Mother-child pairs in a small Mexican town and in Los Angeles, California, were observed in two experimental situations in which the mother either controlled the rewards given to the child for success or failure or selected achievement goals for the child. The results of Experiment 1 were that mothers of both groups rewarded their children for success, but that Mexican mothers gave significantly more rewards for failure than did the U.S. mothers. The results of Experiment 2 were that the U.S. mothers chose significantly more difficult achievement goals for their children and did not lower the goal following failure as did the Mexican mothers. (Author)
ABSTRACT

Mother-child pairs in a small Mexican town and in Los Angeles, California were observed in two experimental situations in which the mother either controlled the rewards given to the child for success or failure or selected achievement goals for the child. The results of Experiment 1 were that mothers of both groups rewarded their children for success, but that Mexican mothers gave significantly more rewards for failure than did the U.S. mothers. The results of Experiment 2 were that the U.S. mothers chose significantly more difficult achievement goals for their children and did not lower the goal following failure as did the Mexican mothers.
MOTHER DIRECTED ACHIEVEMENT OF CHILDREN IN TWO CULTURES

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The two experiments reported in this paper were designed so that the level of achievement and the amount of reward selected by mothers for their own children in experimental situations could be observed. These observations were carried out on mothers and their children in two cultural settings in which the authors have conducted several studies of cooperative, competitive, and rivalrous interaction between children (Madsen & Shapira, 1970; Kagan & Madsen, 1971, 1972; Madsen, 1972; Kagan & Madsen, in press). In all of these studies, the behavior of children in the small rural town of Nuevo San Vicente, Baja California, Mexico, was compared with that of children of one or more subcultural groups in Los Angeles, California. The results of these studies were that the children of San Vicente were much less competitive, less rivalrous, and more cooperative in several experimental conflict of interest situations than were children in Los Angeles, including Anglo, Afro, and Mexican-American groups. The Mexican children usually received a greater percentage of the possible rewards than the other groups because the experimental situations were designed so that reward attainment was possible only by cooperation. The Los Angeles children obtained fewer rewards in these situations because their

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assertive desire to achieve by winning over their peers was apparently stronger than their motivation to obtain rewards through interdependent cooperation. Our purpose in these studies has been to describe the behavior of children on dimensions that have cultural relevance. The descriptions, however, are not the documentations of everyday behavior of the ethnographer, but rather of behavior that is elicited in situations in which subjects are forced to make a choice between alternatives.

In the present study mothers were placed in experimental situations in which they selected achievement goals or determined the distribution of rewards for the achievement of their own children. We are making the assumption that achievement motives are learned and that parental direction of children in achievement situations is an important arena for the transmission of cultural values.

Experiment 1

Method

Subjects. Twenty-four mother-child pairs, 12 pairs from each of the two cultural settings, with sex of children equally divided, served as subjects. The children ranged in age from 6 to 8 years in both cultures. The Los Angeles mothers, all Caucasian, were all employed part or full time outside their homes and their children were enrolled in day care centers in which payment is on a sliding scale according to the parent's economic status. The Mexican subjects lived in or near the town of San Vincente, 54 miles south of Ensenada, in the state of Mexicali. San Vincente has a population of about 800 and has an agriculturally based economy. Most of the San Vincente families live just above the subsistence level in homes of two or three rooms.
Task and Procedure. The child's task was to throw a 10 cm. square bean bag at targets on the ground. Ten 20 cm. black canvas squares were placed in a straight line with 60 cm. separating each square. The mother-child pair was instructed that the child would throw the bean bag 10 times at the squares, beginning with the nearest square which was 60 cm. away from the child. If the child succeeded in hitting the square, he was then to attempt the second square on the next throw, progressing to the next furthest square with each success. If the child failed, however, he had to repeat throwing at a particular target until successful. The mothers were instructed to encourage their children to advance to the furthest square possible. Mothers were given ten marbles and told that they could give as many or as few marbles to their child after each throw as they wished. After each throw the mother was asked how many marbles she wished to give her child and the marbles were then placed in a container by the child.

Results. Analyses, unless otherwise indicated, were carried out by Mann-Whitney U tests. In that no analysis indicated significant differences between mother-daughter and mother-son pairs, this variable was collapsed in all analyses. The mothers of the two cultures responded very differently to the performance of their children. The mean number of marbles given by Mexican mothers was 9.7 as compared to 6.5 by Los Angeles mothers (p < .01). Eleven Mexican mothers gave all ten marbles while only three U.S. mothers did so. Examination of responses to success and failure reveals that the cultural difference is almost entirely due to the mothers' responses to failure. Considering only those trials on which the mother had marbles available to give,
the Mexican mothers gave a mean of 1.79 and the U.S. mothers gave a mean of 1.55 marbles per success, a non-significant difference. In response to failures, however, the U.S. mothers gave a mean of only 0.15 marbles as compared with a mean of 1.33 marbles by the Mexican mothers ($p < .001$). The percentage of all marbles given which were for failure was 36.7 for the Mexican and 11.5 for the U.S. mothers. Seven of the U.S. mothers never gave a marble following a failure while only one Mexican mother was similarly withholding ($p < .05$, Fisher test). In the few instances in which U.S. mothers did give marbles after a failure, they often made comments suggesting that the giving was not unconditional, such as, "well, it was a good try," or "almost."

Although U.S. and Mexican mothers did not differ significantly in their mean response to success, their response differed depending on the difficulty of the success. The mean marbles given following the first success, which was quite easy, was 1.0 for the U.S. and 1.83 for the Mexican mothers ($p < .01$). The Mexican mothers also gave more marbles following the second success (2.0 vs. 1.5), but following the third success the pattern reversed with U.S. mothers giving a mean of 2.09 marbles as compared to 1.67 for the Mexican mothers. Seven U.S. mothers gave more marbles for the third success than for the second while only one Mexican mother did so ($p < .05$, Fisher test). This reversal may be related to the cultural difference in the number of marbles retained prior to the third success, but the mean of 4.5 marbles still retained by the Mexican mothers is well above the mean of 1.67 that they gave on the third trial. Analysis of the relation of giving to success difficulty is not possible beyond the third success because several children did not make a fourth success and several mothers ran short of marbles on the later trials.
Experiment 2

In experiment 1, the mother determined the amount of reward that the child was to receive following each trial and the child was required to advance to the next order of difficulty following each success. In experiment 2, the amount of reward per success was predetermined and the mother determined the level of difficulty for her own child.

Method.

Subjects. Twelve mother-child pairs from each of the populations previously described who had not participated in experiment 1 served as subjects. Children ranged in age from six to nine years in both cultures and were equally divided by sex. In that no subsequent sex differences were indicated, this variable was collapsed.

Task and Procedure. Four 20 cm. canvas squares were placed in a line on the ground with 60 cm. between each square. A mother-child pair stood 60 cm. from the nearest square, was given a 10 cm. square bean bag, and was told that the child would make ten throws at the squares. They were further instructed that the mother was to select the target prior to each throw and that the number of prizes for each success depended on which target was chosen. The nearest square was rewarded by one marble, the second by two, the third by three, and the fourth by four marbles.

Results.

The mean number of throws at each target at each by each cultural group is presented in Table 1. For purpose of comparison, targets three and four were designated as high achievement targets and
mothers were ranked on the number of high achievement targets that they had chosen for their children. Comparison of ranks by the Mann-Whitney U test indicated that the U.S. mothers chose significantly more high achievement targets than did the Mexican mothers (p<.02, two tailed test). One possible result of the difference in target selection was that the Mexican children were more often successful in hitting their targets (mean 5.5) than were the U.S. children (mean 5.0). In spite of fewer successes, the U.S. children received more rewards (mean 12.0) than did the Mexican children (mean 9.67). This result was due to the fact that more rewards were given for the more difficult successes. Neither of the above differences, however, are statistically significant.

Perhaps the most interesting cultural difference was in the sequence of target choices. The most frequent response by mothers in both groups following a success was to increase target difficulty. Following failures however, the modal response for ten of the twelve Mexican mothers was to decrease target difficulty while this was the modal response for only four U.S. mothers. Eight of the U.S. mothers most frequently directed their child to try again at the same target after a failure. The difference between groups on their response to failure was significant at the .05 level (Fisher test, two tailed).

Discussion

The results of the two experiments indicate that the U.S. mothers behaved in ways that encourage motivation for high achievement in their children. By rewarding successes and withholding rewards for failure
In experiment 1, reward attainment was made conditional upon the child meeting the U.S. mother's expectations, while the Mexican mothers rewarded their children much more unconditionally. In experiment 2, the U.S. mothers chose more difficult targets for their children, insisting that the children meet the mothers' expectation even following failure. This contrasted sharply with the tendency of the Mexican mothers to reduce target difficulty following failure, thus adjusting their expectations of success to the ability of the child. That the U.S. children, in spite of fewer successes, received slightly more rewards than did the Mexican children, indicates that the U.S. mother's higher risk choices paid off to some extent in this situation.

The results, as well as the subjective impressions developed by the experimenters during the course of the study, lead to the generalization that the Mexican mothers were reacting more to what their children were feeling, or might feel, as opposed to the U.S. mothers who reacted more to their children's achievement behavior. The U.S. mothers more than Mexican mothers both rewarded and modeled high achievement.
References


Footnote

This work was supported through the UCLA Early Childhood Research Center, Dr. Carolyn Stern, Director. The Center is funded by Grant CG9938 from the Office of Economic Opportunity. First author's address: Department of Psychology, University of California, Los Angeles, California. Second author's address: Department of Psychology, University of California, Riverside, California.
Table 1

Mean number of target choices at each level of target difficulty by Mexican and United States mothers

<table>
<thead>
<tr>
<th>Culture</th>
<th>Target Difficulty</th>
</tr>
</thead>
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<tr>
<td></td>
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</tr>
<tr>
<td>United States</td>
<td>.92</td>
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