

The Perception of Landscape Style: a Cross-cultural Comparison

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ABSTRACT

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The perception of landscape style has received little attention. The present study explores this in a cross-cultural context both with respect to the landscapes (Korean, Japanese and Western) and in terms of the individual samples (Korean and Western). Preference ratings of 40

scenes taken in Korea provided the data for category-identifying methods to extract common perceptual groupings. The four distinct categories that emerged for both the Korean and the Western samples had strong similarities. They reflect a combination of landscape style and landscape content, with those based on more natural forms preferred to the more formal, linear categories.

INTRODUCTION

Throughout history, nations have developed unique landscape styles as a result of diverse factors including climate, geography, cultural heritage and the tastes of the residents. It is not unusual, however, to find examples of foreign landscape styles in many countries. With advances in transportation and communication, such transplants have become more prevalent. In Korea, for example, both Japanese and Western landscape styles are common in addition to the indigenous Korean style.

Landscape style is defined here as the typical mode of esthetic organization which characterizes the different kinds of landscape design originating in different countries or periods in the past (Hubbard and Kimball, 1917). Oriental landscape style, including Korean and Japanese landscape style, is characterized by asymmetry and non-geometrical form while Western landscape style has traditionally been based on the principles of geometry and symmetry. The differences between Korean and Japanese landscape styles can be found in terms of the lay-out of space, the use of plants, the

use of rock and stone, the use of water and the manipulation of depth (see Yang, 1988; Tsu, 1988, for the comparisons between landscape styles).

Research on landscape preference has generally focused on landscape elements in the scene rather than landscape style. The focus of the current study is on how landscape style is perceived, including both the native style and exotic versions. Furthermore, these perceptions are considered both for the native population as well as for foreign tourists. The context for study is Korea and thus the comparisons include both Western and non-Western influences. While, to the best of our knowledge, style has not been studied previously, cultural influences on landscape preference have received attention.

Some researchers have stressed culture as the pre-eminent determinant of preference (e.g. Lowenthal, 1968; Tuan, 1973). Much of the work that follows this line of argument explicitly or implicitly indicates that the influences of culture are so great as to preclude major similarities in preference across societies. Other researchers have provided support for strong cross-cultural similarity in esthetic judgments of various landscapes ranging from interior landscapes to natural landscapes (e.g. Shafer and Tooby, 1973; Berlyne et al., 1974; Ulrich, 1977; Kwok, 1979; Tips and Savasdisara, 1986). Despite an abundance of literature concerning landscape preferences, only a few studies have dealt with the comparison of Western and non-Western groups.

Previous cross-cultural comparisons have focused on preference mostly for natural landscapes, such as forests and coastal landscapes, and have found strong similarities using correlations between ratings (e.g. Zube and Mills, 1976; Zube and Pitt, 1981; Buhyoff et al., 1983). Kaplan and Herbert (1987, 1988), however, showed that some important cross-cultural differences can be missed in such analyses. Their studies pointed to differences in the perception of the landscape, although prefer-

ence ratings were highly correlated. In other words, even if the relative preferences for different scenes are highly similar, the patterns among the ratings may be distinct (Kaplan, 1985).

The current study, focusing on designed landscapes, involves cross-cultural comparison in two senses, each including both Western and non-Western influences. The landscape styles that are studied include both the predominant Korean style, as well as Japanese and Western landscape styles found within the Korean environment. Furthermore, study participants included both Korean citizens and Western tourists.

The focus of the study is on the perception of landscape style. To what degree is the combination of factors that comprise a coherent style salient in the way individuals experience the landscape? Is the underlying categorization of the environment based on style or is it more strongly influenced by the objects in the scene? While participants were asked to rate scenes in terms of preference, these ratings were subsequently used as a vehicle for studying such categorization.

METHODS

Participants

The sample included three groups: Korean citizens, Korean students and Western tourists. All participants were over 18 years of age. Selection of the citizen group was achieved through a multistage random sampling process to represent a wide variety of Seoul's citizens.

At the first stage, the 17 Gu, the largest administrative district classification in Seoul, were divided into three groups based on the major housing type of each: (a) apartment-dominant Gu; (b) detached house-dominant Gu; (c) mixed housing-dominant Gu in which the proportion of apartment housing is roughly equal to that of detached housing. Six Gu were then selected randomly, with two Gu from each

group. At the second stage, 18 Dong, the second largest administrative classification, were selected randomly with three Dong from each selected Gu. Random selection was made at the third stage to obtain six Tong (a subdivision of the Dong) from each selected Dong, which resulted in selecting 108 Tong in total. At the fourth stage, four Ban (the smallest administrative district) were chosen randomly from each selected Tong in the cases of detached house-dominant Gu and mixed housing-dominant Gu. In the case of apartment-dominant Gu, two floors were selected randomly from each selected Tong. At the fifth stage, the random selection of one household was made from each selected Ban in the cases of detached house-dominant Gu and mixed housing-dominant Gu. In the case of apartment-dominant Gu, two households were selected from each selected floor. At the final stage, a sample was selected from the families of selected households. The sample consisted of 415 individuals, representing a 96% response rate.

The second sample included 135 students at Seoul National University. Of these, 29 students were majoring in landscape architecture or architecture and 26 students were employed to conduct the survey of citizens and tourists; the others constituted a random sample of students at the Central Library of the University. Here too 96% of those who were asked agreed to participate in the study.

Sample selection of Western tourists involved approaching visitors, on a random basis, at the historic palaces, Changdok Palace (Secret Garden), Kyongbok Palace and Doksu Palace, in Seoul. All 110 tourists who were asked agreed to participate.

Procedure

All the photographs were taken in Korea, mostly in Seoul. The 40 scenes comprising the photo-questionnaire represented three landscape styles: Korean, Japanese and Western and four landscape qualities: lay-out of space,

use of landscape plants, use of stones and rocks, and use of water. For each combination of landscape style and quality, there were four scenes, with the exception of Japanese "layout of space" and Western "stones and rocks" for which there were none.

The process of scene selection involved several successive stages with cooperation from 15 Korean professors and experts in landscape architecture, as well as a panel of American professionals. While each scene was selected to reflect a specific landscape quality, other qualities are also present. Thus scenes representing the "lay-out of space" necessarily also include rock elements or water or vegetation.

The black and white photographs were printed in booklets with four scenes on each page. Participants were asked to rate each scene in terms of their preference and degree of familiarity, using 5-point rating scales. Two sets of photo-questionnaires were printed, varying in the order of the scenes. The initial order was based on a random sequence in terms of landscape style and qualities. The second order was the reverse of the first.

RESULTS

Following the category-identifying methods (CIMs) used in many previous studies (Kaplan and Kaplan, 1989), separate analyses were performed for the preference ratings of the Korean samples and the Western sample. Two approaches were used in these analyses: the Guttman-Lingoes Smallest Space Analysis III (SSA-III), a non-metric factor analysis (Lingoes, 1972) and ICLUS Hierarchical Cluster Analysis (Kulik et al., 1970). These analyses aid in the determination of the underlying perceptual categories. The following criteria were used in the identification of categories: (1) loadings that were at least 0.40; (2) scenes with loadings >0.40 on more than one category were omitted; (3) a category must be defined by at least three scenes; (4) eigenvalues > 1.0.

For both the Korean-based and the Western-

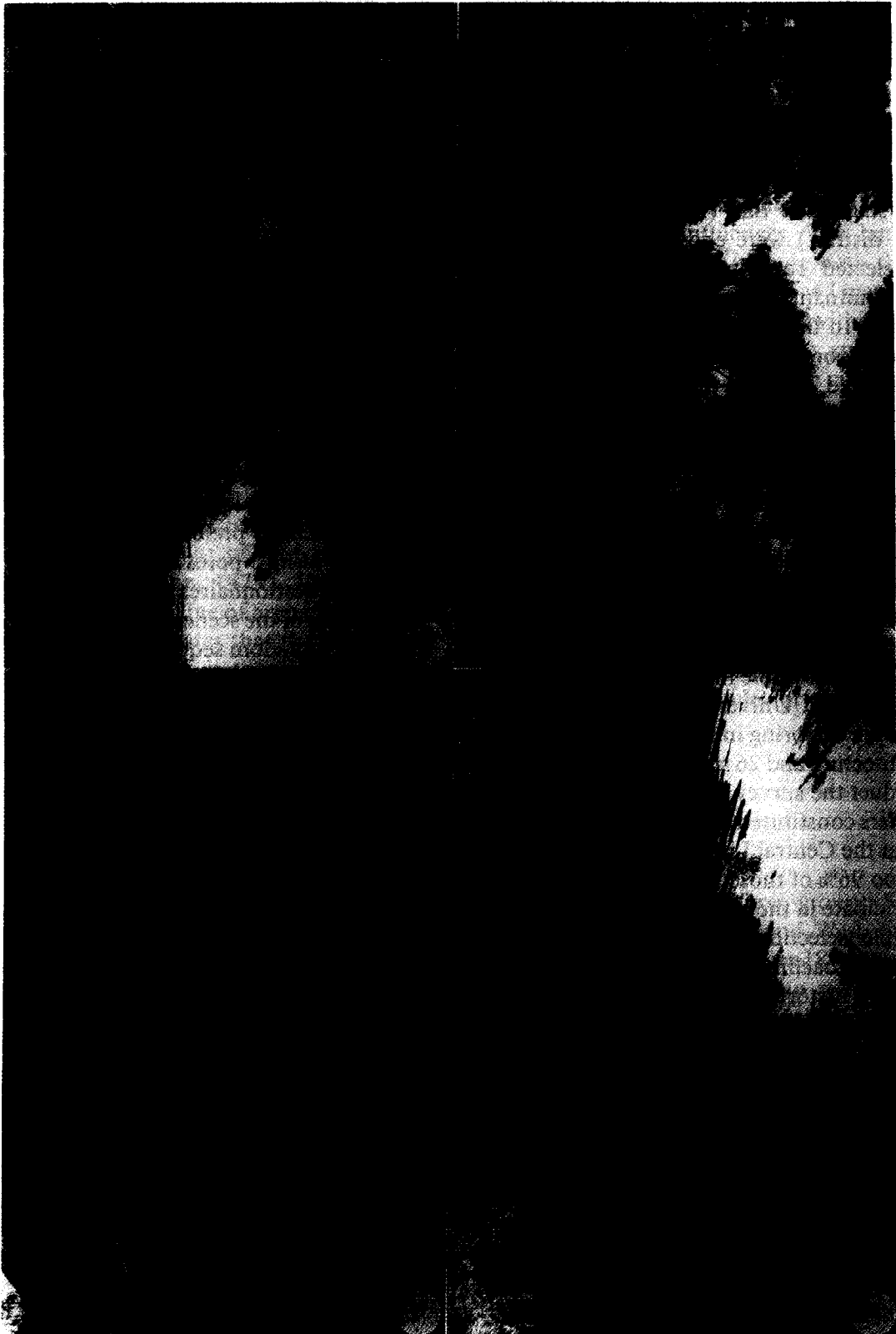


Fig. 1. Scenes common to both analyses showing Japanese style and the predominance of water.

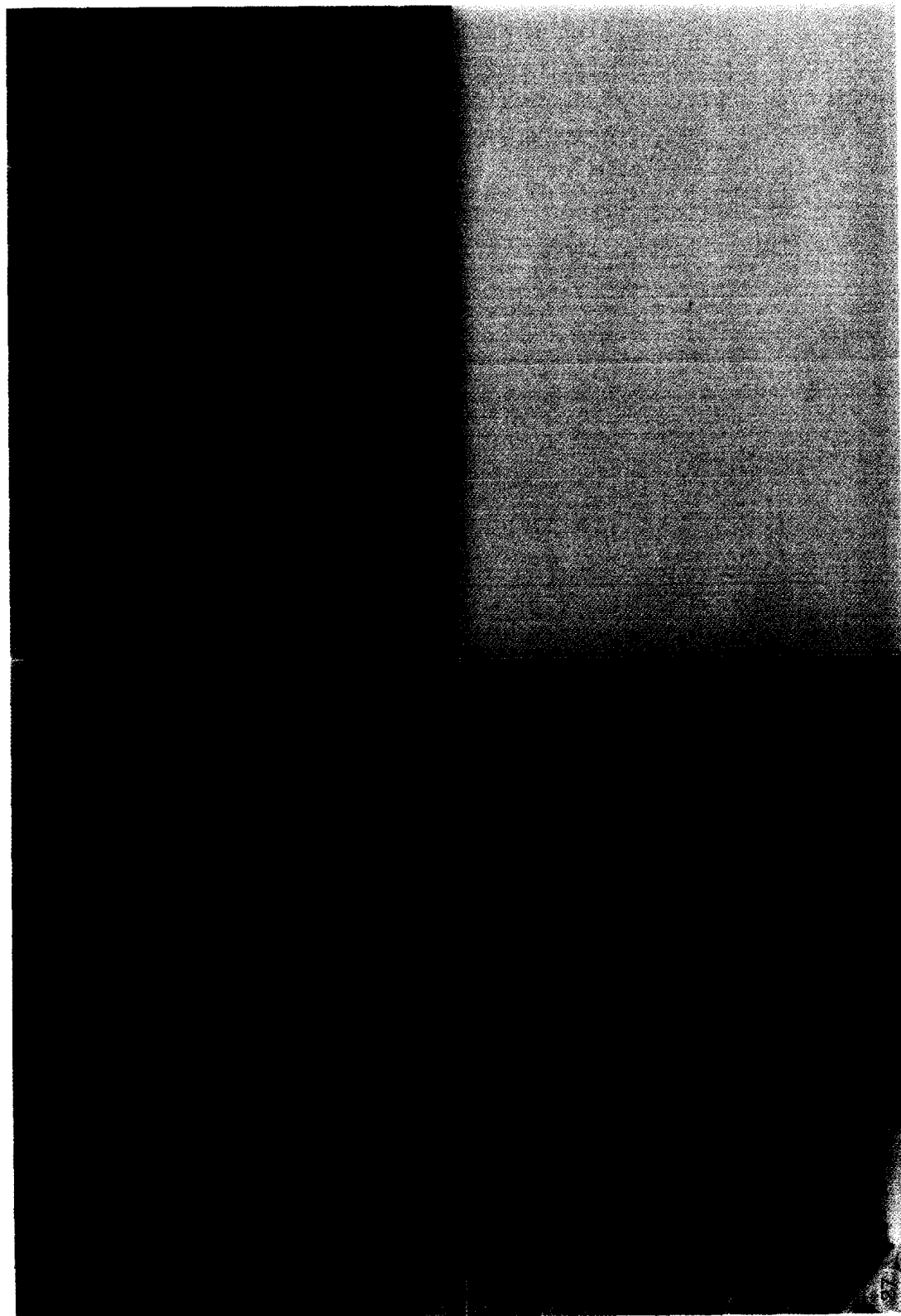


Fig. 2. Part of the same category as Fig. 1 were these scenes which were different for the two samples. Scenes in the top row were included only in the Korean-based category, while the scene in the bottom row was included only in the Western-based category.

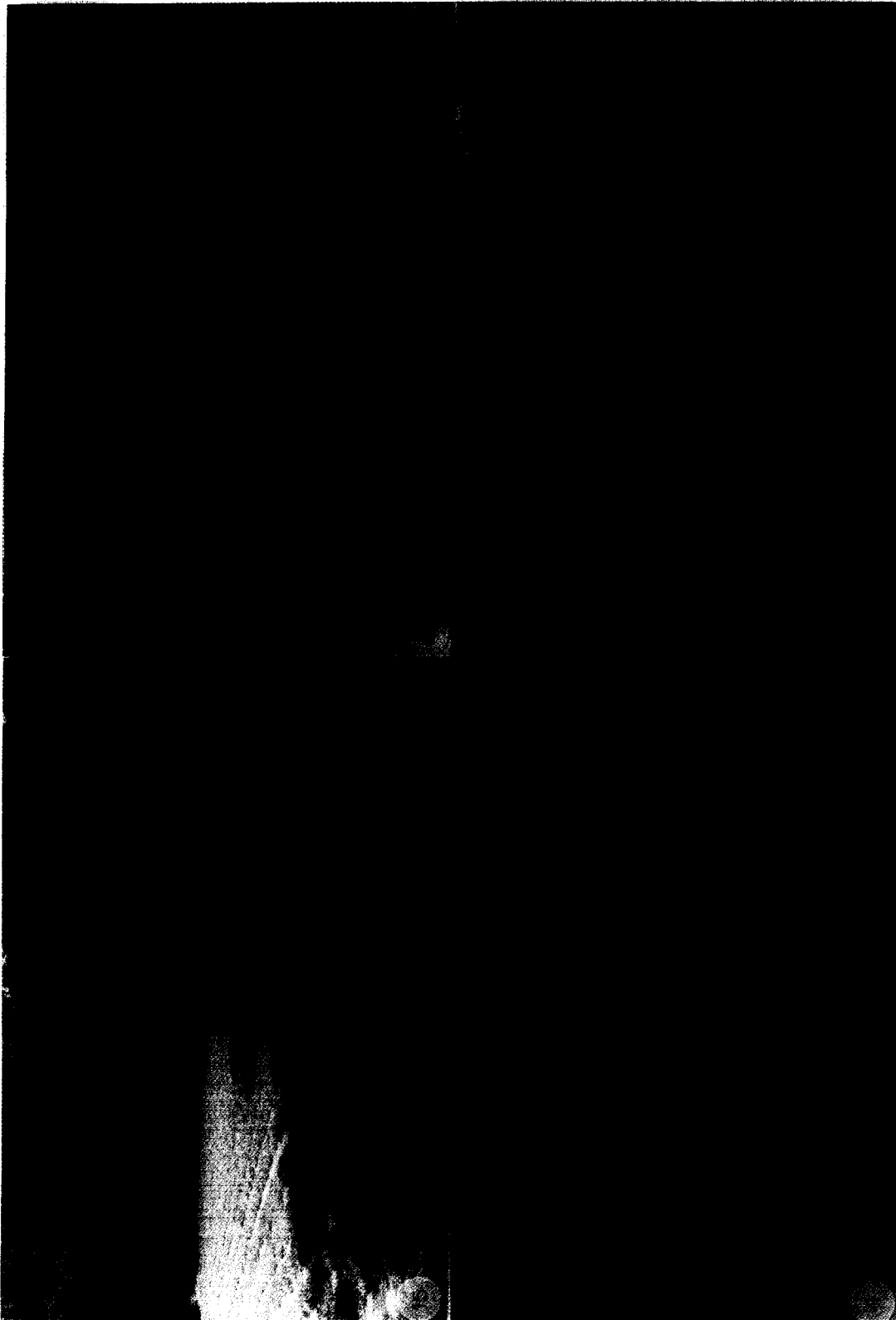


Fig. 3. Two of the three scenes showing informal landscaping style that were common to both analyses are shown in the top row. The bottom row scenes were part of the Western-based category only.



Fig. 4. Four of the scenes in the Western formal category.

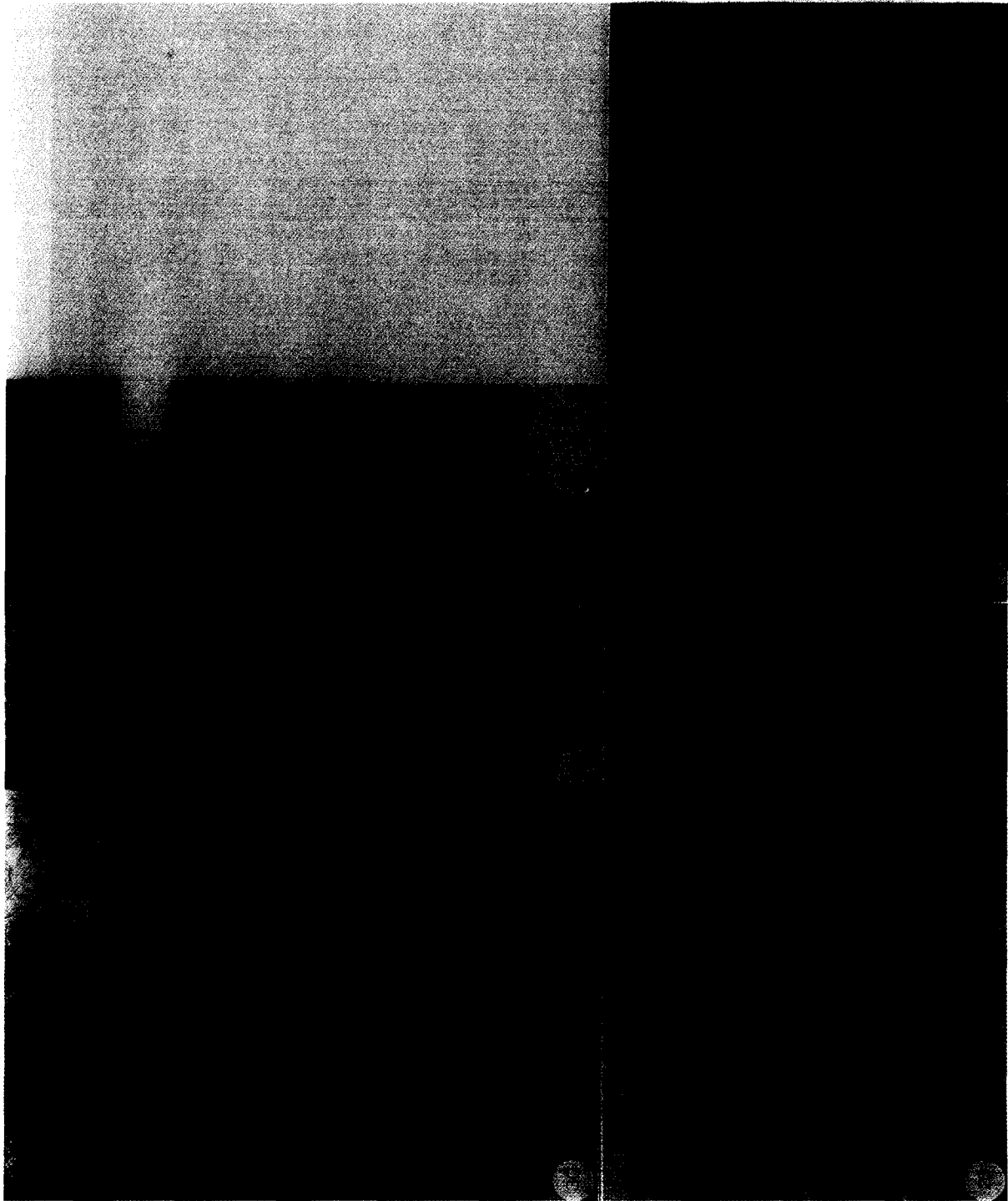


Fig. 5. Sample scenes common to both categories of the Korean-style scenes with a predominance of rock features.

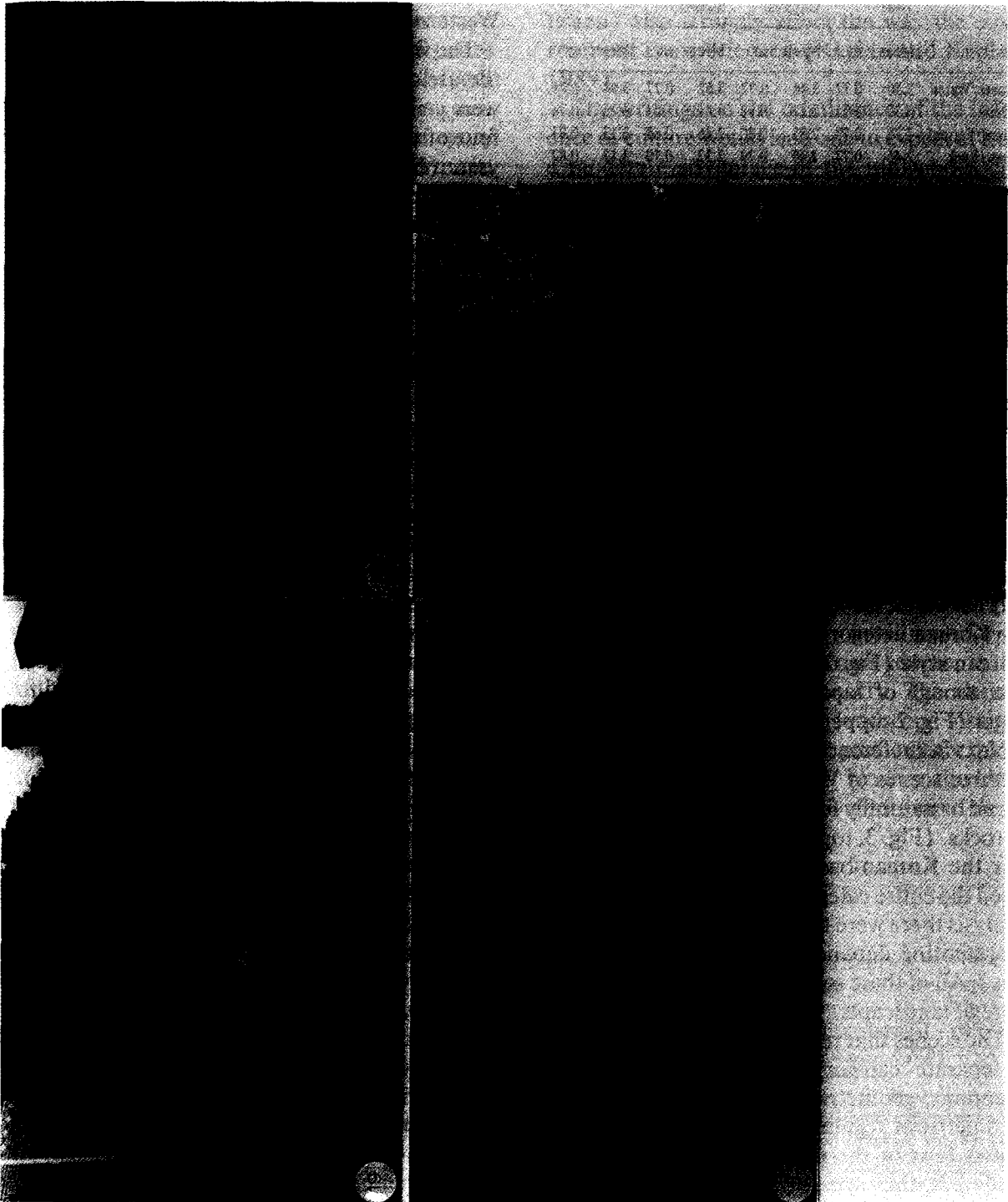


Fig. 6. Part of the category shown in Fig. 5, but scenes that were different for the two analyses. Top row scenes were included only in the Korean-based category, while those in the bottom row were only in the Western-based version.

TABLE 1

Mean preference ratings and standard deviations for perceptual categories

	Korean						Western	
	Total		Citizens		Students		Mean	sd
	Mean	sd	Mean	sd	Mean	sd		
Japanese/Water	3.50	0.77	3.46	0.77	3.62	0.77	3.94	0.71
Informal	3.30	0.95	3.27	0.93	3.41	1.01	3.25	0.76
Western/Formal	2.75	0.78	2.85	0.80	2.46	0.64	3.13	0.93
Korean/Rock	2.46	0.77	2.49	0.79	2.37	0.70	3.12	0.82

based analyses, four categories emerged. Since these show strong similarities it is useful to discuss the two sets of results jointly.

The most preferred category in each case consisted, for the most part, of water scenes with distinctly Japanese influence. Of the six scenes common to both analyses all were of Japanese style (Fig. 1) with water as part of the scene. In many instances, scenes in this category show water surrounded by vegetation, with the trees reflecting in the water. The additional scenes in the Western category (Fig. 2, bottom row) reflected the Japanese style, but had no water. Of the two additional scenes in the Korean category, the one with water is of Korean style (Fig. 2, upper left) and the other one, though of Japanese style, does not have water (Fig. 2, upper right).

Next in preference was a category consisting of three scenes of Western style and featuring round or naturally formed trees with open lawn or rocks. (Fig. 3, top row, shows two of these.) For the Korean-based analysis, these constituted the entire category; for the Western-based analysis there were two additional scenes, both representing Japanese style (Fig. 3, bottom row). All of these scenes represent an informal style of landscape.

The scenes that reflect a formal style formed a separate category. These included water fountains, geometric form of vegetation and symmetric or regular lay-out of space. Figure 4 shows four of the eight scenes that were included in this category in both the Korean-

based and Western-based analyses. (One additional scene was included in the Korean analysis, but did not quite reach the 0.40 loading criterion for the Western sample.) All scenes in this category were designated as Western style.

The final category consisted of scenes where the use of rocks was a dominant feature; these were generally of Korean style. Figure 5 shows four of the nine scenes common to both analyses. (In both analyses one of the common scenes depicted a traditional Japanese lantern.) The Korean-based category included four additional scenes; Fig. 6, top row, shows two of these. Of the three scenes included only in the Western-based category, two included water (e.g. Fig. 6, lower left) and one was of Japanese style (Fig. 6, lower right).

Table 1 shows the mean preference ratings for the categories based on the Western and combined Korean samples. While the ordinal position of the four categories is comparable for the two groups, the magnitudes of the preferences are quite different. The ratings by the Western tourists are, in general, far more favorable than those of the Korean participants and do not differ from each other to as great an extent. For the Western sample, the most preferred category is significantly preferred to each of the three others. For the Korean sample as a whole, the preference means are all significantly different from each other ($P < 0.01$). Table 1 also shows the means for the two Korean groups, citizens and students. Here again, the ordinal positions remain constant. The two groups differ significantly in their preference of two of the categories: the students prefer the Japanese/Water scenes and the citizens are more favorable towards the Western Formal category.

With regard to the relationship between preference and familiarity, the correlation was substantial for both Korean ($r = 0.81$) and Western ($r = 0.51$) samples.

DISCUSSION AND CONCLUSIONS

The cross-cultural similarity in these perceptual categorizations is striking. While the results for the two samples are not identical, the differences are subtle. For both the Korean and Western groups however the four categories that emerged reflect a combination of landscape style and landscape elements. For neither sample, for example, was there a category consisting solely of water scenes. Furthermore, the category in which water was a dominant attribute included none of the photographs with dynamic water. Similarly, none of the categories was a pure reflection of style. While the category with the water scenes also strongly reflected Japanese style, it included only a minority of the Japanese style scenes in the photo-questionnaire.

In terms of landscape style, the four categories suggest that both groups perceive a Japanese style that is distinct from a Korean style. A "Western" style however did not emerge as a single coherent style. Rather, the Western scenes were divided into two discrete categories representing the more formal traditions of French and Italian gardens, and the more informal arrangements which originated in 18th century England and which were, in turn, influenced by reports sent home by missionaries and traders in China (Newton, 1971).

In terms of the landscape qualities included in the study, the four categories suggest that water and rock are important perceptual components, with distinct perceptual categories dominated by each of these. Furthermore, whether vegetation is sparse or ample also played an important role; the categories differ in this respect as well.

The arrangement of the space and the choice of forms used in the lay-out seem to have the greatest impact on perceptual distinctions. Two of the categories, Korean/Rock and Western Formal, are dominated by more rectangular arrangements while the other two, Japanese/Water and Informal, entail rounder, softer

shapes. The fact that there are two separate categories in each case however implies that more than the forms are critical in the perceptual process. The differences in the contents of the scenes (affected by water, rock and vegetation) also strongly affect the way the environment is experienced (Kaplan and Kaplan, 1989).

The writings on the dominance of the influence of culture would lead one to expect at least a moderate advantage of the indigenous cultural style in preference. The particularly low preference ratings for their own cultural style on the part of the Korean sample thus comes as a surprise. In the present study, both cultural groups were consistent in their greater preference for the categories that involve more natural forms rather than more rectangular or formal designs. We are not aware of previous research on environmental preference that addressed this question.

While the findings are useful in the context of cross-cultural comparison and in terms of understanding the underlying bases of perception, they also have implications for landscape design, especially in the Korean context. The preference for natural and curvilinear forms and for asymmetric lay-outs runs counter to the cultural tradition of the country. The importation of formal Western landscape design, however, would seem to be particularly questionable given these results. Neither the local population nor the Western visitors rated these scenes with great favor.

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