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Student Evaluations of the More Natural Aspects of the Campus Environment of International Christian University (ICU)

国際基督教大学 (ICU) のキャンパスにおける自然に対する学生の評価

David W. Rackham International Christian University
デーヴィッド W. ラッカム 国際基督教大学

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要旨

本研究では、東京都三鷹市にある国際基督教大学のキャンパスの自然環境と東京都新宿区の街の景色に対する学生の評価の比較を検討する。研究の結果、春と秋の ICU の景色は新宿の街の景色よりもかなり魅力的であることが明らかになった。また、ICU の景色は新宿の街の景色よりも多様性にかけるということが分かった。ユニーク性に関しては、ICU の景色は新宿の町の景色よりも非平凡的と認知されていた。被験者は新宿の街の景色よりも春と秋の ICU の景色に対して多くの満足感を感じていた。新宿

の街の景色に比べ、ICU の景色は安らぎを与え、平穏であり、のんびりしていて、眠くなる、と認知されていた。ICU のキャンパスに対する好ましい印象は、キャンパスの自然による疲れからの回復という側面と自然的な環境における教育的経験・機会への没頭の促進という側面から説明することができる。

Introduction

All human activity takes place in an environmental context. This context may be physical, social, or, most commonly, a combination of the two. People are influenced by the environments they inhabit and, in turn, exert an influence on these environments by virtue of their presence and activities. People perceive their environments in particular ways and develop beliefs and attitudes which, when transformed into behaviour, have a positive, neutral, or negative impact on their environments.

In evaluating preferences for various types of environmental scenes, Kaplan (1975, cited by Hodgson & Thayer, 1979) found an overall preference for natural scenes compared to urban scenes (See also Ulrich 1981; Appleyard & Lintel, 1972, cited by Nasar, 1988; Peterson, 1967, cited by Nasar, 1988). Yang & Brown (1992) and Zube & Pitt (1981) reported similarities across cultures in preferences for natural scenes although not all studies have confirmed these findings. Kaplan and Kaplan (1992) have argued that "Aesthetic reaction is an indication of an environment where effective human functioning is more likely to occur" (p. 10). The pleasure-arousal hypothesis proposed by Russell and Mehrabian (1978) has been somewhat successful in predicting that people will want to approach settings that are moderately arousing and maximally pleasurable.

Much of an individual's life is spent in learning environments. The latter part of an individual's educational career may typically be spent in a university context. While the essence of a university is ultimately to be found in its people, the physical plant (buildings) and its setting (grounds) help to create an atmosphere unique to a particular institution. As Gifford (1997) points out, much learning occurs outside the school facilities, proper. The contextual ambience of a university afforded by its campus environment may be a significant factor in attracting students to an institution or, conversely, encouraging them to look elsewhere.

Many universities pride themselves on their campus environment. Many North American universities, for example, have managed to situate their physical plant in a semi-natural setting which is thought to enhance the learning process by providing opportunities for reflecting on issues in an environment somewhat detached from the hustle and bustle of normal urban life. In Japan, the campus of International Christian University (ICU) is often considered to be one of the most attractive in the country, especially among universities situated in highly urbanized areas. The purpose of the present study is to explore how students respond to representative scenes of the ICU campus in comparison to a typical Tokyo urban street scene and to speculate on the significance of the semi-natural setting of the campus as it relates to the university's educational mandate and endeavours.

The ICU Campus Environment

The ICU campus represents a unique resource in the greater Tokyo region. The land area of the Mitaka campus is 156 acres, much of it

wooded. The campus is situated like an oasis in the larger context of highly urbanized greater Tokyo. It is designated a Wildlife Preserve by the Greater Tokyo Metropolitan Authority. Student dormitories and faculty housing make ICU a residential campus.

The university goes to considerable effort and expense to ensure that the campus grounds are well maintained throughout the year. Although the university does not refer explicitly to the physical attractiveness of its campus in its official promotional brochures, photographs included in such brochures suggest that the physical environment of the campus is considered to be a significant feature of the university's appeal to students. This is often taken as a statement of fact, but to the author's knowledge, no formal studies of students' responses to the more natural aspects of the ICU campus environment have been undertaken. The present study represents a preliminary effort in this regard.

Methodological Considerations in Assessing Perception of Environmental Scenes

Methods for Presenting Scenes for Evaluation

As Gifford (1997) points out, "in environmental perception research, the emphasis is on large-scale scenes, treated as whole entities." (Gifford 1997, p. 18). A basic question is how a scene should be presented to the perceiver for evaluation. Many methods have been tried over the years including taking perceivers to the environments in question. Such a method has the advantage of allowing the perceiver to experience the full range of sensory stimulation afforded by an environment (visual, auditory, olfactory, etc.). As

such a method is often impractical due to considerations of time and expense, various alternatives relying on photographic technology have been developed, including still photographs (black and white and colour) and motion pictures and videos, with and without sound tracks (Hetherington, Daniel and Brown 1993).

Evidence suggests that responses to two-dimensional photographic representations of a scene are very similar to those observers provide when placed in the actual physical setting (Levin 1977, cited by Kaplan and Kaplan, 1992; Kellomaki & Savolainen, 1984; Shuttleworth, 1980, cited by Daniel & Vining, 1983). Coeterier (1983, cited by Kaplan and Kaplan, 1992) suggested that photographs are better substituted for actual settings for small-scale landscapes such as those used in the present study. Kaplan and Kaplan (1992) have suggested that on the basis of experience people are able to incorporate missing attributes into a scene such as colour and depth into a two-dimensional black and white photograph of that scene. In surveying the literature, Daniel & Vining (1983) note that evaluations of landscapes by experts and lay people are closely correlated.

In the present study, three scenes familiar to the respondents were chosen and presented for evaluation to respondents in the form of projected overhead transparencies. It was assumed that familiarity with the scenes would enhance the sense of reality for respondents who would be able to read some of their direct, personal experiences with these scenes into the evaluative process.

Methods for Recording Responses to Scenes

As Gifford (1997) has noted, environmental assessment is based on the ratings of several observers regarding the quality or lack of

quality of a particular environment. In contrast, environmental appraisal focuses on an individual's responses to an environment. In the present study, the focus was on environmental assessment as the ratings of all observers were combined for purposes of analysis.

Fisher, Bell, and Baum (1984), Bechtel, Marans, and Michelson (1987), Nasar (1988), Daniel (1990), Kaplan and Kaplan (1992), and Gifford (1997) discuss a variety of methods which have been developed for assessing people's responses to environmental scenes. These include self-reports, adjective checklists, physical-perceptual methods in which particular features of a scene are specified and quantified and then evaluated by observers in terms of their scenic value (Fisher, Bell, and Baum, 1984), and a variety of psychological approaches emphasizing the psychological organization of a scene in terms of such predictors of preference as coherence, complexity, legibility and mystery as the critical focus (See, for example, Kaplan and Kaplan, 1992).

Within the more technical of these various theoretical frameworks, the semantic differential technique has often been used to assess more subtle shades of meaning in people's responses to environmental scenes. Subjects are asked to rate a landscape along several continuous dimensions anchored by terms typically considered to be polar opposites. In the present study, the semantic differential technique was employed for evaluating the perception of three scenes. An overall evaluation of each scene based on dimensions originally developed by Zube, Pitt, and Anderson, 1974) was complemented by semantic differential evaluations of each scene in terms of their emotional properties (pleasure and arousal) as originally developed by Mehrabian and Russell (1974).

Predictions

Using the semantic differential landscape evaluation instrument developed by Zube, Pitt, and Anderson (1974), it was expected that the two scenes of the ICU campus would be more positively evaluated compared to the Tokyo urban street scene. Using the semantic differential pleasure and arousal scales developed by Mehrabian and Russell (1974), it was expected that the ICU campus scenes would evoke overall a more pleasurable response but a lower degree of arousal than the urban Tokyo street scene.

Method

Participants. Participants in this study were 35 students (11 male, 24 female) who were members of a General Education course entitled Psychology in the Public Forum (PIPF) during the 1998-99 academic year. A section of this course dealt with environmental assessment and architectural design. Twenty-one came from an urban background and 12 from a rural background with two failing to report their origin. Of these respondents, 3 were first year students, 19 were second year students, 11 were third year students, and 2 were fourth year students. All had been exposed to the ICU campus for a period of at least six months prior to the collection of data.

Apparatus and Survey Materials. Three scenes were chosen from a collection of digitized ICU campus scenes and Tokyo streetscape scenes developed by the investigator. A Sony Mavica FD-91 digital camera was used to take the original images. Cropping and editing of the scenes were done with standard computer image editing tools.

The three scenes were printed in colour on overhead transparency sheets and a standard OHP projector was used to present the images to the participants.

Scene 1 (see Figure 2) was a typical ICU campus scene in early spring. It depicted the annual display of cherry blossoms along the main boulevard of the campus looking east. Scene 2 (see Figure 3) was a typical street scene in the district of Shinjuku in Tokyo. It was used as a contrast to the ICU Scenes 1 and 3. Scene 3 (See Figure 4) was a mid- to late autumn scene on the ICU campus showing a typical campus faculty residence set in the context of Japanese maple trees at the height of their autumn colours.

Two instruments were used for assessing participants' responses to the three scenes. The first was a 7-point semantic differential scale for landscape assessment adapted from Zube, Pitt, and Anderson (1974) (See Table 1). To measure emotional responses to the three scenes, two 9-point semantic differential scales for pleasure and arousal adapted from Mehrabian and Russell (1974) were employed (See Table 2).

Procedure. During a typical class period dealing with landscape assessment, copies of the survey instruments were distributed to participants. Participants were asked to identify their sex, their year in university, and the primary setting of their upbringing (urban or rural) during their pre-university years. Participants were instructed to evaluate each projected scene by circling the number along each dimension in the survey instruments that best described their response to the scene. When it was confirmed that all participants understood the procedure, the room was darkened and Scene 1 (ICU Spring Scene) was projected for a total of approximately 5 minutes. This was followed by Scene 2 (Shinjuku Street Scene) and Scene 3 (ICU

Table 1

Semantic differential scale for landscape assessment adapted from Zube, Pitt, and Anderson (1974).

Varied	1	2	3	4	5	6	7	Monotonous
Common	1	2	3	4	5	6	7	Unusual
Pleasant	1	2	3	4	5	6	7	Unpleasant
Beautiful	1	2	3	4	5	6	7	Ugly
Boring	1	2	3	4	5	6	7	Interesting
Tidy	1	2	3	4	5	6	7	Untidy
High Scenic Value	1	2	3	4	5	6	7	Low Scenic Value
Bright	1	2	3	4	5	6	7	Dull
Like	1	2	3	4	5	6	7	Dislike
Natural	1	2	3	4	5	6	7	Man-Made
Colourless	1	2	3	4	5	6	7	Colourful
Inviting	1	2	3	4	5	6	7	Uninviting
Obvious	1	2	3	4	5	6	7	Mysterious
Closed	1	2	3	4	5	6	7	Open
Hard	1	2	3	4	5	6	7	Soft
Smooth	1	2	3	4	5	6	7	Rough
Angular	1	2	3	4	5	6	7	Rounded
Light	1	2	3	4	5	6	7	Dark

Autumn Scene) in that order. Although participants did not have an equal view of the scenes in terms of angle of view and retinal image size, earlier demonstrations of this sort with such classes had revealed

Table 2

Semantic differential scales for emotional responses (pleasure and arousal) to landscape environments adapted from Mehrabian and Russell (1974).

Pleasure

Happy	1	2	3	4	5	6	7	Unhappy
Pleased	1	2	3	4	5	6	7	Annoyed
Satisfied	1	2	3	4	5	6	7	Unsatisfied
Contented	1	2	3	4	5	6	7	Melancholic
Hopeful	1	2	3	4	5	6	7	Despairing
Relaxed	1	2	3	4	5	6	7	Bored

Arousal

Stimulated	1	2	3	4	5	6	7	Relaxed
Excited	1	2	3	4	5	6	7	Calm
Frenzied	1	2	3	4	5	6	7	Sluggish
Jittery	1	2	3	4	5	6	7	Dull
Wide Awake	1	2	3	4	5	6	7	Sleepy
Aroused	1	2	3	4	5	6	7	Unaroused

no statistically significant differences between participants seated in the front-left, front-right, back-left, and back-right quadrants of the classroom. Accordingly, it was assumed that the location of participants in the classroom would not be a significant factor in their evaluation of the three scenes.

Once all three scenes had been presented, the survey sheets were

collected from the participants and the data were transcribed and subjected to a variety of descriptive and inferential analyses.

Results

For each scene, basic descriptive statistics were calculated for the 7-point semantic differential scale for landscape assessment and the two 9-point semantic differential scales for emotional response (pleasure and arousal). The mean values for each item in each scale were calculated for each scene based on all subjects regardless of demographic sub-category (sex, year at university, or place of upbringing). These mean values were used to produce the graphic representations of the results seen in Figures 5, 6 and 7.

Semantic Differential Scale for Landscape Assessment

Overall responses to each of the three scenes for the 18 items comprising the landscape scale are seen in Figure 5.

As the frequency distributions of responses did not meet the required criteria for parametric inferential procedures, a non-parametric Friedman ANOVA was conducted for each of the 18 items to determine whether there were overall differences in responses to the three scenes. Statistically significant differences were found for 15 of the 18 items, the exceptions being common-unusual, colourless-colourful, and obvious-mysterious. In these 15 cases, X^2 values met or exceeded the .01 level of significance. As Figure 5 indicates, participants responded to the two ICU scenes in basically the same way in contrast to their response to the Shinjuku street scene. The most striking

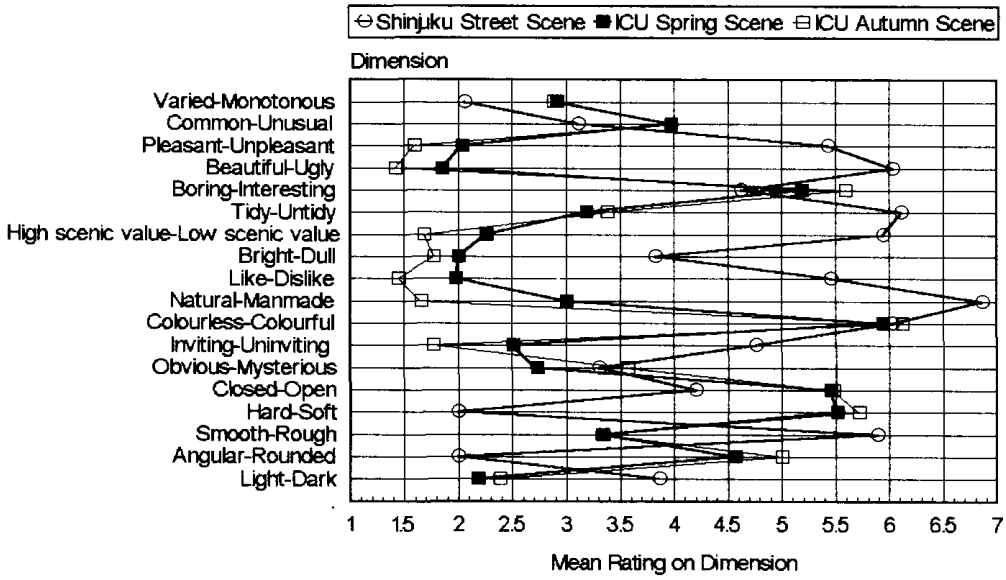

Figure 5. Mean overall responses to the ICU Spring Scene (Scene 1), the Shinjuku Street Scene (Scene 2), and the ICU Autumn Scene (Scene 3) on the items comprising the semantic differential landscape assessment scale adapted from Zube, Pitt, and Anderson (1974).

differences between the ICU scenes and the Shinjuku street scene were with respect to the dimensions of pleasant-unpleasant, beautiful-ugly, tidy-untidy, high scenic value-low scenic value, bright-dull, like-dislike, natural-manmade, inviting-uninviting, hard-soft, and angular-rounded. For all these items, evaluations of the ICU scenes could be considered to be more favourable—i.e., the ICU scenes were perceived to be more pleasant, more beautiful, more tidy, of higher scenic value, brighter, more likable, more natural, more inviting, softer, and more rounded. In general, it could be said that participants evaluated the ICU scenes significantly more positively than the Shinjuku street scene.

A series of t-tests for independent groups was conducted for each scene to determine whether there were significant differences in response to items as a function of sex and primary place of upbringing (urban or rural). For Scene 1 (ICU Spring Scene), the only statistically

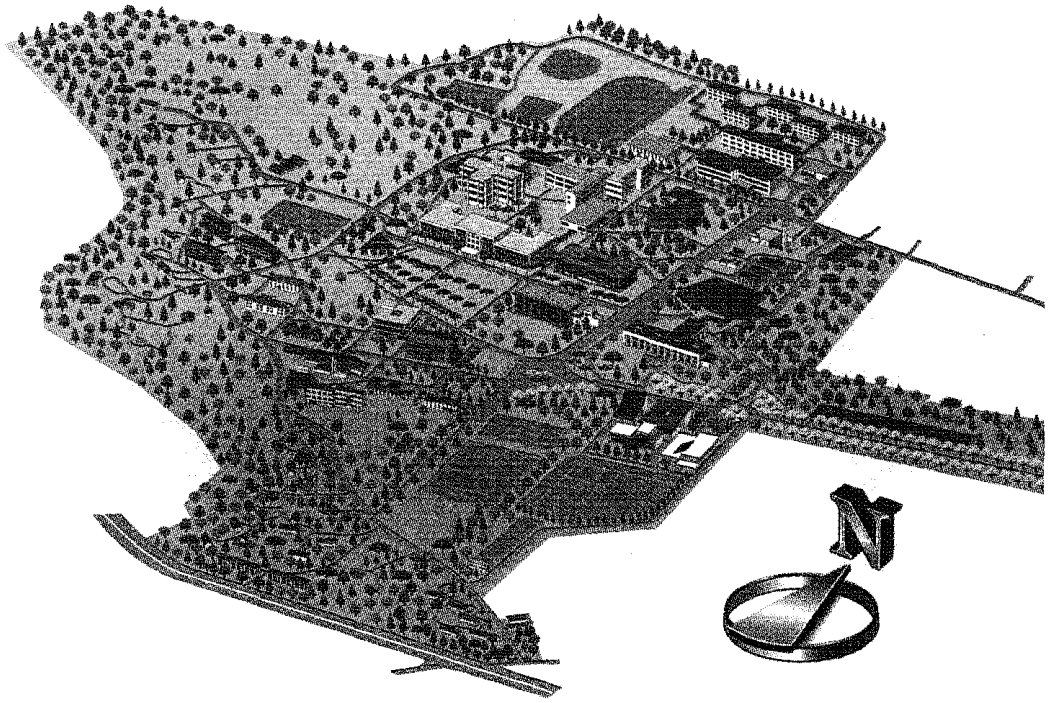

Figure 1. Stylized representation of the campus of International Christian University, Mitaka, Tokyo, Japan (Courtesy of the Public Information Office).

Figure 2. Scene 1 - Looking toward the entrance of International Christian University. Cherry blossoms in early April.

Figure 3. Scene 2 - A typical streetscape in Shinjuku Ward, Tokyo, Japan.

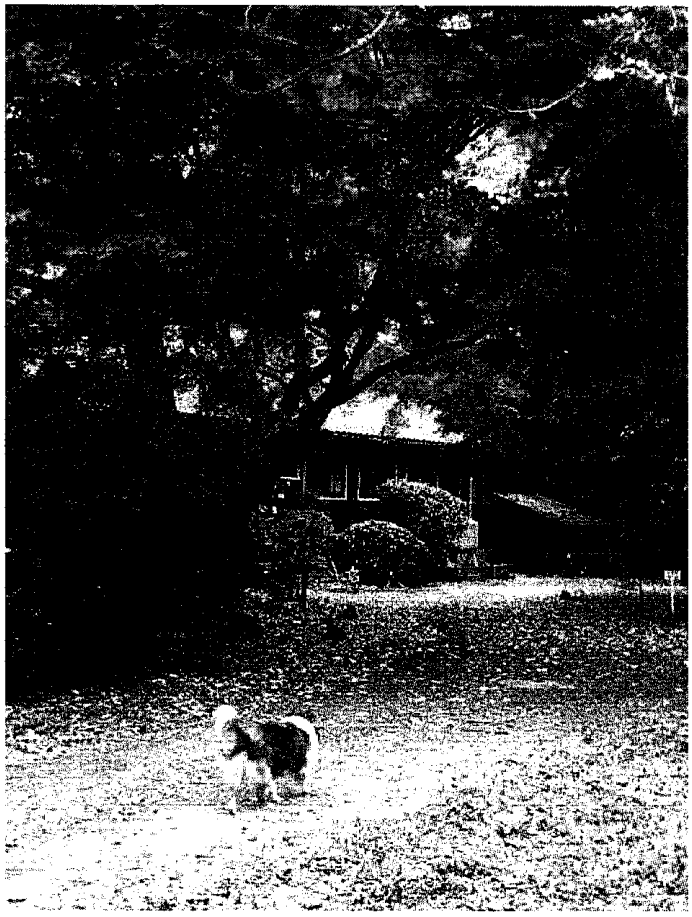

Figure 4. Scene 3 - A campus faculty residence at International Christian University in Autumn.

significant difference between male and female respondents was found for the natural-manmade item ($t(31) = 2.931$, $p = .006$). In other words, male and female participants basically agreed in their assessment of Scene 1. No statistically significant differences were found for Scene 1 in regard to primary place of upbringing. In other word, there was substantial agreement among participants of urban and rural backgrounds in their assessment of Scene 1.

For Scene 2 (Shinjuku Street Scene), the only statistically significant difference between male and female respondents was found for the tidy-untidy item ($t(33) = 2.759$, $p = .009$). In other words, male and female participants basically agreed in their assessment of Scene 2. No statistically significant differences were found for Scene 2 in regard to primary place of upbringing. In other words, there was substantial overall agreement among participants of urban and rural backgrounds in their assessment of Scene 2.

For Scene 3 (ICU Autumn Scene), no statistically significant differences between male and female respondents on the 18 items were found. In other words, male and female participants did not differ in their assessment of Scene 3. No statistically significant differences were found for Scene 3 in regard to primary place of upbringing. That is, primary place of upbringing did not influence participants' response to this scene.

To determine if a primary set of underlying factors accounted for participants' responses to the three scenes, a principal components analysis with varimax rotation was conducted. The results of this analysis are seen in Table 3.

Three factors labelled attractiveness, diversity, and uniqueness were found to account for 49%, 10.2%, and 8.3% of the overall variance, respectively. Overall it can be said that the ICU spring and autumn scenes were found to be more attractive than the Shinjuku

Table 3

Factor loading matrix, communality and percentage of variance for three factors extracted following a principal components analysis with varimax rotation of the semantic differential landscape assessment scale adapted from Zube, Pitt, and Anderson (1974).

Items	Factor 1 (Attractiveness)	Factor 2 (Diversity)	Factor 3 (Uniqueness)	Communality
Pleasant - Unpleasant	**.88742**	.10978	.03004	.63971
Beautiful - Ugly	**.95553**	.12393	–.02404	.92898
Tidy - Untidy	**.81398**	–.10772	.02295	.67470
HSV- LSV	**.91176**	.11231	–.02949	.84479
Bright - Dull	**.63185**	.44402	–.12708	.61254
Like - Dislike	**.91443**	.09916	–.01952	.84640
Natural - Man-Made	**.87554**	.00990	.01681	.76695
Inviting - Uninviting	**.76649**	.31364	.08658	.69337
Hard - Smooth	**–.91633**	–.01581	.04350	.84181
Smooth - Rough	**.79130**	–.16729	–.10149	.66444
Angular - Rounded	**–.79607**	.07395	.07799	.64528
Light - Dark	**.57602**	.34150	.30434	.54105
Varied - Monotonous	–.32744	**.72735**	–.05871	.63971
Boring - Interesting	–.30495	**.56200**	.05318	.41167
Colourless - Colourful	.01701	**–.68106**	.05278	.46692
Common - Unusual	–.25546	–.04937	**.70710**	.56768
Obvious - Mysterious	.07291	–.15260	**.83083**	.71889
Percentage of Variance	**49.0%**	**10.2%**	**8.3%**	

street scene. However, the ICU scenes were found to be somewhat less diverse than the Shinjuku street scene. In terms of uniqueness, the ICU scenes are perceived to be somewhat more unusual than the Shinjuku street scene.

Semantic Differential Scales (Pleasure and Arousal) for Emotional Response

Pleasure

As no differences were found in terms of demographic sub-categories (sex and primary place of upbringing), Figure 6 compares the overall responses of participants in terms of the pleasure they derived from each of the three scenes.

Figure 6 demonstrates very clearly that participants took a great

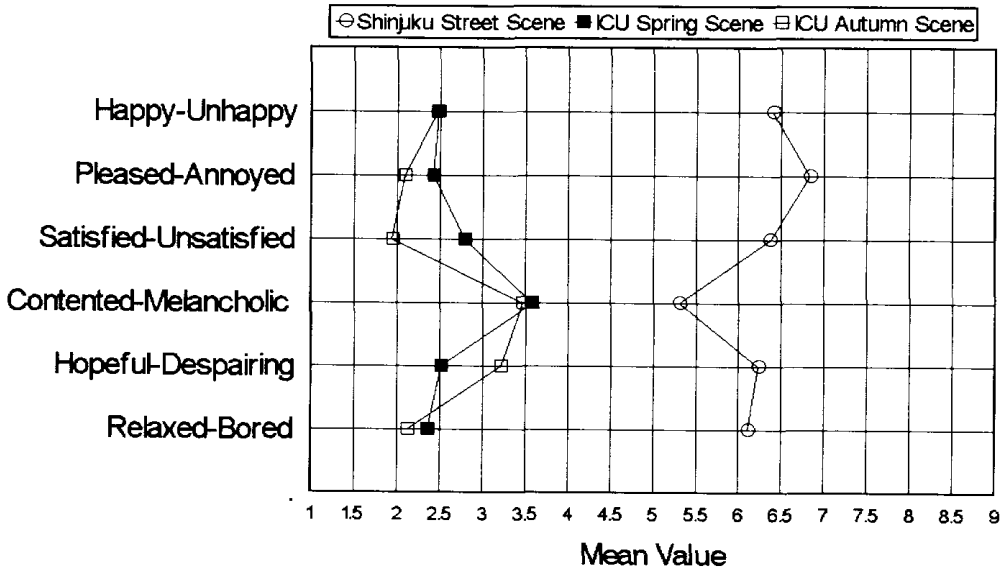

Figure 6. Mean overall emotional responses to the ICU Spring Scene (Scene 1), the Shinjuku Street Scene (Scene 2), and the ICU Autumn Scene (Scene 3) on the items comprising the semantic differential pleasure assessment scale adapted from Mehrabian and Russell (1974).

deal more pleasure in the ICU spring and autumn scenes compared to the Shinjuku street scene. A series of Friedman ANOVAs revealed highly statistically significant differences overall between the scenes ($p \leq .002$ in all cases). A series of non-parametric Wilcoxon Sign Ranks Test was conducted to compare the two ICU scenes. Statistically significant differences were found for satisfied-unsatisfied ($z = -2.265$, $p = .008$) and hopeful-despairing ($z = -1.92$, $p = .055$). While participants were somewhat more satisfied with the ICU autumn scene and somewhat less hopeful with the ICU autumn scene compared to the ICU spring scene, participants were much more satisfied and hopeful overall with the ICU scenes compared to the Shinjuku street scene.

Arousal

As no differences were found in terms of demographic sub-categories (sex and primary place of upbringing), Figure 7 compares the overall responses of participants in terms of the arousal they experienced from each of the three scenes.

For four of the six items comprising the arousal scale, Friedman ANOVAs revealed highly statistically significant differences overall between the scenes ($p \leq .001$). No statistically significant overall difference was found for the items jittery-dull and aroused-unaroused. A series of non-parametric Wilcoxon Sign Ranks Test was conducted to compare the two ICU scenes. A statistically significant difference was found for excited-calm ($z = -2.897$, $p = .004$). Generally speaking, participants found the ICU scenes to be more relaxing, more calming, more sluggish, and more sleepy than the Shinjuku street scene.

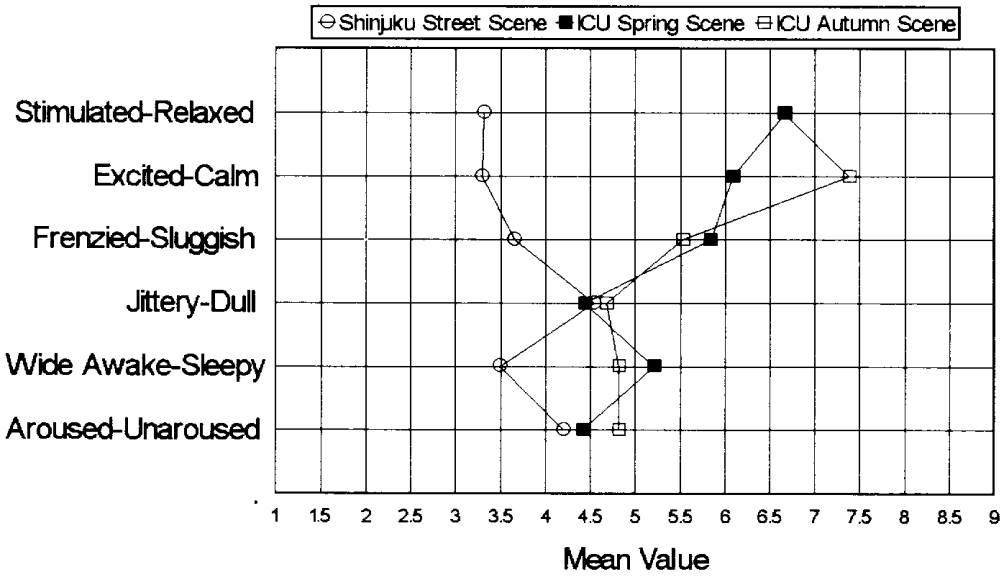

Figure 7. Mean overall emotional responses to the ICU Spring Scene (Scene 1), the Shinjuku Street Scene (Scene 2), and the ICU Autumn Scene (Scene 3) on the items comprising the semantic differential arousal assessment scale adapted from Mehrabian and Russell (1974).

General Discussion

Overall, the results of this study indicate that students perceive the ICU campus environment, as represented by the spring and autumn scenes, to be highly attractive, pleasurable, and relaxing. The results confirm earlier findings that observers have a preference for more natural scenes over urban scenes. Further studies are required to determine to what extent the semi-natural environment of the ICU campus serves to attract students to the institution. Many other factors including academic programmes, overall academic quality and reputation, educational opportunities such as language programmes and overseas exchange programmes, and the overall international and Christian characteristics of the institution are presumably important considerations for prospective students. To

the extent that immersion in a more natural environment is attractive to ICU students, the following possibilities may be considered.

The Campus as a Restorative or Healing Environment

Gifford (1997) explores the commonly held idea that nature is a restorative agent as it affords opportunities for relaxation and relief from stress. Many ICU students face a daily commute on crowded trains so the ICU campus, as a semi-natural environment, may afford some relief from life in more crowded and stressful circumstances. Many people believe that both physical and mental health are enhanced by exposure to more natural settings. Ulrich (1984) and Ulrich, Simons, Fiorito, Miles, and Zelson (1991) report that even the opportunity of looking at a more natural environment from inside a building can be restorative. Kaplan and Kaplan (1992) suggest in their volume "The Experience of Nature" that access to more natural settings is an inherent human need. When that need is not satisfied, the quality of life is compromised to some extent. Haemoid (1982) suggests that more natural environments afford people a kind of cognitive freedom, allowing them to choose what they will attend to rather than having to accept the physical and social constraints of crowded urban environments. If an educational environment such as that of ICU provides such cognitive freedom for its members, than it may facilitate the learning process, including the learning associated with self-growth and self-enhancement and the realization that human beings are an integral part of a much larger ecosystem for which they have a responsibility to nurture and preserve.

Gifford (1997) points out that being with people in more natural settings is a different experience from being with them in urban

settings. In other words, social interactions in more natural settings may be more intimate and restorative than in the more anonymous context of a large urban setting. To the extent that the ICU environment provides a more natural environment for its students, social interaction between community members may be enhanced.

If exposure to a more natural environment has restorative properties, what are the agents of such restoration? Mehrabian and Russell (1974) suggest that more natural environments can evoke more positive emotions which enhance one's sense of physical and mental wellbeing. Cohen (1978) argues that more natural environments can dissipate the stress resulting from stimulus overload in crowded urban environments. For Kaplan and Kaplan (1992), nature is restorative because it is fascinating and does not require the deliberate focusing efforts typical of less natural environments. To the extent that crowded urban environments produce a sense of mental fatigue, the opportunity to experience a more natural environment may afford some relief from such fatigue.

In general, the ICU campus setting, as a more natural environment, especially when contrasted with the surrounding urban environment of greater Tokyo, may well serve as a restorative agent for many students. As such, evaluations of the ICU campus environment would be expected to be favourable as, in fact, they were in the present study. Further research will be necessary to determine whether, in fact, students perceive the ICU campus environment as having restorative properties.

The Campus as an Educational Environment

Environmental issues are of paramount concern in the present age. The media are full of warnings about global warming, ozone depletion, tropical deforestation, and pollution of many sorts. As Smith (1993) has pointed, the typical university community often mirrors in its patterns of energy use, waste management, and administrative structure, the larger society of which it is a part. On the other hand, universities whose commitment to environmental preservation is expressed in an aesthetic and functional blend of the natural and built environments may instill in students some sense of their responsibility for environmental preservation and enhancement. When this informal lesson is enhanced by formal academic programmes in environmental studies and environmental awareness, the most significant long-term advantage is likely to be realized when students exposed to such programmes and settings leave the university to begin to make their livelihoods in the wider society. To the extent that the university lives in the activities of its graduates, ecologically sound attitudes and practices cultivated within the university should be reflected in the contributions these graduates can make in both their professional and personal lives to the ongoing struggle to create an ecologically sustainable world.

Orr (1993, 1994, 1995, 1996) has argued that educational systems must assume a major portion of the responsibility for solving our environmental problems. To the extent that campus environments such as that of ICU are symbolic of a commitment to environmental preservation and enhancement, students may be more inclined to take environmentally friendly attitudes with them to the wider community upon their departure from the university. As Allen (1999) notes, "In addition to saving money, campus greening allows

students to learn how in infuse environmental sustainability into the larger society. Students must be able to practice (and see the University practice) the lessons of environmental sustainability which they are taught in the classroom.." (p. xii)

Future Studies

The present study was designed to enumerate students' perception of the ICU campus environment and their emotional responses to this environment as represented by spring and autumn scenes on campus and contrasted with an urban streetscape in the Shinjuku region of Tokyo. Given that the ICU campus environment is evaluated highly, in terms of attractiveness, uniqueness, a pleasurable emotional response, and a sense of relaxation, it seems clear that students appreciate the campus in a holistic sense. The particular elements that lead to these positive responses on the part of students remain to be explored. The relationships between exposure to such an environment and a positive university experience remain to be clarified. As much time and effort are spent in preserving the more natural aspects of the ICU environment, it would be appropriate to know in a more definitive sense what the educational advantages of the ICU campus are. Such information would prove useful as plans are formulated for the future development of the campus, including the construction of new buildings which can harmonize with the existing, more natural aspects of the campus environment. To the extent that it can be demonstrated empirically that the more natural aspects of the ICU campus environment are important to student well-being and enhance the learning process in both its explicit and

implicit dimensions, every effort should be made to ensure that the more natural aspects of the campus environment are preserved for the foreseeable future.

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