

The Aesthetic Qualities of Urban and Natural Landscapes in Hawaii as Perceived by Native Hawaiians, Residents, and Visitors

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Introduction

- Hawaii is a popular travel destination and place to live. Pressures from agriculture and urban development are jeopardizing its natural environments.
- Plants and natural environments in densely populated areas are often not valued. This can lead to their deterioration.
- Identification of a landscape's aesthetic qualities can reveal complexities in the human relationship with the vegetation.
- Identifying the aesthetic qualities of the "Hawaiian sense of place" can reveal barriers and opportunities for current and future management of Hawaii's urban and natural forests.
- Hawaii may look like other tropical destinations. However, Hawaii has a host culture, the Kanaka maoli which have a strong connection to the `aina or the land. Hawaiian gods are embodied in many different forms, which include at least one plant form.



Objective

- This pilot study examines preferences of Native Hawaiians residents, other Hawaii residents, and visitors for Hawaii's urban forest and natural landscapes.

Methods

1). Participants (n=120) were shown images of landscapes throughout the Hawaiian Islands and asked to rank them using a Likert scale. Questions were: Q1-"How much would you like to be in this landscape"? and Q2-"How much does this landscape reflect Hawaii to you"? Images consisted of four categories that were randomized and each category was represented by five images.

Urban Hawaiian (UH) - urban settings containing at least 75% Native Hawaiian or Polynesian introduced vegetation.



Urban Non-Hawaiian (UNH) - urban settings with at least 75% introduced species.



Non-Urban Hawaiian (NUH) - urban settings with at least 75% Native Hawaiian or Polynesian introduced species



Non-Urban Non-Hawaiian (NUNH) - non-urban settings with at least 75% introduced species.



2). Respondents were queried as to what a Hawaiian landscape was to them.

Results Cont.

- UH12 image was a lo'i (taro pond) framed with loulou (fan palms). This setting found throughout old Hawaii is rarely seen in contemporary settings.
- Respondents preference for UH12 image was significantly higher compared to all the other images for both Q1 & Q2.
- UH14, an ancient coconut forest planted by King Kamehameha V was ranked significantly higher for Q2.
- NUNH18 contained no hardscape with masses of green in varying shades with a backdrop of coconut trees was also rated significantly higher for Q2.
- UH13 was taken in a courtyard that incorporated native Hawaiian plants in an urban setting. The tree canopy was not in the picture and this could have had a confounding effect.
- UNH3 rated significantly lower in both Q1 and Q2. This image was an urban highway dominated by a road and an apartment building with a single row of palm trees.
- The lowest average rating across all the pictures was UNH1, a very urban picture with little vegetation.

Table 2. Overall Preference Means with Significant Difference

Scene	Q1	Q2
UH 1	2.883	3.425
UH 12	7.733	4.041
UH 13	2.183	2.541
UH 14	3.516	3.823
UH 15	3.366	3.533
UNH 1	2.5	3.208
UNH 2	2.808	3.208
UNH 3	1.983	2.741
UNH 4	3.2	3.5
UNH 5	2.983	3.425
NUH 6	3.316	3.733
NUH 7	3.15	3.641
NUH 8	2.891	3.241
NUH 9	3.45	3.775
NUH 10	3.341	3.766
NUH 16	2.741	3.05
NUH 17	3.566	3.158
NUH 18	3.583	3.858
NUH 19	2.95	3.016
NUH 20	3.175	3.3

Urban Hawaiian (UH)
 Urban Non-Hawaiian (UNH)
 Non-Urban Hawaiian (NUH)
 Non-Urban Non-Hawaiian (NUNH)

= Positive
 = Negative
 P < .05

Conclusions

- Overall, participants rated urban settings with large amounts of hardscape significantly lower; images with coconut palms and limited amounts of hardscape were rated higher.
- "Hawaiian sense of place" seems to be dominated by coconut palms in both the preference ratings and in open ended questions.
- Native Hawaiians have a slightly higher preference for Polynesian introduced and native plants, and prefer non urban to urban scenes.
- This pilot study reveals similarities and differences in the perception of a "Hawaiian sense of place" between residents and visitors. Next step would be to increase the sample size across all groups.

Results

Figure 1 shows a content analysis revealing ten major themes of what a Hawaiian landscape was to respondents.

Green/tropical/lush, flowers, and foliage plants occurred most frequently, with palms being mentioned most frequently, followed by coconut palms.

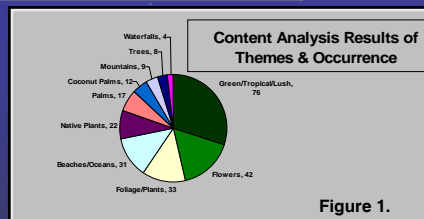


Figure 1.