THE DEVELOPMENT OF AN INSTRUMENT FOR THE MEASUREMENT OF A PRESCHOOL CHILD'S CONFORMING AND NONCONFORMING BEHAVIOR IN AN IMPERSONAL SITUATION

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CHAPTER I

INTRODUCTION

Purpose

The purpose of this research is to develop an instrument for the measurement of conforming and nonconforming behavior in preschool children. The focus of the present study will be on conformity in an impersonal situation as opposed to social conformity.

Definition of Conformity

Conformity, broadly conceived, is defined as a lack of freedom to perceive and respond. In the present study the focus is on the response aspect. Conformity is indicated by a compulsive positive response and nonconformity by a compulsive negative response, both of which indicate a lack of freedom in making a choice.

Problem

Currently there is widespread interest in creative ability and the development of instruments or techniques with which creative ability can be identified. Apparently this interest has grown out of a recognition of the important role creative ability has played in our past history and the role which it is expected to play in the future. Educators have indicated that there is a decline in creative ability and an increase in conformity as children grow older (Stoddard, 1959).

The decline of creative ability and the increase in conforming behavior present the problem of protecting creative ability and encouraging its growth. Specifically the problem becomes that of identifying creative ability in early childhood and gaining an understanding of the factors which are instrumental in its development.

The purpose of the present study is that of developing an instrument which will measure preschool children's conforming and nonconforming behavior in an impersonal situation. Such an instrument should distinguish between the freedom to use conforming behavior and nonconforming behavior and compulsive use of conforming and nonconforming behavior. Ultimately the instrument may be used in a battery of tests designed for the identification of potentially creative children.

Procedure

The following steps were involved in the development of this instrument for use with preschool children in the measurement of conforming and nonconforming behavior in an impersonal situation:

1. A survey of the existing literature to gain an understanding of conforming and nonconforming behavior in relation to creative ability.

2. Pilot work with peg boards and form boards to clarify the criteria for the instrument.

3. Development of the research instrument.

4. Administration of the instrument to children.

5. Analysis of the data.

6. Interpretation of the results and recommendations for the future use of the instrument.

CHAPTER II

REVIEW OF LITERATURE

In the existing literature concerning creativity, consideration is given to theoretical discussions of conformity as a personality characteristic of the creative person, and to research which attempts to identify creative ability. Since freedom to exhibit either conforming or nonconforming behavior has been suggested as one personality characteristic of a creative person, theory and research will be reviewed in relation to this characteristic.

Definition of Conformity

Conformity as a personality characteristic indicates that the individual lacks freedom of perception and freedom of response. Anderson (1957) describes conformity as a degeneration of the quality of behavior, the uncreative stifling of spontaneity. Ludington (1958) has described conformity as a conflict between internal belief and external manifestation. Crutchfield (1962) believes that "conformity tends to destroy creativity by alienating the creator both from reliance on his own thought processes, and from contact with basic reality." (Crutchfield, 1962, p. 120). Osborne (1963) speaks of the tendency to conform as a force which stifles creativity and encourages conventionalism which hampers originality.

Conforming behavior of an individual has been placed in four

categories by Hoffman (1953, pages 384-385).

(1) He may be reacting independently to external stimuli which are similar to those confronting the others, being unconcerned with or even unaware of their behavior. Psychologically, this is not really conformity.
(2) He may be behaving in accordance with internalized values which happen to be similar to theirs. He may again be unconcerned with or unaware of their behavior and, strictly speaking, not conforming.
(3) He may deliberately behave like the others after realistically appraising the particular situation and deciding that a certain amount of conformity is in order.
(4) He may have an inner need to conform to those around him, irrespective of whether or not the situation calls for conformity. To the extent that such a need is generalized and operates repetitively, the individual may be said to be conforming compulsively.

The first two categories are not conformity as we have defined it in this study. The third category is descriptive of behavior considered to be characteristic of the individual who is free to exhibit either conforming or nonconforming behavior. The fourth category is compulsive conforming behavior, which may be a factor that stifles creative ability.

Characteristics of Creative Adults

Most of the recent research pertaining to creativity has been concerned with the study of creative adults, frequently identified by their products or work. In these studies factors which are related to creative ability have been identified.

Drevdahl (1956) and Lowenfeld (1962) found the creative individual to be superior in his verbal ability, fluency, flexibility, and originality. Guilford (1959) described creative expression as including invention, discovery, curiosity, imagination, experimentation, and exploration. Taylor (1963) categorized the characteristics of the

creative person as intellectual and motivational-interest. The intellectual characteristics are those which seem to be valid indicators of creative talent, e.g., originality, adaptive flexibility, and the ability to sense problems. Motivational-interest characteristics are those which may facilitate the expression of creative ability or operate as obstacles to creativity, e.g., freedom to be a nonconformist, and willingness to try the difficult.

The above studies seem to imply that the creative person is free to use behavior which will permit him to attain a desired goal. On the other hand, conformity is observed in the individual who lacks freedom of expression in a variety of situations.

Barron (1955, 1963) has done an extensive study of creative ability as it relates to originality. He has found originality to be related to: (1) independence of judgment, (2) personal complexity, (3) preference for complexity in phenomena, (4) self-assertion and dominance, and (5) rejection of suppression as a mechanism for the control of impulses. Psychological freedom is implied in most of these characteristics and seemingly is essential for the expression of creative ability. Barron (1963) defines freedom as including both actual and potential freedom. He defines actual freedom as the freedom an individual shows at the moment in a particular situation, and potential freedom as the possible reaction of an individual in a future situation.

Barron (1963) states that in some instances the prospect of freedom is undesirable. This condition of freedom, or complete consciousness of his actions, would include responsibility for one's self. Therefore the individual may avoid judging for himself what is right and wrong to escape being weighted down by the burden of free choice. Such an

individual is actually unwilling to exhibit free behavior.

Blake (1957) says that conformity indicates a lack of freedom and is a function of both situational and personal factors in interaction. Both sets of factors must be understood to predict behavior on specific occasions.

In the above studies several writers have indicated that compulsive conformity may stifle creative expression and hinder the individual in his exhibition of free behavior.

Studies Related to Conforming Behavior

Several studies have investigated social conformity using adult subjects. Asch's (1952, 1961) well-known face-to-face experiments on conformity and their subsequent modifications seem to indicate that even in simple perceptual tasks wrong information, contained in other subjects' responses, had some power to change the judgment of the naive adult observer.

Other experiments with adults using modifications of the Asch experiments on social conformity are described in the literature. (Crutchfield, 1955; Moeller, 1957; Nakamura, 1958; Rosenberg, 1961; etc.). However, the experimental methods employed in these studies do not appear to be feasible for use with preschool children.

Moeller (1957) used college students with high motivation for social-approval in a study of conforming behavior. He found that the high-social approval group yielded to the majority significantly more often than did the low-social approval group, as indicated by the frequency of conformity to the erroneous judgment of the majority.

The above studies of conforming behavior were focused upon social

conformity in adults. The following studies are especially pertinent to the present research because the subjects were young children.

Andrews (1930) traced the development of imagination in the preschool child and studied its relation to intelligence, age, sex, and individual difference. She found a low correlation between age and imagination, and found the high point of imagination to be at age three and a half. In this study both structured and unstructured pictures of familiar objects were presented to the children for one second each. Responses were scored on frequency; the less frequently a response was given, the more original it was considered. The important finding of this study was the negative correlation between imagination and age.

Markey (1935) studied the imaginative behavior of preschool children. She observed the children during free play and in two experimental situations, one a block building game and the other a housekeeping game. The individual differences and group differences which she found led to the conclusion that (1) the same test of imagination is not equally valid for all ages, (2) the level of the child's understanding or comprehension influences the type of imaginative responses of the individual.

Northway and McCallum (1955) used form boards in a study of the relationship of creativity and sociometric status in the preschool child. The measure of creativity actually was a measure of nonconformity. A simple form board task was used in which the child was free to follow a model or use his own ingenuity. Those who chose to follow a model were termed copiers, and were considered to be noncreative. Those who used their own ingenuity were termed noncopiers and were considered to be creative. The significance in this study lies in the fact that a

method of discriminating among young children in terms of conforming and nonconforming behavior was devised.

Torrance (1962) included the work of Andrews (1930) to extend his studies of children and found a decrease in creative thinking at about the age of five. Torrance (1963) also reported a drop in creativity among fourth graders following a steady increase in creativity from the first to the third grades.

Those earlier studies all indicate the possibility of using children of preschool age in a study of conforming behavior as it relates to creativity. They also indicate certain factors which must be considered in the development of criteria for a research instrument that will measure compulsive conformity and nonconformity.

Unpublished Study of Social Conformity

Currently at Oklahoma State University an instrument is being developed for the measurement of social conformity and nonconformity in preschool children. A color preference task has been developed for use in the research. Each child selects colors as he chooses pages for a small picture booklet. As he does this, booklets are constructed for three of his friends (or for his parents), and he is given the opportunity to conform by choosing the same color that is given to his friends or by choosing a different color. In this manner, the influence of an opportunity for social conformity is measured.

In the development of this instrument certain criteria were clarified. (1) The compulsive quality and conforming quality of a child's behavior must be measured independently. (2) Conforming behavior must be measured in a variety of situations. The opportunity

to conform in one situation may be more potent than the opportunity to conform in another. (3) The instrument should be adjustable in order that the opportunity to conform be of similar potency for all children. In the color preference task it was possible that a child's preference for or dislike for a particular color would influence his conforming behavior.

The results of this study of social conformity indicate that the influence of the opportunity to conform was being measured by the task. A significant number of the children responded to the opportunity to conform. No age differences in conforming behavior were apparent; however, sex differences were marked. Both boys and girls were influenced by the opportunity to conform to parents; however, girls were the conformists; while among the boys, some were conformists and some nonconformists. (Starkweather, 1963).

Implications for the Present Study

Although most of the research on creativity has pertained to the description of individuals judged creative by their demonstrated abilities, some important implications for the present research are evident.

The importance of the study of conformity in the preschool child is emphasized by the research discussions which imply that the presence of compulsive conforming behavior prevents an individual from achieving his potentialities. The free individual is able to use either conforming or nonconforming behavior, depending upon his own inclinations. This is implied by the findings of studies which show that creative individuals differ from the noncreative individuals in the following

ways: (1) they have fewer signs of repression and anxiety; (2) they function closer to their potential; (3) they show greater independence of judgment; and (4) they reject suppression as a means of achieving unity.

A few research studies have been made concerning creative and imaginative behavior in young children and these provide valuable suggestions for the present study. (1) The measurement of conforming behavior is possible and can be handled in a simple manner by providing the child with a model he can follow or not as he chooses. (2) Inasmuch as some conforming behavior is free behavior, the compulsive quality and the conforming quality of the child's behavior must be measured independently. (3) The fact that conforming behavior may change with age and that boys and girls may differ in their response to an opportunity to conform suggests that sex and age are factors which must be controlled in the present research. (4) A measure of social conformity has been developed and a measure of conformity in an impersonal situation is needed.

CHAPTER III

DEVELOPMENT OF THE INSTRUMENT

This chapter will include a description of the subjects used in the study, a discussion of the selection of the criteria for the research instrument, a description of the instrument, a review of the administration and scoring, and a statement about recommended analysis of the data.

Subjects

The subjects were 156 children, boys and girls, ranging in age from two years seven months through five years eleven months. The group was composed of community children, the majority of whom were in attendance at nursery school, kindergartens, day care centers, and Bible Schools. Control and experimental groups of children were matched on sex and age (within four months) and at least 24 boys and 24 girls were included in each of three age groups, (below 4:0; 4:0 - 4:11; 5:0 - 5:11). Additional children in the community were used as subjects in the pilot work on the instrument and were not included in the final study.

Selection of Criteria for the Research Instrument

The criteria for the research instrument were suggested by the literature, by the findings of the unpublished social conformity study, and by pilot work with peg boards and one form board.

The need to separate the compulsive quality from the conforming quality of a child's behavior and a method of doing so was indicated in the unpublished study of social conformity. In this same study the influence of a child's preferences on his conforming behavior was illustrated by the ease with which the children conformed when conforming required the choice of a favorite color. The need to adjust for this factor in the present research was indicated.

Pilot Study with Peg Boards

A pilot study with peg boards was conducted with 17 children of preschool age. Six small rubber peg boards, with from eight to 16 holes, were used with red and green wooden pegs. Patterns ranged from simple to complex, from a pattern using eight pegs of the same color to a complex pattern using 16 pegs of two colors. The child was shown a pattern on a completed peg board and then given a blank peg board and a box of pegs with the instructions: "Now you make one." The responses of the children were varied. Some reacted with abandon, as though they were unconcerned with the colors and patterns. Others copied all patterns rather accurately. Still others exhibited nonconforming behavior on the simple peg boards and shifted to conforming behavior when the pattern was more complex, i.e., when the task became difficult and presented a challenge, these children were apparently motivated to achieve the difficult. This indicated the need for an extremely simple task for the true measurement of conforming and nonconforming behavior.

Pilot Study with One Form Board

One form board was made and administrated to eight children. This form board (Appendix A, Figure 1) was essentially the picture of a tree. There were five holes in the board, and for each hole there were four different pieces. They were as follows:

	Picture A	Picture B	Picture C	Picture D
1.	Rabbit	Flowers	Ball	Grass
2.	Squirrel	Tree Trunk	Worm	Butterfly
3.	Tree Limb	Bird House	Bird Nest	Bee Hive
4.	Boy on Limb	Tree House	Tree Limb	Kite on Limb
5.	Cloud	Sun	Sky	Airplane

In the administration of this task, the opportunity to conform was provided by a line drawing placed behind the form board. For, example, a line drawing of Picture A was placed behind the form board; and then for one hole at a time, the child was offered the pieces for Pictures A and B (listed above) and was instructed to put in the one that he liked the best. A line drawing of Picture C was then placed behind the form board, and the child was offered his choice of the pieces for Pictures C and D. During a second session, the line drawings for Pictures B and D were placed behind the form board, and the child was given his choice of the pieces for A and B and for C and D respectively. The time interval between the two sessions was less than one hour.

Each child made 20 choices in completing the one form board. The number of conforming responses ranged from three to 19, indicating

behavior which ranged from extreme conformity to extreme nonconformity. The task apparently had discriminatory power and was thoroughly enjoyed by the children. Several children showed marked conflict when making a nonconforming response; they hesitated, stopped before actually touching the block, and even asked to remove a block after it had been placed in the form board. Some children during their second session talked about the picture they had made previously, indicating that the time interval between sessions was much too short.

This pilot study indicated that the design of the instrument was apparently satisfactory; however, the time interval between the two sessions should be longer.

Criteria for the Instrument

After the literature had been reviewed and the pilot work completed, the following criteria were accepted for the research instrument:

1. The instrument should be of interest to young children, and the task involved should be as simple as possible requiring little skill.

2. The specific instrument (the form boards) should be novel, i.e., unfamiliar to the children.

3. An opportunity for conformity in an impersonal situation should be provided, rather than social conformity.

4. Objective scoring should be possible; and the compulsive quality and the conforming quality of the children's responses should be measured independently.

5. The possible influence of personal preferences should be

controlled by offering the children many choices and by including interesting and less interesting form board pieces, the assumption being that all the children would have some pieces which they preferred more than others.

6. The time interval between the two sessions required in the administration of the form boards should be one week or more.

Description of the Research Instrument

Four form boards were constructed for the research instrument, three in addition to the one described above. These are pictured in Appendix A, p. 32, and include (1) a tree, (2) a house, (3) a playground, and (4) a barnyard. Scenes familiar to children of preschool age were chosen for these form boards.

The size of each form board was 12" by 16", and each had five holes for which picture pieces were made. Four sets of picture pieces were made for each form board, making a total of 80 pieces in all. The pieces were paired for presentation to the children. (The illustrations of the form boards in Appendix A show the way in which the pieces were paired.)

The suggestion for conforming behavior was offered by a line drawing placed behind the form board. For example, in the Tree Form Board, as illustrated, the line drawing shows flowers at the base of the tree, and for this space the child would choose between the rabbit and the flowers. During the second session the line drawing would show the rabbit and the child would again choose between the rabbit and the flowers. In a similar way the suggestion for conforming behavior would be offered by line drawings of all form board pieces.

The assumption underlying this design was that the child who really preferred the rabbit would choose the rabbit during both sessions if he were free to use conforming and nonconforming behavior; but the child who was a conformist would choose the rabbit only when the line drawing of the rabbit was shown, and the child who was a nonconformist would choose the rabbit only when the line drawing of the flowers was shown.

Administration of the Instrument

The form board instrument was administered to two groups of children, an experimental group for whom the line drawings suggested conforming responses as they chose pieces for the form boards; and a control group who completed the form boards without the line drawings.

The form boards were administered twice, with an interval of one week between the two sessions. For the control group the two sessions were identical; but for the experimental group one set of line drawings were used during the first session and another set during the second session. The procedure was as follows: A form board was placed before the child and he was told, "The holes all need to have pieces in them to complete the picture, but I don't know which piece you like best". The experimenter then placed two paired pieces in front of the child. (For the experimental group, the piece which matched the line drawing was on the child's left.) She then pointed to the appropriate hole and said, "See this hole. Look at both of these pieces and then put in the one you like best of all". This procedure was continued until the child had chosen pieces to complete all four form boards.

Scoring

For the experimental group, the scoring consisted of a simple count of the number of conforming and nonconforming responses. For the control group, similar scoring was possible by accepting as a "conforming" response the choice of a picture which corresponded to a conforming response for the experimental group.

A D-score, or difference score, was figured by subtracting the number of nonconforming responses from the number of conforming responses. The possible range of D-scores was from +80 (complete conformity) to -80 (complete nonconformity).

A task score is suggested for the comparison of two or more research instruments which do not offer the same number of opportunities for conforming behavior. This score is figured by dividing the D-score by the total number of responses. The possible range of task scores was from +1.00 (complete conformity) to -1.00 (complete nonconformity).

Recommended Analysis

1. The validity of the instrument should be tested by comparing the D-scores of the experimental and control children.

2. The reliability of the instrument should be determined by means of a split-half correlation, and correlations among the form boards should be calculated to determine their value for the instrument as a whole.

3. The preferences of the children in the control group should be studied to determine whether all children can be expected to prefer at least some of the picture pieces more than others.

4. The direction of the influence of the opportunity to conform

(whether positive or negative) should be determined by an analysis of the large D-scores.

5. The data should be analyzed for age differences and sex differences.

6. The data should be further analyzed to determine whether each half of the instrument can be used as a separate instrument in studies of changes in conforming behavior.

CHAPTER IV

RESULTS

A form board task designed to measure the conforming behavior of preschool children in an impersonal situation has been developed. The validity and reliability of the instrument have been tested; the influence of the opportunity to conform has been analyzed; sex and age differences have been determined; and the possibility of using the instrument to measure changes in conforming behavior has been studied. The findings of these analyses are presented in this chapter.

Validity of the Instrument

The question of whether the research instrument provides a valid measure of the influence of an opportunity to conform was answered by a comparison of the control and experimental groups. The D-scores, representing the difference between the number of conforming and nonconforming responses, were used in this comparison. If the research instrument provided a valid measure of this influence, then the children in the experimental group should have larger D-scores than the children in the control group. Frequency of "conforming" and "nonconforming" responses demonstrated by the control group would be the result of chance; and therefore, the D-scores for this group should approximate zero.

In Table I, the frequency of large and small D-scores are presented for the control and experimental groups.

TABLE I

FREQUENCY OF LARGE AND SMALL D-SCORES OBTAINED BY CONTROL AND EXPERIMENTAL GROUPS OF PRESCHOOL CHILDREN IN A TASK DESIGNED TO MEASURE CONFORMITY AND NONCONFORMITY IN AN IMPERSONAL SITUATION. (N=156)

	D-Scores		
	0 - 15	16 - 80	Total
Control Group	67	11	78
Experimental Group	33	45	78

A Chi-square analysis of these data indicates that the children in the experimental group were influenced by the opportunity to conform. ($\chi^2 = 32.203$; $p < .001$). The instrument was accepted as valid. The frequency of D-scores for the experimental and control children, by sex and age, are given in Appendix B, p. 37.

Reliability of the Instrument

The analysis for reliability included a split-half correlation to determine the internal consistency of the total instrument, and correlations among the form boards to determine whether all were approximately of the same value for the task.

A split-half analysis, using the Spearman-Brown formula, yielded a correlation of $\neq .918$ ($p < .01$), indicating that the instrument has reliable internal consistency.

The correlations among the four separate form boards are presented in Table II.

TABLE II

PRODUCT-MOMENT CORRELATIONS AMONG FOUR FORM BOARDS DESIGNED TO MEASURE CONFORMITY AND NONCONFORMITY IN AN IMPERSONAL SITUATION.

Form Boards	r
1. Tree - House	≠.826
2. Tree - Playground	≠.841
3. Tree - Barnyard	≠.750
4. House - Playground	≠.723
5. House - Barnyard	≠.905
6. Playground - Barnyard	≠.865

All of these correlations are significant beyond the .01 level. The four form boards were accepted as approximately equal in value for the task as a whole.

Control of the Influence of Preferences on Conforming Behavior

In the unpublished research on social conformity, a child's likes and dislikes were found to influence his conforming tendencies. Through the use of colors preferred by each child, this influence was controlled.

This method of controlling for the likes and dislikes of each child could not be used in the present study. However, by offering many different choices (80 different form board pieces were used), it was assumed that all children would have some pictures which they preferred more than others and that no child would be completely indifferent to all pictures.

The picture preferences indicated by the control group were analyzed to determine whether the above assumption was true. The control children chose pictures for the form boards without any suggestion for conformity; and a child showed a preference when he chose the same picture in a pair each time that it was presented. His preference score was the total number of picture pieces for which he showed preference.

For 76 of the 78 children in the control group, the mean preference score was 26.4, out of a possible score of 40. The range was from 16 to 35. All of these children had a substantial number of likes and dislikes and the particular picture pieces liked by one child were different from those liked by another.

Two of the control children showed extreme responses because of the manner in which they handled the form board pieces. One child took the picture on the right in each pair as they were placed before him, thereby obtaining a preference score of 40. The other child chose the picture on the right during the first session and the picture on the left during the second session, with an occasional exception, thus obtaining an extremely small preference score.

The preference scores for these two children were considered spurious, inasmuch as they resulted from the manner in which the pieces were handled rather than from deliberate choices. No child in the experimental group chose pieces from the right or left consistently.

The possibility of specific preferences influencing the conforming behavior of the experimental children is controlled in the present study by offering many different choices to the children and thereby assuring that all children would have some preferences. No more

refined method of controlling this factor was possible in the present research.

Direction of the Influence of the Opportunity to Conform

For those children in the experimental group who were influenced by the opportunity to conform, the question arose as to whether there was a positive or negative influence. In other words, did the children respond with conforming or nonconforming behavior? For this analysis the children were divided into three groups: those who were apparently free in their responses as indicated by small D-scores (-15 to +15), those who showed conforming behavior with large positive D-scores (+16 to +80), and those who showed nonconforming behavior with large negative D-scores (-16 to -80). The distribution of the children in these three groups is presented in Table III.

TABLE III

FREQUENCY OF LARGE NEGATIVE, SMALL, AND LARGE POSITIVE D-SCORES OBTAINED BY PRESCHOOL CHILDREN, BOYS AND GIRLS, IN A TASK DESIGNED TO MEASURE CONFORMITY AND NONCONFORMITY IN AN IMPERSONAL SITUATION. (N=78)

D-Scores	Boys	Girls	Total
-16 to -80	5	5	10
-15 to +15	15	18	33
+16 to +80	17	18	35
Chi-Square	6.705 ($p < .05$)	8.242 ($p < .02$)	14.846 $p < .001$)

Chi-square analysis of the data for the total group of children indicated that the children who were influenced by the opportunity to conform responded with conforming rather than nonconforming behavior. ($\chi^2 = 14.846$; $p < .001$).

Sex Differences

Separate analyses of the responses of the boys and girls (see Table III) indicated that there were no real sex differences. Boys and girls who were influenced by the opportunity to conform responded with conforming rather than nonconforming behavior.

Age Differences

The question of whether age would be a factor in conforming behavior was answered by an analysis of the responses of the children in the three age groups, as shown in Table IV.

TABLE IV

FREQUENCY OF LARGE NEGATIVE, SMALL, AND LARGE POSITIVE D-SCORES OBTAINED BY PRESCHOOL CHILDREN, IN THREE AGE GROUPS, IN A TASK DESIGNED TO MEASURE CONFORMITY AND NONCONFORMITY IN AN IMPERSONAL SITUATION. (N=78)

	Ages (in years and months)			
D-Scores	Below 4:0	4:0 - 4:11	5:0 - 5:11	Total
-16 to -80	3	2	5	10
-15 to ≠15	8	14	11	33
≠16 to ≠80	13	11	11	35

The frequency of nonconforming (-16 to -80), free (-15 to +15), and conforming (+16 to +80) responses is similar for all age groups. ($\chi^2 = 3.023$; n.s.). In other words, there were no age differences in the exhibition of conforming and nonconforming behavior.

Use of Instrument in Measuring Changes in Conforming Behavior

The form board task could be used to measure changes in the conforming behavior of preschool children if the two halves of the task could be used as separate instruments. One half could be used in an initial administration of the task and the other half in a subsequent administration. Then the difference between the two scores obtained would indicate the change in conforming behavior.

In order to use the two halves of the task as separate instruments, a high correlation must exist between the two halves, i.e., between the two sets of paired pictures designated for the form boards, and each half must have internal consistnecy.

The product-moment correlation coefficient between the two halves of the task was +.849, which is significant beyond the .01 level. The internal consistency of each half was determined by correlating the combined scores for the Tree and House form boards with the combined scores for the Playground and Barnyard form boards, using the Spearman-Brown formula. The correlation coefficients obtained for these two analyses were +.860 and +.502, both significant beyond the .01 level. For these analyses the number of conforming responses of each child was used.

These results indicate a high correlation between the two halves of the instrument, and internal consistency for each half. The form

boards can be used as two separate instruments for the measurement of changes in conforming behavior in preschool children.

Summary

A research instrument for the measurement of conformity and nonconformity in an impersonal situation has been developed for use with preschool children. The validity of the instrument has been demonstrated by a comparison of the responses of children in experimental and control groups. The reliability has been demonstrated by a split-half correlation and by correlations among the four form boards which comprise the instrument.

No age differences in conforming behavior were apparent. Boys and girls were similarly influenced by the opportunity to conform and responded positively with conforming rather than nonconforming behavior.

Statistical analyses of the two halves of the instrument indicate that each half could be used as a separate instrument in a study of changes in conforming behavior.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this research was to develop an instrument for the measurement of a preschool child's conforming and nonconforming behavior in an impersonal situation. Such an instrument was developed and was successful in discriminating among the children who were free to use conforming and nonconforming behavior and those who were compulsive in their use of conforming and nonconforming behavior. The subjects were 156 children, boys and girls, ranging in age from two years seven months through five years eleven months. Individual children in experimental and control groups were matched on sex and age (within four months).

The instrument was composed of four picture form boards. Each form board had five holes for which picture pieces were made. The suggestion for conforming behavior was offered by line drawings placed behind the form boards. The child was given an opportunity to choose between two picture pieces for each hole. One piece matched the line drawing and thus offered him an opportunity to conform or not as he chose. The form boards were administered twice with the same paired picture pieces being presented both times, but with the line drawing suggesting conformity to one piece during the first session and to the other piece during the second session. This design provided for the independent measurement of the compulsive quality and the conforming quality of the child's behavior.

A score, which indicated the child's tendency to use conforming or nonconforming behavior and indicated the compulsiveness of the child's behavior, was figured by subtracting the number of nonconforming responses from the number of conforming responses. The size of the score indicated the extent to which the child was influenced by the opportunity to conform, and the positive or negative sign indicated the direction of the influence.

The validity of the instrument was determined by a comparison of the responses of the experimental and control children. The experimental children were definitely influenced by the opportunity to conform; and the control children, who were given no opportunity to conform, responded according to their own preferences. The reliability of the instrument was determined by a split-half analysis. Further statistical analysis indicated that the four form boards were approximately equal in value for the task as a whole, and that the form boards could be adapted for use as two separate instruments for the measurement of changes in conforming behavior. There were no age differences or sex differences in the exhibition of conforming and nonconforming behavior. Boys and girls who were influenced by the opportunity to conform (as opposed to those who responded freely according to their own preferences) responded with conforming rather than nonconforming behavior on the form boards.

Implications of the Study

The important thing as far as life and education are concerned is that a child be able to conform to certain standards or requirements of his society; and when this is not necessary, that he be and feel free to follow his own inclinations.

The subjects in the present study showed significant differences in their tendency toward conformity, freedom, and nonconformity in an impersonal situation. If it is assumed that every child is born with the potential for freedom of expression, these findings must be interpreted as indicating that something has encouraged freedom in some children and something has stifled it in other children. This suggests that the use of the form board instrument should permit subsequent studies to investigate other basic factors contributing to creative expression. Such factors might be identified by a study of the backgrounds of children matched on the basis of their freedom to use conforming or nonconforming behavior.

The findings of this research further suggest that boys and girls of preschool age have a tendency toward conforming behavior in an impersonal situation; however, this does not mean that every child having a score indicating conforming behavior on this instrument will be a conformist in every situation.

Recommendations for Future Research

The writer recommends that the instrument developed in the present research might be used in the following studies:

1. Studies of the relationships among variables which may be related to conformity - nonconformity and to creative ability.

2. Studies of changes in conforming and nonconforming behavior.

3. Studies of age differences and sex differences in conforming behavior using a wider age range than that included in the present study.

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APPENDIX A

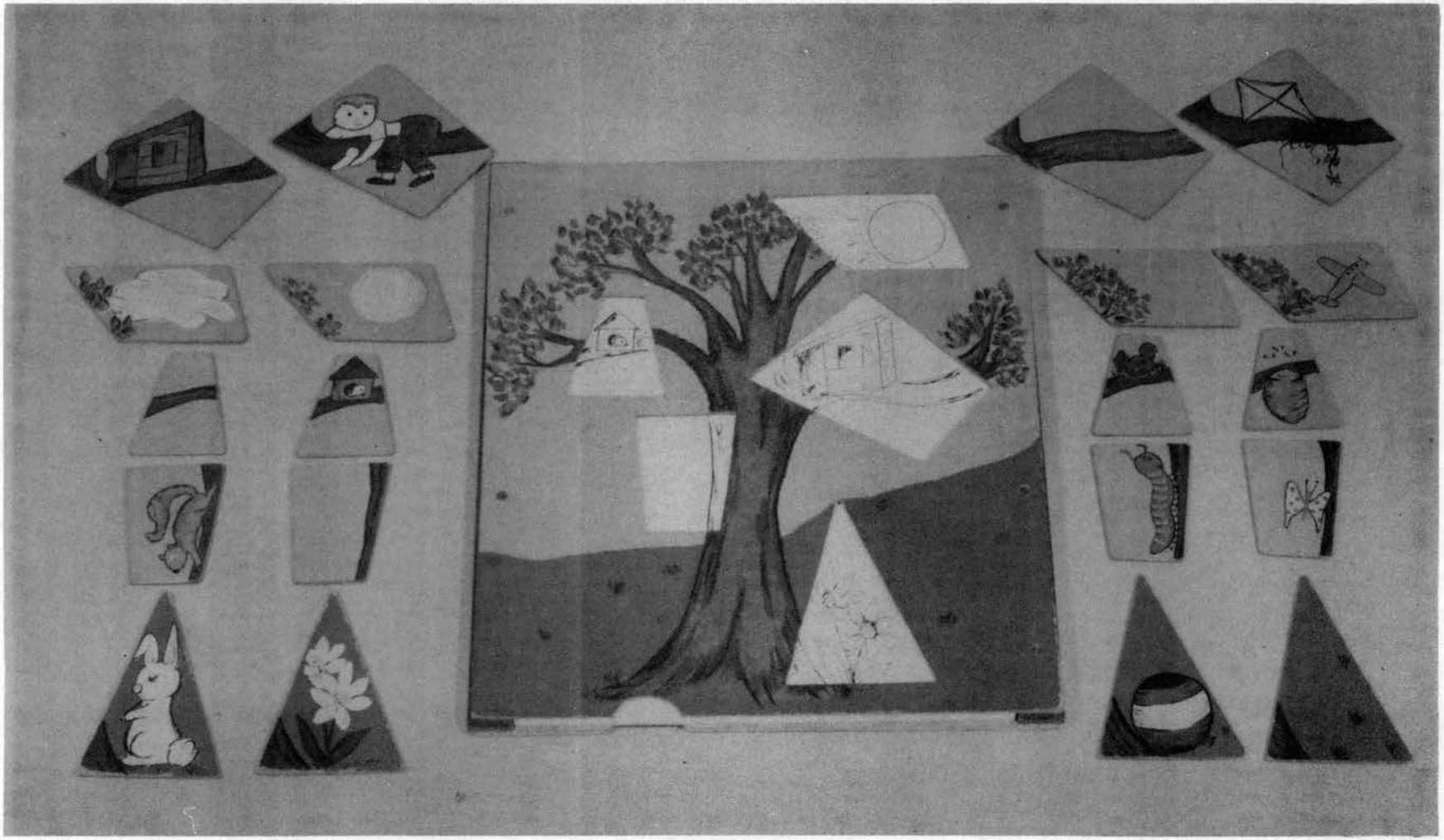

Figure 1. Tree Form Board

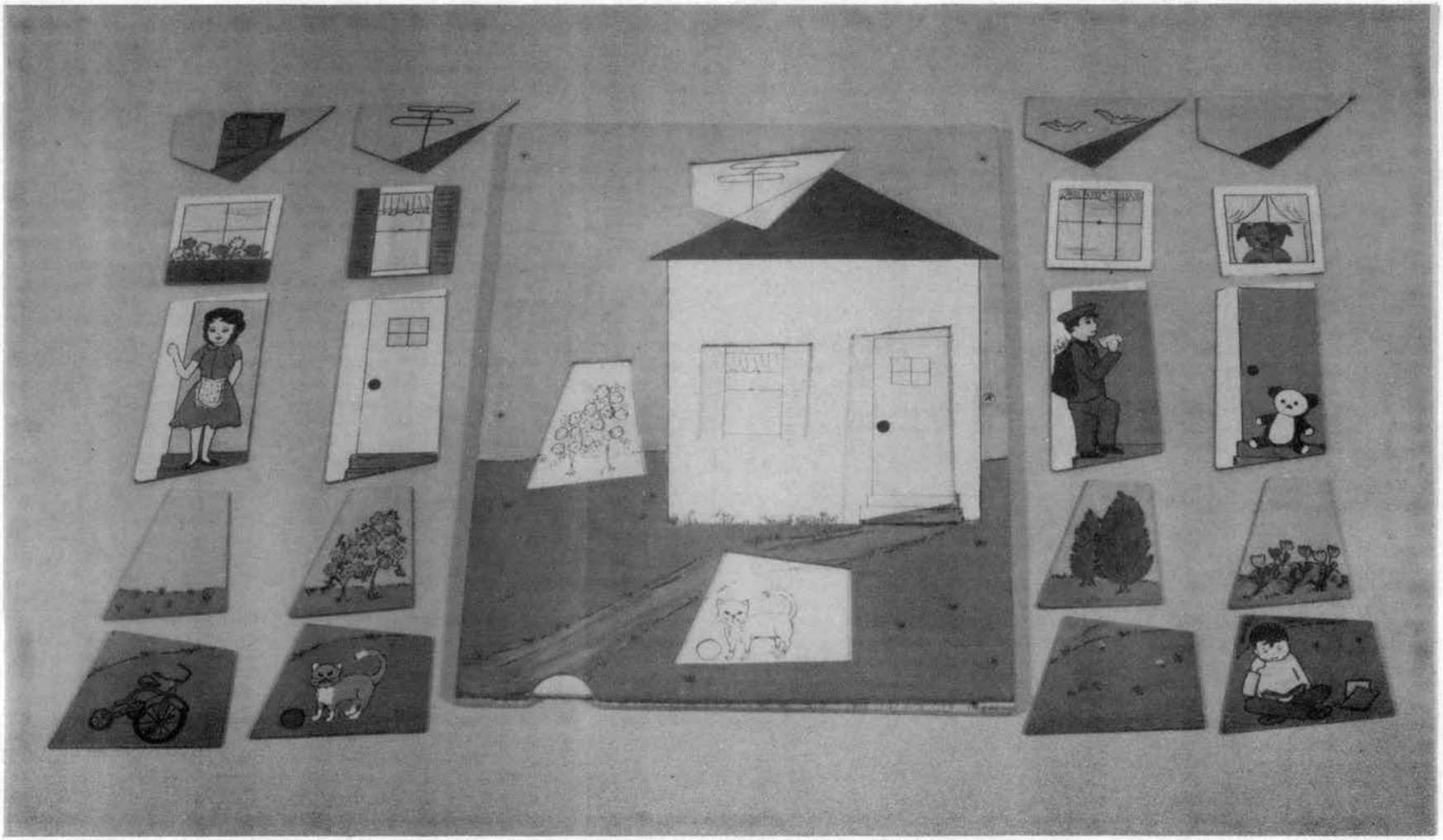

Figure 2. House Form Board

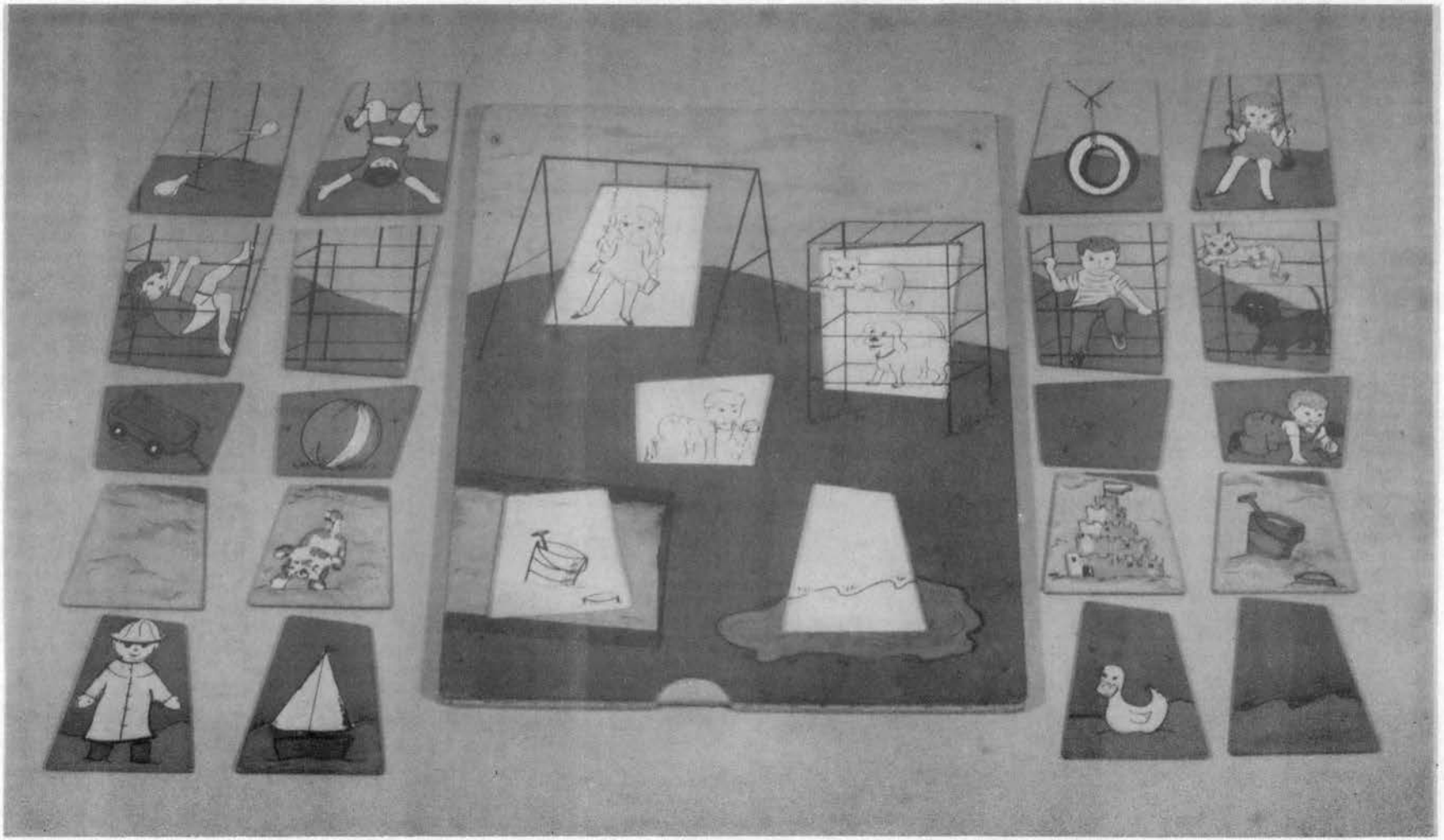

Figure 3. Playground Form Board

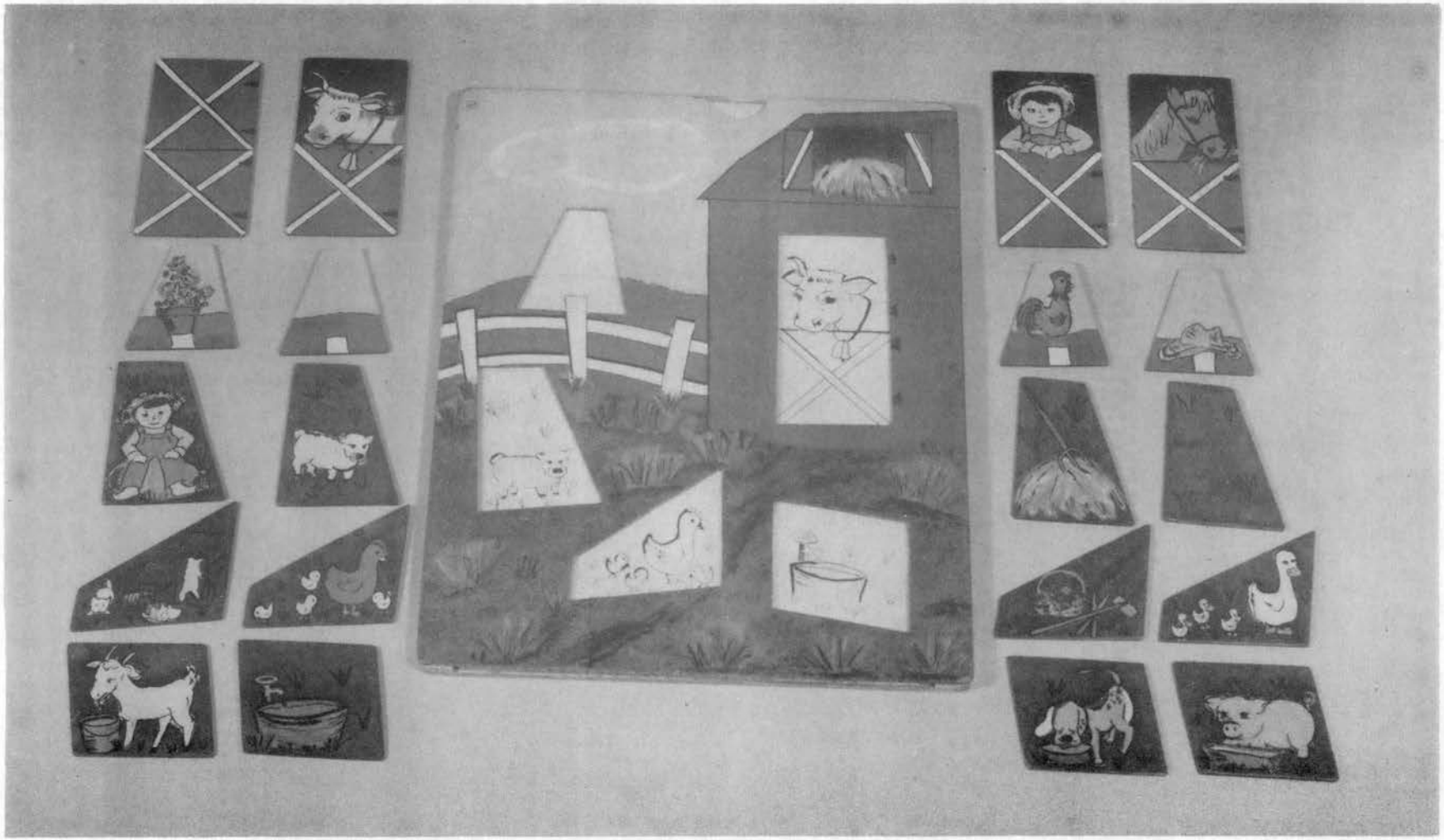

Figure 4. Barnyard Form Board

TABLE V

FREQUENCY OF D-SCORES OF EXPERIMENTAL AND CONTROL GROUPS OF PRESCHOOL CHILDREN, BY SEX AND AGE, ON A FORM BOARD TASK DESIGNED TO MEASURE CONFORMITY AND NONCONFORMITY IN AN IMPERSONAL SITUATION. (N=156)

		D-Scores*						
		Experimental Group			Control Group			
	N	(-16 to -80) Nonconforming	(-15 to +15) Free	(+16 to +80) Conforming	N	(-16 to -80) Nonconforming	(-15 to +15) Free	(+16 to +80) Conforming
By Sex								
Boys	37	5	15	17	37	2	32	3
Girls	41	5	18	18	41	3	35	3
By Age**								
Below 4:0	24	3	8	13	24	2	19	3
4:0 - 4:11	27	2	14	11	27	2	23	2
5:0 - 5:11	27	5	11	11	27	1	25	1
TOTAL	156	10	33	35	156	5	67	6

* The D-Score is the difference between the number of conforming and nonconforming responses.

** Ages are given in years and months.

VITA

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Master of Science

Thesis: THE DEVELOPMENT OF AN INSTRUMENT FOR THE MEASUREMENT OF A PRESCHOOL CHILD'S CONFORMING AND NONCONFORMING BEHAVIOR IN AN IMPERSONAL SITUATION

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