

## PREFERENCES FOR NEARBY NATURAL

### SETTINGS: ETHNIC AND AGE VARIATIONS

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Existing evidence suggests that urban Blacks and Whites both highly value their contacts with nearby nature, but may differ in the particular types of settings which they prefer. The current study extends this work by examining the landscape preferences of Blacks and Whites in adolescent and adult age groups. The results support earlier findings, but also suggest that adolescents' landscape preferences are distinct from the preferences of adults.

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#### Introduction

The importance of access to nearby natural settings has been shown in a number of studies (Francis, 1987; Kaplan & Kaplan, 1989; Schroeder, 1988). Although empirical studies related to satisfactions associated with the urban forest have seldom encompassed racial and ethnic issues, research on the landscape preferences of urban Blacks and Whites suggests that both groups highly value opportunities to enjoy the nearby outdoors (Kaplan & Talbot, 1988).

An appreciation of having nature nearby can express itself in a variety of ways, in terms of the patterns of activities as well as the kinds of settings that are preferred. Our previous research with Black urban residents, using photographs of natural settings, suggests a preference for small, carefully manicured areas with relatively few trees as opposed to larger, more densely wooded spaces. The fear of danger in urban areas with poor visibility may account for some of this pattern, rather than ethnic or cultural differences per se. Whatever the underlying basis for such differences, it is important for managers of urban recreation resources to take them into account in attempting to meet the needs of current urban residents (Talbot & Kaplan, 1984).

Adolescents living in urban areas may be especially vulnerable to such prevalent urban ills as drug abuse and gang involvement. Diverting their needs for risk and excitement into more appropriate paths is a major challenge. It may be critical that recreation managers and planners develop a better understanding of the landscape preferences of urban adolescents, as well, if they are to meet this critical challenge.

Relatively little research has explored how adolescents perceive the natural environment or the nature of their preferences for it. Research by Balling and Falk (1982) showed a consistent pattern of lower preferences among a group of 15-year olds, compared with either younger or older

participants. Medina's (1983) study showed that people in this age group preferred scenes suggesting activity rather than predominantly natural views. On the other hand, Anderson (1978), working with slightly older participants, found that the landscape preferences of Black and White high school students were relatively closely correlated with the preferences of adult residents from these two ethnic groups.

Based on these few studies to date, it is difficult to know whether during the adolescent years there is a reduced appreciation for natural settings, whether preferences are strongly related to what the settings afford in terms of activities, or whether the patterns differ depending on background factors. The present study makes it possible to look at the preference patterns of Black and White adolescents, as well as to compare the preferences of these individuals with those of Black and White adults.

This study examines the landscape preferences of Black and White adolescents who participated in outreach programs conducted by the University of Michigan. These middle-school-aged participants were given the same task that we had used previously with samples of Black and White adults. In combination with these previous studies, the findings offer a rich opportunity for comparing preferences based on age as well as ethnicity.

#### Methods

Landscape preference data were gathered from 140 adolescents participating in outreach programs conducted by the University of Michigan. These seventh and eighth grade students were attending one of three programs developed to encourage individuals from "underrepresented" geographic and ethnic groups to consider scientific and academic careers, at a time when relevant high school courses are still available to them. The sample included 69 Blacks and 71 Whites. Thirty-eight students were male and 102 were female (one of the three programs was only open to girls). The students came from a wide variety of urban, suburban, and rural communities throughout the state of Michigan. No individual demographic data were available for the participants.

Participants in the study sorted 26 black-and-white photographs of outdoor areas into five piles according to preference, where preference was defined as how well they liked each of the areas pictured. They were encouraged to use each of the piles when sorting. The photographs represented a wide variety of outdoor areas, including unmanicured wooded areas, lakes and rivers, landscaped parks, picnic areas, and front yards along residential streets. People were not visible in any of the photographs.

This set of photographs had been used in two earlier studies of preferences for everyday natural landscapes (Talbot and Kaplan, 1984; Kaplan and Talbot, 1988). The first study was a small pretest, with a sample of 31 Black and White Ann Arbor residents (primarily adults, but including a few teenagers). The second study involved interviews with 97 adult residents of inner-city Black neighborhoods in Detroit, Michigan.

## Results

There are a variety of ways to compare the preferences for the scenes across the different studies. The discussion here focuses on a correlational analysis, a comparison based on mean preferences, and a more detailed examination of the particular kinds of settings that received high and low preferences.

### Comparison of Overall Pattern of Preference

A frequently used approach for comparing preferences is by computing the degree of relationship between ratings of different samples. Such correlations have often shown very high agreement across groups, often representing different cultures (e.g., Zube & Mills, 1976; Zube & Pitt, 1981; Kaplan & Herbert, 1987).

Table 1 presents the correlational results for comparisons among the various subsamples in the present and previous studies. The values in the table that are in the same range as those reported in previous studies ( $r > .65$ ) are all between same-ethnic groups. This holds true even for comparisons across ages (e.g., adolescent and the adult Detroit sample).

Table 1. Correlations of preferences across age and ethnic groups.

	Adults		Adolescents	
	white (AA)	black (AA)	black (Det)	white black
Adults:				
white/AA				
black/AA	.05			
black/Det	-.51	.77		
Adolescents:				
white	.80			
black		.68	.71	.39

Note: AA= Ann Arbor study, Det= Detroit study

By contrast, the correlations between different-ethnic groups, though same age range, show a strikingly different and quite variable pattern. In the case of the adolescents subsamples in the most recent study, the correlation is  $r = .39$ . For the previous studies the comparable values include one that is near zero ( $r = .05$ ) and one that is distinctly negative ( $r = -.51$ ). Certainly these results suggest that substantial differences exist between different ethnic groups in the preferences for everyday urban nature settings.

### General Landscape Preference Comparisons

Another way to examine the differences among the samples is in terms of the actual preference ratings. Table 2 provides the overall mean rating for each subsample for the entire set of 26 scenes. These show virtually no variation, averaging to a value somewhat higher than mid-scale.

The table also includes an analysis of scenes rated particularly favorably (means of 4.0 or higher) and those that were distinctly non-preferred (ratings of 2.5 and lower). The latter

Table 2. Variation of preferences across age and ethnic samples.

Subsample	Mean Preference	Percentage of Scenes	
		Preferred	Non-preferred
Adults:			
white/AA	3.4	31	15
black/AA	3.5	31	12
black/Det	3.5	35	12
Adolescents:			
white	3.4	19	8
black	3.4	0	12

Note: AA= Ann Arbor study, Det= Detroit study

category shows considerable consistency across age and ethnicity, with two to four scenes receiving relatively low ratings. The selection of preferred scenes, however, shows considerable contrast between the adult and adolescent samples, and between the adolescent subsamples. In other words, in general, the younger participants find fewer scenes to be particularly preferred -- a pattern that is similar to the Balling and Falk (1982) and Medina (1983) findings for similar age groups.

Particularly striking is the total lack of highly preferred scenes for the black adolescents. They rated half the scenes as moderately positive (between 3.5 and 4.0), reflecting a much more uniform reaction to the set of photographs as a whole than was the case for other groups.

### Preferences for Individual Scenes

The correlational results suggest relatively high agreement within ethnic groups, even across ages. The analysis in Table 2 suggests that while overall preferences are quite similar, the likelihood of rating scenes as highly preferred is far greater for adults than for youths, regardless of ethnicity. None of these analyses, however, provides insights as to the kinds of scenes that the different subsamples favor. The purpose of Figure 1 is to do just that. The two scenes in the top row received low ratings from all three Black sub-samples, but significantly higher ratings (according to the results of Student-t tests, with .05 significance levels) from each of the corresponding White sub-samples. All of the scenes which were non-preferred by the Black subsamples had an undeveloped or unmanicured appearance. These scenes typically received moderate to high preference ratings from the White subsamples.

The middle row of Figure 1 shows two scenes which received relatively high preference ratings from all of the Black subsamples, but significantly lower ratings from the corresponding White subsamples. These scenes typically include built elements such as benches, park equipment, paved walks, and picnic shelters. Despite these constructed components, most of these scenes also have ample trees and vegetation. The open, spacious quality of many of these scenes is similar to the settings which were rated as highly preferred by both the adult and the high-school rural Blacks in Anderson's (1978) study. Each is characterized by smooth



Figure 1. Settings showing both differences (top and middle rows) and similarities (bottom row) in landscape preferences across age and ethnic groups. Scenes in the top row were preferred by adolescent and adult Whites, but not by Blacks. Scenes in the middle row were preferred by adolescent and adult Blacks (with adults giving higher ratings than adolescents), but not by Whites. Scenes in the bottom row received moderately high preference ratings from all samples.

ground texture and by a generally well-kept appearance. Many of these scenes were among the least liked for the White participants, while a few others received moderate preference ratings.

The bottom row of Figure 1 shows two scenes which received moderately high preference ratings from all subsamples. There were no significant differences between ethnic groups in preference for these and other scenes which included both

large trees as well as open areas with filtered sunlight.

Among the adolescents, the current data show that ethnic differences in preferences for everyday urban nature settings are very similar to the findings of the earlier study with adults. Again, the nonpreferred scenes among the Black adolescents were undeveloped or unmanicured. Among the White adolescents, the less preferred scenes included built elements, paving, and smooth ground texture.

Scenes which were highly preferred among the Black adults were relatively preferred among the Black adolescents, although none of the twenty-six scenes were given high average ratings (4.0 and over) by the Black adolescents-- as was the case for each of the other subsamples. While still liked by the Black adolescents, these few scenes were not differentiated from the many other scenes which they considered generally pleasant.

### Discussion and Implications

The findings of the current study, with adolescent Black and White samples, indicate that these ethnic groups vary in the types of everyday natural settings which they prefer. These findings reinforce earlier results with adult samples, giving additional indications that Blacks have higher preferences for settings that are carefully manicured and relatively open, while Whites prefer settings that are more heavily wooded and show less evidence of human influence.

While the consistency of these findings lends weight to their credence, it should be remembered that the adolescent participants represent opportunity samples, and there is no information on other background variables which may affect preference. The earlier data had shown greater preference differences between White Ann Arbor residents and Black residents of Detroit than were found between White and Black residents of Ann Arbor. This finding had been interpreted as suggesting that other cultural and/or situational factors, such as the fear of danger in deteriorated urban environments, may account for some of these landscape preference differences. The current participants are only known to come from a wide variety of urban, suburban and rural settings. The issue of other factors which may affect the preferences of urban residents remains an intriguing question for future research.

In addition to ethnic differences, the current results indicate that age affects preference. The general level of landscape preferences across all the scenes used in these studies was very similar across age and ethnic subsamples. However, the adolescents found fewer scenes that they particularly enjoyed. This finding was most clearly evident among the Black adolescents: while responding positively to these everyday natural settings, the adolescent Blacks rated none of them as being highly preferred. These findings are consistent with the results of the Balling and Falk (1982) research, and are compatible with Medina's (1983) finding that adolescents are particularly favorable to outdoor settings suggesting opportunities for action, rather than to predominantly natural scenes.

These differences in preferences between adolescents and adults were not as strong as the differences between the two ethnic groups. The current findings fit well with the results that Anderson (1978) reported: the preferences of youths and adults within the same ethnic group are relatively closely related, when compared with the preferences of other ethnic groups.

It should be noted that the findings of these studies do not relate to views of spectacular nature settings, which everyone appreciates, but to the kinds of settings that are typically found in and around large urban areas. These findings are directly relevant, therefore, to the management of urban nature settings. Managers and planners should be sensitive to the fact that local residents' landscape preferences are likely to be distinct, in significant ways, from their own.

These findings are also relevant to the design and management of recreation programs intended to appeal to adolescents. Adolescents may be like adults in benefiting from contacts with natural settings, but they are less likely than adults to perceive natural settings as being particularly inviting. The appeal of risk, challenge, and adventure is particularly strong among this age group. Nature programs may be able to offer unique benefits to adolescents, but it is critical that their offerings be embedded in program structures that allow adolescents to test themselves against meaningful challenges, as well.

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