Cooperative Extension Service
College of Tropical Agriculture and Human Resources
University of Hawai'i at Mānoa

Resource Management
Feb. 2002
RM-13

Hawaii Visitor Preference for Landscapes to Screen Buildings

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Special Design Districts have been set aside in various communities around the state in which politicians and neighborhood boards cite landscaping as a major concern. Waikiki and Kapolei residents want more trees, while Kailua and Salt Lake residents want their utility lines underground.

Zoning laws are one way for a community to keep a "Hawaiian sense of place." On Kauai, for example, the Planning Commission restricted the amount of land covered by buildings and pavement to no more than 50 percent of a lot or parcel area. Building heights are restricted to four stories, or 40 feet from the ground, while parking areas and some buildings must be appropriately screened or landscaped.

Designs that take include Hawaii's lush greenery are generally desired. However, agreement about what makes a high quality design is hard to get. In the case of hotels on Kauai, the Planning Commission will judge the design's quality, but the hotel's guests will pay the costs. The visitors' preferences for various landscapes are important if visitors are expected to pay the costs. The study results reported here estimate what visitors say they will pay for certain landscape quality factors.

The survey

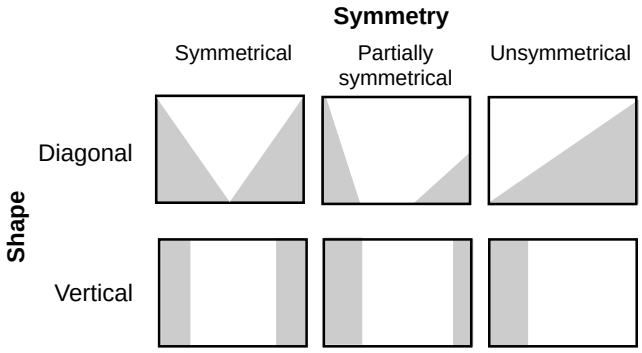
Many different quality factors exist, and not all of them can be studied at one time. We decided to focus on the use of a landscape to screen a building. The foliage in a landscape could cover the entire building, part of the building, or none of the building. Thus one quality factor in the research was building coverage at zero, 33, 66, and 100 percent.

Three other factors in the survey dealt with the shape of the foliage covering the side of the building. If none or if all of the building was covered by foliage, this design factor does not exist. For partial building coverage, the design can be diagonal or vertical, and it may be symmetric or asymmetric. The diagonal and vertical factors had two levels: present or absent. Symmetry had three levels: full, partial, or absent. Figure 1 shows each design factor diagrammatically, and Figure 2 shows two combinations of design factors used in the survey.

Foliage with uniform texture was superimposed over an image of a building to create 48 variations. The photos were grouped into sets of four with a room price per night on each photo. The designs that were likely to be preferred were given higher prices. People who took part in the experiment were told that the building shown was the view seen from the lanai of their hotel room. Participants were asked to assume that they would actually pay for the room with this view, and to rank their first, second, third, and fourth choice in each set of four photos.

From December 13, 2000, to January 8, 2001, at various times of day, visitors were approached at Honolulu International Airport and asked if they would take part in the survey. Those that agreed answered five background questions and, after reading a description of the study, ranked the photos.

Figure 1. Landscape coverage and design factors.



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The survey results

Sixty-four visitors participated in the survey. The participants were all from the U.S. mainland. While a Japanese-language survey was also available, Japanese visitors did not seem interested in participating. A comparison of the participants' background data on Mainland visitors found the participant group to be similar to all Mainland visitors.

Just under a third of those interviewed (20 visitors) were willing to pay more for a view with some landscape covering the building. This group did not appear to have different backgrounds from the participants who did not want to pay more. Based on the room prices on the photos, the estimated value for each 1 percent increase in coverage ranged from $0.05 to $0.75 per room per day. On average, the visitors who were willing to pay more for a landscaped view valued each additional percent of coverage at $0.36. Assuming that each percentage of change is valued equally, 50 percent coverage would, on average, be valued at $18.00 per day.

The respondents' willingness to pay for coverage is summarized in Figure 3. To get an idea of what this means for a hotel's revenues, assume there is a hotel in which all guests had a view of the covered building. The hotel's revenues could be increased by $139,980 per year if 31 percent of the guests would pay $18.00 more per day for the average sized hotel with a 73 percent occupancy rate. The hotel would have to estimate the cost of maintaining the landscape in order to complete a cost-benefit analysis of this quality attribute.

Many participants were unwilling to pay for the design options. Sixteen participants valued the diagonal design, eight participants valued the vertical design and ten respondents valued partial symmetry compared to full symmetry or no symmetry.

Conclusions

About a third of the visitors surveyed were willing to pay more to have the building seen from their hotel room covered by landscape. From one-sixth to one quarter of those surveyed were willing to pay more for one or more of the three design factors included in the survey. The majority of the visitors were not willing to pay more for landscape coverage or for any of the design factors. Hotel owners, as they make design decisions, can use this information about the market benefits of screening a building from their customers' view. As Hawaii's decision-makers continue to strive for attractive views, thought must be given to what makes a view attractive and who will pay the costs and receive the benefits of an attractive view.

Figure 2. Examples of designs with 66% coverage (above, vertical, symmetric; below, diagonal, partially symmetric.

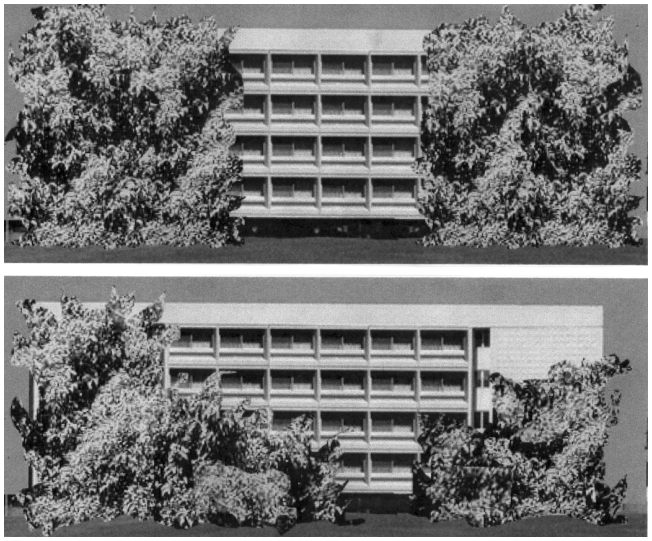

Figure 3. Willingness to pay more for a room when the building viewed from the room is 50% covered by landscaping.