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**AN EXPERIMENTAL STUDY OF RORSCHACH PERFORMANCE  
OF SIX-YEAR-OLDS WITH AND WITHOUT  
A TRIAL BLOT**

**by**

**Katusha Marilyn Didenko**

**A Thesis Submitted to the Faculty of the Graduate School  
of Loyola University in Partial Fulfillment of  
the Requirements for the Degree of  
Master of Arts**

**June**

**1954**

## LIFE

Katusha Marilyn Didenko was born in Chicago, Illinois, June 7, 1929.

She was graduated from Kelvyn Park High School, Chicago, Illinois, June, 1947, and from Mundelein College, Chicago, June, 1951, with the degree of Bachelor of Arts. She began her graduate studies in the department of psychology at Loyola University, Chicago, in June, 1951.

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## CHAPTER I

### INTRODUCTION

The Rorschach Test is one of the outstanding tests of personality known to psychiatrists and psychologists. It consists of ten standardized ink blots on which the subject projects himself in his interpretation of them. This projective method is found to reveal much pertinent material that cannot be obtained with the more stereotyped question and answer type of test. In complying with the instruction to tell what the blot might be, the individual tends to reveal his feelings and attitudes by projecting them on to the cards.

The possibilities inherent in the use of ink blots were discovered accidentally some one hundred years ago. Psychological experimentation with the ink blot technique began considerably later, in 1895, with Alfred Binet, the founder of modern intelligence testing. Various types of blots and methods of administration and interpretation were developed, but the first set of ink blots to have universal adoption is that introduced by Herman M. Rorschach, a Swiss psychiatrist, in 1921. Rorschach's report, entitled Psychodiagnostik, has been the framework and inspiration for much research and investigation for the past twenty years.

David Levy first introduced the test in America, and was instrumental in starting Samuel Beck on his long series of investigations. The latter became the first American psychologist to work with the Rorschach method, and to the present writing his contributions have appeared regularly in psychological publications. Other recognized experts in this country are Bruno Klopfer and Marguerite Hertz.

Interest in the Rorschach Test has grown rapidly. The organization of the Rorschach Institute in New York City and the publication of the quarterly, Rorschach Research Exchange (now entitled Journal of Projective Techniques) are evidence of this growth. The number of studies dealing with the Rorschach has reached enormous proportions. However, the major part of the research has been with adult subjects. Most basic texts make only a passing reference to children.

There have been several studies with children, but most have dealt with adolescent or preschool children, with relatively few reports being published on the years from six to twelve. Furthermore, the majority of investigations have used highly select groups both in intelligence and in socio-economic status. Therefore, the results of these studies can scarcely be called normative data, data collected from and descriptive of a group of normal or average children. Because of this, the effective use of the Rorschach Test with children has been handicapped by the lack of adequate group sampling studies on which to base interpreta-

tion. Conclusions based on adult interpretative criteria have led to incorrect judgments, since children show many characteristics considered more or less abnormal phenomena in the record of an adult. The undesirability of scoring records of young children on the basis of adult norms is recognized, but since norms for young children have not yet been developed, there is no alternative. Fortunately, the literature on children's patterns is amassing steadily and helping to decrease earlier skepticism as to the usefulness of this test with children.

The lack of normative studies is apparent to most investigators. However, numerous other problems arise in accumulating data from children's records. Of main concern is the lack of agreement on the details of administration. Different methods of administration have an unknown effect on the results obtained, and as such decrease the value of the work done. Since the testing of children is relatively new, most past methods have involved a certain degree of trial and error for the sake of maintaining the child's attention and interest. A minor concern in adult testing, maintaining interest becomes a major problem in testing children. Instructions and procedure must be planned with this in mind. Despite certain common points in procedure, there is need for further agreement on the actual details of administration. This seems best determined by an experimental study of the effects of certain procedures on test results.

The evaluation of one of these methods with young sub-



jects will be attempted in the present study. It is a procedure which is somewhat unusual, in terms of tradition, but one which is advocated by two noted research workers, Mary Ford and Marguerite Hertz. Briefly, it involves the use of a trial blot or practice blot which is presented before the standard ten cards. Both workers have offered logical and persuasive reasons for the inclusion of a trial blot, but nowhere in the literature does the value of this method appear to have been tested experimentally. Rorschach workers, and test administrators as a whole, hesitate to adopt methods which have unproven value, despite the logic surrounding an argument.

The present study will attempt to test the effect of a trial blot procedure with children by measuring the differences in Rorschach patterns between two groups, one of which is given the trial blot administration and one in which it is omitted. Statistical comparisons will be made in terms of the significance of differences between the two groups in all the major Rorschach Test variables.

Since even a range of three or four years results in wide differences in Rorschach records, because children change and mature continually, the present study will follow a growing practice to limit studies to yearly intervals. Six-year-old children will be studied in the present investigation, with the results of surrounding ages to be reported by companion studies, also confined to yearly intervals.

Necessarily, in a study of this kind, a number of children's records will be gathered. From this arises the second aim of this study. The results of the control group, or non-trial blot group, may serve to add to already existing normative data for this age range. And in the event that no significant statistical differences occur between the two groups, they can be considered homogeneous and merged to provide a larger sample. Finally, in either event, the results of the present study can be compared with those of existing studies of this age range.

## CHAPTER II

### REVIEW OF THE RELATED LITERATURE

The use of the Rorschach Test with children was relatively unheard of in this country before 1936. In the short span of almost two decades, there has been a marked increase in the frequency of its study and application. Improved understanding of the children's patterns and of difficulties encountered in collecting their records have decreased considerably the earlier skepticism concerning the applicability of the Rorschach Test to children.

The history of Rorschach testing with children is largely a review of the studies that have appeared from time to time. In surveying the early studies, one is struck by their seeming lack of controls, poor organization and general atmosphere of uncertainty. However, this is the very nature of pioneer investigation, scientific or otherwise, which aims to explore a huge field without knowing what to anticipate. Surprisingly enough, these early beginnings have been the foundation and inspiration for further investigation and refinement by interested followers and, in turn, for still greater advancements in rapid succession by other workers.

A review of the major studies to date is exceedingly valuable, since it acquaints one with the unique problems met in using the Rorschach with children, and further prepares one for the difficulties in utilizing the results of previous studies. The scope of these studies differs in several respects and, therefore, they seem best grouped according to their respective aims. It must be remembered that, though figures are reported, the studies are not necessarily comparable. There are a number of reasons for this. Differences in age level and intelligence of the subjects, varying administrative procedures and, in general, varying normative concepts and sampling techniques influence the results to a considerable degree. Workers are, even now, striving to attain some degree of standardization and are attempting to evaluate the various methods recommended or questioned.

#### Developmental Studies

The developmental point of view suggests that the child develops through a sequence of structured, patterned stages, though at an individual tempo and in a unique manner (1:1). This seems to be evident in intellectual and emotional growth as well as in physical development. Developmental trends have been found in the Rorschach patterns of children of different ages. Workers have attempted to identify and describe these general trends, keeping in mind the individuality of each child, with a view to providing yet another comparison measure for the growth of children.

In studying the records of 205 preschool children ranging in age between two and seven years, Klopfer and Margulies (29) discovered three successive stages in the Rorschach patterns of this age range. The authors called the first stage "magic repetition," which occurs primarily in the two-year-old. The child simply repeats some word as a reaction to each card, with utter disregard for the difference between cards. The second stage substitutes "magic key" and merely rejects uninteresting cards, with some perseveration carrying over from the first stage, but with improved attention to other cards. The final stage noted should be reached by five years of age, and involves sufficient individual attention to each card for the child to give a variety of responses.

The above study was not normative, since the group was composed largely of children of superior mental ability who came from higher than average socio-economic background. However, these workers were among the first to describe the administration difficulties with young children and the need for modifications of adult methods. The most decisive difference was the need for special motivating techniques. This seems to be a common discovery, since it has been found repeatedly that children require continued encouragement to persist in their attention to the task.

Klopfer and Margulies found that the number of responses increases with age (eight at the two to three level, twelve at the three to four level, sixteen at the four to five level, eight-

een at the five to six and six to seven levels). Form-accuracy level increases with age, and card refusals or rejections decrease. Very young children give few motion and color responses. A few pure color responses, undesirable in the adult record, are present.

Kay and Vorhaus (27) also studied the records of preschool children collected by other workers, again with a view to ascertaining developmental factors in the Rorschach protocols of children. The 138 subjects ranged in age from two years to six years eleven months. The groups were small, and available data on intelligence were said to be inadequate and, therefore, were not reported. Despite these handicaps, the authors attempt to describe the results in terms of trends through early childhood. The tendencies noted are similar to the findings of other workers, that the number of responses increases with age, as do the number of detail and popular responses; rejections decrease with age, the quality of form and whole responses improves. Perseveration and arbitrary responses, again undesirable in the adult record, also decrease with age, but are commonly encountered in the very young child.

A year later, Vorhaus (44) alone reported her findings on the same records with regard to location categories, form level, and content. She claims certain meeting-points between young children and adults, despite certain differences. Use of details is closely related to interest, mental maturity, and ability to or-

ganize, and the ease with which an area can be segregated from the total blot. Perseveration tendencies in this group were limited to responses on the last three cards, the all-colored cards.

Paulsen (35) studied a group of eighty-two first-grade children ranging in age from five years eleven months to six years ten months. The range in Binet IQ was wide, 69 to 129 for girls (mean 97.7) and 71 to 120 for boys (mean 98.2). The average number of responses was fifteen. The other data are discussed, but no actual norms are given for the categories. A large majority of the children showed an extraversional M to Sum C relationship, and certain factors were found positively related to intelligence, namely the quality of whole responses, the number of human and animal movement responses, the number of form-color responses, the number of human, popular, and form responses, and, the form-accuracy level. No significant sex differences were found. Quite the contrary, the investigator found that individual differences within a sex group were greater than differences between sex groups.

Hertz and Ebert (25) worked with six and eight-year-old children in terms of their manner of approach. The group comprised 111 boys and 131 girls with an average IQ of 117 at the six-year level; 90 boys and 118 girls, average IQ of 124, at the eight-year level. For the six-year-old, these workers found that whole responses predominated, while eight-year-old children showed the ability to analyze the whole into its obvious details as well as being able to embrace the whole. Mature patterns of mental pro-

cedure are said to begin at this level. Percentage of whole responses for the younger children was forty-one; for the eight year group twenty-seven. Details comprised thirty-nine per cent for the six year group, fifty-two per cent for the eight-year-olds. Small and unusual details averaged seventeen per cent for both groups. White space made up two per cent of the records of the younger children and four per cent of the records of the eight year group.

A study by Mary Ford (12) was for some time the noted one among a few early attempts in child Rorschach testing. The investigation she conducted had many shortcomings, but since it was regarded as an exploratory study, and as such one which would raise more questions than it attempted to answer, it was heartily welcomed by clinicians and regarded as a pioneer study. Indeed, one of the questions raised in the study is the basis of the present investigation.

Ford aimed to refine administration procedures and simplify instructions. Secondly, she intended to study the reliability of the determinants at the preschool level and the validity of the meaning of the test determinants.

The subjects were 123 children ranging in age from three to eight, with approximately as many boys as girls. Intelligence quotients were taken from Stanford-Binet records and ranged from 90 to 157, with an average of 124.35.

Ford found that certain modifications in procedure were



necessary because of the age of the subjects. In a preliminary experiment, she noticed that many of the children occupied themselves with the manipulation of the card. To remedy this, the child was told "You hold it this way" (12:18) when he first attempted to turn it. A comparison of the number of responses with those of other studies was said to reveal no decrease in productivity because of this procedure.

The second modification was the introduction of a trial blot before the standard ten blot presentation, which was to serve as a nonverbal orientation in the type of material which followed. The homemade trial blot, like the Rorschach cards, was bilaterally symmetrical, and made with black ink on white paper. Scoring was on the basis of adult norms.

The final results support the previous claim that there are well-defined stages in the records of young children. The figures of Ford's report, however, are in considerable disagreement with those of other studies for the separate age levels. The average number of responses is consistently high. The reason for this may well be the superior intelligence of these children. Detailed descriptions of her findings on the six-year-old are given elsewhere in the present report (p. 47).

As part of a research project at the Michael Reese hospital, Thetford, Molish, and Beck (40) summarized the test findings of normal children in order better to evaluate the records of deviant children. The subjects were 155 children from Chicago

public schools, screened on the basis of normal intelligence, freedom from overt behavior problems discernible by their teachers, and average academic achievement. Intelligence ratings were based on different intelligence tests given in public schools and, therefore, a mean IQ was not reported. The children were divided into three groups on the basis of three important periods of growth in childhood. The first included the age range six to nine years, the second ten to thirteen, and the last fourteen to seventeen. Statistics are presented for the groups as a whole, and discussion concerns the implications of these data for the relationships among the three age groups.

The results indicate that there is a progressive increase in some of the various Rorschach Test components throughout the three age ranges. Fluctuations in productivity occur, but responses increase with age (21.93 at the six-to-nine level, 27.40 at the ten-to-thirteen level, and 41.35 at the fourteen-to-seventeen level). Whole responses were highest in the middle group (15.30 per cent) and lowest in the older group (12.83 per cent). Details were the predominant location category in all three groups and averaged from seventy to seventy-six per cent for each age range. Unusual details ranged eleven to thirteen per cent for the three sub-groups. Animal content was highest for the middle group (47.95 per cent). Human content increases progressively, with a consistent predominance of human detail over whole human responses. Impulsive and labile expressions decrease. The greatest

amount of shading occurs in the adolescent group. Movement responses are three times as frequent in the adolescent group as in the younger groups. Experience balance differs markedly for the three groups. The adolescent group has no characteristic type, the youngest is primarily coercted, and the prepubescent period is constricted (there is a recurrent trend toward constriction in the prepubescent period). Greatest variability in productivity occurs in the younger groups.

#### Normative Studies

Many studies are incorrectly termed normative. The use of a highly select group both in intelligence and in socio-economic status, encountered in many investigations, does not constitute a normative group, nor do their results describe what is normal for the average child.

Swift (39) conducted a normative study with eighty-two preschool children. Though classified as normative, the children were admitted to be a "sophisticated group," with the majority coming from professional homes and with an IQ consistently above average. The range in chronological age was from three years one month through six years four months. The investigation was designed to present data on the frequencies of the various categories and their relation to age and sex.

A somewhat unconventional procedure was introduced by Swift, in that the instructions began "I have some funny pictures to show you" (39:75). Most Rorschach workers object to using the

term pictures in test procedure. Another adjustment, more acceptable than the first, was the use of an immediate inquiry, one obtained after each response rather than after all ten cards are completed. The usual practice with adults is to obtain the inquiry in a second presentation of the cards, after the spontaneous responses to all cards have been obtained. The immediate type inquiry seems valuable, since a number of workers have noticed that children become angered on a second presentation of the series or have difficulty in identifying their responses again.

The median number of responses for Swift's group was eleven, with a range of one through twenty-two. The majority of the responses occurred on the colored cards. Whole responses were predominant, with little use of detail. Form responses also were high. Few shading or movement responses occurred. Animal responses exceeded human responses. Blood or fire responses appeared in at least sixteen per cent of the records. The number of popular responses, according to adult norms, was small, an average of 2.02 per child. Categories found to be related to chronological age were animal per cent, the number of movement responses, and the number of popular responses. Categories found to be related to mental age were percentage of whole responses, percentage of form-determined responses, and popular responses. Significant sex differences were noted with regard to the frequency of form-color responses (girls give more form-color responses), animal and animal detail responses (more in boys), plant and object responses (more

plants in boys, more objects in girls), the number of rejections (fewer in boys), percentage of details (higher in girls), and percentage of responses to the last three cards (higher for girls).

Meyer and Thompson (34) have published detailed results of their normative study with kindergarten children. Eighty-six children with an average age of five years nine months and an average IQ of 103 were tested in this project. The socio-economic status of these children was somewhat higher than average.

In terms of median figures, the average number of responses for this group was 12.0. Percentage of whole responses was only forty-eight, percentage of details 32.5. Unusual details comprised 10.5 per cent of the responses. Pure form responses were the usual high for young children, 74.5 per cent. Also commonly found was an excess of animal movement over human movement (mean of 0.9 to 0.3) and of color-form and pure color responses over form-color responses (mean of 1.1 to 0.5). Shading was used rarely.

Eight-year-olds were studied by Rae Carlson (14). Her group was made up of fifty boys and fifty girls ranging in age from eight years to eight years eight months. Intelligence scores were limited to the middle range on the Otis Test, based on percentile norms of Seattle's third-grade children. Scoring and administration were according to Klopfer and Kelley. Results are reported in terms of the mean percentage of all the categories.

The number of responses for these eight-year-olds was

20.13, with one or more rejections occurring in twenty-seven per cent of the records. Large details predominated over whole responses (35.88 per cent to 51.30 per cent), but at least one whole response was given by each child. Human movement averaged 6.84 per cent, animal movement 15.15 per cent, inanimate movement 1.23 per cent. Shading was used little, with texture responses leading those which did occur. Over half the children had one or more form-color responses (mean 4.88 per cent). Color-form responses averaged 4.35 per cent, and no pure color occurred in her group. Half of the responses were animal in content, and human detail comprised the larger part of human responses in all cases. Carlson found eight-year-olds quite variable and warned examiners to expect large deviations from adult norms.

One of the most comprehensive studies yet reported, and one which will serve as a basis of comparison for this study, is that of Ames and her co-workers (1). Six hundred fifty records were collected of children from ages two to ten years. Fifty children were tested at each of thirteen age levels; half-yearly from two to six, and at yearly intervals through ten years of age. The data are presented in terms of the half-yearly and yearly intervals selected, and include the extent to which the determinants occur, the percentage of subjects using each of these variables, and a discussion of the sex differences and pattern of behavior characteristic of each age level. Scoring techniques are essentially the same as widely used methods with a few exceptions.

Ames introduces the French category "Clob," responses based on a diffuse impression of the blot stemming from its darkness (1:85). This is similar to Klopfer's C' category. All shading responses were scored F(C). An elaborate system of scoring shading was deemed unnecessary, since children give few such responses (1:82). Scoring of usual details, form accuracy, and populars was based on an analysis of the records themselves, with the aid of Hertz' frequency tables, rather than in terms of adult norms.

Unfortunately, the variable of intelligence was not controlled adequately. The intelligence of half these children is decidedly superior, and based on vague estimates and "developmental examinations." Another shortcoming is one common to many Rorschach studies. Statistical methods of doubtful value (for Rorschach variables) have been applied to the ratio M to Sum C. The results are reported in terms of the means of the two separate factors rather than in terms of quantified categories. The former assumes equivalence. Secondly, sex differences are discussed in terms of means, but the significance of these differences was not tested.

According to the authors, the most conspicuous finding is that the Rorschach picture at each level has a unique and distinctive "characteristicness" which sets it apart from every other age level. Detailed results for the sample of fifty on the six year level are reported in the chapter on the analysis of the results.

The report is generally well organized and presents a wealth of statistical data. Considerable space is devoted to a description of scoring and administration, but the authors warn one that the volume is not presented as an introductory manual on Rorschach procedure. The authors take great pains in the presentation and analysis of the results, and are eager to have their work serve as a partial but important answer to the lack of norms for children. It is unfortunate that this thoroughness did not extend to the initial screening of the children in regard to intelligence.

Another outstanding piece of research is a long range normative study conducted by Nettie Ledwith, chief psychologist at the Pittsburgh Child Guidance Center (31, 32, 47). This study was initiated in the fall of 1946, with a plan to follow the children through their elementary school years, six years of age through twelve. A complete report has not yet been published, but progress reports have appeared from time to time.

In addition to the Rorschach Test, another type of test is administered each year, so that at the close of the study, a comprehensive battery of test results on each child will be accumulated. The additional tests are: Stanford-Binet, Form L; Grace Arthur Performance Scale; Goodenough Draw-a-Man Test; Monroe Diagnostic Reading Examination, and the Thematic Apperception Test.

When first chosen, the 138 subjects of this study were in the first grade of thirty schools, and ranged in chronological



age from six years to six years ten months, with an equal number of boys and girls. The mean Binet IQ reported was 104.6. A more thorough control is evident in this study, since the children are divided into four IQ groups, and results are reported in terms of these separate groups as well as in terms of the total. The first group comprises the children with an IQ of 125 and above (N 13); the second includes the range 110 to 124 (N 32); the third 90 to 109 (N 75); and the last classification includes an IQ of 89 or below (N 18). The total range was 77 to 143 (N 138). For the purposes of this study, the six-year-olds are given attention, the results of the third group in particular, since those with IQ's within the average range are more comparable to the intelligence level of the present study. These data are presented in the chapter on the results of the present investigation.

Ledwith used the Klopfer method of administration, scoring and interpretation. Averages and standard deviations of the various test factors were computed. In the comparisons between intelligence levels and between sexes, little more than trends was noted, and a few differences among the various test factors were significant at the five per cent level. There was a tendency for the boys to give more responses than the girls, and for the brighter children to give more than the less bright. Neither sex nor intelligence seemed to affect the proportion of location categories or the mean number of color responses or movement responses (31:2-3).

### Studies With Special Groups

Mollie Gair (18) compared the records of superior seven-year-old children with those of a more average group of children seven through eleven years of age. Her group of twenty-nine children were selected from a second year class in a school for gifted children. The average IQ was 146, with a mean age of seven years three months. In her comparison, she found greater productivity in the superior group, with a high percentage of whole responses and less use of detail. For the bright children, there was a wider range in content, and a greater maturity in the use of human movement, form color, and form-determined responses. The percentage of human and animal movement in the bright seven-year-olds was close to that found in her average children nine to eleven years of age. As in most children, animal movement exceeded human movement in the bright group, but color responses were more frequent than in older children of equivalent mental age. However, color-form responses continued to predominate over form-color responses, which prompted the author to suggest that the group may have been well-adjusted as a whole, but that emotional development in the bright child may not always keep pace with his intellectual development. However, she admitted that the number studied here was too small to make definite statistical conclusions.

An investigation dealing exclusively with feeble-minded children is Guppy's study of fifty retarded girls (45). Guppy attempted to determine whether there are Rorschach patterns distinc-

tive of feeble-minded children, and to show the relationship between these patterns and intellectual development. The subjects ranged in age from eight years to fifteen years three months, with an IQ range of forty-three to seventy. These children were more responsive to the colored cards than to the achromatic cards. The mean number of responses was 17.34. Usual details exceeded all others in location choice. Shading was rare, and only half of the group saw any movement. Guppy concluded that difference of intelligence within this range of IQ seems to have little influence on productiveness, but that this particular group tended to give fewer responses than normal children. Well over half of the responses were pure form, but sixty-four per cent were decidedly of a minus quality. Pure color exceeded form color and color form combined (seldom found even in normal children) and color naming was quite frequent. Older girls tended to see more popular concepts. Perseveration occurred at all the levels.

Negro children have been studied by Sunne (37) and Norman Kerr (28). Sunne's study was in terms of a comparison between three social-racial groups, white children, Negro children, and mountain children. Kerr's was a normative study of sixty Negro children, ages three to nine, with an average Binet IQ of 103.2. In general, he found that Negro children utilize all the ways of responding as do white children of comparable age, but not always to the same extent. He found the usual qualitative changes and increase in critical judgment. However, productivity

varied and did not show progressive increase with age. Also, detail responses were more frequent than whole responses. Animal movement exceeded human movement, animal content was greater than human content. Little use was made of shading.

Troup (13) tested twenty pairs of identical twins in sixth, seventh, and eighth grade, and retested ten of these pairs a half year later. She found that though the subjects were twins whose heritage and environment were similar, there were wide differences in personality development. Some pairs failed to show any resemblance in temperament. From this, Troup draws attention to the importance of subtle environmental influences in the molding of personality.

#### Trial Blot Studies

Marguerite Hertz (20) was probably the first to suggest the regular use of a trial blot in the administration of juvenile Rorschachs. Through her experience with adolescent subjects, she observed that the attitude of the subject to the test unduly influenced his responses to the first card.

Amusement at the novelty of the task, suspicion, shyness, fear, doubt, and superior attitudes all influenced the test results and in particular the responses to the first test card. In order to make the first card more comparable with the rest and to establish a favorable mental set at the beginning, it was decided to introduce a trial blot before passing to the regular series (20:244).

Several blots, simple in design, were made of black ink on white paper and a few were selected for use. One trial blot was used for each subject. These trial blots were obviously different from

the Rorschach blots, in that they were homemade, just ink on ordinary paper.

The other worker who favors a trial blot procedure does so for different reasons and in a different manner. Mary Ford (12) used one blot with all her subjects, young children, and devised the procedure to serve as a nonverbal orientation to the type of material which was to follow. She found that children are easily distracted and apt to tire of a task that requires sustained attention. She concluded that it was of utmost importance to get the test under way quickly, and that lengthy instructions or explanations were undesirable.

Whenever possible, demonstration rather than lengthy verbal instructions is desirable. For this reason the introduction of a trial blot is especially important when using the Rorschach Test with young children. This procedure is more effective than any verbal attempt to explain the nature of the task (12:34).

Only one other worker seems to have incorporated the use of a trial blot in the administration of the Rorschach Test to children. Guppy (45), in his unpublished study of retarded girls, followed Ford's method and included the trial blot as an aid to instruction.

In each of the above cases, however, the effect of the trial blot was assumed and was not studied experimentally, as is intended in this study.

### Discussion

The earliest age when Rorschach records are obtainable

has not been determined. Since collecting records depends upon the willingness of the subject to cooperate, his ability to concentrate on the task, and his ability to express his meanings in words (12:36), and since these abilities differ in subjects of the same chronological age, it is difficult to set any definite age as the lower age limit of the test. Bockner and Halpern (4) contend it can be given to a child as soon as he is able to talk, but they add that, practically, the test is not particularly helpful in children much younger than four years.

Most investigators stress the need of careful standardization and norms. Ford (12) suggests standardizing a simple trial blot so that pretest conditions may be similar for all subjects. Published studies, though not always comparable in population and administrative methods, agree there is an evolving pattern of responses, qualitative and quantitative, with increasing age. Most investigators claim to use an eclectic method of administration with children, but one which aims at simplicity, sincerity, and flexibility. There is also general agreement on the need for continued encouragement of younger subjects.

Certain modifications in interpretation are also evident. These are necessary because the records of children are scanty, show a large percentage of whole responses, a fact which does not seem to be related to intelligence or drive, show a large proportion of animal movement over human movement, predominance of color form and pure color over form-color responses (not found in

the normal adult record), and show the occurrence of characteristic juvenile populars. In general, children's records seem to require a different evaluation of quality as well as quantity in their responses.

Interpretation of children's records has been most extensively dealt with in European writings. One of the first works to appear in this country on the practical application of children's Rorschachs is Florence Halpern's A Clinical Approach to Children's Rorschachs (8). Her discussion deals with children two and one-half to ten years of age, and covers a variety of clinical syndromes and records of children with various forms of mental and emotional disturbances. Despite admitted questions of validation, the author considers it advisable to publish such a work as more or less an emergency measure until extensive validation and reliability studies appear. The statements are based on empirical findings from the study of many hundreds of children's Rorschach protocols, and from this the awareness that certain patterns of responses, their presence or absence, coexist with specific types of problems.

From existing literature, it is possible to discern the following broad trends and conclusions regarding Rorschach testing with children:

1. The number of responses increases with increasing age.
2. Percentage of whole responses decreases with increasing age, and details become more frequent.

Use of rare detail (rare according to adult standards) is infrequent in early childhood, but increases slightly with increasing age.

3. Pure form responses decrease, form accuracy level increases with age. The number of determinants used also rises. Human and animal movement increase rapidly, with animal movement predominating in most cases. By adulthood, human movement predominates. Inanimate movement is rare with children. Color responses are not primarily form-determined in early years. The latter type of response increases with age. Color-form and pure color responses decrease with age. Little use is made of shading before adolescence.
4. Animal per cent is high and human responses low, but on the gradual increase.
5. Sex differences are neither large nor consistent. Differences within a sex group are greater than those between sex groups.
6. Group populars occur, that is, responses given frequently by children to certain cards but not listed as popular responses according to adult standards. The frequency of adult populars increases with age, but is limited in early years by the infrequency of the determinants required to score the response as popular.
7. Informality, encouragement, and sincerity play an important role in testing children.
8. Certain modifications of interpretative principles are necessary when the Rorschach Test is applied to young children.

### Reliability Studies

Many Rorschach workers claim that the analysis of the consistency of isolated determinants is meaningless because these determinants have meaning only in relation to the other variables in each individual's record. Three methods of judging reliability have been commonly used: test-retest, split-half correlations,



and matching. Each method has limitations. The test-retest method assumes that no change has taken place over the interval between the initial test and the retest. M. Kerr (28) used this method in testing children after one year and found relatively low scores for reliability. When the correlations are arranged in order of the length of the interval between tests, there is a fairly consistent decline as the length of the interval increases. With preschool children, Swift (38) found a median correlation of .76 after two weeks, and after ten months the correlation dropped to .30.

Split-half correlations are not as meaningful because the ten blots are designed to be given together and to produce varying types of responses in their standard order. This method is particularly difficult with children because of the small number of responses given by them. The highest split-half correlations were found by Hertz (19) with 300 junior high school students. She reported a median correlation of .83.

Some contend that the only successful approach to date to determine reliability is the method of matching, which keeps the total Rorschach gestalt intact. Krugman (30) demonstrated the reliability of the scoring and the interpretation of Rorschach records in a study of twenty problem children in which comparisons of interpretations were made by experienced judges, and the response records and the scoring tabulations were matched with the interpretations. This method has its limitations also, in that it

can be applied only to small numbers and depends upon the skill of the judges used.

The problem of the method to demonstrate the reliability of the Rorschach is real and challenging. No adequate statistical procedure has been suggested as yet to handle this problem. Nevertheless, workers feel that Rorschach interpretations possess a high degree of objectivity and reliability in the hands of skilled and experienced clinicians (24:317).

#### Validation Studies

Another problem always with the Rorschach examiner pertains to the validity of the Rorschach method. No systematic, definitive validating study has yet been made on the Rorschach Test. The main problem is the difficulty of designing a study that might be treated statistically and yet would give attention to the configuration of the components. Besides validation problems inherent in the nature of the instrument, there is the difficulty of establishing valid criteria for those aspects of personality with which the test deals. A few studies have managed to throw some light on the question of Rorschach validity. These may be roughly classified into three groups: correlation studies, studies of contrasting groups, and matching techniques. The last method has yielded the most satisfactory approach, since it allows for a holistic approach. Judges compare Rorschach data, interpreted blindly from the test record alone, with a report from one who knows the patient well. These results often show striking

correspondence to the facts about the person. Hertz and Rubenstein (26) submitted a record for interpretation to Beck, Klopfer, and Hertz, and found a high degree of reliability between the interpretations, and that the interpretations appeared validly related to clinical data.

The studies that have tried to correlate single Rorschach variables with different objective measures of personality have been unsatisfactory. The problem is what to use as a criterion. Most studies have relied on paper-and-pencil personality inventories, which themselves have not been wholly successful in personality descriptions. Furthermore, these instruments may use the same labels measured by the Rorschach but these do not necessarily carry the same meaning.

Despite this handicap, a few studies have used this method and reported moderate correlations for Rorschach variables with Bernreuter scores (41) and with the Allport-Vernon Scale of Values (43). Hertz (23) working with adolescent subjects, found highly significant correlations between the Allport Ascendancy-Submission scores and Rorschach introversive-extravertive types. Intellectual factors have also been studied by correlational techniques, using intelligence tests as the outside criteria. Ford (12) found many moderate to high correlations between Rorschach variables and mental age in her study of fifty-five preschool children. Kerr (28) found only a moderate correlation with IQ. Hertz (22) found several Rorschach scores which, together, gave

a moderate correlation with IQ. Vernon (41) made blind estimates of IQ which correlated .78 with Binet IQ's.

In the method of contrasting groups, the Rorschach has been shown to differentiate between individuals of varying age, intelligence, background, school achievement, of different race or nationality, of deviated personality, and between individuals suffering from major kinds of mental disorders (24:319).

Hertz (20) advocates modifications and subsequent standardization in administration prior to attacking problems of reliability and validity. Her efforts have been particularly strong toward stimulating cooperative action which might lead to refinement in administration procedures.

The need for continued study and evaluation is recognized by most workers. Whether the Rorschach Test accomplishes all that some of its proponents claim is still a subject of controversy. For the present, however, it has become one of the most important tests in the study of personality.

## CHAPTER III

### DESIGN OF THE RESEARCH

The subjects of this investigation were seventy-two six-year-old children in the first grade of four Chicago schools, two parish schools and two public schools. In order to assemble comparatively homogeneous groups and to provide a normative sample, the following criteria were used to obtain the population from which the sample was drawn:

- a. Socio-economic status. Subjects came from one regional district representing areas of a middle class population. Most of the residents are small-home owners or apartment dwellers of moderate income.
- b. Age. Children were selected whose chronological ages at the time of the study were between six years one month and six years eleven months. With the cooperation of school authorities, arrangements were made to check school files for names and birthdates.
- c. Intelligence. Scores on the Kuhlmann-Anderson group intelligence test, given shortly before individual Rorschach testing was begun, were used as a measure for determining the middle range (IQ 85 to 115) of intelligence.
- d. Teacher's ratings. A brief checklist<sup>1</sup> of behavior symptoms for each pupil in the class was submitted

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1 See Appendix II, page 74.

to the teacher for rating, and evaluated later on the basis of a point system and the scores of the entire class.<sup>2</sup>

The resulting pupils of average intelligence, making a good adjustment, and within the proper age range, were then paired for age, intelligence, and sex.<sup>3</sup> One group was arbitrarily assigned to be the experimental or trial blot group, and the other the control group. The mean age and intelligence were computed for each group in each school, and for the total groups. The differences between means were tested for significance by using the  $t$  statistic.<sup>4</sup> This was done to check possible influence of age and intelligence factors. The results of these means and their  $t$ 's are reported in Table I (page 34). No statistically significant differences occurred and, therefore, the two groups were assumed to be relatively homogeneous in regard to age and intelligence.

Each of the two groups was comprised of thirty-six children, with an equal number of boys and girls. The mean age for both groups was almost exactly six years six months. The mean IQ for the trial blot group was 106.56, for the non-trial blot group 106.94.

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2 With the aid of judgments by a faculty advisor.

3 See Garrett (7:211) on method of equivalent groups.

4 See Garrett (7:184, 198, 204-206).

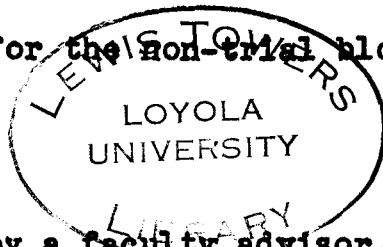


TABLE I

GROUP DIFFERENCES IN MEAN AGE IN MONTHS AND INTELLIGENCE  
OF SEVENTY-TWO CHILDREN IN THE PRESENT STUDY

School	Index	N	Mean		SD	<u>t</u>	P
			Trial blot group	Control group			
1	CA IQ	20	78.10 106.40	78.30 106.00	2.31 4.70	.19 .19	<.50 <.50
2	CA IQ	16	76.50 108.00	75.75 109.50	2.97 3.94	.50 .71	<.50 <.10
3	CA IQ	16	78.13 108.00	77.75 108.50	2.54 3.93	.30 .03	<.50 <.50
4	CA IQ	20	79.10 103.90	79.40 106.94	3.31 6.73	.20 .29	<.50 <.50
Total	CA IQ	72	78.02 106.56	77.92 106.94		.15 .29	<.50 <.50

### Description of the Test

The Rorschach Test consists of a set of ten bilaterally symmetrical ink blots, each centered on a stiff white card seven by nine and one-half inches in size. Five of the blots are achromatic, two have color combined in part, and three are all colored. The cards are numbered I through X and presented in order. The purpose is to get the subject to tell what the blots look like to him with a minimum of suggestion from the examiner. The value of the method lies in the unstructured nature of these blots on which a subject tells what he sees and projects his own meanings. His responses are regarded as a projection of his personality and as such a valid sampling of his characteristic reactions to his environment. Therefore, it is said to reflect the individual's approach to situations and everyday problems (25:10).

### Test Procedure

Test conditions for the Rorschach method are similar to those of any test, in that the subject should be comfortably seated and at ease with the examiner. The card is handed to the subject in an upright position. He is permitted to turn the card in any way if he chooses, but the idea of doing so must not be suggested by the examiner. The subject is given as much time as is needed for each card. The examiner records the time elapsing between the presentation of the card and the first response (reaction time), and the time required for the full responses to a card. A verbatim report of everything the subject says is re-



corded by the examiner, including not only the descriptive responses but also comments, expressions, and behavior. After the subject has seen all the cards, the usual procedure is to conduct what is called the inquiry. This is done to determine what part of the blot was used in the concepts and what determinants were used. After the test and inquiry are over, most examiners ask about which card was liked best and which least, and why. Klopfer (9) conducts a "testing the limits" phase, which is somewhat of a second inquiry to provoke reactions in directions avoided or not clarified by the subject in his spontaneous reactions (9:51).

Except for the use of Mary Ford's trial blot (photographed and mounted to resemble the Rorschach plates<sup>5</sup>) with the experimental group, the procedure was identical with both groups. After the preliminary screening was completed, each child was taken individually to a private room and given the Rorschach Test. All the children had been acquainted with the examiner through the group intelligence testing. In order that good rapport would be established, however, a few minutes were devoted to casual conversation on the way to the examining room and before the test was begun.

The technique for administering the Rorschach was modified according to the suggestions of previous investigators. First of all, simplified instructions were adopted from various

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<sup>5</sup> See Appendix III, page 76.

workers (12, 1, 39, 2) and, secondly, the inquiry was conducted immediately after each card, somewhat after the method of Swift (39) and Ford (12), who found that a second presentation of the card was not always advantageous or appealing to the child. Lastly, the testing of the limits phase was omitted. This was done to insure that the responses were not influenced by communication between children outside of the testing situation.

The child was seated at a table to the left of the examiner and in a position that permitted both the child and the examiner to have full view of the card in the child's hand. The only other material placed on the table top were the other Rorschach cards, piled face down to the right of the examiner, the sheets for the recording of responses, and location charts beneath these. A stopwatch was held unobtrusively in the examiner's left hand.

The child was presented with the first card (or trial blot in the experimental group) with the statement "What could this be?" If the child hesitated for a period of ten seconds or more, he was asked again "What does it look like to you?" Those who stopped with one response were encouraged (only on cards I and II or on the trial blot and card I) with "Anything else? Can you give me some others?" or "Can you give me some more?" Refusals were answered with "Most children see something. I want to know what this might look like to you." When responses ceased, the examiner said "Is that all? When you finish give it to me."

The inquiry was made at this point with "I want to see just what you saw. Where is the \_\_\_\_?" or "Put your finger on the \_\_\_\_." According to need, and to discover what determinants were used, the following questions were asked: "Tell me more about the \_\_\_\_." "Tell me about the \_\_\_\_." "What made you think of a \_\_\_\_?" Probably the most fruitful questions were "How could you tell it was a \_\_\_\_?" or "What reminded you of a \_\_\_\_?" Direct questions asked of the examiner, such as "Does it look like a \_\_\_\_?" were referred back to the child with "Yes, it could be a \_\_\_\_." No time limit was imposed nor was rotation forbidden. When a child asked permission to rotate the card, he was told he might do so if he liked. At times, when it was not clear whether only a detail of a human or animal was seen, the child was asked "Do you see just the (doggie's) (head)?" Timing was in terms of reaction time to each card and the time devoted to the card before the inquiry was begun.

### Scoring

Rorschach described a variety of scoring categories, along the principal dimensions of area, determinants, and popularity. There have been revisions and modifications of scoring, but the main elements remain the same. Klopfer's (9) system is used throughout the present study. Scoring is accomplished through the use of symbols which are, in many cases, abbreviations of what the subject has used, and is a means of quantifying the subject's productions.

Each response is scored for three factors: location, determinant, and content. Locations are scored according to the area of the blot W (whole), D (commonly perceived details of the blot), and Dd (unusual details). The principal determinants are form, color, movement, and shading. The elements in the blot which led the subject to see what he did are identified by careful supplementary questioning in the inquiry period of the test. Responses which are dependent upon the shape of the blot are called form responses (F). Where two or more determinants are used, they are combined, such as where form and color are used together (FC). Human or human-like movement is scored M, animal movement is scored FM. Shading which is used to differentiate the texture of the blot is scored c (or combinations of Fc or cF depending on whether the form affects the response), and shading which implies a third dimension is scored K (or FK or KF). Shading scored k implies a hazy quality differentiated on the blot. The main content categories are A (whole animals), Ad (parts of animals), H (humans), Hd (parts of humans), Obj (man-made objects), Pl (plants), and N (nature). Other content categories are scored by a convenient abbreviation, but most responses fall in the above categories.

For adults, some responses are scored popular (P) or original (O) on a statistical basis, that is, the number of times they occur in a hundred records. According to some authorities, a response occurring once in every six records constitutes a pop-

ular response. Others say it must occur in one out of three records to be scored a popular response. An original response is one that occurs once in every hundred records.

In addition to the above procedure, certain relationships between the categories are studied through the calculation of percentages and ratios.

After the record has been scored, an interpretation is made on the basis of the record as a whole. The results are not simply the product of the test, but of the interpreter who reads and organizes them. Scores are only a step toward interpretation. Various scores have different meanings according to the setting in which they appear.

For the purposes of this study, interpretation will not be attempted. Of main concern is the quantitative distribution of responses and statistical comparisons made between the two groups comprising the study, and between this study and comparable studies. It is recognized that the interrelationships of the various factors are more important than their frequencies, and that, taken out of their context, the various determinants lose much of their meaning. However, it is felt that the global approach of the test has little to lose and much to gain from investigations of this nature. Some quantification is necessary in order to establish normative data and in order to compare results between different investigators.

## CHAPTER IV

### PRESENTATION AND ANALYSIS OF THE RESULTS

The responses of each of the two groups of thirty-six six-year-old children of this sample were analyzed in terms of the means and percentages of the various scoring categories. Frequencies and percentages of major responses were computed for individual records, and then means and standard deviations were computed for the groups. To find what statistical differences exist between the groups, chi square values, incorporating the Yates correction (10:207), were calculated for the various Rorschach categories for the experimental (trial blot) group and the control (non-trial blot) group.

Statistical treatment of the data is presented in Tables II and III<sup>1</sup> in terms of mean, standard deviation, and chi square. In this respect, it is important to note that chi square values do not apply to the mean differences between the groups. Rather, the significance of a difference was tested by making a cut at some suitable score in the distribution and comparing the number of cases in each group which exceeded a certain score.

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1 Pages 42-44.

TABLE II

GROUP DIFFERENCES IN THE MAJOR CATEGORIES  
OF RORSCHACH RESPONSES

Category	Experimental group		Control group		Chi square*
	Mean	SD	Mean	SD	
CA	6-6.02	2.62	6-5.92	3.06	
IQ	106.56	5.28	106.94	5.96	
R	16.94	9.20	14.18	7.28	1.43
Total time	9.62'	9.94	10.06'	4.46	.33
RT (chr)	19.40"	21.90	26.30"	21.80	2.86
RT (ach)	16.80"	14.00	21.30"	16.60	1.02
W	7.78	2.50	7.71	3.96	.08
W%	55.50	25.60	58.93	21.10	.23
D	5.52	5.34	4.84	4.36	.91
d	1.00	1.78	.50	1.04	.56
D+d%	34.90	22.10	30.80	19.40	.50
Dd	1.78	3.54	1.22	1.36	.00
S	.36	1.06	.44	.29	1.23
Dd,S%	9.50	13.70	9.70	10.05	.34
F	11.94	7.40	10.18	5.60	.89
F%	68.80	13.40	71.30	19.60	.80
F+%	91.10	8.30	89.90	10.90	.00
M	.31	.73	.14	.54	1.05
FM	.89	1.17	1.06	1.22	.29
m	.36	.82	.47	.90	.29
FC	.75	.93	.67	.94	.51
CF	.86	1.00	.61	.91	.06
C	.44	.84	.22	.48	.75
C'	.86	1.07	1.22	2.16	2.08
c	.25	.55	.14	.35	.10
K	.31	.73	.28	.50	.00
(continued)					

TABLE II (continued)

GROUP DIFFERENCES IN THE MAJOR CATEGORIES  
OF RORSCHACH RESPONSES

Category	Experimental group		Control group		Chi square*
	Mean	SD	Mean	SD	
A	7.34	3.44	7.34	4.62	.06
A%	45.20	15.60	53.40	22.10	2.72
H	1.69	2.09	1.58	1.93	.00
H%	9.10	15.60	8.30	13.80	.23
P	2.36	1.16	2.11	1.05	.00
P%	15.80	9.30	16.90	10.30	.00
SumC	2.06	1.68	1.28	1.48	3.06
8,9,10%	32.40	13.50	31.10	12.30	1.02
Rejections	.67	1.33	1.33	1.88	2.22
W (3x) > M					.00

\* With one degree of freedom, chi square must reach 3.84 to be significant at the .05 level.



TABLE III

GROUP DIFFERENCES IN THE RATIOS AND IN THE PERCENTAGE OF  
RESPONSES TO THE LAST THREE RORSCHACH CARDS

Category	Per cent of subjects			Chi square
	Experimental group	Control group	Groups merged	
$H + A > H_d + A_d$	80.6	86.1	83.3	.10
$H + A < H_d + A_d$	16.7	8.3	12.5	.51
$H + A = H_d + A_d$	2.8	5.6	4.2	.00
$M < \Sigma C$	66.7	55.6	61.1	.53
$M > \Sigma C$	8.3	2.8	5.6	.26
$M = \Sigma C$	2.8	0.0	1.4	.00
$M=0, \Sigma C=0$	22.2	41.7	31.9	2.30
$FMm < FccC'$	38.9	38.9	38.9	.00
$FMm > FccC'$	38.9	22.2	30.6	1.64
$FMm = FccC'$	8.3	5.6	6.9	.00
$FMm=0, FccC'=0$	13.9	33.3	23.6	2.77
$8,9,10\% > 40$	22.2	19.4	20.8	.00
$8,9,10\% 30-40$	52.8	41.7	47.2	.50
$8,9,10\% < 30$	25.0	38.9	31.9	1.02

The groups were dichotomized on the basis of findings in the literature on children or on the basis of cuts toward the center of the distribution.

An examination of the above tables shows that no statistically significant differences occur between the two groups, either in the variables themselves or in certain ratios. Furthermore, there seem to be no significant trends which suggest that the trial blot enriches or, on the contrary, depresses the group patterns of these children. From a quantitative point of view, therefore, the subgroups do not differ and the total group is homogeneous. It can be assumed that the use of the trial blot with this age group does not influence the responses and is, consequently, of little value and an unnecessary addition to the test procedure. Qualitative impressions gathered from observation of the children support this conclusions. A friendly tone and "un-test-like" atmosphere, brief instructions and rapid pace in the test, seemed to carry more importance with these children than the inclusion of the trial blot, which prolonged the time required for attention.

Since no differences of any consequence occurred, and since the two groups were selected according to the same normative criteria, the groups were assumed to be homogeneous and were merged to serve as a normative group of seventy-two average children with a mean age of six years six months and a mean IQ of 106.75.

### Comparison With Other Studies

Although most previous studies are not directly comparable to this investigation in terms of the population studied, in procedures for administration or scoring, or in manner of presenting data, it may be of interest to bring together available Rorschach material on the six-year-old child. These data are presented in Table IV<sup>2</sup> in terms of the total means of this study and the means of three noted studies which have dealt with the six-year-old (1, 12, and 31, 32, 47). An attempt is also made in the same table to show the relationship of the results of these studies to norms reported in adult studies. Because the scoring categories are the same as this study, Klopfer's statements concerning adult norms have been extracted from The Rorschach Technique (9) and used in Table IV as a representative of adult expectancy on the Rorschach Test.

Total Number of Responses (R). The seventy-two subjects of this study gave a total of 1147 responses to the ten Rorschach cards. The range of responses was from four to forty with a total mean of 15.56. Except for Ford's study, the mean number of responses appears consistently to be fifteen to sixteen for the six year level. The difference in Ford's study is to be expected in view of the fact that her subjects were very superior in intelligence. It will be recalled that Ford's group consisted

TABLE IV

COMPARISON WITH STUDIES OF LEDWITH, AMES, AND FORD,  
AND WITH KLOPFER'S NORMAL ADULT PERSONALITY

Category	Mean for six-year-olds				Klopfers (adult)
	Didenko (N 72)	Ledwith (N 75)	Ames (N 50)	Ford (N 23)	
R	15.56	15.70	15.78	24.40	20 to 40
W	7.74		7.58	5.80	
W%	57.00	43.20	51.00	25.20	20 to 30
D+d	5.93		5.74	15.00	
D+d%	33.00	54.60	34.00	60.50	45 to 55
Dd	1.50		1.56	2.10	
S	.40		.48		
Dd, S%	10.00	2.20	15.00	14.30	less than 10
M	.23	1.10	1.02	1.20	3 or more
FM	.98	2.90	1.62	2.40	less than M
m	.42	.30	.44 <sup>a</sup>	.10	less than 3
K	.30	.80		.70	less than 3
k	.02	.00			
F	11.06	6.80		17.90	
F%	70.05	43.50	60.00	73.40	20 to 50
F+%	90.50		81.00	66.40	85 to 100
c	.20	.20			cC' less than
C'	1.04	.60	<sup>b</sup>		2 (FC+CF+C)
FC	.71	1.20	.40	.70	more than CF+C
CF	.73	1.00	1.48	1.00	less than FC
C	.33	.80	.32	.50	rare
ΣC	1.67	2.80	2.16	2.10	
A	7.34		7.50	12.60	
A%	49.30	44.60	48.00	54.10	20 to 35
H	1.64		1.70	3.40	
H%	12.35		11.00	13.20	
P	2.24	3.20	3.60 <sup>c</sup>	4.50	5 out of the 10
P%	16.35		23.00	20.00	
Rejections	1.00		.54	.00	less than 4

a Ames reports a combined shading mean of .68.

b Ames reports a mean of .30 for her category "Clob."

c Those given by one out of every six children for  
this age group.

of only twenty-three children with a reported IQ mean of 124.35, with no IQ's below 90. Half of Ames' group of fifty children were superior. Ford's higher productivity is also in keeping with her finding that the mean number of responses tends to become larger with increases either in mental age or chronological age.

Rejection of one or more of the ten cards occurred in 37.5 per cent of the records, with a mean of one per record. This figure greatly exceeds the number reported by the other investigators and contradicts the suggestion that rejections disappear after the preschool period. In the present investigation, all the cards were rejected at least once, but card II was rejected most frequently and card V least frequently.

#### Location Categories

At this age level, a manner of approach largely in terms of whole responses is the characteristic one. All the children gave at least one whole (W) response. Over half of the responses (57.20 per cent) were included in this category. The next highest in frequency is the large detail (D) used by eighty-five per cent of the children, with an average percentage of 32.85 per record. The third most frequently used location category is unusual detail (Dd). Small usual detail (d) and white space (S) are used least, with less than one per child. Since the use of wholes is but slightly greater in this study than in the studies of Ames and Ledwith, the significantly lower incidence of whole responses in Ford's group would tend to indicate that children

with advanced mental maturity tend to use a smaller percentage of whole responses. The predominance of detail over whole responses usually does not appear until the eight year level.

#### Determinants

Form (F). The largest determinant category used in all four studies is form. However, in the present study, it is used to a much greater extent. The range was twenty-five per cent to one hundred per cent, with a mean of 70.05 per cent. The still higher percentage reported by Ford seems to contradict the mature tendencies of her superior group.

Accuracy of form (F+) for the responses of these groups was scored with leniency, as it was felt that form-level rating for children's responses should be based on a wider knowledge of what may be expected at this age level. Furthermore, the frequent responses of anatomical or arbitrary objects from a child with little experience cannot be judged by strict canons of accuracy. The lack of limits which can be placed on many such responses contributes to the difficulty in scoring form accuracy.

Movement. The children of the present sample gave an average of .23 human movement responses (M), .98 animal movement (FM), and .43 inanimate movement (m). All four studies agree on the predominance of animal movement over human movement. However, the number of inanimate movement responses was more frequent in this study. These usually consisted of such responses as explosions, water splashing, blood dripping, and the like. Human and

animal movement was seldom very active or aggressive, but was confined to minor action and mild activity.

Color. Almost half of the group produced both form-color (FC) and color-form (CF) responses. Pure color (C) was given by less than one-fourth of the group. These findings follow the trends of the other studies, although in those reports the total amount of color employed is greater. Whereas in the present study color responses constitute the second largest determinant, in the other studies this order is reversed. Only Ledwith's study neglects to show the usual predominance of color-form over form-color responses; all the studies show an excess of color-form plus pure color over form-color responses.

Shading. The shading responses of this group are summarized in three categories: those which differentiate texture (c); those which project three-dimensional percepts onto the card (K); and those which imply a hazy quality (k). Only one child gave a response in the latter category. Other studies find this absent at this age level or do not bother to treat it statistically. Contrary to findings in this study, most studies find that texture responses lead all shading responses, although the total use of shading is always small. Texture responses were given by seventeen per cent of this group, while twenty-four per cent of the children gave three-dimensional responses. A great many of these responses were clouds and smoke, and rarely implied distance or perspective. Ames combines her shading responses in the cat-

egory F(C) and reports a total of .68 per child, with texture responses leading.

A considerable discrepancy between reports is met in the number of responses in the category C' or achromatic color. Many studies neglect to comment on this category. It occurred rather frequently in the present investigation, about one per child, with over forty per cent of the group giving such a response. Ames reports a mean of .30 for her category "Clob," which is similar to Klopfer's C' category. Besides the use of black as color, she includes here those responses based on a diffuse impression of the blot stemming from its darkness and assuming threatening qualities. This type of response was also met in the present study, probably more frequently than the use of black as color. Following Klopfer's system of scoring, however, these responses were rated as C' symbolism responses and later reported under the category C'.

#### Content Categories

Animal content is most frequently given by these children. All of the subjects gave from fourteen to one hundred per cent A responses. Human beings (H) comprised 12.35 per cent and were given by nearly two-thirds of the group. The mean frequencies are in close agreement with the reports of Ames and Ledwith. Developmental studies indicate a tendency toward increasing use of human concepts and decreasing number of animal concepts, but Ford's report of superior children contradicts this trend. Most



average children at this age level give at least half of their responses in animal content. Next in order of frequency occurred objects, animal detail, plants, nature, human details, and anatomy.

### Popular Responses

The popular responses, scored according to Klopfer's norms for adults (9:179-181), comprised 16.35 per cent of the responses, with a mean of over two per child. The frequency of responses to each of Klopfer's ten populars is given in Table V along with the per cent of subjects who responded to each popular concept.

TABLE V  
FREQUENCY OF POPULAR RESPONSES

Card number	Number of responses	Per cent responding
I	26	36.1
II	2	2.8
III (men)	5	6.9
III (bow)	32	44.4
V	59	81.9
VI	1	1.4
VIII	17	23.6
X (spider)	16	22.2
X (animal head)	4	5.6
X (worm)	0	0.0

- As others have found, the inability to see movement and shading prevents the children from seeing more popular responses. This difficulty occurred most frequently on card VIII and to a

lesser degree on card VI and card III.

Ledwith's children saw a greater number of Klopfer's popular responses. Ames' mean of 3.60 popular responses is not comparable to the other studies, since her responses were scored on the basis of each age group and not in terms of adult norms. Many workers have suggested that group populars may be established for special populations, as Ames has done, by using a criterion of frequency. Rorschach originally suggested that a response be classified as popular if it occurred with a frequency of one in three records; other workers have proposed one in six records (the criterion used by Ames). Certain responses were noted as occurring frequently in this study, but these were not tabulated as such. However, the possibility of establishing populars for particular age groups seems desirable.

#### Timing

The children devoted an average of almost ten minutes in responding to the ten cards. Ames, the only worker to quote total time figures, found an average of almost nine minutes. In the present study, it was found that this time was largely made up of reaction time or time between responses rather than in giving elaborated responses. Reaction times for children between six and twelve are seldom reported. The reaction time of the present group (22.85 seconds for the colored cards, 19.10 seconds for the non-colored cards) is considerably longer than the average of 10.6 seconds reported by Ford (12.43) for her six year group.

Here again, this may be a function of maturity, but this seems to be contraindicated by the report of 11.0 seconds on five-year-olds in Meyer and Thompson (34).

#### Card Preference

As Ames found, the majority of children prefer Card X because of its color. Conversely, the most disliked cards are most frequently disliked because of their blackness. Some children choose card X as their favorite despite having rejected it during the performance. Some like cards because of the content perceived ("flowers on it"), some because of the ease with which they could respond ("looked easy to me," "easiest"), and others could not explain their preference ("I just like it"). Many children chose all the colored cards or the three completely colored cards as their favorites and disliked the rest ("I didn't like the black ones only I like these" pointing to cards VIII, IX, and X). Surveying the records as a whole, card X was liked most by the greatest number of children, and card IV was most frequently pointed out as the least liked. All cards were chosen as best and least liked twice or more except card IV. No child picked this card as the one he liked best.

#### Experience Balance

The results for the M to Sum C ratio<sup>3</sup> indicate that these children fall predominantly into two categories: the extra-

tensive and cōartative. This trend is not completely supported in the ratio FMm to FccC', since a similar number of children fall in either the extratensive or introversial category. However, a large number again have no responses on either side. On the percentage of responses to the last three cards, almost half of the children fall into the ambiequal category (thirty to forty per cent of their responses on the last three cards). Introversial tendencies appear next (responses less than thirty per cent) and extratensive tendencies last (responses over forty per cent).

#### Qualitative Impressions

One of the most outstanding characteristics noted in collecting the records of these children was their frequent inability to explain spontaneously why they were reminded of a particular concept. Considerable prodding was necessary to clarify their responses. Furthermore, these children often misname objects and animals or are unable to remember proper labels. Often, they are conscious of the inadequacy of their descriptions and admit being "not very good" at such a task. Most children make a sincere effort to explain themselves. The majority of children at this age say little during the examination. A few are extremely talkative and relate numerous incidents which come to mind while examining the cards. Some are critical of the cards ("Gee, these are sloppy" or "Did you make these silly things?"). Many are noticeably uncomfortable when they cannot recall the correct name of an object, remembering that it is "something that flies,"

and discussing where and how it was seen, but not being able to name it.

Most children do not volunteer an inquiry. That is, after being asked about each response, they are frequently limited to "it looks like it" or "I just knew it." Their manner is uninhibited. No child was suspicious nor asked the purpose of the visit. On the contrary, it was amusing to observe their willingness and compliant attitude throughout the school contacts.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

Although the Rorschach Test has been used with children for a number of years, this use has been handicapped by the lack of adequate norms on which to base interpretation. Most studies have been quite limited in application, since they were done either on rather select groups of high intelligence and superior socio-economic status, or they dealt with restricted aspects of the test. Certain recent studies have used improved sampling methods and have refined study to include narrower age intervals.

Besides the need for norms, there is the question of what type of administration to use with young subjects. Most workers have found that adult procedures are inadequate and have, as a result, used some type of modified approach with children. The present study has attempted to evaluate one of these administrative procedures. It is a method suggested by Marguerite Hertz and Mary Ford, wherein a trial or practice blot is introduced before the ten standard cards are presented. Hertz uses a trial blot to offset test reactions which might affect responses to the first card. Ford recommends the trial procedure as a nonverbal demonstration of the task that follows.

In order to test the effect of the trial blot procedure on children, it was necessary to test two groups, one in which the trial blot was incorporated and one in which it was not used. The results of the groups were then compared and tested for the significance of differences between them. The study was limited to one age level, six-year-olds in this instance, since changes in Rorschach patterns can be expected because of maturational factors in a period of more than one year.

A second purpose of the investigation was to use the results of the control group to add to the already existing normative data on six-year-olds. If there were no statistical differences between the two groups, they would be merged to provide a larger sample. This second aim necessitated certain criteria by which the children would be selected. To exclude deviants from the group, the children were screened for age, intelligence, socio-economic status, and behavior. Four schools were used, two parish schools and two public schools, which represented middle-class areas of the city. Only children six years one month to six years eleven months were included. Kuhlmann-Anderson group intelligence tests were administered and used to screen for the middle range of intelligence, IQ 85 to 115. Ratings by teachers were used to exclude emotionally disturbed children.

The resulting seventy-two children were then paired for sex, age, and intelligence, and assigned to be part of the experimental group or part of the control group. The mean age of both

groups was approximately six years six months. The mean IQ for the experimental group was 106.56, for the control group 106.94. To check any possible influence of age and intelligence factors, the means of the two groups were tested for significance of differences by use of the  $t$  statistic.

Administration procedures followed certain modifications recommended by previous workers. Simplified instructions were adopted from those of other studies, and the inquiry was conducted after each card. Procedure was identical with both groups except for the use of Mary Ford's trial blot with the experimental group.

The Klopfer method of scoring the test was used. The number and percentage of main responses were computed for individual records. Means and standard deviations were then computed for the groups. Chi square values, incorporating the Yates correction, were calculated for the major categories and ratios to test the differences between the two groups. The results showed no statistically significant differences between the two groups. Therefore, it was concluded that a trial blot method such as this is an unnecessary procedure for this age level.

The groups were considered homogeneous and merged for comparisons with the studies of Ledwith, Ames, and Ford. At least half of Ames' children were of superior intelligence; Ford's group was decidedly superior; Ledwith's subgroup of average children is the most comparable study in terms of sampling methods. Close



agreement was met between the results of the present study and those of Ledwith and Ames, particularly in regard to certain trends which are descriptive of the six-year-old. Ford's group rather consistently shows trends which are characteristic of more mature children.

Perhaps the most interesting of the observations is the value of an immediate inquiry. This particular procedure enabled the examiner to solve a number of difficulties met in testing young children. In the main, it helped to take advantage of the child's momentary interest, which declined considerably toward the end of the test. Most children are eager to cooperate, but in a short time they become restless and prefer to switch to another type of task.

The findings of the present investigation may not be universally applicable for this age level. However, the following points, based on the average measures of this study, will probably prove useful with the normal six-year-old.

1. A number of responses near fifteen or sixteen.
2. A manner of approach largely in terms of whole responses. About half of the record is devoted to whole responses. Usual details comprise about one-third of the record. Almost all of the children employ usual detail to some extent. One in two children discover unusual detail, but to a small extent. One in four children utilize white space with an average of less than one response per child.
3. Form is by far the most frequently used determinant, and constitutes from forty to seventy-five per cent of the record. Form quality is difficult to ascertain, since the children of this age level, with

their limited experience, frequently give responses of an arbitrary nature. Furthermore, they are often unable to name concepts correctly or describe them in detail, and may give the impression of using poor form.

4. At least one in four children gives human movement responses, but this category is used sparsely when it does appear. Except for one of the shading categories, it is the least used category. Over half the children give animal movement responses. This response averages less than one per record. Inanimate movement is given by nearly one-fourth of the children, and is usually given without form. Explosions, water splashing, blood dripping are typical responses with this type of movement.
5. One to two color responses can be expected per record. Half of the children give form-color or color-form responses, but less than one-fourth give pure color responses. More than a third of the children give achromatic color responses.
6. Texture responses are given by one in six children, but to very little extent. Three-dimensional shading responses usually consist of smoke or clouds, but less than one-fourth of the children use this determinant. Responses implying a hazy quality are practically never given.
7. Half of the responses of this age group can be expected to be animals or parts of animals. Humans are seen by two in three children, but these average less than ten per cent of the record.
8. These children are able to see at least two of Klopfer's ten popular responses for adults. These usually occur on card V or on card III (bow). The inability to use movement prevented children from seeing the popular responses on card III (men) and card VIII.
9. Extratensive-introversial tendencies are not consistent in the group nor within an individual record, primarily because the children give few of the type of responses included in the ratios which measure these tendencies.
10. Total administration time falls close to one-half

hour. The children actually hold the cards for a total of about ten minutes, and may be expected to respond very slowly to each card.

#### Suggestions for Future Research

1. A study of the Rorschach patterns of problem children at the six-year level.
2. A study of sex differences in the Rorschach patterns of six-year-olds.
3. An experimental study of the effect of an immediate inquiry versus the orthodox method of conducting the inquiry in a second presentation of the cards.
4. An experimental study where the examiner would give two or three typical responses to a preliminary trial blot.

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# APPENDIX I

## SAMPLE RECORD

Number 3    Boy    CA 6-5    IQ 109

Response	Inquiry	Scoring			
Card I					
R.T. 5"					
1. A wolf mask or something.	A wolf nose. Little bit like eyes (S).	W,S	F	Mask	
28"	Ears.				
Card II					
R.T. 6"					
1. This looks a little bit like a rocket ship top (sigh). This looks like a rocket ship's taken off.	Cause a rocket ship has fire when it shoots up. Because fire is red. Body, wings (S).	dr,S	Fm C	Obj Fire	
54"					
Card III					
R.T. 4"					
1. Two little men pulling on some trees.	Round head, nose, neck, body, hands, and then legs. A tree looks like that. Little trees in the ground.	W	M	H Pl	P
2. That looks like a little bow tie.	This is a bow tie because I know it.	D	F	Obj	P
31"					
Card IV					
R.T. 18"					
Wow!					
1. Those look like big feet.	Feet are round like that.	D	F	Hd	

## Response

## Inquiry

## Scoring

2. That looks like a rocket ship body, I know that. The rest of it I don't know.  
35"

A rocket ship body is like that when it's on the ground without no fire coming out.

D F Obj

## Card V

R.T. 21"  
(sigh)

1. This looks like a little, looks a little like jet wings.

Some jets have wings bent back.

W F Obj

2. Butterfly or beetle bug.  
40"

Those things that stick up on a beetle bug. Feet. Alive. Otherwise would be laying on the ground instead of flying.

W F A P  
FM

## Card VI

R.T. 15"

1. I think that looks like an Indian post. You know what they have with all carvings on it. The rest of it I don't know.  
27"

Looks like it's got eyes and a nose.

D Fc Obj

## Card VII

R.T. 5"

1. These look like puppy dogs.

Tail, eyes, ears.

W F A

2. A little house.  
17"

Window, and that looks like smoke. Because it has black. Those are trees. Look like trees.

D F Arch  
KF Smoke  
Pl

## Card VIII

R.T. 7"

1. These look like lions to me.

A lion has four feet and a head.

D F A →P

Response	Inquiry		Scoring		
2. This looks like a rose. 20"	Because I know what a rose looks like. Roses have pretty colors.	D	FC	Pl	
Card IX					
R.T. 5"					
1. Green leaves.	Cause they're green.	D	CF	Pl	
2. Witches.	Witches have hats like that.	D	F	(H)	
3. Pink flower. 50"		D	CF	Pl	
Card X					
R.T. 3"					
1. Some kind of stick.	Straight down.	D	F	Obj	
2. Spiders.	How many legs.	D	F	A	P
3. Cow's head. 53"	Eyes, ears, mouth looks like a cow's head.	D	F	Ad	

Best III - "I could figure out all that so easy."  
 Least VIII - "Couldn't get anything done on it."

## SAMPLE RECORD

Number 61 Boy CA 6-8 IQ 104

Card I					
R.T. 30"					
Is it an animal?					
1. A big robin. A mother robin, teaching its baby to fly. 63"	Well, these here look sort of like wings, and those are the things what hang, and here could be the feet. Little beak here.	W	FM	A	P

Card II					
Oh!					
R.T. 22"					
1. Right here it looks pretty good	With hands right around them. I could	d	F	Obj Hd	

Response	Inquiry	Scoring		
2. Could be a man with red socks splashing in the water.	I could see some skin here. I could see that bumping out and everything.	D	M FC	H Water
3. And there's fire up above, smoke I mean, so you can't see him. 1'40"	There's smoke coming out of here. Flames. This here is sort of reddish orange. Smoke comes out of fire. It's dark just like smoke.	W	CF KF mF C'F	Fire Smoke

## Card III

Ooh!

I don't know what this is anyway.

R.T. 8"

1. If that was together would look like a chick.

Toes like a chick, head, and there's his point (beak). Stomach, leg.

W F A

2. That looks like fire, too.

Right all along here. Well, it's orangee, red, looks like fire.

dr C Fire

Oh,

3. A tree, looks like branches, this branch is falling off. These leaves are kinda orange. Not on there. Falling down I think.  
1'10"

These leaves are falling down. Looks like a branch and right here. Well, they have points like branches and round like branches and everything, except some branches don't have such sharp points.

W Fm Pl  
FC

## Card IV

Eeeks!

R.T. 10"

1. These here look like big, you know, those that have big noses and teeth, and other stuff.

I don't know, but it's some kind of an animal. Just part of him. That's how big a feet they have.

D F Ad

2. Could be a pump on both sides and

Like right here just pump that.

D F Obj

## Response

## Inquiry

## Scoring

all the things where  
the water would come  
out.

3. These, could look  
like a shoe with them  
shoe strings. How  
many papers do you  
have to fill out?  
1'55"

A little bit untied.  
Looks like a little  
bit like a sole.

D F Obj

## Card V

R.T. 5"

1. Oh, this looks  
like a butterfly, I  
could tell that right  
away.  
18"

His head could be  
there. There's his  
antelopes, you know  
those antelopes they  
have.  
Looks like a bit like  
he's alive, and he's  
flying.

W F A P  
FM

## Card VI

Eeeks!

R.T. 15"

1. Could be an ant.  
Two legs starting to  
come out. You think  
so?

These here two legs  
and these here grow-  
ing. And it looks like  
an ant's face (bel-  
ches). Sometimes ants  
grow things on the  
sides.

W F A

2. Right up to there  
could be a bird. I  
could see his whis-  
kers at least. I  
can see I have four  
more to do. This one  
is really a hard one.  
50"

I could see his eyes  
and beak and wings  
and tail, everything  
like that.

D F A

## Card VII

Ug! . . . I can't tell  
what this is.  
1'30"

Rejected

## Response

## Inquiry

## Scoring

## Card VIII

R.T. 6"

1. It could be a colored frosting cake with all the colors mixed in.

(names colors) Only if rounder.

W

CF

Fd

2. Down there looks like a rubber band.  
44"

Then a stick here (illustrated sling-shot)

D

F

Obj

## Card IX

R.T. 10"

1. This could be a cake, too, if it was a little rounder. A frosted cake, a colored cake.

Well, it has frosting like a cake. Just write down the same thing I had over there.

W

CF

Fd

2. A little stick there.  
59"

There's a straight line down, pretty even.

D

F

Obj

## Card X

Finally, I'm done!

R.T. 7"

1. Right there looks like a ukelele tune. That's all I could think of.

Like one of them notes.

D

F

Grace-note

2. And right over there could be a pair of pliers.  
59"

See, if just open 'em. It has two things there like a pliers and a dot like a screw and an opening.

D

F

Obj

Best X - "real bright colors what I like"

Least I - "It has such a dark color, and too much splatter all over and too many holes."

**APPENDIX II**

**BEHAVIOR SYMPTOMS CHECKLIST**

## BEHAVIOR SYMPTOMS

If any of the following items are applicable to this child, indicate with a number 1 if it is a mild problem, 2 if moderate, and 3 if severe. Leave blank or mark 0 if an area shows no difficulty.

\_\_\_\_\_ Sensitiveness

\_\_\_\_\_ Tendency to worry

\_\_\_\_\_ Depressed attitude

\_\_\_\_\_ Daydreaming

\_\_\_\_\_ Shyness, timidity

\_\_\_\_\_ Seclusiveness

\_\_\_\_\_ Failure to adjust with other  
children

\_\_\_\_\_ Unmanageable, defiant

\_\_\_\_\_ Fighting, bullying

\_\_\_\_\_ Stealing

\_\_\_\_\_ Truancy

\_\_\_\_\_ Acts of violence

Any unusual behavior not included above that should be noted: \_\_\_\_\_

Is this child's behavior generally acceptable to ordinary school standards? Yes No (circle)

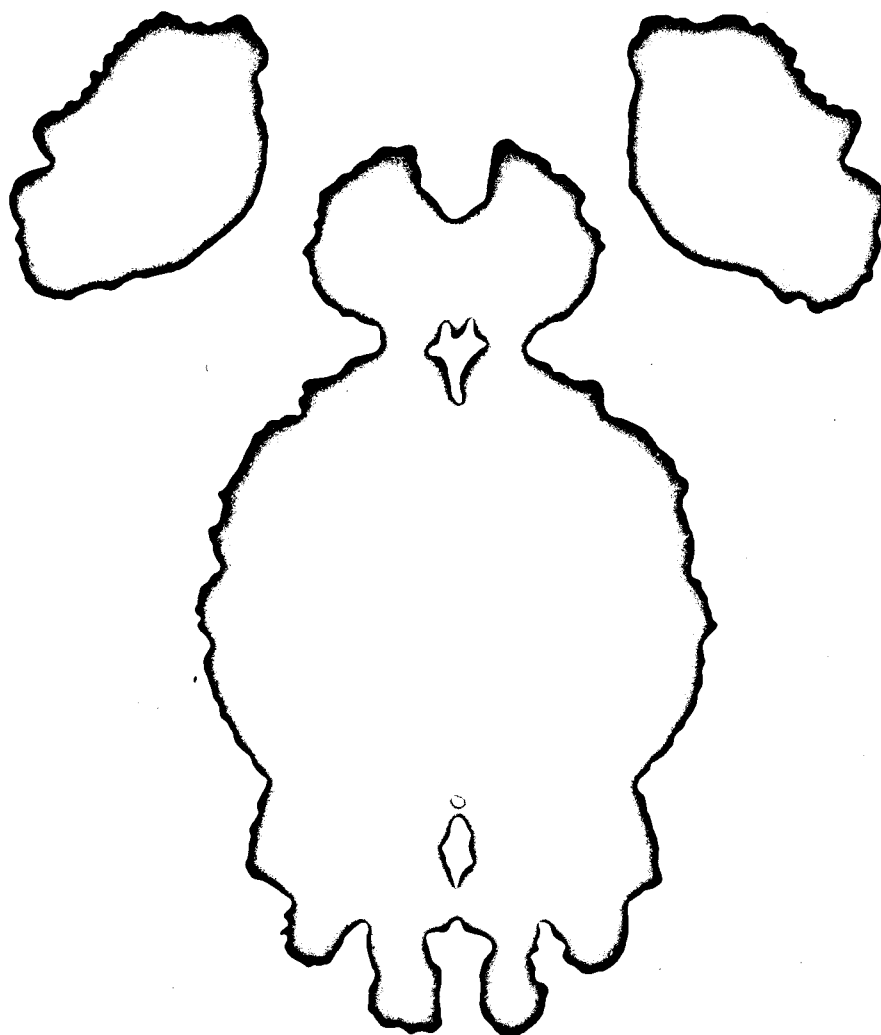
From your experience with this child, is he so markedly aggressive as to constitute serious behavior problems, Yes No (circle)

or so markedly withdrawn as to occasion serious concern to teachers? Yes No (circle)



APPENDIX III

TRIAL BLOT



APPROVAL SHEET

The thesis submitted by Katusha Marilyn Didenko has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

June 12, 1954  
Date

Charles L. D. [Signature]  
Signature of Adviser