

AN ABSTRACT OF THE THESIS OF

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This study compared responses to the Children's Apperception Test (C.A.T.) and the Children's Apperception Test-Human (C.A.T.-H). A third grade sample of 30 regular classroom subjects (12 males, 18 females) were administered five C.A.T. cards and five C.A.T.-H. cards. The results were compared by gender and type of stimuli (animal/human). A Chi-square was calculated to determine the quality of response given to type of stimuli and refusals. A t -test was used to determine if the difference between male and female means was significant.

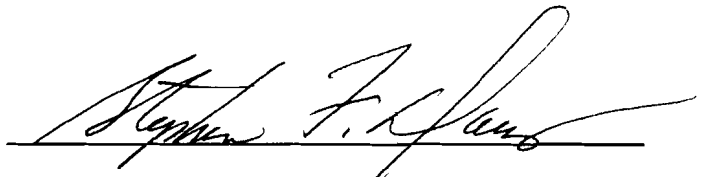
This study indicates that the C.A.T. and C.A.T.-H. are relatively equal in eliciting projective responses from male and female third grade subjects. Both males and females tend to tell more descriptive stories than enumerative or apperceptive. In this study the female subjects responded quicker after the placement of the card than male subjects, but this did not have an effect on the other measures. Further studies need to be conducted to give clearer clinical uses of children's projective tests.

COMPARING ANIMAL AND HUMAN STIMULI
IN PROJECTIVE TESTING OF CHILDREN

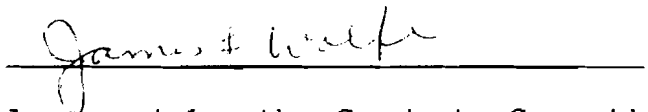
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A handwritten signature in cursive script, appearing to read "Stephen F. Jones", written over a horizontal line.

Approved for the Major Department

A handwritten signature in cursive script, appearing to read "James D. Wolfe", written over a horizontal line.

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CHAPTER 1

Introduction

As the major professional role of the clinical psychologist focused on the skills of assessment, the period between the 1930's through the 1960's saw a rise in the application and development of projective technique (Howes, 1981). Since then, projective techniques of personality assessment have achieved a growing theoretical acceptance along with an increased clinical and empirical use (Howes, 1981). Projective tests raised psychological testing beyond the collection of information and the computation of IQ scores to providing insight into the dynamics of individual human personality (Howes, 1981). Murray introduced the term "projective test" to describe methods which attempt to "discover the covert (inhibited) and unconscious (partially repressed) tendencies of normal persons by stimulating the imaginative processes and facilitating their expression in words or in actions" (Murray, 1938, p. 57). Recent surveys indicate that projective techniques have become increasingly valuable as primary tools despite the criticisms of these techniques' apparent lack of reliability and validity (Anastasi, 1982). The field of psychology is thriving with

projective techniques in various stages of development and with varying degrees of established validity and reliability (Obrzut & Cummings, 1983).

Projection in Children

Even though the purpose of testing and the techniques incorporated may be similar in the evaluation of children and adults, there are special considerations when evaluating children. A child's age, developmental status, shortened attention span, and verbal ability are factors which will influence the quantity and quality of responses. Furthermore, the child's spontaneous conversation or willingness to reveal his or her personality may be dependent on the examiner's effects upon the child and the social setting of the test situation (Rabin & Haworth, 1960). The child and the projective responses obtained must be evaluated from a developmental and normative perspective. Responses that would be considered distorted and indicative of pathology in adults may be only signs of developmental immaturity in children. Since children have a limited knowledge of social and physical reality around them and limited verbal and abstract reasoning skills, their

distorted responses may not necessarily be taken to mean ego disintegration, regression, or defensiveness. Children's projective performances may be more indicative of developmental status than of personality organization. For example, "impulsive responses reflecting poor judgment and tenuous controls may be expected from a child of four or five who is just beginning to exercise control over his/her impulses. When a child reaches the age of six or seven one begins to see patterns emerging that reflect the child's general coping style and impulse control" (Obrzut & Cummings, 1983, p. 418).

Review of Literature

The Children's Apperception Test (C.A.T.) is a projective test designed for use with children three to ten years of age. The original C.A.T., developed in 1949, consisted of ten cards depicting animals in various situations. The pictures are relatively unstructured and afford the subject latitude to project himself or herself and reach whatever interpretations he or she wishes. Bellak (1952) stated that the C.A.T. is "a method of investigating personality by studying the dynamic meaningfulness of the individual differences in perception of standard stimuli" (pg. 7). The C.A.T. was followed by the Children's

Apperception Test, Supplement (C.A.T.-S.) in 1952, which was later followed by the Children's Apperception Test-Human (C.A.T.-H.) in 1965. The C.A.T.-H. consists of an exact substitution of human stimuli for the original animal stimuli.

For each of the ten cards in the C.A.T. the child is to develop a story which describes who is performing or participating, what happened prior to the picture, and what will happen beyond the actions in the picture. These spontaneously verbalized stories can be scored using content and quantitative analysis. Most clinicians tend to use a qualitative approach to interpretation. Regardless of the scoring techniques, the stories are presumed to reveal some of the child's dominant drives, emotions, traits, and conflicts by identifying significant interpersonal needs, press, and themes (Murray, 1971).

The C.A.T. is relatively culture free and can be used equally well with any ethnic group. When children are unfamiliar with the animals pictured they tend to substitute animals with which they are familiar (Bellak, 1954). In order to investigate the utility of the C.A.T. for the cross-cultural study of personality of young children, an area where a projective test could be useful, Kline and Svaste-Xuto (1981) compared responses to the C.A.T. of Thai

and British children. The results suggest that the C.A.T. can be used cross-culturally with children between the ages of four and six. When the C.A.T.-H. was developed it presented some problems. The animal figures are ambiguous as to age, sex and cultural attributes; the human figures, however, are not. Studies reviewed by Bellak suggested some children do better with animal stimuli and some with human stimuli. Children having difficulty producing responses tend to perform better with the animal cards. Children between the ages of seven and ten, especially with higher IQ's might consider animal stimuli "childish" or below their intellectual functioning.

The C.A.T. pictures were designed to reflect problems, situations, and roles that were especially relevant to children. It was assumed that an eating scene, toilet scene, sleeping scene etc., were stimuli that would elicit significant responses reflecting current and not so distant realities and fantasies. By using these situations it was hoped that one could come closer to learning something of the context of the child's preoccupations, troubles, wishful daydreams and of his or her body or self image, coping devices, and adaptive functioning (Rabin & Haworth, 1960). It was initially expected by Bellak that children would identify more readily with animal figures than human

figures. This assumption was predicated on the fact that emotional relationships to animals are easier for children to handle. On the conscious level animals serve as friends to children (Bellak, 1954). Animals which children know are usually smaller and nonthreatening as compared to adult people (Rabin & Haworth, 1960). On the unconscious level animals serve as identification figures in dreams, and the cause of many phobias (Bellak, 1954). Therefore, aggressive and other negative sentiments could possibly be more easily ascribed to a lion than to a human father figure, and the child's own unacceptable wishes could be more easily projected onto the less transparent identification figure (Rabin & Haworth, 1960). It was felt since animals were freer than humans with oral and anal expression, children might be less inhibited with responses in these areas. Animal stimuli might provide the necessary manifest disguise to minimize resistance allowing freer expression of innermost feelings and negative comments (Roberts, 1958).

A good deal of literature has been consistent with this idea. Gordon (1953), expressed an interest in the child's animal fantasy. He referred to the fact that Freud found a close connection between the psychodynamics of the individual child and the kind of animal predominating in the child's fantasy. Freud is reported as showing a marked

Interest in studying the connection between animal thoughts that predominated in child's fantasy and the psychodynamics of the child (Bellak & Bellak, 1949). In his case presentation of "Little Hans" in Analysis of a Phobia of a Five Year Old Boy he claimed that children did not seem to stress the gulf between the animal and human world (Freud, 1948). Clinical experience with Rorschach scores of children reveal a high viewing of animal figures and an absence of human figures (Klopfer & Davidson, 1942). Children respond with a considerably higher number of animal over human percepts than adults on the Rorschach (Beck, 1961; Bellak & Hurvich, 1966; Roberts, 1958). The use of animals as identification figures by some psychotics and in primitive cultures also tends to support the expectation of a high stimulus value (Rabin & Haworth, 1960).

Bills (1950) tested school age children with the Thematic Apperception Test (T.A.T.) which consisted of human figure stimuli cards. An additional ten pictures using animal stimuli were used in the study. The children were asked to tell a story about each picture. Bills compared word counts, refusals, description, and coherency. His results showed that children found the task easier and told longer stories about the animal stimuli. Bills and Bills

(1950) and Lelman and Thomas (1950) in a pioneer investigation compared T.A.T. pictures with animal pictures using children ranging from five to ten years of age. They concluded that the animal picture was an easier situation for formulating projective stories. Further studies by Bills (1950), Bills, Lleman and Thomas (1950) and Blum and Hunt (1952) using T.A.T. pictures of rabbits show that animals are favored over human figures, as children rejected fewer cards and told longer stories. The results of Bills' study may be unreliable since the presentation of rabbits involved the confounding variable of color.

Boyd and Mandler (1955) discovered that a large majority of preschool stories involved animals. By the third grade human characters were frequently depicted in favorable situations, while animals were retained to fill undesirable roles. Olney and Cursing (1935) found 75 percent of children's picture books used animal stimuli. Bender and Rapport (1944), on the basis of their clinical experience with normal and disturbed children, concluded that animal pictures were more productive. Werner's (1948) discussions of the mental organization of children as well as quoted statements from source books on primitive man also supported the proposition that animal stimuli are more productive.

Subsequent studies have confirmed this proposition.

Spiegelman, Terwilliger, and Fearing (1952) reported that animals appeared in 50 percent of all Sunday comic strips. Blum and Hunt (1952) believed in the superiority of animals over human figures because animal stimuli more easily overcame the child's resistance, and thus projection of the child's feelings are facilitated. Budoff (1960) tested four year old preschoolers with C.A.T. cards and an analogous human set. There were no statistically significant differences between picture sets on the measure of productivity, story level, and transcendence index. It was hypothesized that where responses to human figures seemed especially threatening, animal figures elicited more productive stories possibly due to the increase of psychological distance.

Vuyk (1954) studied the C.A.T. and found animals as stimuli produced richer stories than stories obtained from human stimuli. Boyd and Mandler (1955) studied third grade children's reactions to human and animal stories and pictures. It was found that animal stimuli led to a greater degree of expression of ego involvement, particularly as manifested in the projection of negative affect. On the other hand it was reported that the more significant effect of human stories on the production of imaginative material

did not corroborate the hypothesis of children's primary identification with animals.

Although several studies support the hypothesis that animal stimuli are more productive than human stimuli, other research suggests there is no significant difference between animal and human stimuli, or that human stimuli are superior to animal stimuli. Biersdorf and Marcuse (1953) used six pictures similar to the C.A.T. cards 1,2,4,5,8 and 10, and had the same artist design corresponding human cards. The two sets were similar in other respects although there were some shading and size differences. The human set was not nearly as ambiguous as the C.A.T. with respect to role and sex. On seven criteria of productivity no significant difference was found between the two sets of cards. A second study was then done by Malnard and Marcuse (1954) with the use of the same two sets of pictures but now administered to emotionally disturbed children. Four criteria, similar to the ones in the first study failed to show significant differences, but Judges' ratings of clinical usefulness showed that human figures produced more clinical information. Furuya (1957) used the Marcuse pictures with Japanese subjects. He, too, found that human figures produced better results using criteria such as expression of feelings and expression of significant

conflict. Two of these groups' age ranged well above ten years of age, the upper limit for which the C.A.T. claims possible advantage for animal figures. Light (1954) tried to improve on the Marcuse and Biersdorf study by using more subjects and more qualitative criteria. He found better identification with human than animal figures. His subjects' ages ranged from 9 years 8 months to 10 years 6 months. His study compared C.A.T. cards with T.A.T. cards. One reason why these data are not particularly useful is that none of the above studies used a child below 5 years 4 months. This is important because the C.A.T. was developed for the younger child, ages three through ten.

Murstein (1959, 1965) summarized comparisons of animal and human stimuli and the assumption that children identify more with animals. He concluded that studies do not support the supremacy of the C.A.T. over pictures with humans. Butler (1961) administered the Washington set of cards to 50 retarded subjects whose IQ's ranged from 30 to 77. No significant differences were found between the two forms for formal criteria expressions of feelings and conflicts or for outcomes. Budoff (1960) administered a set of nine cards to a sample of 12 borderline retarded subjects, and to 11 low average subjects as a control. No differences were found between animal and human forms for either group. The

retarded subjects told significantly longer stories to the human form, while there were no differences in the story length for the control group. Armstrong (1954) compared the responses of first, second, and third grade children on five C.A.T. cards and a duplicate set with human figures. The mean IQ for each grade of children was in the superior range. Significantly higher transcendence index scores were found for the human figures in that more subjective, personalized, and interpretive responses were obtained instead of mere description.

A study using animal and human figures with children ages five and a half to seven years was conducted by Weisskopf-Joelson and Foster (1962). It was found that the mean transcendence index score for all stories to human pictures compared with all stories to animal pictures did not differ significantly. Studies by Armstrong (1954), Boyd and Mandler (1955), Furuya (1957) and Roberts (1958) show that children may prefer human figures as the projective material of choice because the results indicated longer stories, more themes, more expressions of feelings, and a more definite outcome.

Another five studies revealed no significant difference in the responses of normal, anxious, or emotionally disturbed children to animal or human figures with only a

vague trend toward favoring the human figures (Biersdorf & Marcuse, 1953; Budoff, 1960; Mainard & Marcuse, 1954; Neuringer & Livesay, 1970; Weisskopf-Joelson & Foster, 1962). Myler, Rosenkrantz, and Holmes (1972) conducted a study using the C.A.T., C.A.T.-H. and T.A.T. with 60 female second grade subjects. Four measures revealed minimal differences between the C.A.T. and C.A.T.-H. Both the C.A.T. and the C.A.T.-H. were judged more suitable for second graders than the T.A.T.

Bellak and Hurvich (1966) considered the evidence obtained from several reports in the literature concerning the superiority of either the animal or the human pictures and have noted the two most influential factors responsible for the conflicting evidence have been variations among the studies in stimulus cards used and in outcome measures employed. The sets of human drawings used have generally not been characterized by the ambiguity of age or sex that is achieved with the animal figures. As far as outcome measures are concerned, dynamic evaluation of the responses have been infrequent. Starr (1960), Eron and Murstein (1966) and Murstein (1965) indicated the stimulus is the chief determinant of response content. Murstein (1965) pointed out that until we can accurately determine stimulus impact, we are left with the discomfort of sorting the

components of any response generated by stimulus properties, from the components generated by the subjects personality.

There appear to be reasons for the prevalent disparity in results. There are many variables that are not constant across studies so that it becomes difficult to make a comparison between studies. For instance the number of subjects varies from 8 to 96. Children's ages vary from 4 to 12. Most of the children tested were normal but some were emotionally disturbed or mentally handicapped. No standardization of stimuli has been preserved across studies. The T.A.T., C.A.T., and C.A.T.-H. and specialized drawings of animals have been utilized.

Methods of presenting stimuli and obtaining children's stories also varies. Some studies utilize an individualized presentation, or a tape recording of the child's response. Other studies projected the cards on a screen, collecting children's written responses in a group. The most severe discrepancy among these studies involves the criteria for measuring results. Some measures are objective, while many rely heavily on the experimenters' subjective evaluation of results. Some of the measures appear to be lacking in construct validity (Zubin, 1965). The quality of the child's story is measured according to the researchers preference: by word count, number of nouns, verbs,

occurrence of the pronoun "I", original ideas, or the Weisskopf-Joelson transcendence index. Other studies are concerned with the number of feelings, conflicts, themes, and figures used. Still other researchers consider reaction time, number of value judgements, and presence of reward versus punishment. The child's own subjective preference has not been explored as a factor in determining the preferred stimulus.

It is possible that the C.A.T. and C.A.T.-H. are truly equivalent instruments, a fact that Neuringer and Livesay (1970) call "a rarity to be cherished" (p. 491). Even if this is so, a child's proneness to animal identification gets progressively weaker as the child grows older (Boyd & Mandler, 1955). However it has also been documented by Amen (1944) that children's concern with human relationships can be demonstrated at a very early age. She showed children a stimulus of a boy, a girl and a dog in between them. She asked the subjects to tell her what the story was about. At age two 40 percent of the stories centered on the dog. At age four only 3 percent of the stories centered solely on the dog. In their stories 95 percent included the human figures.

Purpose of the Study

Past research seems to indicate that children responded with better quality responses to animal stimuli because animal stimuli overcame the child's resistance (Blum & Hunt, 1952). However, over the past several decades children have begun to mature at a faster rate both physically and psychologically due to improved nutrition, medical and technological advancement, education, changes in the nuclear family, and exposure to the media. Today's children are learning to exercise control over their social environment. They practice skills in decision making and learn influence tactics and how to adapt them to changing circumstances (Bandura, 1973). Because children are more aware of their social environment and the stimuli around them, the possibility exists that children will be more comfortable and better able to identify with human stimuli rather than animal stimuli.

It is generally believed, regardless of whether animal or human stimuli are used, that the C.A.T. and the C.A.T.-H. selected stimuli to elicit themes relevant to children's growth and emotional problems. However, past research seems to indicate that animal figures elicit better quality responses than human stimuli from children,

regardless of variables such as age and IQ. Assuming research is correct and remains unchanged, there is a significant difference between quality of responses to animal and human stimuli on projective tests, when the responses are obtained from children.

It is the purpose of this study to examine test results from the C.A.T. and the C.A.T.-H., of third grade students in a regular classroom, using animal and human stimuli as a variable to determine which form of Bellak's Children's Apperception Test elicits more quality responses.

Significance of Study

This research represents an effort to establish when animal or human stimuli would be preferred in projective testing. Since projective tests have seen an increase in application with children (Howes, 1981), and have been determined useful when evaluating children, determining which type of stimuli, animal or human, elicits a better quality response would be beneficial in psychological interpretations. The central assumption of this study is that the child will reflect his or her inner needs, desires and or conflicts when asked to impose meaning or order to an ambiguous or unstructured stimulus. Inherent in this assumption is that all behavioral manifestations are expressions of an individual's personality.

CHAPTER 2

Method

Sample

The subjects who were administered the C.A.T. and the C.A.T.-H. were randomly selected by drawing names from two separate third grade classrooms of the Paola Unified School District. The two groups included third grade students in the regular third grade classroom. Their ages ranged from eight to nine years of age. The researcher randomly selected thirty names which consisted of twelve males and eighteen females. Nine students chose not to participate.

Materials and Instrumentation

The two tests that were administered were the C.A.T. and the C.A.T.-H. Both tests are projective tests consisting of ten black and white drawings on cardboard cards. The C.A.T. cards were developed using animal stimuli. The C.A.T.-H. replaced the animal stimuli with human stimuli. The tests are identical in nature, except for type of stimuli. Subjects' responses were recorded by taping the subjects responses on a cassette recorder that was visible to the subject. A digital stop watch was used to record the time

between placement of the C.A.T. or C.A.T.-H. card and start of the subjects response.

Procedure

Written permission to test the third grade students was obtained from Paola Elementary School. Permission slips were sent home with the children. This form provided an explanation of the experiment and the need of the research to satisfy thesis requirements for a master's degree in psychology. The consent form required a parent's or guardian's signature and the student's signature for permission to participate in the research effort. The consent forms were returned to the third grade classroom teacher. Confidentiality was observed in that only the first names and last initials of the subjects were listed. An application for approval of human subjects was submitted to Emporia State University's Review Board for Treatment of Human Subjects.

The random selection of the subjects was accomplished by placing the names of the children who received parental consent in a box. Then the researcher selected thirty students' names from the box. All thirty subjects were tested individually, at convenient times for instructors and students, in an isolated classroom in the Paola Elementary

School. A sign depicting "Please do not disturb, Testing" was taped to the classroom door to discourage distractions. Of the thirty subjects, fifteen were administered a C.A.T. card first alternating with the C.A.T.-H. The remaining fifteen subjects were administered a C.A.T.-H. card first alternating cards with the C.A.T. Each subject was given the following directions:

I am going to show you some pictures. These pictures have animals and humans in them. I want you to take a good look at each picture and tell me a story. Tell me what the animals and humans are doing. You can tell me any story you want. When you are finished with your story say "That is all or finished." You are going to tell such good stories I am going to tape them so I won't forget them. Are you ready? Do you know what to do?

Then the first card was presented to the child. The examiner presenting the cards was a female master's level clinical psychologist. Whenever an ambiguous response was received the examiner sought further clarification by saying "Tell me more". During the administration of the tests the examiner sat to the left of the subject at a slight angle, placing the testing card directly on the table in front of

the subject. Time was recorded from the placement of each card to the start of the response. Completion of the stories from the ten cards terminated the testing session. All subjects were thanked for their time and cooperation. Any questions about the results were answered by the examiner with "Your stories were useful and they will help in this study". All test results remained in the strictest of confidence of the examiner.

Data Analysis

The study of the relationship of children's quality of responses given on a projective test using either animal or human stimuli was measured by Chi square and the t -test. The 2 X 4 Chi square's independent variables were animal and human stimuli. The levels of each independent variable were enumerative, descriptive, apperceptive and the subject's refusals to each story. Data were recorded in an A X B table. For each cell the expected frequency is computed by multiplying the row total for that cell by the column for that cell and dividing by N. This operation must be performed for each cell using the appropriate row and column totals in each computation. For each cell the expected frequency was subtracted from the observed frequency. The outcome was squared and divided by the expected frequency.

The total was found by summing the totals for each cell (Linton & Gallo, 1975). A t-test was used to analyze the differences between pairs of means. Group means and standard deviations were figured for both males, females, and a combination of males/females for each score between placement and response and word count (Isaac & Michael, 1985). A significance level of .05 was used.

CHAPTER 3

Results

The method of classification of Byrd and Witherspoon (1955) where responses were rated as enumerative, descriptive or apperceptive was used. The responses were scored to give credit to the highest level of response, enumerative being the lowest level of response and apperceptive being the highest level of response. If a response was enumerative, descriptive and apperceptive it was scored as apperceptive, not all three. In order to clarify the scoring procedure the following example is cited:

Card 1: slitting- this is classified as descriptive
chicks- this is classified as enumerative since it
only names an object
They're eating pudding. Their mother is feeding
them.- this is classified as apperceptive.
Apperceptive responses might give some
indication of the inner dynamics of
personality that is operating (Byrd
and Witherspoon, 1955).

The subject's responses for each individual card were analyzed and scored as being either enumerative, descriptive or apperceptive. In addition the quality of response elicited by either animal or human stimuli was also

determined by the time between the placement of the stimuli and start of response, word count, and refusals. Research results may be generalized to third grade students in the regular classroom in a rural community.

Twelve scores for each of the 30 subjects were recorded: six scores from the C.A.T. and six scores from the C.A.T.-H. were obtained. The 2 X 4 Chi-square results are presented in Tables 1, 2 and 3.

Table 1

2 X 4 Chi-square for the C.A.T. and C.A.T.-H.

(Male/Female Combined)

Test	Enumerative	Descriptive	Apperceptive	Refusals
C.A.T.	14 (13.5)	115 (114.5)	19 (20.5)	2 (1.5)
C.A.T.-H.	13 (13.5)	114 (114.5)	22 (20.5)	1 (1.5)

Note. Observed frequencies with
 expected frequencies in parentheses.

Chi-square = .5942
 df = 3
 p = .8977

There was no significant difference between the type of response given for animal or human stimuli on the C.A.T. or the C.A.T.-H. The subjects tended to tell descriptive stories on the C.A.T. and C.A.T.-H. more often than enumerative or apperceptive. There was no significant difference on refusals to type of stimuli.

Further analysis of responses to the C.A.T. and the C.A.T.-H. showed no significant difference on type of response given by males or females. Results are presented in Tables 2 and 3.

Table 2

2 X 4 Chi-square for the C.A.T. and C.A.T.-H.

(Males)

Test	Enumerative	Descriptive	Apperceptive	Refusals
C.A.T.	8 (8)	40 (38.5)	11 (12.5)	1 (1)
C.A.T.-H.	8 (8)	37 (38.5)	14 (12.5)	1 (1)

Note. Observed frequencies with
 expected frequencies in parentheses.

Chi-square = .4769
 df = 3
 p = .9239

Table 3

2 X 4 Chi-square for the C.A.T. and C.A.T.-H.(Females)

Test	Enumerative	Descriptive	Apperceptive	Refusals
C.A.T.	6 (5.5)	75 (76)	8 (8)	1 (.5)
C.A.T.-H.	5 (5.5)	77 (76)	8 (8)	0 (.5)

Note. Observed frequencies with expected frequencies in parentheses.

Chi-square	= 1.1172
df	= 3
p	= .7729

Table 4 presents descriptive statistics for males and females separately along with t -values.

Table 4

Descriptive statistics and t-test comparisons for males and females on the C.A.T. and C.A.T.-H.

Variable	N	M	SD	t	p
<u>Word Count</u>					
Male	12	26.16	15.30	-.19	< .01
Female	18	26.92	15.17		
<u>Time between Placement and Response</u>					
Male	12	4.24	3.90	2.25	< .01
Female	18	2.37	2.50		

There was no significant difference between the length of stories told by males or females on the C.A.T. and C.A.T.-H. There is a significant difference between the male and female scores on the time between placement of the testing card and the start of the subject's response.

CHAPTER 4

Discussion

Tables 1, 2 and 3 reveal that the responses elicited by male and female children on the C.A.T. and the C.A.T.-H. are similar. There does not appear to be a preference for, or more quality type of response given to either animal or human stimuli on the C.A.T. or C.A.T.-H. It appears that both males and females tell more descriptive stories than enumerative or apperceptive to animal and human stimuli. From these results it is evident that gender and type of stimuli (animal/human) has little influence and no significant difference on the quality of response given by the subject.

Table 4 reveals that males and females tell approximately the same length of stories to both animal and human stimuli on the C.A.T. and C.A.T.-H. Neither animal nor human stimuli seems to produce a longer response with males or females.

Table 4 does reveal that there is a significant difference between male and female scores on the time

between placement of the C.A.T. or C.A.T-H. card and the start of the subjects' response. The male subjects were significantly slower than the female subjects to start their response. This may be due to the examiner's gender being female. The female third grade subjects may have developed a stronger rapport and identification, therefore responding quicker to both the C.A.T. and C.A.T.-H. cards, than the same grade male subjects.

This study indicates that gender of the subject need not be taken into consideration when deciding whether to use the C.A.T. or C.A.T-H. There was no significant difference between third grade males and females quality of response (enumerative, descriptive or apperceptive) on the C.A.T. or C.A.T.-H. There was no significant difference on the amount of refusals given by males or females to animal or human stimuli. Also, there is no significant difference in length of response given by male or female subjects to the C.A.T. and C.A.T.H. There is a significant difference in response time. Males are significantly slower than females when responding to stimuli placed by a female examiner. However, this does not appear to make a difference in the length or quality of response given on the C.A.T. or C.A.T-H.

One should use caution when generalizing from one sample alone. More research is necessary to determine whether or

not results would be different if the subjects would have been an urban more cosmopolitan group rather than a homogeneous rural group. Further differences may be found using a different grade, age or population such as the mentally disturbed. Individual responses were not taken into consideration. Further research may find that specific C.A.T. or C.A.T.-H. cards may elicit more quality projective responses than others. If this research is consistent in future studies it would appear that gender and type of stimuli (animal/human) makes little difference when deciding what type of projective test to use in clinical test administration.

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