

Housing Problems after the Great Hanshin Awaji Earthquake :

Co-Housing and Rebuilding the community

Yasuzou Tanaka

Akiko Kimura

The Great Hanshin Awaji Earthquake

The M7.2 Great Hanshin Awaji earthquake of January 17, 1995 struck southern parts of Hyogo Prefecture and did widespread damage to urbanized areas. In Kobe City (pop. 1,500,000) where more than 4,000 people were killed, some 11,000 buildings were heavily damaged or destroyed (Kobe City, 2000) and the damage concentrated in inner-city areas where the population had not only decreased in the last 20 years but had also grown old and become diverse. The distribution of earthquake impacts being uneven, certain areas of Kobe City had concentrated damages and loss of housing stock. Some of these neighborhoods were home to the elderly, and especially in the western part of the bay areas they were home to significant numbers of ethnic minorities and recent immigrants from Vietnam employed in the local chemical industry

Damage in Kobe City

Number of Persons Dead	4,569
Missing	2
Injured	14,679
Damaged Houses: Total	112,925
Totally Destroyed	61,800
Half Destroyed	51,125
Fires	175

Source: Kobe City (2000)

Not only the earthquake but also sheltering and housing programs and reconstruction plans carried out by the Japanese Government and the local government, enforced the victims to move to suburban areas where temporary housing was provided. As a result, it wiped out supportive social networks established to maintain certain factors for the sustainability of the local economy and community.

Location of Public Temporary Housing in Kobe City

Ward	Number of Damaged Houses	Number of Prefabricated Houses Built
Higashinada	33,458	3,883
Nada	29,815	986
Chuou	24,826	3,796
Hyogo	23,647	654
Kita	603	5,838
Nagata	38,534	647
Suma	15,050	2,125
Tarumi	1,470	2,308
Nishi	760	8,941

Source: Nihon Jyutaku Kaigi (Japan Housing Council 1996)

The recovery process of “Misuga”(pop.5,000) in Nagata ward (pop. 250,000) where land readjustment took place after the earthquake is a typical case showing decline in population and local economy. Six years after the earthquake, the area has yet to regenerate it’s functions as a town.

Many support groups and volunteers were involved in activities to achieve better conditions in temporary housing which were mainly located in suburban areas, remote from the previous dwellings of the victims. On the contrary, those who found recovery of local areas where the victims once lived crucial for permanent housing were quite few. In Misuga, “Machi Communication” one of the few groups that recognized supporting local areas and communities as an important task, was organized by young volunteer staffs and a manager of a local company who was also a member of the community design conference. Although they themselves were not planners or architects or specialists of community design, they played a significant role in the recovery process of Misuga. Their main activities were to support the “Machizukuri Kyougikai(community design conference)” dealing with land readjustment and housing problems in Misuga.

Social Trends Before the Earthquake in Misuga

In Misuga, before the earthquake there were some attempts to regenerate the neighborhood during the 1970’s and 1980’s. Planners encouraged small factories to move into large buildings to prevent the

polluting. With the help of community organizations, they also tried to educate the residents that they were risking their lives, living in densely built prewar wooden row houses or apartments, and that there should be roads with sufficient width instead of narrow alleys in terms of “disaster mitigation”(Ono and Kimura 2000). Much of the low income housing stock in Misuga is in the form of row houses or tenement houses mainly built of seismically vulnerable wooden construction. Landowners, landlords and residents would need technical and financial advice to rebuild or up-grade these structures to be made safer. Of course, such attempts could lead to shortage of housing for lower income households but most of all no one could afford the time, money or energy to improve housing conditions in communities like these. Residents who were most likely to be living in such conditions were the elderly. Younger generations with financial ability had already moved out to the suburbs.

Population of Misuga

Year	1960	1965	1970	1975	1980	1985
Population	8,347	7,819	6,431	5,433	4,499	5,415
Number of Households	2,046	2,130	1,891	1,751	1,541	1,950

Source: Misuga Kakushudantai Renraku Kyougikai (Misuga Association of Local Organizations 1986)

Housing and Reconstruction in Misuga

Soon after the earthquake, fire broke out and spread quickly but nothing could be done because of water supply cutoff. A month later while victims were still evacuating, building was restricted (except for temporary use) in the burnt areas and two months later the local authority announced the reconstruction plan which was in this case designation of land readjustment. Victims were furious at such enforcement, and lack of housing was serious for those displaced but reluctant to seek temporary or new permanent housing located far away, having strong commitment to their neighborhoods. Something had to be done but the existent community organization *Jichikai* could not handle these issues for the chairman who was already in his seventies and other leaders were victims themselves. Under these circumstances the *Jichikai* was reorganized and was later acknowledged as a community design conference by the city, with advice from planners who were responsible for carrying out the land readjustment. The conference covered the readjustment areas only and not the entire area of Misuga. There were two conferences, one in the eastern part and another in the western part.

The Community Design Conference

The community design conference of the west side of Misuga (5th and 6th block of Mikura-dori) is said to be unusual in a way. It consisted not only of landlords but also of tenants who run companies or own factories and tenants who were merely residents but had strong commitments to their neighborhood.

Although the conference was expected to respond to the reconstruction plan with recommendations for zoning, the members of the conference thought housing was the most urgent problem and shared their views with other victims. On the other hand, the city's planning department staff and technical advisers' intention was to complete the zone planning, quickly move on to the land readjustment and then finally start thinking about housing problems. As the reconstruction plan was being carried out, those who only had tenant rights but wanted to return to the places where they had lived previously seemed to be ignored. Those who had the choice, preferred areas that provided better conditions to re-establish their everyday life or business without being disturbed by the reconstruction plans. Decline in population and the local chemical industry, of medium and small-scale enterprises was rapid and this also led to drop in consumption. Owners of grocery stores, coffee shops and small restaurants who lost their customers could no longer earn a living. The reconstruction plan seemed to neglect economic regeneration.

Population of 5th and 6th block of Mikura-dori

Year	1990	1995
Population	735	134
Number of Households	314	54
Number of People Aged 65 or Over	154 (21%)	21 (16%)

Source: Kobe City (1991), (1997)

Those who had no alternative but to stay needed support to rebuild their homes. Rebuilding for landowners with small housing sites, from 30 to 40 square meters, was another significant issue, for the land readjustment enforced landowners to give over approximately 10percent of their land to the city and contribute to the reconstruction plan. To some this was intolerable, the conference was caught between the city's construction plan and the residents' requirements. In response to this conflict the conference sought advice of an architect who was trying to help the community and a co-housing project emerged.

Support

The members of the community design conference were mainly people in their fifties and sixties, who were trying to rebuild their lives and cope with full-time jobs. They needed both technical advice and administrative support. As a response to this, the volunteer group, Machi Communication was organized in April 1996. To begin with they helped the local community carry out festivals and memorial services which provided victims with opportunities to return to their hometowns once in a while. It also helped to ease tensions among the residents who had remained and had to cope with reconstruction plans. They gradually became to provide information and interpret technical data in ways elderly residents or people unfamiliar to urban planning could understand.

As Machi Communication began to receive recognition from the local community, they volunteered to do some research to collect data to show the serious situation the community faced, to understand what

residents required and what their hopes and plans were for the area. The research met with opposition from the chairman of the conference who wanted to know who would take responsibility for the data? After some discussion, the chairman agreed to do the research on conditions that it contributed to the co-housing project. Machi Communication carried out the research working together with people who specialized in architecture and social research. It's purpose was to find out which households were eager to rebuild their homes in Mikura and whether they wanted to participate in the co-housing project. At the same time they held workshops and meetings convincing residents that co-housing was efficient for rebuilding their homes and that it would enable them to live in a cooperative way.

The Out Come of the Co-Housing Project

Nine households who had previously lived in Mikura participated in this project, seven of them were landowners of relatively small building sites and two of them had tenant rights for even smaller pieces of land. Their land was gathered into one, and by adding the space that was provided by a local company whose manager is the previously noted member of Machi Communication, a building site of approximately 450 square meters was put together. Land readjustment was useful in terms of gathering participants from different parts of the Mikura area. Seven of the households have returned and are now living in the units adjusted and designed according to their needs and affordability. One is for rent, and one is used as a restaurant by a member of the family of the owner. Also two new households moved into this area by purchasing the extra units built. However, these people were friends with one of the families who were eager to participate in the co-housing project from the beginning. Much effort was needed in putting the building site together, negotiating with city planners and the developer which was in this case the Housing and Urban Development Corporation, negotiating between participants and architects, solving financial problems and so on. In spite of all the trouble, the participants were able to establish good relationship with each other before they moved in. Machi Communication played an important role in interpreting technical matters and making discussions easy to understand so that everyone felt that they were free to speak.

The company manager who was aware that participating in the co-housing project would not be profitable, decided to use the unit they owned as a place for community-based activity. The 6 story reinforced concrete structure was named "Mikura Five", and this unit was named "Plaza Five". Although the co-housing project itself could not realize it's full intentions, (for example it could hardly reach out to the many senior victims on welfare who had no choice but public housing in remote areas) it is making a longitudinal contribution to the community. There are small groups that prepare meals for elder residents who tend to stay alone indoors. This gives them the opportunity to meet neighbors and have conversation. Some student volunteers teach how to use personal computers. Senior residents are eager to use the internet and exchange e-mail with friends and relatives. Active residents are now planning to organize a new Jichikai, they need their own community organization to keep the local society together.

Concluding Observations

Urbanized areas of Kobe City had concentrated damages, reflecting social trends in the inner-city where population density was high, and row houses or tenement houses mainly built of seismically

vulnerable wooden construction were mainly occupied by lower income households. The victims including significant numbers of elderly residents faced serious housing problems but temporary and permanent housing programs by the local government failed to meet their needs. Community recovery was crucial in areas characterized by a common experience of relative need and mutual dependence. However in areas designated of land readjustment, tenants found it difficult to return and industry moved out. With the help of voluntary groups and specialists, community organizations responded to housing problems and the reconstruction plan by carrying out the co-housing project. The intentions were to enable the victims including tenants, workers and enterprises of the local industry and the elderly to restore their everyday life. Although the outcome of co-housing it self was limited to the return of seven households, the building process was a learning experience for all the people involved and it provided the bases for continuing community-based activity.

As Urano(1995)found, problems which senior victims faced were more or less problems that any member of the society could have in common, not to mention the handicapped or foreigners in terms of adaptation to the sociocultural environment. To recognize the victims' social, cultural and historic backgrounds are essential for post-disaster housing and community recovery. Other wise consequences of resettlement itself maybe even more grievous than the impact of the disaster(Oliver-Smith,1991).

References

- Kobe City (1991) *Report of 1990 Census*.
 Kobe City (1997) *Report of 1995 Census*.
 Kobe City (2000) *Hanshin-Awaji Daishinsai Kobe Fukkoushi(Kobe Chronicle of The Great Hanshin Awaji Earthquake)* . Kobe City
 Misuga Kakushudantai Renraku Kyougikai (Misuga Association of Local Organizations 1986) *Sketches and Plans for Community Design in Misuga*.
 Nihon Jyutaku Kaigi (Japan Housing Council 1996) *Jyutaku Hakusho(Housing White Paper)*. Domesu Publications
 Oliver-Smith, A.(1991) Successes and Failures in Post-Disaster Resettlement Disasters Vol.15 No.1
 Ono, K. and A. Kimura (2000) *Hanshin-Awaji Daishinsai Hisaichiku deno Kyoudousaiken (Co-Housing after The Great Hanshin Awaji Earthquake): Jutaku* Vol.49, Japan Housing Association.
 Urano, M.(1995) *Hisaisha no Seikatsusaiken eno Doutei (The Victims' Path to Re-establishing Everyday Life)* . : Jichitaigaku Kenkyu Vol. 65, Kanagawaken Jichi Sougou Kenkyu Center.