I, Sho Yoshino, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture (Master of).

It is entitled:
Social Integration of Elderly and Architecture

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Social Integration of Elderly and Architecture

A Thesis Submitted to:
The Division of Research and Advanced Studies of the University of Cincinnati in partial fulfillment of the requirement for the degree of Master of Architecture in the School of Architecture and Interior Design of the College of Design, Architecture, Art, & Planning

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Master of Architecture, University of Cincinnati. 2012
June 2012

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Abstract

In the aftermath of the Hanshin Earthquake of 1995, a phenomenon called “kodokushi” became a colossal social issue in Japan. More than 200 elderly people who were displaced by the earthquake were forced to live alone in temporary housing; thus they died alone, and sometimes committing suicide, their bodies lying undiscovered for long periods of time. On March 11, 2011, Tohoku Earthquake, the most devastating earthquake in Japanese history, struck the northern region. It is predicted that many elderly will again “kodokushi”, that is die alone. It is a pressing need to build housing for those who lost their homes in the earthquake, but it is particularly important to create housing that can socially integrate elderly into the community in order not to repeat the same mistakes of the Hanshin Earthquake. How can architecture help the elderly to become integrated into the community?

After research, a two-fold strategy became apparent for the social integration of the elderly. The first part of the strategy is the use of a mediator; combining senior housing with other programs which connecting them to the community. Secondly is the use of pleats; a building form with pleats induces integration between inside and outside.
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Introduction

Before I started to study architecture, I had three years experience as a certified care worker in Tokyo. Working closely with elderly in various situations, I realized the importance of elderly care in Japan’s ageing society. In the duration of studying architecture, because of my experience as a care worker, I became interested in humanitarian architectural design. Can design be helpful for people in need?

On March 11, 2011, the most severe earthquake in the history of Japan struck the northern parts, followed by an enormous tsunami that destroyed many cities. More than 20,000 people were killed or came up missing, and nearly 300,000 buildings were destroyed. I was especially shocked about the fact that more than half of the victims were elderly people. Even if they survived, many elderly lost their home, friends, and families. Usually, the elderly carry more memories of their home place and grasp a greater attachment to their hometown compared to the younger generations. So, they are in the depths of despair.

What can we do for the elderly who have survived thus far? How can architectural design help to recover their will to live? These are the questions I have asked myself as I became interested in the relationship between architectural design and the social integration of elderly in our society.
Problem 1: Aging Japanese Society

Even before the earthquake, the issue of population ageing was a major social issue, but now it is a major concern to society since the elderly population is increasing rapidly while the young of the population who support them is stable or even decreasing. The percent of population over 65 was 22.6% in 2010 in Japan; this is the highest percent in the world. In 2007, the baby boomers who were born during 1947 and 1949 started to retire, and Japanese society is experiencing rapid aging. It is predicted that the population of the elderly (older than 65) will be 28.7% in 2025, and will be 35.7% in 2050 (Mori 16). This means that one out of three people will be elderly in 2050. Many elderly worry about their future in this increasingly ageing society.

The graphs above, that describes the proportion Japan’s population from the youngest at the bottom to the oldest at the top, show the transition of the population. These show drastic change of the structure of society. In 1950, the baby boomers are on the bottom of the graph where its shape is a proportional pyramid. However, after 1950, along with the growth of the boomers, the shape of the pyramid transfers to an inverted triangle. In 2000, the boomers were the main bearer of elderly care, but soon they will become the people who will be cared for in 2025. The young suffers from the increase of cost and time
to take care of their parents, while the old suffers from degrading quality of care and the indifference of society toward them. Especially, the elderly people who do not have assistance from their families are in a difficult situation since they need to take care of themselves while contending with their weakened bodies in their isolated state.

The table and graph show the expected total of widow/single elderly households. It shows a rapid increase of single, elderly households in the near future; the single household will almost double from 2005 to 2025.

Along with the growth of baby boomers, the number of houses has also increased. In the 1980s, newly built houses were 11.97 million (27.3% increase), which was the greatest increase. In 1998, the number of houses built was 50.25 million, and the number of households was 44.36 million. At this point, the number of houses exceeded the number of the households. The map on the left shows the expected distribution of single households, households with elderly people
with dementia, and vacant houses in a sample community in 2015. It shows that people will live with elderly households as close neighbors.

Most of the present houses, constructed by boomers in 1970s and 1980s, however, are not designed with consideration for the elderly. These houses will not work well when the boomers become old. In order to adapt to the abrupt change in society, it is a pressing need to create a new kind of housing for the elderly.
Problem 2: Tohoku Earthquake and Its Aftermath

Statistics

The 2011 earthquake off the Pacific coast of Tohoku, also known as the 2011 Tohoku earthquake or the Great East Japan Earthquake, was a magnitude 9.0 earthquake off the coast of Japan that occurred at 14:46 JST (05:46 UTC) on Friday, March 11 2011. Its epicenter was approximately 43 miles east of the Oshika Peninsula of Tohoku. It was the most powerful known earthquake ever to have hit Japan, and one of the five most powerful earthquakes in the world since modern record keeping began in 1900. The earthquake triggered powerful tsunami waves, which reached heights of up to 133 feet in Miyako in Tohoku’s Iwate Prefecture, and which in the Sendai area travelled up to 6 miles inland. Japanese Prime Minister Naoto Kan said, “In the 65 years after the end of World War II, this is the toughest and the most difficult crisis for Japan.” The Japanese National Police Agency confirmed 15,828 deaths, 5,942 injured, and 3,760 people missing across eighteen prefectures, as well as over 125,000 buildings damaged or destroyed (Asahi Shinbun 1).

Earthquake and Poverty

The earthquake severally damaged the economy in the Tohoku region. According to Yomiuri Shinbun, between March 12 and May 13, after 106,000
people in Iwate, Miyagi, and Fukushima prefecture lost their job, they applied for unemployment allowance. This number was 2.4 times greater than applications in 2010. Therefore, about 50,000 people lost their jobs on account of the earthquake. Also, according to Searchina, 861 households applied for public assistance after the earthquake. They also state that 15 households out of 66 households who applied for public assistance in July 2011 were elderly households.

**Earthquake and Elderly**

According to Asahi Shinbun, among the 7,935 causalities who were identified, 4,398 were elderly. This is 55.4% of the causalities. The rate of elderly causalities in the Great Hanshin Earthquake was 49.6%. This high percentage of elderly causalities in Tohoku Earthquake is because many elderly could not escape from the Tsunami. Although the actual number is not announced yet, many elderly, even if they survived, were widowed (Asahi Shinbun 1).
Housing Situation of Refugees

The chart below shows the typical progression of the housing situation of refugees of the earthquake.
After the destruction of their houses by earthquake and tsunami, refugees first move to nearby emergency shelters, which are usually public schools or hotels. They usually spend less than a month in these shelters when they move to temporary houses. These temporary houses are sometimes located far away from their original house, and they are forced to move away from their community. They usually spend up to 2 years in these temporary houses, and then there are 3 main housing options open for them. If they have enough money, they can construct a new house where they used to have their house. If they have a relative who does not mind living together with them, the evacuated can move to another city to live with them. If they have neither, they move to public housing.

Right now, many elderly who lost their home are living in temporary houses. However, these houses are available for a limited time only (2 years). Moreover, their environments are not very comfortable and not designed for elderly who need care, so many of the elderly people’s health declines as they struggle with this environment. Also, public housing and the temporary houses are composed of the people from various cities, and it is hard to create a sense of community in these places. Elderly people are especially having a hard time in these places because they do not have adaptability to new environments compared to younger generations.

In the aftermath of the 1995 Great Hanshin Earthquake, the phenomenon, “Kodokushi (lonely death)” of the elderly became a major social issue. More than 200 displaced elderly in temporary houses who lived alone
died alone (sometimes committed suicide) and their bodies were found in
places undiscovered for a long period of time. The tsunami destroyed not only
houses but also communities. Communities will not be reconstructed by merely
constructing new houses. In order not to make same mistake, it is imperative to
create housing, which can socially integrate the elderly into society.
Problem 3: Kodokushi

What is Kodokushi

In the 1990s, Taichi Yoshida, the owner of a small moving company in Osaka, Japan, began noticing that many of his jobs involved people who had just died. Families of the deceased were either too squeamish to pack up for their dead relatives, or there wasn’t any family to call on. So Yoshida started a new business cleaning out the homes of the dead. Then he started noticing something else: thick, dark stains shaped like a human body, the residue of liquids excreted by a decomposing corpse. These, he learned, were kodokushi, or “lonely deaths.” Now he has seen plenty — these deaths make up 300 of the 1,500 cleaning jobs performed by his company each year. The people die alone, sprawled on the floor beside crumpled clothing and dirty dishes, tucked beneath flowery bedspreads, slouched against the wall. Months — even years — can pass before somebody notices a body. On occasion, all that’s left are bones. (Time 1)

Kodokushi is a solitary death where one dies completely alone without being taken care of or being accompanied by anybody. One’s body is often found several days or even a few months after one’s death. This phenomenon became a major social issue after the 1995
Great Hanshin Earthquake. Many displaced elderly who lost their home, died alone in temporary housing or public housing. According to Ueno Yasuhiro, an assistant professor at the Medical Department, Kobe University, the number of kodokushi amounted to 253 incidents (March 9th, 1995, May 5th, 1999). Newspapers reported on kodokushi in temporary housing 2 years after the Great Hanshin Earthquake as follows:

*Found by a Volunteer Nurse. He had been visiting the hospital for visceral disease. He bought liquor rather than food. There was a bottle of sake and two copies of his CV at his bedside. In the refrigerator there was only an apple which was distributed by the community association. It could be classed as death from starvation. (Kobe Newspaper, January 29th, 1997, Port-Island temporary housing, Minatojima-Naka-Machi)*

*“The room was littered by empty bottles of sake and liquors. Half-eaten noodle and sushi-packs were found. (Mainichi Newspaper, March 13th, 1997, Iwaoka temporary housing, Nishi-ward).*

There are two characteristics of kodokushi. The first is that males from 55 to 69 formed the majority. The number of males who died a kodokushi was 2.3 times as likely as that of females (165 males to 71 females). As to the age group, males belonging to the 55-64 age bracket occupied 44%. In the case
of females, those from the same age bracket occupied only 14%, while the highest percentage came from the 80-84 age bracket, occupying 18%. Female deaths show a natural increase as the age increases, but the deaths of males are abnormally concentrated in a group.

The second is alcohol related problems. Prof. Ueno pointed out that the cause of kodokushi in males who have liver disease amounted to 36%, heart disease to 35%, and cerebrovascular disease to 15%. Of the hepatic cases, 68.4% were considered to be related to alcohol. Also 44.7% of the hepatic-caused deaths had a medical record of chronic excessive alcohol consumption or alcoholic addiction (Shiozaki 8). After the Great Hanshin earthquake, it is reported that many people became alcoholic. They lost their tie to society and motivation to live. In order to mitigate their loneliness in temporary housing, they often consume an excessive amount of alcohol. When an alcoholic habit is combined with aging, the health of the elderly becomes a serious issue.
Social Background

Japanese elders, as elders in other countries, would like to stay at home as long as they can, and avoid moving into senior care facilities. However, this creates a problem of social isolation for them. Due to the collapse of the conventional family system and the weakened networks to their local community, it may have caused the serious social problem of Kodokushi.

Based on the results of the World Value Surveys conducted by the Organization for Economic Cooperation and Development (OECD), which asked respondents about their contact with other people in their normal daily lives, Japan was one of the most “lonely” countries. People in Japan had the least communication with friends, work colleagues and other acquaintances in places of worship, and in sports and cultural associations in their everyday life.

It is important to ensure that elders can age in place at their own houses, however, the society should re-visit this concept and ask, “why do people like to remain in their own homes when they age?” The answer is not just the attachment to their houses, but to maintain casual and continuum socializations within their familiar community. The social phenomenon of “Kodokushi” may be teaching us to challenge a shift in our thinking from individual focused to a community-based approach (Thomas 1).
How does an earthquake make the Kodokushi occur frequently?

1) Earthquakes destroy the community

Earthquakes destroy not only buildings but also the community. Buildings can be rebuilt, but a destroyed community cannot be restored by merely rebuilding the buildings.

2) Earthquakes force relocation

People who lose their home are often forced to relocate to temporary housing far from their home. By doing so, people lose ties to their community.

3) Earthquake create unemployment

As mentioned before, earthquakes severely damage the economy, and may create unemployment. Unemployed people lose their link to society, and tend to retire into inactivity.
4) Earthquakes produce widows

In many cases, especially for men, spouses are the major link to the community. By losing the spouse, people tend to be isolated from the community.

Causes and Measures

Tokuko Sasaki wrote a book about kodokushi, Hitori Darenimo Mitorarezu, where she concluded that it is impossible to completely prevent kodokushi. In order to prevent kodokushi, it is necessary to solve all the causes behind kodokushi, but the causes behind kodokushi are just too many, thus making it difficult to completely solve kodokushi. The examples of causes are: aging society, increase of single households, urbanization, individualization of the society, increase of divorced and unmarried people, declining birthrate, unemployment, declining health by aging, mental diseases, dementia, alcoholism, depression, disrupted families, and poverty. However, Sasaki states, looking from a different angle, “One can say that the cause of kodokushi is just loneliness and isolation.” And, in order not to make people lonely and isolated, Sasaki states that creating relationships with people and communities is important. Sasaki admits that this is a stopgap measure and not a fundamental resolution, but she argues, “You have to lower your body temperature if you have a high fever, no matter what are the causes.” (Sasaki 226)

One of the suggestions from Sasaki is to become good at asking for help. People, especially Japanese people, tend to hesitate to ask for help because
they know that there are conditions to asking for help. They all know that no one will help them if they did not do anything for others beforehand. So, Sasaki suggests contributing to the community as soon as possible. By contributing to others, one can acquire the help from others relatively easily, and also one feels less hesitant to ask for help (Sasaki 231).

William Ronald Dodds Fairbairn, a Scottish psychiatrist, described a theory of development based on a maturational sequence of relationships throughout life, from infantile dependence to “mature dependence.” His theory is unique among other psychiatrists who define theory of development simply as transition from dependency to independency.
Research 1: Quality of Life in Old Age

In order to design new housing for the elderly, what should be the goal of this housing? What guideline should be used to assess if the new housing design is successful or not? “Quality of life” can be one of the indicators to use.

The term “quality of life” is used to evaluate the general well being of individuals and societies. The term is used in a wide range of contexts, including the fields of international development, healthcare, and politics. Quality of life should not be confused with the concept of standard of living, which is based primarily on income. Instead, standard indicators of the quality of life include not only wealth and employment, but also the built environment, physical and mental health, education, recreation and leisure time, and social belonging.

The American social gerontological tradition, which emerged during the post war period, focused more specifically on the subjective experience of later life. A core concept was life satisfaction, developed as part of a disengagement theory (Cumming and Henry 1961) in the 1950s. A product of the dominant functionalist social science of the 1960s was the preoccupation with the measurement of life satisfaction and subsequently “quality of life” in American gerontological research, particularly clinical gerontology. This focus on the measurement of quality of life in older people reflects the dominant activity at
Research 1: Quality of Life in Old Age the time, which is still dominate today; the measurement of the quality of life in health and illness. Within North America this has led to a highly productive industry for researchers who study the quality of life and a subject that is now a global phenomenon.

So what is quality of life? Beverley Hughes lists eight key domains relevant to quality of life of older people:

1) Subjective Satisfaction Factors
   The most important domain of quality of life, if there is one, must be the overall satisfaction an individual has with life. This is a central part of the research done in the US over last forty years. The methods used to assess subjective satisfaction, however, have come under close scrutiny over the years and there remains a considerable debate about what is being measured.

2) Physical Environment Factors
   The standard of the physical environment has been a significant factor in quality of life research, and includes occupancy levels, the presence or absence of basic amenities such as indoor WCs and hot running water, the presence of central heating in some or all rooms, as well as the general quality of the condition or state of disrepair of the building. It is noticeable how indicators of the physical environment have changed over the last fifty years, reflecting the relative improvement of housing stock since the 1950s. Similarly, the physical environment of institutional facilities such as nursing or residential homes have
altered as seen by the proportion of single or multiple occupancy rooms, the nature of the communal rooms, access for people with disabilities, and again the physical condition of the building. The physical proximity of both housing and institutional facilities has always been seen as significant. But increasing control over the physical environment has become an important standard of the quality of physical environments, reflecting once again the relative values of policy makers and society over time.

3) Social Environmental Factors

Family and social support networks have remained fundamental aspects of the social environment from the early community studies to the current day. This reflects not only the importance of family and social networks in our social structure, but also the policy maker’s preoccupation with community care. Apart from the family and social networks, the level of recreational activity and social participation (including paid and unpaid work), and the availability of formal and informal services, have been widely accepted as important indicators of the quality of the social environment.

4) Socio-economic Factors

Given the hegemony of the globalized consumer culture and the response of individuals to that culture, income and wealth are seen as key factors influencing quality of life. In absolute terms, the list of basic essentials of everyday life is increasing. Adequate cover, nutrition and warmth are taken
for granted. Inequalities in the overall standard of living continue to dominate academic and political debate. Relative poverty and relative deprivation remain important factors in a person’s quality of life.

5) Cultural Factors

The social sciences tend to recognize the presence of cultural differences resulting from the social status attributed to an individual’s age, gender, class position, ethnic background or religious preference. When conceptualizing quality of life, these factors are frequently treated as homogeneous but the reality is that there is often as much individual difference within social or cultural groups as there is between different social or cultural groups.

6) Health Status Factors

Later life is often characterized by sickness. It is also, almost by definition, about the only certainty in life, that is, death. It is, therefore, not surprising that the quality of the monitoring of the health status of older people as treated by geriatricians, as a very important factor in quality of life. Physical well-being, functional ability, and mental health have all been shown to be associated with quality of life.

7) Personality Factors

An individual’s personality and psychological make-up are often
associated directly with mental health but also function indirectly to influence quality of life. Studies have investigated quality of life in terms of psychological well-being, morale, life satisfaction, and happiness. But perhaps the most important personality factor to quality of life is a person’s sense of self and personal identity.

8) Personal Autonomy Factors

Linked to personality factors, but dependent also on social and physical environments are personal autonomy factors such as the ability to make one’s own choices, the ability to exercise control, and the ability to control or negotiate one’s own physical or social environment.

Not all of these factors have architectural implications, but some do. For example, cultural factors can be fulfilled by a design based on research of the culture of the users. Health factors can be fulfilled by a design that includes health care programs or proximity to exercise opportunities. In the field of architecture, people discuss physical environmental factors, and they created designs as universal design or barrier-free design. However, other factors are often dismissed or neglected. It is impossible to improve the quality of life as a whole by merely working on one of the factors. In my thesis research, I am especially interested in the third factor, social environmental factors, and how architecture can affect it.
Research 2: Environment and Identity in Old Age

Does where you are affect who you are? If so, does this relationship change in later life? This section looks at the significance of location in the everyday lives of older people by considering conceptual understandings of place and of what it is that fosters the sense of attachment to place.

Sense of Place

We believe that where an older person lives is an essential element in their quality of life and not merely a “setting” within which the life is lived. Laws (1997) and Dixon and Durrheim (2000) are among the many geographers and environmental psychologists who subscribe to the interactivity of persona and place: place being seen as important in allowing people to create and sustain a sense of self. People may want and need to be in different kinds of places at different periods in their lives. In an ideal world, each of them would be at “the right place” at “the right time”. But the appropriateness of particular places for particular people is bound up with complexities of continuity and change, so that people can find themselves to be “out of place” and experiencing a diminished quality of life.

What do we mean by “a sense of place”? It is a concept that has been discussed in many disciplines; social science and sociology, anthropology,
geography, and architecture among them. It is clear that while many authors attest that a “sense of place” exists and is vitally important both to individuals and societies, no single definition of sense of place has emerged from these various approaches. Nevertheless, there are certain commonalities in what have been regarded as key aspects to understanding how people interact with the places where they live and work. These themes are included in the following:

1) Knowledge of Place

To have sense of place it is necessary to know it in some way. Arguably, the more intimately one knows a place, the better one’s sense of it, for better or worse. Knowledge of place is seen as related both to memory and to interpretation, and to embrace legends, myths and the “spirit of place”. Experience and stories help a place to become legible to the person and in this process knowing the name (or naming) of the place plays an important part; so too does a physical knowledge through bodily experience. Narratives of individual and group experience can help to define and explain places and embed the received cultural understandings of them.

2) Connection through Identity

Place therefore has biographical relevance. People generally forge attachments to places as part of their everyday lives and a sense of real connectedness can be made at almost any stage of life and to more than one
significant place. Yet individuals may also form attachments to places by virtue of the collective identity or history of groups with which they closely identify (such as religious or cultural group). Both individual and collective responses to such culturally significant places can include emotional and spiritual attachments to them in people who personally know them very little or not at all. But while a person might claim a strong attachment to such a place, it could be argued that lack of personal knowledge and familiarity produces a “real” attachment to a place that is “imagined”.

3) Consequences of Loss of Places

Because people live always in time and place, and because of their intimate connections with specific places, loss of place is seen as a serious disadvantage. Homelessness and rootlessness are related to social alienation and exclusion and to losing the sense of one’s past. This argument has been
applied both to individuals and to displaced groups, where loss of place may also imply the loss of cultural heritage and community cohesion.

4) Mechanisms of Attachment

Place attachment, an outcome of knowledge and connection, and we would argue, an aspect of identity, has been defined as an affective bond between people and place setting (Tuan, 1974). The interdisciplinary nature of interest in person/place relationships is evident in the range of analytical frameworks that have been used to describe how people form and maintain attachments to places. These have included interpretive, interactionist, constructionist and social construction behaviors, and experiential cultural beliefs and behaviors. It is essential to the quality of life of older people that they are able to actively maintain their connections to the places where they live. Their social integration with their neighbor is the interaction to the place, so an architectural design which helps the social integration of the residents can help to maintain their interaction to the place, and therefore sustain their sense of self.

Sense of Community

What do we mean by communities? Taylor (2000) suggests that most communities can be defined by the common beliefs, economic statuses, and activities of their populations and by the common interests that tie members together; while Etzioni (1995) describes “social webs of people who
know one another as persons and have a ‘moral’ voice”. Living in the same location is not necessarily a defining characteristic of communities. Indeed religious and cultural diaspora may span continents. Characteristics that give belonging to certain communities may implicitly exclude people from others. Ratcliffe (1999) and Albhai-Brown (2000) have cited race, class, culture and economic status as such characteristics. Individuals may in fact align themselves with different groups to varying degrees depending on the context in which they find themselves. The roles and status of individuals are not static, and because they have lived for a long time, older people in particular are likely to have experienced changes in how they relate to the wider community. For many older people, this has implications on their inclusion or exclusion in the life of the community.

For some people, including many older people, the reality is that day-to-day interactions with other people, especially in person, are confined to the immediate neighborhood (if not entirely to their own home in the case of people who are housebound), and for many people, communities based on neighborhood were essential to their well being and sense of identity. Neighborhoods, as distinct from communities, are geographical areas with personal and social meaning related to the physicality of the environment. Taylor and Brower (1985) describe them as those environments most proximate to individuals’ homes in which interest and control are shared among households. The definition of where a neighborhood begins and ends is negotiable. They may include fixed elements (rivers, railway lines, main
roads), but they may also be vague or undefined. Sheila Peace states that an individual’s neighborhood can be defined as extending from their own front door to the point to which they feel they are “out of the neighborhood” – this usually means that they feel they no longer belong, or are known, or are deeply familiar with the physical environment (Peace 70).

Many countries face change brought about by globalization, environmental change, changing social structures, increasing longevity, declining birth rates, and developments in forms of communication and technologies. Yet in terms of interaction at the practical and everyday level, it is the neighborhood that continues to be the more significant point of attachment to society for most older people. The neighborhood provides a context for and a bridge between the intimacy of the dwelling place and the wider public domains of township/county/state/country. To date, neighborhoods have been relatively underemphasized in considering an optimal environment for older people, yet it is clear that as people age and may become more focused on home, the salience of the neighborhood is likely to increase.

How can an architectural design help to connect people with community? An example of an architectural component that does this is the front porch. Also, careful placement of apertures can help and enhance the residents’ connection to the community. An architectural design can sustain sense of community with shared spaces such as a communal kitchen.
Importance of Primary Group

A group in which the members have an intimate, direct, personal relationship with one another is called a primary group. The members of primary groups interact face-to-face in relationships that involve many aspects of their personalities, and these relationships are valued solely for themselves and not as a means to an end. One of the most important primary groups is the family. Other examples are a clique of workers in an office and a group of friends at a retirement community. Primary groups are of necessity small in size. It is not possible for large numbers of people to interact on a close, intimate basis. For intimacy to arise and be maintained, face-to-face contact is usually necessary, and so is the persistence of the group relationship over time. Primary groups fulfill a number of functions for their members. The following are some of the ones that relate to the elderly:

1) Primary groups help support and sustain the individual

All human beings need the emotional support and intimate companionship of others. Lowenthal and Haven (1968) found that older people who have a close friend seem to be happier and in better mental health than those who do not. The presence of close relationship is essential to personal adjustment and emotional sustenance. They serve as a buffer against the age-linked losses of retirement and widowhood.
2) Primary group function as important instruments of social control

In her study of the residents of Merrill Court, a small apartment house composed of older people who were mostly widows, Hochschild (1973) observed a pressure toward conformity. One resident named Daisy wanted to keep to herself. The group chastised her and made her feel uncomfortable about this desire. The residents felt it was their duty to try to help her be more sociable and get involved in their activities. The residents were pressured into being active and involved as well as acting “proper”. Another resident, Beatrice, like Daisy, was also considered a deviant but for a different reason. Beatrice flagrantly disregarded the group’s conventions. Everybody disapproved of her behavior and gossiped about her. This is an illustration of how groups penalize those who do not conform to its expectations.

3) Primary groups serve as havens

In such groups, people can be themselves. They do not feel that they have to be on guard or worry about the impression they make. Hochschild (1973) points out that when no younger people were around, the elderly widows of Merrill Court sang and danced without fear of what others would think. She also notes that their topics of conversation were different. When the old people were together alone, everyone was a representative of the past, and no one had to instruct or interrupt. They felt free mentally to move back a generation and speak of themselves less as grandmothers and mothers and more as sisters and children of their own deceased parents.
4) Primary groups are major link between the individual and society

All persons in modern societies must deal with large-scale formal organizations, and most family members, including the elderly, look to their relatives for assistance. The family often acts as a mediator for the elderly in their dealing with such formal organizations as hospitals, nursing homes, and the Social Security system (Shanas & Sussman, 1977).

Much has been written about the decline of primary groups and the rise of formal organizations in modern societies. While the significance of formal organizations is great, it is well documented that primary groups persist and also remain essential to modern life. Although formal organizations and primary groups have contradictory structures and different goals, they work best when they work closely together, especially in the management of the problems of the elderly (Harris 112).

In order to create an intimate primary group, an architectural design should pay extra care to the design of communal spaces that help the integration between the residents. If the residents are from same or similar age groups, it is easier for them to create an intimate primary group.
The social integration of older persons has emerged as a topic of both scientific and public concern. Indeed, perhaps because the segregation of older individuals from the societal mainstream was so obvious to many analyses, gerontology echoed sociology in giving social integration and isolation of older persons a place of prominence. This century has seen dramatic changes that present unique challenges to staying socially integrated during the second half of life. Early retirement, increased propensity to live alone after divorce or widowhood, geographic mobility of offspring, and – in the baby boomer generation who are now growing old – smaller family sizes, create a large group of older persons for whom social integration is a task to be accomplished, rather than a given.

What is Social Integration?

Research literature suggests basic uses of the expression “social integration.” One is commonly employed in the study of social networks, where social integration is a technical term indicating the number of interpersonal ties an individual has (for example, the number of members of his or her social network). Persons with more social ties (and, in some definitions, organizational
memberships) are considered to be more “socially integrated” (Lee & Whitbeck, 1987). Although this is a reasonable usage, the concept seems to have a substantially broader meaning. Karl Pillemer defines that “social integration” means the entire set of an individual’s connections to others in his or her environment (Pillemer 8). In contrast to the narrow definition just described, he employs social integration in a more general sociological sense to refer to both participation in meaningful roles and the network of social contacts. At the other end of the spectrum is social isolation, or the lack of significant relationships with kin, neighbors, coworkers, and friends, and of fulfilling roles.

Pillemer’s definition is consistent with two well-articulated analyses of the concept of integration, both of which focus on the term embeddedness. In Booth, Edwards, and Johnson’s framework, a key component of social integration involves “the degree to which an individual is embedded in a broader network of social relations.” As such, integration “involves the formation and maintenance of a set of relations in which a person gives and receives affective support and social approval. To say an individual is highly integrated in this sense requires the existence of a social network of ties. Most proximate among these are friendships and affiliations with community organizations, particularly those in which there is face-to-face interaction and a process of identification has taken place” (Booth 209). Pillemer’s definition is also consistent with Barrera’s (1986) formulation of social embeddedness, which he defines as “the connections that individuals have to significant others in their social environments” (Barrera 415). Such social connectedness is key
to a psychological sense of community. Components of social embeddedness in Barrera’s conceptualization include key social ties like marriage, participation in organizations, and contact with friends and family. Pillemer’s broad view of social integration include these aspects of social embeddedness, as well as the social support functions that are supplied by network members.

Problems

The path to a stable and satisfying set of social relationships is not always smooth. As older adults move through their life course, they experience critical transitions that can make them vulnerable to threats to social integration. Although such transitions can under certain circumstances also enhance integration, social relationships may be negatively affected in a number of ways.

First, owing to changes in occupational and educational status, some children and other relatives may be widely dispersed. This geographic mobility can be problematic, because the major factor in determining the frequency of contact with kin is physical proximity. Numerous studies have found that intergenerational contact is greatly affected by geographical distance between households, with more distant children interacting less often with parents. A similar pattern has been found in relationships with grandchildren. To be sure, research has established that few older people are totally isolated from kin. However, some older persons – particularly those in areas with heavy out-migration of the young – lack networks of emotionally and instrumentally
supportive family relationships.

Second, compounding the problem of geographical distance from potential supporters is the loss of network members through death. The transition to widowhood is particularly stressful, both immediately following the spouse’s death and in the long term. Research indicates that low morale and loneliness are common in the years following a spouse’s death (Lichenstein et al., 1996). Other long-term intimate relationships – with friends, siblings, and other kin – are also likely to be lost in later life. If no replacement is found for these important ties, isolation and psychological distress can result (Arbuckle & de Vries 1995).

Third, declining health is another transition that can reduce social integration. The risk of chronic disease increases dramatically with age. Although many people are living longer and healthier than ever before, it is estimated that approximately 86 percent of persons over age 64 have at least one chronic illness, and that one in five requires some assistance with activities of daily living. The greater likelihood of chronic impairment, with its accompanying limitations on mobility, increases the risk of social isolation.

Fourth, the loss of work is a critical life course transition that can reduce social integration. Although retirement is a positive experience for some individuals, it nevertheless, represents an exit from a highly valued role – that of paid employee – and, in many cases, to the loss of most work relationships. If new, meaningful roles are not found, retirement can represent a serious break in social integration. Researchers are increasingly viewing retirement
as a complex process, with shifts in work, family, and community roles and expectations.

It is worth to note that lives typically reflect cumulative advantage or disadvantage. Individuals who are advantaged in one area of their lives tend to be advantaged in other social roles and relationships. For example, individuals who have (or had) rewarding careers tend also to have better incomes, larger networks of friends and social acquaintances, and greater resources to age successfully. Conversely, individuals disadvantaged in employment status, health, income, and even driving status tend to cumulate and compound one another. Take, for example, the coming development of congregate housing for seniors. Although the burgeoning new independent living, assisted care, and life care options for older people can be expected to continue, such housing and care options are only available for those who can afford to pay for them. The aging baby boomer generation will challenge current housing arrangements and may accentuate the accumulation of disadvantages in the quality of life of those already economically disadvantaged.

Implications for Intervention and Social Inventions

Although social isolation and loneliness constitute significant social problems among older people, there are no systematic strategies for addressing them. Instead, a number of programs funded by public and private sources have had varying degrees of impact on social isolation. Although
practitioners have attempted social support interventions aimed at particular segments of the older population, such efforts are not yet well developed (Pillemer 294). Developing and assessing efforts to promote social support and meaningful roles among older adults makes sense, given the weight of the evidence that social integration leads to positive outcomes for health and wellbeing.

In the United States, to some extent, federal and state governments have responded to the challenge of social isolation among older people. Funding through the Older Americans Act for senior centers is perhaps the most notable example. These centers have the goal of providing opportunities for social relationships and activity. The congregate meals program funded through the OAA, in addition to nutritional goals, also offers opportunities for socializing. Another federally funded program, the Retired Senior Volunteer Program, provides opportunities for volunteerism on a wide scale. Some communities have implemented specialized transportation services for older people, which link older individuals to social activities, volunteer opportunities, and other services (Pillemer 295).

At a community level, a range of institutional innovations as well as small-scale voluntary efforts aim at increasing the social integration of older people. Experience Corps engages older adults in community services, including tutoring and helping out in neighborhood schools. Some corporations are responding to the needs for continued productive involvement of their retirees, both through rehiring them on a part-time or temporary basis, and
by developing special programs that encourage and facilitate volunteering (Pillemer 295).

Other community level social support programs include friendly visiting and telephone reassurance projects, as well as support groups targeted toward persons suffering from a particular problem or disease. The past decade has also witnessed growth in intergenerational programs that link older people with young to engage in activities and share experiences (Pillemer 295). Karl Pillemer argues that the key task for future policies and programs is one of targeting. He states, "we are now at a stage in our knowledge where we must move beyond ‘scattershot’ interventions that seek to promote social integration among persons who are already well integrated to focus on groups with particular needs (such as women living alone, person in poor health or in institutions, isolated rural older persons)” (Pillemer 296). Carefully targeted intervention will be the most likely to produce measurable effects.
Research 4: Age-segregated Versus Age-integrated Living Arrangements

A few studies have focused on the relationship between housing arrangements and social connections. The strength of these relationships varies widely both across outcomes and in the operationalization of social integration (or social support).

Studies of the relationships between different kinds of housing arrangements for older adults and social integration have focused principally on the benefits of age-segregated versus age-integrated living arrangements.

Advocates of Age Segregated Living

One of the major advocates of age segregation is Irving Rosow. He proposed that the most viable opportunities for the integration of older people in informal groups are among their age peers. His proposal opposes specific gerontologists in that the most effective way to maintain older people’s integration, associations, and morale is to have them live in the midst of the young. Many professionals believe that residential proximity promotes integration between the generations, vitalizes the elderly, and maintains their youthfulness. However, Rosow argues that this represents a major ideological
conviction whose assumptions are tenuous (Rosow 35). According to him, age
and sex are the two most basic factors in classifying peers, people who are
socially alike. As holders of an ascribed status, the eligible members of an age-
sex group do not change in the course of life, but consist of the same cohort
of people. There is no circulation of members into and out of the category as
occurs, for example, in social classes. But the relationship between different
groups does change, strictly as a function of aging and of a group’s succession
to various age-related positions. So age groups operate as stable peer
categories within which friendships are primarily organized. Rosow believes
that sheer generational proximity does not foster social interaction. The old
are likely to become isolated in an indifferent environment of younger people
(Rosow 324). Therefore, he concludes that residential proximity should not
integrate the old and the young (Rosow 293).

Advocates of Intergenerational Integration

On the other hand, an advocate of age-integrated living is Elizaneth
Larkin. She states, “When older adults are surrounded only by their own age
peers, their relationships inevitably begin to dwindle, and loneliness looms
large. Moreover, young children need multiple role models to envision their own
aging process in a positive light” (Larkin 99).

Peter Ebner introduces the concept of “integrated living.” According to him,
“integrated living” is the idea to encourage different groups of residents
who can mutually support each other to live together. Integrative living in its
final consequence means reflecting on the complexity of our society, being on the lookout for new tendencies, and offering suitable structural solutions in housing. Integrated living is not a minority program but rather entails penetration from the macro-level into the micro-organics of our society; reducing its complexity and the barriers to “the other” where they constrain groups, and inversely, drawing boundaries where they are required. Ebenr states that integrated living paints a cheerful picture of our society. It is the utopia in which the “other” and the “alien” are seen not as a threat, but rather as a benefit, and where mono-structural concepts like race, class, or the dichotomies of sex are finally abandoned in favor of real diversity in our society (Ebenr 12).

So, what should we do?

Overall, high age-concentrated settings appear to facilitate social interaction, yet the relationship to morale or life satisfaction is mixed. It appears that the elderly can easily create their primary groups by living with same age groups. Then, these primary groups will be the link between the individual and larger society. Intergenerational programs can happen outside of their primary group, and they can help the elderly to integrate into the larger society.

Principles of Intergenerational Programs

Matthew Kaplan studied the intergenerational programs in Japan.
He states that the influence that intergenerational experiences have on senior adult participants is, for the most part, positive and far-reaching, touching upon the psychology as well as the social, economic, and community involvement dimensions of their lives (Kaplan 150). He also notes, “intergenerational programs not only provide ways for elderly people to cope with feelings of isolation from the society and to ‘recycle’ skills of elderly people, but also to enhance the integration of the community members and to pass down traditions and culture” (Kaplan 151). Through his study, he found some key points on intergenerational programs:

1) Elderly as “service provider”

Kaplan argues that in an intergenerational program in which senior adults see themselves providing a service for young people seem to have a particularly strong impact on how they view themselves and their lives. The following quotes from senior adult participants of Konodai Elementary School Intergenerational Otedama Project, for example, indicate how their contributions to the school and to the students influence their sense of life meaning and purpose.

*It’s my pleasure to take part in this kind of activity. It’s a meaning in my life.*

*This is a new discovery and pleasant occasion which gives life more*
meaning. It also makes me live more positively.

It is a great pleasure which gives me a sense of pride in contributing a little to society.

This clearly illustrates the importance, across the lifespan, of being and feeling “useful.” Notably, the “service provider” benefits as much as (and at times more than) the “service recipient.”

2) Mutual Interaction

Kaplan states that, in some cases, very little attention is paid to how intergenerational interaction can be effectively promoted. In such cases, what typically is referred to as “intergenerational interaction” is often one-way, where members of one age group present, sing or otherwise perform for the members of the other age group, and then promptly leave the (temporary) multigenerational setting in orderly fashion, with missed opportunities for structured or spontaneous interaction (Kaplan 155).

3) Natural Communication

The emphasis on “natural communication” is a major theme found in the comments of participants, administrators, and evaluators of intergenerational initiatives. Some intergenerational program administrators are exploring various strategies for stimulating a deeper level of interaction between participants
of intergenerational initiatives, such as emphasizing natural communication in a low pressure atmosphere, incorporating initial “ice-breaker” activities where possible. It is common to find organizers of intergenerational programs commenting about how fostering intergenerational communication is, and should be, a gradual process. The children and the senior adults need time to gradually warm up to each other.

4) Environmental Context

It would be all too easy in a report on intergenerational initiatives to focus on the programmatic and administrative aspects and ignore the physical environmental context in which such an initiative can occur. However, such an omission would constitute an incomplete presentation of the factors affecting the program planning process. There must be a space or facility in which people of different generations can come together in the first place.

Part of the design task for multi-use facilities is to develop spaces that can be readily used for a variety of purposes, i.e., for small and large group gatherings, active as well as passive activities, and intergenerational as well as mono-generational activities. This can be achieved by incorporating movable parts, such as sliding walls and flexible seating arrangements, into the design. It is important that the program staff and participants have some control over their environment in terms of being able to manipulate their surroundings to facilitate their comfort and the achievement of their program/activity objective.

Another design principle which is relevant for facilities that incorporate
senior adult services and child and youth services, is the creation of spaces that will support and protect people’s right to withdraw from intergenerational interaction. The existence of other parts of the facility, which are not characterized by high-energy intergenerational exchange where people can escape to find some privacy is particularly important if the facility includes residential services, such as a joint nursing home/nursery school type facility. There is nothing therapeutic or life enriching about placing people in “forced interaction” situations which lack a privacy option.

The goal of creating a “natural” or “normalized” environment in which intergenerational activities can take place freely is particularly relevant in situations involving senior adult nursing homes or group home settings in which so many aspects of behavior are typically regulated. In designing such a facility, much effort should go into figuring out how to create a non-institutional, comfortable atmosphere. Accordingly, throughout the facility one should find curtains on the windows, pictures on the walls, comfortable furniture, and warm home-like colors.
Precedent Analysis 1: Age-integrated Living/Senior Citizens’ Residence and Kindergarten

My first precedent is Senior Citizens’ Residence and Kindergarten in Thalgau, Austria, by Kadawittfeldarchitektur. Inter-generating contact between the youngest and the oldest members of their society is the driving idea of this design. The merging of a senior citizen’s home with a kindergarten offers the chance to integrate the elderly, who are isolated from their familiar context, into a new social structure.

The central theme of the concept is the activation and utilization of public space. Two independently organized buildings meet at a junction used as a common dining room. The senior residence has been organized like a small town, and offers up a variety of outdoor activities. Each of the rooms has “seating niches” which provide communal spaces along the residential passageways. The arrangement of the three parallel strips of buildings, slightly offset to one another in a north-south direction, creates an entrance terrace on the south side. A connecting element runs crossways, acting as a clasp that joins the buildings with one another. Despite its integrative approach, the contrasting forms and elaboration of the facades reveal characteristic differences between the section for the young and for the old.

The home for the elderly, with its homogeneous cladding of horizontal larch weatherboarding, rhythmic pattern of windows, and rectangular shape appears weighty, while the glass facades and sailing roofs of the children’s
kindergarten embody a sense of lightness.

This is a good example of a complex that encourages multi-generational integration. This combination of a home for the elderly and children’s kindergarten is intended to create synergies beneficial for both groups. In an age in which family structures are dissolving, both old people as well as children have opportunity to establish relationships based on affinity (Feddersen 216).
kindergarten

home for the elderly

two programs and their entrances

court yard

courtyard and circulation around
dining room as a junction

view to the court yard

seatings

seating niches in the walkway
Precedent Analysis 2: Communal Living/Solinsieme

The Solinsieme, “Factory of Living,” is a self-organized, communally financed project awarded the 2007 Age Award by the Swiss Age Foundation that represents an attractive opportunity to anyone who, at the beginning of the second half of their life, is thinking of combining their housing situation with a communal form of living. Four female friends imagined a housing form in which they would not be alone but in a shared house. One focus was reducing and minimizing individual households in favor of shared infrastructure that would enable them to be living together without impinging on their personal freedom. It is a housing situation derived from a familial form of cohabitation but without depending on traditional ties.

To realize such a project, the four initiators, all women, purchased a former embroidery factory after consulting with their architects Bruno Dorr and Armin Oswald. Over a period of 13 months of renovation and extension work, the existing fabric of the buildings from an earlier period were utilized while the later extension was replaced by a new building that served as a communicative element containing the entrance, circulation, terraces, and outdoor areas. A total of 17 flats have been created, as well as numerous spaces for communal use, which make up almost 20% of the overall floor area. These include the central communal room, called U1, with kitchen and bar in which a variety of different events take place at regular intervals, as well as two ateliers, a guest room, a general access roof terrace, a bicycle store, and
smaller utility rooms. U1 is a 710 square foot room that can be used by about forty people for public parties or internal events and is frequently used as a bar. There are neighborhood card-playing evenings, lectures, and occasionally film screenings. Nonresidents can also rent the space.

Over 90% of the residents are very happy with their flats, but they are aware that the flats do have some deficits with regard to barrier-free access in old age, which was an initial motivation for starting the project. Evidently they are confident that together they will find an appropriate solution when the time comes and the need arises (Feddersen 146).
public v.s. private
Site Analysis: Sendai, Japan

Site Description

The address of the site is 5, 3 Tyoume, Asuto Nagamachi, Tashiro-ku, Sendai-shi, Miyagi-ken, Japan, which used to be a rail yard, but is now being developed as the second center of the city of Sendai. The site is designated as a residential/commercial zone with some residential houses being built around the site. North of the site will also be developed as a residential/commercial zone someday, but for now, it contains 233 temporary houses for the refugees of the Tohoku Earthquake. There will be a park adjacent to the west side of the site. A major railway runs along the far west side of the park where there is a train station to the southwest within walking distance (800’). There is also a 6-lane major street on the east side of the site. The square footage of the site is about 6,300 square feet (96’ x 65’).
History of the Site

The site was a rail yard since the 1900s, but was closed in 1986. At the same time, the site was planned to be developed as a new city center. The development should continue until 2017.
On March 11, 2011, a 9.0 earthquake and a subsequent major tsunami hit Sendai, without causing much damage in the center. In other areas however, especially on the coastal area including Sendai Airport major damage was reported. The tsunami reportedly reached as far as Wakabayashi Ward Office, 8 kilometers (5.0 mi) from the coastline. In reports, 704 were killed, and countless more were injured and/or homeless.
Climate of the Site

Sendai has a moderate, specifically humid, subtropical (Köppen Cfa) climate with neither the very hot summers of Tokyo nor the snowbound winters of Sapporo. Winters are cool and relatively dry, with January averaging at 1.5 °C (34.7 °F). Summers are very warm when much of the year’s precipitation is delivered with a August average of 24.1 °C (75.4 °F). The city is rarely hit by typhoons, and experiences only 6 days with more than 10 centimetres (4 in) of rainfall on average. Sendai’s rainy season usually begins in late June to early July, which is later than most cities in Japan. During this time, cold winds from the Okhotsk air mass, called “Yamase”, blows, helping to depress daytime highs. Extremes range from −11.7 to +36.8 °C (11 to 98 °F).
Methodology 1: Mediator

The New Senior Housing should be small scale and built in a city in order to be best integrated into the community.

By sharing a house with people from same age group, the housing can create intimate primary group.
However, the senior housing can be isolated from its neighborhood if it is placed by itself, that is, a disconnection between the primary group and neighbors.

Therefore, we need something in between them. I call it a “Mediator.”
Elderly and the community both have their own needs.

WE WANT TO TALK TO THE YOUNG.

WE NEED PLACE TO TAKE CARE OF OUR CHILDREN.

*CHILDREN WHO ARE ON THE WAITING LIST FOR A VACANCY AT NURSERY 26,275 IN JAPAN (2010)

Mediator integrate the senior housing and the community by fulfilling both of their needs.

Integration between the elderly and the community happens in this space.
Methodology 2: Pleats

- Units are far apart
- Equal distance between the units
- Clear boundary
  → the complex is closed to the outside
- All units are the same shape

- Units are close to each other
- Various distance between units
  → Units’ relationships are close to actual human relationships
- “Pleats” makes the boundary vague
  → Chance to integrate inside and outside
- Units are varied in shape
Connected units

Open to the park
Pleats of one plane

Pleats of both planes
Design

PROGRAM
Many public spaces are dispersed among private units

a: safe
b: unit 1
c: unit 2
d: laundry room
e: unit 3
f: unit 4
g: unit 5
h: communal bath
i: elevator
j: communal kitchen
k: unit 6
l: unit 7
m: unit 8
n: mailbox room
o: unit 9
p: nursery
WALLS
Colored interior walls identify the programs, and white exterior walls unite them.
MAIN STREET, COMMUNAL FARM, AND JAPANESE GARDEN
People from varied programs interact

ROOMS AND TERRACES
Private space flows outside
WINDOWS
Sensing neighbors through them

Furniture and window placement

S for daylight, M for ventilation, L for access to terrace

I will ask you how to grow turnips.

Kenji made his sister cry again!

Naoko takes care of her plants everyday.

Yes! I came back. Let’s play chess with him!
CONSTRUCTION
Precast tilt-up concrete wall
Bibliography


