

Continuity and Regeneration of the Orders in City Space - Revitalization Proposal for the Center of Tokyo

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Abstract

Through the process of urbanization, large cities in Japan, in particular Tokyo, have seen a reduction in green spaces and the loss of public spaces. We have to realize that our present-day city has lost what we should have inherited and reproduced. This paper proposes the ideal state of urban space and city architecture by observing the historical transformation of the local orders in space based on the idea and method of Open Building. The Open Building method can help in understanding the order of city space.

Traditionally in Japan, the natural environment and the built environment constituted city space as a whole, not as a confrontational existence. Reconstructing the relationship between these spaces, which is suitable for the present high-density city environment, will ensure the flexible transformation and the sustainable development of the urban fabric over a long period of time. It is often said that the context which becomes the background of the prototype for city architecture has already disappeared in Tokyo. This paper suggests that the hidden orders, like natural geographical features and site allocation patterns help us to figure out the prototype for city architecture and proposes the way to establish public space and green space in the central part of a city block and activate a central city.

In order to realize a sustainable society, a city must be grown utilizing the existing building stocks. Therefore, to realize the sustainable growth of cities, the construction industry must change its business model from scrap and build to the maintenance and reuse of the existing building stocks in cities.

Keywords: city space, order, regeneration, Tokyo, green areas, prototype for city architecture

1. Introduction

Presently, most of the projects that are called “urban regeneration” are for the conversion of ex-plant land and shunting land to high-rise building areas, but these areas connect weakly with the existing surrounding city areas, and it is difficult to say that they are a renewal of the history these cities are inheriting. What are the things modern-day cities have lost, what should be “regenerated,” and what should continue to be passed down? This can be understood by studying the individual “spatial order” of the particular area that has been passed down over time. These days, “nature” scarcely exists in the city centers, but in the past it existed as part of our immediate life space. The redefinition of our position where we want the natural environment in modern cities, and rebuilding the order of the chaotic city space should lead to the sustainable development of cities.

1. Regeneration of the Order of City Space

During the transformation of cities over the long period of tens and hundreds of years, the things that remain are not physical structures such as buildings or civil engineering works, but moreover the void spaces such as streets and squares. For example in Tokyo, even if the buildings change on such streets and avenues as Omotesando, the Chuo-dori Avenue in Ginza, or the Daigaku-dori Avenue in Kunitachi, that space or landscape continues as before (the social reaction when it does not, paradoxically proves this). Public spaces and parks such as the Imperial Palace Plaza, Yoyogi Park and Hibiya Park also continue to exist longer than any structures. Cities are formed due to the connection between them and the lives of the people who live there, so in some cases a non-daily “festival” continuing for centuries can be a decisive factor in forming the city space. The basis of the continuity of cities can be said to be the consciousness of people toward their lifestyles and the city space.

As shown in Table 1, the “structures” and “spaces” that form living environment can be seen as an hierarchical structure ¹⁾. The higher the structures and the spaces in the hierarchy, the longer their life spans. The transformation of these structures and spaces transform the structures and spaces lower down in the hierarchy, but even if the structures and spaces lower down undergo some transformation, the structures and spaces high up in the hierarchy remain stable.

One of the reasons for the chaos in the Tokyo city environment, and for the extremely short life period^{*2} for buildings there, is because the high level structures and spaces which should have a long life period and should be stable have shown major changes in a short period of time. While maintaining continuity culturally and historically, in order to build a flexible city which is able to meet the extreme social and economic changes, there must be control of the order, to control city structural elements that should be maintaining continuity, and for changes in the short term.

In the case of Tokyo, during the Edo Period, samurai residences were located on the high land of the Musashi plateau, and the residences of low caste samurai and tradesmen were located in the valleys below, forming a life space for a mixture of living and working areas according to the configuration of the land. The Tokyo Bay could be seen in the distance from the roads leading down from the high land, and there were various places where people could enjoy the sight of Mount Fuji. Even in London today, protecting the view of Saint Paul’s Cathedral from various main points around the city is a major guideline for the city planning.

In the case of city planning in Japan, too much predominance has been given to universality rather than the characteristics of the place, resulting in the creation of a stereotype city space. By paying attention to the various contexts of the city such as the configuration and breakdown of the land, the history and the culture, and by fostering the “characteristics of the place,” rebirth could be given to a city space with individuality and activity.

Table 1: Levels and Structure of the “Living” Environment

Environ-Mental Levels	Elements that form the	Physical Forms that result	Spaces that are formed	Principles that control the Environment
6	Rivers Hills	Landscapes	Natural Environment	Nations
5	Major Arteries	City Structure	Neighborhood	Municipalities
4	Local Roads	District	Block	Local Council
3	Building Elements	Building	Built Space	Building owner
2	Partitions	Floor plan	Rooms	Occupants
1	Furniture	Furniture Layout	Place	Individuals

3. Urban Regeneration Basaed On History And Uniquesness Of The Area – Use Of Rivers As City Life Space

Like other historical cities, Edo, or Tokyo, developed around the rivers and canals. These days, the rivers are isolated from the town by vertical embankments, and the buildings have their backs to the polluted rivers, but previously, the view was opened up, and the river banks, with direct access to the water transportation network, were ideal sites for city architecture.

Buildings are now being built closer together, so in present-day Tokyo, without enough open space, dry riverbeds and harbor front areas are an important spatial resource. To acquire new land and build parks and green spaces would require an enormous amount of money, so the use of underused river spaces as the structural element for rebuilding the city would be effective.

Dry riverbeds function as roads for the wind, clean the air and cool down the city heat. Over the past 100 years, the average annual temperatures have risen by over three degrees centigrade, and it is said that the protection and creation of green areas, and greening urban areas would be effective in reducing the temperature of Tokyo by about 0.3 degrees centigrade ²⁾.

Like the Emerald Necklace of Boston, by joining the green areas of the rivers to the green areas of the inner city, and building a green network, the effect of regenerating nature would be increased, and would also give a chance for the cut-off ecosystem to be reborn. In Tokyo, the separation of living and working areas has advanced too extremely, and it is said that the average work and school commuting time is 71 minutes, with about 70 percent of the people spending over one hour to commute daily.

If nature was brought back to the center of the city, more families would probably choose to live there. Regeneration of the city or an area cannot be realized just by the

renewal of individual buildings. One also cannot anticipate too much degree the effectiveness of the urban regeneration policy through conversion (the conversion of offices to residences), unless this conversion improves the appeal of the entire area.

One known example of successful conversion in urban regeneration is the Clerkenwell area of London. That area is close to the City, the financial and business center, where intensive conversion was undertaken in the 1990s. There were five points regarding the background to this boom.

- 1) The emergence of a rent gap between offices and residences;
- 2) Relaxation of regulations regarding building use;
- 3) Tax benefits from the government;
- 4) The developers used the media to promote lofts as a new type of lifestyle; and
- 5) The image of the developed area was also promoted, which also gave great impetus to the project.

Presently, in the Nihombashi area (Chuo-ku, Tokyo), there is much anticipation for the use of conversion to do something about the empty office space, but there must be some city-level measures to improve the appeal of the area. By making use of the site of this area which was previously a center for water transportation, fast boats leaving from Nihombashi could reach Haneda Airport in 20 minutes, and Tokyo Disneyland in 30 minutes, so the area could be regenerated as ideal for hotels and the entertainment business. For other areas also, ideas for regeneration could be found from their historical context.

4. Finding The Potential Value Of Existing City Space And Green Areas - Revitalization Proposal For The Center Of Tokyo

For the regeneration of the city of Tokyo, there is a need for making the environment of existing city areas more appealing, not just the redevelopment of vacant factory sites. Even if only a few, there are areas in the city center where not enough is being made of the potential value of space and green areas. I would like to make the following proposals for these space and green areas.

Uchibori-dori Avenue in the center of Tokyo has eight lanes going around the palace, with trucks and other large vehicles always making a lot of noise. The green-sloped area of the palace grounds opposite the moats are visually and psychologically isolated from the surrounding city area (photos 1 and 2). The Metropolitan Expressway in that area runs underground because they would destroy the views of the area around the palace.

If the Uchibori-dori Avenue were put underground, and the traffic restricted along the present Uchibori-dori Avenue, it would surely create a pedestrian space with lots of greenery. I would like to connect the rich green space around the moats with the city space around the palace by giving bypass surgery to the Uchibori-dori Avenue which is running through the heart of the capital of Tokyo.



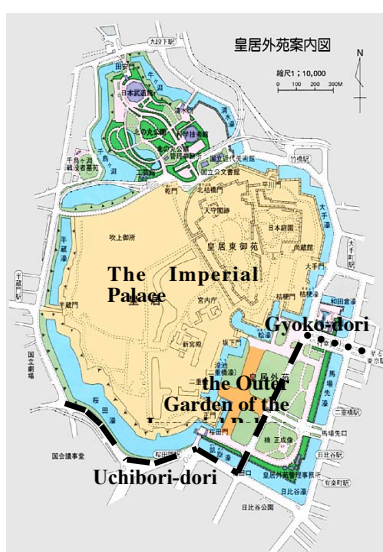
Photo 1: The Green Areas around the Palace



Photo 2: Uchibori-dori Avenue around the palace (taken from same place as photo 1)

(2) Uchibori-dori Avenue cuts through the Outer Garden of the Imperial Palace which is adjacent to Hibiya Park, with the car noise creating a restless atmosphere. This huge square was actually constructed for the announcement ceremony of the Imperial Constitution, but at the time (1889), it was one big undivided square ³⁾. If the Uchibori-dori Avenue were put underground, and Japanese black pines were once again planted, it would give birth to a very large open space area covering around 30 hectares (400 meters by 700 meters) where events, an outdoor stage, or sporting events could be held, and would activate the business area in the center of the city which loses popularity on holidays.

(3) The road leading from Sakuradamon to the main entrance of the Diet Building is always an appealing space with security vehicles parked. It has not been designed as a space for citizens, and is poor compared to the squares in front of the national parliament buildings of foreign countries (photo 3). I would like to propose that this important space in the capital city is reconstructed as a healthy, green, pedestrian area where people can gather.



Map 1 Central Tokyo; Uchibori-dori Avenue, the Outer Garden of the Imperial Palace, and Gyoko-dori Avenue



Photo 3 The space in front of the Diet

(4) The Tokyo Station Building in Marunouchi is scheduled to be rebuilt in its original state, so at the same time, it is hoped that landscaping and reconstruction work is done to Gyoko-dori Avenue leading to the palace, and the square in front of the station, as city spaces that symbolize Japan's modernization process. To preserve the historic buildings in this area, it is possible to use the system for an area exempt from the ratio of building volume to lot, and move the unused portion to another area. However, by doing so this could cause confusion, and moreover there may not be any need for the unused portion elsewhere. As far as the owners of historic buildings are concerned, the lost profit due to the cost of conserving the buildings and abandonment of redevelopment would not be small. Therefore, understanding for the conservation due to their cultural value should not just be sought, but there needs to be an economic and rational system in place which the owners can appreciate, such as tax measures, for example fixed asset and city planning tax reductions.

5. Prototype For City Architecture Combining Sustainability And Development

When thinking about a prototype for future city architecture, the types of high-density residences around the world, and the structural principle of machiya-style traditional Japanese houses serve as useful references. They have the following characteristics ⁴⁾:

- 1) The environment of each site such as sunlight and wind passage is autonomously secured, and any environmental impact on neighboring sites is kept to a minimum.
- 2) Any rebuilding or renewing work on a site-by-site basis is done, so the structure gives growth to the city as a whole.
- 3) They reflect the culture of the area, and the mutual relationship between both the city's unique public domain and private domain are developed.
- 4) There is a common understanding and agreement about the structural principles of the city environment by the residents between each other, and this continues generation after generation.

However, in most cities in Japan, during the process of modernization, high-rise buildings appear without concern for the neighboring areas, and the streets which were part of the life space have transformed into wide roadways, so the traditional city architecture no longer functions.

To create a "prototype for city architecture" for today, replacing the style of traditional city residences, rules need to be made in each area regarding maximum height, the distance between buildings depending on the size, the use of the part of the site that faces the road (for greenery, or for pedestrians), the location of car parks outside, and how the cars should be driven in. It is necessary for the residents of each area to discuss and make the rules, the rules decided upon and a process for renewal must be upheld by everyone and passed on. The "Urbanex Sanjo" machiya-style traditional Japanese house-type condominium^{*3} project that was completed in Kyoto in 2002, is known as a pioneering effort of introducing an architectural style with values upheld by the "town" as a whole, after years of consultations between the residents of the area and various specialists ⁵⁾. It is hoped that this type of project will be developed throughout the nation, creating various types of city architecture matching the different areas.



Photo 4: Urbanex Sanjo, Courtesy of Urbanex Inc

As one method of regenerating existing urban areas that is being proposed is to put a narrow street through the cleavage line at the back of sites in a block, which can be used for greening, for pedestrians and as common car parks ⁶⁾. Blocks in historical urban areas have depth^{*4}, so the sites in the block are easier to use with people moving through the center of the block, and the environmental conditions of the backs of the sites could be improved.

In contrast to the main roads which serve for cars, by having smaller pedestrian paths in the center of the block, there could be good access to the commercial and business areas via the main roads, and good access to residential areas via the back roads, thereby maintaining good access to both separately. By using the most back part of sites by the block as a whole commonly, a new type of architecture for a mixture of living and working areas could be created while using the existing buildings, and on top of that a green area can be secured in the center part of the block community.

In Britain, a building that was built for use as a residence 100 years ago, was after that used as offices, and recently has been converted into residences again. Because the core, such as the stairways and elevators could be used as they were after the building had been converted, the refurbishing cost was low, and so it was a good candidate for conversion. It is thought that when planning buildings in cities in the future in Japan, architecture with highly-versatile plans and equipment specifications, so conversion into either offices or residences or vice versa is easy, could be a requirement for sustainability and development.

In Japan, because building requirements are relaxed for the various areas and uses, it is possible to construct a building for any type of use relatively freely, so buildings for various types of use are mixed together in urban areas. On the one hand, because there

are many detailed regulations for each building depending on its use, conversion is not easy. In the future, more importance will be placed on global environment conservation such as the effective use of resources and reduction in industrial waste. Also, the Japanese population is dropping, so a high level of economic growth cannot be expected. Therefore, there should be longer use of the building stock through conversion, city growth and renewal. City plans, building standards and fire regulations must be revised or rewritten at an early date, so that it will be possible to convert buildings smoothly.

6. Conclusions

When considering a prototype for city architecture in Japan, it is often said that the urban tissue, which is the context (the context of the area), does not exist. However, the natural configuration of the land and the historical breakdown of the land, hidden in the background of the city, give suggestions of cornerstones. Also, historically, “the natural environment” and “structures” are not an opposing existence, but have given structure to city space as one. The rebuilding of that relationship as something suitable for the high density city of the modern day, will not only enable cities to smoothly transform, but should also contribute to the continuation of their growth.

Notes

- 1: Based on N.J. Habraken, 1998, The Structure of the Ordinary, MIT Press,
- 2: The average lifespan of Japanese houses is about 26 years (the average age of the houses demolished in the past five years). This is extremely short compared to about 44 years in America and 75 years in Britain.
- 3: Condominiums based on the structural principles of traditional Japanese city houses mainly used by merchants.
- 4: According to the ancient Japanese grid-type lot-allocation city planning structure, a block is 120 square meters, which is divided into two or three sections. A block is therefore between 40 to 60 meters deep.

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