# Metropolitan Neighborhoods in Japan and the West : Nested Systems versus Axial Systems

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## 1. INTRODUCTION

The first Japanese national census in 1920 revealed the urban population (or, more precisely, the population living in *shi*, municipalities over 50,000) to be over 10 million, or 18 percent of the entire population of Japan. Of this urban population, roughly half was accounted for by the five largest cities at the time (Tokyo, Osaka, Kyoto, Nagoya, and Kobe). The total population of these five cities had increased by as much as ten-fold since the beginning of the Meiji period in 1868.

After 1920, Japanese urbanization continued to proceed steadily, and by the census year of 1955 the urban sector accounted for over fifty percent of the national population. Then from 1955 to 1980, out of a total national increase of 27 million, the metropolitan regions of the three largest cities of Tokyo, Osaka, and Nagoya accounted for fully 25 million. In other words, 93 percent of the increase in Japan's population since 1955 has gone to the largest cities, revealing a pattern of urbanization has that might better be termed "metropolization."

In looking back over historical population trends in Japan, one notices that since the medieval period there have been two periods of very rapid growth. The first was from the middle of the seventeenth century until the beginning of the eighteenth century, and the second has extended from the Meiji Restoration until just recently. Both of these periods of national population growth have also been periods of the building and expansion of cities. The earlier period saw the formation of Edo, Japan's first city of over one million population, while the later modern period witnessed the expansion of Tokyo to a metropolis of over ten million. The modern

period is both one of urbanization in general and of the growth of very large cities in particular.

In comparing large cities throughout the world, one finds that they have come to share common functions and landscapes. In the area of residential patterns, however, one is struck by various contrasts among great cities. In Paris and Kyoto, for example, the upper classes tend to remain in the old city center, while the working classes live in the suburbs. In London and New York, by contrast, as well as in such Japanese cities as Osaka, the upper classes tend to prefer suburban living. There are differences between those cities which have an old urban culture and those cities which have emerged primarily as a result of industrialization. It is clear that both cultural and historical variations create differences in urban residential patterns.

There are a variety of ways of comparing large modern cities, but in this paper I would like to focus on the issue of "neighborhoods." In villages and small towns, smallness of scale enables all residents to have a clear conception of the social and spatial structure of the settlement. But when the scale increases to a population of tens or hundreds of thousands, such a grasp becomes impossible. In such large cities, however, there is a tendency for people to organize themselves in various smaller units, or neighborhoods. Perhaps it is here that we may find a key for the comparison of these huge cities which modernization has created.

## 2. ADDRESS SYSTEMS AS A REFLECTION OF URBAN STRUCTURE

In visiting European and American cities, Japanese are astonished to find how simple it is to find one's way around with just the aid of a map. Every street has a name, and if one knows the street name and number, it is generally easy to find an address without any help. Even medieval European cities, with their tortuous street patterns, are no exception to this rule. In Japanese cities, on the other hand, it is rarely a simple matter to find the address one is seeking. As a look at a Japanese city map will reveal, there are usually no names to streets: the basic distinction is rather among areas known as "machi."

In terms of the conception of urban space, then, Western cities are conceived of as networks of streets, while Japanese cities are seen more as agglomerations of areas. The best concrete expression of this contrast lies in the differing systems of addresses. In European and American cities, as in most cities throughout the world, the address system is one of street name plus house number. It is essentially an *axial* system, by which a given point is indicated by coordinates. In Japan, by contrast, a particular place is specified by the use of a nested hierarchy of area units proceeding downwards, as from *shi* (city) to *ku* (ward) to machi. This can be called a *nested* system.

One revealing piece of evidence for the comparison of address systems is the list of the addresses of the 149 Japanese embassies throughout the world. This list

reveals that Korea is the only nation other than Japan which uses a nested address system; all others rely on street names and numbers.[1]

Of course there are some exceptions to the use of a nested address system in Japan. One of these is Kyoto, where street names are in fact used. The address of Kyoto City Hall, for example, must begin with "Nakagyō Ward," but may then be followed by, variously, "Kawaramachi Oike" (that is, at the intersection of Kawaramachi Avenue and Oike Avenue) or "Teramachi Street, Oike" or "Teramachi Street, Oshi Lane" (Fig. 1). But even here, it is not an unadulterated axial system, since the full formal address includes the machi as well as the street position: "Nakagyō Ward, Teramachi Street, Oshi Lane South, Kami-Honnōji-mae Machi, Number 488." With a large and well-known place like City Hall, the machi name is in fact not very often used. With ordinary residences, however, both the street name and the machi name tend to be used.

Kyoto is thus a combination of the axial and nested systems, a fact which stems from its special historical background, by which a formal grid plan was laid out
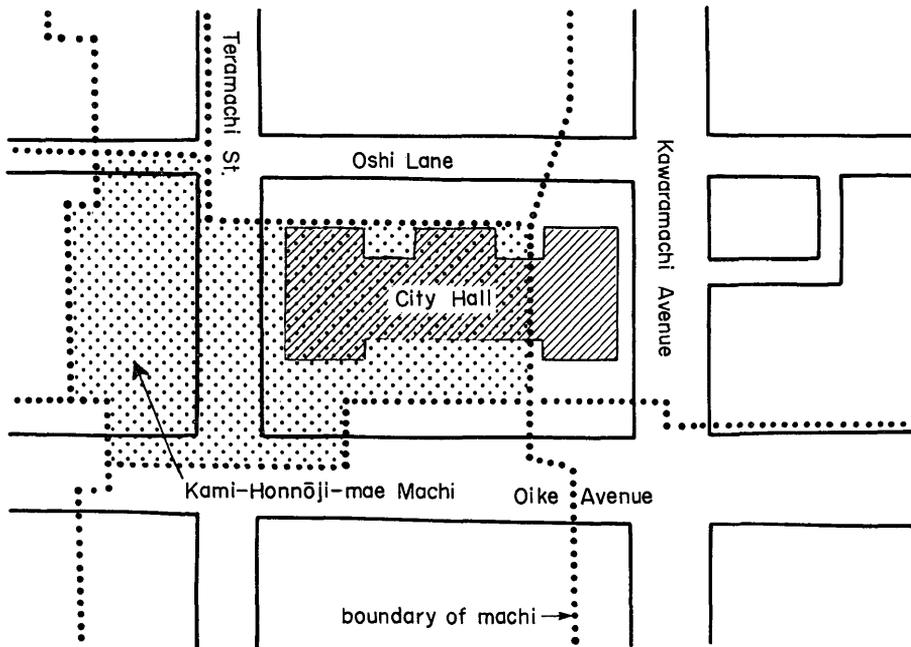


**Fig. 1.** Location of Kyoto City Hall.

1) The nested address system may also be found in Taiwan (where Japan currently has no embassy). It remains to be studied whether this type of address system originated in China, spreading then to other countries of East Asia, or whether it began in Japan and then spread to Taiwan and Korea during the period of Japanese colonial occupation. It also appears that neighborhood groups comparable to the Japanese *chōnaikai* (discussed below) may be found in the Philippines and in Burma, but the address system in these countries is of the Western (street name plus number) type.
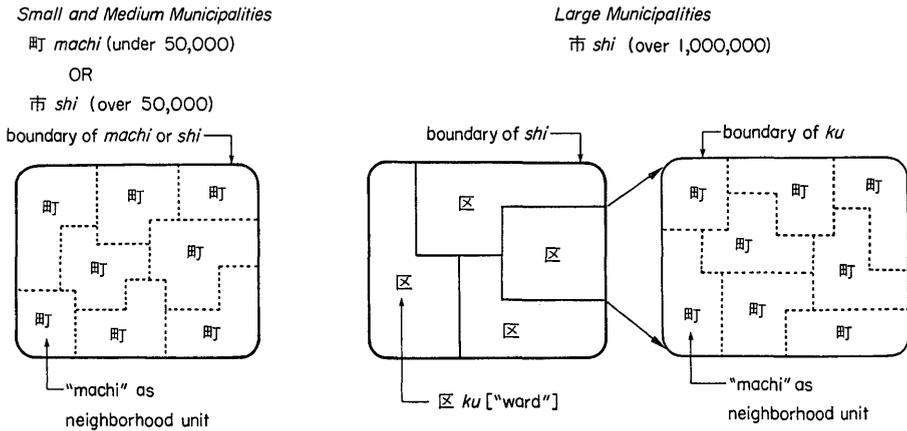
Small and Medium Municipalities                    Large Municipalities
町 machi (under 50,000)                           市 shi (over 1,000,000)
OR
市 shi (over 50,000)



**Fig. 2.** Administrative Structure of Japanese Municipalities

according to the Chinese model in the late eighth century, but then gradually modified over the centuries. What is particularly revealing is that even though the grid plan of Kyoto makes an axial system of addresses wholly adequate for locating places, there has nevertheless evolved the parallel use of a nested system of designation.

One particularly difficult thing to understand about the Japanese case, and something which often confuses foreigners, is the distinction between two kinds of "machi." On the one hand, administrative municipalities are designated either *shi* or *machi*, the latter being reserved for municipalities with a population under 50,000. At the same time, machi is used in the wholly different sense of a non-administrative neighborhood unit within a municipality—whether *shi* or *machi* (Fig. 2). In the following discussion, it is purely in this latter sense that I use the term "machi."

## 3. NEIGHBORHOOD GROUPS IN JAPAN AND THE WEST

In spatial terms, Japanese cities are thus constituted and conceived of as aggregations of small territorial units known as "machi." In most such machi, one finds organizations known as *chōnaikai* (machi associations), of which all residents are automatic members. The roots of these associations are to be found in such older organizations as the *goningumi*[2] or *machigumi*[3] of the Tokugawa period, although

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2) The *goningumi*, or "five-man groups," were established in the cities of the Tokugawa period as a measure of local control. Under this system, the land-owners and their supervisors (see Note 4 below) were organized into groups of five (more or less) in which mutual responsibility was imposed for any criminal activities within the group or among the tenants of the group members; particular attention was paid to the control of covert Christians. In time, however, these initial concerns gave way to the use of the *goningumi* as a means of transmitting government decrees, and the groups themselves came to function internally as mutual aid organizations.

there appears to be little direct institutional continuity. The modern *chōnaikai* were rather organized in the Meiji period as a spontaneous response to changes brought about by modernization. The actual terminology varied, some being called *"chōkai"* or *"kunaikai"* rather than *chōnaikai*.

It was only in 1940, on the eve of the Pacific War, that the *chōnaikai* were mobilized as official units within the formal system of urban administration. According to Home Ministry Directive No. 17 of that year, the *chōnaikai* were rationalized under administrative leadership in order "to organize and unify the residents of cities, towns, and villages in a spirit of neighborhood solidarity, and thereby to fulfill local responsibilities in accordance with the principle of total support for the national effort."

For many Japanese, these neighborhood groups are thus inevitably linked with memories of their wartime administrative role. It is worth asking, however, what sort of a role the *chōnaikai* played before being subsumed into the war effort. One useful piece of evidence is a survey of Tokyo *chōnaikai* which was conducted in 1925 by the Tokyo Institute for Municipal Research [TŌKYŌ SHISEI CHŌSAKAI 1927]. This study enables us to gain an understanding of the nature of neighborhood associations apart from the wartime experience which was to follow.

The study shows that in Tokyo in 1925 there were 1167 *chōnaikai* organizations, with a total membership of 357,633. Membership generally consisted of all heads of households: in only 4 of the 308 *chōnaikai* surveyed was the membership restricted to landlords and shop-owners. The basic unit was thus the household, and the reported membership accounted for over eighty percent of the total of 420,000 households in Tokyo at the time.

In terms of founding data, the 1925 study shows that 94 percent of the *chōnaikai* had been organized since 1898, and that 37 percent had been founded in the brief span of two years following the Great Kanto Earthquake of September 1923. These figures suggest the extent to which the *chōnaikai* movement was encouraged as a response to the disruption caused by the earthquake. More broadly, however, the *chōnaikai* may be seen as a means of dealing with the large influx of newcomers into the city of Tokyo during a period of rapid metropolization. For example, another survey of the same period reveals that of all the students in an elementary school in the Kanda area of central Tokyo, only 16 percent were pure "Tokyokko" (that is, third generation Tokyo-born) [TŌKYŌ SHISEI CHŌSAKAI 1926: 89].

The areas in which *chōnaikai* were involved included funeral support, public health, festival arrangements, military affairs, neighborhood patrols, relief activity, traffic regulation, commercial affairs, contact with government agenices, educational

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3) The *machigumi*, or "machi groups," were groupings of several separate machi. This type of organization emerged in Kyoto after the Ōnin War of 1467-77 when various machi joined together to form autonomous groups. By the end of the Tokugawa period, the 1454 machi of Kyoto were grouped into 21 *machigumi*. A similar system emerged in the late medieval period in Sakai and Ōmi-Hachiman as well. In Edo and Osaka, however, although machi were similarly the basic units of urban organization, no such higher-level system as the *machigumi* appears to have been adopted.

matters, consultation and mediation in personnel disputes, giving of awards, and provision of loans. More detailed descriptions explained that "military affairs" involved holding celebrations and providing gifts for young men of the neighborhood who had been inducted into military service. "Commercial affairs" consisted of festooning the neighborhood and setting up lotteries at New Years' and Chūgen (mid-year) festivities as a way of promoting business.

The 1925 survey also included written descriptions by *chōnaikai* leaders of the problems faced by their organizations. Reflecting a certain gap between the founding ideals and the contemporary reality of *chōnaikai*, three basic complaints emerged from these responses: 1) the indifference of the salaried classes to *chōnaikai* activities, 2) the difficulties of forming a sense of neighborhood solidarity, and 3) legal constraints on *chōnaikai* activities. These answers make it clear that the *chōnaikai* were surviving, but that they were limited by a weak sense of solidarity. Some of the specific responses were as follows:

> At present, our membership is a virtual microcosm of society in general, bringing together members of every class from aristocrats and state ministers to civil servants, businessmen, small merchants, artisans, and on down to manual laborers. The differences in ideology and social position among these various groups make it very difficult to administer the association. [Miyamura-chō, Azabu Ward]

> Our association is different from those in other neighborhoods which serve purely as clubs of like-minded types. With only one exception, every single household in the neighborhood is a member of our association. (The exception is a professor at the University of Commerce, a man who seems not to understand the nature of the association.) [Tamachi, Ushigome Ward]

These reports make it clear that the *chōnaikai* were already very different from such Tokugawa organizations as the *goningumi*, which had been imposed from above, and in which membership was restricted to land-owners or their supervisors.[4] The *chōnaikai* were rather true neighborhood groups which as a matter of principle were based wholly on voluntary participation. The diverse social composition of the *chōnaikai* constitutes one of the unique characteristics of the modern Japanese machi.

What are the reasons for this diversity of residential class in the machi? In the Edo period, back-alley tenements (*ura-nagaya*) were constructed inside of the blocks into which cities were divided. The tenants living in these row-house tenements were known as *tanako*, and belonged generally to the small-merchant and small-artisan classes. Hence in the commoner districts, there was already considerable

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4) In the three major cities under the control of the Tokugawa shogunate (Edo, Osaka, and Kyoto), land in the commoner districts was technically owned by the shogun, who conferred the right to use the land on those who occupied it. In practice, many of these landholders built houses on their land for rental to others. In time, this right of land use became very much like ownership, and there was actual dealing in land, so it is not inaccurate to speak of "land-owners" or "landlords." These land-owners were of two types, those who resided in the machi in which they held property, and those who acted as absentee landlords. The latter employed "supervisors" (known by various terms, but typically *yanushi* in Osaka and *yamori* in Edo) who managed their rental properties.

mixing of social classes. In the process of urbanization in the Meiji and Taisho periods, the land-owning classes continued to rent out units, but as in the case of Edo-period tenements, these seem to have been generally units in the immediate vicinity of one's own house. Thus in terms of social composition, modern residential districts in Japan are much like the commoner districts of the Edo period. It is also worth noting that in a 1941 survey of housing in 24 cities, the rental rate in Tokyo was 77 percent, and that in Osaka was as high as 90 percent [NISHIYAMA 1975: 76, 229]. At least until the postwar period, rental housing was clearly the common pattern in Japanese cities.

Although most agree that the distant roots of the modern *chōnaikai* are to be found in the neighborhood organizations of the Tokugawa period, the specific circumstances of their founding lie rather in public health associations. The connection between such associations and *chōnaikai* varied, however, from city to city. In the case of Tokyo, very few *chōnaikai* in fact had their origins in the public health groups, but in the new city of Kobe, it seems that the public health associations were the *only* neighborhood groups which aimed at local self-governing activities. Even there, however, the territorial divisions corresponded to the areas of shrine parish membership, and the association leaders tended to be the older residents. One would predict, of course, that there would be some relationship between the *chōnaikai* and shrine groups, and in fact, a survey in the late 1920s of 112 *chōnaikai* in the Kyōbashi, Ushigome, and Nihonbashi areas showed that fully 73 percent served, among their many other functions, as a sub-unit of some larger shrine support group. At the same time, however, only 6 out of 127 machi (5 percent) in the same districts had their own shrines for which they bore the total expense of festivals by themselves [TŌKYŌ SHISEI CHŌSAKAI 1927: 92–96]. The *chōnaikai,* in other words, rarely served themselves in the capacity of independent shrine support groups.

It is clear that Japanese urbanization from Meiji to Taisho proceeded at an explosive rate. As we have seen in the case of Kobe, this urbanization proceeded within the framework of the existing local society, but this did not mean that local traditions were carried on in the same form. The spatial structure of the machi rather provided a framework for the extension and consolidation of new social units in Japanese urban society. It was through the proliferation of such units that the Japanese city grew so very rapidly.

In European and American cities, it is of course possible to find neighborhood units comparable to the Japanese machi. In Sweden, the parish districts known as "församling" also serve for administrative purposes as units of household registration, while the "Viertel" (quarters) in Germany towns serve as the organizational basis for such functions as festivals and city planning hearings, and are consequently easily mobilized for citizens' movements as well. Even in this case, however, there is no such thing as a permanent organization for each Viertel comparable to the Japanese *chōnaikai.*

In the mid-1920s the Tokyo Institute for Municipal Research made an inquiry to Luther Gulick, then director of the New York Bureau of Municipal Research, as

to whether there existed in American or European cities such small-area self-governing organizations as the Japanese *chōnaikai*. Gulick responded as follows:

> To the best of my knowledge, there are no groups with such functions in either Europe or America, where there is a growing tendency to avoid entrusting private groups with functions which should properly be carried out by official government agencies. The fact that such groups exist in Japan is probably because of the vestiges of feudalism which still survive in that country. [TŌKYŌ SHISEI CHŌSAKAI 1927: 290]

In fact, one does find that administrative subdivisions comparable to the Japanese machi once existed in European and American cities, and it is revealing to see what became of them. London in the eighteenth century, for example, was divided in 26 "wards," which were further subdivided into "precincts." Each precinct contained several hundred households, and was closely related to the church districts known as "parishes" (although the two were not identical) [TŌKYŌ SHISEI CHŌSAKAI 1927: 307].

Precinct meetings in London were held every year on a set day in December, and here preliminary elections were made for the posts of Common Councilmen, Constable, Scavenger, and Collector. Those who were elected but chose not to serve were required to pay a fee for non-service; these fees were put into a fund for a banquet at the local pub. These functions of the precincts gradually disappeared, however, with the growth in the power and authority of the municipal assembly and with the flight to the suburbs of the upper classes as the urban environment deteriorated under the impact of industrialization [TŌKYŌ SHISEI CHŌSAKAI 1927: 315].

It would thus seem that although there were organizations in Western cities comparable to the Japanese *chōnaikai*, they gradually disappeared in the course of industrialization and modern urbanization. But were the Japanese *chōnaikai* in fact the "vestiges of feudalism" which Luther Gulick claimed them to be? Here it is important to note that at precisely the time that Gulick was penning his reply, the so-called "community center movement" was rapidly spreading throughout the United States, based on the ideal of local neighborhood associations of just the non-governmental kind that Gulick deprecated. The key theorist of this movement was Clarence Arthur Perry.

## 4. PERRY'S "NEIGHBORHOOD UNITS" VERSUS THE JAPANESE MACHI

Perry first put forth his theory of neighborhood units in December 1923, at a joint meeting of the National Community Center Association and the American Sociological Society. His basic proposal was town planning on the basis of elementary school districts, and the theory was developed in the greatest detail in a 1929 study for the Plan for the New York Region [PERRY 1929]. Figure 3, taken from this study, shows a plan for a single "neighborhood unit," prepared by Robert Whitten on the basis of Perry's theory. The influence of this theory on the city planning profession was great and can be felt even today.

Perry's theory of the neighborhood unit aimed at planning "family-life commu-
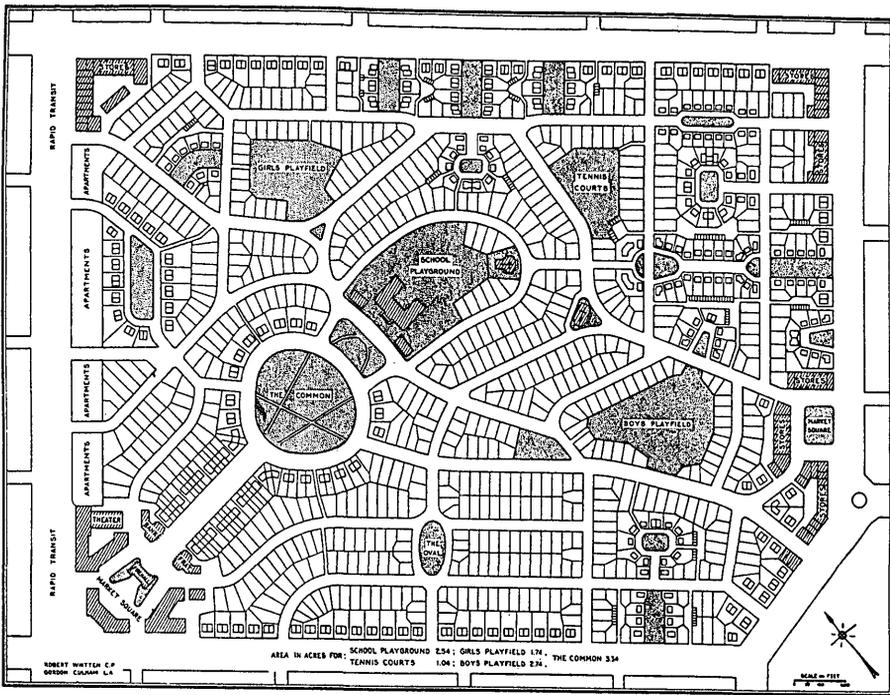
**Fig. 3.** A Subdivision for Modest Dwellings Planned as a Neighborhood
Unit. [PERRY 1929: 36]

nities" which enabled the fulfillment of both the daily activities of children and the
social activities of adults. In terms of the former, Perry noted that the coming of
the automobile had not only carved up existing neighborhoods with arterial streets,
but had also created great dangers for children travelling to school, resulting in a
fatality rate of over one child per day in New York City [PERRY 1929: 30]. It was
necessary therefore to provide safe routes for children to commute to school, as well
as play areas free from the danger of automobiles. This, he argued, could be
accomplished through city planning by using cell-like "neighborhood units" within
the interstices of arterial highways. As the ideal size for such a residential unit,
Perry recommended the "population for which one elementary school is ordinarily
required" [PERRY 1929: 34]. Since the appropriate size for an elementary school is
from 800 to 1200 students, the total population of the neighborhood unit would
therefore be between 5000 and 10,000 persons.

As for adult social life, Perry pointed out that most people in the contemporary
American metropolis lived a great distance from their places of work, "in sections
where widely different classes and races live side by side and yet never touch each other
in informal neighborly relations" [PERRY 1929: 123]. This situation makes it im-
possible to create a true community in which the will of the citizenry is faithfully
reflected in city government. Perry saw the village as the place "from which we get
our notion of community," and hence recommended a process of urban growth

"whereby the village civic cell would be repeated at a rate corresponding with the expansion of the population" [PERRY 1929: 125–126]. Perry argued that a neighborhood unit centered around an elementary school would enable the face-to-face relationships which are essential for effective political life at the local level. In any local community, it is the elementary school, flying the national flag, which is the most conspicuous public building. Together with the local assembly hall, it is the school which gives dignity to a community. The public school can thus serve naturally, he concluded, as a center for various types of civic activity [PERRY 1929: 72–75].

The first planned development in which Perry's theory was put fully into practice was the "model industrial town" of Radburn, New Jersey, in the suburbs of New York City, begun in 1928 [PERRY 1929: 24, 31]. Because of the Great Depression which began the following year, the Radburn plan was left half-finished, but the neighborhood unit idea was later realized in postwar British new town of Harlow.

A key influence in Perry's formulation of the neighborhood unit idea was his previous experience in the community center movement in Rochester, New York. The basic idea of the community center movement was to use the public school as the center of various activities aimed at improving the social, economic, and political life of American towns and villages. The community center movement appears to have been influenced by the English settlement movement, but whereas the settlement movement focused on improving the slums of large cities, the community center movement aimed rather at middle-class residents in the suburbs. In 1919, the U.S. Bureau of Education issued a model "Constitution of a Community Association," an indication that the community center movement was more than just a localized phenomenon.

Since public schools were the focal point of organization in the community center movement, it was considered expeditious that school principals serve as directors of the community centers, as long as it did not interfere with their official school responsibilities. The activities of a community center were placed under a variety of committees, in charge of administration, recreation, employment counseling, public health and hygiene, the sale and production of foodstuffs, savings and investment, and child care. A consumers' cooperative was set up, which together with membership dues provided the capital for a credit association [TŌKYŌ SHISEI CHŌSAKAI 1927: 319–320].

Membership in a community center was open to all residents of either sex within a given area, provided that they were American citizens and over the age of 21. In addition there was a category of "prospective members" for those who did not yet have American citizenship but who intended to acquire it. There also appear to have been some community centers which excluded Blacks from membership, regardless of citizenship [TŌKYŌ SHISEI CHŌSAKAI 1927: 328].

According to the constitution recommended by the Bureau of Education, a "community center" was a form of community "association." Western theories of urban society posit the principle of "association" as the basic type of social bond in city life, so that the community "associations" may be seen as a device to strengthen

the principle of voluntary association as the basis of urban community. This is very different from the Japanese *chōnaikai*, in which, as I shall stress later, participation is technically voluntary but in actual social practice almost universal.

As is made clear by the term "neighborhood unit," however, the focus of Perry's theory was less on the concept of the community than on that of the "neighborhood." Whereas "community" is a concept involving social relations, "neighborhood" is a spatial concept. The problem is whether or not Perry's formulation of a neighborhood was in fact adequate to serve as a viable spatial unit.

Perry conceived of a "neighborhood" as a community of 5000–10,000 people, which he saw as the maximum number that would still allow the face-to-face relationships essential for effective local government. But, as Hans Blumenfeld has suggested, the size of a community in which all members can have personal knowledge of each other is about 500 to 600 at the most; such a community is the ideal size for maintaining face to face contact and the ability to produce natural leaders [SPREIREGEN 1967: 177]; note that this is precisely the scale of the Japanese *chōnaikai*. Beyond this, Blumenfeld argued, the "human scale" is passed, and when it comes to a unit of the size proposed by Perry, "except for the meeting at the parent-teachers' council, there is not much that these 5,000 to 10,000 people have in common" [SPREIREGEN 1967: 177–178]. Perry's "neighborhood unit" was simply too large for a neighborhood based on the model of the village community.

Perry's ideas were not widely accepted in American society at the time, nor did they become the basis for any major planning efforts. His theories do, however, give important insights into American society itself. As described earlier, Perry's argument rested on the assumption that American city residents lived "in sections where widely different classes and races live side by side and yet never touch each other in informal neighborly relations.... Even if there are cliques or groupings within the section, these are separated from each other and the mass of the people by unbridged chasms" [PERRY 1929: 123]. He thus saw it necessary to link such people to one another, but he also implied certain conditions, as revealed by his assertion that parents "want their children to associate with children from homes which hold standards similar to their own" [PERRY 1929: 25].

As we have seen, the act of joining a community center was purely voluntary, and some of the centers explicitly excluded Blacks. Participation in the community, in other words, was at once both voluntary and selective. This is wholly unlike the Japanese *chōnaikai* of which one almost automatically becomes a member simply by living in the neighborhood. Perry's choice of the elementary school district as the minimal size for his "neighborhood unit" thus may well reflect the free associational character of American society: only at that level is it possible to exercise a degree of selectivity in participation in community affairs.

## 5. NEIGHBORHOOD GROUPS AND ELEMENTARY SCHOOLS

Elementary school districts, as anyone who has school-age children will realize,

have a certain practical reality as units of community life. In contemporary Japan, a wide variety of local groups, including the *chōnaikai*, either take school districts as a territorial unit of organization, or have close links with groups which are themselves organized along school district lines. For the remainder of this essay, I wish to explore the ways in which elementary schools have been linked to local society at the community level in the process of modern urbanization.

It is well known that in Kyoto after the Meiji Restoration of 1868, elementary schools were established at the initiative of the local machi organizations. At the time of the Restoration itself, schemes for setting up elementary schools had already been proposed by one group in Kyoto. Nishitani Ryōho, one of the members of the group, petitioned Kyoto Prefecture about the urgency of building elementary schools. Arguing that the essence of education lay not in learning to read difficult Chinese characters but rather in "being born human, to seek out the essence of the great principle of being human," Nishitani urged the importance of educating children [TSUJI 1977: 124].

Already from the late eighteenth century, there had appeared in Japan a number of pioneering proposals for the education of children, by such thinkers as Shōji Kōgi (1793–1857), Umetsuji Norikiyo (1798–1861), and Satō Shin'en (1769–1850). Shin'en in particular offered a proposal for planning cities around elementary schools.

In 1869, Ryūchi Elementary School (Kamigyō 27th Machigumi), the first local elementary school in Japan, opened in Kyoto. Some of the *machigumi* of Kyoto even assessed fees of as much as one or two *ryō*[5] per household in order to raise funds for school construction, leading the prefectural government, fearful of citizen protests against over-taxation, to issue a directive advising the refund of such assessments [TSUJI 1977: 128]. This suggests the strength of the enthusiasm of the local community in Kyoto for building schools, a reflection in part of the fact that it was already taken for granted in Kyoto that children should learn the three R's in *terakoya* or private academies. The establishment of elementary schools in Kyoto proceeded apace, and by the end of 1869 fully 64 schools had opened.

Once a school had been built, funds were needed to maintain it. To this end, "elementary school corporations" (*shōgakkō kaisha*) were set up in Kyoto, using the capital of the *machigumi*. These corporations had as their functions the perpetual maintenance of the local schools, the provision of aid to the poor, and the promotion of local industry.

Within each of these local schools in Kyoto, an office was set up for machi officials, which served as the center for conducting surveys of the district membership and for distributing relief rice. The schools also served as centers for public health services, as well as the sites of fire-watch towers and warning bells. In short, the public schools were the focal points for the efforts to modernize and improve the life of machi residents.

From mid-1871, Kyoto Prefecture directed the children of the aristocracy, the

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5) Two *ryō* in 1869 would buy about 33 kilograms of rice, worth approximately ¥12,000 at 1985 prices.

clergy, and the ex-samurai to enter the local public schools together with commoners, so that all social levels came together on an equal basis in the classroom [TSUJI 1977: 141–144].

Following in the wake of Kyoto, the movement to set up public elementary schools was actively pursued in Tokyo, where six schools were opened in the following year of 1870. As in the case of Kyoto, the expenses for running the schools were assumed by the residents of the neighborhoods in which the schools were located, and the pattern of direct community support for schools became widespread.

After the establishment of the modern system of local administration by the central government in 1888, schools districts were no longer territorially identical with the units of local government. In Nagoya and Kobe, school districts were unified into a single large district for the entire city, but in Tokyo, Osaka, and Kyoto, the original school districts continued to function along the same territorial lines, wholly separate from the system of municipal administration. In Tokyo, elementary schools came to be administered by the wards (ku) in which they were located, but in Kyoto and Osaka the elementary school districts continued to survive as independent corporate bodies, even during the years of rapid metropolization in the 1920s [TŌKYŌ SHISEI CHŌSAKAI 1926: 799–801].

Thus in Japan's major cities, elementary schools were in origin the creation of local communities, and they continued in some cases to survive for many years wholly independent from any administrative authority above the community level. Even today, in the case of Kyoto, the school districts continue to serve an extremely important function as the framework for a great variety of organizations at the local level. In any particular school district of Kyoto, for example, some of the many groups which are organized along school district lines include: Health Association, Athletic Association, Crime Prevention Group, Womens Committee, Youth Association, Disabled Veteran Association, Elementary School Alumni Club, Social Welfare Association, Swimming Pool Committee, Voluntary Fire Brigade, and so forth. Many of these groups are organized on the basis of direct representation from each of the various chōnaikai in the school district. At the same time, each such group has a representative on an overall "Union of School District Organizations" ([Gakku] jichi rengōkai).

In contrast to the close integration of elementary schools with the local machi community which one finds in Japan, European cities have tended to have a high proportion of private schools. In London in 1922, for example, private schools accounted for 39 percent of all elementary schools and 20 percent of all school students [TŌKYŌ SHISEI CHŌSAKAI 1926: 481], in distinct contrast to Tokyo, where in 1924 only two percent of all elementary school students were attending private schools [TŌKYŌ SHISEI CHŌSAKAI 1926: 568–569].

In England, the initial pattern was to leave the education of commoner children to Sunday schools and charitable groups, so that the state itself was relatively slow to establish public schools [KYŌSHI YŌSEI KENKYŪKAI 1983: 65–66]. By the end of

the nineteenth century, a complete system of public education had been established, but the pattern of wholly separate private and public school systems continued until the two were finally unified by the Fisher Act of 1918 and the Butler Act of 1944 [KYŌSHI YŌSEI KENKYŪKAI 1983: 80–81, 116]. Thus whereas Japanese schools were of what might be called the "local community type," English schools were rather of the "private corporation type."

In America, settled by immigrants from England, the pattern of the growth of elementary education was similar to that in England. Education was carried out by churches or individuals, and sectarian schools, Sunday schools, and private children's schools were established with the primary objective of providing an education for the children of the poorer classes [KYŌSHI YŌSEI KENKYŪKAI 1983: 81]. As of 1922, private schools accounted for 18 percent of all elementary schools in Boston, and 36 percent in Milwaukee [TŌKYŌ SHISEI CHŌSAKAI 1926: 441, 567]. Note that the figure for the eastern seaboard city of Boston is almost the same as that for London in the same period, while the figure for the midwestern city of Milwaukee is much higher.

In the New England region in which Boston is located, the organization of school districts by local communities was begun from an early point. Local residents spontaneously set up school districts, assessed educational taxes, hired teachers, and administered elementary schools. In 1789, the State of Massachusetts finally recognized these local school districts, a pattern which was followed by other northern states. In Massachusetts, a major educational reform was carried out in 1855, aimed at assimilating the growing numbers of immigrants, at cultivating patriotic feeling, and at secularizing education through separation of church and school [KYŌSHI YŌSEI KENKYŪKAI 1983: 81–82].

From this it is clear that elementary schools in the United States, at least in New England, were closely rooted in local communities. It may be presumed that this tradition was also a factor in fostering the community center movement, which used the elementary school district as its basic framework. But at least in terms of numbers, the level of private school education remained similar to that in London, and much higher than that in Japan, suggesting that the principle of community-based elementary education was by no means universal.

## 6. CONCLUSION: TWO TYPES OF URBAN STRUCTURE

Japanese cities are composed of units known as "machi." Anyone who sets up residence in a particular machi is almost automatically qualified to become a member of the local *chōnaikai* and there is generally low-keyed pressure to join. The unit of membership is generally the household, so that the overall pattern of organization is one of "nesting": cities are made up of machi, machi are made up of households, and households are made up of individuals. Since each unit is defined territorially rather than socially, there are no hierarchical distinctions between classes. Within this nested system, the elementary school district functions as one important type of

intermediate "nest."

This essay began with the observation that the Japanese address system is of the "nested" type. This is of course a reflection of the fact that the Japanese city is spatially organized as a complex of machi, and these spatial units have come to correspond to units of social organization, best represented by the *chōnaikai*. Thus the Japanese city is apprehended in terms of an essentially spatial structure.

The address system in Western cities is of the "axial" type, by which one is led to a given point directly through linear streets. This corresponds closely with the social structure of the Western city, in which the individual rather than the household is the basic unit. This of course is not to say that local territorial relationships have been considered unnecessary, for it is precisely this sort of relationship which was at the heart of Perry's theory.

Perry imposed the idea of the neighborhood on the elementary school district, but in fact the school district was too large a unit for a true neighborhood. Although he proposed a clearly defined spatial unit, his real concern was with creating "an urban district favorable to voluntary association," characterized by such organizations as taxpayers' groups and ward-improvement associations [PERRY 1929: 55]. The characteristic feature of such a "neighborhood unit" was that one did not become a member of the community association simply by fact of residence in the community. Participation was as individuals, not as household representatives, and a selective element is apparent in the rejection of Black membership by some community associations. A community based on such a principle of voluntary association tends to be composed of those who share similar life styles and beliefs.

This is very different from the Japanese *chōnaikai*. The "nested" structure of the Japanese city dictates that anyone located at a given point in space will automatically have a place in the social structure. In other words, it is at once a mode of spatial organization and a system of social custom. The automatic element means that no particular volition is required for participation; on the contrary, it requires an act of the will to *avoid* participation.

In an "axial" urban structure, by contrast, the basic assumption is of wholly disparate individuals. One can envision the ways in which these individuals relate to each other as a system of lines. These lines, which correspond spatially to the streets of the city, presume both volition and shared beliefs in order to link one person with another. These shared beliefs tend to constitute a coherent ideology for any give social group.

It is apparent that the "nested" type of structure can be very easily reproduced and extended. It permits standardized modular units of urban organization which can easily embrace diverse social elements. Since this pattern has become systematized and institutionalized, its expansion proceeds automatically. It is revealing, for example, that even in high-rise apartment complexes, organizations comparable to the *chōnaikai* have emerged. As mentioned earlier, Japanese cities underwent a process of explosive growth in the years following World War I. It may be suggested that one reason for such rapidity of urban expansion may have been this system

of natural self-reproduction.

In an "axial" system, on the other hand, in which voluntary and selective relationships are presumed, expansion likewise tends to be selective. There is a tendency for those of similar class and similar beliefs to be grouped together both spatially and socially, and to avoid grouping all sorts of different people together in a single territorial unit. Hence in a situation in which there are diverse elements— as there are in almost any community—there tends to be friction among the residents. To avoid such friction, it comes to be considered necessary to create larger spatial and social frameworks and to focus on ideological rather than territorial principles of association. I would suggest that such a pattern of organization is not very well adapted to a situation of rapid urbanization.

In American cities in recent years, there has been a reevaluation of the importance of the neighborhood as a way of improving living conditions in slums and lower-class residential districts. At the same time, vigilante-like neighborhood clubs are formed as a means of self-defense against urban crime. It would seem that there is a groping for a proper conception of the role of the neighborhood in America.

What about the case of Japan? While there are few who actively oppose neighborly relations and *chōnaikai* functions, one can detect a general falling off of machi-oriented activities. The structure of "nesting" has become more vague and loose. This is particularly true in the central areas of large cities, in which it is said that almost half of those living in upper-income apartment buildings (*manshon*, from "mansion") do not register as residents of their machi—in effect a denial of one's place within the nested system. In time this may well lead to a type of urban society which is quite new to the Japanese.

Thus it would appear that Western cities, organized along axial lines, tend to be turning to nested structures as a way of shoring up their social organization, whereas in Japan, the recent tendency is rather in the direction of axial organization, away from the tradition of a nested structure. As mentioned earlier, Kyoto's address system is in fact a hybrid of the nested and axial systems, and in this sense both the spatial and social organization of the city of Kyoto may provide some sort of model for cities of the future.

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