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ABSTRACT

This study used the Value Inventory for Children (VIC), a 60-item pictorial instrument designed to measure seven hypothesized dimensions of value. These seven orthogonal factors are (1) me first, (2) masculinity, (3) asocial, (4) academic, (5) adult closeness, (6) sociability, and (7) social conformity. The primary question to which the symposium addressed itself was: "What is a value?" Subjects of the study were 611 children from grades one through three. They were tested in the fall of 1970 and retested in the spring of 1971. Two categories of criteria were employed in an attempt to validate factor scores derived from the VIC. Results were reported in terms of (1) sex comparisons, (2) grade comparisons, (3) ethnic comparisons, (4) predictor criterion relationships and, (5) interclass comparisons with respect to teacher-class congruities. The overall conclusion was that values do play a part in the adjustment of the child to school and in his achievement, although it is impossible to determine exactly to what extent they contribute over and above the child's ability since no precise measure of ability is available. (BW/Author)

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RELATION OF TEACHER-CHILD CONGRUITIES TO ACHIEVEMENT

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## RELATION OF TEACHER-CHILD CONGRUITIES TO ACHIEVEMENT

### INTRODUCTION

For those of you not familiar with the Values Inventory for Children (henceforth to be called the Vic), it was, in its original form a 60-item pictorial instrument designed to measure seven hypothesized dimensions of value.

Factor analyses of the original items, using the principal axes method and rotating to the varimax criterion, showed that there were eight underlying dimensions but that these were by no means the same as those hypothesized. Continuing refinement of the instrument during the past year involved eliminating 30 items, 23 of which loaded less than .30 on any dimension, three of which measured a dimension called Aesthetic, and four of which were related to health habits but consistently loaded on the Academic factor. Since neither Aesthetics nor Health Habits mattered to teachers when they were asked to rank-order dimensions, and since in analyses these items proved to be a nuisance as well as demonstrating little or no relationship to any criteria, the decision to eliminate them was a rational one.

While refinement was in process, however, staff were engaged in retesting 611 children who had been tested in the first year and since at that time no one knew exactly which items would be retained, teachers were asked to rate children on the dimensions later eliminated. Thus, they will occasionally be mentioned in this report.

After refinement, seven orthogonal factors remained and are named and described as follows:

1. Me First. This factor is characterized by items which require the child to choose between being first or third, active or passive in play, a leader or a follower, to share or not to share, and to take a bigger helping or a smaller one than he gives his friend. It is a dominant and selfish value dimension. (5 items)
2. Masculinity. This factor is one consisting of items depicting activities (boxing; whittling with a knife; walking into a dark cave; confronting a snake; participating in a tug-of-war) and things (a soldier; ghosts from a haunted house) that are liked by boys and disliked by girls. (7 items)
3. Asocial. Items loading on this factor involve approval of or liking for activities that society would disapprove because there is some harm resulting or a violation of a moral principal (stealing; littering; throwing vegetables at a fence; squirting water on a man with a hose). (4 items)

4. Academic. This factor consists of school-related activities or situations: reading; studying; being in the classroom; talking to the teacher. (4 items)
5. Adult Closeness. The choices in this factor are between (a) being patted on the head vs hugged by father, and (b) being hugged vs patted on the head by mother. (2 items)
6. Sociability. The choices in this factor are between (a) talking to one friend or many, and (b) playing with one friend or many. (2 items)
7. Social Conformity. Items making up this factor have in common the choice between doing something that one ought to do and doing something that is harmless and fun but nonconforming. Choices are: to listen in class or turn around and talk; to clean up the classroom or toss the eraser around and leave the room dirty; to stay in bed while sick or get up to play; to sleep at night or talk to the child in the next bed; to prefer a man who smokes or one who does not. (5 items)

Analyses to be reported here are based on factor scores derived from the items measuring these seven dimensions of value. It is easy to see that some factors have very few items loading on them, reducing the reliability of the factor scores markedly. In the new, revised VIC there are 50 items and each dimension (with the exception of Adult Closeness) has been expanded to include at least six, and generally eight or nine, items. Results of the analyses of the revised VIC will be available in the Final Report, in May, which can be procured through Eric documentation.

The original construction of the VIC and the construction of the revised form entailed a great deal of preparation in the way of interviews with children, pretesting and revision of items, development of understandable instructions, evaluation of the usefulness of an answer sheet, etc. These efforts are also described in the Final Report. In brief, it was necessary to ascertain that every item was understood by at least 90 percent of the children, that each child responded to every item in a manner consistent with his true feeling about the concept or situation depicted, and that responses were not too eccentric (i.e., not more than 90 percent either approved or disapproved of an item requiring a "liking" response or chose one or the other response to an item requiring a "choice" response). These criteria were met with respect to all items.

#### DEFINITION OF VALUES

Since this symposium is one in which there are divergent definitions of the term "value," it seems appropriate to address ourselves to the question:

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What are the values that are important to children at the third grade level.

"What is a value?" There are almost as many definitions as there are investigators and rarely do any two agree on the meaning of the elusive term. The manner in which the investigator pursues values also has a profound effect on the values he identifies.

As an example, a conventional approach has been to address subjects with the open-ended questions: "What is a good thing to do?" "What is a bad thing to do?". Quite naturally, the responses to such questions will consist primarily of activities and these activities, in the experience of users of such a system, are contingent upon the interpretation placed on the terms "good," and "bad." The first interpretation is generally the moral one. The second is synonymous with the term "pleasant." Thus, a "good" thing to do might be "contribute to charity" or "go waterskiing." In one study done by GBS both types of responses have been provided to these questions.

Another approach is to ask what kind of a person the respondent "admires" and what is there about that person that inspires his admiration. In a sense what is being sought after here is not activities but qualities of people. These may be things they do or things they are.

The difference between being and doing in terms of abstraction is an important one with respect to values of children. It is perfectly justifiable to talk about terminal values (goals in life) and instrumental values (things one considers efficacious and permissible to do in attaining those goals) but when it comes to small children, there is considerable question as to whether or not they can conceptualize either abstract goals (c.g., salvation) or abstract qualities (e.g., patriotism) and it is certain that values defined in this manner cannot be depicted in drawings. While it is granted that for the adult one might symbolize abstract goals in pictorial form such that salvation might be represented by St. Peter greeting the saved soul at the gates of heaven or patriotism might be depicted by a group saluting the flag, it is doubtful that even were such items prepared, they would be universally understood by all Americans. Certainly they would be culturally biased in the sense that not all religions conceptualize salvation as "going to Christian Heaven" or patriotism as saluting the American flag.

Reverting to the problem of defining "good" in terms of moral good or pleasurable good, it would seem that the term "good" should be erased from the vocabulary of values and the two connotative terms, "right" (or moral good) and "pleasant" (or pleasurable good) substituted. Thus, investigators can account for moral values in terms of the "right" or the "ought" and for the things people value because they are rewarding in terms of a dimension of "pleasantness-unpleasantness." The philosophy here is that people value things because they (1) know they should and/or (2) want to and that in many cases the "ought" conflicts with the "want." In general, the individual identifies the "ought" in terms of social values which he may or may not accept or act upon (but nevertheless, recognizes) and the "want" in terms of his own needs, desires, wishes, etc.

This difference between what one knows is right and what one desires is an important one for the construction of measurement devices. Any

individual confronted with a moral decision will, if sufficiently socialized, make the decision he knows is expected. Thus, a test of moral values inevitably imparts a built-in social desirability response set. The best way of overcoming this is, first, to minimize the extremity of any given item (i.e., provide "wrong" things that are not "very wrong" and "right" things that are not "very right") so that sufficient variability of response can be obtained. In constructing the VIC it was evident that some items were so "wrong" that no child would accept them. The second way to overcome this response set is to present an alternative to the moral or "right" thing that while it may not be morally "right," is pleasurable--and thus, valued. As an example, on the dimension of Social Conformity of the VIC, children are presented with choices in which they may do something they ought to do or they may do something else that is more fun.

Some might say that only when the individual both knows what he ought to do (the cognitive aspect) and wants to do it (the effective aspect) can his "value" be internalized. We would say, rather, that much of the confusion with respect to defining values lies in the attempt to integrate what is ethical or moral thought with an approach-avoidance continuum based on affective response to objects, persons, or situations which have in the experience of the individual proved rewarding or punitive. It is the affective aspect of values on which we have focussed our instrument partly because children as young as those we have studied relate to the world in terms of specifics, not abstractions, and partly because it is this aspect that is most predictive of behavior. To determine whether or not a person will act on his knowledge of "right" or "wrong" it is necessary to discover whether or not he is motivated to do so. Motivation is far more a matter of approach-avoidance than cognition. Furthermore, there are many things (persons; objects; situations) in life that one may "value" (attach both positive affect and importance to) which cannot in any way be identified as "right" or "wrong"--they are simply a matter of taste.

As a specific example of a value that is in no way related to ethics or morality, let us consider "friendship." Many individuals value friends more than almost anything--including, in extreme instances, such matters as family or job. Loners, on the other hand, are low in this value. Wanting to have a lot of friends is not "wrong" but is really a matter of preference; yet, it is a value of the sort that one would classify as "pleasurable" or "desirable" if one holds it as a value and "undesirable" if one does not.

With respect to the difference between the terms "value," "attitude," "personality trait," "interest," or "opinion," the Sociability dimension of the VIC provides a realistic vehicle for demonstrating the extent to which these terms are related to one another. One "values" friends in the sense that it is important to him to have lots of them. His "attitude" toward having friends is positive. He is "interested" in meeting people and getting to know them. If asked his "opinion," he will say that having friends is a good thing. If administered a temperament or personality test measuring the "trait" of sociability, he will score high. The commonality is positive affect. Cognitive analogies of the concept of "friends" derive from that

affect. The differences are more semantic than real and derive from the methods used to measure the affective state of the individual.

Thus, we come full circle to measurement with the warning that the manner in which the measures determines the results one gets and at this stage of theory, one has a great deal of latitude in labeling any instrument in the affective domain. It must be admitted that the authors of the VIC have adopted a very pragmatic approach in its definition of values. If it pleases others to express the opinion that all or some of the dimensions of the VIC are not dimensions of "value," we will not quarrel but will only say that we think they are making a "value judgment."

## ANALYSES OF RETEST CHILDREN

### I. Measures Used

#### A. Criteria

Two categories of criteria were employed in an attempt to validate factor scores derived from the original VIC. First, teachers were instructed to rate children on the value dimensions identified in the first year of research, as well as on the following indices of adjustment to school: (a) "good" classroom behavior; and (b) "good" peer relationships. They also rated children on academic ability (as inferred from response to learning situations and measures of intelligence) and "satisfactoriness" as a pupil. The latter rating was intended as a measure of how well they liked the child. Second, a uniform criterion of achievement was sought. The only standardized measure, applicable across all schools, was the grade-level score on state-wide reading tests

Ratings were made at the time of Spring of 1971 retest and reading scores were obtained from statewide testing which occurred in the midst of the project retest effort (May of 1971).

It was impossible to determine the reliability of ratings since each teacher rated only the children in her own class and did so only once. There were, as expected, high intercorrelations between some ratings. A factor analysis of the five-point rating scales revealed three dimensions. The first was one in which good classroom behavior, social conformity, unselfish and passive behavior, and rejection of asocial acts rendered the child satisfactory. The second was one in which high academic motivation, high academic ability, good habits of health, sociability, and ability to get along well with peers were related to satisfactoriness. The third consisted of ratings of aesthetic appreciation and physical closeness to adults, two dimensions that were largely irrelevant to teachers (in terms of their rank-ordering dimensions) and unrelated to most predictors.

No attempt was made to partial out any of these ratings since the scales were designed to be relevant to factors and each was to be analyzed with respect to its related factor. From consultation with teachers it was possible

to conclude that ratings were made conscientiously but there was a tendency to view almost all children in a favorable light and, furthermore, to rate them satisfactory despite their shortcomings.

In comparisons between sexes, grades, and ethnic groups it was found that, in general, girls were ascribed all the virtues and boys all the faults. Second grade children were rated higher than either first or third when it came to "desirable" characteristics, despite the fact that third grade children are further along in socialization as evidenced by their scores on dimensions related to this process. Outstanding ethnic differences in ratings were as follows: (a) Anglos received lower ratings in Academic Motivation than any other group; (b) all groups rated higher in Asocial Behavior than Orientals and none rated as high in this characteristic as Mexican-Americans; (c) Orientals were rated more socially conforming than any other group as well as least dominant and selfish; (d) with respect to Academic Ability, Orientals were rated higher than any other group; (e) Orientals were also rated higher than any other group in good Classroom Behavior; (f) the Mexican-American children were rated as getting along less well with peers than any other group; (g) despite these differences, the only significant difference with respect to satisfactoriness was between the Oriental and the Mexican-American with the latter rating lower. Teachers, as stated, tended to rate children as likeable even when they presented problems.

Reading scores were derived from the Cooperative Primary Reading Test for first and second grade children and from the Stanford Achievement Tests of Reading and Reading Comprehension for third grade. Scores were provided as grade levels. At the May testing children should be .7 years above their grade level (i.e., first graders should score an average of 1.7, etc.). When relating these scores to other variables it was necessary to convert them by subtracting the expected grade level score from their actual score. However, for purposes of group comparisons this was not necessary since all 611 children were involved.

In the comparison between boys and girls there was no significant difference in reading achievement. Grades were not compared for obvious reasons. Reading scores were not available for the Negro ethnic group because of difficulties in the school system following testing. In comparisons between the other three groups, Orientals were significantly superior to both Anglos (who attended the same schools) and Mexican-Americans (who did not) and Mexican-Americans were significantly below Anglos. Both Anglos and Orientals were well above the expected mean of 2.7, scoring 3.10 and 3.42, respectively. Mexican-Americans were below the expected 2.7, with a mean of 2.15. Considering the higher socioeconomic status of the Anglo-Oriental schools and the lower economic status of the Mexican-American and adding the language problems of the latter children, these results are not surprising.

#### B. Predictors

The first predictors were the factor scores on the seven retained dimensions of the VTC. These were available for 1,000 children and posttest

although it must be remembered that the factor structure was slightly different for each testing and that, therefore, the factor scores are not based on precisely the same factors.

The second predictors were teacher-child congruities as derived from the correlation between teacher responses to the VIC made at the time of retest and child responses to the same items obtained at both pre- and posttest. The rationale for pretest congruities was based on an assumption that teachers remain stable in their responses to such items over a period of eight months whereas children do not. This assumption may be questioned but there is support for it in the research literature. Several measures of congruity were evaluated. The results of the evaluation indicated that a Pearson  $r$  approximation served the purposes of the study best and so, for purposes of normalizing the distribution of  $r$ 's for later application, the measure used was Fisher's  $Z$ .

The third predictor was change in teacher-child congruity. A base-free measure of change was required since the magnitude of any such change in a relationship is dependent upon not only the original responses of both teacher and child, but the distance between them at the outset (or, conversely, their original congruence). The method used was to obtain a predicted posttest value by (a) correlating pretest congruities with posttest congruities, (b) multiplying the ratio of the standard deviation of the posttest distribution to that of the pretest to obtain the estimated regression coefficient, and (c) using this regression coefficient to find the predicted posttest values. The difference between the predicted and actual posttest value for each teacher-child pair constituted the change measure.

The fourth predictor was value change. This, also, was a base-free measure of change calculated on the same basis as were congruity change measures but using factor scores.

## II. Subjects

Subjects for this portion of the study were 611 children from grades one through three who had been tested in the Fall of 1970 and were retested in the Spring of 1971. No attempt was made to find all the children from the 1970 testing and, as expected, a number had dropped out of the classes originally tested.

For comparisons between sexes and grade levels, the total of 611 were used and both pre- and posttest results were analyzed. For ethnic comparisons, only 475 children were used for both pre- and posttest. These were children upon whom the first year's analyses were based and were selected according to the criteria of the first year--that is, they must not only be members of their ethnic group but they must also be students in the schools originally selected to represent that ethnic group. These  $N$ 's apply to all analyses except those in which the achievement measure was used.

When reading scores were used as the criterion of achievement, the  $N$ 's used are of the same size as those used for interethnic comparisons.

No tables are provided in this report because their inclusion would only lengthen it unnecessarily. They appear in the Final Report. Whenever a relationship is designated, it is based upon a Pearson  $r$  approximation significant at or beyond the .05 level. Whenever a difference is designated, it is based upon a  $t$  ratio significant at or beyond the .05 level.

### III. Results

#### A. Sex comparisons

##### 1. Factor Score Differences Between Sexes

Boys scored significantly higher than girls in Me First (dominant and selfish values) in pretest but not in posttest. Boys, predictably scored higher than girls in Masculinity on both pre- and posttest. On the A-social factor, there was no difference between the sexes in either pre- or posttest, nor was there any difference in Academic value. Girls were higher than boys in liking for physical Closeness to Adults in both pre- and posttest. There was no difference between the sexes in Sociability in pretest but by posttest, girls had become significantly more sociable than boys and boys had decreased in this value. On the pretest Social Conformity factor the difference between the sexes was nonsignificant but on posttest, girls were more conforming and boys had become less so, making the difference significant.

##### 2. Factor Score Changes between Sexes

Boys changed more than girls in Masculinity factor scores (relative to their predicted change), going in the direction of greater masculinity while girls changed in the opposite direction. Boys also changed more than did girls in Adult Closeness, Sociability, and Social Conformity. In every case, boys become less favorable toward these values while girls became more so.

##### 3. Teacher-Child Congruities between Sexes

In both pre- and posttest, girls were more like teachers in values than were boys. This is not unexpected since 27 of the 28 teachers were women and, in addition, congruities were based on items measuring the factor of Masculinity--one on which girls score low and boys high.

##### 4. Teacher-Child Congruity Changes between Sexes

Boys changed more than did girls with respect to congruities over the eight-month period. They became less like teachers than predicted and their change was in the direction of disparity. Girls changed less, but their change was in the direction of increased congruity.

#### B. Grade Comparisons

##### 1. Factor Score Differences between Grades

On the basis of the first year's work with the VIC it was to be expected that maturation would occur with respect to values involved in socialization although the extent of the change was unpredictable since the

time interval between pre- and posttest was only eight months. The two ways in which maturation in values were assessed were: (a) grade level comparisons, using different children; and (b) differences in factor score changes between grades, using the same children.

In pretest, grade three scored lower than either grades one or two in Me First and on posttest grade one scored higher than two, and two scored higher than three. At pretest there were no significant differences between grades with respect to Masculinity but by posttest, the difference between grades one and three had become significant with the older children scoring higher. On both pre- and posttest, Asocial value decreased significantly with grade one scoring higher than two, and two higher than three.

In pretest there were no differences in Academic value but by posttest, third grade children were significantly lower in this value than either first- or second-graders. There were no significant differences between grades with respect to Adult Closeness in either pre- or posttest but it is assumed that the increase in this value on the part of girls was counter-balanced by the decrease on the part of boys. Sociability did not differentiate between grade levels in pretest but by posttest, third grade children had become significantly higher in valuing friends than either first or second grade children.

Social Conformity is a dimension with respect to which maturation is expected to occur and in the pretest comparisons (as in the results of the first year's testing) grade three was significantly higher than two which, in turn, was significantly higher than one. Strangely, these differences disappeared in posttest and while first and second grade children seemed to attain higher means, third-grade children had a lower mean.

## 2. Factor Score Changes between Grades

In only one case did any grade change in values significantly more than any other when the base-free measure was used. Both first and second grade children scored higher on Me First in posttest than did third but the first grade children became relatively more selfish and dominant than predicted when compared with the second-graders.

## 3. Teacher-Child Congruities between Grades

Do children become more like their teacher as they grow older? In pretest, first grade children were less like their teachers in values than were either second or third grade children. In posttest only the difference between third and first remained significant. At all grade levels, congruity was higher on posttest than on pretest.

## 4. Teacher-Child Congruity Changes between Grades

Despite changing means in the direction of greater congruity between pre- and posttest, no significant differences in change appeared. Thus, no grade changed more than any other in becoming more like the teacher.

## C. Ethnic Comparisons

### 1. Factor Score Differences between Ethnic Groups

The four ethnic groups involved in comparisons contained the following

numbers of subjects: Anglo, 107; Negro, 98; Oriental, 167; Mexican-American, 101.

Pretest and posttest differences were the same with respect to the Mc First value in that both Negroes and Mexican-Americans scored higher than either Anglos or Orientals. In pretest Anglos scored significantly higher than Orientals in Masculinity. By the end of eight months they scored higher than any other group.

Orientals scored lower than any other group in pretest and lower than Mexican-Americans and Negroes in posttest when it came to the Asocial dimension. Mexican-Americans were higher in Asocial than either Anglos or Orientals in both pre- and posttest. The major difference was that Anglos decreased sufficiently in this value so that they were no longer as different from Orientals in posttest.

In pretest Anglos were lower than either Orientals or Mexican-Americans in liking for Academic values. By posttest they were also lower than Negroes. This waning interest in school-related activities among Anglos has been noted in other analyses and it should also be noted that only the Orientals increased in Academic value while the other three groups decreased.

Orientals were lowest of all in liking for physical closeness to adults, a finding noted in the previous year's research. In pretest they were significantly lower only than Anglos. In posttest they became significantly lower than both Anglos and Mexican-Americans. There were no significant differences between any of the ethnic groups with respect to Sociability.

In both pre- and posttest, Orientals scored highest in Social Conformity, followed by Anglos. Mexican-Americans were less conforming than either Anglos or Orientals.

## 2. Factor Score Changes between Ethnic Groups

Mexican-Americans changed more than predicted in the direction of scoring high on Mc First than did either Anglos or Orientals, and Orientals changed more in the direction of scoring low than did either Negroes or Mexican-Americans. The direction of change for Negroes and Mexican-Americans was positive (higher scores); for Anglos and Orientals, it was negative.

Anglos changed significantly more in the direction of scoring higher in Masculinity than did any other group. They were the only group to significantly raise their score on this dimension.

Mexican-Americans increased in Asocial values significantly more than did either Anglos or Orientals and Negroes increased significantly more than did Orientals. The direction of change for Mexican-Americans and Negroes was positive; for Anglos and Orientals, it was negative.

Anglos' factor scores on Mc First were lower and the change significantly differentiated them from Negroes. The only significant change in Academic value

and from both Mexican-Americans and Orientals who increased in it.

No significant differences in change appeared in Adult Closeness or Sociability despite the fact that Orientals seemed, in the factor score comparison, to decrease in liking for Adult Closeness.

Orientals changed significantly more on Social Conformity than did Mexican-Americans. The change for Orientals was in the direction of greater conformity; for Mexican-Americans it was in the direction of non-conformity but was not as profound as was that of the Orientals.

### 3. Teacher-Child Congruities between Ethnic Groups

Anglos and Orientals were more like their teachers in values at pretest than were either Negroes or Mexican-Americans. In posttest the Anglo had become less like his teacher while all other groups had become more like her. Consequently, the Oriental was significantly more like his teacher at posttest than was any other group. This change in relationship between the Anglo and his teacher may be attributed to his lessening concern (or liking for) things related to school and his increased liking for masculine things, values in conflict with those of the female teacher.

### 4. Teacher-Child Congruity Changes between Ethnic Groups

The group with the greatest degree of change, and that change in the direction of increased congruity was the Oriental. All others changed in the opposite direction. This significant change on the part of the Oriental occurred despite the original high congruity between this group and teachers.

## D. Predictor Criterion Relationships

### 1. Relationship between Values and Criteria

Teacher ratings of the original dimensions of the VIC were expected to correlate with the factor scores for those dimensions. Since items measuring Health Habits and Aesthetics were eliminated, the relevance of those ratings is questionable and, indeed, in pretest they did not relate to any factor dimension. In posttest the Health Habits rating was positively related to factor scores on Me First and Social Conformity although the relationships were significant at only the .05 level. Aesthetic rating on posttest was positively related to both Adult Closeness and Sociability factor scores.

When it comes to other teacher ratings of existing dimensions corresponding to the factor scores of children rated on these dimensions, the results from pretest were far less satisfactory than were those from posttest. In pretest the only appropriate significant relationships were between (a) Masculinity rating and Masculinity factor score; (b) Social Conformity rating and Social Conformity factor score; and (c) Me First rating and Me First factor score. The masculinity relationship was to be expected since the factor score is so profoundly sex-biased (the factor loading of sex-male in last year's analysis was as high as that of the highest-loading item) and since the teacher's rating is based on the sex of the child.

In posttest things improved. In addition to the previously established correlations, Adult Closeness ratings became positively associated with

Adult Closeness factor scores and Asocial ratings became positively related to Asocial factor scores. However, in a number of cases the relationships between factor scores and ratings of their matching dimensions were lower than were the relationships between the same factor scores and other ratings.

When it came to predicting adjustment to school (Classroom Behavior and Peer Relations), the factor scores for Asocial and Social Conformity had the highest relationships, in the expected directions. The only other significant relationships with these criteria were for Masculinity, negative in both cases.

The Satisfactoriness rating was negatively correlated with factor scores for Masculinity and Asocial, and positively correlated with factor scores for Social Conformity and Adult Closeness.

Predicting adjusted reading scores (achievement) was possible to some extent in both pre- and posttest. In pretest, Me First and Asocial factor scores were negatively related to achievement. Social Conformity factor scores were positively related. In posttest Me First no longer bore a significant relationship to achievement but the other two relationships remained. It is interesting to note that, consistent with the finding that boys and girls are not differentiated on the basis of achievement, Masculinity factor scores do not relate to reading scores. However, when it comes to ratings by teachers, the Masculinity element is most important. From these findings one might conclude that the dimensions of socialization (Asocial and Social Conformity) are the most important dimensions of value in achievement. To a lesser extent, the Me First (selfishness and dominance) value may have a negative relationship to achievement. Strangely, but consistently, Academic values are useless as predictors of adjustment to or achievement in school.

## 2. Relationships between Congruencies and Criteria

Is the extent to which the child is like his teacher in values related to his adjustment to and achievement in school in his early school career? It would seem reasonable to assume that a teacher would rate a child high on "desirable" characteristics and low on "undesirable" ones if he is more like her.

On pretest there were positive relationships between congruities and ratings of Academic Motivation, Academic Ability, Social Conformity, good Classroom Behavior, good Peer Relations, and Satisfactoriness. There was a negative relationship with Masculinity. On posttest these relationships remained and were augmented by a positive relationship with Adult Closeness and negative ones with Asocial Behavior and Me First. To the extent, then, that a teacher and child are alike in values, the child is rated high on "desirable" dimensions and low on "undesirable" ones. Ratings of Sociability, Health Habits, and Aesthetics did not correlate with congruities in either pre- or posttest.

The correlations between teacher-child congruities and reading scores were positive and very significant ( $p < .01$ ) in both pre- and posttest. In pretest the correlation was .15; in posttest it was .17. The more alike the teacher and child in values, the greater the achievement.

### 3. Relationship between Value Changes and Criteria

It was found that increasing Me First values were positively related to ratings of Sociability, Health Habits, and Academic Motivation. Increasing Masculinity values were positively related to ratings of Masculinity, Asocial Behavior, and Me First and negatively related to ratings of Adult Closeness, Social Conformity, good Classroom Behavior, and Satisfactoriness.

Increasing Asocial values were positively related to the Asocial rating and negatively related to ratings of Social Conformity, Academic Ability, Classroom Behavior, Peer Relations, and Satisfactoriness. Changes in Academic values were not related to any ratings. Increasing Adult Closeness values were positively related to the Adult Closeness and Aesthetic ratings and negatively related to the rating of Masculinity.

Increasing Sociability values were positively related to Adult Closeness and Aesthetic ratings and negatively related to the Masculinity rating. Increasing Social Conformity values were positively related to ratings of Social Conformity, Classroom Behavior, and Peer Relations and negatively related to ratings of Asocial Behavior and Masculinity.

When factor score changes were correlated with reading scores the only significant relationships were for increasing Social Conformity (positive) and increasing Asocial (negative).

### 4. Relationships between Congruity Changes and Criteria

The highest relationship was between congruity change and the rating of Masculinity. Since boys were rated masculine and girls feminine, this is consistent with the finding that boys become less like their teachers while girls increase in congruity with them. It was also found that the more like the teacher a student became over eight months, the higher that student was rated in Classroom Behavior, Social Conformity, Satisfactoriness Peer Relations, Academic Ability, and Academic Motivation. The more he became like her in values, the lower he was rated in Asocial Behavior and Me First.

Increasing congruity between teacher and child in values was positively and very significantly related to achievement as evidenced by the correlation of .17 between congruity change and reading scores.

### E. Interclass Comparisons with Respect to Teacher-Class Congruities

One of the hypotheses generated for this analysis of retest children was that a teacher would be more like her own class than like any other. A corollary of that hypothesis was that a class will be more like its own teacher than it is like any other teacher.

To test this hypothesis,  $t$  ratios were computed between (a) the mean congruity of a teacher with all children in her class vs the mean congruity of that same teacher with children in each other class, and (b) the mean congruity of a class with its own teacher vs the mean congruity of that class with each other teacher.

Results showed that not only are teachers not more like their classes than like others, but there is great variability in the extent to which

any given teacher is like any given class or any given class is like any given teacher. Some teachers are congruous with a great number of classes and more so with others than with their own. Others are not congruous with almost any class. In general, teachers in the Anglo-Oriental district tend to be more congruous with their classes than do teachers in either the Mexican-American or Negro districts. This is not surprising when one considers the ample evidence that teachers in general hold to middle class values of conformity whereas children in communities where ethnic minorities predominate are less likely to share these values.

### SUMMARY AND CONCLUSIONS

Limitations with respect to this study pertain to the questionable reliability of the rating criteria, the inability of the investigators to procure reading scores from one school district, and the fact that analyses of values as measured by factor scores are based upon two slightly different factor structures--pre- and posttest.

Teachers tend to give more "desirable" ratings to girls than to boys, to second-graders than to either first- or third-graders, and to Anglos and Orientals rather than to Mexican-Americans and Negroes. There is no implication here with respect to the direction of causation since it is likely that (a) girls, second-graders, and Anglos and Orientals are better-behaved than are those in the comparison groups, a conclusion supported by differences in values, and (b) while the teacher may well be initially biased in favor of these groups, her contact with them also provides her with positive reinforcement. In other words, a teacher may rate some subgroups as more desirable because she perceives them as being more desirable and/or because they are more desirable.

When factor scores are used to measure the seven dimensions of values, analyses show that:

1. At pretest boys score significantly higher than girls in Masculinity, and Me First and lower in physical Closeness to Adults. At posttest they score significantly higher in Masculinity and lower in Closeness to Adults, Sociability, and Social Conformity. On these last three factors boys become more negative over eight months while girls become more positive. With respect to Masculinity, boys become more positive and girls more negative.
2. Girls are more like their teachers in values than boys are and over the eight month period boys become less like the teacher while girls become more like her.
3. As children progress from first to third grade they approve more of values relating to Masculinity and, to some extent, to Social Conformity and Sociability and approve less of values relating to Asocial behavior, Academic activities, and, especially, dominance and selfishness as seen in the Me First value.

4. There is a tendency for children to become more like their teacher in values as they grow older.
5. The major characteristics of Anglos, as contrasted with other groups, are their high Masculinity and low Academic values. They become more disparate in these values over time. They are initially congruous with their teacher but become less so over time, a finding explainable on the basis of changes in the two values mentioned.
6. The major characteristics of Orientals, as contrasted with other groups, are their low Asocial and high Social Conformity values and their relative distaste for physical Closeness to Adults. They are the group most congruous with their teacher initially and become even more so as time passes.
7. The major characteristics of Mexican-Americans, as contrasted with other groups, are (a) their high Me First values which increase markedly over time, (b) their relatively high Asocial and low Social Conformity values, both of which become more divergent over time, and (c) their approval of Academic values, which increases. They are initially least congruous with their teacher and become even less so over time.
8. The Negro group tends to follow the Mexican-American in most values but their values are not as divergent from those of Orientals and Anglos nor are their changes as profound. They are initially less congruous with their teachers but increase in congruity over time.
9. Factor scores from five of the seven retained value dimensions correlate significantly with their corresponding teacher rating dimensions. Sociability and Academic do not.
10. The best value predictors of adjustment to school in terms of good behavior and getting along with other children are approval of socially conforming behaviors and disapproval of asocial behaviors. Masculinity values are also related to these rating criteria since boys are generally rated as more asocial and nonconforming than girls.
11. Teachers like best those students who are feminine (girls), conforming, disapproving of asocial acts, and desirous of physical closeness to adults.
12. Achievement is predictable primarily on the basis of dimensions of value socialization (Asocial and Social Conformity) and not on the basis of Academic values.
13. The more like his teacher a child is in values, (a) the higher the teacher will rate that child in desirable characteristics, (b) the lower she will rate that child in undesirable characteristics, (c) the more likely that child is to be a girl, and (d) the better that child will score on reading achievement. The same conclusions hold true for increasing congruities.

14. The more socially conforming and disapproving of asocial acts the child becomes, the higher will be his reading achievement.
15. The hypothesis that teachers will be more congruent with their own classes than with others is not supported. Congruity with class is greater where the class is of middle or upper-middle socioeconomic status than where it is of lower-middle or lower status. This generalization does not hold true for all teachers, however.

The overall conclusion is that values do play a part in the adjustment of the child to school and in his achievement although it is impossible to determine exactly to what extent they contribute over and above the child's ability since no precise measure of ability is available.

What implications do these findings have for education? First, it seems that valuing things academic makes little or no difference. As in the first year of research, we found the Mexican-American child liking academic activities and situations but holding relatively unsocialized values on other dimensions. Furthermore, he is the child who receives the least desirable ratings and is perceived as getting along least well with his peers. Everyone is familiar with the high dropout rate and underachievement of this ethnic group. Further, there are indications in the literature that Mexican-Americans do not want to be socialized if it means being "Angloized." Anglos, on the other hand, are lowest in valuing things academic and yet, probably because they are socialized, do not suffer in school. Orientals present a unique picture of the very socialized and academically concerned--a picture consistent with recent findings with regard to their occupational status which is higher than that of Anglos despite the relative recency of the release of the Japanese-Americans from internment (27 years ago) and the even greater recency of the provision of property rights for Chinese-Americans. Negroes fall about midway between Mexican-Americans and Anglos in socialization and so, to a lesser extent, evidence some of the same difficulties in school with respect to adjustment and achievement as do Mexican-Americans.

The question becomes one of the rights and responsibilities of the school. On the one hand, adoption of the values of teachers and schools which, admittedly, are middle-class Anglo values, seems obviously related to success in school. On the other hand, this is a "free" country within which any subculture has the right to its own values even if these values do not enable the individual holding to them to achieve "success" as defined by the school. There is a growing feeling that education places too high a premium on "book-learning" and flexibility in teaching and there is evidence that the Mexican-American relates much more successfully to skill training and a structured environment. In the integrated school, how is it possible to tailor education to all subcultures and to expose children to values without imposing values upon them? Perhaps the only solution lies in the passage of time during which intensive interaction between children of all cultural heritages generates what might be called a "value compromise." Perhaps, too, changes in teacher selection and training will bring about a "hard sell" of teachers trained to and accepting of cultural differences in values and capable of adapting the learning process to these differences.