

Preference for and Meaning of Arboretum Landscapes

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Introduction

The Morton Arboretum, located in the Chicago suburb of Lisle, IL, is an example of a unique landscape resource in a major metropolitan area. The value of the Arboretum's landscape is reflected in the heavy use that the place receives, especially in the colorful fall and spring seasons.

This study used a combination of quantitative and qualitative research methods to examine landscape preferences and meanings for a group of Morton Arboretum users. Preference was measured on a rating scale using a quantitative approach similar to earlier studies of landscape preference (Daniel and Boster, 1976). Landscape meanings were pursued through open-ended, written responses, similar to those employed by Gobster and Chenoweth (1990).

Methods

Participants for this study were contacted through announcements in the Morton Arboretum newsletter and in a volunteer training session. Thirty-four persons who expressed interest in participating were sent a questionnaire containing 20 color photographs of Arboretum landscapes, including natural forests, formal gardens, special collections, and open fields. Participants rated each landscape on a scale of preference ranging from 1 to 10.

The 32 participants who returned usable questionnaires were then mailed a second questionnaire, which asked them to select from memory several landscapes that characterized the kind of place the Arboretum is for them, and to give a brief written description of each selected landscape. The respondents were also asked to explain the meaning of each landscape by writing down the thoughts, feelings, and memories they associated with it. Each of the 29 persons who completed the second questionnaire described between three and five landscapes, providing a total of 126 separate landscape descriptions.

Results

In the preference questionnaires, the highest ratings were given to scenes in which dense forests with natural-appearing trees and shrubs predominated. Scenes that fea-

tured trees in more open settings that did not appear highly formal or maintained were the next most preferred, followed by scenes of open areas with tall, natural-appearing grass. Slightly lower ratings were given to scenes that showed trees in more maintained, park-like settings with mowed grass. The lowest ratings were given to highly manicured, formal landscape scenes.

Open-ended descriptions of landscapes from the second part of the survey were content analyzed to identify the concepts that figured prominently in respondents' mental images of the Arboretum. The most frequently mentioned environmental features included forests, paths, lakes and ponds, colors, spring and autumn seasons, and large trees. The most frequently mentioned subjective qualities of the environments were serenity and beauty.

These Arboretum users associated their favorite settings with walking, contact with nature, and memories of people, places, and past events in their lives. This indicated that arboretum settings are not experienced simply as aesthetic scenes to be viewed in a stationary, detached way, but these settings help people to feel connected with the processes of nature and with their natural and historical heritage.

Most people chose several different kinds of settings to represent their mental image of the Arboretum. Thus, the variety of different kinds of settings available at the Arboretum seems to be an important aspect of people's mental images. This is also indicated by the fact that 55% of the respondents explicitly mentioned "variety" as an important feature of at least one of their preferred settings.

The experience of beauty occurred across a wide range of environments and did not appear to be associated with any one kind of setting more than others. This is not surprising, since the landscape descriptions were all selected by the respondents, who would be unlikely to include scenes with low aesthetic quality. Other experiential qualities and meanings did seem to be associated with particular types of settings, however. Serenity was most often mentioned in connection with cool settings and water. Joyful, happy feelings, on the other hand, seemed most associated with sunshine and warmth. Forests and wildflowers evoked thoughts of nature, while a prairie restoration area was associated with pioneer history.

Recommendations for Arboretum Management

An improved understanding of the meaning of the Morton Arboretum's landscapes for the people who enjoy and value them may help arboreta to design landscapes that enhance users' experiences and to develop educational and interpretive programs that will enable more people to enjoy and appreciate the unique features of the arboretum setting.

Natural settings, particularly forests, are very important in this regard, as are the lakes and ponds found in the Arboretum. Paths that lead through diverse environments may enhance the experience of variety, which is also an important aspect of people's experience of the Arboretum.

The prominence of serenity as a quality in people's explanations of their preferred settings is consistent with Ulrich's (1981) research on the relaxation-inducing qualities of vegetation in landscapes. Many respondents viewed the Morton Arboretum as a place of refuge, where they could escape from daily routine and urban hassles to find solitude, because its controlled entry and exclusion of more active recreation greatly reduces the safety concerns and the noise that can intrude on solitude in urban outdoor recreation sites. Serenity, refuge, and solitude can be provided in areas away from roads and congestion, by inconspicuous trails leading to cool, shaded places near lakes or ponds.

A final recommendation concerns the fact that preferences varied significantly among different people in this study. Most of the participants liked natural woods the most, but several people preferred more formally landscaped settings. People also varied considerably in how much they liked open, natural meadows. By providing a variety of natural and landscaped settings with varying densities of vegetation, an arboretum can appeal to a public with diverse landscape preferences.

References

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"The Field Trip Milieu: Learning and Behavior as a Function of Contextual Events"

J. Falk & J. Balling (1982). *Journal of Educational Research*, 76(1), 22-28.

This study is part of a series by Falk and his colleagues which examined children's experiences on school field trips, especially the effects of novel environments.

The attitudes, behavior, and learning of third and fifth graders were compared in two environments: (1) a field trip to a nature center to learn about tree biology; and (2) the same lesson given at school outside the students' classroom. The 196 students in this study were divided equally between third and fifth graders; 46 girls and 52 boys from the fifth grade, and 44 girls and 54 boys from the third grade.

The following measures were used: a pretest, posttest measure of knowledge (both multiple-choice and completions items); direct observation during the instruction; and self-report items to measure attitudes.

Results

Cognitive Learning Measures

1. Fifth grade students scored higher on the tests than third graders.
2. All groups showed an increase in performance from pretest to posttest.
3. Third grade students performed higher in the school setting, while the fifth grade students performed higher in the nature center environment.
4. Fifth grade girls in the nature center group performed better on the retention test than all other groups.

Behavioral Data

1. Students spent most of their time on-task.
2. Third graders were more on-task in the school setting, while fifth graders were more on-task at the nature center.

Affective Data

1. Over half the students (56.2%) thought the forest was the best place to learn about trees, with greenhouse (13.4%) and classroom (10.8%) next.
2. Over 80% preferred the field trip.

The study demonstrates that the general environment and the grade level of students are both important factors to consider in learning situations. The authors suggest a curvilinear model that shows the relationship between learning, setting novelty, and off-task behavior.