

Roles of Park and Green Space Planning for Establishing Livable Communities in the Environmental Age through Encouraging Linkage of Academic and Practical Approaches

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Abstract

The significance and means of parks and green space planning have been changed dramatically in this century in Japan. The first priority must be given to define the means and purposes of planning, especially the role of ecological, social and economical management with the increasing trend of environmental concern, and the method to estimate values of park and green space from the point of view of regenerative society development. The role of planning parks and green space is reviewed in the following three aspects; as tools for land use control (master plan), as tools for finding appropriate lands for purchasing land (development plan) and tools for application of individual development technique of green space and landscapes (site plan and design). It is a serious issue that the existence of parks in urban setting which used to be considered as a top priority, is now being challenged in terms of economical, social and environmental benefits. In such processes, the most important issue is to define what makes parks and green spaces attractive and ecological to obtain social support to be developed.

Key Words : Park And Green Space, Landscape Architecture, Green Master Plan, Greening Strategy, Sustainable Development

I. BRIEF OVERVIEW OF THE BACKGROUND OF PARK AND GREEN SPACE PLANNING

The classic frame of park and green spaces as current professional background seems to have been complete in the late 1910s in Japan. It inherited contents of the western professions such as Landscape Architect, Landscape Gardener, Landscape Designer, Landscape Engineer, Landscape Artist, Architect-Paysagist, Gartenkünstler. The domain of park and

recreation studies as practical science has been divided and handled into gardening, park designing and construction, the community landscape development and nature landscape planning. It may be said that the frame of a domain of landscape technology has been taken over until today while establishment of laboratories at universities could have been closely connected with it. The various new open spaces such as gardens, parks, the community open spaces including urban squares and natural lands which have been defined in legislative means by different governmental organizations were expected to be run

out to build new spaces and institutions such as biotope and the artificial planting ground for green spaces such as roof top gardens and artificial grounds with trees and grasses. It should be an object to begin to bear new sites and should listen to a recent tone around a general idea of landscape related scientific areas mainly based upon ecology and environment. These spaces and areas have been defined in the legislative manner of central government under each law which countermeasure each projects for long period. Thus the Japanese experience of landscape research has been closely related with the division of development means of green space and landscape areas through application of theory into the practical programs.

II. ASPECT OF SITE PLANNING OF PARK AND GREEN SPACE LINKED WITH CITY PLANNING ADMINISTRATION

I would like to define landscape, from a standpoint of park and recreation administration, as "visual and dynamic existence of spatial units of green spaces, namely green patches of land, which are influenced by natural, biological, ecological and horticultural concerns under certain legislative, social and economic realities. It gives approval at a certain economic condition to consider it as the structure of a city and which is so defined in "gestalt psychology", and as a "spatial network of individual sites". Accordingly it is nothing but the order of all public spaces in general where design and management are possible at the same time. In this regard, parks and gardens were objects for planning to decide the location of sites in connection with city planning legislation.

After the adjustment of the way of understanding

the role of public services was introduced as is important, amenity and ecology were added as thoughts of most high priority, and the thoughts of community oriented importance became more easily accepted to back up the diversification of the subject. Responsibility that is indispensable for those who begin to create new environment and landscapes in the park are classified into the following three: responsibility for the community, responsibility for ecology, and responsibility for the economy. Engineering system related to creation of facility-oriented landscapes with biotope and social security of the spatial conservation of green space is required the help of landscape ecology, and the construction of building is coupled with ecologically supported environment engineering. Besides, workshops for barrier free design and universal design and the development of the disaster-free communities have been realized as responsibilities for a community. Theme parks, civic arts and other new sites began to be public arts as the expression of the responsibility for the economy.

All park and recreation professionals including landscape architects made continuous efforts in the construction of new "sites". Park and recreation administration profession shall include landscape management sustained by landscape architectural profession when provided with the ability that the realization of such all responsibilities could propose decidedly. In addition to intensive landscape operation in handling given sites, it is comprehensive technology to operate the independent landscape management system that the economic and the local community subjects are worked on. This synthesis technology shall be expected to adjust form and function of open spaces.

The following open spaces shall be the places we should work for the sake of mankind: gardens, city parks, residential complexes, commercial complexes, the central business districts, industrial complexes,

farm villages, natural areas, river basins, roads, open spaces of other traffic services and so on. It is a collaboration system that is indispensable to realize such frame. Within this frame are a civil engineer, an architect, a city planner, a rural planner, an interior designer, a horticulturalist, an ecologist, an artist, a psychologist and so on. We should recognize, in the community oriented landscape period, the fact that the clients are diversified, and it is indispensable to invite all members concerned in all processes of decision making and design and planning processes to realize our dreams. Even if there are various landscape managers such as administration landscape managers, corporation landscape managers and citizen landscape managers, the right or wrong of the future of a community shall rely upon the degree of correspondence of each of them, and it should not be an exaggeration.

III. GREEN SPACE MASTER PLAN ADMINISTRATION AS TOOLS OF LAND USE CONTROL

We have developed so large area of land for industrial and residential use. Japan has realized most progressed urbanization and industrialization all over the country through which densely inhabited districts have spread out everywhere. Beautiful mountainous country has lost natural environmental sustainability through the process of modern development of any kind. Conservation of green space was of great concern to establish reasonable order of land use by which rational distribution of land resources for suitable use, and in that context, the concept of ecological planning was not the leading background for the creation of development schemes. Quantitative balance of green space and developed land was a great interest among planners. Today, in the early 21st

century, ecological planning method is only the one that enable us to indicate the future of our urban environment. Realization of symbiotic relation of cities with natural environment is the answer of our works, but it is true how to realize it is still the most difficult question. I would like to talk about the planning process of green spaces in cities in Japan as example of applying the principle and concept of environmentally friendly development process of urban environment. That is a green master plan system which has been started in 1960th, and revised two times afterwards. Today we have the new one which many local municipalities would try to settle on their own responsibility with help of peoples participation, and, of course, landscape architects and other professionals.

The planning legislation is applied for parks and open spaces for local governments to create public open spaces for recreation, environmental conservation, landscape enhancement and disaster prevention has been tested by many try and error attitudes. I think this idea would help to give us much generated method for environmentally balanced social development technology. The concept of symbiosis is originally a biological term and quite recently used as most effective technical term for expressing environmentally balanced condition of landscapes, and this activities must be operated technically in the field of landscape planning and design.

There have been many projects of development plans related with ecological concepts such as eco city project and eco-town project in which all development projects of a city should be united into one conceptual system. They have been linked with urban planning system. Landscapes and green space were considered as means to control development activities in the spatial context, and, in this regard, the problem of the planning is the distribution and spatial standard of conservation.

IV. ADOPTING STRATEGIC GREENING MEASURES AS TOOLS OF SUSTAINABLE DEVELOPMENT OF COMMUNITIES

1. Basic Ideas

It is a contemporary international trend that spatial form of a city becomes artificial without limit. Assertion to circulate through urban greening is on the turning point. As a city develops, I think it is natural that greening technique must be evolved. The strategy of greening that one city needed in advanced stage must be revised in the next stage. There are two different types of strategies. To solve regionally and locally according to the economic and natural environmental situation is the applicable one and the other is the fundamental strategy that must be taken over to from the former stage. It is said that today is the age of environmentally symbiotic balance, and techniques of nature environment recovery has a power. I would like to, from a point of view of systematic greening, mention about the strategy.

The way of thinking to realize harmonious city structure with ecological balance become common sense. It is important that artificial landscapes and natural balance is preserved by natural open land where ecosystem is maintained through generative system of water existing under the control of environment for the human residence in a city. It is a common means to develop ecological network of water ways and green space where biological diversity is strictly preserved. It may be derived from fundamental statement of green space master plan designated by local municipalities.

Sir, David Nicholson describes the importance of greening that is ecological in the book entitled

Greening of the Cities in detail in the later half of 1980's. He has insisted that it was important to establish open space network where ecosystem is maintained, and to put one space together organically by one with various greens. He calls the technique as greening. He evaluates the ecological meaning of open space system of Boston proposed by F.L. Olmsted as the model. To systematize green open space gives a city various quality, and to put them together organically guarantee natural conditions of a spatial structure of a city. In a British city, he warned, the area ratio of green space is high, but takes you to understand that the big parks which are short in the wild nature taste scatters irrelatively. It should be positioned as basic strategy to systematize various green spaces ecologically. Today, this planning principle is strongly backed up by out comes of scientific research of ecology and landscape architecture which sustain the quality of green space.

The effort to systematize various green patches of land according to city form is important, Green tract of land is sorted to the natural ground and institutional open space. In the natural ground, a function is maintained by such as forests, rice fields or fields, marshes, and circulatory system of water is maintained. It implies planted area of parks of a certain size. Building occupancy rate and floor area ratio shows a tendency to increase in the city center, and this tendency is gone along to the suburbs most generally. That's why inner city problems tell the importance of regeneration of nature in many different ways. Problems of inner city green space planning will occur from here.

2. Meaning of Traditional Planning Standards for Green Spaces

According to the regulation of standard of green space master plan, the green ratio standard was as an

indicator of the goal of the plan, and it indicates the ratio as 30%. It became an established theory from academic sides of landscape architectural studies that the ratio of 30 % is an appropriate level of a green space proposed in the plan which is called as city greening promotion plan. It will be assumed that this 30 % as a quantitative aim temporarily. More than 50 % should be an impossible goal in a city that an area of the natural ground seems to exist only 10 % in the present situation. It is extremely difficult in the former to create the green structure, and therefore, what is chased in surface countermeasures is general, the frame structure with redevelopment of land is made much of. This quantitative standard is essential for the local municipality in order to estimate how much money is required. In this context, the standard is meaningful for the realization of preserving green space and development of parks. In the national governmental consideration, it is important how much budget must be prepared to attain the goals.

An ecological function of the natural ground of an area of a city gives critical influence to a quality of environment of an area of other neighborhood cities. But, actually speaking, Japanese city structure is complicated, and it is rare to apply a fixed model. Because the base which green patch of land exists in each varies, it is needed to establish an aim of independent characteristic plans. Accordingly the natural ground is considered as environmental resources from that point of view. This supports the reality of green policies of the government. In this sense, the planning is very political and administrative.

It is important to take them into the matrix system when the greening strategy of a city shall be considered. Greening is redefined to "make the state of natural open land which a man seeks for as environment of the area where he lives in under the balanced condition of natural environment and urban amenity is well realized". There are three types of

greening system. Type A is a primitive type that was created resembled to the pure nature ground of distant place. There is an example of Amsterdam Boss in the Netherlands. Type B is located among natural open land that may be called alteration type. There is a garden city of London suburbs as an example. Type C is the city that always holds rising in the business district. It is the example of the shining city that Le Corbiers has proposed. There are so many small pocket parks and atriums in the giant cities as Tokyo and New York as examples. Actually the greening is a process of the control of urban development by means of developing greens to a certain quantity and quality which is considered as an appropriate condition to us.

3. Strategy of Greening for Comprehensive Development of Individual Green Spaces

Generally, land of a city is classified roughly into the next three areas: inner city, densely inhabited districts and the urban fringe area where agriculture and forestry excels in. The geographical condition becomes a cause of difference of strategy of greening. An original strategy is to be developed in each region. A strategy of the business district and a strategy of urban fringe accomplish evolution most sudden today. The former is important as the place that surface of a wall of a building and technology of the outer layer greening of the roof is applied. The latter is important as a place of application of resource maintenance technology of farmland and forests for regeneration. These two different green zones are considered to rescue the heat island phenomenon caused by complicated mechanism of urbanization.

It is important in commercial and business district to plan for advanced greening by positive practical use of corporation open spaces. Diversification of space and recognition of them as arts becomes questions to

be solved. Because it is replaced in this area by building, therefore the greening method is established and strongly influenced a form of building and engineering works. It is expected that green space diversify increase in the future. Because the floor area ratio increases, artificial greening spaces in the commercial spaces will go along rapidly. The new greening material as an element of artificial environment of atrium is developed within large buildings. Such technology is developed as so called interior landscape technology.

Need to prepare systematic management of spaces and to solve problems of burden for the cost happens. In these spaces, a burden for the cost is to be made fundamentally by private sectors who deal with their own properties and assets. The contents are sorted for maintenance and management costs and construction costs. Because maintenance and management expenses are reduced, maintenance free technology will be thought about. Daily activities of peoples in a city become automobile dependence type increasingly and, in the same time, outdoor walking space will be narrowed. Because the compound functioning progresses, automation of administration system corresponding to it should be necessary, and systematic development by existing greening will be required. All these strategic means must be united into one organic and functional planning tool which realize the goal of environmentally harmonized urban settings.

4. Qualitative Evaluation of Green Spaces for Sustainable Communities

Park and green spaces profession is still expanding range of practical field and professional territory. If we completely accept the idea of sustainable development, we must think about the influence of economy, and if we deny the sustainability, we may be able to live in highly industrial and information society where

natural environment is becoming worse and worse. We must find the point where park and green space met with the ideal solution of mitigation oriented, ecology oriented and, of course, socio economic value oriented ways of settlements and recreation requirement. Regenerative means what is proposed by John T. Lyle seems to have strong support from willing people, on the contrary, in the far remote district from a city. I don't think it possible to live in the world without cities.

A city grows everlastingly, but should be kept compact in order that peoples may be able to live in accordance with the quantitatively and qualitatively well managed green spaces. Total comprehensive greening system in the context of both of ecologically and technologically balanced spatial settings are attained. If it is realized, we may continue to live in a city without running out from there. Only park and green space can help a city be sustainable with low cost and natural means. We must be particular to the pin point place as a design subject, however, we must reach to the widely spread landscaped region where all necessary management are done and inevitable spatial and environmental systems are well sustained by landscape architectural works of not only modern but also old which must be conserved. Real landscape manager of a large city as a steward of it must be born from the field of landscape architecture in the early stage of the 21st Century. Final decision will be made by those who are responsible for the green space concerned in each community. Local administration, residents who is responsible for paying taxes, and business sector who is responsible for the use of land as resources of their economic activities.

V. EPILOGUE

The role of landscape architecture to establish sustainable green space planning system has been

changed from proposing the method of planning to initiate the means of realizing the goals in order that conservation and development of green spaces in the most effective way in a city. Local identity and responsibility must be considered as indispensable background of green space planning of our own countries, cities and villages. We must share the meaning of "planning and design" in the same circumstance even the social, political and economic background is quite different from each other. Lessons can be given through even exchange of opportunities to learn what is green space.

Judging criteria of the International Awards for the

Livable Communities, enhancement of the landscape, heritage management, environmentally sensitive practice, community involvement and planning for the future indicate that the purpose of establishing such planning system can be worth if they are applied to develop livable communities. Green space planning system should be evolved if it is coupled with ecological, economical and social means in the context of landscape management. In that sense, the planning is the process of community development through countermeasures in which academic and practical approaches of landscape architecture meet together in an appropriate manner.