Local identity through low-rise compact city in Japan: In search of Zushi-ness

Koichi Nagashima

The author, an architect, urban designer and planner – a graduate of Waseda University, School of Architecture, Tokyo (B.A. Architecture), Harvard University, Graduate School of Design (M.A. Architecture) and the Graduate School of Ekistics, Athens Center of Ekistics, Athens, Greece – is currently Principal Partner, AUR (Architecture-Urban Design & Research) Consultants, Tokyo, and former visiting Professor of Architecture, Waseda University. He is nationally and internationally known for the large number of architectural, landscaping and planning projects he has undertaken (for which he has received high order prizes and other distinctions), for his numerous publications, and for his teaching activities at universities in Japan, Australia and the UK. He is a member of the World Society for Ekistics and Japan correspondent of Ekistics. *The text that follows is a slightly revised and edited version of a paper presented at the international symposion on "Globalization and Local Identity," organized jointly by the World Society for Ekistics and the University of Shiga Prefecture in Hikone, Japan, 19-24 September, 2005. He was a member of the Steering Committee for this symposion together with (in alphabetical order): Takashi Doi, Haruhiko Goto, Catharine Nagashima and Koichi Tonuma.*

Background

How to create local identity for Japanese cities is a difficult issue. Especially when it comes to medium and small cities, the situation is almost tragic in that the erstwhile identities of cities have been lost dramatically in recent history. While trying to clarify the reasons behind it, I would like to contemplate how we can get out of the situation, and create cities with identity.

Low rise profiles as cityscape infrastructure

One possibility I would like to propose is of forming a low-rise configuration (one to three storeys) as the infrastructure for the cityscape of Japanese cities in the near future.

With that as a base, it would be possible to create specific city identities by re-evaluating and harnessing the local ***fudo*** (wind, soil, history and culture), and enhancing it by providing spatial planning and design involving citizen participation at a district level.

Traditional Japanese cities

Japanese cities, even Edo, the former Tokyo, with over a million residents, used to have low profiles of one to two storeys, with timber-built temples and pagodas as landmarks. These cities had the characteristics of a "garden city," with a good balance between man-made phenomena and nature, and without having clear or distinct borders between the city and the surrounding countryside (fig. 1).

Incidentally, towards the end of the Edo period and the beginning of the Meiji Restoration (1868), foreign visitors were pleasantly impressed by the city of Edo, reporting on its clean, low-rise townscape, well harmonized with trees and water bodies, describing it as a "garden city." It has even been claimed that the word "garden city" was invented there and then for the first time.

In this respect Japanese cities were different from European cities, where by and large the inherited primary landscape was of medium-height masonry apartment houses, a tradition even from the time of classic Rome, with distinct borders such as city walls, and with clear separation between the man-made city proper and the open countryside. This historic primary landscape was inherited throughout Europe.

Transformation of Japanese cities through modernization

During the process of modernization Japan tried to copy Western things. Medium-height masonry buildings were introduced abruptly in the midst of low profile cities. Thus the discontinuity of tradition led to disorder in the urban landscape.

In the 1960s, technological innovations in seismic-resistant engineering led to the abolishment of height restrictions. In 1963 the Building Standard Law was revised. Instead of an absolute height limit of 31 meters, FAR (ratio of total floor area to area of site) was introduced for controlling building volume. This in turn resulted in the drastic transformation of the landscape of large cities as developers took advantage of the excessive volume allowance framework endowed by the City Planning code (fig. 2).

Furthermore, when in 1968 urbanization promotion areas (UPA) and urbanization controlled areas (UCA) were established, UPA was generously demarcated to allow for further urbanization and economic development. The overall population density in UPA is actually rather low. As a national average, UPA has the capacity for four times its existing structural density. In other words, UPA could be reduced by careful re-demarcation for enhancing the compactness of cities without paving the way for tall buildings.

Strangely enough, so far no architects or city planners have seriously considered re-evaluating and re-developing the traditional low-rise profile of Japanese cities, to accommodate modernization, instead taking it for granted that the Western model is the only choice to be employed.

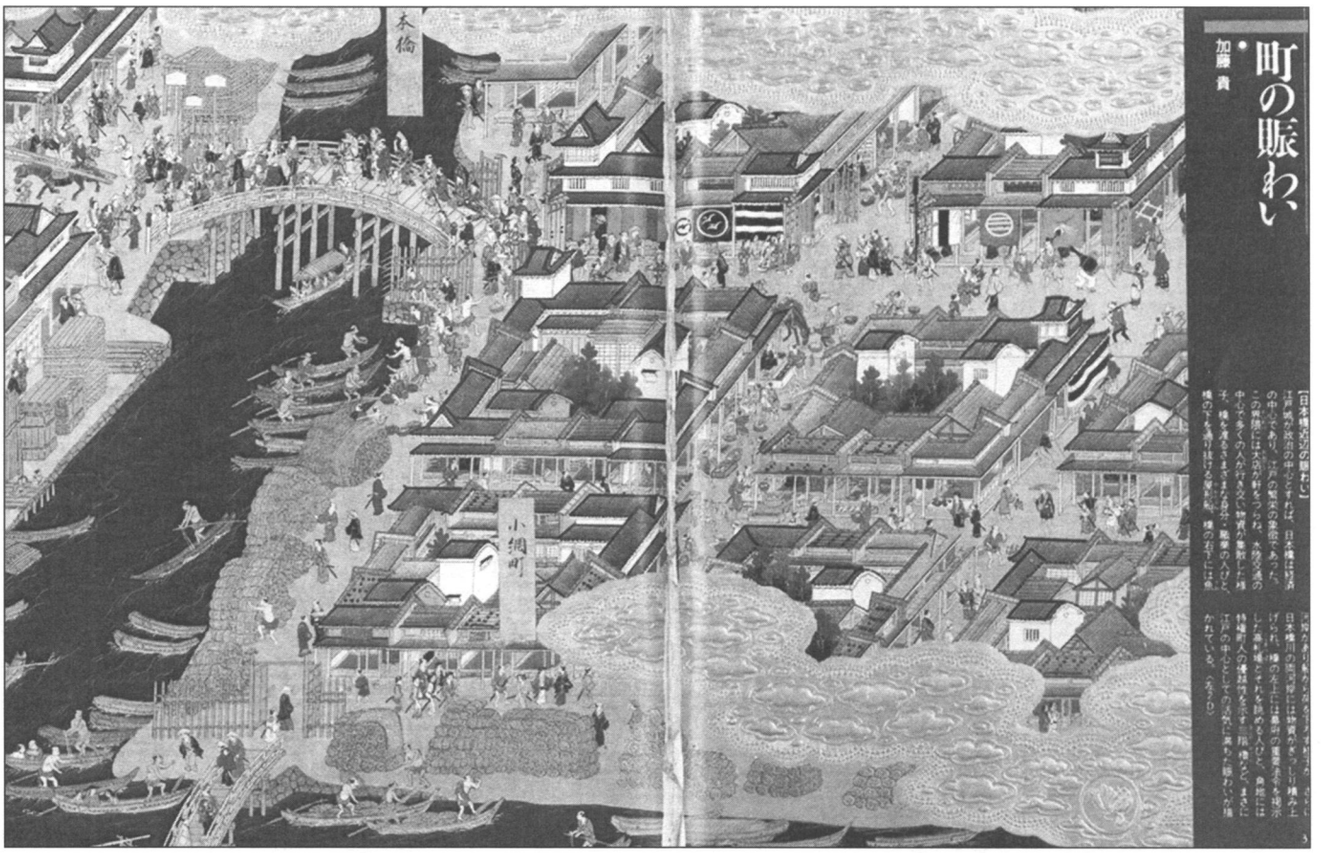


Fig. 1: Byobu-e: early 17th Century, Edo, Town Blocks.

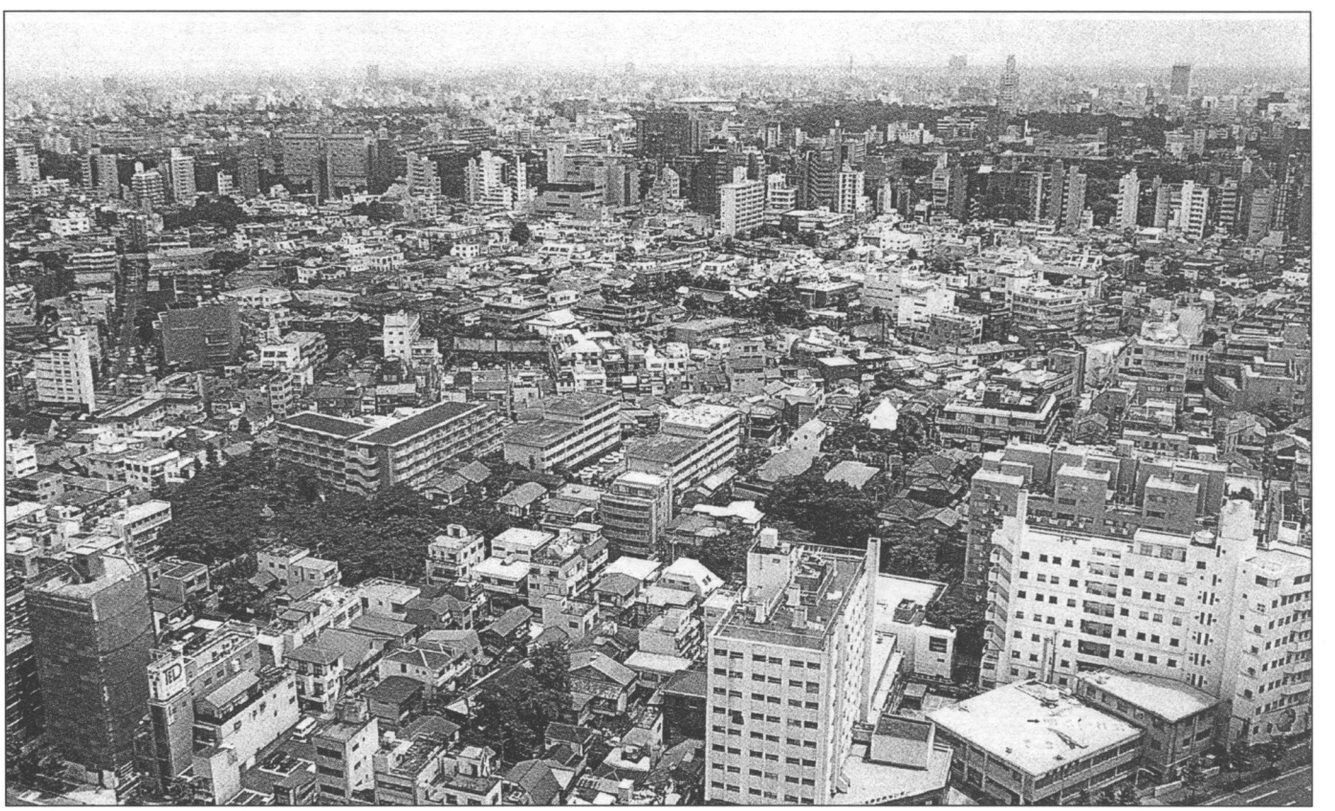


Fig. 2: View of Tokyo central area, 2003.

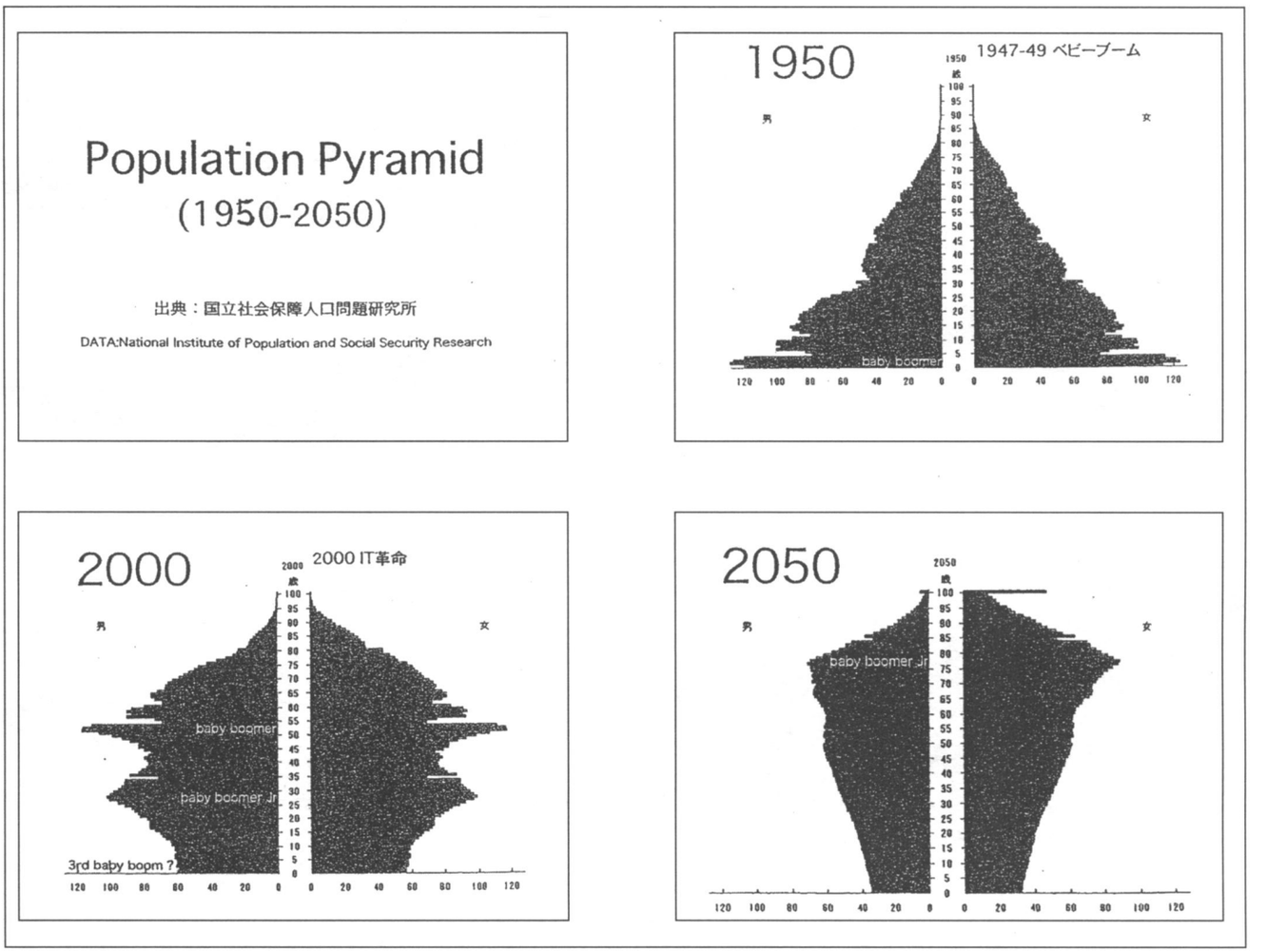


Fig. 3: Demographic Projection Chart.

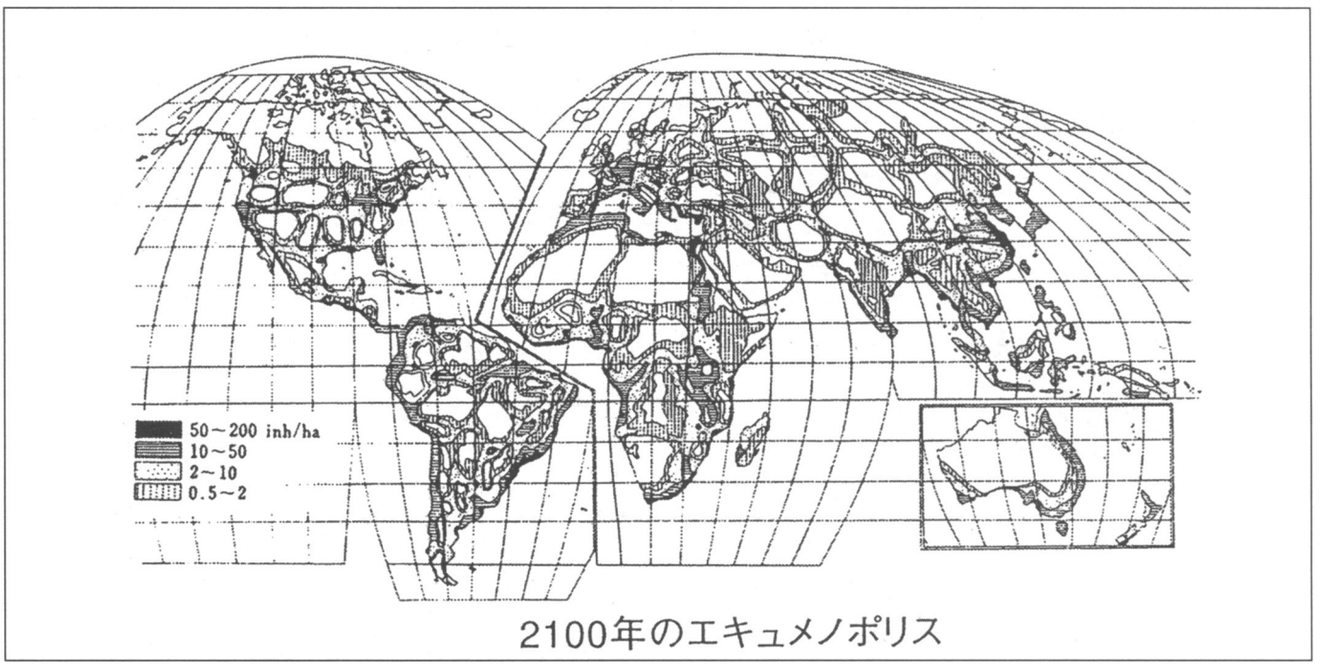


Fig. 4: Ecumenopolis (world map). (*Source:* COF Research Project, Athens Center of Ekistics).

Emergence of a new crisis and opportunities

Present-day Japanese cities are encountering new crises and new possibilities at the same time.

The population of Japan is facing an era of sharp decline, with a low birth rate, and it could be halved by the end of the century. Meanwhile economic growth of the country is tapering down (fig. 3).

The consequence would be an increase in vacant land and houses and a resulting fear of deterioration of safety, security, vitality and urban landscape. Hence the question arises as to how we can secure sustainability of cities in response to the shift from the "industrial society" to the "post-industrial society," and consequent changes in lifestyles.

Another opportunity arises in relation to the question of sustaining global ecological balance and survival of human habitat as raised by Doxiadis, which naturally leads to the concept of "Ecumenopolis," a sustainable world city with a network of megalopolises (fig. 4).

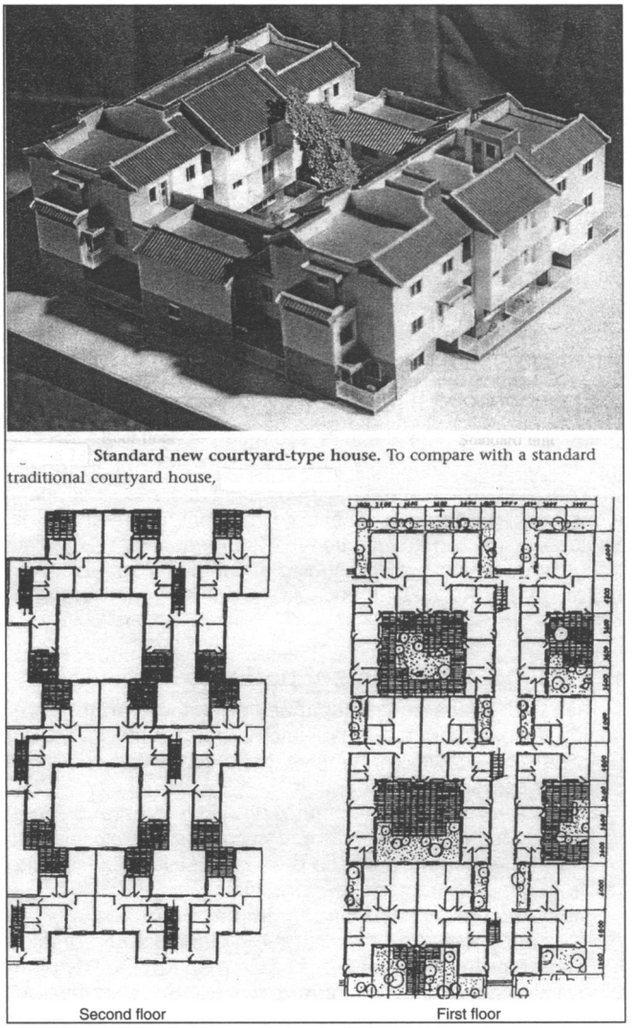
Re-evaluation of low-rise development patterns

It is time to overcome the common belief that low-rise developments do not enhance the intensive use of land. A good example to counteract the cliché is the three-storeyed courtyard condominium project built in Beijing to replacing the old ***hutong*** (one-storeyed courtyard family house), designed by professor Wu Liangyong et al. These ***hutong*** replacements attain a semi-gross density of 200-400 p/ha (fig. 5).

The traditional British terrace house is another example, as is the proposed three-storeyed courtyard condominium project by Andrew Wright Assoc., UK, attaining 75 unit/ha (semi-gross density of 200-300 p/ha). The above examples are almost medium density rather than low density (fig. 6).

Low-rise development has viability.

- Firstly, the low-rise urban configuration is akin to traditional Japanese cities of human scale, and therefore culturally sustainable.
- Secondly, with regard to physical sustainability, up to three storeys there is no need for high-tech ingredients that consume resources and energy. Building can be done using locally produced materials such as timber (68 percent of land in Japan is mountain forests, not sufficiently exploited), with appropriate technology. Basically there is no need for elevators; there is ease of maintenance, safety at the time of earthquakes, and ease of escape.
- Thirdly, in terms of socio-cultural aspects, a low-rise human-scale environment provides children's outdoor play spaces naturally, and enhances neighborliness; hence it is



Standard new courtyard-type house. To compare with a standard traditional courtyard house,

Fig. 5: Planning and design of the Ju'er Hutong redevelopment project in Beijing.

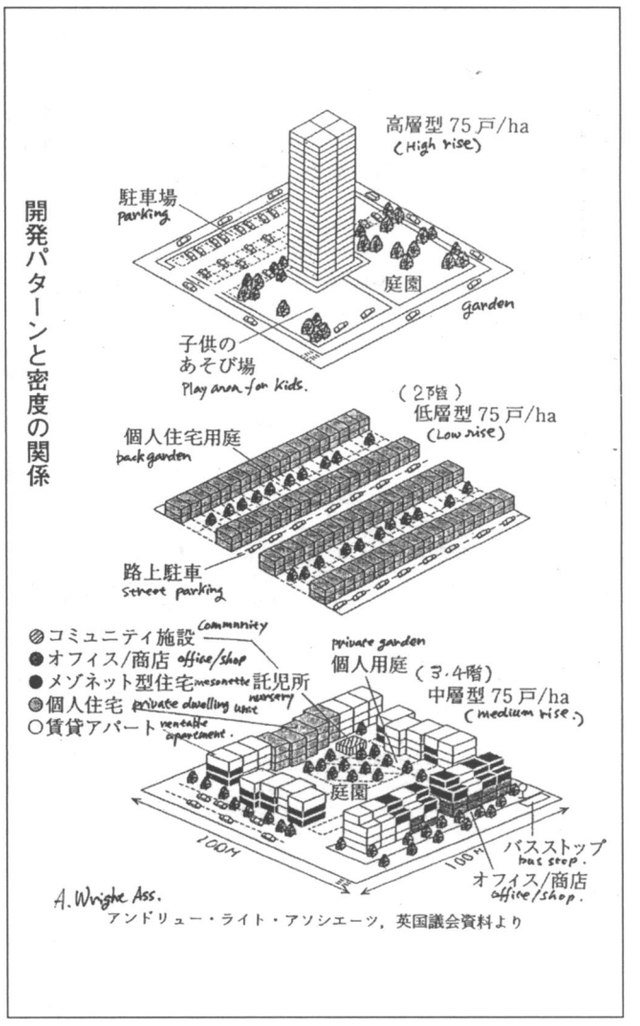


Fig. 6: Comparison of three types of development. (*Source:* A. Wright Associates).

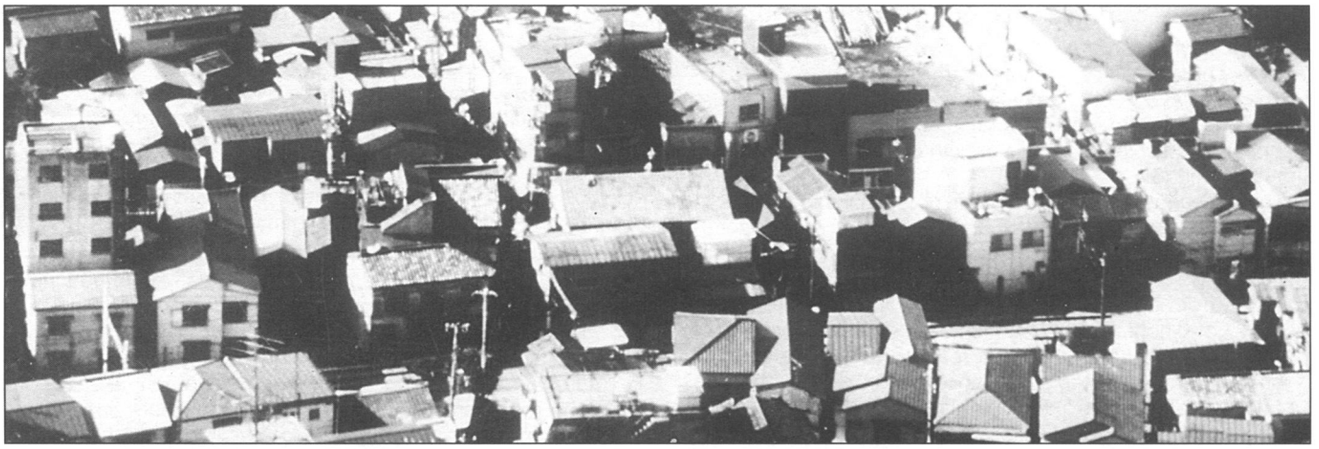


Fig. 7: Disruption of residential environment (Central Tokyo's fringe residential area, Nakano District).

easy to create humane and convivial communities.

Excessive allowance of UPA and FAR

For the future of Japanese cities, there needs to be serious reflection on the mal-effects of the above-mentioned excessive allowance of urbanization promotion areas (UPA), of the volume allowance of floor area ratios (FAR), of the unnecessary introduction of medium-high buildings in small and medium-sized cities, and of the lack of urban design in creating the urban spatial structure. Although it has come rather too late, the "Urban Landscape Act" (*keikan-ho*) came into being as a token reflection last year. It is a hopeful start, and it will give some legitimate momentum to formulating new possibilities in *"machizukuri."*

Uniform application of the Tokyo model or possibility of low-rise compact city

Why should Japanese small and medium-sized cities uniformly conform to the Tokyo model, in which medium and high-rise buildings are promoted without examining their validity?

In looking for ways to create identity for Japanese cites in general, it is necessary to enhance traditional and primary landscapes held in the group memory of the people, hence the idea of going back to the low-rise urban configuration as "the infrastructure," or basis, for urban landscape. Only then will we be in a position to re-evaluate and incorporate local specifics of *fudo* (the *f*climate, geography, culture and history), and create a cityscape that can manifest the fundamentals of the locality and enhance local identity.

Population decrease, slowdown of economy and public interest in a cityscape would seem to favor the rehabilitation of the tradition of the low-rise compact Japanese city in a new light.

Whenever cityscape with a low-rise profile is mentioned, the immediate response is that in a small country like Japan where habitable land is so scarce, the idea of intensive use of land by means of high density and high-rise development needs to be accepted, and that low-rise cities in Japan are therefore inconceivable. Superficially, this sounds so logical that nobody questions its reality.

Arguing for the protection of private property rights and avoidance of administrative complications, the government and business circles are not in favor of "down-zoning." Rather, they condemn down-zoning as a disqualified adaptation to the status quo.

However, citizens can very well argue that tall buildings built in the context of historically formed low-rise residential environments are in most cases surely disruptive to the quality of residential environment, contravening the basic property right (fig. 7).

Although it may sound paradoxical, I would like to argue that it is indeed possible to have intensive use of land and at the same time to create compact low-rise cities.

New tide of citizen participation

During the past quarter century, in trying to complement the shortcomings of "legitimate" city planning, numerous examples of *machizukuri* (literally "town-making"), in which citizen participation is becoming increasingly instrumental and indispensable, have emerged. As the background of the trend, there is a paradigm shift from "centralized power nation state" to "regional decentralization city," and many cases of *machizukuri* through the initiative of citizens have been achieved.

Recovering a low-rise profile in Japanese cities – Zushi

Zushi is a residential city with a population of around 60,000 located on the commuter fringe of the Tokyo Capital Region. In order to survive in the era of population decrease, economic slowdown, and paradigm shift from industrial to post-industrial society, a commendable option for Zushi would be to maintain and promote a low profile. Aiming at somewhat rehabilitating traditional garden city ideas could secure a better living environment (fig. 8).

Prevailing development patterns

In the residential areas of Japanese cities there are two prevailing development patterns, which are widely criticized, but practically no effective preventive measures have been taken so far, and Zushi is no exception.

One is ***mini-kaihatsu*** ("minute" development) resulting in "rabbit-hutch" three-storeyed wooden houses built closely side by side, but independently, on plots of 80-100 sq.m, leaving no open space except for car-ports (fig. 9).

The detached house environment has been very much a part of Zushi-ness, and if it is to be maintained and protected from ***mini-kaihatsu***, it is necessary to mobilize the city planning law to enforce a minimum plot size. So far public authorities have been reluctant to do so, for fear the plots would be unaffordable to the younger generation.

The other is the ***manshon*** ("mansion"), a tall apartment build-

Fig. 8: Aerial view of Zushi.

ing built on a site of 600-1,000sq.m, leaving no amenity open space for residents, and being surrounded by parking spaces only. These ***manshon*** tend to take maximum advantage of the generous and legitimate floor area ratio (FAR), and to exploit the existing good quality low-rise residential environment as a sales point. It is a far cry from the ideal of "radiant city" proclaimed in the 1930s, which proposed the provision of ample green open spaces around skyscrapers (figs. 10 and 11).

The average population density of Zushi UPA is 70p/ha. Assuming that the population is unlikely to increase, it is very

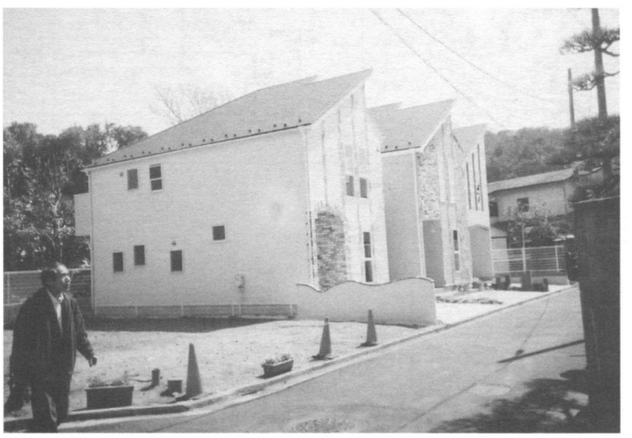


Fig. 9: Example of *Minikaihatsu* (used to be a site for a single detached house, in Zushi).

Fig. 10: Example of an overscaled *Manshon* invading low-rise residential area predominantly in two storeys, Zushi.

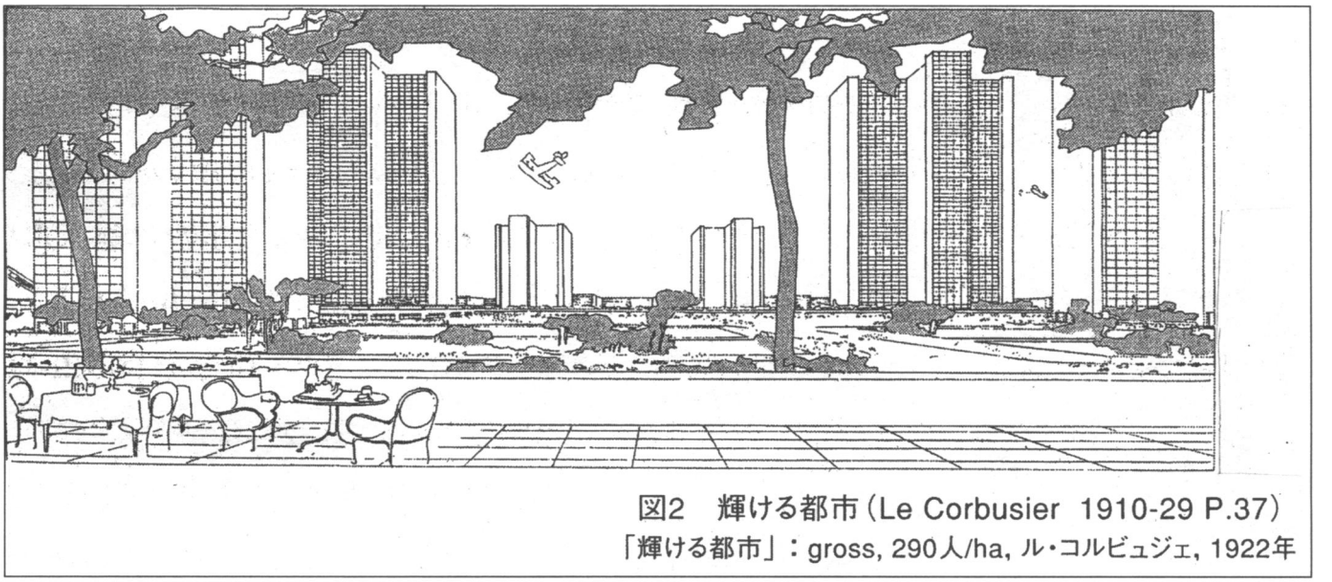


Fig. 11: Radiant City. (*Source: Le Corbusier 1910-29,* p. 37).

clear that there is no need for the people of Zushi to live in tall flats to be compact. If collaborative renewal development methods were to be employed by residents in areas where small plots are prevalent, three-storeyed courtyard condominiums could be built, and would provide more than double the existing open space, quite an asset to the relatively inferior residential districts of Zushi (figs. 12a and 12b).

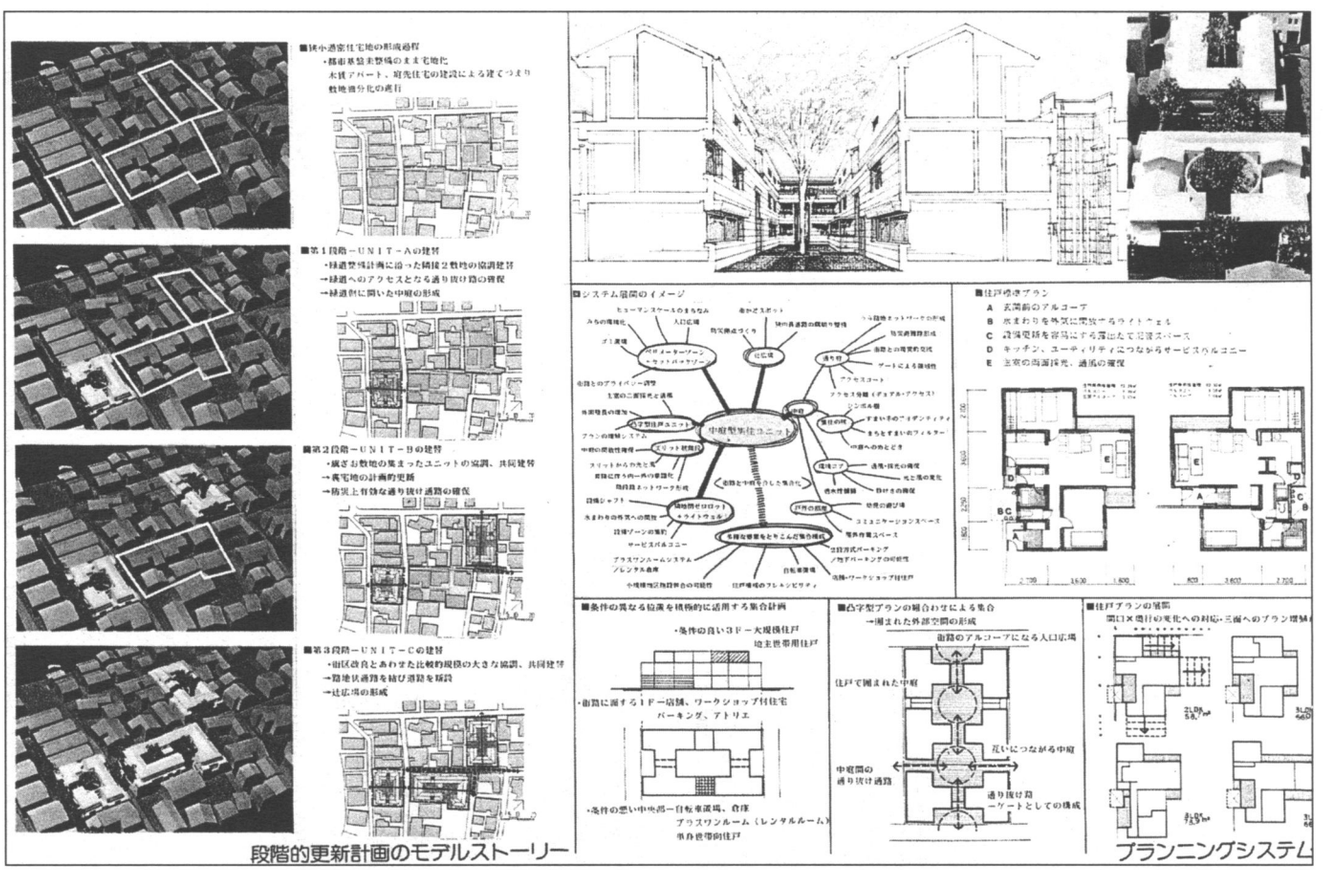


Fig. 12a: Image of block development progressively created by resembling individual small sites.

Roles of Master Plan and District Plan

Zushi has for the past year and a half been attempting to create a Master Plan, ***machizukuri kihon-keikaku,*** to be finalized towards the end of 2007. It is expected that the District Plan, ***chiku-machizukuri-keikaku*** (***chiku*** being a small district or neighborhood), positioned in the Master Plan, will be instrumental in producing measures to create a cityscape with genuine local identity, by incorporating active citizen participation in the process. The role of the Master Plan is to guide overall urban design and the creation of a better landscape while the District Plan at the *chiku* level is pursued in collaboration with its residents.

Primary landscape as group memory

It is certainly difficult to define Zushi-ness as such. One way of starting the quest is by trying to perceive the "primary landscape" of Zushi. Primary landscape (or proto-landscape) is what lies in the depth of the memory of each citizen. While being extremely personal, at the same time, having been absorbed into the subconscious by people who have shared the same experiences, it has become a group memory.

Rehabilitation of Zushi's primary landscape

A clue to Zushi-ness may be to re-invoke the primary landscape, to have it materialized, in *machizukuri.* Through the process of citizen participation, some positive transformation even accommodating diversified contemporary situations may prove to be possible. What are the elements of primary landscape that make for Zushi-ness, that are embedded remain in the childhood memories of residents who grew up in the city, or that attracted people to live in Zushi?

There were one or two-storeyed wooden detached houses with thick groves of pines; summer retreats in hybrid styles, Japanese and Western; hedges; fences made of fine local bamboo; two-storeyed shops along the main streets; corner shops scattered in residential areas. There was the relaxing river-scape along the banks of Tagoe-gawa, with willow trees, the sound of wind through the pines, the green of the hills reaching down to the river basin. There was the seashore, with its rocky shelf along Nakitsuru peninsula, and the white sandy beach flanked by pine groves. A human scale con-

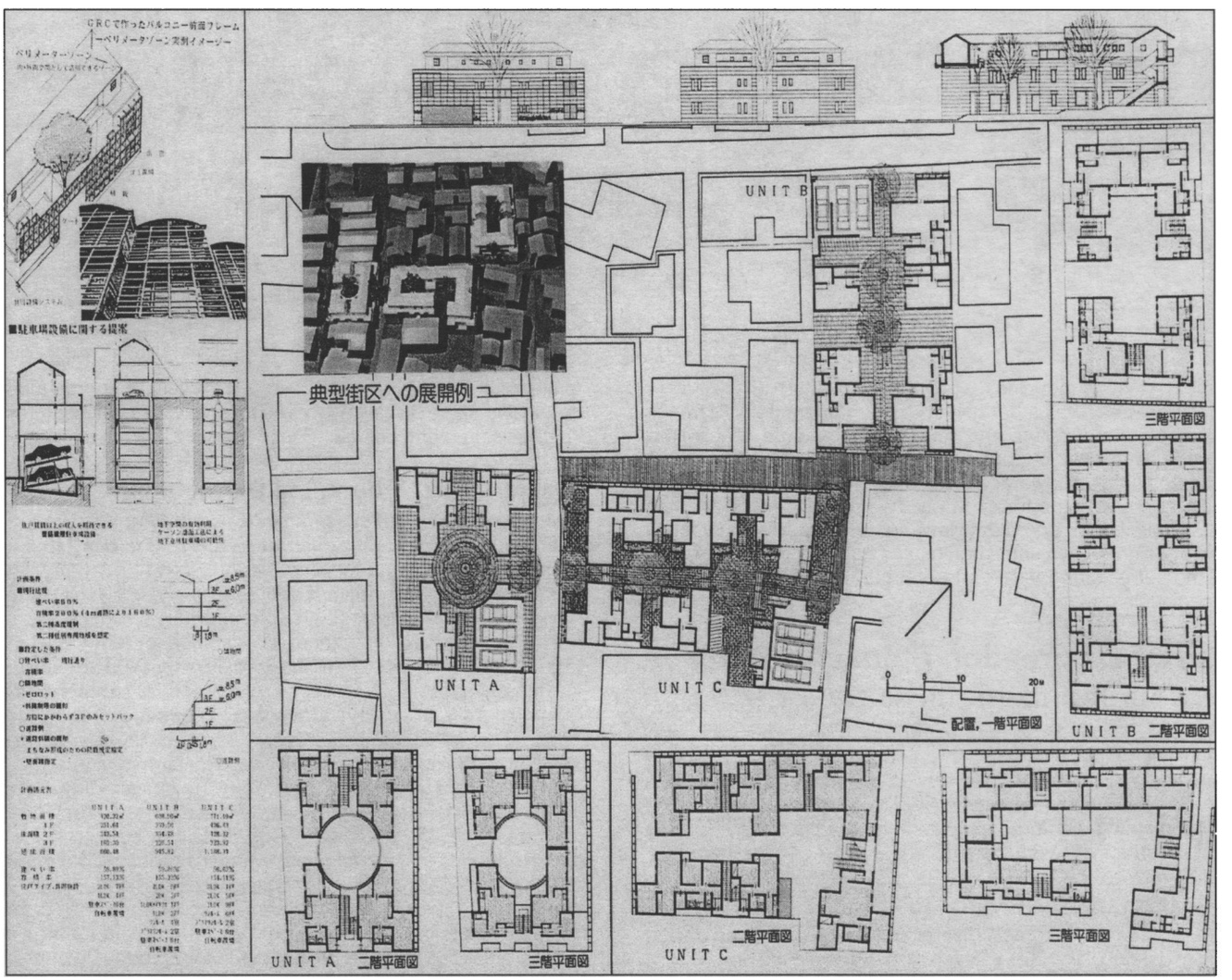


Fig. 12b: Image of block development proposed by Koichi Nagashima for downtown fringe residential area of Nakano.

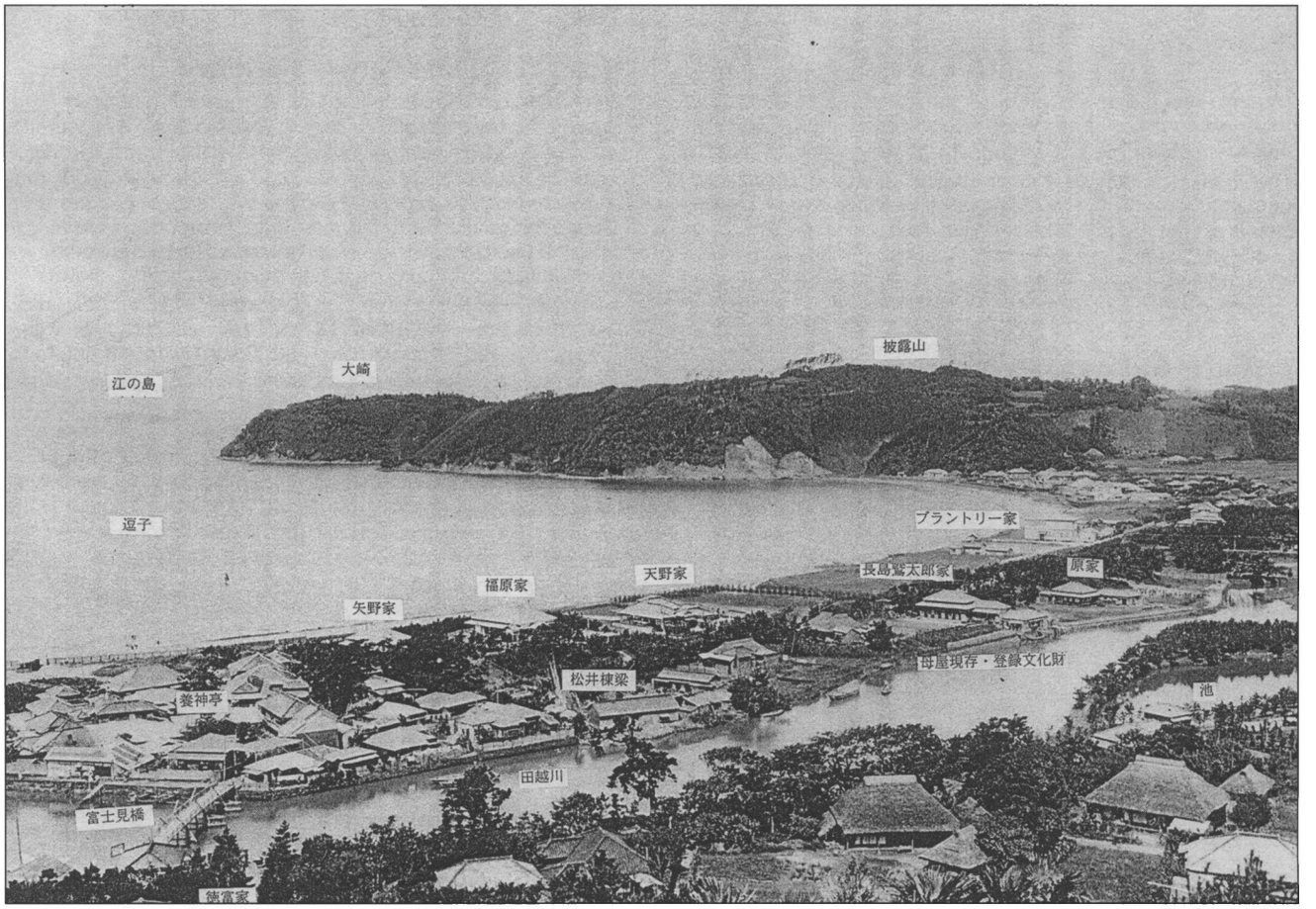


Fig. 13: Zushi circa 1900.

ducive to neighbourliness was ubiquitous (fig. 13).

Zushi-ness was a harmonious environment derived from a fine mixture of nature and man-made elements. The willow trees have been chopped down, the rocky shelf has disappeared under a sewerage plant, and a motorway has replaced the shoreline pine trees. Many Zushi-ness details are lost. There is though one great view that remains almost intact. It is the sight of two small peninsulas hugging Zushi Bay, with Enoshima island in the mid-distance, Mt. Fuji and the Izu peninsula beyond.

Towards creation of local identity through citizen participation

Becoming involved in ***machizukuri*** activities provides opportunities for personal transformation from being simply a resident, to becoming an autonomous citizen, one who takes on responsibilities and participates in forming and operating the city, winning the right to enjoy the fruit of the efforts. This is the essence of ***machizukuri***.

Scaling up from "site" to "block"

One of the spatial preconditions for engaging in urban design is to get out of the current system of "one building on one site" dictated by the building code, and to shift to a framework based on the block. The block is a practical spatial unit or receiving plate for district-level *machizukuri*. It serves for coordinated rebuilding of the district, as well as for involving local residents in practicing urban design.

Machizukuri through the District Plan

The ***chiku-machizukuri-keikaku*** **(**District Plan) is an important ingredient of the ***machizukuri-kihon-keikaku*** (Master Plan). It comes under the ***machizukuri-jorei*** (City Planning Ordinance). The minimum spatial unit for *chiku-machizukuri-keikaku* (District Plan) is 3,000 sq.m.

According to the Ordinance, a committee for formulating a *machizukuri* plan must be authorized by at least 60 percent of the local electorate. Then the city can authorize experts or urban designers to join the committee. Regrettably, so far no District Plan has been initiated by residents. It may be because residents tend not to initiate *machizukuri* involving negotiations with neighbors, or relating to property, unless an immediate threat to the neighborhood environment emerges. They prefer to reside by the status quo. Residents may be sensitive to minor changes in the immediate living environment, but there is not yet sufficient community consciousness among residents for them to act for its improvement. One of the issues from here onwards is how a sense of community and a mature sense of citizenship can be fostered, spontaneously and/or with input from professional planners, urban designers and city authorities.

Supposing a proposed scheme by a developer were taken as a test case, four parties would be involved, namely local residents, the developer, the city authority and experts. A series of round table workshops could be organized, so as to harmonize respective parties' interests, and ensure their collaboration in creating the District Plan. The public authority would assume the roles of producer and umpire, and the experts serve as moderators and urban designers (fig. 14a and 14b).

It is desirable that planning permission be issued after mutual agreement has been arrived at. It may take longer than currently practiced procedure and legislature dictates, but the energy put into the process is likely to lead to better physical realization and neighborliness, and to enhance the transformation of residents into responsible citizens, rather than being expended in futile disputes.

Such a collaborative method could materialize in a better and a new breed of District Plan, having urban design input and a consistent spatial structure, overcoming the existing system of simply adhering mechanically to the building code, and neglecting both physical and social relationships in the neighborhood.

Role of Livelihood Sphere

There exists a spatial concept of ***fureai-katsudoken*** or Livelihood Sphere. It is now being conceived in the ***machizukuri-kihon-keikaku*** (Master Plan) as one which encompasses layers of public activities which enhance daily functions at a local level, for instance in the fields of senior citizens' welfare, child care, security and especially anti-disaster measures. The size of a Sphere is dictated by a walking distance of a 250-300 m. radius from a core facility(ies), and a catchment area population of around 2,500 persons. However, there would be no definitive physical border or rigid administrative boundary.

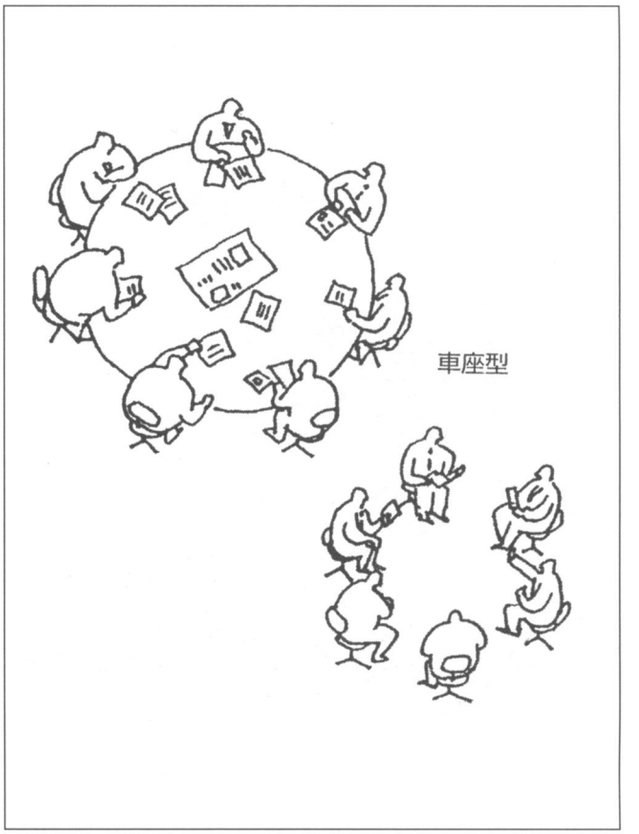


Fig. 14a: Image of a round-table discussion.

Fig. 14b: Image of a round-table discussion.

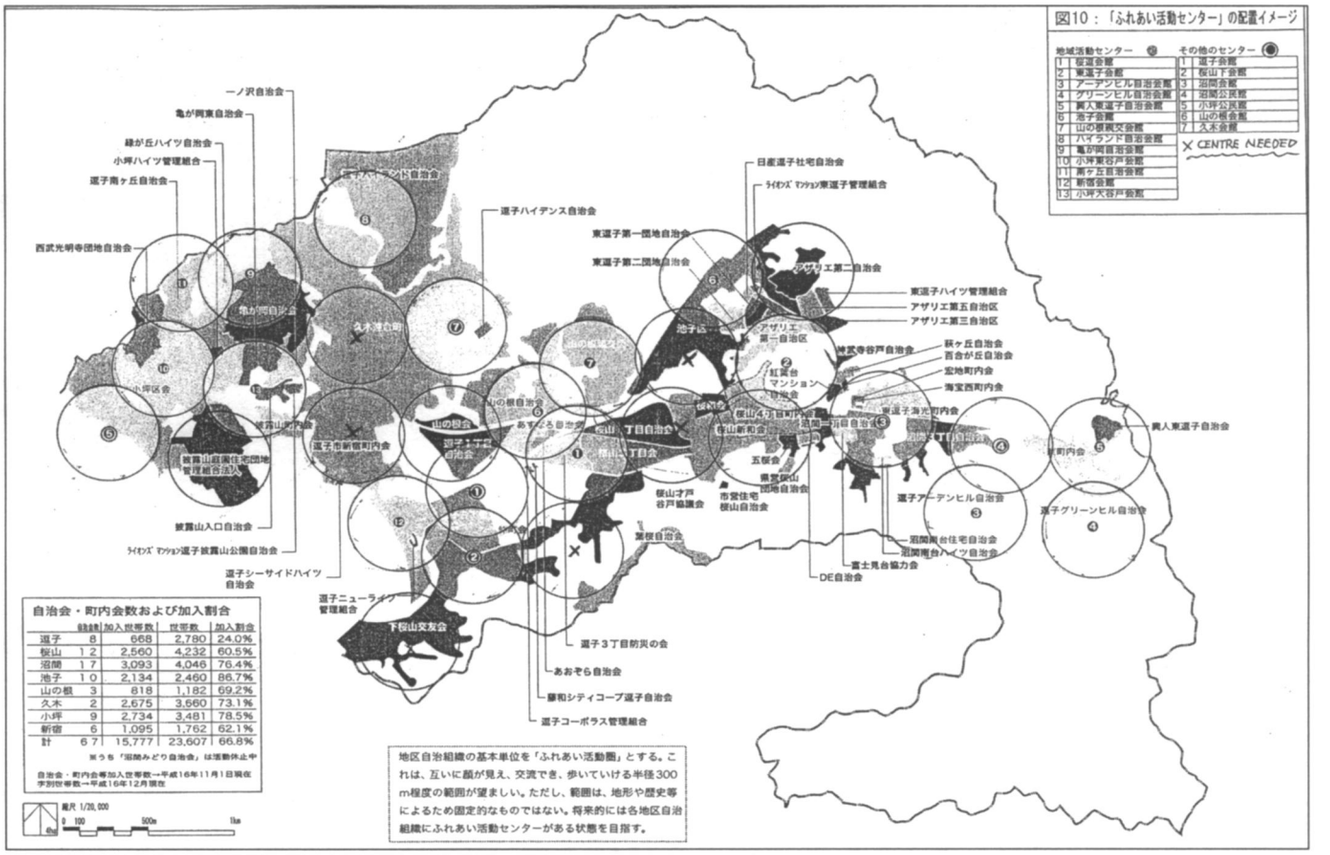


Fig. 15: Tentative demarcation of fureai-katsudoken (Livelihood activity area) in Zushi (shaded areas constitute built-up areas).

Interestingly, ***fureai-katsudoken*** happens to relate to a traditional district scale of ***ko-aza. Aza***, one hierarchy above the ***ko-aza*** scale, and consisting of a few ***ko-azas***, used to be a hamlet or village, and usually had its own history, socio-cultural identity, geographical unity and, very often, cohesiveness in landscape (fig. 15).

Probably, if the *fureai-katsudoken* were to materialize, it would function as a field where *machizukuri* activities could take place involving daily functional concerns and issues. As a result, an ethos of autonomous citizenship could take shape, and end up forming a new breed of local community. This could serve as a model for re-instilling a sense of urban residential community in Japan, where many urban social problems are attributed to its loss.

Relationship between Livelihood Sphere and District Plan

A ***fureai-kastudoken*** would in theory contain several ***chiku-machizukuri-keikaku*** (District Plan) areas. The layers of daily functional activities of residents would promote community consciousness, and provide a broader community basis for those who wished to form a *machizukuri* association to formulate a District Plan.

The content of the District Plan in return contributes to the improvement of the functional and landscape aspects of the Livelihood Sphere. For instance, the District Plan dictates the design of the surrounding roads and their relationship to parking spaces; need for and location of boundary fences; location of open spaces; kinds of buildings, their setback, height, etc. These physical aspects directly or indirectly influence the functional aspects of safety to pedestrians, visibility, security, disaster and welfare needs of the Sphere. In this sense, the spatial concept of the Livelihood Sphere provides direction to and guidelines for the District Plans. The greater the number of District Plans, the closer is the relationship to the Livelihood Sphere.

Enhancing cityscape by interweaving District Plans

The structure of the *machizukuri-kihon-keikaku* Master Plan may need to be mentioned. Besides the *chiku-machizukuri-keikaku* District Plan, another component of the Master Plan is a series of Sectoral plans such as the Transport Plan and the Welfare Plan. If compared to a piece of textile, the Sectoral Plans are the warp and the District Plans the weft.

The *chikumachizukuri-keikaku* (District Plan) is to be formulated slowly within a certain time span, involving citizen participation. As time goes by, the Sectoral Plans are interwoven with the District Plans and other related Area Plans, into one piece of cloth, the total structure. Thus there is a process of active feedback between the city as a whole and its component districts.

The *chiku machizukuri-keikaku,* by its nature, by involving citizen participation, picks up the genuine characteristics of a respective locality in terms of its spatial, ecological, and socio-cultural aspects. This *machizukuri* process, when integrated at the city-wide level, can eventually attain both physical and socio-cultural sustainability, and a genuine Zushi-ness in terms of city-scape and ambience.