

Housing Session

Korea – Speaker

INFORMATION SOCIETY AND HOUSING CULTURE,

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1. Introduction

The information revolution will dramatically change our homes and families. Many of us may live in the same house in the 21st century, but interiors will undoubtedly be different from those of today.

We are already witnessing these radical changes in every corner of our lives. No parts of our lives have been unaffected by informatization. Since industrialization, technological development has had increasingly strong and comprehensive effects on our daily lives, and their results will become even more obvious in the next century. Electronic home appliances, such as TV, video, stereo, computer, and so on, have transformed life styles of both individuals and families. Technological developments have altered the traditional concepts about time, space, and socio-cultural order.

Today, firstly, I'd like to talk about the impact of the information revolution on housing, particularly focusing on its technical aspects. Secondly, I'll emphasize that appropriate approaches have to be taken to more clearly understand the impact of information revolution. Lastly, I'd like to share my thoughts on the ideal housing for the future.

Then, how does the age of information influence the housing culture? Answers are twofold. On the one hand, it will accelerate technological development, which is both the foundation and yardstick of informatization. On the other, it will change the system of values and the ways of life. Today, I'll give some examples of these changes and share my opinions on ways to improve Korea's housing.

The time frame for most of today's narrative is roughly from 2001 to 2020. Now, let's take a look at Korea's housing development plan during this time frame. By the year 2001, the housing distribution rate will rise up to 92.8%, thanks to intense efforts to construct a large number of small-sized houses. By the year 2010, the rate will reach 100%, and the quality of houses will also significantly improve. By the year 2020, 5-6% of GNP will be invested in housing development annually. Efforts will be made

to repair and renovate existing houses in densely-built residential areas and to supply houses that meet the needs of each social class. Demands will grow for alternative house designs, such as one-room flats, weekend houses, or houses that serve dual purposes as a home and an office.

2. Technological Impacts

There remain several prerequisites to be met to equally distribute the benefits of informatization throughout the society as a whole. Korea's housing distribution rate, the quality of utility services, and housing sizes lag far behind those of advanced countries. The information society is too often interpreted so narrowly as nothing but cyberspace, which was born with the help of the development of telecommunications technologies and equal access to information. However, it is equally important to improve the quality of housing since a true information society comes only after it arrives home where people can have first-hand experience of its benefits.

Though the housing distribution rate is planned to be pushed up to 100% by the year 2010, the actual figure will be only 81% because of single-family households and those with no blood ties. When the rate rises above the 100% mark, houses become readily available. A higher distribution rate is, therefore, essential to form a mindset that regards housing as public property.

The Korean society will go through extensive changes: the number of family members decreases; family organization and structure becomes more diverse; the portion of senior citizens among the population grows larger throughout the 2010s, and the aged society arrives in the 2020s; 80% of the labor force work 40 hours a week; and energy depletion and environmental destruction will pose technological challenges to mankind.

In fact, technologies are already in place. Architects can build 100 or more-story mega structures--as in Samsung's World Peace project for a 160-story building. They are deploying state-of-the-art technologies such as artificial intelligence and used water recycling mechanism to protect the environment. In other words, missing are not technologies, but principles on which we build our future houses.

3. New Orders in Housing Culture

How will the information age transform time, spatial, and socio-cultural order? There are three types of space: empirical, perceived, and imaginative space. In the information society, time and spatial order are different between those who can cross over the line between reality and virtuality by logging onto the cyberspace and who cannot.

What it would be like if people confirm their appointments, do their shopping, make reservations, deliver goods, meet and have fun via media without any physical contacts? Telecommuting and distance learning will eliminate the need to go to work or school. Virtual communities will be formed according to interests in different information. This will loosen the constraints of distance and offer more choices when select houses. Communications via computer networks are open 24 hours a day. In addition to the existing simultaneous communications technologies such as telephone, e-mail and file transferring store and deliver messages at any time convenient to receivers. Satellite and mobile telecommunications make possible communications anywhere and anytime, negating barriers of time and space and thus changing the conventional concept about time and space. We no longer need to go outside to see, hear, smell, or feel the gentle breeze of spring. An artificially duplicated nature will come into our homes.

The digital society will produce new rules. Patriarchal authoritarianism will be replaced by feminism which stresses reconciliation, harmony, and unity. There will be other equally dominant ideologies: symbiotic ecoism will put emphasis on environmental protection and health; and communal anarchism on the interests shared within subgroups and leisure activities.

1) Time and Spatial Order

How much will time and spatial order be changed and in what aspects? The quality of life of individuals takes on a greater importance in the future. Unlike the industrial age, when families gather around TV sets and spend time together, in the information age, each family member follows his or her own schedule, eats alone, has personal telephones, watches his or her personal TV alone, and uses his or her own PC. They'll have different jobs and hobbies and even play alone. It is predicted that an average of 4 telephone lines will be laid per house since each room will have its own separate communication line. As a result, dining, watching TV together, or having talks at home will occur only at special occasions. Homeshopping, telebanking, telemedicine, and telecommuting will reduce need for physical movement and at the same time create extra time for leisure activities as the average working hour per week decreases. Computer networks will connect your office with anywhere in the world and offer a window to a variety of cultures. Schedules are different from individual to individual, but there will be one thing in common. Extended roles of women will cause considerable change in the current time and spatial order since more and more of them will join the paid labor force. In the past, their roles were restricted to housekeeping and mothering, which

were at best supplementary. However, in the future, machines, electronic appliances, and robots will automate housework, automatically controlling indoor environment, reducing work load, and saving energies. All these systems will become more user-friendly and give an opportunity for all the family members to enjoy the benefits of information age.

An increasingly large number of families will own multiple number of houses. During workweeks, they will stay at small-sized flats or 'officetels', a combination of office and home, and during weekends, they will go to country villas and take a rest. Single-family residences will be advanced to meet specific needs of their owners. For example, they will be designed for elderly persons, singles, or students in the first place. In addition, communication devices such as TV, video, computer screen, or videophone will be united and take up smaller space. An intelligent house may recognize the mood of its resident by his or her voice and control electronic devices concealed behind the wall-size screen to help him or her relax.

Interiors are to be modified to cater to telecommuters. They have to be different when a housewife telecommutes and when a couple does. If a housewife works at home, it will be better to integrate kitchen, living room, and home office and provide a short path to outdoors.

A courtyard type of housing is effective in using small space and ensuring security and privacy of residents. The courtyard will play the same role as Korea's traditional garden did. In Korea, most apartment buildings are built looking south and are designed to minimize construction costs. As a result, though they provide convenience to each individual flat, they fail to utilize the unique merits of housing complex.

Houses are to be designed to serve residents at different age levels. Small-sized houses are no longer inhabited only by nuclear families. Residents can be youths or the elderly. Therefore, the universal design concept has to be introduced. In other words, rooms will become threshold-free, and lever-type doorknobs, furniture with height-fixing mechanism and bathtubs with handrail will be used.

2) Socio-Cultural Order

In the industrial age, education determined much of one's life. In contrast, in the information age, information management skills determine career, income, and social status, and thus change social order. In the future, stress will be put on individual aptitude for and interest in jobs rather than on public recognition. Culture will be enjoyed selectively through the internet, cable TV, or satellite broadcasts at any time convenient to viewers. A more widespread use of videotex, television,

smellavision, and robot will give added pleasures to users and alter their preferences to cultural goods.

In the industrial age, nuclear families were best positioned to meet the needs of the times. They normally consisted of a father who brought bread to home and a mother who took charge of housework, consumption, the education of children. The house was a castle for a family and a place to take a rest and to refresh the labor force. In the future, however, the needs of family members will be so diverse that they cannot be taken care of by a mother alone, who herself more and more wants to have a career. Korea's family lives are in the process of significant changes. With diversified life styles and changing value systems, celibacy has become prevalent. The tight boundary of marriageable age has been loosened. Because of career and education, an increased number of families live apart, as in the case of couples who can meet only on weekends. Single-parent families are also growing. Senior-citizens-only households will rise as the elderly account for 12.7% of the total population by the year 2020. Digitization, automation, robots, and cyber lovers are likely to loosen family ties, outdating marriages and raising the number of singles. In the meantime, family relations will be transformed. Higher-speed communications and change in the concept of distance will produce new family relations. In the industrial age, energy and time were invested mostly in the development of industries. Muscle powers were replaced by motors, and division of labor improved productivity considerably. In the digital age, though office and housework automation creates more time for leisure activities, desire for to stable homes will become stronger as people want to find their identity and unity at homes in a world where computers replace human brains, a function so far believed unique to human beings. This may send people back to homes and strengthen family ties. Families may regain their role as a mark to identify individuals. Their ties may also be solidified through family businesses. Scholars contend that though nuclear families have grown prevalent in Korea, most of them are in fact modified extended families. A family composed of three generations, they argue, is an idealistic family organization in the 21st century. This may be true. But, the ways family members make contacts with each other will be changed. They no longer need to walk or drive to each other's house. They will be able to meet and talk through videophones. Even cyber neighbors may gather together more easily than family members or neighbors living next door.

However, the conventional family organization will remain dominant well into the information society. A house is to be designed to support unity of family organizations and structures. Two-household houses-houses designed

for three generations will best fit Korea's ideal of family organization which is composed of three-generations and meet the needs of families changing in accordance with family life cycle.

A house which has inside connecting paths between the two households, separate porches, and kitchens enables each household to keep privacy and at the same time to facilitate communications. This design makes it unnecessary to move out to separate families and is in line with the conventional concept of a house, a belief that families are supposed to live at the same house generation after generation, and the house is a castle for a family.

4. Utopia or Distopia in Housing Culture

Is the future of housing culture bright or bleak? Optimism paints the future as the progress of modern civilization based on techno-economism and the fruit of modern technologies and industries. In particular, Alvin Toffler predicts that the future will be the one of deuniformity and demassification, and technologies will create a more human world, which is characterized by deindustrialization, emphasis on individuality, small-quantity production, localization and a combination of production and consumption.

Pessimism says environmental destruction and resource depletion will bring about energy and food shortages and threaten human lives by the year 2010. Rapid growth has already hit the ceiling, and its ramifications will be felt in political and social crisis.

However, the advent of the information society already proves that this bleak theory is false. Resource depletion and environmental problems have spawned new industries rather than blocked growth. A more mature information society may solve the inequalities of the agrarian and industrial ages and enhance the quality of life, if only cautions of pessimism and beliefs of optimism are well taken to make accurate predictions about and proper preparations for the future.

Some paints a rosy picture about the housing of the future: digitization, automation, robots will make our lives far more convenient; individualism, independent way of life, and the habit of eating alone will minimize the possibilities of conflict to secure resources. However, doomsayers predict that families will be dissolved, the sense of being left out will deepen, and high-tech mini-size one-room flats will become popular. Their arguments are that addicted to cyberspace, people may lose ability to get accustomed to the real society. They will try to escape from the challenging and stressful environment and become psychopaths who cannot distinguish virtuality from reality. There are other dangers, too: one's freedom in

cyberspace can shake others' morality at the fundamental level. Humanity has to be kept safe from becoming captive to less reality created by computers.

This cannot be done without metamorphosis in our paradigms, as many scholars have pointed out, to ecoism, feminism and the community spirit which prioritize the protection of humanity. In the West, cohousing and housing complex with public areas have been suggested as a method to overcome problems of the post-industrial society since they facilitate the union of families and local communities. They create a sense of being together among residents by setting boundaries. If penchants for independent life styles and individualism go extreme, they drive a wedge between people. Cyber communities will emerge as a place where distance or geography no longer hampers communications. However, living with like-minded people next door also have great merits: it provides an opportunity to save resources, to protect the environment, to realize feminism, to prevent addiction to the cyberspace, and to create a solid community.

If working areas are combined with those for play within a single-household house, family members can more easily communicate with each other, and the joys of living together with families will multiply. They can do housework or play at the same place and can help each other easily. In doing so, they share resources for housework and spend time together whether they work or play.

5. Conclusion

Family studies predict that despite the increase in the number of single-family households and nuclear families, Korea's traditional concept of a family will not be easily lost. In addition, as the life times of houses are long, houses built in the industrial age and those built in the information age will coexist and affect people's lives. As Winston Churchill once said, "Once being built, houses will affect their residents' lives." It is hoped that the houses of the future are designed to maximize the benefits of the information age, to enhance the quality of life, and to be instrumental to senior citizens and working women. They are also to become a place to nurture human relations and a tool to save natural resources to protect the ecosystem.

As an alternative to a plethora of houses built in the industrial age, I'd suggest cohousing, two-household houses and houses which combine areas for housework and play. Housing complexes are advised to have courtyard to ensure security and to enhance the sense of being together. These new house designs will help improve the quality of life and take advantage of

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the merits of living together with families. It will eventually help overcome the pessimism about the age of information and create healthy housing culture.

Housing Session

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I would like to thank the Korean-Japanese Home Economics Association for organizing this conference and providing the opportunity for us to share our insights and opinions on future housing needs in a multi-media culture. And I also express thanks to professor Hong who has given us optimistic ideas for the future housing.

First of all, I would like to comment on some of important ideas presented in professor Hong's paper and then I would like to discuss a few relevant topics.

For millions of people in today's high technological and industrialized world, "home" is merely a place to sleep, eat, and store personal belongings. An extraordinary amount of times is spent away from home. In fact, the most working people spend most of their waking time outside the home-on the job, in a classroom, shopping, eating at restaurants, enjoying different types of entertainment or simply traveling to or from work, various other places and home. However, this way of life has not always been true. History tells us that for almost all culture, home was the center of every aspect of a person's life. Until the industrial revolution, the home, even if only four walls and a roof, was a "24 hour a day hub of activity" for the family. The fire place or hearth, situated in the center of the home, was the place where the family gathered to eat, work, and share life.

It may seem surprising to think that the homes of the future may be more like those of the past than a continuation of our present homes. In a way, the home of the future will be an independent unit yet interdependent. Each home will be connected to a worldwide network of electronic communication. The personal/home computer and other electronic equipment in the process of development will bring services to the home rather than the present situation of people going to services, such as educational institutions, libraries, work places, theaters, etc. Furthermore, it will provide a new way of life.

"Media Room"

The future home of the multi-media/information society may be different than anything we can imagine: new material, new construction method,

and new technology will certainly transform the home and home life for many families. Despite the anticipated changes, many people will continue to live in the houses as we presently know them, since housing remains the same for years and years. Many people still live in houses that were built in the 18th and 19th centuries. Moreover, there are many people who prefer the classic design more than the contemporary design. Thus, since many people feel more comfortable in traditional style houses than the contemporary style, architects and builders often follow old styles in new construction.

However, even if the style of the house doesn't change much, there will still be important changes. For instance, every home, whether traditional or modern in style, an apartment or a detached house, will probably designate a room/space to be a "Media Room". As we know, many homes already have televisions, VCRs, stereo equipments, a personal computer, fax, telephones, and other electrical appliances. These items are usually connected by wires and attached to electrical outlets and antennas, and due to their size, are difficult to move. Some of the items like television, telephone, and stereo are mostly placed in the living room, while computer and fax are often located in the study. Thus, it seems practical to have particular place for these various types of media equipment. I imagine many architects and interior designers will be asked to design a place or room that will be functional, uncluttered and pleasing to the eye.

"Intelligent Home"

Things that were just a figment of the imagination or dream of the past have now materialized and, as a consequences, people can enjoy a highly technological and efficiently operated home. The capabilities of the home computer are many: regulating the heat and air conditioning, activating lights and appliances, controlling alarms to alert occupants about possible danger, such as fire, a break-in and even providing a "wake-up call" in the morning.

These electronic devices and future innovations will make our home safer, more energy efficient, and more comfortable. Electronic technology will help create better use of space and light and make our home increasingly responsive to our needs and wishes. The human voice will probably play a much bigger role in activating various electronic devices. Perhaps the door will open with nothing more than a voice. Houses may also be programmed for relaxation or entertainment when the occupants return home, such as soothing music or video scenes. An increased use of cable TV, teleshopping, routine bank transactions will save both energy, time and money for busy people.

"Working at Home"

New technology will enable more people to work at home in the future. The capabilities of personal or home computer users will improve more and more, through ordinary telephone lines, cable TV, and even satellite broadcast links. Small computers connected to telephone and television systems will enable people to exchange written information, pictures, and money(credit/debit statements instead of paper checks/cash)as well as spoken messages and recorded sounds, even at a long distance. Thus, the home itself will become the principal workplace for many people. Through the use of the computer and new technology, the home could be quite functional for clerical workers, writers, and consulting specialists(e.g., architects, lawyers, professors and doctors) could prepare documents, conduct interviews and meetings, present lectures and give examinations, with only an occasional appearance in the office, classroom, or courtroom.

However, this home-centered work environment could have a negative affect, insofar as the person could begin to feel "house-bound" or experience "cabin-feber". Some people may feel a need to have a change in the work environment and choose to work outside the home. Many travel agencies may offer fantastic options for customers who want to make fresh themselves from "cabin-feber". Nevertheless, technology will provide an option for people who choose to work at home.

It is obvious that the work-at-home era will not come overnight. Few homes or apartments built in recent years would be able to accomodate the space and need for privacy that is required for a computerized office or workplace. Even if the demand for workplace in the home becomes widespread, it will take years for architects, interior designers and builders to respond with new designs and construction.

"A Creative and Ecological House"

New information and technology may be the principal force for change in architecture and lifestyles. It will help architects think of new materials and techniques in design and construction as well as spark their imagination and creativity.

Architects are also talking about the use of modular homes for future living units. The modular home could be placed with a large structure. An apartment can be purchased at a department store and then transported to a larger, central tower which contains wiring, water pipes, and other utilities. The modular unit is transported to its new building, hoisted by crane and fitted into its space. When the owner decides to move, he/she and the apartment move to their new location together.

In the recent past, people have become more and more aware of the

environmental problems of planet earth. People are beginning to suffer from numerous pollution problems: air, water, soil and the effect on the entire ecological system. The concern for a safer and cleaner environment will continue to increase. Thus, one idea for a house in the near future may be an "ecological house". Some scholars or architects are interested in ecological architecture or designing a type of 'healthy house', a house more conducive to healthy living. Technology has already provided passive solar houses. And now, architects are applying scientific information in designing homes that reduce heating and cooling costs by harnessing prevailing winds, locating homes that capture the seasonal variation of sunlight and using insulating properties of non-traditional building materials.

In an effort to build a more energy-efficient dwelling, some architects have designed and built homes underground or within hillsides. Earth-sheltered buildings merge into the landscape and leave more space for lawns and gardens. They can be burrowed into hillsides too steep for conventional housing.

The energy crisis has added impetus to the building of earth-centered houses, because the temperature underground remains fairly constant and the earth that covers the roof and surrounds three sides of the house provides good insulation for heat and cold. This type of home uses solar energy for winter heating but the earth protects it from the effects of direct summer sun. Furthermore, it can be soundproof, even though the house is built in the noisy environment.

"Facts to Consider"

It is hard to imagine the society of the future. Thinking about the future often raises alarm and triggers our fears of the unknown. Some futurists like Alvin Toffler make positive projections about the future. Bill Gates is quite optimistic concerning the information era of the future. Certainly, it is best to be hopeful and discuss implications of media and technology regarding the future. Yet, at the same time, there are other issues to consider.

If sensors, electronic locks, and other automated devices were controlled by someone other than the occupants, is it not possible that the Cybernetic House or Computer House become like a prison?

Isolation could also be a negative by-product of a home-centered work environment. There is the possibility of a growing dependency, even over-dependency on technology. Perhaps people will begin to increase interaction time with computer and electronic devices and decrease interaction with other people. Could this not decrease the socialization of society or the dynamics of the emotional dimension of the person?

Moreover, how is the family system going to change in the future? The family system, as we know it, may undergo a drastic change or even dissolve.

On this respect, I wholeheartedly agree with professor Hong's suggestion about co-housing. Co-housing is an alternative housing concept that has been applied in Denmark. While I was in Denmark, I visited a co-housing project and saw elderly people, friends, and others sharing a home. Many residents were pleased with their way of living. This type of housing allows the occupants to care for the children and share various household chores, such as cooking, cleaning, and washing dishes in turn. It provides a climate of emotional support.

The physical design of a co-housing unit faces a courtyard and serves as a gathering place for the occupants to talk, have coffee and share concerns. Co-housing promotes an atmosphere of family-mutual concern, even though each is a single family household. This way of living could provide valuable assistance for senior citizens, working parents with young children, single family household and even extended families.