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Designing Techniques of Japanese Gardens I Miniaturization and Borrowed Views

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Abstract

The main purpose of this study is to examine the various designing techniques used in Japanese gardens from a contemporary viewpoint. These techniques are often quite sophisticated as can be seen from the many famous gardens throughout Japan. The techniques of "BORROWED VIEW" and "MINIATURIZATION" have been discussed in many writings by discerning researchers.^{1, 2, 3)} In this study, I will focus on:

1. The significance of studying the designing techniques used in present-day Japan;
2. The history of the development of such techniques;
3. Some examples of such designing techniques.

SIGNIFICANCE

New types of construction materials, innovative designs, complex facade designs and drastic change in the urban landscape have vastly changed the expression of architecture in Japan. The changes have been sweeping and rapid, unlike any other growth period in our history. These, in essence, are the basis of the "MODERNISM" movement in architecture.

To clarify the thoughts regarding landscape architecture in Japan, we conducted a survey to landscape architects. Our survey involved written questionnaires and open discussion and interviews. This study summarizes the results of our study.

By and large, these men share a common stance and interest—the importance of promoting traditional styles of Japanese gardens and landscapings. Our study indicates a preference for traditional aestheticism over new and innovative designs.⁴⁾

This is not unusual. In his paper, "Criteria for a New Ethic," Prof. M. Laurie makes a proposal for meeting contemporary trends in the field of landscape architecture.⁵⁾ He stresses "THE TRADITIONAL BREAKDOWN."

Bearing in mind that traditionalism is a hallmark of Japanese designing, it is all the more important to understand the techniques which have been passed down through the generations over century after century.

While this paper cannot hope to cover all aspects and techniques of Japanese designing, I feel it worthwhile to focus on a few of the major techniques in use today. I would hope that additional and more detailed studies of these and other techniques will be forthcoming, enabling urban landscape planners to promote comfort and beauty in our modern lifestyles.

I would like to take this opportunity to thank Dr. Tadashi Kubo, Prof. Emeritus of the University of Osaka Prefecture for the data on the various designing techniques used in this study. I would also like to note the suggestions and contributions of Prof. Daishu Abe, Lab. of Urban Landscape Design of that same University, and other senior

researchers without whose assistance, this study would not have been possible. I would like to add a special thanks to Miss Nakamura for her assistance in the preparation of the graphs and diagrams herein.

DEVELOPMENT

The history of Japanese aestheticism can be divided into three stages of development, based on the types of interactions between human beings and nature.

In the first stage, or Stage One, people viewed themselves as a part of nature. In Japan, this era was earmarked by an influx of culture from the Korean peninsula and the Chinese mainland.

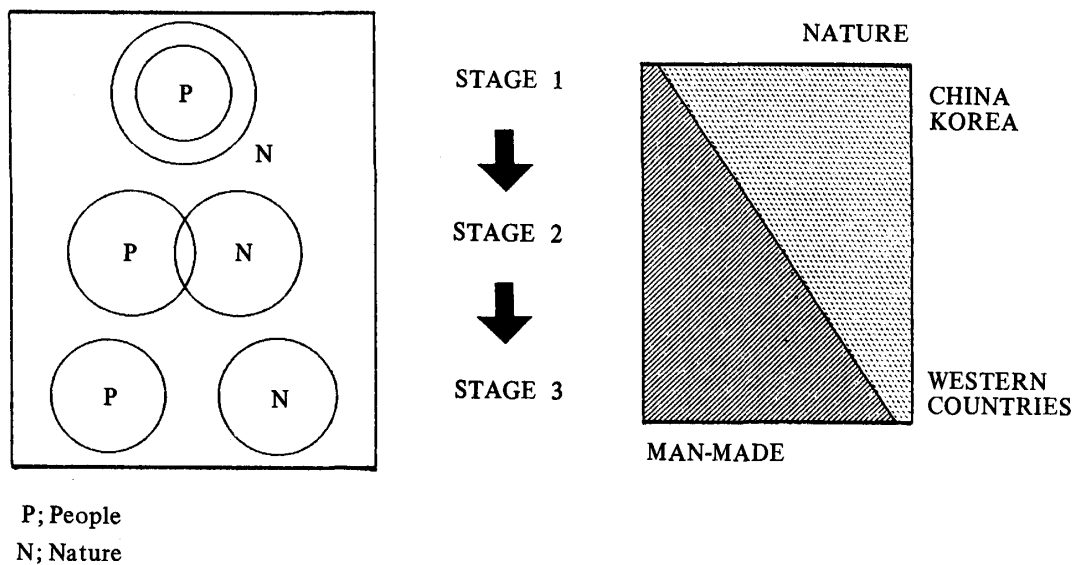


Fig. 1 The Development of Japanese Aesthetic Perception

In Stage Two, people began to view nature as a balance to human beings. This is the stage where Japanese cultural traits flourished and developed and solidified. There was, in essence, an equilibrium between man and nature.

Finally, in Stage Three, people began to draw away from nature, their view of their world changing to meet pressure and new ideologies from outside. In Japan, this was marked by arrival of American and European influences.

I believe that society and nature both have undergone these stages of development.⁶⁾ The progression of each stage is analyzed from the viewpoint of time, but these changes can be marked geographically as well,⁷⁾ with the areas of habitation closing in on primal wildness.

The aestheticism of today's society, then, is the result of a long history of development, of accumulated interactions between developing concepts and developed concepts, and not a linear succession of concepts.

In order to clarify the differences between the aesthetic perceptions of Stage One and Two, it is necessary to contrast the images of beauty. (Figure 2, Figure 3)

In Stage One, when the life of man was dominated by nature, peoples appreciation of beauty was direct and simple. I would classify their level of aestheticism as primitive. The images which they held as their standard of beauty were items such as trees, moun-

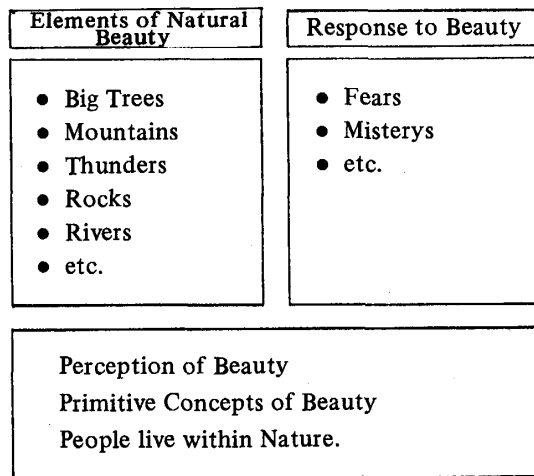


Fig. 2 Japanese Concepts of Beauty (Stage 1)

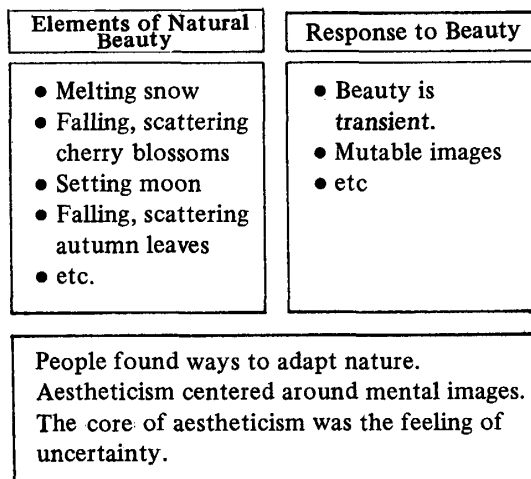


Fig. 3 Japanese Concepts of Beauty (Stage 2)

tain peaks, thunder and lightning, and rivers. These items represented not only beauty but eternity and other phenomena beyond their comprehension. Thus, aestheticism would have been closely related to mysticism, and perhaps even fear.

Some of the concurrent practices such as mountain worship religions and the assignation of a scared identity to large trees and other natural objects (known as shananism) can be regarded as an extension of the conceptual traits developed during this stage. This type of primitive aestheticism prevailed only because the lives of the people themselves were dominated by the elements of nature.^{8, 9)}

In Stage Two, people found ways to adapt nature to their purposes, fitting nature comfortably into thier lives. Aestheticism became more and more centrated around mental images of natural phenomena. Various methods of evaluating nature, the changes of nature, and the place of man within nature became of paramount importance. During this time, the effects of Buddhism were beginning to be felt in Japanese society, affecting the artistic activity of the people of this stage. Artists often focused on eternal change, representing it with images of falling rain, scattering petals of the cherry blossom, melting

snow, etc.

The core of aestheticism in this stage was MUJOKAN,⁹⁾ or the feeling of uncertainty under the eternal changes of the universe. This concept led to GOKURAKU JODO, or the anticipation of Paradise, where even anxiety ceases to exist. Parallel acceptance of DEATH emerged during this time, as a great void in the absence of consciousness.¹⁰⁾ These concepts are central to the acceptance of Buddhism into Japan during Stage Two.

Because many Buddhist priests, painters, masters of the tea ceremony, masters of ikebana, etc., participated in the planning and construction of gardens, the effects of MUJOKAN and GOKURAKU JODO were noticeable in the designing techniques of Japanese gardens.¹⁰⁾ This influence of Buddhism on gardening lent it a sophistication and refinement unparalleled in that era.

In this study, I would like to add the element of ORGANIC SENSE to my study of designing concepts.¹¹⁾ People perceive landscapes not only visually, but with other senses as well. Hearing, smelling, touching and tasting, our secondary senses, are also noteworthy contributors to the concept of beauty. There are numerous examples of gardens in Japan which were designed to appeal to a broad range of these senses. In other words, landscape planning in Japan involves complex elements outside the visual range.

Although admittedly, these holistic gardens tended to be distributed rather sparsely across Japan during Stage Two, the techniques for designing such gardens certainly developed during this period, contributing to the growth of the three-dimensional aspect of gardening so important and essential to a Japanese garden.

Adding the concept of ORGANIC SENSE to our viewpoint of Japanese gardens, we can analyze landscaping techniques in a new and innovative way.

DESIGNING TECHNIQUES

Some of the features I will discuss in this section have been covered most thoroughly elsewhere in literature, and in those cases, I offer a summary of the current thought on the subject. Other items have rarely been highlighted in the literature and I would like to devote my attention to them extensively.¹²⁾

MINIATURIZATION AND BORROWED VIEWS

The techniques of miniaturization and borrowed views usually play significant roles, not only in the application of various techniques to the design of a specific garden, but in planning the entire landscape area as well.

According to Dr. Kubo,¹³⁾ these techniques may be described as the handling of distance.

Miniaturization is the technique used to handle the reorganization of space with a garden. In other words, the garden and the natural landscape overlap each other on the same dimensional plane. Dr. Kubo call this "Landscape into Garden."

Borrowed views, then, are a direct contrast, serving to separate physically the garden from the landscape. These, according to Dr. Kubo, are "Gardens into Landscapes."

Dr. Nakamura quotes from the works of Prof. Lee Oh Young.¹⁴⁾

"... he sees miniaturization as being particularly and peculiarly Japanese, even from the eyes of its nearest neighbor."



Garden into Landscape
(Borrowed Views)



Landscape into Garden
(Miniaturization)

Fig. 4 The Models of Miniaturization and Borrowed Views

This technique enables the direct interaction between people and the nature within a garden, not only visually but also by physical contact as well. Miniaturization is, therefore, an aspect of gardening that is uniquely Japanese.

According to Prof. Shinji,¹⁵⁾ the technique of borrowed view has the aim of creating a highly complex landscape structure which results in sophisticated and refined metaphysical effects. This is accomplished by providing for the possible interaction between an outer landscape and a garden, while defying the inner structure of an enclosed space.

In short, the techniques of miniaturization and borrowed view bind the natural landscape and the people, not only by physical contact, but also by creating the momentum of psychological interaction between people and nature. Figure 4 shows the relationship between landscape and the garden according to Dr. Kubo.¹⁶⁾ As is obvious, minia-

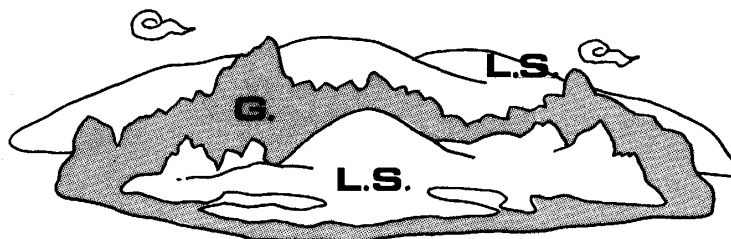


Fig. 5 Different Co-efficients of Distance between Landscape and Garden

turization and borrowed view techniques are not opposite methods of design. Rather, they can be seen as two techniques on the same dimension, working within the same matrix, with different co-efficients of distance.

VISTA

The construction of elongated vistas such as those often found in French style gardens of highly geometric designs has never been developed or incorporated in Japanese gardens. I do find, however, sequences of small units of vista connected to each other in many famous Japanese gardens, such as the garden of Katsura Rikyū Villa.

Mr. Nishizawa, architect, believes that

“the introduction of the tea ceremony as an element of garden design was rather innovative. The Kaiyū, or circulatory, style gardens are made up of sequentially connected units of Shoin, or samurai, style gardens. Along the proceeding passages, the concept of the tea ceremony is well-represented in the transition of one passage to the next, but each unit in and of itself is strictly Shoin style.¹⁷⁾”

What this means, is that the structure in its entirety creates a continuous string of small units of vista, each of limited depth or expansion. The structuring of space in such a manner is one of the traditional designing techniques, and is diagrammed in Figure 6.

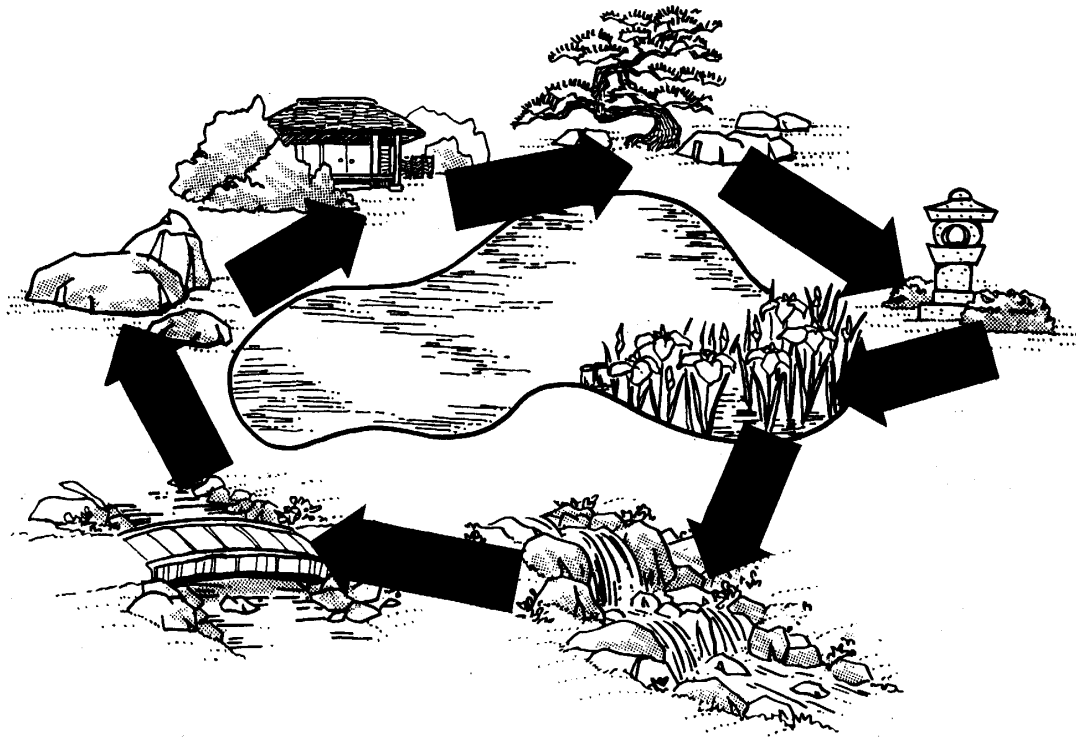


Fig. 6 The Sequences of Small Units of Vista

It is important to note that, in the construction of each unit of scenery, stone lanterns, pine trees, and even buildings are employed in order to provide focusing points in the scenery for viewers.

ORGANIC SENSES (HOLISTIC PERCEPTIONS)

Many of the designing techniques used in Japanese gardens are meant to realize not only visual effects, but also to appeal to the other senses of the viewers. This is the reason why we call such designing techniques "organic senses."

Prof. Nakamura points out that the distances between the objects distributed in a garden and the viewer is shortened physically by the effects of miniaturization. This is the direct result of the visual perception. Hence the other senses come into play, providing a whole range of holistic interactions between people and nature.

Using this techniques, the sounds of water flowing, waterfalls, leaves falling, the crackling of twigs, etc., appeal to the audible senses of the people. An atmosphere of mid-mountain serenity can be felt from an earth-finished passage, while a rock-paved passage provides the transparency of water, and the texture of ground surfaces beneath the feet. Such an intimacy between viewers and gardens becomes possible only when the distance between them is shortened physically and psychologically.

When successfully employed, this technique creates a significant effect on the viewer, who is inclined to view the garden setting holistically in any case.

CONTROLLING THE PERSPECTIVE

By placing objects of conspicuous, large elements at positions close to viewing points, a spacial expansion is exaggerated even in a limited space. This techniques is called "controlling the perspective."

For example, trees with large leaves may be located near viewing points. Hedges with smaller leaves may be trimmed apart from the viewing points in the shapes of hills or other natural items of landscape, or complex water edge line may be created. There are numerous methods to deceive the viewer's perception of the perspective. This technique is used frequently.

FRAMING

J. O. Simonds¹⁸⁾ points out the importance of "framing" in constructing a visual field of scenery. In his words,

"the vista and frame always have to go along side by side . . ."

I would like to point out that framing is accomplished vertically as well as horizontally. When using the technique of borrowed views, the natural scenery outside of the garden is incorporated into the visual field. In such a case, framing the field vertically becomes all the more important in order to maximize the effect of the technique.

As shown in Figure 7, the use of pillars, floors, roofs, or even plants to define the frame is common.

Horizontal framing is accomplished through the use of clay walls, even in relatively small rock gardens. This is shown in Figure 8. By clearly delineating the garden space from the surrounding space, the specialized area enclosed or framed is more effective.

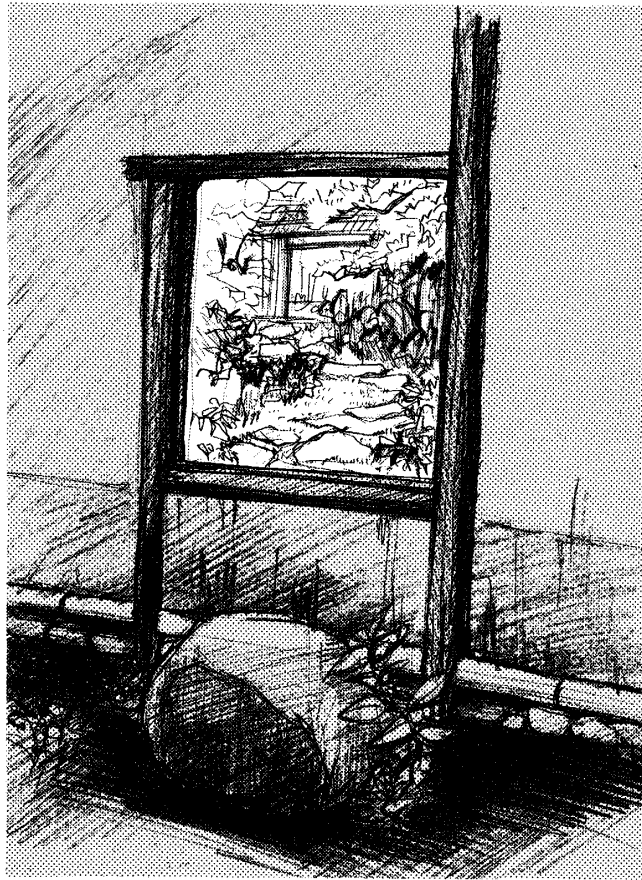


Fig. 7 The Vertical Framing

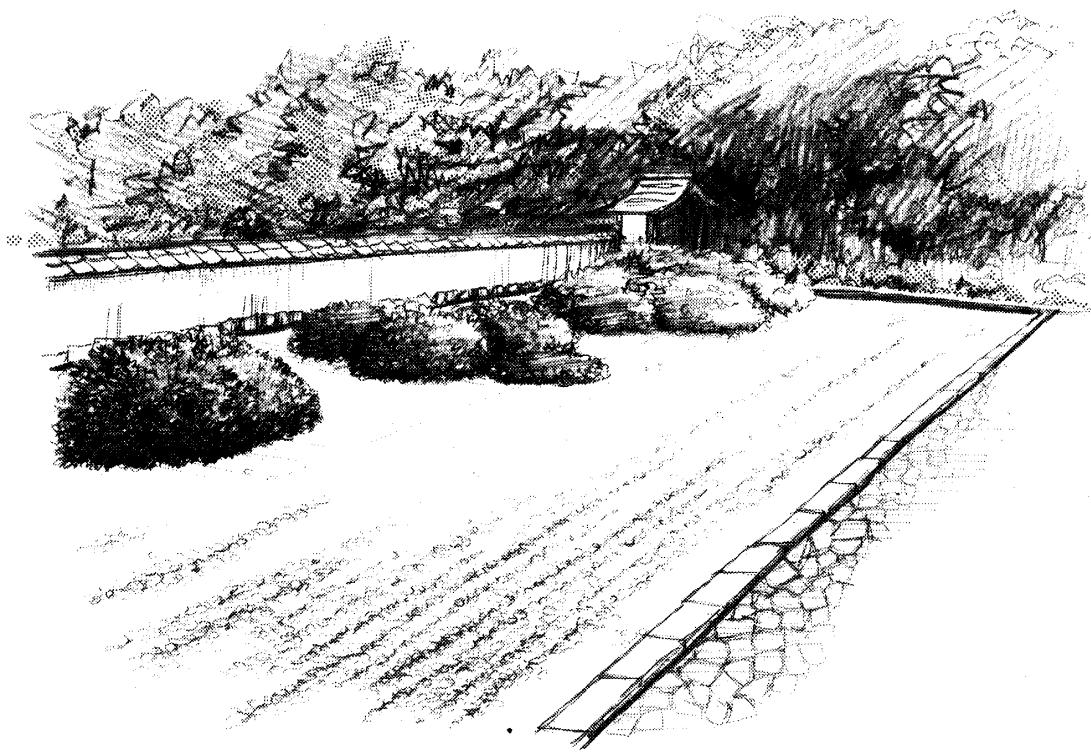


Fig. 8 The Horizontal Framing

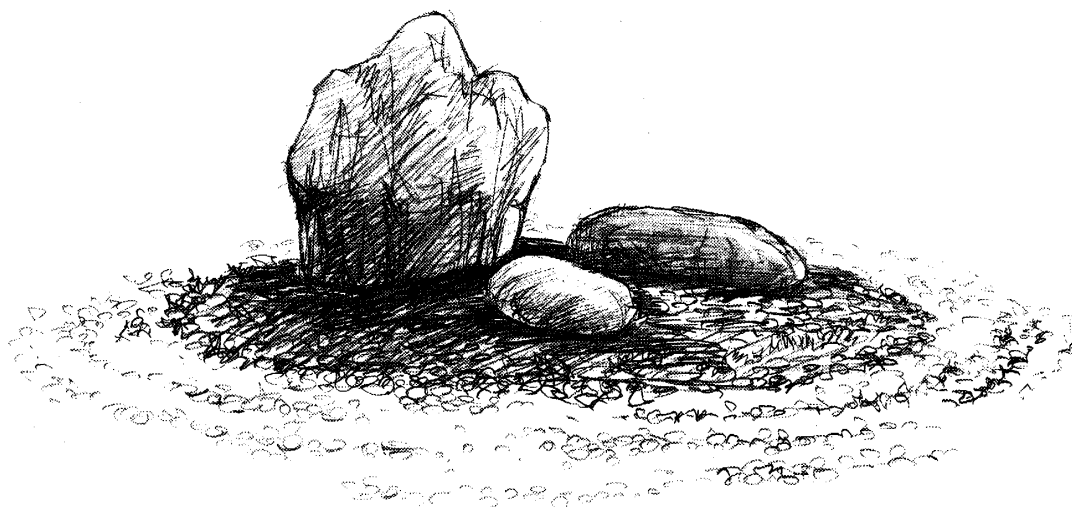


Fig. 9 The 3-5-7 Technique

OTHER TECHNIQUES

In addition to the techniques already mentioned, there are a few still worthwhile noting, as shown in Figure 9.

The 3-5-7 technique is used in the arrangement and distribution of rocks and trees.¹⁹⁾ The designer seeks to avoid any linear arrangement along lines of sight. This is in direct contrast to European techniques in which trees are planted along crossing points in an "X" matrix pattern.

Another technique rests on the hierarchy²⁰⁾ of classifying viewing elements as shin (formal), gyo (semi-formal), or so (informal). A representative photograph of one such garden is indicated as Photograph 1. This shows how methods of pavement can show this hierarchy. Other elements may be utilized to indicate this differentiation, i.e., the



Photo. 1 Shin, Gyo, So

shapes of stones, etc. The arrangement indicated the significance of the contribution to the garden's overall effect.

Finally, an important technique worth mentioning is the scale of measurement used in Japanese gardens. The shaku, or Japanese foot, and the ken, a measurement taken from the length of the body, are both units based on human beings. This scale adds a human element to the scaling and planning of Japanese gardens. The designer never loses sight of the role of human beings in their appreciation of beauty and gardens.

CONCLUSIONS

Although I have explained both the background and the characteristics of the preceding designing techniques, I have not gone into detail regarding their interrelationships. How these techniques draw on each other, methods of complementing one technique with another, etc., have not been covered. However, it is necessary to look at a garden as a total effect, a total landscape, complete in itself.

This study is not meant to cover every technique used in Japanese garden design. It is hoped that more study will be forthcoming. Particularly welcome would be studies regarding the psychological effects of the suggestive nature of Japanese garden design.

I believe it is necessary to collect more information about techniques of design in Japanese gardens, and to analyze them from the standpoint of their relationship to man.

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