,407	2,294	3,112	4,224	3,311	4,349
Unclassifiable	13	25	35	160	51	50	51	50
				Number of Households (%)				
OVERALL TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Agriculture, Forestry, Fishing	18.26	12.96	8.62	5.54	3.96	3.30	3.80	3.19
Part-time Primary	12.67	10.64	9.77	7.36	6.25	5.37	5.95	5.15
Non-Primary Workers	65.24	71.69	76.29	79.26	80.52	79.62	80.87	80.07
Non-Primary Employees	45.70	53.20	56.28	60.83	61.69	63.64	62.89	64.69
Unemployed	3.78	4.60	5.20	7.33	9.13	11.58	9.24	11.45
Unclassifiable	0.06	0.11	0.13	0.51	0.15	0.14	0.14	0.13
				Number of Household Members (1,000 persons)				
OVERALL TOTAL	89,299	93,466	99,983	107,970	113,733	117,811	115,451	119,312
Agriculture, Forestry, Fishing	18,886	14,627	10,414	7,161	5,208	4,303	5,216	4,310
Part-time Primary	14,826	13,660	13,705	11,475	10,471	9,614	10,471	9,614
Non-Primary Workers	53,877	62,943	73,303	84,883	92,848	96,946	94,358	98,315
Non-Primary Employees	35,908	44,548	51,666	62,762	68,687	75,500	70,167	76,856
Unemployed	1,650	2,128	2,426	3,822	5,031	6,823	5,230	6,948
Unclassifiable	61	108	135	629	175	124	175	125
				Number of Household Members (%)				
OVERALL TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Agriculture, Forestry, Fishing	21.15	15.65	10.42	6.63	4.58	3.65	4.52	3.61
Part-time Primary	16.60	14.62	13.71	10.63	9.21	8.16	9.07	8.06
Non-Primary Workers	60.33	67.34	73.31	78.62	81.64	82.29	81.73	82.40
Non-Primary Employees	40.21	47.66	51.67	58.13	60.39	64.09	60.78	64.42
Unemployed	1.85	2.28	2.43	3.54	4.42	5.79	4.53	5.82
Unclassifiable	0.07	0.12	0.14	0.58	0.15	0.11	0.15	0.10
				Average Household Size (persons/hhld)				
OVERALL TOTAL	4.56	4.05	3.69	3.45	3.33	3.23	3.22	3.14
Agriculture, Forestry, Fishing	5.28	4.89	4.46	4.14	3.85	3.57	3.84	3.55
Part-time Primary	5.98	5.56	5.18	4.99	4.91	4.91	4.91	4.91
Non-Primary Workers	4.22	3.80	3.55	3.42	3.38	3.34	3.26	3.23
Non-Primary Employees	4.01	3.63	3.39	3.30	3.26	3.25	3.11	3.13
Unemployed	2.23	2.00	1.72	1.67	1.62	1.62	1.58	1.60
Unclassifiable	4.77	4.36	3.83	3.92	3.44	2.51	3.41	2.49

Ordinary: Used to contrast with non-ordinary households (institutional households, boarding houses)
General: A broader category which does not include institutional households (i.e. student dormitories, military barracks, correctional facilities)
Source: 1992 Latest Demographic Statistics, p. 143.

we can still see a pattern in household size with respect to occupations (if we ignore the unemployed and unclassifiable categories of employment). In 1985, the average size of the households of part-time primary workers was the largest (4.91 persons), whereas households containing non-primary employees had the smallest average size (3.13 persons). As a result, modernization has definitely had an impact on not only the structure of the labour force but also the nation's household size. If household size has been affected, we cannot help but wonder if the structure of Japanese households has also been affected by continued modernization.

Family relations in Japan have always been quite different from those in Western countries:

> The importance of the traditional relationship between parents and children is illustrated in the way it has been used as a model for many other relationships in society, so that similar obligations of aid and indebtedness are created between master and pupil, employer and employee, landowner and tenant, as well as in patron-client links of business, politics, and even underworld activities. (Hendry 1981, p. 93)

Promoted and reinforced in the late nineteenth century during the Meiji period, 'ie' represents Japan's ideal co-resident or stem household which is composed of two married couples of different generations, or of a single parent living with a married child (Martin and Culter 1983, 634). For the individual Japanese person, the human relationship within the household group ('ie') - which consists of those persons who actually live under the same roof - are thought of as more important than all other human relationships (Hsu 1975, p. 33; Nakane 1985, p. 4).

> Thus, the wife and daughter-in-law who have come from outside have incomparably greater importance than one's own sisters and daughters, who have married and gone into other households. A brother, when he has built a separate house, is thought of as belonging to another unit or household; on the other hand, the son-in-law, who was once a complete outsider, takes the position of a household member and becomes more important than the brother living in another household. (Nakane 1985, p. 5)

'Ie' is a concept which expresses the essence of the firmly rooted, latent group consciousness in Japanese society.

Table 2.2 shows the co-residence intentions among mothers with children from various countries throughout the world, including Japan. Overall, Japanese mothers of all age groups constitute the highest proportion with the intention to co-reside yet remain financially independent. Mothers from Thailand, however, express the largest intention for co-residence and financial dependence, while South Korean mothers represent the second largest group in this category. Hence, as documented in many co-residence studies, households in Asian countries, including Japan are indeed more commonly co-resident than households in North American or Western societies. However, the Japanese society is unique among other Asian societies, as shown by Japanese mothers' co-residence yet independence intentions. Here, we can see the influences of modernization combined with a strong and persistent fidelity to traditional customs such as the co-resident household.

Similarly, the co-residence intentions of elderly Japanese relative to the elderly in other countries are shown in table 2.3. Once again, the Asian elderly of Japan

Table 2.2: Cross-Cultural Comparison of Mothers' Co-residence Intentions with children, 1981

COUNTRY	AGE-GROUP OF MOTHERS	CO-RESIDENCE AND DEPENDENCE (%)	CO-RESIDENCE AND INDEPENDENCE (%)	NO CO-RESIDENCE AND DEPENDENCE (FINANCIAL HELP) (%)	NO CO-RESIDENCE AND INDEPENDENCE (NO FINANCIAL HELP) (%)	UNDECIDED (%)
JAPAN	TOTAL	20.70	34.50	6.00	22.90	15.90
	<= 39	18.20	35.40	6.20	22.90	17.20
	40-49	23.10	34.20	5.50	22.50	14.70
	>= 50	25.00	22.20	11.10	27.80	13.90
U.S.A.	TOTAL	4.90	2.70	8.40	79.00	5.10
	<= 39	4.50	2.60	8.20	79.30	5.30
	40-49	5.30	2.80	7.20	80.20	4.60
	>= 50	6.20	2.70	15.00	72.60	3.50
U.K.	TOTAL	1.50	2.70	8.90	78.90	8.00
	<= 39	0.90	2.60	8.60	79.50	8.50
	40-49	1.70	2.70	9.10	79.20	7.20
	>= 50	8.00	4.00	12.00	68.00	8.00
FRANCE	TOTAL	2.00	7.10	7.90	76.60	6.30
	<= 39	1.40	7.00	6.50	78.80	6.20
	40-49	2.30	7.10	8.30	76.50	5.80
	>= 50	5.50	7.30	15.50	64.50	7.30
THAILAND	TOTAL	72.50	8.00	8.00	4.40	7.00
	<= 39	69.80	8.70	9.90	5.30	6.20
	40-49	73.40	8.00	6.90	4.00	7.80
	>= 50	80.50	4.90	4.90	2.40	7.30
SOUTH KOREA	TOTAL	34.20	17.90	16.50	25.50	5.90
	<= 39	29.40	19.20	14.00	32.10	5.30
	40-49	36.40	16.20	19.30	21.30	6.70
	>= 50	47.10	22.10	12.50	14.40	3.80

Data is compiled from survey of middle-aged women with children aged 10-15.
Source: 1992 Latest Demographic Statistics, p. 206.

Table 2.3: Value Judgement of Co-residence, 1987

ELDERLY INTENTIONS	JAPAN (%)	THAILAND (%)	U.S.A. (%)	DENMARK (%)	ITALY (%)
AGREEABLE TO LIVING TOGETHER ALWAYS	58.00	65.90	2.70	3.80	33.60
AGREEABLE TO SHARING OCCASIONAL MEALS AND/OR CONVERSATION	33.70	9.50	65.00	74.50	55.00
AGREEABLE TO SHARING OCCASIONAL CONVERSATION	5.80	21.80	30.50	17.50	10.00
IT'S BETTER NOT TO HAVE ANY CONTACT WHATSOEVER	1.50	1.20	0.30	0.20	1.00

According to data compiled from the report, entitled "Report of the Surveys of living conditions and intentions of the elderly for international comparison" (1987).
This report surveyed elderly people, aged 60 and over, excluding those who are institutionalized.
Source: 1992 Latest Demographic Statistics, p. 206.

and Thailand express the greatest desire for complete co-residence with their children. In contrast, the elderly living in other developed countries prefer separate residence from their children which allows for 'intimacy at a distance'.

Morgan and Hirosima (1983) found that co-residence is considered an adaptive strategy in modern nations, in particular, Japan. In addition to traditional cultural ties, there are conditions specific to the Japanese society which make co-residence an attractive living arrangement in spite of strong modernization influences. High housing costs, especially land costs, are coupled with weak government support of the elderly who retire much earlier in Japan than in any other developed nation. This motivates many elderly and their children to share living expenses. Also, there is less job-related geographical mobility in Japan than in Western nations. Less movement among family members creates a stabilizing influence for the creation and/or maintenance of co-resident households.

Although Japan shows a greater proportion of co-resident households when compared to other industrialized or developed nations, studies have shown that changes in the country's family system have occurred with the advance of modernization and contact with the Western world (Martin and Culter 1983). For example,

> in 1985, only 61.6 percent of persons aged 65 and over were living with their children, down from 75.3 percent in 1970 (Japan Statistics Bureau, 1973, 1975, 1986). (Martin 1989, p. 628).

Studies on intergenerational co-residence in Japan can be

> divided roughly into three categories: post-nuptial co-residence, co-residence of the middle-aged with their parents, and the living arrangements of the elderly. (Martin and Tsuya 1991, p. 300)

Martin and Tsuya (1991) examined Japanese co-residence from the middle-aged children's perspective. They found that post-nuptial co-residence of eldest sons has declined since 1960 and the proportion of middle-aged men who live with their own or their wives' parents has also declined, but only among certain age-groups (between 40 and 54).

Kojima (1990) examined Japanese co-residence from the perspective of never-married young adults. Three intervening variables were chosen as determinants of co-residence. Each of these variables are determined by a set of independent variables. The availability of kin variable is determined by demographic characteristics such as sex, age, eldest-child status, and sibling size. The feasibility of co-residence is determined by housing conditions and financial status. Finally, the desirability of co-residence is determined by factors that indicate the strength of social and economic alternatives to co-residence. In Japanese society, these factors are represented by education, occupation, urban/rural residence, and stem or nuclear family regions. Stem households are prevalent in the Tohoku and Hokuriku areas while Shikoku and Kyushu are characterized by nuclear family systems (Kojima 1992). All of these variables were found to be significant to Japanese young adults' co-residence with their parents.

Kojima (1992) used these intervening variables in another Japanese study examining the co-residence of married couples with an elderly mother. The results

indicated that kin availability has a stronger effect on co-residence than the feasibility and desirability variables. However, the study resulted in some interesting findings with respect to the feasibility and desirability variables. First, lower age at marriage for the husband is associated with current and prospective co-residence. Secondly, home ownership has a positive effect on current co-residence with own mother but a negative effect on prospective co-residence with own mother after the current living arrangements of the mothers are controlled. Another interesting finding is that different types of employment among wives are associated with different types of co-residence.

From the perspective of the elderly, there has been a clear decline in co-residence with children, even though the probability of survival of the various family members has increased (Martin and Culter 1983; Martin and Tsuya 1991). Hirosima (1993) noted that the marital status of Japanese elderly continues to exert considerable influence on whether the elderly co-reside with their children. As a result, declines in co-residence with children have been matched by increases in 'couple' and 'one-person' households among the elderly.

Similarly, Martin and Culter (1983) claim that the declining importance of co-residence within Japanese households is largely associated with the living arrangements of the elderly. The mortality transition that Japan has undergone in the twentieth century has significantly increased the probability of three generations of a family being alive at the same time. It should have led to the prevalence of the cultural ideal of three-generation households. However, the actual decline in such living

arrangements indicates that there must have been a significant change in the behaviour of Japanese parents with regard to their decisions about living with adult offspring and grandchildren (Hirosima 1993; Martin and Culter 1983).

There are many possible reasons for this change in behaviour, such as availability of housing and migration of children (Martin and Culter 1983). Another possibility is a change in the desire or feeling of obligation of adult offspring to have their parents living with them, or a change in the desire or need of elderly parents to live with their offspring. Various opinion surveys in Japan have documented these changes in attitudes to some extent. Similarly, the surveys report a change in attitude

> about inheritance in the postwar period. The belief that property should be given only to the eldest child declined, while the concept of equal inheritance for all children has remained the most popular with almost half the couples supporting it throughout the period. Another concept that has gained in popularity is that of giving property only to children who provide care for their parents in the future. (Martin and Culter 1983, p. 644)

Although changes in co-residence show that the younger Japanese are questioning their traditional values with respect to family structure, it is still much more common in Japanese society for the elderly to live with their children than it is in Western societies such as the United States (Palmore 1975; Martin and Tsuya 1991). Demographic data from various countries in 1970 shows that the older traditions of multi-generational families were preserved in many of the rural areas within developed countries, including Japan where household size was larger in the rural areas than in the

urban areas (Kuznets 1978). And, more recent studies continue to show that co-residence still exists in Japan (Kojima 1990; Kojima 1992).

As discussed earlier, modernization theorists contend that the integration and status of the elderly tends to decline with modernization (Gubrium 1974; Cowgill 1986). Accordingly, Cowgill and Holmes (1972) paint a grim picture of the elderly within co-resident households in Japan:

> No doubt a fair number of aged Japanese are treated with fondness and dignity at home, but there are several indications that inside the home as well as out, the after years are an un-prime time. Morioka Kiyomi (Kosei Hakusho 1967, p. 370) estimated that 1 in 5 old people is not effectively included in day-to-day family conservation and activity. (p. 142)

In addition, Cowgill and Holmes (1972, p. 135) and Martin (1988) indicate that there is a high rate of suicide among elderly Japanese living in three-generation households. The most likely reason for suicide amongst older Japanese seems to be:

> to eliminate the self when it has become a drag upon others (family above all), when it no longer can contribute to their well-being. (Cowgill and Holmes 1972, p. 137)

Such negative perspectives on the elderly within co-residence situations may be an extreme view regarding the impact of modernization on Japan's family/household structure. Palmore (1975) believes that Japan proves to be an exception to the general modernization rule regarding the status of the aged. He asserts that in Japan, the decline in the status and integration of the aged is relatively slow and small so that respect for the aged remains relatively high. The elderly are more integrated into the family, the

work force, and the community than in other modern nations.

It is true that living together may create tensions in Japanese households and in any other household for that matter. However, it is important to remember that the link between older and younger generations is much stronger in Japan than in any other developed country (Martin and Tsuya 1991; Palmore 1975). The expected further declines in Japanese co-residence may not necessarily mean that intergenerational relations will deteriorate. The traditional living arrangement among Japanese households has a tendency to survive, adapting itself to the changing societal environment and it will not unconditionally perish (Hirosima 1993).

This literature review has established the context within which our co-residence study will unfold. The common theme in the literature is that co-residence patterns vary according to the degree of modernization in a society. In Japan however, modernization is also confronted by a strong traditional ideology regarding family relations.

CHAPTER 3

DATA SOURCE AND STATISTICAL TECHNIQUES

This study of the co-residence of Japanese households (1986) uses the micro data of a national survey on migration history and the co-residence situation in Japan. Statistical procedures are employed in order to explain the current co-residence situation at the time the survey was taken and also to identify variables affecting the situation. This chapter describes the data and the technical procedures used in this study.

3.1 JAPANESE CO-RESIDENCE DATA (1986)

In 1986, Japan's Institute of Population Problems (IPP) conducted a national survey which addressed the country's migration and co-residence situation. With a high response rate of 94 percent, this survey resulted in a micro data base consisting of 7,825 usable household records.

The structure of each household record consists of five separate parts. The first part is the main core of the survey. It includes basic personal characteristics (household status, birth date and place, level of education, and occupation) for up to eleven household members, including only those who are co-resident members at the time of the survey.

The second part of a household record deals with information on up to five

children of the household head who do not co-reside with the household heads at the time of the survey. In this part of the record, the above-mentioned personal attributes are also collected and a distinction between surviving and deceased status is made.

The third part of a household record deals with a subset of the individuals of the first part who are the children of the household head and who have left the household and then returned. The maximum number of such children per household is limited to three. This part of the survey collects specific spatial and temporal information regarding separation as well as return to the household.

The two final parts of a household record offer more detailed information than that which can be obtained in part one. The fourth part consists of information about the household head. There is a substantial amount of information available to the researcher in this section, including information on the head's sibling status, parents' dates of birth, and parents' presence or absence in the household, and whether parents are alive or dead. Additional information relating to co-residence is also available: residence immediately before and after marriage, residence after first employment, and whether or not the current residence is inherited from parents.

The fifth part of a household record contains information about the spouse of the household head. The type of information collected here is for the most part identical to the information collected in part four, but with somewhat less details.

3.1.1 ADVANTAGES AND DISADVANTAGES OF JAPANESE CO-RESIDENCE (MICRO) DATA

The obvious advantage of using micro data is that it provides us with information on individuals as opposed to aggregations of individuals. The main advantages of the micro data file are the following. First, it allows for a high degree of flexibility in the specification of theoretically meaningful variables and categories. Second, it permits the application of a rather comprehensive multivariate model so that the assessment of the influence of a factor in question can be more properly conducted in the context of many other relevant factors.

The IPP data set have some shortcomings and limitations. First, for an elderly who is not a household head, it is impossible to know the information on his/her non-co-resident children. This kind of missing information problem makes it impossible to use the data to study the effect of children's attributes on the elderly's propensity to co-reside. Second, since the survey covers only non-institutional households, the data set does not contain any information on the few institutionalized elderly who are not parents of a household head.

3.2 CREATING PERSONAL RECORDS FOR TWO PERSPECTIVES

For this study, it is necessary to create personal records from the household records. This is done by manipulating the household records through various SAS programs. The research objective is to examine the Japanese co-residence situation from two different perspectives - that of the elderly and that of the household heads. As a

result, we find ourselves consulting the data compiled only in parts one, four and five of the survey. The data collected in part one applies to both perspectives, whereas parts four and five of the survey offer supplementary data which are useful to only the household head perspective.

For the elderly perspective, we create a new file in which each record represents an elderly person (aged 60+). We use the household status variable to create a simple co-residence status variable for each elderly person. By examining the specific values of this variable for all persons in a household record, we are able to determine if an elderly person (aged 60+) is part of a co-resident household or not. While using this variable, we need to take into account the two forms of co-residence that are possible: co-resident with children or with grandchildren. The dependent variable for the elderly perspective is a dummy variable which assumes the value of 1 if the elderly person in question is co-resident with child or grandchild. Each record in the new file contains this variable and a set of explanatory variables to be described in Chapter Four.

For the household head perspective, we create another new file in which each record represents a household head with at least one parent being alive. The dependent variable for this perspective is a dummy variable which assumes the value of 1 if the household head in question has at least one co-resident parent. Due to the abundance of the data pertaining to household heads, we are able to use not only the attributes of the household heads but also the attributes of the spouses and parents as the explanatory variables. The explanatory variables of this new file will be described in Chapter Five.

3.3 THE STATISTICAL MODEL

In order to explain the variations in the dependent variables defined above, we use the following multivariate binomial logit model:

$$P[i] = \exp(b[o]+\mathbf{b}'\mathbf{x}[i]) / \{1 + \exp(b[o]+\mathbf{b}'\mathbf{x}[i])\}$$

where P[i] is person i's co-resident probability; exp( ) is the exponential function; b[o] is an unknown parameter; **b'** is a row-vector of unknown parameters; and **x**[i] is a column-vector of explanatory variables relevant to person i's propensity to co-reside.

Many co-residence studies use the logit model as the basis of their analysis. Martin (1991) uses it to analyze the living arrangements of the elderly in Fiji, Korea, Malaysia, and the Philippines. Similarly, Wolf (1984) and Wils and Wolf (1992) also use it to study the living arrangement decisions of elderly women in the U.S. and in the Netherlands, respectively. Interestingly, Martin and Tsuya (1991) also use the same logit model that we use to examine the co-residence situation in Japan from the perspective of middle-aged Japanese children. Their dependent variable is, in essence, equivalent to the dependent variable used in the household head perspective of our study: to live in a co-resident setting involving elderly parent(s) or not.

The unknown parameters are estimated by the maximum quasi-likelihood method. This method is better than the commonly used maximum likelihood method, because it does not need the assumption of independent events. The estimation method is implemented by the Newton-Raphson iterative algorithm written in the GAUSS

language. For each estimated coefficient, a t-ratio is calculated. Due to our large sample sizes (3,799 individuals for the elderly perspective and 4,233 individuals for the household head perspective), a t-ratio with a magnitude of about 2.0 can be interpreted as an indication that a significant relationship exists between the dependent variable and the explanatory variable in question. Based on the likelihood criterion, we may also use the magnitudes of the t-ratios to rank the relative importance of the explanatory variables: the greater the magnitude, the more important the corresponding variable (Kawabe and Liaw 1992).

To evaluate the model's goodness of fit, we use

Rho-square = 1 - L[g]/L[O]

where L[g] is the maximum value of the log of the given specification's quasi-likelihood, and L[O] is the corresponding value of the 'null' model. The 'null' model is the initial run where all parameters are set to zero, except for the constant term c, implying that the decision to co-reside does not depend on any of the explanatory variables. The Rho-square cannot assume a value outside of the range between zero and one. The greater the value of the Rho-square value, the greater the model's overall explanatory power.

We define the **full model** as the model that contains a large number of explanatory variables which have substantively meaningful coefficients and which help the model achieve large explanatory power. A subsequent series of runs or tests are done in which explanatory variables are selectively deleted from the full model in order to observe the extent to which the explanatory power of certain variables overlap or

complement each other. Complementary variables strengthen each other's explanatory powers when both are included in the model, whereas overlapping variables weaken each other's explanatory powers. Decreases in Rho-square can be compared to assess the importance of deleted explanatory variables. If a test results in a greater decrease, then the deleted variable is considered more important.

To get easily digestible co-resident proportions, each of the two dependent variables is also cross-tabulated against sex and each of the other relevant explanatory factors. The resulting sex-specific co-residence proportions are used in Chapters Four and Five to complement the more abstract statistical indicators of the logit model.

CHAPTER 4

CO-RESIDENCE OF JAPANESE HOUSEHOLDS (1986): ELDERLY PERSPECTIVE

4.1 INTRODUCTION

Japan has often been regarded as an exception to the generalization that the multi-generational family or co-resident household represents a structure which is rare in almost all industrial societies (Palmore 1975). Japanese elderly are vital members of the multi-generational family and their integration is usually treated with high respect. Many researchers have examined the decline of the multi-generational family in Japan by focusing on the perspective of the elderly. Other studies examining inter-generational transfers, of which co-residence is a part, have also used an approach dependent on the elderly perspective (Freedman et al. 1991). This perspective of co-residence is indeed significant since many aging societies are finding it increasingly important to keep track of the living situation of the elderly for future planning strategies. It is also interesting to see whether any changes in co-residence are indicative of changes in elderly attitudes regarding preferred living arrangements.

In this chapter, we examine Japanese co-residence from the elderly perspective. We will use the IPP 1986 survey data to determine the extent to which Japanese elderly co-reside with their adult children, based on various factors that relate to these elderly.

The minimum age at which an individual is categorized as elderly in this study is chosen to be 60. Although other studies use 65 as the arbitrary age cutoff, we've decided to lower that limit in our study in order to be consistent with Japan's official retirement age.

The dependent variable for each elderly person is a dummy variable which assumes the value of 1 if he/she co-resides with a child or a grandchild, and the value of 0, if otherwise. Hirosima (1993) found that a high proportion of elderly co-residing with grandchildren in Japan is the result of co-residence with children. Therefore, for brevity, we may call our dependent variable an indicator of co-residence with child.

The structure of the remaining part of this chapter is as follows. In section 4.2, we propose several hypotheses which guide the selection of the explanatory variables. In section 4.3, we present the empirical results. The main points are summarized in section 4.4.

4.2 MAJOR HYPOTHESES AND SELECTION OF EXPLANATORY VARIABLES

In general, whether an elderly person co-resides with a child or not depends not only on the attributes of the elderly person but also the attributes of his/her children. However, the IPP data does not provide information on non-co-resident children, if the elderly person is not a household head. Thus, in attempting to explain the co-residence phenomenon from the elderly perspective, we will use only the attributes of the elderly as the explanatory variables.

4.2.1 Hypothesis 1: The tendency to co-reside with child is an increasing function of the elderly's inability to care for themselves.

The health condition of elderly individuals deteriorates as age increases, making the elderly less able to care for themselves. As a result, the care provided by children in a co-resident household becomes a more probable alternative in living arrangements as the Japanese elderly become older. Therefore, we select the following explanatory factor.

Age of Elderly (+). We start by choosing six age groups: 60-64, 65-69, 70-74, 75-79, 80-84, and 85+. Since it appears that the co-residence tendencies of the first two age groups are very similar, we use only five age groups in our multivariate model, by using the 60-69 age group as the reference category. Each of the remaining four age groups are represented by a dummy variable. The coefficients of these dummy variables are expected to be positive and to increase in magnitude as age increases.

4.2.2 Hypothesis 2: Compared to elderly males, elderly females are more likely to co-reside with children, especially when the spouse is deceased.

The main reasons for this hypothesis are as follows. First, healthy elderly Japanese females can provide many useful household services (cooking, cleaning, and taking good care of grandchildren), whereas healthy elderly Japanese males tend to do relatively few household chores. Thus, the adult children get a high utility from co-resident mothers than from co-resident fathers. Second, with less property rights and

less income from pension and other sources (Mason 1992), elderly females are less able to live without financial assistance from their children. Third, the importance of these two differences is increased when one spouse in an elderly couple passes away. Fourth, if the male spouse is still alive, the female spouse is likely to co-reside with her elderly husband and less likely to co-reside with child. This is because it is customary for elderly Japanese women to take care of their spouses throughout their marital lives, particularly when their spouses age and grow frail. Based on this hypothesis, we select the following two explanatory variables.

Female (+). This variable is represented by a dummy variable which assumes the value of 1 if the elderly in question is female. The effect of this variable is expected to be positive.

Female * Spouse Alive (-). This variable is a dummy variable assuming the value of 1 if the elderly person in question is female and has a spouse who is still alive. The effect of this variable is expected to be negative.

4.2.3 Hypothesis 3: Modernization forces act against the formation of co-resident households (Mason 1992). As a result, the elderly who are influenced by these forces tend to have a greater preference for privacy and separate living.

The influences of modernization on the elderly tend to vary with their level of education and occupation. In general, the better educated elderly tend to be more modernized and are therefore less likely to co-reside with children. With respect to

occupation, the elderly in family-oriented occupations (those in family-owned small business, farming, and fishing) are more likely to co-reside with their children because they are more likely to preserve the stem family tradition. In contrast, the elderly who are professionals are more prone to accept the nuclear family arrangement and are less likely to co-reside with their children. Therefore, this hypothesis leads to the selection of the following explanatory factors.

High School and College/University Education (-). We start by defining five categories: (1) still in school, (2) primary school, (3) high school, (4) college/university, and (5) unknown. We learn that there are very few elderly in categories (1) and (5), and that the main difference is between the high co-residence proportion of the elderly with primary education and the low co-residence proportion of the elderly with high school and college/university education. In the multivariate model, the level of education is represented by a dummy variable which assumes the value of 1 if the elderly person in question has high school or college/university education. The effect of this factor is expected to be negative. Palmore (1975) found that among all age groups in Japan, it is common for parents with college and/or university education to prefer to live separately from their children.

Family-Oriented Occupation (+). This variable is formed by integrating two separate occupational categories. The category of agriculture, forestry and fishing is combined with the category labelled family workers. This variable is a dummy variable which assumes the value of 1 if the elderly person in question belongs to this combined

occupational category. Agriculture, forestry, and fishing are primary forms of employment that are essentially family-dominated. Family workers are made up of those individuals who work for family members who are self-employed or run their own businesses. For families that have their own businesses, a frequent main role in the household for elderly parents is to help in the family business (Palmore 1975). A multi-generational household not only represents the traditional mode of Japanese family relations but it is also a convenient way for a family to guarantee financial security for itself. In other words, living together and working together would go hand in hand in producing social and financial harmony. We expect those elderly employed in family-oriented work to be more likely to co-reside with their children.

Professional/Security Occupation (-). To define this variable, we merge together four separate occupational categories: (1) "free occupation" (artists, writers, lawyers, doctors, etc., who are not employed by others); (2) managerial occupation ("kacho" (section chief) or higher position in large companies and civil service, school principal, etc.); (3) specialized professions (doctors, nurses, engineers, teachers, scientific researchers, journalists, priests, etc., who are employed by others); and (4) security occupation (police, soldiers, guards, etc.). This variable is a dummy variable which assumes the value of 1 if the elderly person in question belongs to this combined occupational category. The effect of this variable is expected to be negative.

Low-level Employees (+). To define this variable, we merge together the following four separate occupational categories: (1) "yaku-in" (low level officers) in companies

and civil service; (2) clerical or secretarial workers, etc., who are employed by others; (3) sales and service employees (sales persons, barbers, beauticians, laundry workers, receptionists, bar girls/waitresses, etc.); and (4) blue collar workers whose occupations are primarily physical and technical (drivers, assembly line workers, repair men, printers, etc.). This variable is a dummy variable which assumes the value of 1 if the elderly person in question is employed in this combined occupational category. Relative to the elderly in the reference group which includes mostly those who are not working, the elderly in this category are expected to be somewhat less likely to co-reside with child. This is because the income from their employment could help their economic independence. However, the elderly in this category are expected to be more traditional and therefore, more prone to co-reside with child than those working in the professional fields.

4.2.4 Hypothesis 4: Native elderly are more prone to co-reside with child than are their non-native and foreign-born counterparts.

The basic reason for this hypothesis is that relative to non-native elderly (those who do not live in their prefecture of birth) and foreign born elderly, native elderly (those who live in their prefecture of birth) are more likely to have properties passed down from earlier generations. Furthermore, some of their children (usually the eldest sons) would come back to inherit these properties and co-reside with their parents. This hypothesis leads to the selection of the following explanatory variables.

Non-Native (-) and **Foreign Born (-).** The former is a dummy variable which assumes the value of 1 if the elderly person in question is non-native, whereas the latter is another dummy variable assuming the value of 1 if the elderly person in question is foreign born. We expect both variables to have negative effects.

4.2.5 Hypothesis 5: The co-residence tendencies are subject to the effects of regionally distinct cultural effects.

Although foreigners and many Japanese themselves usually characterize Japan as a homogenous country, there are clear and rather persistent regional differences. These differences are quickly recognized by anyone who tries to understand the languages used in Japanese families. More perceptive observers of Japanese families may also recognize different housing arrangements in different regions of Japan. With respect to co-residence patterns, there appear to be two distinct regions in Japan. The first is the Tohoku and Hokuriku areas in the northeastern part of Honshu Island where there is a long tradition of multi-generational (stem) families. The second region includes the islands of Kyushu and Shikoku where stem families are less common than in the rest of Japan. These regional differences in co-residence tendencies have been recognized by previous researchers (Kojima 1990; 1992; Martin and Tsuya 1991). To detect these regional effects in a multivariate framework, we select the following two explanatory variables.

Stem Family Region (+). This variable is a dummy variable assuming the value of 1

if the elderly individual in question is living in Tohoku (including the prefectures of Aomori, Akita, Iwate, Yamagata, Miyagi and Fukushima) or Hokuriku (including the prefectures of Niigata, Toyama, Ishikawa and Fukui), as shown on the Map of Japan. The effect of this variable is expected to be positive.

Nuclear Family Region (-). This variable is a dummy variable assuming the value of 1 if the elderly individual in question is living on Kyushu or Shikoku Island (see Map of Japan). The effect of this variable is expected to be negative.

4.2.6 Hypothesis 6: Co-residence is less feasible in highly urbanized areas where the smallness of housing space makes co-residence impossible or very difficult.

Compared with other major industrialized countries, Japan has the smallest housing space per capita. In Japan, the shortage of housing space is particularly severe in the core areas of large metropolitan areas where many dwelling units are too small to accommodate stem families. This hypothesis leads to the selection of the following explanatory variables.

Major Metropolitan Core (-). This variable is a dummy variable which assumes the value of 1 if the elderly person in question is living in a major metropolitan core area (including the prefectures, Tokyo, Aichi and Osaka). The effect of this variable is expected to be negative.

Regional Metropolitan Core (-). This variable is a dummy variable which assumes the value of 1 if the elderly individual in question is living in the regional core area

(including the prefectures, Miyagi, Hiroshima and Fukuoka). The effect of this variable is also expected to be negative.

4.3 EMPIRICAL FINDINGS ON CO-RESIDENCE OF JAPANESE ELDERLY

Before applying the mulivariate logit model to the file of the elderly (aged 60+), we compute the co-residence proportions for each sex and for all other factors discussed in the previous section. These proportions not only provide easily understandable indicators of the co-residence phenomenon but they also provide helpful suggestions relating to the combinations of the categories that may be important in the multivariate model. The observed co-residence proportions are shown in Table 4.1 (Parts 1 and 2). It is important to keep in mind that the proportions computed for the categories with relatively few individuals tend to be relatively unreliable and should not be emphasized.

From the observed co-residence proportions, we find the following.

First, as high as 63.7 percent of the (non-institutional) Japanese elderly co-resided with a child in 1986.

Second, the co-residence proportion is higher for females (66.5 percent) than for males (59.9 percent).

Third, starting from the late 60s, there is a trend of increasing co-residence with age. This trend is clearer for females than for males.

Fourth, among females, those with a deceased spouse have a rather high co-

Table 4.1 (Part 1): Co-residence of Japanese Elderly (Aged 60+) with Child, 1986

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT ELDERLY (persons)			TOTAL ELDERLY (persons)		
	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES
TOTAL	59.9	66.5	63.7	962	1458	2420	1606	2193	3799
I. AGE									
60-64	59.9	60.8	60.4	330	386	716	551	635	1186
65-69	56.0	60.7	58.8	201	317	518	359	522	881
70-74	60.5	67.7	64.5	202	293	495	334	433	767
75-79	62.6	73.7	69.4	127	235	362	203	319	522
80-84	59.8	79.9	72.2	67	143	210	112	179	291
85+	74.5	80.0	78.3	35	84	119	47	105	152
II. SPOUSAL SITUATION									
Spouse Deceased	60.4	72.4	70.5	136	857	993	225	1183	1408
Spouse Alive	59.8	59.5	59.7	826	601	1427	1381	1010	2391
III. LEVEL OF EDUCATION									
Still in School	80.0	83.3	82.4	4	10	14	5	12	17
Primary School	64.8	69.7	67.7	667	1059	1726	1030	1520	2550
High School	51.4	55.1	53.6	167	269	436	325	488	813
College/University	48.0	65.9	53.6	97	60	157	202	91	293
Unknown	61.4	73.2	69.1	27	60	87	44	82	126
IV. OCCUPATIONAL STATUS									
Family-Oriented	77.1	81.3	79.1	185	224	367	240	224	464
Self-employed Proprietors	63.5	66.7	64.5	99	75	149	156	75	231
Professional/Security	51.8	46.7	51.2	58	15	65	112	15	127
Low-level Employees	54.4	52.3	53.7	131	107	187	241	107	348
Other Types of Work	51.6	65.1	59.3	32	83	86	62	83	145
Not Working	57.9	65.6	63.2	431	1585	1471	744	1585	2329
Unknown	51.0	66.4	61.3	26	104	95	51	104	155

Note: There were a few cases of coresidence with grandchildren. These cases are incorporated into the tabulation.

Table 4.1 (Part 2): Co-residence of Japanese Elderly (Aged 60+) with Child, 1986

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT ELDERLY (persons)			TOTAL ELDERLY (persons)		
	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES
TOTAL	59.9	66.5	63.7	962	1458	2420	1606	2193	3799
V. NATIVITY STATUS									
Non-Native	52.0	61.0	57.3	211	371	582	406	609	1015
Foreign Born	26.3	48.0	38.6	5	12	17	19	25	44
Native	63.1	68.8	66.3	740	1057	1797	1173	1536	2709
Unknown	75.0	78.3	77.4	6	18	24	8	23	31
VI. CULTURAL REGIONS									
Stem Family Region	64.8	77.9	72.1	166	253	419	256	325	581
Nuclear Family Region	49.2	59.3	55.2	122	210	332	248	354	602
The Rest of Japan	61.2	65.7	63.8	674	995	1669	1102	1514	2616
VII. URBANIZATION EFFECT									
Major Metropolitan Cores	58.8	62.3	60.9	178	278	456	787	1077	1864
The Rest of Japan	60.2	67.5	64.4	784	1180	1964	819	1116	1935
Regnl. Metropolitan Cores	48.3	58.7	53.9	42	61	103	303	446	749
The Rest of Japan	60.6	66.9	64.2	920	1397	2317	1303	1747	3050
Major Metropolitan Areas	60.5	64.3	64.7	476	692	1252	87	104	191
The Rest of Japan	59.3	68.6	62.7	486	766	1168	1519	2089	3608
All Metropolitan Areas	59.3	63.8	61.9	518	753	1271	874	1181	2055
The Rest of Japan	60.7	69.7	65.9	444	705	1149	732	1012	1744

Major Metropolitan Cores: Tokyo, Osaka, Aichi.

Regional Metropolitan Cores: Miyagi, Hiroshima, Fukuoka.

Major Metropolitan Areas: Major Metropolitan Cores + Saitama, Chiba, Kanagawa, Miye, Gifu, Kyoto, Hyogo, Nara.

All Metropolitan Areas: Major Metropolitan Areas + Regional Metropolitan Cores.

Extended Family Region: Tohoku + Hokuriku.

Nuclear Family Region: Shikoku + Kyushu.

residence proportion (72.4 percent), whereas among the males, the death of a spouse is not reflected by a higher co-residence proportion (60.4 percent).

Fifth, with respect to the level of education, lower co-residence proportions are associated with high school graduation (51.4 percent for males and 55.1 percent for females) and college/university graduation (48.0 percent for males and 65.9 percent for females).

Sixth, with respect to occupation, the elderly in the family-oriented category have very high co-residence proportions (77.1 percent for males and 81.3 percent for females). The co-residence proportions of the elderly in the professional/security and low-level employee categories are lower than that of the elderly in the not-working category.

Seventh, with respect to nativity status, the co-residence proportions are higher for the native category than for the non-native and foreign-born categories.

Eighth, with respect to cultural regions, the co-residence proportions are relatively high for the elderly in the stem family region (64.8 percent for males and 77.9 percent for females) and relatively low for the elderly in the nuclear family region (49.2 percent for males and 59.3 percent for females).

Ninth, the co-residence proportions are lower in both the major metropolitan cores and regional metropolitan cores than in the rest of Japan.

4.3.1 EMPIRICAL FINDINGS FROM THE MULTIVARIATE MODEL

The information conveyed by the co-residence proportions in Table 4.1 is not quite satisfactory from a scientific point of view due to the following reasons. First, some effects suggested by the proportions may be false. For example, the regional effects might be mostly due to inter-regional differences in such factors as occupation, education, and nativity status. When these factors are controlled, the regional effects may disappear so that there may not be any empirical support for the concept of cultural regions. In other words, the observed co-residence proportions do not inform us about how the explanatory factors overlap in their explanatory powers. Second, it is difficult to use the observed proportions to make an objective assessment of the relative importance of the explanatory factors. Therefore, to get better insights, we now report the results of applying the multivariate logit model. The estimation results are shown in Table 4.2 (Parts 1, 2, and 3). Table 4.3 is a tabulation of the coresidence proportions based on the variable classifications used in the model.

In the full model, all of the explanatory variables have coefficients of the hypothesized signs. The t-ratios show that only five variables are not statistically significant: age 70-74, professional/security, low-level employees, major metropolitan core, and regional metropolitan core. In light of the large sample size (3,799 persons), the Rho-square of 0.0513 suggests that the full model provides a fairly good fit.

With respect to the age of the elderly, we find that the tendency to co-reside with child starts to increase markedly with age in the late 70s: the coefficients are 0.3056

Table 4.2 (Part 1): The Estimation Results of Co-residence for Japanese Elderly (Aged 60+) with Child, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 1 -AGE		TEST 2 -SPOUSAL SITUATION		TEST 3 -GENDER & SP. SITUATION	
	COEFF.	(T)	COEFF.	(T)	COEFF.	(T)	COEFF.	(T)
Constant	0.4721	(5.4)	0.6182	(8.0)	0.4328	(5.0)	0.6144	(8.4)
I. Age of Elderly								
70-74	0.1012	(1.1)	----	----	0.1646	(1.8)	0.1547	(1.7)
75-79	0.3056	(2.7)	----	----	0.4088	(3.8)	0.4042	(3.7)
80-84	0.3996	(2.7)	----	----	0.5463	(3.8)	0.5370	(3.8)
85+	0.6920	(3.3)	----	----	0.8747	(4.2)	0.8803	(4.3)
II. Gender								
Female	0.5382	(6.1)	0.5924	(6.8)	0.2810	(3.8)	----	----
III. Spousal Situation								
Female*Spouse Alive	-0.5228	(-5.3)	-0.6429	(-6.8)	----	----	----	----
IV. Level of Education								
High School & Above	-0.3628	(-4.6)	-0.4073	(-5.3)	-0.3787	(-4.9)	-0.3885	(-5.0)
V. Occupational Status								
Family-Oriented	0.8890	(7.1)	0.8234	(6.6)	0.8472	(6.8)	0.8020	(6.4)
Professional/Security	-0.0439	(-0.2)	-0.1121	(-0.6)	-0.0162	(-0.1)	-0.1618	(-0.9)
Low-level employees	-0.1018	(-0.8)	-0.1885	(-1.6)	-0.0802	(-0.7)	-0.1741	(-1.5)
VI. Nativity Status								
Non-native	-0.2712	(-3.3)	-0.2735	(-3.4)	-0.2689	(-3.3)	-0.2569	(-3.2)
Foreign Born	-0.6534	(-2.0)	-0.6892	(-2.1)	-0.6542	(-2.0)	-0.6463	(-2.0)
VII. Cultural Regions								
Stem Family Region	0.2158	(2.0)	0.2129	(1.9)	0.2085	(1.9)	0.2013	(1.8)
Nuclear Family Region	-0.4905	(-4.9)	-0.4771	(-4.7)	-0.4713	(-4.7)	-0.4656	(-4.6)
VIII. Urbanization Effect								
Major Metro. Core	-0.0635	(-0.7)	-0.0560	(-0.6)	-0.0576	(-0.6)	-0.0557	(-0.6)
Regional Metro. Core	-0.2520	(-1.6)	-0.2599	(-1.6)	-0.2482	(-1.6)	-0.2533	(-1.6)
Log of quasi-likelihood	-2361.2		-2371.5		-2375.5		-2382.9	
Rho-square	0.0513		0.0471		0.0455		0.0426	
Decrease in Rho-square			0.0042		0.0058		0.0087	

Sample Size: 3799 persons.

Table 4.2 (Part 2): The Estimation Results of Co-residence for Japanese Elderly (Aged 60+) with Child, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 4 -EDUCATION		TEST 5 -OCCUPATION		TEST 6 -NATIVITY	
	COEFF.	(T)	COEFF.	(T)	COEFF.	(T)	COEFF.	(T)
Constant	0.4721	(5.4)	0.3539	(4.3)	0.6263	(8.0)	0.4001	(4.7)
I. Age of Elderly								
70-74	0.1012	(1.1)	0.1338	(1.5)	0.0863	(1.0)	0.1000	(1.1)
75-79	0.3056	(2.7)	0.3511	(3.2)	0.2557	(2.3)	0.3085	(2.8)
80-84	0.3996	(2.7)	0.4567	(3.1)	0.3422	(2.4)	0.3995	(2.7)
85+	0.6920	(3.3)	0.7624	(3.6)	0.6051	(2.9)	0.7083	(3.4)
II. Gender								
Female	0.5382	(6.1)	0.5574	(6.3)	0.4891	(5.7)	0.5276	(6.0)
III. Spousal Situation								
Female*Spouse Alive	-0.5228	(-5.3)	-0.5396	(-5.5)	-0.4628	(-4.8)	-0.5211	(-5.3)
IV. Level of Education								
High School & Above	-0.3628	(-4.6)	----	----	-0.4199	(-5.5)	-0.4004	(-5.2)
V. Occupational Status								
Family-Oriented	0.8890	(7.1)	0.9248	(7.4)	----	----	0.9308	(7.4)
Professional/Security	-0.0439	(-0.2)	-0.1551	(-0.8)	----	----	-0.0677	(-0.4)
Low-level employees	-0.1018	(-0.8)	-0.1395	(-1.2)	----	----	-0.1141	(-0.9)
VI. Nativity Status								
Non-native	-0.2712	(-3.3)	-0.3036	(-3.7)	-0.3426	(-4.2)	----	----
Foreign Born	-0.6534	(-2.0)	-0.8253	(-2.6)	-0.7222	(-2.3)	----	----
VII. Cultural Regions								
Stem Family Region	0.2158	(2.0)	0.2417	(2.2)	0.2488	(2.3)	0.2715	(2.5)
Nuclear Family Region	-0.4905	(-4.9)	-0.4957	(-4.9)	-0.4657	(-4.7)	-0.4540	(-4.5)
VIII. Urbanization Effect								
Major Metro. Core	-0.0635	(-0.7)	-0.0904	(-1.0)	-0.1052	(-1.1)	-0.1116	(-1.2)
Regional Metro. Core	-0.2520	(-1.6)	-0.2749	(-1.7)	-0.3215	(-2.0)	-0.2837	(-1.8)
Log of quasi-likelihood	-2361.2		-2371.8		-2391.0		-2368.2	
Rho-square	0.0513		0.0470		0.0393		0.0485	
Decrease in Rho-square			0.0043		0.0120		0.0028	

Sample Size: 3799 persons.

Table 4.2 (Part 3): The Estimation Results of Co-residence for Japanese Elderly (Aged 60+) with Child, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 7 -URBANIZATION EFFECT		TEST 8 -CULTURAL REGIONS		TEST 9 BEST MODEL	
	COEFF.	(T)	COEFF.	(T)	COEFF.	(T)	COEFF.	(T)
Constant	0.4721	(5.4)	0.4529	(5.4)	0.4251	(5.3)	0.4623	(6.3)
I. Age of Elderly								
70-74	0.1012	(1.1)	0.1029	(1.1)	0.1137	(1.2)	----	----
75-79	0.3056	(2.7)	0.3034	(2.7)	0.3016	(2.7)	0.2827	(2.6)
80-84	0.3996	(2.7)	0.4048	(2.8)	0.3819	(2.6)	0.3853	(2.7)
85+	0.6920	(3.3)	0.6926	(3.3)	0.6613	(3.2)	0.6708	(3.2)
II. Gender								
Female	0.5382	(6.1)	0.5379	(6.1)	0.5156	(5.9)	0.5573	(6.4)
III. Spousal Situation								
Female*Spouse Alive	-0.5228	(-5.3)	-0.5213	(-5.3)	-0.4989	(-5.1)	-0.5334	(-5.5)
IV. Level of Education								
High School & Above	-0.3628	(-4.6)	-0.3694	(-4.7)	-0.3823	(-4.9)	-0.3830	(-5.0)
V. Occupational Status								
Family-Oriented	0.8890	(7.1)	0.9027	(7.2)	0.8845	(7.1)	0.9129	(7.4)
Professional/Security	-0.0439	(-0.2)	-0.0427	(-0.2)	-0.0698	(-0.4)	----	----
Low-level employees	-0.1018	(-0.8)	-0.1022	(-0.8)	-0.0963	(-0.8)	----	----
VI. Nativity Status								
Non-native	-0.2712	(-3.3)	-0.2829	(-3.5)	-0.2546	(-3.2)	-0.2849	(-3.5)
Foreign Born	-0.6534	(-2.0)	-0.6817	(-2.1)	-0.7262	(-2.3)	-0.6809	(-2.1)
VII. Cultural Regions								
Stem Family Region	0.2158	(2.0)	0.2075	(2.0)	----	----	0.2144	(2.0)
Nuclear Family Region	-0.4905	(-4.9)	-0.5039	(-5.2)	----	----	-0.5036	(-5.2)
VIII. Urbanization Effect								
Major Metro. Core	-0.0635	(-0.7)	----	----	-0.0086	(-0.1)	----	----
Regional Metro. Core	-0.2520	(-1.6)	----	----	-0.3374	(-2.2)	----	----
Log of quasi-likelihood	-2361.2		-2362.6		-2378.6		-2363.7	
Rho-square	0.0513		0.0507		0.0443		0.0503	
Decrease in Rho-square			0.0006		0.0070		0.0010	

Sample Size: 3799 persons.

Table 4.3: Co-residence of Japanese Elderly (Aged 60+) with Child, 1986: Based on the Classification Used in the Logit Model

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT ELDERLY (persons)			TOTAL ELDERLY (persons)		
	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES
TOTAL	59.9	66.5	63.7	962	1458	2420	1606	2193	3799
I. AGE									
60-69	58.4	60.8	59.7	531	703	1234	910	1157	2067
70-74	60.5	67.7	64.5	202	293	495	334	433	767
75-79	62.6	73.7	69.4	127	235	362	203	319	522
80-84	59.8	79.9	72.2	67	143	210	112	179	291
85+	74.5	80.0	78.3	35	84	119	47	105	152
II. SPOUSAL SITUATION									
Spouse Deceased	60.4	72.4	70.5	136	857	993	225	1183	1408
Spouse Alive	59.8	59.5	59.7	826	601	1427	1381	1010	2391
III. LEVEL OF EDUCATION									
High School & Above	50.1	56.8	53.6	264	329	593	527	579	1106
Less Educated & Unknown	64.7	70.0	67.8	698	1129	1827	1079	1614	2693
IV. OCCUPATIONAL STATUS									
Family-Oriented	77.1	81.3	79.1	185	182	367	240	224	464
Professional/Security	51.8	46.7	51.2	58	7	65	112	15	127
Low-level Employees	54.4	52.3	53.7	131	56	187	241	107	348
Other Work & Unknown	58.1	65.7	63.0	588	1213	1801	1013	1847	2860
V. NATIVITY STATUS									
Non-Native	52.0	60.9	57.3	211	371	582	406	609	1015
Foreign Born	26.3	48.0	38.6	5	12	17	19	25	44
Native & Unknown	63.2	69.0	66.5	746	1075	1821	1181	1559	2740
VI. CULTURAL REGIONS									
Stem Family Region	64.8	77.9	72.1	166	253	419	325	256	581
Nuclear Family Region	49.2	59.3	55.2	122	210	332	354	248	602
The Rest of Japan	61.2	65.7	63.8	674	995	1669	1514	1102	2616
VII. URBANIZATION EFFECT									
Major Metro. Core	58.8	62.3	60.9	178	278	456	303	446	749
Regional Metro. Core	48.3	58.7	53.9	42	61	103	87	104	191

Note: There are a few cases of coresidence with grandchildren. These cases are incorporated into the tabulation.

for the 75-74 age group, 0.3996 for the 80-84 age group, and as high as 0.6920 for the 85+ age group. It seems that the elderly Japanese in general remain relatively healthy and are relatively able to take care of themselves up to their early 70s. However, through the late 70s and beyond, they become progressively incapable of taking care of themselves.

With respect to gender, elderly females are more prone to co-reside with child than are elderly males. This finding suggests that Japanese elderly females are more helpful in taking care of household matters, making them more welcome by their children. However, the gender effect is relatively small (coefficient=0.5382-0.5228=0.0154) when the spouse is alive, but it is quite large (coefficient= 0.5382) when the spouse is deceased. This difference is probably due to the fact (1) that elderly females in Japan have relatively little financial resources to live independently, and (2) that most female Japanese feel obliged to take care of their elderly husbands and are therefore more likely to live with their husbands in husband-and-wife-only households.

To test whether the co-residence tendency of the elderly males is also enhanced by widowhood, we add to the full model a dummy variable which assumes the value of 1 if the elderly person in question has a deceased spouse. Since this variable has a statistically insignificant coefficient, we infer that the death of spouse does not enhance Japanese elderly males' tendency to co-reside with child. This finding is quite interesting because a lone elderly male would have a strong need to co-reside with child in order to be relieved of uncomfortable household chores. It seems that the children of

the lone elderly males do not particularly look forward to co-residence with their fathers because elderly males are usually not expected to do much house work.

With respect to the level of education, the elderly with high school and college/university education are less prone to co-reside with child: the coefficient is -0.3628, and the t-ratio is -4.6. This finding confirms the idea that the better educated elderly are less prone to adhering to the traditional values of the stem family. Furthermore, they are probably wealthy enough to pay for the cost of maintaining more privacy.

With respect to occupation, the statistical results indicate that the elderly in the family-oriented occupations are strongly prone to co-reside with child: the coefficient is as large as 0.8890, with t=7.1. However, other occupational distinctions fail to be statistically significant.

With respect to nativity status, the multivariate results confirm the hypothesis that the non-native and foreign born elderly Japanese are less prone to co-reside with child than are their native counterparts: the coefficients are -0.2712 for the non-native category and -0.6534 for the foreign born category. Note that the relatively small magnitude of the t-ratio (-2.0) associated with the foreign born category is due to the very small numbers (44) of elderly in this category.

With respect to the effects of cultural regions, our multivariate results confirm the hypothesis that the elderly in the stem family region (Tohoku and Hokuriku) are more prone to co-reside with child, whereas those in the nuclear family region

(Kyushu and Shikoku) are less prone to do so: the former is associated with a coefficient of 0.2158 (t=2.0), and the latter is associated with a coefficient of -0.4905 (t=-4.9).

With respect to the effect of urbanization, our multivariate results do not provide strong support for the hypothesis that the elderly in the metropolitan cores are less prone to co-reside with child. The coefficients have the expected negative sign, but the magnitudes of the t-ratios are less than 2.0. The lack of statistical significance suggests that prefectures are probably too large for the identification of congested urban areas.

4.3.2 ACHIEVING BETTER INSIGHTS INTO THE CO-RESIDENCE OF ELDERLY BY THE METHOD OF ELIMINATION

The lack of statistical significance among the five explanatory variables in the full model may be due to the problem of collinearity or it may mean that some of these variables are just not important to the elderly's propensity to co-reside. This will be checked by selectively deleting some of the explanatory variables in the full model in a subsequent series of tests. By eliminating some of the explanatory variables, we will also be able to evaluate their relative importance.

Tests 1, 2 and 3 show that a multivariate model should simultaneously include the factors of age, spousal situation (widowhood), and gender, because the deletion of age results in the overstatement of the importance of gender and widowhood, whereas the deletion of widowhood and gender results in the inflated importance of age. The overlap in their explanatory powers is due to the fact that widowhood and female

domination increase with age. The underlying demographic reasons are that mortality increases with age, and that this increase is greater for males than for females.

Tests 4 and 5 show that the explanatory powers of education and occupation overlap to some extent. This overlap is due to the fact that better educated individuals are less likely to be employed in family-oriented occupations and more likely to be professionals. Unless they are simultaneously included in the multivariate model, the statistical results will overstate their importance, although this overstatement is not serious.

Tests 6 and 7 show that the explanatory powers of nativity status and urbanization also overlap to some extent. This is because more urbanized prefectures tend to have a larger pool of non-native elderly due to the large rural-to-urban net migration flows in the previous decades. We note that the deletion of nativity status (Test 6) almost makes the negative effect of regional metropolitan core statistically significant.

Test 8 shows that the deletion of the factor of cultural regions has relatively little effect on the coefficients of the remaining variables. This suggests that there are some intrinsic cultural differences among the regions that have systematic effects on the co-residence tendency.

Test 9 shows that the deletion of statistically insignificant variables from the full model has a negligible effect on the model's goodness of fit: The Rho-square is decreased by only 0.0010.

From the changes in Rho-square at the bottom of Table 4.1, we see that the occupation factor is the most important factor. Specifically, the elderly's tendency to co-reside with child is very strongly enhanced by being in the family-oriented occupation. In other words, the stem family tradition is best kept in the families where the function of economic production is continued.

4.4 SUMMARY

In the first part of this chapter, we proposed several hypotheses which guided the selection of variables that are potentially useful in explaining the variation in the co-residence of Japanese elderly. In the logit analysis, all of these variables have the hypothesized signs and are for the most part, statistically significant.

In general, the data have allowed us to gain a better understanding of the extent to which the given factors affect an elderly Japanese individual's decision to co-reside with his/her child. Although the data confines us to using only the attributes of the elderly as the explanatory factors, our findings suggest that whether co-residence takes place or not depends not only on the needs and preferences of the elderly but also on the attitudes and preferences of their adult children. Otherwise, we can not understand why the death of a spouse does not increase the elderly males' tendency to co-reside with child.

What are the attributes of the adult children that make them more or less willing to co-reside with their elderly parents? We will deal with this problem in

Chapter Five by examining the perspective of household heads.

CHAPTER 5

CO-RESIDENCE OF JAPANESE HOUSEHOLDS (1986): HOUSEHOLD HEAD PERSPECTIVE

5.1 INTRODUCTION

The co-residence situation in Japan examined from the household head perspective will allow us to determine which factors act for and against the decision to include parent(s) as residing members of the household. In Japan and many other Asian countries, traditional cultural values are often the driving force behind adult childrens' willingness to include elderly parents as household members. In this respect, co-residence from the perspective of household heads, who are usually married adult children, is considered an obligation or duty.

However, with the onset of modernization, many adult children are exemplifying new attitudes regarding co-residence with their elderly parents. Many studies have found that those children with 'modern' characteristics are less likely to live with their parents (Martin & Tsuya 1991). For those household heads who prefer co-residence, it may be regarded more as a matter of convenience than as a traditional obligation. For example, household heads and their families may benefit by receiving help from their co-residing parents in the form of monetary assistance, child care services, daily household work, and assistance in time of illness and other crisis situations (Novak 1988, p. 288-289; Mason 1992).

In section 5.2, we present a set of hypotheses to aid in the selection of the explanatory factors. The empirical results are discussed in sections 5.3. and 5.4. Section 5.5 summarizes the main findings.

5.2 SELECTION OF THE SAMPLE AND EXPLANATORY FACTORS

To study the co-residence phenomenon from the household head perspective, we contruct a sample by making each observation represent a household head with at least one parent being alive. We find a total of 4,233 such household heads from the 1986 survey data. For each of these household heads, the dependent variable is a dummy variable which assumes the value of 1 if he/she has at least one co-resident parent.

The explanatory factors include the attributes of the household head as well as his/her spouse and parents. To use the attributes of elderly parents as explanatory factors, it is necessary to extract information relating to both co-resident and non-co-resident parents. Due to this requirement, only a limited amount of information about the parents of the household heads can be extracted from the IPP survey data.

We now propose a set of hypotheses to guide the selection of the explanatory factors.

5.2.1 Hypothesis 1: A household head's demographic characteristics help determine his/her **availability** for co-residence with elderly parents (Kojima 1990).

This hypothesis leads to the selection of the following three variables.

Male (+). This is a dummy variable assuming the value of 1 if the household head in question is male. It is quite rare for women to be heads of households due to the traditional patriarchal nature of the Japanese society. Since the households headed by females do not, for the most part, have a co-residing husband and relatively little financial resources, they are less able to support a co-residing parent. Thus, we expect that male-headed households are more likely to have a co-residing parent.

First Child (-) and **Surplus Child (-).** The former is a dummy variable assuming the value of 1 if the household head in question is the first child. The latter is a dummy variable assuming the value of 1 if the household head is a surplus child. For a female to be the first child, it is necessary that she does not have a brother(s). In the Japanese tradition, a male sibling is more important than an older sister(s) in inheriting the family line. By using the only child as the reference category, we expect these two variables to assume negative coefficients in the logit model, with the latter being more negative than the former.

Non-Native (-). This is a dummy variable assuming the value of 1 if the household head in question is non-native (residing in a prefecture that is not the prefecture of birth). This variable captures the effects of previous migration on current co-residence. Non-native individuals are considered more mobile and more exposed to modernization forces. They may also be less available for the creation and maintenance of a co-resident household. We expect the non-native household heads to have a weak propensity for having an elderly parent live with them.

5.2.2 Hypothesis 2: The **desire** of household heads to co-reside with parents is determined by the norms and values that are assigned to co-residence and/or familial relations. These factors indicate the strength of social and economic alternatives to co-residence (Kojima 1990). They may also be used to assess the household heads' 'modern' characteristics. This hypothesis leads to the selection of the following variables.

High School (-) and **Best Educated (-).** The former is a dummy variable assuming the value of 1 if the household head is a high school graduate. The latter is another dummy variable assuming the value of 1 if the household head is a college/university graduate. Higher levels of education may breakdown traditional values and norms which dictate that children should care for their elderly parents in a multi-generational family system (Mason 1992). We expect the effects of these two variables to be negative, with the latter being more negative than the former.

Family-Oriented Occupation (+) and **Professional/Security (-).** The former is a dummy variable assuming the value of 1 if the occupation of the household head in question belongs to the family-oriented category. The latter is another dummy variable assuming the value of 1 if the household head's occupation belongs to the professional/security category.

Household heads employed in family-oriented occupations generally live with family members and jointly work with them on the same premise (Kojima 1992). As a

result, they are expected to have a strong propensity for co-residence with parents. Like higher levels of education, a high occupational status is another product of modernization which should have a negative influence on an adult child's tendency to include his/her parents as household members. Many household heads in security occupations tend to live in government-owned facilities which are generally not suitable for multi-generational families. Thus, we expect the household heads in the professional/security category to have a weak tendency to co-reside with elderly parents.

5.2.3 Hypothesis 3: The employment status of the spouse of the household head also affects the decision to co-reside with parent(s).

Employment of Spouse in Family-Oriented Occupation (+). This is a dummy variable assuming the value of 1 if the spouse of the household head in question is employed in a family- oriented occupation. The occupational status of the spouse of the household head captures the effect of modernization on Japanese women. We expect there to be a large tendency for elderly parents to co-reside in households in which spouses of the household heads are employed in family-oriented work.

Working Spouse with Child (+). This is a dummy variable assuming the value of 1 if the spouse of the household head in question has a job and if there is at least one child in the household. This variable will allow us to determine whether elderly parents actually play a role in the household as home and child care providers while the housewives are working outside of the home. The effect of this variable is expected to

be positive.

5.2.4 Hypothesis 4: An elderly parent's need for help tends to increase a household head's willingness to co-reside with his/her parents.

Spouseless elderly father (+) and **Spouseless elderly mother (+).** The former is a dummy variable assuming the value of 1 if the parent of the household head in question is a spouseless male. The latter is a dummy variable assuming the value of 1 if the parent is a spouseless female. When elderly male parents become widowers, they lose the support and care provided by their female spouses. Although their financial stability would allow them to purchase this care, tradition dictates that their children are often regarded as better alternatives. As a result, we expect household heads to have a positive tendency towards including their spouseless elderly fathers in their households. With less financial resources and property rights, spouseless elderly females in the Japanese society are less able to live independently than their male counterparts. As a result, they are much more in need of a co-resident household. Also, Japanese sociologists have observed that female elderly or elderly mothers are more welcome by younger generations than male elderly. Therefore, we expect adult children to have a very strong propensity for co-residence with their spouseless elderly mothers.

Age of Father (+). This explanatory factor is represented by a set of seven variables. Using the "less than 60" age group as the reference category, the dummy variables correspond to 60-64, 65-69, 70-74, 75-79, 80-84, 85+, and unknown age, respectively.

Since the age of father is highly correlated with the age of the mother, this explanatory factor can be interpreted as a general index of the parents' increasing need for help. We expect the coefficients of the dummy variables to be positive and to increase with age.

5.2.5 Hypothesis 5: A household head's willingness to co-reside with parent is subject to the influence of cultural regions.

Stem Family Region (+). This variable is a dummy variable assuming the value of 1 if the household head in question is residing in the Tohoku and Hokuriku regions, which have been identified in other studies as regions associated with the stem family system (Kojima 1990; 1992; Martin and Tsuya 1991). (See Chapter 4 for the prefectures that comprise this region.) We expect there to be a strong co-residence propensity among the household heads residing in these areas.

Nuclear Family Region (-). This variable is a dummy variable assuming the value of 1 if the household head in question is residing on Kyushu and Shikoku islands, which have been identified as regions of nuclear family households in previous studies (Kojima 1990; 1992; Martin and Tsuya 1991). We expect a weak tendency for co-residence to exist among the household heads who reside on these islands.

5.2.6 Hypothesis 6: Due to the smallness in living space of housing units, the household heads living in metropolitan cores are less likely to co-reside with parent(s) (Martin and Tsuya 1991).

Major Metropolitan Core (-) and **Regional Metropolitan Core (-).** The former is a

dummy variable which assumes the value of 1 if the household head in question is living in the major metropolitan core areas (including the prefectures of Tokyo, Aichi and Osaka). The latter is a dummy variable assuming the value of 1 if the household head is residing in the regional metropolitan cores (including the prefectures of Miyagi, Hiroshima and Fukuoka). The effects of both variables are expected to be negative.

5.3 EMPIRICAL FINDINGS ON THE CO-RESIDENCE OF HOUSEHOLD HEADS WITH ELDERLY PARENTS

Before discussing the results of the application of the multivatiriate model, we start by characterizing the observed co-residence proportions from the household head perspective (Table 5.1: Parts 1, 2, and 3).

We learn that 19.8 percent of household heads were co-residing with their parents in 1986. As expected, the female household heads' co-residence proportion is much smaller than that of the male household heads (8.7 percent versus 21.4 percent). We also find that the co-residence proportion tends to increase with the age of household head: from less than 10 percent for young household heads (less than 30 years old) to about 40 percent for old household heads (aged 55-59 and 60+).

With respect to sibling status, the co-residence proportions for the only children (33.7 percent for males and 23.4 percent for females) are higher than those for the first children (30.9 percent for males and 10.6 for females), which are in turn much higher than those of the surplus siblings (only 9.5 percent for males and 6.9 percent for females).

Table 5.1 (Part 1): Co-residence of Japanese Household Heads with Elderly Parents, 1986

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT HOUSEHOLD HEADS (persons)			TOTAL HOUSEHOLD HEADS (persons)		
	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES
TOTAL	21.4	8.7	19.8	793	46	839	3701	532	4233
I. AGE OF HHLD HEAD									
15-24	3.5	0.0	2.1	8	0	8	228	155	383
25-29	4.7	8.0	5.1	16	4	20	340	50	390
30-34	11.4	2.5	10.8	60	1	61	526	40	566
35-39	18.3	9.6	17.6	151	7	158	827	73	900
40-44	24.9	14.3	23.8	145	9	154	583	63	646
45-49	28.7	8.0	26.9	146	4	150	508	50	558
50-54	35.1	16.3	33.1	129	7	136	368	43	411
55-59	43.3	25.8	40.9	84	8	92	194	31	225
60+	42.9	23.1	39.5	54	6	60	126	26	152
Unknown	0.0	0.0	0.0	0	0	0	1	1	2
II. SIBLING STATUS OF HHLD HEAD									
Only child	33.7	23.4	31.8	70	11	81	208	47	255
First Child	30.9	10.6	30.4	561	5	566	1815	47	1862
Surplus Child	9.5	6.9	9.0	159	30	189	1671	437	2108
Unknown	42.9	0.0	37.5	3	0	3	7	1	8
III. EDUCATION OF HHLD HEAD									
Still in School	0.0	0.0	0.0	0	0	0	79	21	100
Primary School	35.9	12.9	33.6	304	12	316	847	93	940
High School	20.0	9.5	18.7	319	20	339	1598	211	1809
College	14.6	5.9	11.2	38	10	48	260	169	429
University	13.7	8.0	13.6	121	2	123	882	25	907
Unknown	31.4	15.4	27.1	11	2	13	35	13	48
IV. OCCUPATION OF HHLD HEAD									
Family-Oriented	38.6	20.9	37.3	216	9	225	560	43	603
Free Occupations	16.2	12.5	15.8	11	1	12	68	8	76
Company Employees	20.9	22.2	20.9	71	2	73	340	9	349
Professionals	14.6	3.6	12.5	86	5	91	589	140	729
Sales/Service Employees	16.7	9.5	15.4	119	15	134	713	158	871
Security	8.4	0.0	8.4	11	0	11	131	0	131
Blue Collar	22.3	7.9	21.7	189	3	192	848	38	886
Other Work & Not Working	20.4	8.3	17.4	77	10	87	378	121	499
Unknown	17.6	6.7	15.7	13	1	14	74	15	89

Table 5.1 (Part 2): Co-residence of Japanese Household Heads with Elderly Parents, 1986

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT HOUSEHOLD HEADS (persons)			TOTAL HOUSEHOLD HEADS (persons)		
	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES
TOTAL	21.4	8.7	19.8	793	46	839	3701	532	4233
V. EXISTENCE OF CHILDREN									
Childless Household	18.6	7.7	15.9	191	26	217	1027	339	1366
Household with Child	22.5	10.4	21.7	602	20	622	2674	193	2867
VI. OCCUPATION OF SPOUSE (OF HHD)									
Family-Oriented	46.0	0.0	45.9	161	0	161	350	1	351
Other Types of Work	24.9	20.0	24.8	249	1	250	1002	5	1007
Not Working	15.5	0.0	15.5	259	0	259	1672	1	1673
Unknown	18.3	8.6	14.1	124	45	169	677	525	1202
VI. NATIVITY OF HHLD HEAD									
Non-Native	7.9	5.0	7.5	114	12	126	1443	238	1681
Native	30.0	11.6	27.8	655	33	688	2189	285	2474
Foreign Born	34.7	20.0	33.3	17	1	18	49	5	54
Unknown	35.0	0.0	29.2	7	0	7	20	4	24
VI. GENDER & MARITAL STATUS OF ELDERLY PARENTS									
Spouseless Elderly Male	21.8	2.9	19.7	62	1	63	285	35	320
Spouseless Elderly Female	35.0	23.0	33.8	545	40	585	1556	174	1730
Elderly Couple	10.0	1.6	8.8	186	5	191	1860	323	2183
VII. AGE OF FATHER									
Less than 60	5.7	0.5	4.5	34	1	35	598	189	787
60-64	12.8	4.9	12.2	58	2	60	452	41	493
65-69	14.0	4.9	13.2	61	2	63	435	41	476
70-74	24.2	7.9	22.7	146	5	151	603	63	666
75-79	26.4	13.1	25.1	143	8	151	541	61	602
80-84	30.6	22.2	29.8	133	10	143	435	45	480
85+	35.1	23.9	33.5	144	16	160	410	67	477
Unknown	32.6	8.0	30.2	74	2	76	227	25	252

Table 5.1 (Part 3): Co-residence of Japanese Household Heads with Elderly Parents, 1986

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT HOUSEHOLD HEADS (persons)			TOTAL HOUSEHOLD HEADS (persons)		
	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES	MALE	FEMALE	BOTH SEXES
TOTAL	21.4	8.7	19.8	793	46	839	3701	532	4233
VIII.AGE OF MOTHER									
Less than 60	7.8	1.4	6.5	67	3	70	858	218	1076
60-64	15.5	3.7	14.5	95	2	97	613	54	667
65-69	24.7	8.7	23.4	135	4	139	547	46	593
70-74	25.6	11.5	24.0	164	9	173	642	78	720
75-79	31.7	22.6	30.7	155	14	169	489	62	551
80-84	34.5	26.5	33.6	100	9	109	290	34	324
85+	36.1	15.2	32.9	66	5	71	183	33	216
Unknown	13.9	0.0	12.8	11	0	11	79	7	86
VI. CULTURAL REGIONS									
Stem Family Region	30.9	11.9	28.7	136	7	143	440	59	499
Nuclear Family Region	20.8	4.8	17.7	128	7	135	615	146	761
The Rest of Japan	20.0	9.8	18.9	529	32	561	2646	327	2973
VII. URBANIZATION EFFECT									
Major Metropolitan Cores	16.3	14.7	16.1	137	17	154	841	116	957
The Rest of Japan	22.9	7.0	20.9	656	29	685	2860	416	3276
Regional Metropolitan Cores	13.4	0.8	9.7	44	1	45	329	133	462
The Rest of Japan	22.2	11.3	21.1	749	45	794	3372	399	3771
Major Metropolitan Areas	18.7	10.7	17.9	354	24	378	1892	224	2116
The Rest of Japan	24.3	7.1	21.8	439	22	461	1809	308	2117
All Metropolitan Areas	17.9	7.0	16.4	398	25	423	2221	357	2578
The Rest of Japan	26.7	12.0	25.1	395	21	416	1480	175	1655

See Table 4.1 (Part 2) for definition of Major Metropolitan cores, Regional Metropolitan cores, Major Metropolitan Areas, and all Metropolitan Areas.

With respect to level of education, we find that the co-residence proportions assume three levels: very high for the heads with primary education (33.6 percent), relatively low for the heads with high school education (18.7 percent), and very low for college/university education (about 12 percent). This pattern is clear for both male and female heads.

With respect to occupation, the most salient feature is the very high co-residence proportions for the household heads in the family-oriented occupation (33.7 percent for males and 23.4 percent for females). On the other extreme are the very low co-residence proportions for the professional category (14.6 percent for males and 3.6 percent for females) and the security category (8.4 percent for males and no information for females, none of whom are classified in the occupation).

With respect to nativity status, the main contrast is between the very low co-residence proportions for the non-native category (7.9 percent for males and 5.0 percent for females) and the rather high co-residence proportions for the native category (30.0 percent for males and 11.6 percent for females). The foreign born category appears to have relatively high co-residence proportions, but we are not confident about the observed values due to the small sample size (54).

With respect to the circumstances of the spouses and children of household heads, we find that the household heads with wives employed in family oriented occupations have an extremely high co-residence proportion (46.0 percent). The household heads with children have slightly higher co-residence proportions (22.5 percent

for male heads and 10.4 percent for female heads).

With respect to the effects of the attributes of the elderly parents, we find that the co-residence proportions of household heads with spouseless mothers (35.0 percent for male heads and 23.0 percent for female heads) are higher than those of household heads with spouseless fathers (21.8 percent for male heads and 2.9 percent for female heads). These proportions are in turn, higher than those of the household heads with both parents being alive (10 percent for male heads and and 1.6 percent for female heads). We also find that the co-residence proportions tend to increase with the ages of both fathers and mothers.

With respect to the effects of cultural regions, the co-residence proportion of the stem family region (Tohoku and Hokuriku) is much higher than that of the nuclear family region (Kyushu and Shikoku): 28.7 percent versus 17.7 percent.

With respect to the effects of the smallness of living space in the housing units of metropolitan core regions, the household heads living in metropolitan cores constitute relatively low co-residence proportions: 16.1 percent in major metropolitan cores (Tokyo, Aichi and Osaka) and as low as 9.7 percent in regional metropolitan cores (Miyagi, Hiroshima and Fukuoka).

5.3.1 EMPIRICAL FINDINGS FROM THE MULTIVARIATE MODEL

The coefficients of all of the explanatory variables in the full model have the hypothesized signs, and the majority of the variables are statistically significant (Table

5.2: Parts 1, 2, 3, and 4; Table 5.3: Parts 1 and 2 is a tabulation of the co-residence proportions based on the classifications used in the model). In other words, most hypotheses are supported and none are contradicted. The full model fits the data very well (Rho-square=0.2913).

From the coefficients and t-ratios of the full model and the changes in the values of Rho-square due to the deletions of various variables from the full model, we can make the following inferences.

First, the sibling status of the household head is by far the most important determinant of the co-residence propensity. Compared to household heads who are only children, household heads who are surplus siblings are much less prone to coreside with parent. The household heads who are first children are also somewhat less prone to do so. The coefficients associated with these two sibling status' in the full model are -2.3331 (t=-12.7) and -0.5536 (t=-3.2). Their deletion from the full model results in a Rho-square decrease by as much as 0.0890 (Test 2). The post-war civil law of Japan emphasizes equality between brothers and sisters and requires that parental properties be equally divided among the siblings. However, our analysis suggests that the burden of the elderly is still more likely to fall upon the first child than the younger siblings. In other words, changes in culture are much slower than changes in legislation in Japan.

The second most important factor is the nativity status of household heads. The household heads who are non-natives are much less prone to co-residing with parent than those who are natives. In other words, the household heads who have left their

Table 5.2 (Part 1): The Estimation Results of Co-residence of Japanese Household Heads with Elderly Parents, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 1 -GENDER		TEST 2 -SIBLING STATUS		TEST 3 -EDUCATION	
	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)
Constant	-1.6921	(-5.6)	-1.5492	(-6.0)	-3.1195	(-12.1)	-2.0126	(-7.0)
I. Gender of Household Head								
Male	0.1782	(0.9)	—	—	0.7804	(4.4)	0.1783	(0.9)
II. Sibling Status of Household Head								
First Child	-0.5536	(-3.2)	-0.5315	(-3.1)	—	—	-0.5341	(-3.1)
Surplus Child	-2.3331	(-12.7)	-2.3346	(-12.7)	—	—	-2.3116	(-12.6)
III. Education of Household Head								
High School	-0.3077	(-2.8)	-0.3081	(-2.8)	-0.3331	(-3.2)	—	—
Best Educated	-0.4742	(-3.5)	-0.4739	(-3.5)	-0.3999	(-3.1)	—	—
IV. Occupation of Household Head								
Family-Oriented	0.3520	(2.5)	0.3515	(2.5)	0.3485	(2.7)	0.4023	(2.9)
Professional/Security	-0.2541	(-1.9)	-0.2499	(-1.8)	-0.1562	(-1.2)	-0.3812	(-2.9)
V. Occupation of Spouse (of HHD)								
Family-Oriented	0.5977	(3.6)	0.6190	(3.8)	0.6195	(4.1)	0.5857	(3.5)
VI. Child Care								
Working spouse with Child	0.1904	(1.7)	0.2090	(1.9)	0.2203	(2.1)	0.2119	(1.9)
VII. Nativity of Household Head								
Non-native	-1.3834	(-11.8)	-1.3812	(-11.7)	-1.3626	(-12.3)	-1.4132	(-12.1)
VIII. Gender and Marital Status of Elderly Parents								
Spouseless elderly males	0.6231	(3.4)	0.6213	(3.4)	0.5591	(3.2)	0.6608	(3.6)
Spouseless elderly females	1.3057	(11.3)	1.3054	(11.3)	1.2847	(11.9)	1.3251	(11.5)
VIV. Age of Father								
Unknown	1.1833	(4.6)	1.1882	(4.6)	0.8125	(3.3)	1.2844	(5.1)
60-64	0.8649	(3.7)	0.8703	(3.7)	0.7483	(3.2)	0.8609	(3.6)
65-69	0.9764	(4.1)	0.9833	(4.1)	0.6526	(2.8)	0.9940	(4.2)
70-74	1.4480	(6.6)	1.4530	(6.7)	1.0461	(5.0)	1.4961	(6.9)
75-79	1.4763	(6.6)	1.4767	(6.6)	0.9861	(4.6)	1.5407	(6.9)
80-84	1.5293	(6.6)	1.5318	(6.7)	1.0382	(4.7)	1.6319	(7.2)
85+	1.6445	(7.1)	1.6417	(7.1)	1.1196	(5.1)	1.7154	(7.5)
X. Cultural Regions								
Stem Family Region	0.2378	(1.7)	0.2363	(1.7)	0.1720	(1.3)	0.2564	(1.8)
Nuclear Family Region	-0.2016	(-1.5)	-0.2032	(-1.5)	-0.1410	(-1.1)	-0.2126	(-1.5)
XI. Urbanization Effect								
Major Metro. Core	-0.1274	(-1.0)	-0.1285	(-1.0)	-0.1155	(-1.0)	-0.1630	(-1.3)
Regional Metro. Core	-0.4714	(-2.4)	-0.4732	(-2.4)	-0.4857	(-2.6)	-0.5052	(-2.6)
Rho-square	0.2913		0.2911		0.2023		0.2882	
Decrease in Rho-square			0.0002		0.0890		0.0032	

Sample Size: 4233 persons.

Table 5.2 (Part 2): The Estimation Results of Co-residence of Japanese Household Heads with Elderly Parents, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 4 -OCCUPATION		TEST 5 -CHILD CARE & OCCUPATION(SP)		TEST 6 -OCCUPATION(HHD) & CHILD CARE	
	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)
Constant	-1.6921	(-5.6)	-1.6462	(-5.5)	-1.7626	(-5.9)	-1.7066	(-5.7)
I. Gender of Household Head								
Male	0.1782	(0.9)	0.1607	(0.8)	0.2934	(1.6)	0.3173	(1.7)
II. Sibling Status of Household Head								
First Child	-0.5536	(-3.2)	-0.5252	(-3.0)	-0.5539	(-3.2)	-0.5029	(-2.9)
Surplus Child	-2.3331	(-12.7)	-2.3029	(-12.5)	-2.3370	(-12.7)	-2.2871	(-12.4)
III. Education of Household Head								
High School	-0.3077	(-2.8)	-0.3663	(-3.4)	-0.2969	(-2.7)	-0.3859	(-3.6)
Best Educated	-0.4742	(-3.5)	-0.6026	(-4.7)	-0.4778	(-3.5)	-0.6582	(-5.2)
IV. Occupation of Household Head								
Family-Oriented	0.3520	(2.5)	—	—	0.5741	(4.9)	—	—
Professional/Security	-0.2541	(-1.9)	—	—	-0.2603	(-1.9)	—	—
V. Occupation of Spouse (of HHD)								
Family-Oriented	0.5977	(3.6)	0.8367	(5.8)	—	—	—	—
VI. Child Care								
Working spouse with Child	0.1904	(1.7)	0.1864	(1.7)	—	—	—	—
VII. Nativity of Household Head								
Non-native	-1.3834	(-11.8)	-1.3975	(-11.9)	-1.4166	(-12.1)	-1.4564	(-12.5)
VIII. Gender and Marital Status of Elderly Parents								
Spouseless elderly males	0.6231	(3.4)	0.6217	(3.4)	0.6312	(3.4)	0.6366	(3.5)
Spouseless elderly females	1.3057	(11.3)	1.3054	(11.4)	1.3045	(11.4)	1.2979	(11.4)
VIV. Age of Father								
Unknown	1.1833	(4.6)	1.1951	(4.7)	1.2444	(4.9)	1.3017	(5.1)
60-64	0.8649	(3.7)	0.8702	(3.7)	0.8776	(3.7)	0.8955	(3.8)
65-69	0.9764	(4.1)	0.9910	(4.2)	1.0006	(4.2)	1.0440	(4.4)
70-74	1.4480	(6.6)	1.4508	(6.7)	1.4938	(6.9)	1.5344	(7.1)
75-79	1.4763	(6.6)	1.4870	(6.7)	1.5299	(6.9)	1.5800	(7.2)
80-84	1.5293	(6.6)	1.5160	(6.6)	1.6024	(7.0)	1.6349	(7.2)
85+	1.6445	(7.1)	1.6470	(7.2)	1.7006	(7.4)	1.7539	(7.7)
X. Cultural Regions								
Stem Family Region	0.2378	(1.7)	0.2416	(1.7)	0.2555	(1.8)	0.2716	(2.0)
Nuclear Family Region	-0.2016	(-1.5)	-0.2065	(-1.5)	-0.1855	(-1.4)	-0.1643	(-1.2)
XI. Urbanization Effect								
Major Metro. Core	-0.1274	(-1.0)	-0.1331	(-1.1)	-0.1403	(-1.1)	-0.1523	(-1.2)
Regional Metro. Core	-0.4714	(-2.4)	-0.5055	(-2.6)	-0.4943	(-2.5)	-0.5672	(-2.9)
Rho-square	0.2913		0.2885		0.2881		0.2806	
Decrease in Rho-square			0.0028		0.0033		0.0107	

Sample Size: 4233 persons.

Table 5.2 (Part 3): The Estimation Results of Co-residence of Japanese Household Heads with Elderly Parents, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 7 -NATIVITY		TEST 8 -GENDER OF ELDERLY		TEST 9 -FATHER'S AGE	
	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)
Constant	-1.6921	(-5.6)	-2.1632	(-7.4)	-1.3562	(-4.7)	-0.7726	(-3.1)
I. Gender of Household Head								
Male	0.1782	(0.9)	0.1251	(0.7)	0.1556	(0.8)	0.1633	(0.9)
II. Sibling Status of Household Head								
First Child	-0.5536	(-3.2)	-0.3961	(-2.4)	-0.6009	(-3.6)	-0.4847	(-2.9)
Surplus Child	-2.3331	(-12.7)	-2.1971	(-12.4)	-2.3668	(-13.2)	-2.1531	(-12.1)
III. Education of Household Head								
High School	-0.3077	(-2.8)	-0.3509	(-3.3)	-0.3292	(-3.1)	-0.4017	(-3.7)
Best Educated	-0.4742	(-3.5)	-0.6257	(-4.8)	-0.5483	(-4.1)	-0.6108	(-4.6)
IV. Occupation of Household Head								
Family-Oriented	0.3520	(2.5)	0.3767	(2.8)	0.3413	(2.5)	0.4146	(3.0)
Professional/Security	-0.2541	(-1.9)	-0.3192	(-2.4)	-0.2675	(-2.0)	-0.1744	(-1.3)
V. Occupation of Spouse (of HHD)								
Family-Oriented	0.5977	(3.6)	0.7561	(4.7)	0.5849	(3.6)	0.7156	(4.3)
VI. Child Care								
Working spouse with Child	0.1904	(1.7)	0.2482	(2.2)	0.2168	(2.0)	0.2957	(2.6)
VII. Nativity of Household Head								
Non-native	-1.3834	(-11.8)	—	—	-1.3587	(-11.8)	-1.3937	(-12.0)
VIII. Gender and Marital Status of Elderly Parents								
Spouseless elderly males	0.6231	(3.4)	0.6036	(3.4)	—	—	0.9073	(5.0)
Spouseless elderly females	1.3057	(11.3)	1.2773	(11.3)	—	—	1.6616	(16.1)
VIV. Age of Father								
Unknown	1.1833	(4.6)	1.1148	(4.4)	2.1258	(8.8)	—	—
60-64	0.8649	(3.7)	0.9108	(3.9)	0.9413	(4.0)	—	—
65-69	0.9764	(4.1)	0.9900	(4.2)	1.1826	(5.1)	—	—
70-74	1.4480	(6.6)	1.4906	(7.0)	1.8593	(8.8)	—	—
75-79	1.4763	(6.6)	1.4821	(6.8)	2.0238	(9.5)	—	—
80-84	1.5293	(6.6)	1.5599	(6.9)	2.2040	(10.1)	—	—
85+	1.6445	(7.1)	1.6657	(7.4)	2.4704	(11.4)	—	—
X. Cultural Regions								
Stem Family Region	0.2378	(1.7)	0.4355	(3.2)	0.2863	(2.1)	0.2412	(1.7)
Nuclear Family Region	-0.2016	(-1.5)	0.0379	(0.3)	-0.2086	(-1.5)	-0.1997	(-1.5)
XI. Urbanization Effect								
Major Metro. Core	-0.1274	(-1.0)	-0.2521	(-2.1)	-0.0749	(-0.6)	-0.0893	(-0.7)
Regional Metro. Core	-0.4714	(-2.4)	-0.5546	(-2.9)	-0.4549	(-2.4)	-0.5388	(-2.8)
Rho-square	0.2913		0.2537		0.2588		0.2731	
Decrease in Rho-square			0.0377		0.0325		0.0182	

Sample Size: 4233 persons.

Table 5.2 (Part 4): The Estimation Results of Co-residence of Japanese Household Heads with Elderly Parents, 1986

EXPLANATORY VARIABLE	FULL MODEL		TEST 10 -CULTURAL REGIONS		TEST 11 -URBANIZATION EFFECT		TEST 12 BEST MODEL	
	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)	COEFFICIENT	(T)
Constant	-1.6921	(-5.6)	-1.6936	(-5.7)	-1.7487	(-5.9)	-1.6152	(-6.3)
I. Gender of Household Head								
Male	0.1782	(0.9)	0.1781	(0.9)	0.1843	(1.0)	—	—
II. Sibling Status of Household Head								
First Child	-0.5536	(-3.2)	-0.5412	(-3.1)	-0.5505	(-3.2)	-0.5195	(-3.0)
Surplus Child	-2.3331	(-12.7)	-2.3132	(-12.6)	-2.3300	(-12.7)	-2.3219	(-12.6)
III. Education of Household Head								
High School	-0.3077	(-2.8)	-0.3211	(-2.9)	-0.3208	(-2.9)	-0.3128	(-2.8)
Best Educated	-0.4742	(-3.5)	-0.4896	(-3.6)	-0.4988	(-3.7)	-0.4865	(-3.6)
IV. Occupation of Household Head								
Family-Oriented	0.3520	(2.5)	0.3434	(2.5)	0.3617	(2.6)	0.3459	(2.5)
Professional/Security	-0.2541	(-1.9)	-0.2719	(-2.0)	-0.2710	(-2.0)	-0.2611	(-1.9)
V. Occupation of Spouse (of HHD)								
Family-Oriented	0.5977	(3.6)	0.5991	(3.6)	0.6123	(3.7)	0.6151	(3.7)
VI. Child Care								
Working spouse with Child	0.1904	(1.7)	0.1942	(1.7)	0.1968	(1.7)	0.2114	(1.9)
VII. Nativity of Household Head								
Non-native	-1.3834	(-11.8)	-1.3791	(-11.9)	-1.3981	(-11.9)	-1.3685	(-11.8)
VIII. Gender and Marital Status of Elderly Parents								
Spouseless elderly males	0.6231	(3.4)	0.6371	(3.4)	0.6183	(3.3)	0.6205	(3.4)
Spouseless elderly females	1.3057	(11.3)	1.3154	(11.4)	1.2986	(11.3)	1.3031	(11.3)
VIV. Age of Father								
Unknown	1.1833	(4.6)	1.1645	(4.6)	1.2027	(4.7)	1.1839	(4.6)
60-64	0.8649	(3.7)	0.8695	(3.7)	0.8933	(3.8)	0.8726	(3.7)
65-69	0.9764	(4.1)	0.9696	(4.1)	0.9921	(4.2)	0.9711	(4.1)
70-74	1.4480	(6.6)	1.4464	(6.6)	1.4574	(6.7)	1.4505	(6.7)
75-79	1.4763	(6.6)	1.4759	(6.6)	1.4973	(6.7)	1.4698	(6.6)
80-84	1.5293	(6.6)	1.5279	(6.6)	1.5446	(6.7)	1.5198	(6.6)
85+	1.6445	(7.1)	1.6382	(7.1)	1.6632	(7.2)	1.6383	(7.1)
X. Cultural Regions								
Stem Family Region	0.2378	(1.7)	—	—	0.2222	(1.7)	0.3088	(2.3)
Nuclear Family Region	-0.2016	(-1.5)	—	—	-0.2533	(-2.0)	—	—
XI. Urbanization Effect								
Major Metro. Core	-0.1274	(-1.0)	-0.1298	(-1.1)	—	—	—	—
Regional Metro. Core	-0.4714	(-2.4)	-0.5111	(-2.7)	—	—	-0.5230	(-2.8)
Rho-square	0.2913		0.2897		0.2897		0.2905	
Decrease in Rho-square			0.0016		0.0016		0.0008	

Sample Size: 4233 persons.

Table 5.3 (Part 1): Co-residence of Japanese Household Heads with Elderly Parents, 1986: Based on the Classification Used in the Logit Model

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT HOUSEHOLD HEADS (persons)			TOTAL HOUSEHOLD HEADS (persons)		
	MALE	FEMALE	BOTH SEXE	MALE	FEMALE	BOTH SEXE	MALE	FEMALE	BOTH SEXES
TOTAL	21.4	8.7	19.8	793	46	839	3701	532	4233
I. SIBLING STATUS OF HHLD HEAD									
First Child	30.9	10.6	30.4	561	5	566	1815	47	1862
Surplus Child	9.5	6.9	9.0	159	30	189	1671	437	2108
Unknown/Only Child	34.0	22.9	31.9	73	11	84	215	48	263
II. EDUCATION OF HHLD HEAD									
Best Educated	13.0	5.6	11.9	159	12	171	1221	215	1436
High School	20.0	9.5	18.7	319	20	339	1598	211	1809
Primary School & Unknown	35.7	13.2	33.3	315	14	329	882	106	988
III. OCCUPATION OF HHLD HEAD									
Family-Oriented	38.6	20.9	37.3	216	9	225	560	43	603
Professional/Security	13.7	4.1	12.2	108	6	114	788	148	936
Other & Unknown	19.9	9.1	18.6	469	31	500	2353	341	2694
IV. OCCUPATION OF SPOUSE (OF HHD)									
Family-Oriented	46.0	0.0	45.9	161	0	161	350	1	351
Other types of work	24.9	20.0	24.8	249	1	250	1002	5	1007
Not working	15.5	0.0	15.5	259	0	259	1672	1	1673
Unknown	18.3	8.6	14.1	124	45	169	677	525	1202
V. EXISTENCE OF CHILDREN									
Childless Household	18.6	7.7	15.9	191	26	217	1027	339	1366
Household with Child	22.5	10.4	21.7	602	20	622	2674	193	2867
V. NATIVITY OF HHLD HEAD									
Non-Native	29.9	11.6	27.8	655	33	688	2189	285	2474
Unknown/Native/Foreign Born	34.8	11.1	32.1	24	1	25	69	9	78

Table 5.3 (Part 2): Co-residence of Japanese Household Heads with Elderly Parents, 1986: Based on the Classification Used in the Logit Model

PERSONAL FACTORS	CO-RESIDENCE PROPORTION (%)			CO-RESIDENT HOUSEHOLD HEADS (persons)			TOTAL HOUSEHOLD HEADS (persons)		
	MALE	FEMALE	BOTH SEXE	MALE	FEMALE	BOTH SEXE	MALE	FEMALE	BOTH SEXES
TOTAL	21.4	8.7	19.8	793	46	839	3701	532	4233
VI. GENDER & MARITAL STATUS OF ELDERLY PARENTS									
Spouseless Elderly Males	21.8	2.9	19.7	62	1	63	285	35	320
Spouseless Elderly Females	35.0	23.0	33.8	545	40	585	1556	174	1730
Elderly Couples	10.0	1.6	8.8	186	5	191	1860	323	2183
VII. AGE OF FATHER									
Less than 60	5.7	0.5	4.5	34	1	35	598	189	787
60-64	12.8	4.9	12.2	58	2	60	452	41	493
65-69	14.0	4.9	13.2	61	2	63	435	41	476
70-74	24.2	7.9	22.7	146	5	151	603	63	666
75-79	26.4	13.1	25.1	143	8	151	541	61	602
80-84	30.6	22.2	29.8	133	10	143	435	45	480
85+	35.1	23.9	33.5	144	16	160	410	67	477
Unknown	32.6	8.0	30.2	74	2	76	227	25	252
VIII. CULTURAL REGIONS									
Stem Family Region	30.9	11.9	28.7	136	7	143	440	59	499
Nuclear Family Region	20.8	4.8	17.7	128	7	135	615	146	761
The Rest of Japan	20.0	9.8	18.9	529	32	561	2646	327	2973
VIV. URBANIZATION EFFECT									
Major Metro. Cores	16.3	14.7	16.1	137	17	154	841	116	957
Regional Metro. Cores	13.4	0.8	9.7	44	1	45	329	133	462
The Rest of Japan	24.2	9.9	22.7	612	28	640	2531	283	2814

"home town" and established their own household at a distant location (across a prefectural border) are unlikely to welcome their parents as residing members of their 'new' household. The coefficient of the non-native status in the full model is -1.3834 (t=-11.8). Its deletion from the full model results in a decrease of Rho-square by 0.0377 (Test 7).

The third most important factor is the spousal status of the parents of the household heads. The household heads whose parents are spouseless are more prone to co-residing with parent. This tendency is particularly strong when the spouseless parent is a female. In the full model, the coefficient of spouseless elderly males is 0.6231 (t=3.4), and that of spouseless elderly females is as high as 1.3057 (t=11.3). The deletion of these two dummy variables from the full model results in a decrease of Rho-square by 0.0325. Consistent with the finding in Chapter 4, we find that household heads are much more willing to welcome into their households spouseless mothers than spouseless fathers. The main reason probably being that elderly females perform many more household services than elderly males.

Fourth, we find strong evidence that household heads with older parents are more prone to co-reside with parent. In the full model, coefficients of the age groups of fathers are greater for older age groups and reach a high level of 1.6445 (t=7.1) for the 85+ age group. The deletion of the age factor from the full model results in a decrease of Rho-square by 0.0182. This finding suggests that as their parents become more and more frail, household heads are more willing to accept them into their

households.

Fifth, the nature of the occupations of the household heads and their spouses and, to a lesser extent, the existence of children also have important effects on the co-residence propensities, which are strongly enhanced by the heads of spouses being employed in family-oriented occupations. We find relatively weak evidence for our assumption that household heads who have a child and a working wife are more prone to co-reside with parent. When these factors are deleted from the full model, the value of Rho-square drops by 0.0107 (Test 6).

Sixth, the level of education of household head has moderate explanatory power in the multivariate framework: the higher the education, the weaker the propensity to co-reside with parent. In the full model, the coefficients are -0.3077 (t=-2.8) for high school level and -0.4742 (t=-3.5) for college/university level. The deletion of the education factor from the full model results in a decrease of Rho-square by 0.0032 (Test 3).

Seventh, the effects of cultural regions and urbanization are rather weak in the multivariate framework, although the hypothesized contrasts are visible. The deletion of each of these factors from the full model results in a decrease of Rho-square by only 0.0016 (Tests 11 and 12).

Finally, the multicollinearity problem is not serious, except for the overlap between the gender of household head and the sibling status of household head. This indicates that most female household heads are surplus siblings. Due to this overlap, the

positive coefficient of the male variable (0.1782) in the full model is not statistically significant (t=0.9). When sibling status is deleted from the full model (Test 2), this coefficient becomes larger (0.7804) and statistically significant (t=4.4).

5.4 SUMMARY

By examining the perspective of household heads, we have shown in this chapter that co-residence propensities depend significantly on the attributes of not only household heads but also the attributes of their spouses and, more importantly, their parents.

The most important explanatory factor is the sibling status of household head. This significant finding indicates the strength of the traditional values inbred in the stem family system, despite the attempt of the post-war civil law's emphasis on equality among siblings.

We also find evidence on the selective effects of modernization. Better educated household heads are less prone to co-reside with parent. The co-residence propensities remain strong for household heads in family-oriented occupations and seem to become somewhat weaker for household heads who are professionals.

We have also clearly revealed the strong negative effects of migration on co-residence through the use of nativity status as an explanatory factor. It becomes obvious that migration in some cases can help re-unite elderly parents with their adult children. However, it is also a main contribution to the separation between the generations.

Finally, we have found clear evidence to support the assumption that household heads are more willing to co-reside with parents when their parents become less able to lead independent lives. This is demonstrated through the enhancement of co-residence propensities by parents' age. The household heads with spouseless parents are more willing to co-reside with parent, although this willingness is much stronger for mothers than for fathers. It is interesting to note that some Japanese primary schools are giving male students opportunities to learn and practice cooking skills. When they grow old, this may allow them to become better accepted members of co-resident households!?

CHAPTER 6

SUMMARY AND CONCLUSION

We examined Japanese co-residence from two separate perspectives - the elderly (aged 60+), and the household heads whose parents are still alive. We proposed hypotheses which were subsequently tested to determine which factors affect the elderly's decision to co-reside and which factors affect adult children's decision to live with their elderly parents. The main results are as follows.

From the elderly perspective, the most important factor affecting co-residence is occupation. Family-oriented types of work have a strong relation to co-resident households. Elderly females are more likely to co-reside than males but this difference is substantially reduced when their spouses are still alive. Widowhood among elderly males does not appear significant and this may be due to the lack of information pertaining to the attributes of the adult children. Increases in age also tend to increase the co-residence tendency. Better educated elderly and those who are mobile (non-native or foreign born) have a much weaker propensity to live with their children. The elderly living in the stem family region are more prone to co-reside than those living in the nuclear family region.

From the household head perspective, sibling status is the most important determinant for co-residence with elderly parents. Surplus children have a very weak

propensity for co-residence. Those adult children who are non-natives have a very weak association with a co-resident household. If elderly parents are spouseless, then co-residence with parents is very likely, especially if the parent is a mother. The older the parent, the greater the chances that the adult child will have the parent living in the household. When household heads and spouses are employed in family-oriented work, a strong co-residence tendency exists and is further intensified by the existence of children in the household. The higher the education, the lower the propensity to co-reside with parent.

For both perspectives, the effects of urbanization were not captured clearly enough. We suspect that this may be due to the inadequacy of prefectures as the units used to create these variables. Further co-residence studies can incorporate census tract data which will permit the researcher to focus on the congestion of urban areas and its effect on co-residence.

In this study, we have identified the characteristics that induce and discourage Japanese co-residence. However, to gain a deeper insight, we need to examine the attributes of those adult children and elderly who are not members of a co-resident household. We have also left room for assessing the impact of aging on the Japanese society. In order to further examine the effect of aging on Japanese household structure, we should work with a data base that uses the elderly as its unit of analysis.

We have identified many characteristics among both Japanese elderly and

their adult children that hinder the formation of co-resident families. Although we are led to believe then that the co-residence of Japanese households is decreasing with time, the strength of Japan's value system will work against making this ideal living arrangement obsolete. More research can assess the strength of Japan's value system by looking at the financial and emotional aspects of inter-generational interaction in Japan both within and across household boundaries (Martin & Tsuya 1991). This can involve the use of longitudinal information which is appropriate for any study involving aging, since aging is truly a process, and life at 60 may be very different from life at 75 (Martin 1990). Hence, changes in co-residence can indeed be detected by examining Japan's value system over an extended period of time.

Japan's social organization is different from that of any other modern nation in the world. The strong emphasis on group consciousness and human relationships within groups form the essence of social structures like the family and/or household. Furthermore, the Japanese do not avoid changes like modernization. Rather, it is Japanese nature to accept change with little resistance and to welcome and value it. Since the traditional system, manifested in group organization, has contributed to Japan's high degree of industrialization, other surface changes brought on by modernization may be considered superficial in the Japanese context. And, superficial changes tend not to have the slightest effect on the firm persistence of the basic nature and core of personal relations and group dynamics (Nakane 1985, p. 153). Although we can conclude that changes in co-residence are indeed taking place, we cannot assume that these changes

parallel Western experience.

Hence, Japanese society is indeed unique in all aspects. Often times, simple numbers that are the products of national surveys cannot capture this uniqueness. As a result, we as researchers also cannot capture the essence of what drives a society or culture to let go of or preserve certain norms. A qualitative approach may give us the opportunity to search for and observe this essence through confronting the Japanese psyche.

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