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## Preferences for Nonrepresentational Drawings by Navaho and other Children

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Children (N = 320) who were mostly 11 and 12 years old and from four different cultures—the Navaho Indian, suburban U.S., Israeli, and Costa Rican—selected preferred pictures. Two of five pictures were chosen from 32 different picture arrays in which all pictures were nonrepresentational drawings. Navaho and suburban children also picked the best and the least-liked pictures across all arrays. Preferences among cultural groups were discriminated by three scales scoring picture attributes of High Quality, Low Action, and Uniqueness. The Navaho girls produced the most extreme scores on each of the scales with most High Quality and Low Action choices and fewest Unique choices. It was concluded that (a) as a group the Navaho girls already conformed to the stereotype that adult Navahos have conservative but superior esthetic preferences, (b) sex differences that are of only borderline significance within a culture may still be important in cross-cultural comparisons, and (c) the overall best-liked pictures for Navaho and suburban children were similar even though some significant scale differences were found using the above forced-choice technique.

## PREFERENCES FOR NONREPRESENTATIONAL DRAWINGS BY NAVAHO AND OTHER CHILDREN

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Numerous scholarly authorities on the Navaho Indians of the southwestern United States have commented on their high level of esthetic taste and accomplishment (e.g., Hatcher, 1968; Kluckhohn and Leighton, 1962). It is also well documented that the Navahos, who are one of the most economically disadvantaged groups in the United States, possess a much more homogeneous esthetic tradition than can currently be found for almost any other cultural group of comparable size and geographic dispersion. As manifested in

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their crafts of weaving and jewelry-making, their esthetic sophistication is unassailable. Nevertheless, it is obvious that such artistic products are unfair samples from which to draw conclusions about general levels of esthetic taste. For example, one could scarcely infer on this basis that the average Navaho child has different, let alone superior, esthetic preferences. It is the purpose of the present study to compare pictorial esthetic preferences for typical Navaho children with those given by children of three other cultural groups to determine if, in fact, Navaho children's preferences do display a distinctive patterning.

The question of cross-cultural group differences in esthetic preferences is of some theoretical interest, since Child (1969) has forcefully argued for the conclusion that people in general who are not esthetic experts or practitioners often have a broad range of esthetic agreement. Evidence for agreement across cultural boundaries is more ambiguous in other studies showing opposing results. But it would appear that more agreement might be found among children than adults, since children's interests are less specialized. Cross-cultural studies of children's esthetic preferences are infrequent, but one study showing good cross-cultural agreement is that of Machotka (1963), who found many similarities between French and American children in pictorial preferences.

What is a suitable instrument from which to draw cross-cultural conclusions concerning esthetic preferences? The usual strictures against the impossibility of culture-fair tests apply strongly to the esthetic area, and all the more so when children are tested who have been nurtured on a fairly

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Development, Catholic University of America, Washington, D.C. 20064. I thank Marc Nemiroff for obtaining the suburban sample and for a preliminary data analysis, Ligia Alpizar Vargas for administering the test procedure to Costa Rican children, Nissim Levy for obtaining the Israeli sample, and Peter Syverson for data analysis. Special thanks are due Frances Bentzen, a great friend of the Navaho, for providing the opportunity to work with Navaho children. Above all, I am indebted to Professor Kenneth Beittel for making forms of the Visual Magila available to me and encouraging its administration to novel subject groups.

limited content range of stylized objects and illustrations. However, the use of nonrepresentational drawings as preference items appears to possess less content bias than most other material. Another advantage of the administered test instrument was that several preference dimensions could be scored, so possible group differentiation was not limited either to amount of consensual agreement or to the single dimension of esthetic quality. In addition to the Navaho children, other children from the eastern United States, Israel, and Costa Rica were tested to give a broad basis for comparison. It was expected that Navaho preferences would be distinctive in some respects but would also show considerable overlap with the other U.S. sample; but other findings such as sex differences were unanticipated.

## METHOD

### Subjects

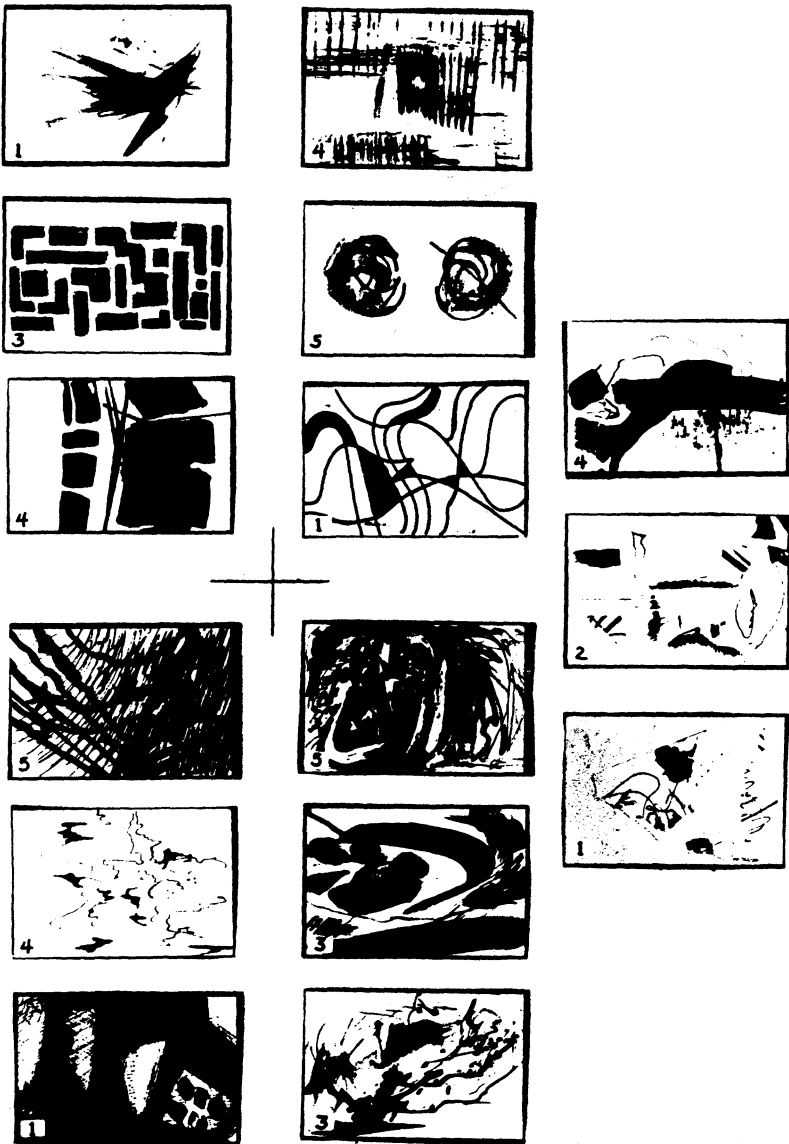
Almost all of the 320 children who participated in the study were either 11 or 12 years of age. A few exceptions occurred when children were administered the test booklet because they were in the same school classes as the other children. Distributions by cultural group and sex are listed in Table 1. The Navaho children were all attending a Bureau of Indian Affairs boarding school on the Navaho reservation in northeastern Arizona. Although the children were 11 or 12 years of age, most of them were one or two grades behind their suburban peers, i.e., they were enrolled in the fourth or fifth grade. This is the usual situation, since it has been common for Navaho children to start school late or spend a year in the boarding school learning English before they are assigned to a classroom grade. Many of the children had spoken Navaho almost exclusively before attending school. The test was administered by the author in English.

The suburban group was drawn from the Washington, D.C., area; children were predominantly white and middle-class. The Israeli children were all Jewish children attending schools in the Haifa area. Test instructions were administered in Hebrew by an Israeli. The Costa Rican children attended two elementary schools in the San José area. One school was private and one public, but results from both groups were combined in analyzing responses. A Costa Rican administered the test, giving instructions in Spanish.

### **The Preference Test**

The test instrument was the “Visual Magila: An Experimental Exercise for Visual Preference Patterns.” (Note that in administering the Magila to the children and in the discussion that follows the term “picture” has been substituted for the awkward term “nonrepresentational drawing” or the ambiguous term “pattern.”) The Magila was devised in 1962 by Professor Kenneth Beittel of the Department of Art Education, Pennsylvania State University. It was initially planned for use with individuals older than those sampled in the present study and without any intent of cross-cultural application.

The Magila consists of 32 picture arrays, each picture array containing five nonrepresentational black-and-white pictures. There are four arrays (items) on a page, with the pages bound together within covers and instructions in a test booklet. Each picture is 4.8 cm. wide and 3.3 cm. high, separated from adjacent choices by a black border. Examples of individual pictures are given in Figure 1. Instructions appropriate for adults are printed on the inside cover of the Magila. They require two picture preference choices for each item marked on a separate answer sheet. The instructions read: “Make this selection on the basis of the appeal which these pictures hold for you. This is the only basis for selection



A sample of three keyed pictures from five different Visual Magila scales. The three upper left-column pictures are examples of High Quality, while the three lower pictures are examples of Low Quality. In the second column the three upper pictures are examples of Low Action, while the three lower pictures are examples of High Action. The three pictures on the right are examples from the Uniqueness scale.

Figure 1

required—your personal interest or attraction to them.” These instructions were paraphrased and restated to fit the requirements of each subject group. It was always stressed that there were no correct answers as to which pictures were selected. Numbered answer sheets were given to the children on which they wrote down the two numbers designating their selections for each item. For the Israeli children, special answer forms were printed—reversing choice numbers from right to left. Children were run individually or in groups of six or fewer. There was no time limit.

For two groups—the Navaho and U.S. suburban—an additional task was administered after completion of the test booklet choices. Children in these groups were first told to designate the single picture they liked best in the entire test booklet, i.e., their first choice from among the total of 160 pictures. They were then told to designate the single picture they liked the least of all the pictures. These choice numbers were written on the back of the answer sheets.

### Scoring Scales

Scoring scales were constructed for the Visual Magila by selection of individual pictures from a large pool of pictures generated by making original black-and-white drawings. Picture selectors were experienced art teachers and art education graduate students who followed the a priori criteria for each scale. Scales were then item-analyzed and revised on the basis of discarding items that contributed to positive intercorrelations among scales.

In Figure 1, pictured items from five scales are shown. Pictures in the High Quality scale represent a high level of esthetic sophistication as opposed to a low level of esthetic sophistication in the Low Quality scale. The Low Action scale is made up of pictures that were judged to be static in appearance with a lack of pictorial movement or tension and a more balanced than spontaneous overall design; while the

High Action pictures were judged to demonstrate activity and spontaneity. The Uniqueness scale is an indicator of choice originality in that it comprises pictures with more difficult shapes to organize perceptually, e.g., items with strong negative space contributions and asymmetries. The number of items in each scale varied with, respectively, 15, 26, 16, 15, and 24 pictures for the scales of High Quality, Low Quality, Low Action, High Action, and Uniqueness.

The Magila is also keyed for two other scales—Femininity and Masculinity—that are not illustrated in Figure 1 because of a failure of either scale to discriminate among subject groups. These scales label contrasting classifications that refer to the embodiment of lightness, roundness, and diffuseness versus heaviness, hard edges, and massiveness.

## RESULTS AND DISCUSSION

Results are presented in Table 1 only in terms of the three scoring scales of the Visual Magila that discriminated consistently among the four cultural groups. As some significant differences were found between girls and boys in the same culture, separate mean scores are given for each sex. (Since the number of items was different in each scoring scale, Table 1 presents scores in terms of mean choice percentages.) It is apparent that the Navaho girls are at one extreme for each of the three presented scales—highest on High Quality, lowest on Uniqueness, and highest on Low Action. Therefore, the Navaho girls, rather than the entire Navaho group, are used as the comparison group in performing significance tests. In this regard, it can be noted that the only two nonsignificant comparisons in the Uniqueness and Low Action columns are of borderline significance at  $p < .10$ , as is the comparison with Costa Rican boys in the High Quality column. Thus, with the less rigorous  $p < .10$  level of significance, only 1 of



**TABLE 1**  
**Mean Choice Percentages on Three Scales of the Visual**  
**Magila Preference Test for Nonrepresentational Drawings**

<u>N</u>	Subject Group	High Quality	Uniqueness	Low Action
42	Navaho girls	36	19	70
55	Navaho boys	32	26**	64
52	Suburban girls, U.S.A.	29**	23	61*
47	Suburban boys, U.S.A.	33	25**	60*
36	Israeli girls	29*	26**	49***
39	Israeli boys	30*	27**	53***
23	Costa Rican girls	27**	34***	48***
24	Costa Rican boys	30	30***	57***

NOTE: t tests are between the Navaho girls and all other groups.

\* =  $< .05$

\*\* =  $< .01$

\*\*\* =  $< .001$

18 non-Navaho comparisons (suburban boys on the High Quality scale) and 1 of 3 Navaho comparisons (also High Quality) failed to differentiate the Navaho girls.

On the other hand, the Navaho boys are as similar in their scores to the suburban boys and girls as they are to the Navaho girls. When t-tests were performed between the Navaho boys and the other groups (comparisons not shown in Table 1), many fewer significant differences resulted. Only the comparison with the Costa Rican girls was significant at the  $p < .05$  level for the High Quality and Uniqueness scales, although significance was attained in the Low Action scale for comparisons with both Costa Rican and Israeli groups. What were the results with the omitted scales? The Low Quality and High Process scales tended to give results that were the inverse of the High Quality and Low Process scales shown in Table 1, but they also showed a constricted scoring

range that produced fewer significant differences. Scores for the Feminine and Masculine scales were even more constricted in range and did not discriminate either between boys and girls or among the four different cultural groups.

Total number of different picture choices per group was used as a measure in summarizing results obtained with the Navaho and suburban children in picking out their "best-liked" and "least-liked" pictures. The Navaho girls' best-liked choices were by far the most compact with only 13 different pictures as compared to 18 for the Navaho boys, 21 for the suburban girls, and 24 for the suburban boys. Picture choice totals for least-liked pictures were, in the same order as above, 23, 25, 35, and 29. Between-group comparisons are not strictly comparable as number of different choices tends to increase as group size increases. Still, for best-liked choices, the small number of choices for Navaho girls seems out of proportion to their only slightly smaller group size. An exact comparison can be made between combined Navaho and suburban groups, as each group had 97 children. The Navaho children chose a total of 23 best-liked pictures and 40 least-liked, while the suburban children chose 31 best-liked pictures and 51 least-liked. For the Navaho children, the four best-liked pictures comprised 67% of the total choices and for the suburban children 48%. These four best-liked pictures were the same for both groups, though not quite in the same order of preference. For the four least-liked pictures, Navaho children's choices were 43% of total choices, and suburban children's choices, 29%. Only the single picture chosen most frequently by both groups was the same.

These results reinforce (1) the conclusion that Navaho choices were more homogeneous than those of suburban children and (2) the expected finding that criteria for selection of best-liked pictures were more definite than those for least-liked. That modal choices for preferred pictures were surprisingly alike for the two groups could hardly have

been expected on a chance basis, since children made their best- and least-liked choices from 160 pictures. These results should not be interpreted as invalidating preference findings obtained from more restricted forced-choice methods, but they do suggest that scaled dimensions that are clearly discriminated and preferred need not possess high salience when it comes to picking overall favorites. Children as well as art Philistines appear to “know what they like.” Nevertheless, results indicated some coincidence between scaled preference favoritism and best-liked choice, as the single most preferred picture (chosen by 29 Navaho and 13 suburban children) was one of the 16 pictures in the Low Action scale.

Insofar as the Navaho girls were concerned, the conclusion that Navaho children have a distinctive pattern of esthetic preferences that is different from that of other cultural groups received considerable support. Their choices could be characterized as conservative with few unique choices, a restricted number of best-liked pictures, and a preference for pictures that were low on internal dynamics. Yet, in accordance with the ratings of experts, they chose a higher number of esthetically sophisticated pictures than other groups. The main esthetic environmental experience that distinguishes girls of this age from boys is the girls' greater familiarity with blanket weaving, a craft that is usually performed only by Navaho women. Blanket patterns are most frequently nonrepresentational, static in form, and esthetically sophisticated, although this is on occasion more evident in color selection than geometric patterning. Girls in our sample can all be assumed to have had some firsthand experience with weaving, since the boarding school they attended drew its pupils from an area that kept up traditional practices. In partial contrast, the choices performed by the Navaho boys, although close to those made by the Navaho girls, were not distinguishable from those given by the suburban U.S. groups.

The scoring range across the four cultures was considerably less on the High Quality scale than on the Low Action and

Uniqueness scales. But it can be pointed out that—as informal administration of the Magila to graduate students indicates—untrained individuals practically never obtain high scores on this scale. Thus, since scores are invariably relatively low, similarities are probably not as great on this scale as they appear to be. However, since at least two pictorial dimensions other than quality preference have been discovered that show wide cross-cultural variation among groups of children, it is likely that others also exist.

An unexpected finding was that the Costa Rican girls produced scores on the scales in Table 1 at the other extreme from those given by the Navaho girls. No reasons are apparent for these results. Like the Navaho girls, the Costa Rican girls did not show consistent significant differences from the boys of their own cultural group. But for the Uniqueness and Low Action scales, the girls gave scores that were significantly different from most of the other groups. Methodologically, therefore, on the basis of results obtained both with the Costa Rican and Navaho children, it appears that it is frequently not appropriate to collapse nonsignificant within-group sex differences in making cross-cultural comparisons.

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