

PERSONAL CHARACTERISTICS OF
PRESCHOOL CHILDREN WITH
IMAGINARY COMPANIONS

By

HEIDI ELAINE WELCH

Bachelor of Science

McNeese State University

Lake Charles, Louisiana

1987

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the degree of
MASTER OF SCIENCE
December, 1990

Thesis
1990
W439
cop. 2

PERSONAL CHARACTERISTICS OF
PRESCHOOL CHILDREN WITH
IMAGINARY COMPANIONS

Thesis Approved:

Donna Couchenour

Thesis Adviser

Delucia A. Self

Ruth Jones

Norman N. Deuker

Dean of the Graduate College

ACKNOWLEDGEMENTS

As my graduate career at Oklahoma State University draws to a close, I would like to recognize those individuals whose kindnesses and support must be applauded.

A very special thank you is extended to my advisor and friend, Donna Couchenour, whose guidance, knowledge, encouragement, support, and belief in my abilities made this project possible. I would also like to express my gratitude to committee members, Patricia Self and Ruth Tomes for their time, efforts, encouragement, and knowledge that they generously offered throughout each step of this project.

My sincere gratitude is expressed to Eric Kocher for his invaluable assistance, guidance, and advice regarding the statistical analyses for this project as well as for providing a generous amount of emotional support throughout the past year. I would also like to applaud my friend Robert Steiner, for his assistance in reanalyzing the data for this project at record speed.

A big thank you is expressed to Pamela Ramming and Wendy Husby Branstetter for the superb interviews they performed with the preschool children. My sincere gratitude is expressed to Pam for the additional time she spent in assisting with data collection at the private preschool as well as being such a supportive and enlightening friend. I

would also like to thank Yoong Lee for her time and invaluable assistance with scoring some of the data for this project.

A very special thank you is expressed to my friend, Paige Davis, for the many hours we spent running around together, studying together, and sharing our thoughts and ideas. Without Paige, my experience at OSU would not have been the same.

I would also like to applaud Jane Jacob for her time, efforts, and assistance in preparing each draft of this project. A big thank you is extended to Coeta Milner for supplying dozens of chocolate chip cookies, chocolate cake, and generous amounts of emotional support throughout the past two years.

My sincere gratitude is expressed to my parents, grandparents, and friends who have generously provided emotional support and encouragement throughout my life. Their belief in my abilities made this project possible and future endeavors reachable.

My gratitude is expressed to the parents at the Oklahoma State University Child Development Laboratories for their time, cooperation, and support. I would also like to thank Kathy Rutledge, the staff, and parents of the First United Methodist Church Preschool for their cooperation, time, and assistance. Finally, I would like to thank the children at the OSU Child Development Laboratories and the

First United Methodist Church Preschool who so willingly shared their imaginations and made this project possible.

Abstract

Scope and Method of Study: The purpose of this study was to determine personal characteristics of 3, 4, and 5 year old preschool children with imaginary companions. Preschool children 3, 4, and 5 years old were interviewed in order to identify preschool children with imaginary companions as well as to obtain descriptive information about make-believe friends. The final sample consisted of 42 preschool children enrolled in either a university laboratory school or a private preschool. Twenty-one children reported an imaginary character (12 females and 9 males, with an age range of 46 to 65 months). These children were matched with 21 children who reported no imaginary companions (12 females and 9 males, with an age range of 44 to 65 months). The Multidimensional Stimulus Fluency Measure was used to identify creative potential in the preschool children. The Kohn Social Competence Scale, a teacher rating, was used to assess the social and emotional functioning of the preschoolers. Mothers completed the Behavioral Style Questionnaire, an assessment of the child's temperament.

Findings and Conclusions: Results from the probit analyses revealed that five single independent variables (originality, interest-participation, cooperation-

compliance, approach, and adaptability scores) did not significantly predict the presence of imaginary companions. However, children with imaginary companions scored significantly higher on the intensity dimension of the temperament scale than children without pretend friends. When the three temperament variables (intensity, approach, adaptability) were examined together within a model, results demonstrated that these temperament variables significantly predicted the presence of imaginary companions. Individual differences in temperament appear to be important characteristics in looking at pre-school children with make-believe friends. Also, children with imaginary companions scored significantly higher on the social competence scale than children without imaginary companions. Children with greater social skills may practice and rehearse their social interactions with imaginary companions.

TABLE OF CONTENTS

	Page
Introduction	1
Method	11
Subjects	11
Instruments	13
Imaginary Companion Interview	13
Multidimensional Stimulus Fluency Measure	13
Peabody Picture Vocabulary Test: Revised	15
Kohn Social Competence Scale	16
Behavioral Style Questionnaire	17
Results	19
Creative Potential	20
Social Competence	20
Temperament	22
Discussion	25
Social Competence	27
Temperament	27
Limitation of This Study	29
Qualitative Differences	30
References	32

Appendices	38
Appendix A: Literature Review	38
Incidence of Imaginary Companions	40
Functions Served by the Imaginary Companion	42
Age of the Child Who Experiences an Imaginary Companion	45
Family Structures, Environmental Factors, and Personality Characteristics that Influence the Development of Imaginary Companions	46
Intelligence, Creativity, and Writing Ability of Children with Imaginary Companions	49
Descriptive Data on Imaginary Companions	50
Parental View of Imaginary Companions	54
References	56
Appendix B: Letters to Parents	59
Appendix C: Instruments	76
Imaginary Companion Interview	77
Multidimensional Stimulus Fluency Measure	80
Peabody Picture Vocabulary Test: Revised	93
Kohn Social Competence Scale	98
Behavioral Style Questionnaire	102
Appendix D: Raw Data	111
Appendix E: Probit Analyses	114

LIST OF TABLES

Table		Page
I.	Means and Standard Deviations	35
II.	Probit Analyses for Single Independent Variables	36
III.	Probit Analyses for Multiple Independent Variables	37

Personal Characteristics of Preschool
Children With Imaginary Companions

Introduction

Years ago, children who reported having imaginary companions were often considered to be hallucinating and even schizophrenic. Some of these myths have changed, but many people still regard children with imaginary companions as being extremely removed from reality and a cause for concern.

The first study concerning imaginary play companions was conducted by Vostroskey in 1895. Even with this early research, few studies have explored the phenomenon. Much of the literature refers to Svendsen's (1934) definition of the companion.

According to Svendsen, it:

implies an invisible character, named and referred to in conversation with other persons or played with directly for a period of time, at least several months, having an air of reality for the child, but for no apparent objective basis. This excludes that type of imaginative play in which an object is personified, or in which the child himself assumes the role of some person in his environment (p. 988).

The literature also suggests that imaginary companions can be animals, humans, stuffed animals, and even personified objects. Manosevitz, Prentice, and Wilson (1973) defined the imaginary companion as a very vivid imaginary character (person, animal, object) with which the child interacts during play and daily activities.

There has been much concern about whether the imaginary companion is a healthy and normal developmental occurrence in young children. When trying to understand the purposes served by imaginary companions, it is important to be aware of the potential functions such fantasy may serve for children.

Ames and Learned (1946) believe that imaginary companions may occur as part of the natural development of some children, determined by internal factors, and occurring as part of the normal development of imaginative behavior. Singer (1973) also regards the imaginary character as part of the normal development of imaginative behavior.

Piaget (1962) believes that imaginary companions are a common phenomenon to young children and the companions are viewed as an indicator of the healthy development of the child's symbolic or fantasy play.

According to Jalongo (1984), children create imaginary companions for numerous reasons, but despite each companions unique characteristics, he, she, it, or they appear to have a protective role. Imaginary companions insulate the child

from peer rejection, free the child from guilt, or become a caricature of fears that can be placed under the child's supervision and control.

Nagera (1969) describes several potential functions of the imaginary companion that were formulated during the psychoanalytic period. The imaginary companion serves a variety of functions depending on the various needs of the child. These functions of the imaginary companion include: serving as a superego prop for children; as a scapegoat; and serving to prolong the child's feelings of omnipotence and control. Nagera also states that children may create companions who are an impersonation of the child's primitive ego ideals. Finally, Nagera describes the feelings of loneliness, neglect, and rejection that frequently motivate children to create pretend friends.

The family structure and home environment are associated with the development of imaginary companions in young children. Several studies cite evidence that the size of the family does not influence the creation (Hurlock & Burstein, 1932; Svendsen, 1934). Svendsen (1934) found that although the phenomenon is encountered in families of all sizes, the important consideration is the size of the family at the time the child creates the companion. In her sample, 50 percent of the selected children were the only child at the time of their companion creations. Ames and Learned (1946) found that the subjects in their study were only children or had only one or two siblings. Kalyan-Masih

(1986) also found that the oldest or only children in her study were more likely to experience the phenomenon. Manosevitz, Prentice and Wilson (1973) reported that 73% of the imaginary companion subjects in their study were only or first born children. Sixty-one percent of the children with imaginary companions had no siblings at the time of the appearance of the imaginary companion. Findings of these studies indicate that chronological proximity to siblings appears to be a significant factor contributing to the development of imaginary companions.

In Kalyan-Masih's (1986) investigation of family characteristics of children with imaginary companions, she found no significant differences between the imaginary companion and the non-imaginary companion group of parents on age, education, socioeconomic level, or family size. Manosevitz, Prentice and Wilson (1983) found that nuclear family disruption does not appear to be a contributing factor to the creation of imaginary companions.

Although many of the children who created imaginary companions were from families with little or no sibling interaction, the opportunities for play with other children were not lacking. Children with many real playmates also give evidence of creating imaginary companions (Ames and Learned, 1946; Manosevitz, et al., 1973; Kalyan-Masih, 1986). Manosevitz, Prentice and Wilson (1973) found that

there were no significant differences between the two groups in their study on household members, number, age, and sex of playmates, or number of pets.

Parents in the Manosevitz et al. (1973) study were asked to complete a seven adjective checklist that described their child's play at home. The home play of 97% of the children who had imaginary companions was described as "self-initiated", in comparison to 86% of the children who did not have imaginary companions. The home play of the imaginary companion group was described as "quiet" for 18% of these children and for 34% of the non-imaginary companion group. Manosevitz et al. (1973) suggest that these differences in self-initiation and quiet play imply that the child who has an imaginary companion may be more capable of engrossing in play activities.

Svendsen (1934) revealed that some form of personality difficulties were reported for 35 of the 40 selected children in her study. Timidity was the personality difficulty most often reported.

Parents in the Manosevitz et al. (1973) study were also asked to rate their child's personality on two dimensions using a 7-point scale. The first dimension was characterized at one end by "shy and reserved" and at the other end by "open and outgoing". The children in both groups were rated as more open and outgoing than average. The second dimension was characterized at one end by "very adept at talking and interacting with adults", and at the

other end by "talks and interacts much easier with children than adults". Parents of children with imaginary companions rated their children as being more verbal and able to interact with adults than did parents of children who did not have imaginary companions.

The assumption is often made that those children who have had imaginary companions are more intelligent and more creative than those who have no companions. Shaefer (1969) explored the relationship between the reported occurrence of childhood imaginary companions and creativity in 800 high school students. He found that creative adolescents of the literary nature reported this childhood fantasy more often than did their matched controls. Shaefer and Anastasi (1968) investigated this further in their study of 400 high school males. They found that the visually creative adolescent boy was more likely than any other to report imaginary companions and childhood daydreaming.

Manosevitz, Fling, and Prentice (1977) explored creativity, intelligence and waiting ability in 42 children who had been identified by parental report as having imaginary companions. There were no significant differences found in creativity, intelligence, or waiting ability in the group of children having imaginary companions as compared to the control group. The findings of this study are inconsistent with previous studies. The conflicts may be a result of differences in sampling procedures, age of subjects, or methods used to measure the three variables.

Kalyan-Masih (1986) also explored intelligence as a factor associated with the creation of imaginary companions. Results of her study indicate that there are no significant differences in intelligence between the imaginary companion group and the non-imaginary companion group. In regard to the five Piagetian tasks, Kalyan-Masih reported that the two groups were more alike than different.

Manosevitz, Prentice, and Wilson (1973) found that 93 percent of the children in their study preferred not to interact with their imaginary companion when there were other children to play with. Svendsen (1934) found that imaginary companions were talked about freely in the family or within the hearing range of family members. Hurlock and Burstein (1932) found that boys showed greater reticence than girls in discussing the activities shared with their companions with other people. Data for Svendsen's (1934) study were also obtained through a recorded interview with each of the children. When questioned by a stranger about their imaginary companions, 5 of the children greeted the first question with smiles. Sixteen of the children took the question seriously and answered the questions in the same manner.

The literature reflects three approaches to understanding the role of the imaginary companion. The first approach, as described by Nagera, reflects the psychoanalytic view. The second approach reflects the Piagetian aspect of the phenomenon. In this regard, the

imaginary companion is viewed as an indicator of the healthy development of the child's symbolic or fantasy play. Others regard the imaginary companion as a part of the normal development of imaginative behavior (Singer, 1973; Ames & Learned, 1946). The literature suggests that children create imaginary companions for numerous reasons, but for whatever purpose the imaginary companion appears to be an important aspect of the child's intellectual, creative, and social development.

Much of the literature suggests that the imaginary companion is a very positive aspect in the developing child, but it is clear that interpretations of the role of the imaginary companion are needed. Several aspects of the phenomenon have been explored: intelligence, creativity, and environmental and family correlates thought to be associated with the imaginary companion. Few studies have explored several of the aspects in one particular study.

Upon reviewing the available literature, many inconsistencies are found in the findings of these studies. These inconsistencies may be a result of several factors. One of these factors may be due to poor sampling techniques. Several researchers relied on parental reports to identify children with imaginary companions. Some adults may be reticent about discussing their child's make-believe world or may not be aware of the make-believe character. Other studies relied on teacher observations to identify these children. The literature suggests that more often the child

plays with the imaginary companion when not in the presence of other children. One group of researchers interviewed high school and college students about their childhood imaginary companions. This method is also subject to error because of the drastic effects of time on memory. Several studies have focused primarily on creativity and intelligence but findings of these studies have also been inconsistent. These discrepancies may be a result of the various methods used in assessing creativity and intelligence. Few studies investigated personality factors associated with the phenomena such as the child's temperament and social competence.

The purpose of this study was to determine personal characteristics of 3 to 5 year old preschool children with imaginary companions. Investigating several personal characteristics with one group of children with imaginary companions and one group of children without companions is a strength of this study.

The following hypotheses were examined.

1. Higher originality scores on the Multidimensional Stimulus Fluency Measure predict the presence of an imaginary companion.
2. Higher receptive vocabulary scores on the Peabody Picture Vocabulary Test predict the presence of an imaginary companion.

3. Higher scores on the interest-participation dimension of the Kohn Social Competence Scale predict the presence of an imaginary companion.
4. Higher scores on the cooperation-compliance dimension of the Kohn Social Competence Scale predict the presence of an imaginary companion.
5. Higher levels of approach on the Behavioral Style Questionnaire predict the presence of an imaginary companion.
6. Higher levels of adaptability on the Behavioral Style Questionnaire predict the presence of an imaginary companion.
7. Higher intensity scores on the Behavioral Style Questionnaire predict the presence of an imaginary companion.
8. Higher scores on the interest-participation dimension and the cooperation-compliance dimension of the Kohn Social Competence Scale predict the presence of an imaginary companion.
9. Higher levels of approach, higher levels of adaptability, and higher intensity scores on the Behavioral Style Questionnaire predict the presence of an imaginary companion.
10. Higher originality scores on the Multidimensional Stimulus Fluency Measure; higher receptive vocabulary scores on the Peabody Picture Vocabulary Test; higher scores on the interest-

participation dimension and the cooperation-compliance dimension of the Kohn Social Competence Scale; and higher levels of approach, higher levels of adaptability, and higher scores on the Behavioral Style Questionnaire predict the presence of an imaginary companion.

Method

Subjects

Fifty-nine preschool children 3, 4, and 5 years old were interviewed for this research project. All of these children were enrolled in either half-day or full day preschool programs. Fifty-two of these children were enrolled in a University Laboratory School. Seven of the children were enrolled in a private preschool program.

Each of the children were interviewed in order to identify preschool children with imaginary companions as well as obtain descriptive information about their make-believe friends. Two graduate students conducted the interviews with the preschool children and the interviews were tape recorded. At the completion of the interview, the investigator listened to the audio tapes and categorized the interviews into two groups. The first group consisted of children who reported having an imaginary companion(s) and were able to give some type of descriptive information about their make believe friends. The second group consisted of children who reported that they did not have imaginary

companions or children who were unable to provide any descriptive information about their pretend friend(s).

For the purposes of this study, the investigators employed the Manosevitz, Prentice, and Wilson (1983) definition of the imaginary companion. According to these researchers, the imaginary companion is a very vivid imaginary character (person, animal or object) with which the child interacts during his or her play and daily activities. The investigator included children in the imaginary companion group who attributed human characteristics to dolls, stuffed animals, and pets.

The final sample consisted of 42 preschool children 3, 4, and 5 years of age. Of the fifty-nine preschool children interviewed for this project, twenty-one of the children reported a vivid imaginary character (12 females and 9 males, mean age = 54 months, with an age range of 46 to 65 months). The twenty-one children who reported imaginary companions were matched with twenty-one children who reported no imaginary companions (12 females and 9 males, mean age = 54 months, with an age range of 44 to 65 months). The two groups were matched according to age, sex, and number of siblings. A child who reported an imaginary companion was matched with a child from the group with no imaginary companions who was no more or less than six months different in age, the same gender, and had a similar number of siblings.

Instruments

Imaginary Companion Interview

The Imaginary Companion Interview was used in this study to identify preschool children with imaginary companions. The interview was developed by the investigator and questions for this interview were based on information from the literature (Hurlock & Burstein, 1932; Svendsen, 1934; Manosevitz et al., 1973; Singer, 1973; Kalyan-Masih, 1986). Two graduate students conducted the interviews with the preschool children and the interviews were tape recorded. The interviews were conducted in a small room within the child's classroom or in a room at the center with which the children were familiar.

Multidimensional Stimulus Fluency Measure

The Multidimensional Stimulus Fluency Measure (MSFM) (Moran, Milgram, Sawyers, and Fu, 1983) was used to identify creative potential in the preschool children. The MSFM is an adaptation of Wallach and Kogan's (1965), Ward's (1968) and Starkweather's (1971) creativity tasks. The MSFM, an assessment of ideational fluency, consists of three tasks: instances, uses and pattern meanings. In the two instances tasks, children are asked to name all the items that they can think of that are round and that are red. In the two uses tasks, children are asked to name all the possible uses for a box and for paper. In the pattern meanings task, the stimulus items are 3-dimensional wooden shapes painted red,

blue and yellow. The children are handed the 3-dimensional shape and asked what each 3-dimensional shape could be.

Scoring protocols have been established and Godwin (1984) reports the reliability of these scoring protocols as well as normative data from research with preschool children (interscorer reliability = .98). Responses were scored as original or popular (given by less than or more than 5% of the normative sample). Responses were scored as original or popular on each task and a total score was calculated by finding the sum of original and popular responses across the three tasks. This total score, or quantity of responses, is a measure of ideational fluency. The sum of the popular responses on the three tasks is the total popular score. The sum of the original responses on the three tasks is the total originality score. The originality score is the measure of creative potential, the score which was used for this study.

Moran et al (1983) report that the alpha coefficients of the original and popular scores were .76 and .55 respectively. The validity of the MSFM as a cognitive style distinct from intelligence was evidenced by Moran et al. (1983) with a nonsignificant correlation between original scores and intelligence ($p = .09$).

Moore and Sawyers (1987) report that the MSFM appears to be a relatively stable assessment of ideational fluency for children between the ages of 4 and 7 ($r = .54$, $p < .01$).

Peabody Picture Vocabulary Test - Revised

The Peabody Picture Vocabulary Test - Revised (Dunn & Dunn, 1981) was used as a measure of receptive language vocabulary. The PPVT-R has also been used as a measure of intelligence for preschool children.

The test consists of 175 items arranged in order of increasing difficulty. Each item is set up in a multiple choice format, with four simple black and white illustrations. The subject is asked to select the picture that best illustrates the meaning of the word orally presented by the examiner. Reliability for the PPVT-R has been established and reported by Dunn and Dunn (1981). Split half reliability is reported for children and youth (ages 2 1/2 - 18) and coefficients ranged from .67 to .88 on Form C (median .80) and from .61 to .86 on Form M (median .81).

Alternate-forms reliability was established based on an immediate retest and coefficients for the raw scores ranged from .73 to .91 (median .82). Coefficients for the standard scores ranged from .71 to .89 (median .79). Alternate-forms reliability was also established based on a delayed retest and coefficients for the raw scores ranged from .52 to .90 (median .78). The coefficients for the standard scores ranged from .54 to .90 (median .77).

Kohn Social Competence Scale

The Kohn Social Competence Scale (Kohn, 1988) was used to assess social and emotional functioning of the preschool children. The Kohn Social Competence Scale (KSC) is a teacher rating scale, consisting of items that can be easily observed. The KSC scale consists of 64 positive and negative statements regarding the child's classroom behavior and is set on a 5-point Likert-type scale. Each of these items rates the degree of frequency of behaviors considered to be socioemotional. The items are summed to yield two bipolar dimensions; interest-participation versus apathy-withdrawal and cooperation-compliance versus anger-defiance. Items on the first dimension concern the child's interest, curiosity, assertiveness in the preschool setting, and the child's involvement with other children. The opposite end of this dimension relates to shyness, isolation from classroom activities, and passivity. The second dimension relates to the child's ability to conform to the rules and routines of the classroom. The negative pole of this dimension relates to defiance, hostile interactions with peers, and the creation of disturbances that upset the normal tone of the classroom.

Kohn (1988) reports the reliability of the Kohn Social Competence Scale with 112 children between 33 and 73 months. Internal consistency was demonstrated on both factors of the rating scale (Factor I: $r = .95$, $SEm = 4.99$; Factor II: $r = .96$, $SEm = 4.24$). Interrater reliability scores have also

been established for each of the factors (Factor I = .77; Factor II = .80).

Information regarding scoring directions and procedures are printed on the inside of the KSC form and can be found in Appendix C. In order to score the KSC, the Answer Sheet TM must be separated by tearing along the perforated edge of the form. Positive items for Factor I are represented by circles and individuals scoring the form must sum the numerical values of the responses that have been darkened by the rater. Next, a Negative score for Factor II is obtained by summing the numerical values that are represented by squares. Raw scores are entered on the spaces provided on the Answer Sheet and the total raw score is calculated for Factor I by subtracting the score for the Factor I negative items from the score for the Factor II positive items.

This process is repeated for Factor II. Positive items for Factor II are represented by triangles and negative items are represented by diamonds. The total raw score for Factor II is calculated by subtracting the negative sum for Factor II from the positive sum of Factor II. Final raw scores are calculated by adding the total raw scores from a second rater or by doubling the raw scores obtained by an individual rater (Kohn, 1988).

Behavioral Style Questionnaire

The Behavioral Style Questionnaire, (BSQ), developed by McDevitt and Carey (1978) has been used to assess children's temperament. The BSQ is a Likert-type questionnaire that

was completed by the mother. The questionnaire contains 100 items which are to be rated from one (almost never) to six (almost always). The questionnaire yields scores in each of the nine categories of temperament identified by Thomas, Chess, Birch, Hertzog & Korn (1963). These nine categories are activity level, rhythmicity, approach/withdrawal, adaptability, intensity or reaction threshold of responsiveness, quality of mood, distractibility, and attention span/persistence. Based on information found within the literature, the following temperament dimensions were explored for the purposes of this study: approach, adaptability, and intensity.

Initial scoring procedures include transferring the mothers responses for each of the BSQ questions to a scoring sheet which is arranged by temperament categories. The scoring sheet can be found in Appendix C. Individuals scoring the BSQ must circle or check the numerical response for each of the test items (range: 1-6). Item responses are then totaled and divided by the number of items rated. This procedure is repeated for each of the temperament categories. The BSQ has a test-retest reliability of .89 and an alpha reliability of .84 (McDevitt & Carey, 1978).

Results

Linear models were used to conduct tests of the hypotheses stated in the introduction. Ordinary least squares (OLS) regression is not appropriate in this case since the dependent variable in this study is a dichotomous variable. Probit and logit analyses are appropriate methods of estimation for the models investigated. According to Aldrich and Nelson (1984) probit and logit procedures yield results that are essentially indistinguishable from each other. Consequently the choice of one procedure over the other is often an arbitrary choice and does not significantly alter the conclusions. For this study, probit analyses were conducted to estimate the models using the Statistical Analysis Systems (SAS) computer program. Analyses consisted of the probit procedure in which single and multiple independent variables were used to predict the presence of imaginary companions. Probit analyses yield significance tests that are two-tailed in nature, however, due to the directional hypotheses stated in the introduction, results from the one-tailed significance tests are presented (Bartz, 1988). Results of the probit analyses are presented in the following sequence: creative potential, social competence, and temperament and are presented in Tables II and III respectively. All of the information regarding the instruments, raw data, and statistical analyses for this project are presented in

Appendices C, D, and E respectively. Mean scores and standard deviations were computed for the imaginary companion group and the control group and are presented in Table 1. Due to test administration difficulties, scores from the Peabody Picture Vocabulary Test were not included in the analyses for this project.

Insert Table 1 about here

Creative Potential

The first analysis examined originality as measured by the Multidimensional Stimulus Fluency Measure (Moran, Milgram, Sawyers, and Fu, 1983). The test of significance on the originality scores for the probit procedure was not significant (approximate $X^2(1) = 1.13$, $p = 0.15$). As a result, it was concluded that originality scores do not predict the presence of imaginary companions.

Originality scores on the MSFM for the imaginary companion group ranged from 7 to 41 ($M = 18.00$, $SD = 8.21$). Originality scores for the control group ranged from 4 to 36 ($M = 14.52$, $SD = 9.58$).

Social Competence

The second analyses examined the social and emotional functioning of the preschool children as measured by the Kohn Social Competence Scale (Kohn, 1988). The interrater reliability was established by asking two teachers who had the most contact with the preschool children to complete the

forms independently. The scores from the teachers were summed to yield the total scores for each of the dimensions which are stated in the Kohn Social Competence Manual (1988) interest-participation (Kohn 1) and cooperation-compliance (Kohn 2). In the case of the children from the private preschool, only one teacher was available to complete the forms. The scores from the teacher were doubled to yield total scores on each of the dimensions. This method of yielding a total score is an acceptable method and is reported in the Kohn Social Competency Manual.

The test of significance on the interest-participation (Kohn 1) scores for the probit procedure was not significant (approximate $X^2(1) = .47$, $p = .25$). As a result, it was concluded that interest-participation (Kohn 1) scores do not predict the presence of imaginary companions.

The scores for the interest-participation dimension (Kohn 1) ranged from 32 to 143 for the imaginary companion group ($M = 97$, $SD = 32.44$) and from 28 to 150 for the control group ($M = 90.05$, $SD = 34.12$).

The test of significance on the cooperation-compliance (Kohn 2) scores for the probit procedure was not significant (approximate $X^2(1) = 1.80$, $p = .09$). As a result, it was concluded that cooperation-compliance (Kohn 2) scores do not predict the presence of imaginary companions.

Scores for the cooperation-compliance dimension (Kohn 2) for the imaginary companion group ranged from -106 to -10 ($M = -39$, $SD = 38.76$) and from -112 to -15 ($M = -51.52$, $SD = 31.65$) for the control group.

Temperament

Mothers were asked to assess their child's temperament using the Behavioral Style Questionnaire developed by McDevitt and Carey (1978). Three of the nine temperament dimensions as identified by McDevitt and Carey (1978) were analyzed for the purposes of this project, including approach, adaptability, and intensity.

The test of significance on the approach scores for the probit procedure was not significant (approximate $X^2(1) = .31$, $p = .29$). As a result, it was concluded that approach scores do not predict the presence of imaginary companions.

Scores for the approach dimension ranged from 1.5 to 5.0 ($M = 3.15$, $SD = .94$) for the imaginary companion group and from 1.4 to 4.3 ($M = 3.01$, $SD = .70$) for the control group.

The test of significance on the adaptability scores for the probit procedure was not significant (approximate $X^2(1) = .24$, $p = .32$). As a result, it was concluded that adaptability scores do not predict the presence of imaginary companions.

Scores for the adaptability dimension ranged from 1.4 to 4.2 ($M = 2.88$, $SD = .80$) for the imaginary companion group and from 1.2 to 3.7 ($M = 2.77$, $SD = .66$) for the control group.

Results from the test of significance on the intensity scores for the probit procedure were significant (approximate $\chi^2(1) = 2.97$, $p = .04$). As a result, it was concluded that intensity scores predict the presence of imaginary companions.

Scores on the intensity dimension for the imaginary companion group ranged from 3.3 to 5.6 ($M = 4.50$, $SD = .63$) for the imaginary companion group. Scores for the control group ranged from 3.2 to 5.3 ($M = 4.15$, $SD = .62$) for the control group.

A model was used which included the following variables: interest-participation (Kohn 1) and cooperation-compliance (Kohn 2). The test of significance on the model was significant for the probit procedure (likelihood ratio Chi square Approximation = 56.26, $p = .04$). As a result, it was concluded that interest-participation (Kohn 1) scores and cooperation-compliance (Kohn 2) scores within a single model predict the presence of imaginary companions.

A model was used which included the following variables: approach, adaptability, and intensity. The test of significance on the model was significant for the probit procedure (likelihood ratio Chi square approximation = 53.45, $p = .04$). As a result, it was concluded that

approach, adaptability, and intensity scores within a single model predict the presence of imaginary companions.

A model was used including all the variables examined in this project. The model included: originality, interest-participation (Kohn 1), cooperation-compliance (Kohn 2), approach, adaptability, and intensity scores. The test of significance on the model for the probit procedure approached significance (likelihood ratio Chi square approximation = 46.53, $p = .07$). As a result, it was concluded that originality, interest-participation (Kohn 1), cooperation-compliance (Kohn 2), approach, adaptability, and intensity within a model did not significantly predict the presence of imaginary companions.

 Insert Table II about here

 Insert Table III about here

When examined as single independent variables, originality, interest-participation (Kohn 1), cooperation-compliance (Kohn 2), approach, and adaptability scores did not predict the presence of imaginary companions. However, results from the probit procedure revealed that intensity scores predicted the presence of imaginary companions. The interest-participation (Kohn 1) scores and cooperation-compliance (Kohn 2) scores within a single model predicted

the presence of imaginary companions. The three temperament variables i.e., approach, adaptability, and intensity scores were examined within a single model and the model was significant. A single model including originality, interest-participation (Kohn 1), cooperation-compliance (Kohn 2), approach, adaptability and intensity scores did not significantly predict the presence of imaginary companions.

Discussion

Considering the findings of this research project, Singer's theory regarding the imaginary companions a part of imaginative behavior seems to be supported. The purpose of this study was to compare personal characteristics of 3, 4, and 5 year old preschool children with imaginary companions and their cohorts without imaginary companions. These personal characteristics included creative potential, social competence, and temperament. Information regarding preschool children with imaginary companions is quite limited. Few studies have explored personal characteristics of preschool children with pretend friends. Investigating several personal characteristics with one group of children with imaginary companions and one group of children without companions is a strength of this study.

Six single independent variables were examined for this research project including: originality, interest-participation (Kohn 1), cooperation-compliance (Kohn 2), approach, adaptability, and intensity. Findings from this study revealed that five of the single variables examined did not predict the presence of imaginary companions in the preschool sample. However, results demonstrated that intensity predicted the presence of imaginary companions for this sample. Higher intensity scores appear to be an influencing factor contributing to the creation of pretend or make-believe friends. Questions from the intensity dimension of the temperament scale describe children as being more involved in their daily activities and highly reactive to situations and events (McDevitt & Carey, 1978). This author believes that children who scored higher on the intensity dimension may be more involved in imaginative ideas and behaviors. Additionally, such children may have a greater potential to create an imaginary companion.

Findings from this study revealed the originality or creative potential scores did not predict the presence of imaginary companions. This finding is consistent with the Manosevitz, Fling, and Prentice (1977) study where no significant differences were found in creativity in their group of children having companions as compared to the control group who had no imaginary companions.

Social Competence

The two social competence dimensions, interest-participation and cooperation-compliance, served as independent variables in a model predicting the presence of imaginary companions; results demonstrated that the model was significant. Children who reported imaginary companions scored higher on the social competence scale than those children who reported no imaginary companions. Findings from this study revealed that together the two aspects of social competence predicted the presence of imaginary companions. It may be that children who have greater social skills may practice and rehearse their social interactions with roles with their pretend or make-believe friends. One other possible explanation is that children who have greater social skills may prefer interacting with others and create an imaginary companion to interact and play with when there are no real children to interact with. It is important to recognize that the social competence scale is a teacher rating. Children who have positive interactions with their teachers may be rated higher on the social competence scale.

Temperament

The three temperament variables: approach, adaptability, and intensity served as independent variables in a model predicting the presence of imaginary companions and results demonstrated that the model was significant. These findings indicate that temperament variables may be related to the creation of imaginary companions. In

examining the norms for the approach adaptability, and intensity dimensions of the Behavioral Style Questionnaire (McDevitt & Cary, 1978), the means for this sample are closer to the withdrawal dimension of the approach-withdrawal continuum and closer to the slow to adapt dimension of the adaptable continuum. These three aspects of personal style i.e., approach, adaptability, and intensity, appear to be contributing characteristics to the creation of pretend friends. Piaget (1962) regards the imaginary companion as a common phenomenon in young children. Although all young children do not have imaginary companions, many may have the potential to create pretend friends. Individual differences in temperament and personal styles appear to be important characteristics in looking at preschool children with imaginary companions. These stylistic differences may influence the child's ability to create and the desire to share information about their imaginary companions with an interviewer.

The six variables: originality, interest-participation, cooperation-compliance, approach, adaptability and intensity served as independent variables in a model predicting the presence of imaginary companions. The full model approached significance but these six variables within a model did not predict the presence of imaginary companions.

The literature suggests that children create imaginary companions as early as 2 1/2 years of age. The mean age for the children with imaginary companions in this sample was 54.1 months. Sixteen three year olds were interviewed for this research project and only four reported a pretend or make-believe friend and were able to provide some type of descriptive information. Many of these three year olds named real friends or classmates. It seems that many of these children did not fully understand the meaning of pretend and make-believe. Many of the three year olds who did report imaginary companions were unable to provide any of the descriptive information asked in the interview. Perhaps many of these children did not have the verbal skills to describe their pretend friends or provide additional information about their relationship. None of these children were included in the group of children with imaginary companions.

There is a need for reliability in future imaginary companion interviews. It is recommended that two individuals listen to the audio tapes separately in order to establish reliability in categorizing the interviews.

Limitations of this Study

It is important to recognize that some of the children may have been reticent about discussing their pretend friends with the interviewers. In one particular case, a child reported that she had no pretend or make-believe friends. However, in conversations with the child's mother,

the mother reported that the child maintained an on-going relationship with several pretend friends.

Even with the findings of this research project, the investigator regards the direct interview with the preschool children as a valid and consistent approach in identifying preschool children with make-believe friends. Many adults may be reticent about discussing their child's make-believe world or may not even be aware of the make-believe character. Many studies have relied on teacher observations to identify these children. The literature suggests that more often the child plays with the imaginary companion when not in the presence of other children. In a recent article regarding young children as informants for research projects, Hatch (1990) suggests several strategies for use with children under seven years of age. These suggestions include taking time to establish personal relationships with the children, emphasizing informal rather than formal interview methods as studies are designed and implemented, and asking questions children can answer, expecting them to answer, and acceptance of their answers. Each of these suggestions was considered and employed in the design and implementation of this research project.

Qualitative Differences

Qualitative differences in descriptions of imaginary companions were found in this sample of preschool children. Many of the children reported personified stuffed animals and dolls. These imaginary companions "snored", "were

nice", and "were bad". Many of the children described imaginative games in which they played with their pretend friends. These ranged from "Eor" playing "bucking bull" to "Tiger" and "Pooh-Bear" playing "coo-coo" and "moo-moo". Some of the children described their companions as sisters and brothers but most of the children labeled their companions as friends. One child reported a magical blue-bird named "Guessy" who lived in the trees. Further research into the qualitative differences of the imaginary companions reported by the preschool sample would be a worthwhile endeavor. This research may lead to more information regarding personality differences of preschool children with imaginary companions.

References

- Alrich, J. H. & Nelson, F. D. (1984). Linear probability, logit, and probit models, A Sage University Paper. Beverly Hills: Sage Publications.
- Ames, L. B., & Learned, J. (1946). Imaginary companions and related phenomena. Journal of Genetic Psychology, 69, 147-167.
- Anastasi, A., & Schaefer, C. E. (1969). Biographical correlates of artistic and literary creativity in adolescent girls. Journal of Applied Psychology, 53, 267-273.
- Bartz, A. E. (1988). Basic statistical concepts (3rd ed.). New York: Macmillan.
- Dunn, L. M., & Dunn, L. M. (1981). Peabody Picture Vocabulary Test - Revised. American Guidance Service, Circle Press, Minnesota.
- Godwin, L. J. (1984). Validity and reliability of an instrument for measuring creativity in preschool children. Unpublished masters' thesis, Virginia Polytechnic Institute and State University, Blacksburg.
- Hatch, J. A. (1990). Young children as informants in classroom studies. Early Childhood Research Quarterly, 5, 251-264.
- Hurlock, E. B., & Burstein, M. (1932). The imaginary playmate: A questionnaire study. Journal of Genetic Psychology, 41, 380-391.

- Jalongo, M. R. (1984, January/February). Imaginary companions in children's lives and literature. Childhood Education, 60, 166-171.
- Kalyan-Masih, V. (1986). Imaginary play companions: Characteristics and functions. International Journal of Early Childhood, 18, 30-40.
- Kohn, M. (1988). Kohn problem checklist/Kohn social competence scale. Research edition. New York: Harcourt Brace Jovanovich.
- Manosevitz, M., Fling, S., & Prentice, N. M. (1977). Imaginary companions in young children: Relationships with intelligence, creativity and writing ability. Journal of Child Psychology and Psychiatry, 18, 73-78.
- Manosevitz, M., Prentice, N. M., & Wilson, F. (1973). Individual and family correlates of imaginary companions in preschool children. Developmental Psychology, 8, 72-79.
- McDevitt, S.C., & Carey, W. B. (1978). The measurement of temperament in 3-7 year old children. Journal of Child Psychology and Psychiatry and Related Disciplines, 19, 245-253.
- Moore, L. C., & Sawyers, J.K. (1987). The stability of original thinking in young children. Gifted Child Quarterly, 31, 126-129.
- Moran, J. D. III, Milgram, R. M., Sawyers, J. K., & Fu, V. R. (1983). Original thinking in preschool children. Child Development, 54, 921-926.

- Nagera, H. (1969). The imaginary companion: Its significance for ego development and conflict solution. Psychoanalytic Study of the Child, 24, 165-196.
- Piaget, J. (1962). Play, dreams and imitation in childhood. New York: Norton.
- Schaefer, C. E. (1969). Imaginary companions and creative adolescents. Developmental Psychology, 1, 747-749.
- Schaefer, C. E., & Anastasi, A. (1968). A biographical inventory for identifying creativity in adolescent boys. Journal of Applied Psychology. 52, 42-48.
- Singer, J. L. (1973). The child's world of make-believe. New York: Academic Press.
- Starkweather, E. K. (1971). Creativity research instrument designed for use with preschool children. Journal of Creative Behavior, 5, 245-255.
- Svendsen, M. (1934). Children's imaginary companions. Archives of Neurology and Psychiatry, 2, 985-999.
- Thomas, A., Chess, S., Birch, H. G., Hertzog, M. E. & Korn, S. (1963). Behavioral Individuality in Early Childhood. New York: University Press.
- Vostroskey, C. (1895). A study of imaginary companions. Education, 15, 393-398.
- Wallach, M.A., & Kogan, N. (1965). Modes of thinking in creative young children: A study of the creativity-intelligence distinction. New York: Holt, Rinehart & Winston.

Table 1

Means and Standard Deviations

Variables	Range of scores for this sample	Imaginary Companion Group			Control Group		
		N	Mean	S.D.	N	Mean	S.D.
orig	(4-41)	21	18.00	8.21	21	14.52	9.58
K1	(28-150)	21	97.00	32.44	21	90.05	34.12
K2	(-106- -10)	21	-39.00	28.76	21	-51.52	31.65
App	(1.4-5.0)	20	3.15	.94	21	3.01	.70
Adp	(1.2-4.2)	20	2.88	.80	21	2.77	.66
int	(3.2-5.6)	20	4.50	.63	21	4.15	.62
S	(0-1)	21	0.43	0.51	21	0.43	0.51
Age	(44-65)	21	54.10	5.28	21	54.05	5.82
Sib	(0-4)	21	1.14	0.85	21	1.05	0.59

Table II

Probit Analyses for Single Independent Variables

Variables	Estimate	Chi Square	One-tail p
Originality	-0.03	1.13	.15
Interest -			
Participation (Kohn 1)	-0.00	.47	.25
Cooperation-			
Compliance (Kohn 2)	-0.01	1.80	.09
Approach	-0.13	.31	.29
Adaptability	-0.13	.24	.32
Intensity	-0.56	2.97	.04

Table III

Probit Analyses for Multiple Independent Variables

Variables	Likelihood Ratio Chi Square	p
Social Competency	56.26	.04
Interest-Participation (Kohn 1)		
Cooperation-Compliance (Kohn 2)		
Temperament	53.45	.04
Approach		
Adaptability		
Intensity		
Full model	46.53	.07
Originality		
Interest-Participation (Kohn 1)		
Cooperation-Compliance (Kohn 2)		
Approach		
Adaptability		
Intensity		

APPENDIX A
LITERATURE REVIEW

Years ago, children who reported having imaginary companions were often considered to be hallucinating and even schizophrenic. Some of these myths have changed, but many people still regard children with imaginary companions as being extremely removed from reality and cause for concern.

The first study concerning imaginary play companions was conducted by Vostroskey in 1895. Even with this early research, few studies have been conducted exploring the phenomenon of imaginary companions. Despite the lack of information, there exists a small but rich literature regarding imaginary companions. Much of the literature refers to Svendsen's (1934) definition of the imaginary companion.

According to Svendsen, it:

implies an invisible character; named and referred to in conversation with other persons or played with directly for a period of time, at least several months, having an air of reality for the child, but for no apparent objective basis. This excludes that type of imaginative play in which an object is personified, or in which the child himself assumes the role of some person in his environment (p. 988).

The literature also suggests that imaginary companions can be animals, humans, stuffed animals, and even personified objects. Manosevitz, Prentice, and Wilson

(1973) defined the imaginary companion as a very vivid imaginary character (person, animal or object) with which the child interacts during play and daily activities.

Incidence of Imaginary Companions

The incidence reported in the literature of imaginary companions in young children varies. Svendsen (1934) reports that imaginary playmates are not a common phenomenon to all children. Hurlock and Burstein (1932) developed a questionnaire for their study aimed at finding: 1) the commonness of the phenomenon, 2) the background of the child, and 3) facts about the imaginary playmate. The questionnaire was answered by 701 high-school and college students. Hurlock and Burstein chose adults for the subjects in their study because they believed that children were reticent about discussing their imaginary companions with adults and obtaining first-hand information from these children would be difficult. However, this method, too, is subject to error because of the drastic effects of time on memory. Hurlock and Burstein reported that 31 percent of the women recalled having imaginary companions in comparison to 23 percent of the men. These researchers found in their study that the creation of the imaginary playmate seems to occur more often among girls than boys. The women reported that the imaginary companion first appeared between the ages of five and seven. Men experienced the phenomena at a later age, usually after the age of ten.

Svendsen (1934) focused attention on some of the individual and environmental factors thought to be associated with the phenomenon. Her sample was selected from 119 children from a Chicago suburb between the ages of 3 and 16. She found that 40 of these children had, or at one time, had one or more imaginary playmates for a minimum period of several months. Svendsen obtained some of the information for her study through a direct interview with each of the children. As a supplement to this information, Svendsen interviewed each of the mothers to obtain information regarding the child's social history. A school report of academic and social adjustment was obtained as well as an intelligence test.

In another study conducted by Ames and Learned (1946), 21 percent of the 210 children from the Yale Clinic of Child Development gave evidence of having imaginary companions. One hundred and ten of these children were enrolled in the Guidance Nursery. The children were between 2 and 4 years of age. One hundred research cases were added from Dr. Frances Ilg's guidance files. The records on these children were available from 2-3 years of age up to 5-10 years of age. Data for Ames and Learned's study was obtained through parent interviews and by direct observation of the children during play. The purpose of their study was to present the main types of imaginative behavior commonly observed in the preschool child.

Using a parental questionnaire, Manosevitz, Prentice, and Wilson (1973) investigated the familial and individual factors associated with the presence of imaginary companions in 222 preschool children between the ages of 3 and 5. In their sample, 63 of the boys and girls as reported by their parents had one or more imaginary companions, while 159 were reported as never having had an imaginary companion.

Functions Served by the Imaginary Companion

There has been much concern about whether the imaginary companion is a healthy and normal developmental occurrence in young children. When trying to understand the purposes served by imaginary companions, it is important to be aware of the potential functions such fantasy may serve for children.

Ames and Learned (1946) believe that imaginary companions may occur as part of the natural development of some children, determined by internal factors, and occurring as part of the normal development of imaginative behavior. Singer (1973) also regards the imaginary character as part of the normal development of imaginative behavior.

Piaget (1962) believes that imaginary companions are a common phenomenon to young children and the companions are viewed as an indicator of the healthy development of the child's symbolic or fantasy play.

Pines (1978) describes the role of the imaginary playmate as a true companion.

According to Pines:

whatever their breed, sex or character, the playmates have one thing in common: they talk a lot, and listen even more. They corroborate the children's stories; they share accounts of how unfair the world is; they give unfailing support . . . these imaginary playmates represent an invaluable tool that allow children to rehearse themselves in certain roles and to prepare for life's real problems (p. 41).

According to Jalongo (1984), children create imaginary companions for numerous reasons, but despite each companion's unique characteristics, he, she, it, or they appear to have a protective role. Imaginary companions insulate the child from peer rejection, free the child from guilt, or become a caricature of fears that can be placed under the child's supervision and control.

Fraiberg (1959) describes the imaginary companion created by her niece, Jannie during a time when Jannie was frightened by animals who could bite. Jannie creates a bashful, cowardly beast, named Laughing Tiger. Using fantasy and imagination Jannie transforms the beast into a friendly, laughing one, who is afraid of children, especially his mistress. Through imagination, Jannie was able to take control of her fears and anxieties. According to Fraiberg, these experiences with imaginary companions can have a positive effect upon the mental health of a child.

Nagera (1969) describes several potential functions of the imaginary companion that were formulated during the psychoanalytic period. The imaginary companion serves a variety of functions depending on the various needs of the child. First, the playmate may serve as a superego prop for children. In this manner, the child may use his pretend friend to help him avoid doing something he has come to know as "bad".

Very often, the child uses his imaginary companion as a scapegoat. In this way, the child attempts to avoid the criticism of his parents, tries to maintain his self-love, and by identifying the imaginary companion as the naughty one, he moves toward a self-critical attitude that will eventually lead to self-control.

Another function the imaginary companion may serve to prolong the child's feelings of omnipotence and control. The playmate is a 'necessary, intermediate step' between accepting the true feelings of the child's omnipotence and realizing that control ultimately lies within the hands of his parents (Nagera, 1969, p. 182). Benson and Pryor (1973) also wrote on this aspect of imaginary companions.

Nagera also states that children may create playmates who are an impersonation of the child's primitive ego ideals. The companion is good, strong, lovable, etc. Nagera also speaks of the companion as an outlet for expressing the negative aspects of the young child's ambivalence in regard to his relationship with his parents.

The imaginary companion may be used for defiance and provocation. Finally, Nagera describes the feelings of loneliness, neglect, and rejection that frequently motivate children to create imaginary companions.

Age of the Child Who Experiences An Imaginary Companion

The imaginary companion's first appearance is significantly related to the child's age (Somer & Yawkey, 1984). Hurlock and Burstein (1932) found that among the women in their study, the age range in which the imaginary companion first appeared was between five and seven years. Men who remembered having imaginary companions reported a later first appearance, usually around ten years of age. In Svendsen's (1934) study, the median age of appearance in this group was reported to be 2 years and 5 months. Ames and Learned (1946) reported that the appearance of these playmates occurred most often between the ages of 36 and 48 months. In Nagera's (1969) study at the Hamstead Clinic, he observed the appearance most frequently in children between the ages of 2 1/2 to 3 years and 9 1/2 to 10 years. The majority of the children who had a companion were in the earlier age range.

Kalyan-Masih (1986) investigated some of the characteristics of children with imaginary play companions, the characteristics of the imaginary play companion itself, and family characteristics of the child. Children who played with imaginary companions were identified by parents and teachers at two nursery schools and one kindergarten.

Her sample consisted of 44 children (15 boys, 29 girls; mean age 57.3 months) having imaginary companions and 48 children (24 boys, 24 girls; mean age 60.2 months) having no imaginary companions. The Stanford-Binet and Peabody Picture Vocabulary Test as well as selected Piagetian tasks - Seriation, Classification, Number, Left-Right, and Mass were administered to assess intelligence. Data for this study were also obtained through a demographic questionnaire completed by the parents. The parents of children with imaginary companions completed an additional questionnaire regarding their child's imaginary companion. Parents and children in this group were also interviewed. Parents in this study reported the imaginary companion first appeared when the child was between 2 1/2 and 3 1/2 years of age. Across the literature, the major age range for the appearance of imaginary companions is between the ages of 2 1/2 and 9.

Family Structures, Environmental Factors, and Personality Characteristics That Influence the Development of Imaginary Companions

The family structure and home environment are associated with the development of imaginary companions in young children. Several studies cite evidence that the size of the family does not influence the creation (Hurlock & Burstein, 1932; Svendsen, 1934). Svendsen (1934) found that although the phenomenon is encountered in families of all sizes, the important consideration is the size of the family

at the time the child creates the companion. In her sample, 50 percent of the selected children were the only child at the time of their companion creations. Ames and Learned (1946) found that the subjects in their study were only children or had only one or two siblings. Kalyan-Masih (1986) also found that the oldest or only children in her study were more likely to experience the phenomenon. Manosevitz, Prentice and Wilson (1973) reported that 73% of the imaginary companion subjects in their study were only or first born children. Sixty-one percent of the children with imaginary companions had no siblings at the time of the appearance of the imaginary companion. Findings of these studies indicate that chronological proximity to siblings appears to be a significant factor contributing to the development of imaginary companions.

Firstborn or only children are subject to the development of imaginary companions because social interaction with siblings and peers is limited. With the development of companions, children can practice and develop social and language skills which might otherwise develop more slowly as a result of little age-mate interaction (Manosevitz, et al., 1973).

In Kalyan-Masih's (1986) investigation of family characteristics of children with imaginary companions, she found no significant differences between the imaginary companion and the non-imaginary companion group of parents on age, education, socioeconomic level, or family size.

Manosevitz, Prentice and Wilson (1983) found that nuclear family disruption does not appear to be a contributing factor to the creation of imaginary companions.

Although many of the children who created imaginary companions were from families with little or no sibling interaction, the opportunities for play with other children were not lacking. Children with many real playmates also give evidence of creating imaginary companions (Ames and Learned, 1946; Manosevitz, et al., 1973; Kalyan-Masih, 1986). Manosevitz, Prentice and Wilson (1983) found that there were no significant differences between the two groups in their study on household members, number, age, and sex of playmates, or number of pets.

Parents in the Manosevitz, et al. (1983) study were asked to complete a seven adjective checklist that described their child's play at home. The home play of 97% of the children who had imaginary companions was described as "self-initiated", in comparison to 86% of the children who did not have imaginary companions. The home play of the imaginary companion group was described as "quiet" for 18% of these children and for 34% of the non-imaginary companion group. Manosevitz, et al. (1973) suggest that these differences in self-initiation and quiet play imply that the child who has an imaginary companion may be more capable to engross himself in play activities.

Svendsen (1934) revealed that some form of personality difficulties were reported for 35 of the 40 selected children in her study. Timidity was the personality difficulty most often reported.

Parents in the Manosevitz, et al. (1983) study were also asked to rate their child's personality on two dimensions using a 7-point scale. The first dimension was characterized at one end by "shy and reserved" and at the other end by "open and outgoing". The children in both groups were rated as more open and outgoing than average. The second dimension was characterized at one end by "very adept to talking and interacting with adults", and at the other end by "talks and interacts much easier with children than adults". Parents of children with imaginary companions rated their children as being more verbal and able to interact with adults than did parents of children who did not have imaginary companions.

Intelligence, Creativity and Waiting Ability of Children With Imaginary Companions

The assumption is often made that those children who have had imaginary companions are more intelligent and more creative than those who have not. Shaefer (1969) explored the relationship between the reported occurrence of childhood imaginary companions and creativity in 800 high school students. He found that creative adolescents of the literary nature reported this childhood fantasy more often than did their matched controls. Shaefer and Anastasi

(1968) investigated this further in their study of 400 high school males. They found that the visually creative adolescent boy was more likely than any other controls to report imaginary companions and childhood daydreaming. This was also reported for adolescent girls as well (Anastasi & Shaefer, 1969).

Manosevitz, Fling and Prentice (1977) explored creativity, intelligence and waiting ability in 42 children who had been identified by parental report as having imaginary companions. There were no significant differences found in creativity, intelligence, or waiting ability in the group of children having imaginary companions as compared to the control group. The findings of this study are inconsistent with previous studies. The conflicts may be a result of differences in sampling procedures, age of subjects, or methods used to measure the three variables.

Kalyan-Masih (1986) also explored intelligence as a factor associated with the creation of imaginary companions. Results of her study indicate that there are no significant differences in intelligence between the imaginary companion group and the non-imaginary companion group. In regard to the five Piagetian tasks, Kalyan-masih reported that the two groups were more alike than different.

Descriptive Data on Imaginary Companions

Imaginary Companions are very realistic to their creators and the personality and physical characteristics attributed to the playmates are of the child's imagination.

Although these playmates are imaginary, they are as vivid and real to the child as a living playmate would be (Hurlock and Burstein, 1932).

In most instances, male children are more likely to have male imaginary playmates. Female children show a lesser tendency to have imaginary companions of the same sex. Often, the age of the companion is unknown (Manosevitz, et al., 1973). In some cases the age and sex of the imaginary companion are the same as the child (Kalyan-Masih, 1986).

Girls with imaginary companions are able to give more definite descriptions of their playmate than boys (Nagera, 1969). Because children are able to give descriptions of the appearance of their companions, there is an indication that the experience is accompanied by visual imagery (Svendsen, 1934).

Most children have only one imaginary companion but a small portion have 2 or more of these playmates (Manosevitz, et al., 1973). Children refer to their imaginary companions using common names and names of television characters, but sometimes create their own names (Manosevitz, et al., 1973; Kalyan-masih, 1986). The imaginary companion has it's own identity but at any moment, the name, sex, or age could change to suit the child's wishes and to fit the particular circumstances (Kalyan-Masih, 1986).

Svendsen (1934) found that the imaginary companion did not live in the child's home, even when the playmate was

conceived as a sibling. Some imaginary companions are labeled as relatives, but it is more common for the companion to have the role of a playmate and friend (Ames & Learned, 1946; Kalyan-Masih, 1986). Imaginary companions can be animals, humans, and even personified objects (Ames and Learned, 1946). In one study, parents reported that their child's imaginary companion most often resembled a person or animal (Kalyan-Masih, 1986).

Svendsen (1934) found that children played with their companions in such a way as to indicate that the companion was conceived of as occupying space. The children spoke to them directly and many had a place set for them at the table. Activities shared with imaginary companions are very pleasurable and highly imaginative.

Kalyan-Masih (1986) found that the imaginary companion was very real to the child but most often played with the companion when alone.

Manosevitz, Prentice and Wilson (1973) found that 93 percent of the children in their study preferred not to interact with their imaginary companion when there were other children to play with. Svendsen (1934) found that imaginary companions were talked about freely in the family or within the hearing range of family members. Hurlock and Burstein (1932) found that boys showed greater reticence than girls in discussing the activities shared with their companions with other people. Data for Svendsen's (1934) study was also obtained through a recorded interview with

each of the children. When questioned by a stranger about their imaginary companions, 5 of the children greeted the first questions with smiles. Sixteen of the children took the question seriously and answered the questions in the same manner.

There have been concern whether the child's view of the imaginary companion is realistic or unrealistic. In Svendsen's (1934) study, the make-believe character of the play was established in one little girl by 4 years and nine months of age. There appears to be a transition period from 5 to 6 years. A child aged 3 remarked, "They're crazy things" (Svendsen, 1934, p. 997). Another child at the age of 5 stated, "in my heart I can see him" (Svendsen, 1934, p. 977). Both of these statements imply that children are able to draw some distinction between imaginary and real playmates.

Ames and Learned (1946) reported that the usual duration of this phenomenon is from 36 to 42 months, or from 42 to 48 months. The duration of the imaginary companion varied in Kalyan-Masih's study between one to four years.

Information regarding the disappearance of the imaginary companions is difficult to obtain. Svendsen (1934) found that there is evidence that imaginary companions are played with more secretly as a result of the child becoming aware of social disapproval. Several studies imply that the playmate disappears when the child begins school and there is an increase in the opportunities for

companionship (Hurlock & Burstein, 1932; Svendsen, 1934). Hurlock and Burstein found that the last appearance of the imaginary companion occurs much later among boys and among girls, but for both groups the most frequent time was after ten years of age.

Parental Views of Imaginary Companions

Few studies have focused on parental attitudes of children's imaginary companions. Brookes and Knowles (1982) conducted a study using an interview and a questionnaire of such attitudes. Results of their study indicated that parents did not hold a very positive attitude toward their children playing with imaginary companions. Many of these parents reported that they would make a neutral response, neither encouraging or discouraging their children in their play with their imaginary companions. A substantial portion of the parents indicated that they would discourage this play. In comparison, Svendsen's (1934) study showed that in 36 of the 40 cases that imaginary companions were accepted and even encouraged. In the Manosevitz, et al. (1973) study, 50% of the parents encouraged the imaginary companion, 43% of the parents ignored the companion, and only 7% discouraged the child's imaginary companion. Kalyan-Masih (1986) found that parents whose children had imaginary companions remembered more often having their own imaginary companions. Mothers reported having experienced this phenomenon more often than fathers. Kalyan-Masih

suggests that some of the mothers may have been more tolerable or even encouraged this type of fantasy play.

Upon reviewing the literature regarding imaginary companions, it is clear that there is a need to explore this phenomenon further. The literature reflects three approaches to understanding the role of the imaginary companion. The first approach, as described by Nagera, reflects the psychoanalytic view. The second approach reflects the Piagetian aspect of the phenomenon. In this regard, the imaginary companion is viewed as an indicator of the healthy development of the child's symbolic or fantasy play. Others regard the imaginary companion as a part of the normal development of imaginative behavior (Singer, 1973; Ames & Learned, 1946). The literature suggests that children create imaginary companions for numerous reasons, but for whatever purpose the imaginary companion appears to be an important aspect of the child's intellectual, creative, and social development.

References

- Ames, L. B., & Learned, J. (1946). Imaginary companions and related phenomena. Journal of Genetic Psychology, 69, 147-167.
- Anastasi, A., & Schaefer, C. E. (1969). Biographical correlates of artistic and literary creativity in adolescent girls. Journal of Applied Psychology, 53, 267-273.
- Brooks, M., & Knowles, D. (1982). Parents' views of children's imaginary companions. Child Welfare, 61, 25-33.
- Dunn, L. M., & Dunn, L. M. (1981). Peabody Picture Vocabulary Test - Revised. American Guidance Service, Circle Press, Minnesota.
- Fraiberg, S. H. (1959). The magic years. New York: Charles Scribner's Sons.
- Godwin, L. J. (1984). Validity and reliability of an instrument for measuring creativity in preschool children. Unpublished masters' thesis, Virginia Polytechnic Institute and State University, Blacksburg.
- Hurlock, E. B., & Burstein, M. (1932). The imaginary playmate: A questionnaire study. Journal of Genetic Psychology, 41, 380-391.
- Jalongo, M. R. (1984, January/February). Imaginary companions in children's lives and literature. Childhood Education, 60, 166-171.

- Kalyan-Masih, V. (1986). Imaginary play companions: Characteristics and functions. International Journal of Early Childhood, 18, 30-40.
- Kohn, M. (1988). Kohn problem checklist/Kohn social competence scale. Research edition. New York: Harcourt Brace Jovanovich.
- Manosevitz, M., Fling, S., & Prentice, N. M. (1977). Imaginary companions in young children: Relationships with intelligence, creativity and waiting ability. Journal of Child Psychology and Psychiatry, 18, 73-78.
- Manosevitz, M., Prentice, N. M., & Wilson, F. (1973). Individual and family correlates of imaginary companions in preschool children. Developmental Psychology, 8, 72-79.
- McDevitt, S.C., & Carey, W. B. (1978). The measurement of temperament in 3-7 year old children. Journal of Child Psychology and Psychiatry and Related Disciplines, 19, 245-253.
- Moran, J. D. III, Milgram, R. M., Sawyers, J. K., & Fu, V. R. (1983). Original thinking in preschool children. Child Development, 54, 921-926.
- Nagera, H. (1969). The imaginary companion: Its significance for ego development and conflict solution. Psychoanalytic Study of the Child, 24, 165-196.
- Pines, M. (1978, September). Invisible playmates. Psychology Today, 106, 38-42.

- Schaefer, C. E. (1969). Imaginary companions and creative adolescents. Developmental Psychology, 1, 747-749.
- Schaefer, C. E., & Anastasi, A. (1968). A biographical inventory for identifying creativity in adolescent boys. Journal of Applied Psychology. 52, 42-48.
- Somers, J., & Yawkey, T. D. (1984). Imaginary play companions: Contributions of creative and intellectual abilities of young children. Journal of Creative Behavior, 18, 77-89.
- Starkweather, E. K. (1971). Creativity research instrument designed for use with preschool children. Journal of Creative Behavior, 5, 245-255.
- Svendsen, M. (1934). Children's imaginary companions. Archives of Neurology and Psychiatry, 2, 985-999.
- Thomas, A., Chess, S., Birch, H. G., Hertzog, M. E. & Korn, S. (1963). Behavioral Individuality in Early Childhood. New York: University Press.
- Vostroskey, C. (1895). A study of imaginary companions. Education, 15, 393-398.
- Wallach, M.A., & Kogan, N. (1965). Modes of thinking in creative young children: A study of the creativity-intelligence distinction. New York: Holt, Rinehart & Winston.

APPENDIX B
LETTERS TO PARENTS



Oklahoma State University

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 744-5057

February 26, 1990

Dear Parents,

I am a graduate student in the Department of Family Relations and Child Development at Oklahoma State University. For my Master's thesis, I will be conducting an investigation focusing on personal characteristics of preschool children with imaginary companions. As a part of this research, I would like to interview your child to find out if he/she has an imaginary companion as well as obtaining information regarding the imaginary companion. The interview is composed of ten questions and will take approximately 8 to 10 minutes. The interview will be conducted in the small group room within your child's classroom during the self-select center times of the daily schedule. Your child will be interviewed by a trained graduate student and the interview will be tape recorded. I am also requesting your permission to use an edited tape of your child's recorded interview for research presentations. The audio tapes will be edited and your child will not be personally identified in the edited audio tapes. The interview is nonjudgmental with no correct or incorrect answers. In addition to the interview, I will also use the following information that was collected during the 1989 Fall semester as a part of the Child Development Laboratories Data Base: the Multidimensional Stimulus Fluency Measure; the Peabody Picture Vocabulary Test; the Kohn Social Competence Scale; and the Behavioral Style Questionnaire.

The purpose of this letter is to request permission for your child to be interviewed for this research project and to participate as a subject. All of the information gathered regarding your child will remain confidential and your child will not be personally identified in the study. The audio tapes of the interview will be kept in the research office of the Child Development Laboratories during the time of the study and will be destroyed at the completion of this research project.



Celebrating the Past Preparing for the Future

If you have any questions concerning this research project please contact Dr. Donna Couchenour, the director of the Child Development Laboratories, or Heidi Welch, the investigator, at 744-5730. For information regarding the legal rights of research subjects you may contact Terry Macuila in the Office of University Research Services, 001 Life Sciences East, Oklahoma State University, (405) 744-5700.

Please return the attached consent form to Mary Wilson in the Child Development Laboratories Office, 101 Family & Child Sciences Center, Oklahoma State University, by Friday, March 2, 1990. The interviews will begin on Monday, March 12, 1990. Your cooperation is greatly appreciated.

Respectfully,

Heidi Welch

Heidi Welch
Investigator

Donna Couchenour

Donna Couchenour, Ph.D.
Director, Child Development Laboratories

CONSENT FORM

" I, _____, hereby authorize Heidi Welch to interview my child, _____, for her research project."

" I understand that the interview is composed of ten questions and will take approximately 8-10 minutes. All of the information gathered on my child will remain confidential and my child will not be personally identified in this study. A code number will be assigned to my child and this code number will not be used for identification purposes. I understand that the findings of this study will be reported for the group and not for the individual."

" I understand that the purpose of this procedure is to collect information for an investigation entitled 'Personal Characteristics of Preschool Children with Imaginary Companions.' The purpose of this study is to examine personal characteristics of 3,4, and 5 year old preschool children with imaginary companions."

" I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director. I may contact Heidi Welch for further information about this research project at (405) 744-5730. I may also contact Terry Macula, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, Oklahoma 74078: Telephone (405) 744-5700."

"I have read and fully understand the consent form. I sign it freely and voluntarily. I understand that I will be given a copy of this consent form."

Signed _____ Date _____
(signature of subject's parent)

Child's name: _____

" I further authorize Heidi Welch to use an edited tape of my child's recorded interview for research presentations."
Yes _____ No _____

Signed _____ Date _____
(signature of subject's parent)



Oklahoma State University

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 624-5057

March 19, 1990

Dear CDL Parents:

I am hopeful that you are still considering allowing your child to participate in my thesis research on imaginary companions. If that is true, it is not too late to return the consent form. I have attached another copy of this consent form for your convenience.

If you have comments or questions about the study, please contact me or Dr. Donna Couchenour at 744-5730. Since we are nearing the end of the school term I must complete data collection in the next few weeks. Will you please return the consent form by Friday March 23?

Thank you for your assistance. I will be presenting information from this study at the mini-conference as well as the Friends of CDL meeting on April 12.

Sincerely,

Heidi Welch
Investigator



Celebrating the Past Preparing for the Future



Oklahoma State University

STILLWATER OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 744-5057

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

April 11, 1990

Dear CDL Moms,

As I have gone through data for my research project with preschool children with imaginary companions, I noticed that the enclosed Behavioral Style Questionnaire was not in your child's data folder. As a part of my research project, I am using the mother's report of the child's temperament and would like you to complete the enclosed questionnaire. Please return the questionnaire to me by Monday, April 16, 1990 in Room 114 of the CDL. If I can be of help to you please call me during the day at 744-5730 (CDL) or during the evenings at 624-1559 (home). I appreciate your time and help in this matter. Thanks!

Sincerely,

A handwritten signature in cursive script that reads "Heidi Welch".

Heidi Welch
Investigator



Celebrating the Past Preparing for the Future



Oklahoma State University

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 744-5057

April 25, 1990

Dear CDL Moms,

It's not too late to return the Behavioral Style Questionnaire!! Please return the Questionnaire by Friday, April 27 to your child's teacher. If you need another copy of the Questionnaire, please call me as soon as possible: 744-5730 (work), 624-1559 (home during the evenings).

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Heidi".

Heidi Welch



Celebrating the Past Preparing for the Future



Oklahoma State University

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 744-5057

June 25, 1990

Dear Parents,

I am a graduate student in the Department of Family Relations and Child Development at Oklahoma State University. For my Master's thesis, I am conducting an investigation focusing on personal characteristics of preschool children with imaginary companions. As a part of this research, I would like to interview your child to see if he/she reports having an imaginary companion as well as obtaining information regarding the imaginary companion. The interview is composed of nine questions and will take approximately 8 to 10 minutes. The interview will be conducted within a classroom in the Methodist center. Your child will be interviewed by a trained graduate student and the interview will be tape recorded. I am also requesting your permission to use an edited tape of your child's recorded interview for research presentations. The audio tapes will be edited and your child will not be personally identified in the edited audio tapes. The interview is nonjudgemental with no correct or incorrect answers.

In addition to the interview, I would also like to play two separate games with your child to measure his/her creative potential and receptive vocabulary. Each of these games will take approximately 15-20 minutes and will be conducted within the center. Each of these games are nonjudgemental and will be conducted on separate days.

As another component of my research, I am requesting that each mother complete the attached Behavioral Style Questionnaire. The Behavioral Style Questionnaire is a parental report of your child's temperament. The Behavioral Style Questionnaire is to be completed by the mother.

The purpose of this letter is to request permission for your child to participate as a subject in this research project. All of the information gathered regarding your child will remain confidential and your child will not be personally identified in the study. The audio tapes of the



Celebrating the Past. Preparing for the Future

All of the information regarding your child will remain confidential and your child will not be personally identified in the study. The audio tapes will be kept in a research office during the time of the study and will be destroyed at the completion of this research project.

As emphasized earlier, I may be contacting you to discuss this research project and request permission for your child to participate as a subject in this study. At this time, I will be able to answer any questions that you may have or help with any concerns. Please feel free to contact me if you have any questions about this research project at 744-5730 (work) or at 624-1559 (home). Another letter and consent form will be given to you once I have contacted you and you have agreed to allow your child to participate. I am looking forward to working with you and your child. Your cooperation is greatly appreciated.

Respectfully,

Heidi Welch

Heidi Welch
Investigator



Oklahoma State University

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 744-5057

June 25, 1990

Dear Parents,

I am a graduate student in the Department of Family Relations and Child Development at Oklahoma State University. For my Master's thesis, I am conducting an investigation focusing on personal characteristics of preschool children with imaginary companions. As a part of this research, I would like to interview your child to see if he/she reports having an imaginary companion as well as obtaining information regarding the imaginary companion. The interview is composed of nine questions and will take approximately 8 to 10 minutes. The interview will be conducted within a classroom in the Methodist center. Your child will be interviewed by a trained graduate student and the interview will be tape recorded. I am also requesting your permission to use an edited tape of your child's recorded interview for research presentations. The audio tapes will be edited and your child will not be personally identified in the edited audio tapes. The interview is nonjudgemental with no correct or incorrect answers.

In addition to the interview, I would also like to play two separate games with your child to measure his/her creative potential and receptive vocabulary. Each of these games will take approximately 15-20 minutes and will be conducted within the center. Each of these games are nonjudgemental and will be conducted on separate days.

As another component of my research, I am requesting that each mother complete the attached Behavioral Style Questionnaire. The Behavioral Style Questionnaire is a parental report of your child's temperament. The Behavioral Style Questionnaire is to be completed by the mother.

The purpose of this letter is to request permission for your child to participate as a subject in this research project. All of the information gathered regarding your child will remain confidential and your child will not be personally identified in the study. The audio tapes of the



Celebrating the Past Preparing for the Future

interview will be kept in a research office during the time of the study and will be destroyed at the completion of this research project.

If you have any questions concerning his research project please contact Heidi Welch, the investigator, at 744-5730 (work) or at 624-1559 (home), the research director, Dr. Donna Couchenour, at 744-5730. For information regarding the legal rights of research subjects you may contact Terry Macuila in the Office of University Research Services, 001 Life Science East, Oklahoma State University, 744-5700.

Your cooperation is greatly appreciated.

Respectfully,

Heidi Welch

Heidi Welch
Investigator

CONSENT FORM

"I _____ hereby authorize Heidi Welch to include my child, _____ in her research project."

"I further authorize Heidi Welch to interview my child for her project. I understand that the interview is composed of nine questions and will take approximately 8-10 minutes."

"I authorize Heidi Welch to play 2 separate games with my child in order to measure his/her creative potential and receptive vocabulary. I understand that each game will take approximately 15-20 minutes and will be conducted on separate days."

"I understand that all of the information gathered on my child will remain confidential and my child will not be personally identified in this study. A code number will be assigned to my child and this code number will to be used for identification purposes. I understand that the findings of this study will be reported for the group and not for the individual."

"I understand that the purpose of this procedure is to collect information for an investigation entitled 'Personal Characteristics of Preschool Children with Imaginary Companions.' The purpose of this study is to examine personal characteristics of 3,4, and 5 year old preschool children with imaginary companions."

" I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director. I may contact Heidi Welch for further information about this research project at (405) 744-5730. I may also contact Terry Macuila, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, Oklahoma 74078: Telephone (405) 744-5700."

"I have read and fully understand the consent form. I sign it freely and voluntarily. I understand that I will be given a copy of this consent form."

Signed _____ Date _____
(signature of subject's parent)

Child's name: _____

"I further authorize Heidi Welch to use an edited tape of my
child's recorded interview for research presentations."
Yes _____ No _____

Signed _____ Date _____
(signature of subject's parent)



Oklahoma State University

DEPARTMENT OF FAMILY RELATIONS
AND CHILD DEVELOPMENT
COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337
241 HOME ECONOMICS WEST
(405) 744-5057

June 25, 1990

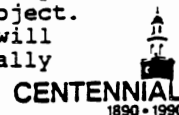
Dear Parents,

I am a graduate student in the Department of Family Relations and Child Development at Oklahoma State University. For my Master's thesis, I am conducting an investigation focusing on personal characteristics of preschool children with imaginary companions. As a part of this research, I would like to interview your child to see if he/she reports having an imaginary companion as well as obtaining information regarding the imaginary companion. The interview is composed of nine questions and will take approximately 8 to 10 minutes. The interview will be conducted in the small group room within your child's classroom during the self-select center times of the daily schedule. Your child will be interviewed by a trained graduate student and the interview will be tape recorded. I am also requesting your permission to use an edited tape of your child's recorded interview for research presentations. The audio tapes will be edited and your child will not be personally identified in the edited audio tapes. The interview is nonjudgemental with no correct or incorrect answers.

In addition to the interview, I would also like to play two separate games with your child to measure his/her creative potential and receptive vocabulary. Each of these games will take approximately 15-20 minutes and will be conducted within the small group room. Each of these games are nonjudgemental and will be conducted on separate days.

As another component of my research, I am requesting that each mother complete the enclosed Behavioral Style Questionnaire. The Behavioral Style Questionnaire is a parental report of your child's temperament. The Behavioral Style Questionnaire is to be completed by the mother.

The purpose of this letter is to request permission for your child to participate as a subject in this research project. All of the information gathered regarding your child will remain confidential and your child will not be personally identified in the study. The audio tapes of the



Celebrating the Past Preparing for the Future

interview will be kept in a research office during the time of the study and will be destroyed at the completion of this research project.

If you have any questions concerning his research project please contact Heidi Welch, the investigator, at 744-5730 (work) or at 624-1559 (home), the research director, Dr. Donna Couchenour, at 744-5730. For information regarding the legal rights of research subjects you may contact Terry Macuila in the Office of University Research Services, 001 Life Science East, Oklahoma State University, 744-5700.

Please return the attached consent form and the Behavioral Style Questionnaire to Heidi Welch by Wednesday, June 27 1990. Your cooperation is greatly appreciated.

Respectfully,

Heidi Welch

Heidi Welch
Investigator

CONSENT FORM

"I _____ hereby authorize Heidi Welch to include my child, _____ in her research project."

"I further authorize Heidi Welch to interview my child for her project. I understand that the interview is composed of nine questions and will take approximately 8-10 minutes."

"I authorize Heidi Welch to play 2 separate games with my child in order to measure his/her creative potential and receptive vocabulary. I understand that each game will take approximately 15-20 minutes and will be conducted on separate days."

"I understand that all of the information gathered on my child will remain confidential and my child will not be personally identified in this study. A code number will be assigned to my child and this code number will to be used for identification purposes. I understand that the findings of this study will be reported for the group and not for the individual."

"I understand that the purpose of this procedure is to collect information for an investigation entitled 'Personal Characteristics of Preschool Children with Imaginary Companions.' The purpose of this study is to examine personal characteristics of 3,4, and 5 year old preschool children with imaginary companions."

" I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director. I may contact Heidi Welch for further information about this research project at (405) 744-5730. I may also contact Terry Macuila, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, Oklahoma 74078: Telephone (405) 744-5700."

"I have read and fully understand the consent form. I sign it freely and voluntarily. I understand that I will be given a copy of this consent form."

Signed _____ Date _____
(signature of subject's parent)

Child's name: _____

"I further authorize Heidi Welch to use an edited tape of my
child's recorded interview for research presentations."
Yes _____ No _____

Signed _____ Date _____
(signature of subject's parent)

APPENDIX C
INSTRUMENTS

Welch

SUBJECT NUMBER: _____
 DATE: _____
 TIME: _____
 INTERVIEWER: _____

IMAGINARY COMPANION INTERVIEW

Primary Questions

1. Do you have a pretend or make-believe friend?
 Probes:
 - a. Have you ever had a pretend friend?
 - b. Do you have a pretend friend that no one else can see?
 - c. Do you have any dolls, stuffed animals, or pets that you like to talk to?

2. Does (did) your pretend friend have a name?

3. What does (did) your pretend friend (include name) look like?

SUBJECT NUMBER: _____

4. Is (was) your pretend friend (include name) always the same?

Probes:

- a. Is (was) your pretend friend (include name) always a boy, girl, animal, or etc.?
- b. Is (was) your pretend friend (include name) always your brother, sister, or friend?

5. Is (was) your pretend friend (include name) with you all the time?

6. Where does (did) your pretend friend (include name) live?

7. Why do (did) you have this friend?

Creativity Research Group

General Instruction for the Examiner

Please bear in mind the following general guidelines:

(1) The establishment of the proper atmosphere for testing and rapport between examiners and subjects is a critical factor in this study. Examiner behavior can significantly affect the research results. Examiners must behave in a friendly manner, create a pleasant atmosphere, and refrain from any behavior which creates the impression of school-type testing and evaluation. The very words and actions of the examiner are critical.

(2) Examiners are requested to arrive early and to make a special effort by means of informal talk to establish rapport. It is imperative not to express anger or impatience at any time. It is important to maintain a pleasant tone in your speech at all times.

(3) Since testing procedures are untimed, each subject will finish at a different time. Allow children enough time to do this task. Do not overschedule.

(4a) The examiner must bear in mind the importance of establishing trust, a pleasant atmosphere, and the desire to participate. The warm-up game is designed to help achieve these goals. The examiner should maintain as natural a

manner as possible while at the same time stimulating the child's interest in the games, and encouraging him to think and to make the maximum effort to give as many responses as possible.

(4b) The examiner should exchange names with the subject, record the name, and continue to call the subject by his first name during the testing session. The child was asked his first name so that the examiner can use it in establishing a more relaxed and friendly atmosphere.

(4c) The examiner says:

Today we are going to play some games. They are a new kind of game which you have probably not played before. We will play several different games. These are thinking and imagination games. You don't have to hurry. We can play as long as you want.

(4d) Refer to specific task instructions for detailed instructions on tasks and answer sheets. Examiner records child's answers verbatim on the form provided. If you do not have enough room use the other side of the answer sheet.

(4e) At the end of the test session the examiner should say to the subject: "That was the last game today. Thank you for your cooperation, you were a big help. You did very well. I'll see you again and play some more games like these."

(5) The examiner is to answer the subject's questions in the following manner:

- (a) Procedural questions are to be answered by repeating the instructions or explaining in synonymous terms.
- (b) Questions designed to elicit help from the examiner are answered by saying "Whatever you think" or "Do what you think is best."
- (c) Children may ask "Is that right?" Respond by saying: "There are no right or wrong answers, whatever you think is fine."

(6) It is important to remember that we are guests within the school and have been allowed the privilege of testing the children. We need to remain courteous at all times. Confidentiality of data must be respected. Also children may refuse to be tested or decide to quit in the middle of a test session. If this occurs use "gentle coercion" to try to persuade the child to stay but if the child will not, discontinue testing for that day and try later in the week.

(7) Be sure to record any irregularities in testing, such as discontinuance, which might occur before, during, or after testing on the form provided for general comments.

(8) In Session I we will be using the following tasks:

- 1. Instances
- 2. Uses
- 3. Patterns

CREATIVITY RESEARCH

Examiner Report Form (1)

Subject # _____ Date _____
Gender M F Experimentor _____
Session I: Time in _____ Time out _____

The examiner says: TODAY WE ARE GOING TO PLAY SOME GAMES.
THEY ARE A NEW KIND OF GAME WHICH YOU HAVE PROBABLY NOT
PLAYED BEFORE. WE WILL PLAY SEVERAL DIFFERENT GAMES. THESE
ARE THINKING AND IMAGINATION GAMES. YOU DON'T HAVE TO
HURRY. WE CAN PLAY AS LONG AS YOU WANT.

Proceed to Task 1.

General Comments:

Instances Task Instructions

"Now we're going to play a game called 'all the things you can think of'. I might say, "tell me things that hurt" and I would like you to tell me as many things as you can think of that hurt. Let's try it. Please tell me all the things you can think of that hurt." (Let the child try to generate responses.) Then reply with, "Yes, that's fine. Some other things that hurt are falling down, getting slapped, fire, getting bruised, a knife, and probably there are a lot of other things too." (The examiner should vary answers so as to give all of these which the child did not give.) Then proceed by saying, "You see that there are all kinds of different answers in this game. Do you know how to play?" (If the child indicates understanding of the game proceed with test items. If the child does not understand repeat procedure from beginning. If the child is still not understanding, terminate test sessions.) The examiner should then say, "Now remember, I will name something and you are supposed to name as many things as you can. Take as long as you want. OK, let's try another" (NO help should be given to the child when test items are being used).

- (1) Name all the things you can think of that are ROUND.
- (2) Name all of the things you can think of that are RED.

When child stops responding ask "What else can you think of? or "Tell me some more things you can think of" until the child indicates he or she has no more responses.

CREATIVITY RESEARCH

INSTANCES

Answer Form

Subject # _____ Time to first response _____

Response time-(first _____
to last response)

Name all the things you can think of that are ROUND:

Child's Responses:

CREATIVITY RESEARCH

INSTANCES

Answer Form

Subject # _____ Time to first response _____

Response time-(first
to last response) _____

Name all the things you can think of that are RED:

Child's Responses:

Uses Task Instructions

"Now today we have a game called 'what can you use it for?' The first thing we're going to play with will be a pencil. (Experimenter hands pencil to child.) I want you to tell me all the things you can think of that you can DO with a pencil, or PLAY with it, or MAKE with it. What can you use a pencil for?" (Let the child try to generate some responses.) Then reply with "Yes, that's fine. Some other things you could use a pencil for are as a flagpole, to dig in the dirt, or you could use a pencil as a mast in a toy boat. Probably there are a lot of other things too. (The examiner should vary answers so as to give all of these which the child did not give.) Then proceed by saying, "You see that there are all different answers in this game. Do you know how to play?" If the child indicates understating of the game, proceed with test items. If the child does not understand, repeat procedure from beginning. If child still does not understand, terminate. The examiner should then say: "Now remember, I will name something and you are supposed to tell as many uses for it as you can think of. Take as long as you want. Let's try this one." NO help should be given to the child on the test items.

(1) What can you use a BOX for?

(2) What can you use PAPER for?

Problems may arise when children ask additional questions. For example, if the child asks, "What size box" the experimenter should reply with a very neutral answer such as "Whatever size you think of." All clarifications of the test questions should be non-committal type.

When the child stops responding, ask, "What else can you think of?" or "Tell me some more things you can think of" until child indicates he or she has no more responses.

CREATIVITY RESEARCH

USES

Answer Form

Subject # _____ Time to first response _____
Response time-(first _____
to last response)

What can you use a BOX for?

Child's Responses:

CREATIVITY RESEARCH

USES

Answer Form

Subject # _____ Time to first response _____

Response time-(first _____
to last response)

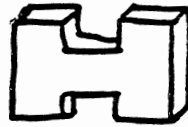
What can you use a PAPER for?

Child's Responses:

PATTERNS (3 Dimensional)

This task deals with the three dimensional designs. The administration of the test should go as follows:

"In this game I'm going to show you some blocks. After looking at each one I want you to tell me all of the things you think each block could be. Here is an example - you can turn it any way you'd like to. (Give the example block to the child.)



"What could this be?"

(Let the child respond.) "Yes, those are fine. Some other things I was thinking of were a bridge, a bed, a building block, a chair, and there are probably a lot of other things too." The experimenter should vary answers so as to give different ones than the child. If the child indicates an understanding of the game, proceed with the tasks.

CREATIVITY RESEARCH

PATTERNS

Answer Form

Subject # _____ Time to first response _____

Response time-(first
to last response) _____

Name all the things you think this could be:

Child's Responses:

CREATIVITY RESEARCH

PATTERNS

Answer Form

Subject # _____ Time to first response _____

Response time-(first _____
to last response)

Name all the things you think this could be:

Child's Responses:



Peabody Picture Vocabulary Test—Revised

INDIVIDUAL TEST RECORD

FORM L

by LLOYD M. DUNN & LEOTA M. DUNN

NAME _____ SEX. M F
(Last) (first) (middle initial) (order)

HOME ADDRESS _____ HOME PHONE _____

SCHOOL _____ GRADE PLACEMENT _____
(or agency) (or education)

TEACHER _____ EXAMINER _____
(or counselor)

LANGUAGE OF THE HOME. Standard English, Other _____
(Specify foreign language or type of English dialect spoken)

Date & Age Data			
	Year	Month	Day
Date of testing	_____	_____
Date of birth	..	_____	_____
Chronological age	..	_____	_____

*If the number of days exceeds 15, add a month to the age (see Part I of the Manual)

Notice to Users
 The PPVT-R is not intended for use in situations where truth-in-testing legislation stipulates that copies of test items and correct responses be distributed to subjects, parents or the general public. Such disclosures may make the norms meaningless in future testing.

Reason for Testing (may include referral source and person authorizing testing)

Copyright 1981 by Lloyd M. Dunn and Leota M. Dunn. It is against the copyright law to reproduce this record by computer, office machine, or any other means.

A 10 9 8 7 6 5 4 3

PUBLISHED BY AMERICAN GUIDANCE SERVICE,
 Publishers Building, Circle Pines, Minnesota 55014



FORM L TEST ITEMS AND ABBREVIATED INSTRUCTIONS

Administering the TRAINING ITEMS

For most subjects under age 8: Use Plates A, B, and C. Administer as many training item series as necessary to secure three consecutive correct responses. For most subjects age 8 and over: Use Plates D and E. Administer as many training item series as necessary to secure two consecutive correct responses.

Training Plate	INITIAL PRACTICE SERIES WORDS & KEYS	ADDITIONAL PRACTICE WORDS & KEYS		
		Alternate Series X	Alternate Series Y	Alternate Series Z
A	doll (4)	fork (1)	table (2)	car (3)
B	man (2)	comb (3)	sock (4)	mouth (1)
C	swinging (3)	drinking (4)	walking (1)	climbing (2)
D	wheel (4)	zipper (2)	rope (1)	rake (3)
E	giant (1)	bride (3)	witch (4)	royal (2)

(Complete directions are given in Part I of the Manual)

Administering the TEST ITEMS

Basal: Highest 8 consecutive correct responses
Ceiling: Lowest 8 consecutive responses containing 6 errors
Starting Point: For a subject assumed to be of average ability, find the person's age circled in the margin, and begin the test with that item. Otherwise consult Part I of the Manual for further instructions.
Recording Responses and Errors: Record the subject's response (1, 2, 3, or 4) for each item administered. For each error, draw an oblique line either through the plate number of the item missed, or through the geometric figure, as illustrated below

32 envelope . . . (2) 4 Ω or 32 envelope . . . (2) 4 ⚡

Every eighth figure is identical to help determine the basal and ceiling.

NOTE

Ages in circles refer to the lowest age in a 6- or 12-month interval. For example, Item 1 is the starting item for ages 2-6 through 3-5, and Item 30 for ages 5-0 through 5-5. Use Item 110 for ages 16-0 and over.

page 4


Plate Number	Word	Key	Response	Error
34	3	1 bus (4)	_____	○
		2 hand (1)	_____	□
		3 bed (3)	_____	△
		4 tractor (2)	_____	Ω
		5 closet (1)	_____	♥
		6 snake (4)	_____	☆
		7 boat (2)	_____	◇
		8 tire (3)	_____	○
		9 cow (1)	_____	□

Plate Number	Word	Key	Response	Error
34	10	lamp (4)	_____	△
	11	drum (3)	_____	Ω
	12	knee (4)	_____	♥
	13	helicopter (2)	_____	☆
	14	elbow (4)	_____	◇
4	15	bandage (4)	_____	○
	16	feather (1)	_____	□
	17	empty (3)	_____	△
	18	fence (4)	_____	Ω
	19	accident (2)	_____	♥
44	20	net (2)	_____	☆
	21	tearing (4)	_____	◇
	22	sail (1)	_____	○
	23	measuring (2)	_____	□
	24	peeling (3)	_____	△
	25	cage (1)	_____	Ω
	26	tool (4)	_____	♥
	27	square (4)	_____	☆
	28	stretching (1)	_____	◇
	29	arrow (2)	_____	○
4	30	tying (2)	_____	□
	31	nest (1)	_____	△
	32	envelope (2)	_____	Ω
	33	hook (3)	_____	♥
	34	pasting (4)	_____	☆
54	35	patting (1)	_____	○
	36	penguin (1)	_____	○
	37	sewing (2)	_____	□
	38	delivering (1)	_____	△
	39	diving (2)	_____	Ω
6	40	parachute (3)	_____	♥
	41	furry (4)	_____	☆
	42	vegetable (4)	_____	◇
	43	shoulder (3)	_____	○

Plate Number	Word	Key	Response	Error	Plate Number	Word	Key	Response	Error
44	dripping.....	(2)	_____	□	78	spatula.....	(3)	_____	○
45	claw.....	(4)	_____	△	79	cooperation....	(4)	_____	□
46	decorated.....	(3)	_____	Ω	80	scalp.....	(4)	_____	△
47	frame	(1)	_____	♥	81	twig.....	(2)	_____	Ω
48	forest.....	(3)	_____	☆	82	weasel.....	(2)	_____	♥
49	faucet.....	(2)	_____	◇	83	demolishing ...	(4)	_____	☆
64 50	group.....	(3)	_____	○	84	balcony.....	(1)	_____	◇
51	stem.....	(3)	_____	□	85	locket.....	(1)	_____	○
52	vase.....	(3)	_____	△	86	amazed.....	(3)	_____	□
53	pedal.....	(1)	_____	Ω	87	tubular.....	(1)	_____	△
54	capsule.	(2)	_____	♥	88	tusk.....	(1)	_____	Ω
7 55	surprised ...	(4)	_____	☆	89	bolt	(3)	_____	♥
56	bark.....	(2)	_____	◇	12 90	communication	(4)	_____	☆
57	mechanic	(2)	_____	○	91	carpenter	(2)	_____	◇
58	tambourine . . .	(1)	_____	□	92	isolation	(1)	_____	○
59	disappointment .	(4)	_____	△	93	inflated	(3)	_____	□
60	awarding.	(3)	_____	Ω	94	coast.....	(3)	_____	△
61	pitcher.	(3)	_____	♥	13 95	adjustable ..	(2)	_____	Ω
62	reel	(1)	_____	☆	96	fragile	(3)	_____	♥
63	signal	(1)	_____	◇	97	assaulting	(1)	_____	☆
64	trunk	(2)	_____	○	98	appliance	(1)	_____	◇
65	human	(2)	_____	□	99	pyramid	(4)	_____	○
66	nostril	(1)	_____	△	14 100	blazing	(1)	_____	□
67	disagreement	(1)	_____	Ω	101	hoisting	(1)	_____	△
68	exhausted	(2)	_____	♥	102	arch	(4)	_____	Ω
69	vine	(4)	_____	☆	103	lecturing	(4)	_____	♥
9 70	ceremony	(4)	_____	◇	104	dilapidated	(4)	_____	☆
71	casserole	(2)	_____	○	15 105	contemplating . .	(2)	_____	◇
72	vehicle	(4)	_____	□	106	canister.	(1)	_____	○
73	globe	(3)	_____	△	107	dissecting	(3)	_____	□
74	filing	(3)	_____	Ω	108	link	(4)	_____	△
75	clamp	(2)	_____	♥	109	solemn	(3)	_____	Ω
76	reptile	(2)	_____	☆	110	archery	(2)	_____	♥
77	island	(1)	_____	◇	111	transparent... (3)	_____	☆	

Plate Number	Word	Key	Response	Error	Plate Number	Word	Key	Response	Error
112	husk	(1)	_____	◇	146	nautical	(3)	_____	☆
113	utensil	(2)	_____	○	147	tangent	(1)	_____	◇
114	citrus	(3)	_____	□	148	inclement	(4)	_____	○
115	pedestrian	(2)	_____	△	149	trajectory	(1)	_____	□
116	parallelogram	(1)	_____	Ω	150	fettered	(1)	_____	△
117	slumbering	(3)	_____	♥	151	waif	(3)	_____	Ω
118	peninsula	(4)	_____	☆	152	jubilant	(2)	_____	♥
119	upholstery	(2)	_____	◇	153	pilfering	(4)	_____	☆
120	barricade	(4)	_____	○	154	repose	(2)	_____	◇
121	quartet	(4)	_____	□	155	carrion	(3)	_____	○
122	tranquil	(3)	_____	△	156	indigent	(2)	_____	□
123	abrasive	(1)	_____	Ω	157	convex	(1)	_____	△
124	fatigued	(3)	_____	♥	158	emaciated	(2)	_____	Ω
125	spherical	(2)	_____	☆	159	divergence	(4)	_____	♥
126	syringe	(2)	_____	◇	160	dromedary	(2)	_____	☆
127	feline	(2)	_____	○	161	embellishing	(2)	_____	◇
128	arid	(4)	_____	□	162	entomologist	(3)	_____	○
129	exterior	(1)	_____	△	163	constrain	(1)	_____	□
130	constellation	(4)	_____	Ω	164	infirm	(1)	_____	△
131	cornea	(2)	_____	♥	165	anthropoid	(3)	_____	Ω
132	mercantile	(1)	_____	☆	166	specter	(4)	_____	♥
133	ascending	(3)	_____	◇	167	incertitude	(2)	_____	☆
134	filtration	(1)	_____	○	168	vitreous	(1)	_____	◇
135	consuming	(4)	_____	□	169	obelisk	(1)	_____	○
136	cascade	(4)	_____	△	170	embossed	(4)	_____	□
137	perpendicular	(3)	_____	Ω	171	ambulation	(2)	_____	△
138	replenishing	(1)	_____	♥	172	calyx	(2)	_____	Ω
139	emission	(3)	_____	☆	173	osculation	(3)	_____	♥
140	talon	(3)	_____	◇	174	cupola	(4)	_____	☆
141	wrath	(3)	_____	○	175	homunculus	(4)	_____	◇
142	incandescent	(4)	_____	□					
143	arrogant	(2)	_____	△					
144	confiding	(3)	_____	Ω					
145	rhombus	(3)	_____	♥					

Calculating Raw Score

Ceiling item _____
 minus errors* _____
 Raw score 

*Count errors between highest basal and lowest ceiling only

Obtained Test Scores

Raw score
(from page 4)

Standard score equivalent
(from Table 1, Appendix A)

Percentile rank
(from Table 3, Appendix A)

Stanine
(from Table 3, Appendix A)

Age equivalent
(from Table 4, Appendix A)

Data from Other Tests

Test	Date	Results
PPVT-R FORM M		

Observations

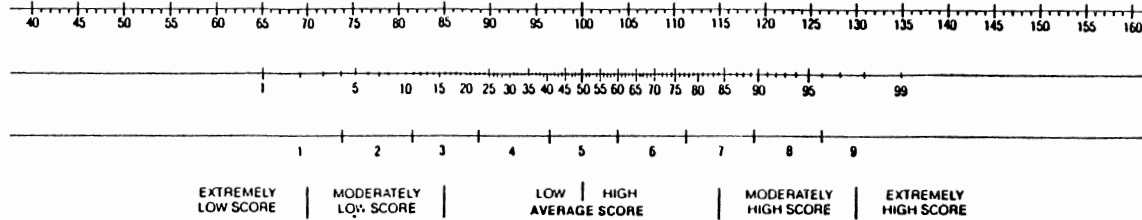
Briefly describe the subject's test behavior such as interest in task, quickness of response, signs of perseveration, work habits, etc.

TRUE SCORE CONFIDENCE BAND

Mark the obtained standard score equivalent on the top scale. Then draw a heavy straight vertical line through it and across the three scales. This line will extend through the three obtained deviation type test scores. Depending upon the obtained standard score shade in a band on both sides of the vertical line using the schedule to the right. An example is given in Figure 1.4 of the Manual.

Obtained Standard Score	AREA TO SHADE		Obtained Standard Score	AREA TO SHADE	
	Left Side	Right Side		Left Side	Right Side
Below 65	0	14	100-109	7	7
65-74	2	12	110-114	8	6
75-84	4	10	115-124	10	4
85-89	6	8	125-134	12	2
90-99	7	7	135 & above	14	0

This shaded area provides a confidence band, the range of scores within which the subject's true scores can be expected to fall 68 times in 100. (These band width values are based on a median standard error of measurement (SEM) of ± 7 with the band widths made increasingly asymmetrical toward the extremes to allow for regression to the mean.) See Part I of the Manual and the Technical Supplement for more precise values and a discussion of SEM confidence bands. Also see the Manual for a discussion of how to calculate the true score confidence band for the age equivalent.



Performance Evaluation

This standardized test provides an estimate only of this individual's hearing vocabulary in Standard English as compared with a cross section of U.S.A. persons of the same age. Do you believe the performance of this subject represents fairly her or his true ability in this area? Yes ___ No ___ If not, cite reasons such as rapport problems, poor testing situation, hearing or vision loss, visual perceptual disorder, test too easy or too hard (automatic, basal or ceiling used), etc.



Recommendations

Examiner's signature

Kohn Social Competence Scale

READY-SCORE™ ANSWER SHEET

Directions. For each item fill in the circle corresponding to the category that best describes the child. Scoring instructions are provided inside the form.

Marking the Answer Sheet. Use a pencil or ball point pen. Press firmly but keep the marks inside the circles. If you make a mistake do not attempt to erase your mark. Make an X on the wrong mark like this  and then mark the space you want. If you decide that your first choice was correct cross out the second answer with an X and circle your first mark like this .

	1	2	3	4	5		1	2	3	4	5
	1	2	3	4	5		1	2	3	4	5
	1	2	3	4	5		1	2	3	4	5
	1	2	3	4	5		1	2	3	4	5
	1	2	3	4	5		1	2	3	4	5
1 Child can communicate his/her needs to the teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17 Child hits teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2 Child seeks adult attention by crying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	18 Child is fearful in approaching other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3 Child seeks adult aid for each step of activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19 Child can accept teacher's ideas and suggestions for play or ways of playing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4 Child is responsible in carrying out requests and directions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	20 Child gets willing cooperation from most other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5 Child seeks physical contact with teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	21 Child gives the appearance of complying with teacher's suggestions but does not do activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6 Child adds freely (verbally or nonverbally) to teacher's suggestions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	22 Child is bossed and dominated by other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7 Child expresses open defiance of authority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	23 Child's ideas have impact on many children in the classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8 Child shies away and withdraws when approached by other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	24 Child rebels physically - for example hits or kicks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9 Child responds with immediate compliance to teacher's direction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	25 Child easily gets attention of other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10 Child can be independent of adult in forming ideas about or planning activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	26 Child has difficulty defending his/her own rights with other children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11 Child frowns shrugs shoulder pouts or stomps foot when teacher makes a suggestion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	27 Child cooperates with rules and regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12 Child can be independent of adult in overcoming difficulties with other children or activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	28 Child dawdles when required to do something	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13 Excessive praise and encouragement from teacher is required for child to participate in activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	29 In play with other children child can shift between leading and following depending on situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14 Other children seem unwilling to play with this child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	30 Child reacts negatively to teacher's ideas and suggestions for play or activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15 Child is unwilling to carry out reasonable suggestions from teacher even when having difficulty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	31 Child is unable to occupy himself/herself without other children directing his/her activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16 Child feels comfortable enough with other children to be able to express his/her own desires or opinions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	32 Child is willing to turn to other children for help and assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Research edition copyright © 1988 by The Psychological Corporation. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher. Printed in the United States of America.

Kohn Social Competence Scale

READY-SCORE™ ANSWER SHEET

Child's Name _____
 Sex _____ Male _____ Female
 Rater's Name _____
 Title/Position _____
 Testing Date _____ Year _____ Month _____ Day _____
 Date of Birth _____
 Child's Age _____

Final Raw Scores.	Factor I Apathy - Withdrawal			Factor II Anger - Defiance		
	1st Rater	2nd Rater or 1st Rater Repeated	Final Raw Score	1st Rater	2nd Rater or 1st Rater Repeated	Final Raw Score





17	5 4 3 2 1					
18	5 4 3 2 1					
19	5 4 3 2 1					
20	5 4 3 2 1					
21	5 4 3 2 1					
22	5 4 3 2 1					
23	5 4 3 2 1					
24	5 4 3 2 1					
25	5 4 3 2 1					
26	5 4 3 2 1					
27	5 4 3 2 1					
28	5 4 3 2 1					
29	5 4 3 2 1					
30	5 4 3 2 1					
31	5 4 3 2 1					
32	5 4 3 2 1					
33	1 2 3 4 5			1 5 4 3 2 1		
34	1 2 3 4 5			2 5 4 3 2 1		
35	1 2 3 4 5			3 5 4 3 2 1		
36	1 2 3 4 5			4 5 4 3 2 1		
37	1 2 3 4 5			5 5 4 3 2 1		
38	1 2 3 4 5			6 5 4 3 2 1		
39	1 2 3 4 5			7 5 4 3 2 1		
40	1 2 3 4 5			8 5 4 3 2 1		
41	1 2 3 4 5			9 5 4 3 2 1		
42	1 2 3 4 5			10 5 4 3 2 1		
43	1 2 3 4 5			11 5 4 3 2 1		
44	1 2 3 4 5			12 5 4 3 2 1		
45	1 2 3 4 5			13 5 4 3 2 1		
46	1 2 3 4 5			14 5 4 3 2 1		
47	1 2 3 4 5			15 5 4 3 2 1		
48	1 2 3 4 5			16 5 4 3 2 1		
49	1 2 3 4 5					
50	1 2 3 4 5					
51	1 2 3 4 5					
52	1 2 3 4 5					
53	1 2 3 4 5					
54	1 2 3 4 5					
55	1 2 3 4 5					
56	1 2 3 4 5					
57	1 2 3 4 5					
58	1 2 3 4 5					
59	1 2 3 4 5					
60	1 2 3 4 5					
61	1 2 3 4 5					
62	1 2 3 4 5					
63	1 2 3 4 5					
64	1 2 3 4 5					

Raw Scores. \square = Factor I Positive Range 21-105 \triangle = Factor II Positive Range 21-105
 \square = Factor I Negative Range 1-70 \diamond = Factor II Negative Range 1-70

Factor Scores \ominus minus \ominus = _____ Factor \triangle minus \diamond = _____ Factor Page 2

TO THE EXAMINER:**Directions for Scoring the Answer Sheet**

This answer sheet allows for the calculation of factor scores on the *Kohn Social Competence Scale*

-  Factor I Positive
-  Factor I Negative
-  Factor II Positive
-  Factor II Negative

Items contributing to the scores for each factor are coded on the reverse side of the answer sheet by the geometric designs given above. Scores for each factor are calculated by simply adding the number of darkened designs which correspond to each of the factors. For example, the numerical values within each darkened circle (1, 2, 3, 4, or 5) are added together to obtain the raw score for Factor I, Positive. In the same way, the numerical values within each darkened square are added together to obtain the raw score for Factor I, Negative. Note that the order of the numerical values differs from one column to the next on the answer sheet. Also be careful to add the correct value when an answer has been changed (crossed out with an X). To obtain the raw scores for the positive and negative portions of Factor II, repeat the procedure used for obtaining the Factor I raw scores by adding together the darkened numerical values appearing within the triangles and diamonds.

Record each of the four raw scores in the spaces provided at the bottom of the answer sheet. Users are cautioned to verify raw scores by adding each score twice and comparing each to the range given for that factor.

Next, for each factor, subtract the negative sum from the positive sum and record the differences in the spaces labeled "Factor Scores." The two Factor Scores are then entered in the spaces at the top of the answer sheet in the area labeled "Final Raw Scores."

In order to use the norms tables, only pooled or doubled scores can be used, therefore, to calculate final raw scores use one of the following methods. (1) obtain the raw scores from a second observer who has rated the same child (on a separate answer sheet) and sum the two ratings in the spaces provided, or (2) double the raw scores when only one rater is available.

The Final Raw Scores for Factor I, Apathy-Withdrawal, and for Factor II, Anger-Defiance, should then be converted to standard scores following the methods described in the *Manual for the Research Edition of the Kohn Problem Checklist/Kohn Social Competence Scale*, The Psychological Corporation, 1988. The manual provides norm tables and further information on the interpretation and use of the Kohn scales.

Kohn Social Competence Scale

READY-SCORE™ ANSWER SHEET

Child's Name _____
 Sex _____ Male _____ Female
 Rater's Name _____
 Title/Position _____

Testing Date. Year _____ Month _____ Day _____
 Date of Birth _____
 Child's Age _____

	Hardly Ever/Never	Seldom	Sometimes	Often	Very Often/Always		Hardly Ever/Never	Seldom	Sometimes	Often	Very Often/Always
33 Child actively defies the teacher's rules and regulations.	1	2	3	4	5	49 Child is bossy and dominating with other children	1	2	3	4	5
34 Child can give ideas to other children as well as accept their ideas.	1	2	3	4	5	50 Child spends time sitting, looking, or wandering aimlessly around	1	2	3	4	5
35 When changing from one activity to another, child resists entering the new activity	1	2	3	4	5	51 Child can remain alert and interested in an activity	1	2	3	4	5
36 Child appears at a loss in unstructured, free-play activities.	1	2	3	4	5	52 Child prevents other children from carrying out routines.	1	2	3	4	5
37 Child easily makes the change from one activity to the next.	1	2	3	4	5	53 Child succeeds in getting others interested in what he/she is doing	1	2	3	4	5
38 Child seems to enjoy playing both with others and by himself/herself	1	2	3	4	5	54 Child shows interest in only a few types of things	1	2	3	4	5
39 Child is hostile or aggressive with other children - for example, pushes, taunts, or bullies	1	2	3	4	5	55 Child puts things away carefully	1	2	3	4	5
40 Other children copy this child's ideas for play	1	2	3	4	5	56 Child is unwilling to play with other children except on his/her own terms	1	2	3	4	5
41 Child has to be a leader in order to participate in activities with other children	1	2	3	4	5	57 Child responds well when the activity is planned or directed by the teacher	1	2	3	4	5
42 Child participates in a half-hearted way	1	2	3	4	5	58 Child disrupts activities of others	1	2	3	4	5
43 Child takes possession of other children's equipment without their permission	1	2	3	4	5	59 Child easily loses interest and flits from one activity to another	1	2	3	4	5
44 Child demonstrates little interest in materials, objects, or activities	1	2	3	4	5	60 Child can participate actively in structured activities as well as free-play activities	1	2	3	4	5
45 Child is open to the ideas and suggestions of other children	1	2	3	4	5	61 Child easily gives up when confronted with a difficulty	1	2	3	4	5
46 Child is responsible in following through on routines - for example, washing hands, cleaning up, or putting toys away	1	2	3	4	5	62 Child shows enthusiasm about work or play	1	2	3	4	5
47 Child is quarrelsome	1	2	3	4	5	63 Child has trouble keeping to the rules of the game	1	2	3	4	5
48 Child seems eager to try new things	1	2	3	4	5	64 Child resists going along with the ideas of other children	1	2	3	4	5

DO NOT WRITE IN THIS AREA

BEHAVIORAL STYLE QUESTIONNAIRE

by
Sean C. McDevitt, Ph.D. and William B. Carey, M.D.

DATA SHEET

Relationship to Child _____

Date of Rating _____
month day year

RATING INFORMATION

1. Please base your rating on the child's recent and current behavior (the last four to six weeks).
2. Consider only your own impressions and observations of the child.
3. Rate each question independently. Do not purposely attempt to present a consistent picture of the child.
4. Use extreme ratings where appropriate. Avoid rating only near the middle of the scale.
5. Rate each item quickly. If you cannot decide, skip the item and come back to it later.
6. Rate every item. Circle the number of any item that you are unable to answer due to lack of information or any item that does not apply to your child.

© Copyright by Sean C. McDevitt, Ph.D. and William B. Carey, M.D., 1975. All rights reserved.

USING THE SCALE SHOWN BELOW, PLEASE MARK AN "X" IN THE SPACE THAT TELLS HOW OFTEN THE CHILD'S RECENT AND CURRENT BEHAVIOR HAS BEEN LIKE THE BEHAVIOR DESCRIBED BY EACH ITEM.

Almost never 1	Rarely 2	Usually does not 3	Usually does 4	Frequently 5	Almost always 6			
1. The child is moody for more than a few minutes when corrected or disciplined.	almost never	1	2	3	4	5	6	almost always
2. The child seems not to hear when involved in a favorite activity.	almost never	1	2	3	4	5	6	almost always
3. The child can be coaxed out of a forbidden activity.	almost never	1	2	3	4	5	6	almost always
4. The child runs ahead when walking with the parent.	almost never	1	2	3	4	5	6	almost always
5. The child laughs or smiles while playing.	almost never	1	2	3	4	5	6	almost always
6. The child moves slowly when working on a project or activity.	almost never	1	2	3	4	5	6	almost always
7. The child responds intensely to disapproval.	almost never	1	2	3	4	5	6	almost always
8. The child needs a period of adjustment to get used to changes in school or at home.	almost never	1	2	3	4	5	6	almost always
9. The child enjoys games that involve running or jumping.	almost never	1	2	3	4	5	6	almost always
10. The child is slow to adjust to changes in household rules.	almost never	1	2	3	4	5	6	almost always
11. The child has bowel movements at about the same time each day.	almost never	1	2	3	4	5	6	almost always
12. The child is willing to try new things.	almost never	1	2	3	4	5	6	almost always
13. The child sits calmly while watching TV or listening to music.	almost never	1	2	3	4	5	6	almost always
14. The child leaves or wants to leave the table during meals.	almost never	1	2	3	4	5	6	almost always
15. Changes in plans bother the child.	almost never	1	2	3	4	5	6	almost always
16. The child notices minor changes in mother's dress or appearance (clothing, hairstyle, etc.).	almost never	1	2	3	4	5	6	almost always

Almost never	Rarely	Usually does not	Usually does	Frequently	Almost always
1	2	3	4	5	6
17. The child does not acknowledge a call to come in if involved in something.				almost never	1 2 3 4 5 6 almost always
18. The child responds to mild disapproval by the parent (a frown or shake of the head).				almost never	1 2 3 4 5 6 almost always
19. The child settles arguments with playmates within a few minutes.				almost never	1 2 3 4 5 6 almost always
20. The child shows strong reaction to things, both positive and negative.				almost never	1 2 3 4 5 6 almost always
21. The child had trouble leaving the mother the first three days when he/she entered school.				almost never	1 2 3 4 5 6 almost always
22. The child picks up the nuances or subtleties of parental explanations (example: implied meanings).				almost never	1 2 3 4 5 6 almost always
23. The child falls asleep as soon as he/she is put to bed.				almost never	1 2 3 4 5 6 almost always
24. The child moves about actively when he/she explores new places.				almost never	1 2 3 4 5 6 almost always
25. The child likes to go to new places rather than familiar ones.				almost never	1 2 3 4 5 6 almost always
26. The child sits quietly while waiting.				almost never	1 2 3 4 5 6 almost always
27. The child spends over an hour reading a book or looking at the pictures.				almost never	1 2 3 4 5 6 almost always
28. The child learns new things <u>at his/her level</u> quickly and easily.				almost never	1 2 3 4 5 6 almost always
29. The child smiles or laughs when he/she meets new visitors at home.				almost never	1 2 3 4 5 6 almost always
30. The child is easily excited by praise.				almost never	1 2 3 4 5 6 almost always
31. The child is outgoing with strangers.				almost never	1 2 3 4 5 6 almost always
32. The child fidgets when he/she has to stay still.				almost never	1 2 3 4 5 6 almost always
33. The child says that he/she is "bored" with his/her toys and games.				almost never	1 2 3 4 5 6 almost always

Almost never 1	Rarely 2	Usually does not 3	Usually does 4	Frequently 5	Almost always 6			
34. The child is annoyed at interrupting play to comply with a parental request.	almost never	1	2	3	4	5	6	almost always
35. The child practices an activity until he/she masters it.	almost never	1	2	3	4	5	6	almost always
36. The child eats about the same amount at supper from day to day.	almost never	1	2	3	4	5	6	almost always
37. Unusual noises (sirens, thunder, etc.) interrupt the child's behavior.	almost never	1	2	3	4	5	6	almost always
38. The child complains when tired.	almost never	1	2	3	4	5	6	almost always
39. The child loses interest in a new toy or game the same day.	almost never	1	2	3	4	5	6	almost always
40. The child becomes engrossed in an interesting activity for one half hour or more.	almost never	1	2	3	4	5	6	almost always
41. The child cries intensely when hurt.	almost never	1	2	3	4	5	6	almost always
42. The child reacts strongly to kidding or light-hearted comments.	almost never	1	2	3	4	5	6	almost always
43. The child approaches children his/her age that he/she doesn't know.	almost never	1	2	3	4	5	6	almost always
44. The child plays quietly with his/her toys and games.	almost never	1	2	3	4	5	6	almost always
45. The child is outwardly expressive of his/her emotions.	almost never	1	2	3	4	5	6	almost always
46. The child is enthusiastic when he/she masters an activity and wants to show everyone.	almost never	1	2	3	4	5	6	almost always
47. The child is sleepy at his/her bed-time.	almost never	1	2	3	4	5	6	almost always
48. The child stops an activity because something else catches his/her attention.	almost never	1	2	3	4	5	6	almost always
49. The child is hungry at dinner time.	almost never	1	2	3	4	5	6	almost always
50. The child holds back until sure of himself/herself.	almost never	1	2	3	4	5	6	almost always

Almost never 1	Rarely 2	Usually does not 3	Usually does 4	Frequently 5	Almost always 6				
51. The child looks up when someone walks past the door-way.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
52. The child becomes upset if he/she misses a regular television program.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
53. The child reacts strongly (cries or complains) to a disappointment or failure.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
54. The child accepts new foods within one or two tries.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
55. The child has difficulty getting used to new situations.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
56. The child will avoid misbehavior if punished firmly once or twice.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
57. The child is sensitive to noises (telephone, doorbell) and looks up right away.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
58. The child prefers active outdoor play to quiet play inside.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
59. The child dislikes milk or other drinks if not ice-cold.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
60. The child notices differences or changes in the consistency of food.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
61. The child adjusts easily to changes in his/her routine.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
62. The child eats about the same amount at breakfast from day to day.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
63. The child seems to take setbacks in stride.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
64. The child cries or whines when frustrated.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
65. The child repeats behavior for which he/she has previously been punished.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
66. The child looks up from playing when the telephone rings.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always
67. The child is willing to try new foods.	almost never	<u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u> : <u> </u>	1	2	3	4	5	6	almost always

Almost never 1	Rarely 2	Usually does not 3	Usually does 4	Frequently 5	Almost always 6			
68. The child needs encouragement before he/she will try new things.	almost never	1	2	3	4	5	6	almost always
69. The child cries or whines when ill with a cold or upset stomach.	almost never	1	2	3	4	5	6	almost always
70. The child runs to get where he/she wants to go.	almost never	1	2	3	4	5	6	almost always
71. The child's attention drifts away or lapses when listening to parental instructions.	almost never	1	2	3	4	5	6	almost always
72. The child becomes angry with one of his/her playmates.	almost never	1	2	3	4	5	6	almost always
73. The child is reluctant to give up when trying to do a difficult task.	almost never	1	2	3	4	5	6	almost always
74. The child reacts to mild approval from the parent (a nod or smile).	almost never	1	2	3	4	5	6	almost always
75. The child requests "something to eat" between meals and regular snacks.	almost never	1	2	3	4	5	6	almost always
76. The child rushes to greet the parent or greets loudly after absence during the day.	almost never	1	2	3	4	5	6	almost always
77. The child looks up when he/she hears voices in the next room.	almost never	1	2	3	4	5	6	almost always
78. The child protests when denied a request by the parent.	almost never	1	2	3	4	5	6	almost always
79. The child ignores loud noises when reading or looking at pictures in a book.	almost never	1	2	3	4	5	6	almost always
80. The child dislikes a food that he/she had previously seemed to accept.	almost never	1	2	3	4	5	6	almost always
81. The child stops what he/she is doing and looks up when the parent enters the room.	almost never	1	2	3	4	5	6	almost always
82. The child cries for more than a few minutes when hurt.	almost never	1	2	3	4	5	6	almost always
83. The child watches a long (1 hour or more) TV program without getting up to do something else.	almost never	1	2	3	4	5	6	almost always
84. The child spontaneously wakes up at the usual time on weekends and holidays.	almost never	1	2	3	4	5	6	almost always

Almost never 1	Rarely 2	Usually does not 3	Usually does 4	Frequently 5	Almost always 6			
85. The child responds to sounds or noises unrelated to his/her activity.	almost never	1	2	3	4	5	6	almost always
86. The child avoids new guests or visitors.	almost never	1	2	3	4	5	6	almost always
87. The child fidgets when a story is being read to him/her.	almost never	1	2	3	4	5	6	almost always
88. The child becomes upset or cries over minor falls or bumps.	almost never	1	2	3	4	5	6	almost always
89. The child interrupts an activity to listen to conversation around him/her.	almost never	1	2	3	4	5	6	almost always
90. The child is unwilling to leave a play activity that he/she has not completed.	almost never	1	2	3	4	5	6	almost always
91. The child is able to fall asleep when there is conversation in a nearby room.	almost never	1	2	3	4	5	6	almost always
92. The child becomes highly excited when presented with a new toy or game.	almost never	1	2	3	4	5	6	almost always
93. The child pays attention from start to finish when the parent tries to explain something to him/her.	almost never	1	2	3	4	5	6	almost always
94. The child speaks so quickly that it is sometimes difficult to understand him/her.	almost never	1	2	3	4	5	6	almost always
95. The child wants to leave the table during meals to answer the doorbell or phone.	almost never	1	2	3	4	5	6	almost always
96. The child complains of events in school or with playmates that day.	almost never	1	2	3	4	5	6	almost always
97. The child frowns when asked to do a chore by the parent.	almost never	1	2	3	4	5	6	almost always
98. The child tends to hold back in new situations.	almost never	1	2	3	4	5	6	almost always
99. The child laughs hard while watching television cartoons or comedy.	almost never	1	2	3	4	5	6	almost always
100. The child has "off" days when he/she is moody or cranky.	almost never	1	2	3	4	5	6	almost always

ACTIVITY	APPROACH	APPROACH	APPROACH	APPROACH	APPROACH	APPROACH	APPROACH	APPROACH
1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6	1 1 2 3 4 5 6
7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12	7 8 9 10 11 12
13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18	13 14 15 16 17 18
19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24	19 20 21 22 23 24
25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30	25 26 27 28 29 30
31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36	31 32 33 34 35 36
37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42	37 38 39 40 41 42
43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48	43 44 45 46 47 48
49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54	49 50 51 52 53 54
55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60	55 56 57 58 59 60
61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66	61 62 63 64 65 66
67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72	67 68 69 70 71 72
73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78	73 74 75 76 77 78
79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84	79 80 81 82 83 84
85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90	85 86 87 88 89 90
91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96	91 92 93 94 95 96
97 98 99 100	97 98 99 100	97 98 99 100	97 98 99 100	97 98 99 100	97 98 99 100	97 98 99 100	97 98 99 100	97 98 99 100

TOTAL
 FACTOR
 PRODUCT
 SUM
 PRODUCT
 NO ITEM
 BAYED
 CATEGORY
 LIFE

BRAIN LURAL STYLE QUESTIONNAIRE - Profile Sheet

for 3 to 7 year old children

Developed (1975) by Sean C. McDevitt, Ph.D. & William B. Carey, M.D.

Child's Name _____ Date of Rating _____

Age at rating: _____ years, _____ months. Sex _____

Category score from Scoring Sheet:

Profile: Place mark in appropriate box below:

	Activity	Rhythm.	App/With	Adapt.	Intens.	Mood	Persist	Distract	Thresh
6	high	arryth.	withdr.	slowly	intense	negative	nonpers	low disu	low
+1 S.D.	4.31	3.43	3.93	3.27	5.17	3.99	3.56	4.70	4.58
Mean	3.56	2.75	2.99	2.55	4.52	3.31	2.87	3.89	3.98
-1 S.D.	2.81	2.07	2.05	1.83	3.87	2.63	2.18	3.08	3.38
6	low	very Rhyth.	app.	very adapt.	mild	positive	high per	non-distrac	high

Diagnostic Clusters

Easy		rhythm.	app.	adapt.	mild	positive
Difficult		arrythm.	withdr.	slowly adapt.	intense	negative
Slow to Warm up	low		withdr.	slowly adapt.	mild	negative

Definition of diagnostic clusters used for individual scoring:

Easy - Scores greater than mean in no more than two of difficult/easy categories (rhythmicity, approach, adaptability, intensity & mood) and neither greater than one standard deviations.

Difficult - 4 or 5 scores greater than mean in difficult/easy categories (as above) This must include intensity and two scores greater than one standard deviation)

Slow to warm up - as defined above, but if either withdrawal or slow adaptability is greater than one standard deviation, activity may vary up to 3.93 and mood may vary down to 2.97.

Intermediate - all others. Intermediate high - 4 or 5 diff/easy categories above mean with one 1 standard deviation, or 2 or 3 above mean with 2 or 1 standard deviation. Intermediate low - all other intermediates.

This child's diagnostic cluster _____ date of scoring _____
 Scored by _____

APPENDIX D
RAW DATA

Variable Codes

id = identification number

ppvt = score on the Peabody Picture Vocabulary Test

orig = originality score on the Multidimensional Stimulus
Fluency Measure

app = approach score on the Behavioral Style Questionnaire

adp = adaptability score on the Behavioral Style
Questionnaire

int = intensity score on the Behavioral Style Questionnaire

K1 = interest-participation (Kohn 1) score on the Kohn
Social Competence Scale

K2 = cooperation-compliance (Kohn 2) score on the Kohn
Social Competence Score

ic1 = children who reported imaginary companions

ic0 = children who reported no imaginary companion

s = gender 0 = female 1 = male

sib = number of siblings

id	ppvt	orig	app	adp	int	k1	k2	ic	age	s	sib	pr
3543	37	21	.	.	.	102	-10	1	46	0	1	1
3544	53	11	2.8	2.4	4.3	114	-28	1	52	0	1	16
3448	57	18	5.0	4.2	4.9	74	-73	1	49	1	1	2
3538	54	20	3.3	3.7	4.4	81	-11	1	46	1	4	17
3509	37	21	2.2	2.9	5.5	112	-78	1	52	1	1	3
3545	.	22	3.0	3.7	3.3	124	-26	1	52	0	1	4
4465	27	22	3.6	3.1	4.3	143	-10	1	65	0	0	18
4556	83	11	1.5	1.5	4.2	124	-23	1	59	1	0	5
4553	52	26	3.3	2.5	3.9	67	-21	1	59	0	1	6
4458	49	9	3.6	3.0	5.3	133	-15	1	61	0	1	7
4564	63	19	1.8	1.4	4.3	117	-37	1	56	0	1	8
4460	70	9	3.0	3.1	4.3	133	-12	1	57	1	2	9
4550	59	11	3.9	2.8	4.8	51	-28	1	58	0	1	10
5462	56	24	1.8	1.7	4.3	70	-52	1	56	1	1	11
5510	24	18	1.9	2.2	4.3	69	-101	1	46	0	1	12
5419	73	41	4.1	2.7	4.1	81	-106	1	56	1	0	13
5517	86	9	4.1	4.0	4.7	105	-50	1	57	0	2	14
5467	74	7	3.4	3.8	5.2	125	-18	1	57	1	1	15
5560	55	28	2.8	2.6	3.3	130	-36	1	53	0	1	19
1101	37	11	3.7	2.8	4.9	50	-40	1	47	1	2	20
1103	71	20	4.2	3.5	5.6	32	-44	1	52	0	1	21
3537	55	16	3.2	2.6	5.2	106	-24	0	46	0	1	21
3540	.	5	2.6	3.5	4.8	100	-41	0	52	1	1	2
3508	60	11	3.1	3.3	3.9	116	-106	0	51	1	1	3
5421	48	16	3.5	3.5	3.8	33	-69	0	57	0	2	4
5562	96	16	4.1	3.1	4.3	28	-24	0	60	1	0	5
5561	.	4	3.0	2.7	4.0	95	-75	0	56	0	1	6
4461	72	8	3.3	2.7	3.8	150	-15	0	62	0	1	7
5468	65	36	3.1	2.1	3.2	104	-25	0	56	0	1	8
4563	72	9	3.0	2.1	4.3	113	-36	0	60	1	1	9
5424	56	4	3.1	2.1	4.1	93	-112	0	55	0	1	10
4549	.	12	2.1	3.2	4.3	95	-95	0	59	1	1	11
5451	41	9	4.3	2.9	3.3	63	-23	0	45	0	1	12
4470	28	10	3.6	3.1	4.5	134	-39	0	60	1	0	13
5469	48	35	1.4	1.2	3.3	124	-19	0	55	0	2	14
5471	43	27	2.2	2.6	5.3	56	-60	0	58	1	1	15
5454	32	5	3.8	2.9	3.9	110	-22	0	46	0	2	1
1106	53	25	3.6	2.9	3.8	90	-72	0	51	0	1	16
1104	62	17	2.8	3.4	3.5	66	-104	0	47	1	2	17
1102	91	14	2.6	1.5	4.3	56	-28	0	62	0	0	18
1105	64	21	2.5	3.1	4.3	38	-44	0	53	0	1	19
3449	38	5	2.3	3.7	5.3	121	-49	0	44	1	1	20

APPENDIX E
PROBIT ANALYSES

Probit Procedure
Class Level Information

Class	Levels	Values
IC	2	0 1

Number of observations used = 42

Probit Procedure

Dependent Variable=IC

Goodness-of-Fit Tests

Statistic	Value	DF	Prob>Chi-Sq
Pearson Chi-Square	31.2246	22	0.0916
L.R. Chi-Square	41.0419	22	0.0081

Probit Procedure

Variable	DF	Estimate	Std Err	ChiSquare	Pr>Chi	Label/Value
INTERCPT	1	0.45973779	0.492629	0.870924	0.3507	Intercept
ORIG	1	-0.0281934	0.026562	1.126604	0.2885	

Probit Procedure

Dependent Variable=IC

Goodness-of-Fit Tests

Statistic	Value	DF	Prob>Chi-Sq
-----	-----	--	-----
Pearson Chi-Square	39.6348	34	0.2331
L.R. Chi-Square	46.5320	34	0.0744

Probit Procedure

Variable	DF	Estimate	Std Err	ChiSquare	Pr>Chi	Label/Value
INTERCPT	1	6.05475938	2.528274	5.73516	0.0166	Intercept
ORIG	1	-0.0594983	0.027663	4.62614	0.0315	
K1	1	-0.0086643	0.007508	1.33189	0.2485	
K2	1	-0.0078128	0.008559	0.83322	0.3613	
APP	1	-0.198611	0.356769	0.309907	0.5777	
ADP	1	-0.0469483	0.413505	0.012891	0.9096	
INT	1	-0.8894112	0.395594	5.054825	0.0246	

VITA

Heidi E. Welch

Candidate for the Degree of
Master of Science

Thesis: PERSONAL CHARACTERISTICS OF PRESCHOOL CHILDREN
WITH IMAGINARY COMPANIONS

Major Field: Family Relations and Child Development

Biographical:

Personal Data: Born in Badkrueznach, Germany, March
11, 1965, the daughter of James R. and Sally Lopez
Welch.

Education: Graduated from LaGrange Senior High School,
Lake Charles, Louisiana, in May, 1983; received
Bachelor of Science Degree in Home Economics in
Business: Family Life and Child Development with
an N-K teaching certificate from McNeese State
University in December, 1987; completed
requirements for the Master of Science Degree at
Oklahoma State University in December, 1990.

Professional Experience: Teacher, Calcasieu Parish
School Board, Lake Charles, Louisiana, January
1988 to August 1988; Graduate Teaching Assistant,
Oklahoma State University, Child Development
Laboratories, August 1988 to July 1990.

Professional Affiliations: American Home Economics
Association; National Association for the
Education of Young Children; Southern Association
on Children Under Six; Louisiana Home Economics
Association; Oklahoma Association for the
Education of Young Children; Oklahoma Association
on Children Under Six; Omicron Nu.