THE SOCIAL AND EMOTIONAL FUNCTIONING OF CREATIVE PRESCHOOLERS

BY

DELORES ELAINE SMITH

Bachelor of Science in Home Economics
Oklahoma State University
Stillwater, Oklahoma
1984

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1986

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
July, 1989

THE SOCIAL AND EMOTIONAL FUNCTIONING OF CREATIVE PRESCHOOLERS

Thesis Approved:

James McCarthy
Thesis Adviser

Donna Couchenour

Diane H. Jackman

Joseph A. Wilbur

Norman N. Durham
Dean of the Graduate College

ACKNOWLEDGEMENTS

I wish to extend my sincere gratitude and appreciation to Dr. James D. Moran, lll, my major adviser, for his immeasurable guidance and enduring patience throughout my graduate program of study and particularly with this research project. Without his competent leadership this endeavor could not have been realized. I am indebted to him for his helpful encouragement and guidance toward my professional preparation and personal development. He was never ever too busy to lend a listening ear or to offer sound advice, especially in my most anxious and tension-filled moments.

Considerable gratitude is also expressed to Dr. Donna Couchenour, Dr. Diane Jackman, and Dr. Joseph Weber, who as members of my committee gave unselfish advice and guidance over the course of this project.

I am also thankful to the faculty of the department of Family Relations And Child Development for their moral support and encouragement throughout my graduate program. Dr John C. McCullers deserves special mention for his inspiration and expressions of confidence in my ability to realize my fullest potential.

Words are inadequate to express my deep love and appreciation to my beloved husband Michael Snr. for his unceasing devotion, support and continued show of confidence in my abilities. Had it not been for him I certainly would not have made it this far.

It is impossible to acknowledge the contributions of my three children Michael Jnr., Leighton, and Carey. Nonetheless, sincerest thanks, love, and admiration go out to them for the many sacrifices they made, and for their patience and understanding. They were undoubtedly deprived of much attention during this very stressful period of time.

TABLE OF CONTENTS

LIST OF TABLES

The Social and Emotional Functioning of Creative Preschoolers

Delores E. Smith

Oklahoma State University

This article is based on the doctoral dissertation research of the author, conducted under the direction of Dr. James Moran III. The author expresses thanks to Dr. Donna Couchenour, Director of the Oklahoma State University Child Development Laboratory. Appreciation is also extended to the teachers and children associated with the program.

ABSTRACT

This study investigated the relationship of the social and emotional status and children's level of creativity for forty preschoolers, ranging in age from 44 to 68 months. Socioemotional functioning was assessed by two teacher rated instruments, the Kohn Social Competency, and the Child's Behavior Traits scales, whereas creative potential was determined by the Multidimensional Stimulus Fluency Measure, employing the median split procedure.

No statisically significant differences in psychosocial adjustment of more or less creative preschoolers was found. However, a significant gender effect was detected on six of the seven socioemotional variables examined with girls outperforming boys on overall socioemotional adjustment. A more positive characterization of psychosocial functioning of highly creative individuals was evidenced. Similarly, more positive attributes of female preschoolers are indicated in areas of functioning that traditionally have been reported to be characteristic of males.

THE SOCIAL AND EMOTIONAL FUNCTIONING OF CREATIVE PRESCHOOLERS

The superior ability and aptitude of creative individuals have always been recognized as a national asset. Consequently, society has looked to, and depended on leaders with these exceptional abilities, and has viewed such distinguished talent worthy of early identification and nurturance. As a result highly gifted children have become the subject of much public interest and concern. Unfortunately though, research efforts have focused primarily on the cognitive aspects of these gifted individuals rather than on their affective attributes (e.g. Moran et al., 1983a, 1983b; Ward, 1968, 1969). Additionally, many of the empirical studies on creativity have centered on school-age children, adolescents, and adults rather than on the early childhood years. Similarly, investigators who have addressed the personality issues of the creative individual have also concentrated on the older age groups. However, despite this limitation, and despite the variety of measures used in these studies, relative consistency in the findings have been noted. The creative person is reported to possess supposedly superior, socially approved, and advantageous qualities. Autonomy, intelligence, originality, independence, self-confidence, self-sufficiency, dominance and strong willedness are only a few of the desirable and impelling attributes of these

individuals (Barron 1955; Bachtold & Werner, 1983; Cattell & Butcher, 1968; Cattell & Drevdahl, 1955; Drevdahl & Cattell, 1958; Helson, 1983, MacKinnon, 1962a, 1962b, Roe, 1951, 1952, 1953; Tomlinson-Keasey & Smith-Winberry, 1983). Highly creative individuals are at the same time reported to exhibit social and emotional deficiency, and may therefore be at risk for psychopathology (Cattell & Butler, 1968; Cattell & Drevdahl, 1955; Janos & Robinson, 1985; Roe, 1951, 1952, 1953). Several reasons, ranging from a lack of intellectual challenge in peer relations, to differential personality traits, to general misunderstanding by grownups of the incongruency between intellect and emotions in these highly creative individuals, have been given for such apparent maladjustment. Still, regardless of the origin of such problems the personality profile of the intellectually prococious, characterizes them as being, disruptive, impulsive, rebellious, nonconforming, attention seeking, introverted, and socially withdrawn, (Cattell & Butler, 1968; Cattell & Drevdahl, 1955; Drevdahl & Cattell, 1958, Janos & Robinson 1985; MacKinnon, 1962a, 1962b; Roe, 1951, 1952, 1953;). Based on such evidence, the need for special intervention and counseling for the gifted at an early age, has been justifiably advocated. For example, there have been recent warnings, that intellectual precocity does not necessarily translate into mature socioemotional functioning, and as a result of such discrepancy adults need to be alert to the vulnerabilities of these children to a

variety of psychosocial adjustment difficulties, which may necessitate specific guidance and training in the social sphere (Altman, 1983; Greenlaw & McIntosh, 1988; Roedell, 1984, 1985).

Of the sparse literature linking creativity and affect at the preschool level, some studies have reported seemingly consistent findings with the adult studies. For example, Sawyers & Moran (1984) reported a significant correlation between ideational fluency and internal locus of control. Bomba & Moran (1987) studying temperamental characteristics of the creative preschooler reported some relationship between selected temperament variables and creativity. Likewise, Burk (1980) in examining gifted nursery through second grade children, found that her gifted subjects differed markedly in personality attributes and temperamental characteristics from their less gifted peers. Based on the foregoing, one would therefore expect differential functioning between highly creative preschoolers and their less gifted counterparts.

Although these studies are a step in the right direction, still there has been little done to determine whether the attributes of creative young children are consistent with those of older children and adults. For example, are the characteristics of creative adults similar to those of creative children? Do adults who end up with these attributes start out that way? There is uncertainty about the answers to these questions, because of the dearth

in the literature regarding the socioemotional functioning of creative preschoolers. Current premises are based mainly on speculations and inferences from retrospective studies of creative adults rather than on investigations involving the children themselves. This paucity, therefore clearly indicates a need for studies in this area. It is therefore hoped that the current study will serve to create a knowledge base with regard to the affective characterization of creative preschoolers.

The study will attempt to examine the social competencies and overall socioemotional status of more or less creative preschool boys and girls. It is hypothesized that highly creative preschoolers would demonstrate differential psychosocial adjustment from less creative children. Gender is also hypothesized to be related to the socioemotional functioning of young children, but not to creativity.

Method

Sample

Subjects were 40 children (16 boys, 24 girls) enrolled in a university child development laboratory. Subjects ranged in age from 44 to 68 months, with a mean age of 56.2 months.

Procedure and Measures

Creativity. Creativity was assessed using the Multidimensional Stimulus Fluency Measure, which measures ideational fluency (Moran et al. 1983a). The test is an

adaptation of Starkweather's (1971), Wallach and Kogan's (1965), and Ward's (1968) creativity tasks, and utilizes three measures: instances, pattern meanings, and alternate uses. In the instances tasks the stimulus items were things that were red and round. Each child was asked to name all the items that represent the features of the specific stimulus. In the pattern meanings task, 3-dimensional, various colored styrofoam shapes were used. The child was asked what the shapes could represent. In the alternate use task, the child was asked to name all the various uses of the stimuli - box and paper. Scores from the Multidimensional Stimulus Frequency Measure were obtained by trained examiners and creativity determined by the number of original ideas or associations (Wallach 1985) given by each child. The median split procedure was used to categorize more creative and less creative children.

Socioemotional Functioning. In keeping with the wealth of empirical evidence attesting to the reliabilty and value of teacher rating procedures as an effective assessment of children's socioemotional functioning (Althrows, Maunula, and Ladonde, 1986; Connolly & Doyle, 1981; French & Waas, 1985; Lupo, 1986; Virtue & French, 1984;), the Kohn Social Competency (Kohn 1988) and the Child's Behavior Traits (Levenstein 197Ø) scales were used to measure socioemotional adjustment. The Kohn Social Competency (KSC) measure, set on a 5-point Likert scale, consists of 64 positive and negative statements about the child's overt classroom

behavior, with each item rating the degree of frequency of behaviors considered to be socioemotional. Two teachers (lead and co-teacher) in each classroom, and who were unaware of the children's level of creativity independently rated each child on the scale. 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 reflect the child's interest, involvement with peers, and assertiveness in the preschool setting, while the opposite end assesses shyness, passivity, and general isolation. The child's ability to conform to rules and routines is measured by the latter dimension, with defiance, antisocial interactions, and disturbance of the normal tone of the classroom reflected by its negative pole.

The Child's Behavior Traits (CBT) which measures socioemotional development, is also a teacher rated instrument consisting of 20 items set on a 5-point scale, with each item rating the degree of presence of behaviors considered to be socioemotional. The summative score of the five subscales (responsible-independence, social-cooperation, cognitive-skills, emotional stability, and task orientation), reflect and indicate the child's emotional well-being and social adjustment.

Results

The 2 (gender) x 2 (creativity) analysis of variance (ANOVA) was used to compute the main and interaction effects for each of the seven dependent variables. To enhance clarity of interpretation and consistency in the direction of the scores on both instruments (i.e., higher scores indicating better performance) raw scores were used in the analyses of the KSC factors, rather than the specially formulated Kohn scores, which indicate interpretation of scores in the opposite direction of the CBT.

Table 1 presents the mean scores, standard deviations, and values performance on the seven dependent variables as a function of creativity, with higher scores on each factor, indicating better adjustment and a higher degree of social and emotional functioning. Scores indicate that there was no statistically significant difference between the highly creative and the less creative preschoolers on the adjustment indices of interest-participation and cooperation-compliance or on factors of responsible independence, social cooperation, cognitive skill, emotional stability and task orientation. Similarly, no statistical significant relationship was detected between creativity and gender, indicating that males and females performed equally well on the originality measure.

Insert Table 1 about here

There was, however, a significant relationship between sex and social emotional functioning on all factors except interest-participation versus apathy-withdrawal. Table 2 presents the mean scores, standard deviations and values by sex. Inspection of the data suggests that even though girls had a tendency to score less favorably on interest participation, the relationship was not significant (df = 1,38), F = 3.Ø1, n.s., suggesting that girls in the sample are not necessarily more quiescent or more apathetic than the boys, as the literature would suggest. Scores on the cooperation-compliance versus anger defiance were significantly different for males and females (df =1,38), F = 5.39, $p < .Ø5$, indicating that the girls exhibited more cooperation attributes. They were more likely to comply to rules and requests by teachers and peers. Conversely, the boys demonstrated more anger and defiant tendencies and were more likely to create disturbances that upset the normal classroom routines. Similar results were also derived from the analysis of the factor of social cooperation on the CBT scale. This result supports, and is consistent with the literature, which portrays females as being more socially adept than males.

Insert Table 2 about here

Discussion

The finding that girls outperformed boys on measures of overall social competency is not at all surprising, as

females have always been reported to be far more socially adept than males. Also expected is the nonsignificant relationship between gender and creativity, lending credence to the overwhelming evidence now available, that in general gender difference in creativity at this age is negligible. What is surprising, and therefore one of the most important findings of this study is a more positive characterization of highly creative preschoolers in their socioemotional functioning and overall psychosocial adjustment. These results suggest that highly creative preschoolers are not necessarily hampered, socially and emotionally by their giftedness as suggested in the literature (eg. Altman 1985; Roedell 1984). Contrary to the existing literature, the more gifted preschoolers in the sample were not reported by their teachers to be less sociable, less cooperative or more defiant and rebellious than their less gifted peers. This apparent homogeneous functioning by high creatives and low creatives may be accounted for by the fact that these preschoolers and others of similar age, may not yet be aware of their official label of being different (Altman, 1983). This perception of being similar to peers might therefore cause young children to exhibit behaviors that are compatible with the group in general. However, at a later stage of development, when children are classified as gifted and singled out for special treatment, differential interpersonal relationships may become apparent, and which in turn may affect their psychosocial development.

It may be too, that because of these children's superior ability, greater environmental pressure and expectations to achieve and concentrate on intellectual activities may cause older creative children to withdraw from social interactions (Greenlaw & McIntosh, 1988). Similarly, the apparent developmental trend toward introversion evidenced in older gifted samples (Janos & Robinson, 1985) could also be a direct result of such adult anticipation. These observed tendencies might therefore be interpreted as maladjusted personality and emotional instability.

Throughout this discussion, we are of course assuming that the MSFM does measure components of creativity. Moran et al., in press, have argued that the nature of creativity changes with age as we move from less to more stringent definitions. Certainly, it may be that as other factors (e.g. self-evaluation) become more important to the creative process, it is these factors which are most affected by socioemotional variables.

Another unexpected finding is the absence of a gender difference on the factor of interest participation. Indications are that the teachers perceived the girls to be as curious, alert, and as assertive as the boys, in fact girls had higher mean scores on these variables. This finding shows some discrepancy with the gender profile which characterizes females as nonadventuresome and passive. Equally surprising, is that girls performed significantly

higher on areas relating to independence, cognitive skill and task orientation. As far as task orientation and independence are concerned, this particular finding contradicts the previous literature which consistently reports females to exhibit far greater interpersonal sensitivity and dependent behavior, over task oriented tendencies and autonomy. This inconsistency with studies utilizing older samples may therefore be a result of the socialization process.

Eccles (1985) delineated several socialization variables which directly or indirectly affect children's gender role stereotypes. They include parents' attitudes, occupations and activities, teachers' and peers' behaviors and attitudes, and children's participation in special programs. Consequently, if the gender messages are consistently non-biased across all situations, these young children are likely to display behavior patterns which are consistent with such an orientation. However, at later periods of development when the social agents become more heterogenous and varied, there might be more pronounced adherence to biased gender role prescriptions. Older children are also more likely to be exposed to strong gender role biases from powerful role models and peers. Eccles (1985) noted that students often have serious discussions with one another about educational and vocational options, and reactions and opinions to such queries are more often

than not, loaded with gender role biases. With young children however, the pressure is less severe.

The findings from the study are relevant to the relatively understudied affective attributes of the creatively gifted young child. However, more data are needed to examine the developmental trends and persistence of the traits identified. Additional research utilizing more representative samples of creative preschoolers, is also needed to test the generalizability of the findings reported here. A need for the study of the factors mediating changes in the socioemotionl development in the gifted after the preschool years, is also implicated.

References

Altman, R. (1983). Social-emotional development of gifted children and adolescents: A research model. Roeper Review, 6, 65-68.

Althrows, I., Maunula, S. & Lalonde, B. D. (1986). Employing teachers' ratings in selection of achievement tests in reading and mathematics with a behaviorally disturbed population. Psychology in the Schools, 23, 316-319.

Bachtold, L. & Werner, E. (1983). Creative psychologists: Gifted women. In R. Albert (Ed.). Genius and eminence: The social psychology of creativity and exceptional achievement (pp. 331-344). New York: Bergamon.

Barron, F. (1955). The disposition towards originality. Journal of Abnormal and Social Psychology, 51, 478-85.

Bomba, A. K. & Moran, J. D.III. (1987). The relationship of selected temperament characteristics to creative potential in preschool children. Unpublished masters thesis. Oklahoma State University.

Burk, E. (1980). Relationship of temperamental traits to achievement and adjustment in gifted children. Ann Arbor, MI: University Microfilms International.

Cattell, R. B. & Butcher, H. J. (1968). The prediction of achievement and creativity. Indianapolis: Bobbs-Merrill.

Cattell, R. B. & Drevdahl, J. E. (1955). A comparison of the personality profile of eminent researchers with that of eminent teachers and administrators, and the general population. British Journal of Psychology, 46, 248-261.

Connolly, J. & Doyle, A. (1981). Assessment of social competence in preschoolers: Teachers versus peers. Developmental Psychology, 17, 454-462.

Drevadhl, J. & Cattell, R. (1958). Personality and creativity in artists and writers. Journal of Clinical Psychology, 14, 107-111.

Eccles, J. S. (1985). Why doesn't Jane run? Sex differences in education and occupational patterns. In Horowitz and M. O. O'Brien (Eds.), The gifted and talented: Developmntal perspectives (pp.251-295). Washington, D.C.: American Psychological Association.

French, D. C. & Waas, G. A. (1985). Teachers' ability to identify peer-rejected children: A comparison of sociometrics and teacher ratings. Journal of School Psychology, 23, 347-353.

Greenlaw, M. J. & McIntosh, M. E. (1988). Educating the gifted: A sourcebook. Chicago: American Library Association.

Helson, R. (1983). Creative mathematicians. In R.Albert (Ed.) Genius and eminence: The social psychology of creativity and exceptional achievement (pp.311-330). New York: Pergamon.

Janos, P., & Robinson, N. (1985). Psychological development in intellectually gifted children. In F. Horowitz & M. O'Brien (Eds.) The gifted and talented: Developmental perspectives (pp.149-195). Washington, DC: American Psychological Association.

Kohn, M. (1988). Kohn problem checklist/Kohn social competence scale. Research edition. New York. Harcourt Brace Jovanovich.

Levenstein, P. (1970). Child's behavior traits. Form 65. New York: Verbal Interaction Project.

Lupo, J. M. (1986). Reliability of the teacher rating scale of the Behavior Rating Profile. Journal of Psychoeducational Assessment, 4, 327-333.

Mackinnon, D. (1962a). The nature and nurture of creative talent. American Psychologist, 17, 484-495.

MacKinnon, D. (1962b). The personality correlates of creativity: A study of American architects. In G. S. Nielson (Ed.), Proceedings of the Fourteenth International Congress of Applied Psychology, Vol. 2, Munksgaard (pp.11-39).

Moran, J. D.111, Milgram, R. M., Sawyers, J. K. & Fu, V. R. (1983a). Original thinking in preschool children. Child Development, 54, 921-926.

Moran, J. D.III, Milgram, R. M., Sawyers, J. K. & Fu, V. R. (1983b). Stimulus specificity in the measurement of original thinking in preschool children. Journal of Psychology, 114, 99-105.

Moran, J. D.111, Sawyers, J.K., Fu, V. R. & Milgram, R. M. (in press). Measuring creativity in preschool children. Gifted Child Quarterly.

Roe, A. (1951). A psychological study of physical scientists. Genetic Psychology Monographs, 43, 121-235.

Roe, A. (1952). A psychologist examines sixty-four eminent scientists. Scientific American, 187, 21-25.

Roe, A. (1953). The making of a scientist. New York: Dodd, Mead.

Roedell, W. C. (1984). Vulnerabilities of highly gifted children. Roeper Review, 6, 127-130.

Roedell, W. C. (1985). Developing social competence in gifted preschool children. Remedial and Special Education, 6, 6-11.

Sawyers, J. K. & Moran, J. D.III. (1984). Locus of control and ideational fluency in preschool children. Perceptual and Motor Skills, 58, 857-858.

Starkweather, E. K. (1971). Creativity research instrument designed for use with preschool children. Journal of Creative Behavior, 5, 245-255.

Tomlinson-Keasey, C., & Smith-Winberry, C. (1983). Educational strategies and personality outcomes of gifted and non-gifted college students. Gifted Child Quarterly, 27, 30-40.

Virtue, M. S., & French, D. C. (1984). Peer and teacher ratings of socially neglected and rejected fourth and fifth grade boys. Journal of Applied Developmental Psychology, 5, 13-22.

Wallach, M. A. & Kogan, N. (1965). Modes of thinking in creative young children: A study of the creativity-intelligence distinction. New York: Holt, Richard and Winston.

Ward, W. C. (1968). Creativity in young children. Child Development, 39, 737-754.

Table 1

Means, Standard Deviations and F Values Based on Creativity

Variables	High creatives		Low creatives		
	Mean	S.D	Mean	S.D.	F[a]
Int-Part	92.10	33.00	99.62	25.23	.80
Coop- Comp	-68.10	35.93	-57.19	29.00	.94
Resp-Ind	16.21	2.90	15.66	2.44	.38
Soc-Coop	15.84	3.60	15.86	3.45	.18
Cog-Skill	16.63	3.00	16.90	2.60	.70
Emot-Stab	15.74	3.20	16.82	2.00	.30
Task-Orient	15.84	3.32	16.48	3.30	.33

[a] df 1, 38

Table 2

Means, Standard Deviations, and F Values Based on Gender

Variable	Males		Females		
	Mean	S.D.	Mean	S.D.	F [a]
Int-Part	86.50	26.09	102.38	30.01	3.01
Coop-Comp	-76.25	28.52	-53.10	32.23	5.39**
Resp-Ind	14.25	2.40	17.04	2.14	13.73**
Soc-Coop	13.19	3.54	17.63	2.00	25.08**
Cog-Skill	15.50	2.76	17.63	2.45	6.24*
Emot-Stab	14.31	3.54	17.38	2.00	12.53**
Task-Orient	14.18	3.04	17.50	2.50	14.33**

[a] df 1, 38
* p< .05, ** p< .001

APPENDIX A

REVIEW OF THE LITERATURE

The Social and Emotional Functioning of Creative Preschoolers

Creativity

Much emphasis has been and continues to be placed on intellectual capacity. Creativity is one such area that has drawn a lot of attention in recent times. Consequently over the past three decades there has been an unprecedented volume of research and writings on the psychology of creativity -- the nature of the creative person, the characteristics of the creative person, and conditions favoring or hindering the creative process. There is however, a problem with the definition of this construct. Creativity is one of those inconstant constructs whose definition varies according to the theoretical perspective (Prentky, 1980), the aspect of creativity being studied at the particular time (Khatena, 1978), the age of the subjects and the measurement techniques employed (Moran, Sawyers, Fu, & Milgram, in press).

However, the definition of creativity commonly used in adult empirical studies is that proposed by Wallach (1985). He defines creativity as "excellence of work in a particular field resulting in expansion at the field's cutting edge" (p. 112). This definition seems to be the one used by many eminent researchers in the area. Barron (1955), Drevdahl and Cattell (1958), MacKinnon (1962), Helson (1983), and Roe (1952), in selecting samples for their studies chose individuals of proven creative ability in their particular

fields. These included prominent scientists, psychologists, artists, architects, and mathematicians. Other researchers such as Werner (1966), and Werner and Bachtold (1969) focused on gifted and talented school-age children and adolescents, where at this level giftedness is determined mainly by intelligence tests. At the preschool level, however, the concentration shifts to ideational fluency which Wallach (1985) defines as "the tendency to generate many ideas or associations, including unusual or original ones, in response to various task requests" (p.103).

Measuring creativity at this young age, is evidently problematic. Consequently several psychometric measures, each attempting to identify the creative potential have emerged in recent times, with each pointing out the deficiency in the other, and all claiming to measure ideational fluency (eg. Guilford, 1956; Starkweather, 1971; Torrance, 1981; Moran, Sawyers, Fu, & Milgram, 1983; Wallach & Kogan, 1965; Ward,1968). Fortunately, many of these test developers however, have heeded Starkweather's (1971) clever advice. In recognizing the problems inherent in measuring the creativity construct in the early years, Starkweather (1971) warned against the application of the same criteria and types of measurements across all periods of development. Starkweather insisted that in keeping with young children's cognitive abilities, creativity tasks for preschoolers should be relevant to that particular stage of development. This position was later reiterated by Moran et al. (in

press) who further cautioned against transferring creativity tasks from one developmental level to the other. Additionally, several researchers have endorsed the notion that the focus of creativity at the preschool years be on the generation of ideas and its resultant original thinking (Moran et al. in press; Moran et al. 1983; Wallach, 1985). The consensus among these investigators also, is that ideational fluency is the best measure of original thinking at this young age.

Even though there have been some doubts concerning the long-term predictive value of young children's creativity (Kogan 1983), there still persists the assumption that children with high ideational fluency will have a high potential for being creative adults. Consequently, in an effort to identify early creative talent, more and more children are being tested at an early age as contemporary psychologists become involved in an unprecedented effort to identify and measure creative potential (Milgram & Arad, 1981, Moran, et al. 1983; Ward, 1968). Tegano, Moran, and Goodwin (1986) and Moran et al. (in press) who are themselves involved in testing preschoolers, stipulate that the most important reason to measure creativity in young children is to identify those with exceptional abilities so that those who demonstrate the promise of giftedness can be singled out for the careful fostering and nurturance of the creative talent they possess. In light of this, the widespread attention being paid to the identification and

assessment of the creatively gifted young seems to be a valid concern.

Further evidence of the importance attached to creativity is apparent in the numerous studies and arguments favoring direct teaching and training of creative skills at all levels of the educational system and to all types of individuals (Davis & Scott, 1971; Khatena, 1978; Hallman, 1967; Torrance, 1972). The main concern here according to Brim, Crutchfield and Holtzman (1966), "is not with the selection and nuturance of the gifted few, but an attempt to raise the general level of creative thinking at all levels and in all types of individuals regardless of the initial level of creativity that they demonstrate" (p.34).

Sex differences and creativity

Several child development researchers have attempted to study the effect of gender on general creativity in preschool children (Gross & Marsh, 1970; Lichtenwalner & Maxwell, 1969; Ward 1968, 1969). Despite the fact that these studies have used different samples, different measures and for different purposes, the consensus of findings is that no sex differences exist. There are, however some amount of contradictions on the personality profile of creative males and females. Research efforts in this regard were conducted by Werner (1966) who studied the personality factors of talented and underachieving elementary age boys and girls. Findings from the study indicated that the talented subjects of both sexes were

found to be more intelligent than their counterparts but the personality profile of these gifted boys closely approximated that of highly creative adults. The gifted girls when compared with talented boys, however, showed dependency, submissiveness and a strong adherence to group standards; traits clearly characteristic of the less creative personality.

Additionally Werner and Bachtold (1969), compared gifted adolescent girls with their less gifted peers. Although no direct attempt at comparing boys with girls was made, they reported that in comparison to gifted boys, the girls did not exhibit a higher degree of socialibility, dominance or self assurance than the gifted adolescent girls. They further found that talented males at this age level, like their counterparts in middle childhood, showed a striking resemblance to the personality of creative adults. Conversely, the profiles of gifted girls were significantly less characteristic of the creative personality. More recent studies contributing to the confirmation of such a finding include Fox (1982), who found highly motivated males to be significantly more self-confident than their equally highly motivated peers of the opposite sex. Helson (1983), in assessing the traits of creative female mathematicians reported incongruency between behavior and perception. Results of the study indicated that the females exhibited the global characteristics frequently attributed to the creative personality. However, when scores were contrasted

based on gender, whereas creative men described themselves as being confident, ambitious, intellectual and other forceful qualities, the women perceived themselves as possesssing more female stereotypical qualities. They described themselves as being nonadventurous, inhibited and inwardly focused. The results of Bachtold and Werner (1983) focusing on creative psychologists, are also in general agreement with the Helson (1983) study. Bachtold and Werner, however concluded that the creative female psychologists in their study exhibited the same personality characteristics as their creative comtemporaries of the opposite sex but did not report finding any traits of conventionality among the female creatives. Other studies reporting no sex differences on personality attributes among individuals with exceptional abilities include; Benbow and Stanley (1982) who found no significant gender differences in their gifted subjects' self perception of competence. Similarly Tidwell (198Ø) and Tomlinson-Keasey and Smith-Winberry (1983) found no differences between males and females on measures of self concept and internal locus of control.

Evidently, the literature on gender differences as it relates to the personality correlates of those with exceptional intellectual abilities, has been inconclusive. There is nevertheless, doubts being expressed by some investigators who have reported sex differences. Such findings have caused these investigators to wonder whether the dissimilarities are genuine sex differences or the

results of the socialization process in general, and in particular the outcomes of the special selection procedure used for the education of gifted students (Eccles 1985; Werner & Bachtold 1969). Regardless of the source of these differences, the literature seems to suggest differential functioning on various personality characteristics. Consequently, variations in the social and emotional adjustment of creative male and female preschoolers might be expected.

Cooperation and the creative preschooler

Piaget theorized that one's ability to cooperate is linked to one's cognitive functioning. He maintained that the inherent egocentric nature of preschoolers prevents meaningful cooperation at this level. According to this view, it is not until the concrete operational stage, when children are able to shift mental perspective and decenter their thoughts, that genuine cooperation becomes possible. It is at this stage that children develop the ability to consider both their own needs and those of others (Piaget, 1928, 1965; Shantz, 1983). Based on Piaget's developmental process, one is therefore led to believe that it would be unreasonable to expect preschoolers to cooperate, since egocentrism limits their simultaneous evaluation of perspectives. However, several post-Piagetian researchers have presented overwhelming and convincing evidence of far more social competencies and skill development at the preoperational level than Piaget attributed (Azmitia, 1988;

Cooper, 1980; Eisenberg & Garvey, 1981; Gelman & Bailargeon, 1983). Apparently, Piaget in conceptualizing his model, did not take individual differences into consideration. For example, highly creative individuals are reported to exhibit differential and superior intellectual functioning and personality characteristics than comparison groups (Janos & Robinson, 1985). This, then, would suggest that preschoolers who score high on creativity can be expected to be better cooperators. On the other hand, the picture becomes contradictory when one considers that the cooperative process rests on the many personality issues which come into play in any group endeavor. Yet, the qualities portrayed by persons with exceptional abilities are not ones conducive to the cooperative process. As cited below highly creative individuals are reported to be antisocial, aggressive, independent, unfriendly, unconventional and demanding.

The research on the personality correlates of creativity in older children and adults have all been relatively consistency in their findings. MacKinnon (1962) found that his creative architects scored low on socialization, communality and other participative temperament attributes. Conversely, they scored high on aggressiveness, selfcenteredness, persuasiveness, and independence. In relation to interpersonal skills, they exhibited less desire for group involvement and group

activities, and when they did interact with others there was the tendency to dominate and control others.

Roe (1952), who relied on her subjects' retrospection to examine their life histories, reported that as children creative scientists were shy, aloof, and less socially developed than their peers. Additionally, Barron (1955) described his creative Air Force captains as being demanding, forceful, unfriendly and impatient. They also were found to be independent in judgement and rejected external control. These undemocratic and uncongenial attitudes attributed to the creative person, imply that the cooperative process would be grossly hampered by these individuals. Their domineering mannerisms and their preference for controlling others rather than being controlled would imply that the creative individuals are authoritarians. Highly creative preschoolers might be therefore expected to be despotic, and overbearing, exhibiting dictatorial behaviors rather than egalitarian ones. Conversely, less creative children, because of their alleged superior social skills might be more successful at negotiating and making compromises, resulting in fewer conflicts and more successful interpersonal relationships with peers.

Summary

The review of literature focused on the effects of creativity and gender on psychosocial adjustment. Indications are that there is the assumption that young

children's creativity if identified and nurtured will translate into adult creativity. Consequently in recent times, there has been an unparalled effort by psychologists and child developmentalists to identify the creative potential at an early age. Subsequently, there has been far less empirical studies done on of these children's social and emotional development, resulting in a dearth of the research literature relating to the socioemotional correlates of creative young children. Indications are that the current profile of the gifted young are steeped on inferences and generalizations from adult studies, with the implication that highly creative individuals are prone to mental instability and social maladjustment.

With regard to gender differences the literature overwhelmingly supports differential functioning of males and females. Whereas creative males function differently from the less creative of their own gender, regardless of the level of creativity females seem to fit the stereotypical mold of female emotional and social functioning.

References

Azmitia, M. (1988). Peer interaction and problem solving: When are two heads better than one. Child Development, 59, 87-96.

Bachtold, L. & Werner, E. (1983). Creative psychologists: Gifted women. In R. Albert (Ed.). Genius and eminence: The social psychology of creativity and exceptional achievement (pp. 331-344). New York: Bergamon.

Barron, F. (1955). The disposition towards originality. Journal of Abnormal and Social Psychology, 51, 478-85.

Benbow, C., & Stanley, J. (1982). Consequences in high school and college of sex dlifferences in mathematical reasoning ability: A longitudinal perspective. American Educational Research Journal, 19, 592-622.

Brim Jnr., O. G., Crutchfield, R. S. & Holtzman, W. H. (1966). Intelligence: Perspective 1965. The Terman-Otis Memorial Lectures. New York: Harcourt, Brace & World.

Cattell, R. B., & Butcher, H. J. (1968). The prediction of achievement and creativity. Indianapolis: Bobbs-Merrill.

Cooper, C. (1980). Development of collaborative problem solving among preschool children. Developmental Psychology, 16, 443-450.

Davis, G. A. & Scott, J. A. (1971). Guiding creative thinking. New York: Holt, Rinehart & Winston.

Drevadhl, J. & Cattell, R. (1958). Personality and creativity in artists and writers. Journal of Clinical Psychology, 14, 107-111.

Eccles, J. (1985). Why doesn't Jane run? Sex differences in education and occupational patterns. In F. Horowitz and M. O'Brien (Eds.), The gifted and talented: Developmental perspectives (pp.251-295). Washington, DC: American Psychological Association.

Eisenberg, A., & Garvey, C. (1981). Children's use of verbal strategies in solving conflict. Discourse Processes, 4, 149-170.

Fox, L. (1982). The study of social processes that inhibit or enhance the development of competence and interest in mathematics among highly able women: Final report. Washington, DC: National Institute of Education.

Gelman, R., & Baillargeon, R. (1983). A review of some Piagetian concepts. In P. Mussen (Ed.), Handbook of child psychology, Vol.III (pp.167-230). New York: John Wiley & Sons.

Gross, R. B. & Marsh, M. (1970). An instrument for measuring creativity in young children: The Gross geometric Forms. Developmental Psychology, 3, 267.

Hallman, R. J. (1967). Techniques of creative teaching. Journal of Creative Behavior, 1, 325-330.

Helson, R. (1983). Creative mathematicians. In R.Albert (Ed.) Genius and eminence: The social psychology of creativity and exceptional achievement (pp.311-330). New York: Pergamon.

Janos, P., & Robinson, N. (1985). Psychological development in intellectually gifted children. In F. Horowitz & M. O'Brien (Eds.) The gifted and talented: Developmental perspectives (pp.149-195). Washington, DC: American Psychological Association.

Khatena, J. (1978). The creatively gifted child: Suggestions for parents and teachers. New York: Vintage.

Kogan, N. (1983). Stylistic variation in childhood and adolescence. In: P. Mussen (Ed.), Handbook of Child Psychology Vol. III (pp.631-706). New York: John Wiley & Sons.

Lichtenwalner, J. S. & Maxwell, J. W. (1969). The relationship of birth order and socioeconomic status to creativity of preschool children. Child Development, 40, 1241-1247.

Lupo, J. M. (1986). Reliability of the teacher rating scale of the Behavior Rating Profile. Journal of Psychoeducational Assessment, 4, 327-333.

MacKinnon, D. (1962). The personality correlates of creativity: A study of American architects. In G. S. Nielson (Ed.), Proceedings of the Fourteenth International Congress of Applied Psychology, Vol. 2, Munksgaard (pp.11-39).

Milgram, R. M., & Arad, R. (1981). Ideational fluency as a predictor of original problem solving. Journal of Educational Psychology, 73, 568-572.

Moran, J. D.III, Milgram, R. M., Sawyers, J. K. & Fu, V. R. (1983a). Original thinking in preschool children. Child Development, 54, 921-926.

Moran, J. D.III, Milgram, R. M., Sawyers, J. K. & Fu, V. R. (1983b). Original thinking in preschool children. Child Development, 54, 921-926.

Moran, J. D., Sawyers, J.K., Fu, V. R. & Milgram, R. M. (in press). Measuring creativity in preschool children. Gifted Child Quarterly.

Piaget, J. (1928). Judgement and reasoning in the child. New York: Harcourt Brace.

Piaget, J. (1965). The moral judgement of the child. New York: The Free Press.

Prentky, R. (1980). Creativity and psycho-pathology: A neurocognitive perspective. New York: Praeger.

Roe, A. (1951). A psychological study of physical scientists. Genetic Psychology Monographs, 43, 121-235.

Roe, A. (1952). A psychologist examines sixty-four eminent scientists. Scientific American, 187, 21-25.

Roe, A. (1953). The making of a scientist. New York: Dodd, Mead.

Shantz, C. (1983). Social Cognition. In P. Mussen (Ed.), Handbook of Child Psychology Vol.III (pp.495-555). New York: John Wiley & Sons.

Starkweather, E. K. (1971). Creativity research instrument designed for use with preschool children. Journal of Creative Behavior, 5, 245-255.

Tegano, D. W., Moran, J. D.III, Goodwin, L. (1986). Cross-validation of two creativity tests designed for preschool children. Early Children Research Quarterly, 1, 387-396.

Tidwell, R. (1980). Gifted students' self-image as a function of identification procedure, race, and sex. Journal of Pediatric Psychology, 5, 57-69.

Tomlinson-Keasey, C., & Smith-Winberry, C. (1983). Educational stragegies and personality outcomes of gifted and non-gifted college students. Gifted Child Quarterly, 27, 30-40.

Torrance, E. P. (1972). Can we teach children to think creatively? Journal of Creative Behavior, 9, 182-195.

Torrance, E.P. (1981). Thinking creatively in action and movement: Administration, scoring, and norms manual. Bensenville, IL: Scholastic Testing Service.

Wallach, M. (1985). Creativity testing and giftededness. In F. Horowitz & M. O'Brien (Eds.). The gifted and talented: Developmental perspectives (pp.99-123). Maryland: American Psychological Assosiation.

Wallach, M. A. & Kogan, N. (1965). Modes of thinking in creative young children: A study of the creativity-intelligence distinction. New York: Holt, Richard and Winston.

Ward, W. C. (1968). Creativity in young children. Child Development, 39, 737-754.

Ward, W. C. (1969). Creativity and environmental cues in nursery school children. Developmental Psychology, 1, 543-547.

Werner, E. E. (1966). CPQ personality factors of talented and underachieving boys and girls in elementary school. Journal of Clinical Psychology, 22, 461-464.

Werner, E. E. & Bachtold, L. M. (1969). Personality factors of gifted boys and girls in middle childhood and adolescence. Psychology in the Schools, 6, 177-182.

APPENDIX B

CORRESPONDENCE TO TEACHERS

OSU

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 13, 1989

Dear Teacher:

The Department of Family Relations and Child Development is conducting an investigation into the social and emotional functioning of preschool children. We are soliciting your help in providing the necessary information on each child in your classroom.

Two rating forms are provided for this purpose: the Kohn Social Competency and the Child's Behavior Traits scales. To insure that results are as reliable as possible we ask that two sets of forms be independently completed for each child -- one by the lead teacher and one by the co-teacher. For each item please base your rating on the child's behavior in the classroom during the most recent week. Be sure to answer every item, since an item left blank can invalidate the scoring of the scales.

Your usual kind cooperation is very much appreciated. Should you have any questions concerning the project or the instruments, please contact Dr. Jim Moran, the project director, at 744-5057, Dr. Donna Couchenour, director of the Child Development Laboratories, at 744-5730 or Delores Smith, investigator, at 744-5080.

Kindly return the completed forms to the box provided in FCSC 101 by March 31, 1989.

Respectfully,

Jim Moran
Project Director

Delores Smith
Investigator

APPENDIX C

INSTRUMENT DESCRIPTION

Description of Instruments

Ideational Fluency

The Multidimensional Stimulus Fluency Measure (Moran, et al., 1983) uses three tasks from the Wallach and Kogan model to index ideational fluency: Instances, Patterns, and Unusual Uses. For each task the subject is first provided an example, then asked to name all the things that they can think of to fit the particular task. (see pp. 39-43 for test instructions) The reliability and validity of the MSFM has been established as well scoring protocols and normative data from research with over 120 preschool children (Godwin, 1984). The alpha coefficients of the original and popular scores were .76 and .55 respectively (Moran, Milgram, Sawyers and Fu, 1983). Validity of the MSFM as a cognitive style distinct from intelligence was evidenced by Moran, Milgram, Sawyers, and Fu (1983) with correlation between original and popular scores with intelligence being .22 (NS). The MSFM appears to remain relatively stable, $r=.54$, $p<.01$ between the ages of four and seven (Moore & Sawyers, 1984). The intertask reliability for the MSFM tasks runs greatest between round and red, $r=.65, p<.05$, and lowest between half and hammer, $r=.24$. Scoring of the MSFM was accomplished by joint consensus of the three testers on the response scores given in the scoring protocol (Godwin, 1984).

General Instructions

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 not timed, each subject will finish at a different time. Allow children enough time to do this task. Do not over schedule.

(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 stimulate the child's interest in the games, and encourage 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 sot 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 for toady. 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 t h e school and have been allowed the privilege if testing t h e 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 a 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.Patterns

In Session II, the tasks will be:

1. Uses

Ideational fluency

Items Two items will be used on each subtest:

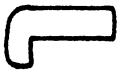
Instances:

Tell me all the things you can think of that are round.

Tell me all the things you can think of that are red.

Patterns:

Tell me all the things that this could be: 

Tell me all the things that this could be: 

Uses:

Tell me all things you could use a box for.

Tell me all the things you could use a paper for.

Instances task instructions

"Now we are going to play a game called üall the things you can think of it." I might say, ütell 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 think 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 a lot of other things too." The examiner should vary the 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 the test items. If the child does not understand, repeat the procedure from the beginning. If a child still does not understand, terminate the test session. 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. Okay, let's try another." No help should be given to the child when the test items are being used. When the child stops responding, ask, "What else can you think of?" or "tell me more things you can think of" until the child indicate he or she has no more responses.

Patterns Task Instructions

"In this game I am 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 child the sample block. Ask, "What could this be? Let the child respond. Reply, "Yes, those are fine. Some other things I can think of are 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 ones different from the child's. If the child indicates an

understanding of the game, proceed with the test tasks.

Uses Task Instructions

"Now today we have a game called üwhat can you use a box for?'. The first thing we are going to play with will be a pencil." Hand the child a pencil. "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, "Yes, that is fine. Some other things you could use a pencil for are as a flagpole, to dig in the dirt, as a mast of a toy boat. There are probably a lot of other things, too." The experimenter should vary the answers so as to give one which the child did not give. Proceed by saying, "You see that there are all different kinds of answers. Do you know how to play? If the child indicates an understanding of the game, proceed with the test items. If the child does not understand, repeat the procedure from the beginning. If the child still does not understand, terminate the test. The examiner should then state, "Now remember I will name something and you are suppose to tell me 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.

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.

When the 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

Session I:

Subject Number _____

Gender M F

Date _____

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 IMAGINING GAMES. YOU DON'T HAVE TO HURRY. WE CAN PLAY AS LONG AS YOU WANT.

Proceed to Task 1.

General Comments:

CREATIVITY RESEARCH

INSTANCES

ANSWER FORM

Subject number:_____

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

Child's Responses:

CREATIVITY RESEARCH

INSTANCES

ANSWER FORM

Subject number:_____

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

Child's Responses:

CREATIVITY RESEARCH

PATTERNS

ANSWER FORM

Subject number_____

Name all the things you think this could be: 

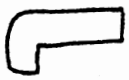
Child's Responses:

CREATIVITY RESEARCH

PATTERNS

ANSWER FORM

Subject number_____

Name all the things you think this could be: 

Child's Responses:

CREATIVITY RESEARCH

USES

ANSWER FORM

Subject number_____

What can you use a BOX for ?

Child's Responses:

CREATIVITY RESEARCH

USES

ANSWER FORM

Subject number_____

What can you use a PAPER for ?

Child's Responses:

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 ✖ and circle your first mark like this: ⊗

	Hardly Ever/Never	Seldom	Sometimes	Often	Very Often/Always
1. Child can communicate his/her needs to the teacher.	①	②	③	④	⑤
2. Child seeks adult attention by crying.	①	②	③	④	⑤
3. Child seeks adult aid for each step of activity.	①	②	③	④	⑤
4. Child is responsible in carrying out requests and directions.	①	②	③	④	⑤
5. Child seeks physical contact with teacher.	①	②	③	④	⑤
6. Child adds freely (verbally or nonverbally) to teacher's suggestions.	①	②	③	④	⑤
7. Child expresses open defiance of authority.	①	②	③	④	⑤
8. Child shies away and withdraws when approached by other children.	①	②	③	④	⑤
9. Child responds with immediate compliance to teacher's direction.	①	②	③	④	⑤
10. Child can be independent of adult in forming ideas about or planning activities.	①	②	③	④	⑤
11. Child frowns, shrugs shoulder, pouts, or stamps foot when teacher makes a suggestion.	①	②	③	④	⑤
12. Child can be independent of adult in overcoming difficulties with other children or activities.	①	②	③	④	⑤
13. Excessive praise and encouragement from teacher is required for child to participate in activities.	①	②	③	④	⑤
14. Other children seem unwilling to play with this child.	①	②	③	④	⑤
15. Child is unwilling to carry out reasonable suggestions from teacher even when having difficulty.	①	②	③	④	⑤
16. Child feels comfortable enough with other children to be able to express his/her own desires or opinions.	①	②	③	④	⑤

	Hardly Ever/Never	Seldom	Sometimes	Often	Very Often/Always
17. Child hits teacher.	①	②	③	④	⑤
18. Child is fearful in approaching other children.	①	②	③	④	⑤
19. Child can accept teacher's ideas and suggestions for play or ways of playing.	①	②	③	④	⑤
20. Child gets willing cooperation from most other children.	①	②	③	④	⑤
21. Child gives the appearance of complying with teacher's suggestions but does not do activity.	①	②	③	④	⑤
22. Child is bossed and dominated by other children.	①	②	③	④	⑤
23. Child's ideas have impact on many children in the classroom.	①	②	③	④	⑤
24. Child rebels physically - for example, hits or kicks.	①	②	③	④	⑤
25. Child easily gets attention of other children.	①	②	③	④	⑤
26. Child has difficulty defending his/her own rights with other children.	①	②	③	④	⑤
27. Child cooperates with rules and regulations.	①	②	③	④	⑤
28. Child dawdles when required to do something.	①	②	③	④	⑤
29. In play with other children, child can shift between leading and following depending on situation.	①	②	③	④	⑤
30. Child reacts negatively to teacher's ideas and suggestions for play or activities.	①	②	③	④	⑤
31. Child is unable to occupy himself/herself without other children directing his/her activities.	①	②	③	④	⑤
32. Child is willing to turn to other children for help and assistance.	①	②	③	④	⑤

THE PSYCHOLOGICAL CORPORATION
HARCOURT BRACE JOVANOVICH, INC.

9-175019

Kohn Social Competence Scale — READY-SCORE™ ANSWER SHEET

Child's Name: _____

Sex: _____ Male _____ Female

Rater's Name: _____

Title/Position: _____

	Year	Month	Day
Testing Date:			
Date of Birth:			
Child's Age:			

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

Rating period(circle): Early Prog. 1 Late Prog. 1 Late Prog. 2 or FU: 1 2 3 4 5 6 | VIP/MCHP

VIP FU: K

VERBAL INTERACTION PROJECT/ Replication or Model Program) | Keypunch characters in boxes only

SCHEDULE C: CHILD'S BEHAVIOR TRAITS (CBT)

Child: _____ School(if app.): _____ Data Card#: C | C (1)

Rater's Name: _____ Child's case #(VIP use only): _____ | (2 3 4 5 6)

Rating date (Month and day, e.g. 0405 = April 5) _____ | (7 8 9 10)

Rating year (Last two digits, e.g. 77 = 1977) _____ | (11 12)

Replicator Org.(if applicable): Location:

INSTRUCTIONS TO RATER: Circle number, at right of behavior trait which best rates the amount you judge that that trait to be present in the child from your specific or general observations. Your ratings may range from 1 (almost not present) to 5 (markedly present). Please consult the accompanying guide as often as you wish.

	Almost not present	Slightly present	Moderately present	Often present	Markedly present	THIS COLUMN FOR OFFICE USE ONLY
1. Is well organized in work or play	1	2	3	4	5	15
2. Seems generally cheerful and content	1	2	3	4	5	16
3. Refrains from physically aggressive behavior toward others	1	2	3	4	5	17
4. Expresses ideas in language	1	2	3	4	5	18
5. Initiates non-destructive, goal directed activities	1	2	3	4	5	19
6. Accepts or asks for help when necessary	1	2	3	4	5	20
7. Is cooperative with adults	1	2	3	4	5	21
8. Seems to know difference between facts and make believe.	1	2	3	4	5	22
9. Is spontaneous without being explosive	1	2	3	4	5	23
10. Understands and completes tasks without frequent urging	1	2	3	4	5	24
11. Protects own rights appropriately for his (her) age group	1	2	3	4	5	25
12. Follows necessary rules in family or school	1	2	3	4	5	26
13. Is creative, inventive	1	2	3	4	5	27
14. Tolerates necessary frustration (e.g. awaiting turn at game)	1	2	3	4	5	28
15. Enjoys mastering new tasks	1	2	3	4	5	29
16. Seems self-confident, not timid	1	2	3	4	5	30
17. Can put own needs second to those of others	1	2	3	4	5	31
18. Refrains from unnecessary physical risks	1	2	3	4	5	32
19. Seems free of sudden, unpredictable mood changes	1	2	3	4	5	33
20. Is attentive and concentrates on tasks	1	2	3	4	5	34

Col. 80 (VIP only)------ 80

  Form #65 #65

Verbal Interaction Project
Mother-Child Home Program

CBT ITEM GUIDES, 1973 - 1974

For use with Schedule C: Child's Behavior Traits (CBT, VIP Form #65)

For guidance in rating the child's behavior, the 20 items of the CBT are explained below, with examples of behavior given as they might occur in a Home Session of the Mother-Child Home Program (child aged two to four years), or in the classroom or other setting of a school. THE EXAMPLES ARE FOR ILLUSTRATION ONLY.

To save space, the child is usually referred to as "he", but all statements are meant to apply as much to girls as to boys.

ITEM AND EXPLANATION	EXAMPLES
1. Is well organized in work or play. Thinks through ahead of time the materials or activities he will need and then uses them to proceed with the requirements of accomplishing the task in orderly sequence. Appears to be reflective about task.	Home Session: Empties all the pieces from a puzzle, before starting it, and then fits them into logically possible spaces. In frequent pauses, he seems to be thinking about which piece should come next. School: Prepares his desk with pencil, paper, or other materials he needs to copy and complete arithmetic problems. Heads paper correctly and leaves regular spaces between problems.
2. Seems generally cheerful and content. Gives an impression of being satisfied and even happy most of the time. Seems tension-free, and negative feelings (eg, sadness, fear, anxiety) generally appear to be absent.	Home Session: Smiles, laughs, perhaps claps hands occasionally during session. OR: seems relaxed and involved in play even if face doesn't show any feelings. School: Seldom cries or complains. Smiles or laughs occasionally. Facial expression generally does not convey fear, worry, or other negative feelings.
3. Refrains from physically aggressive behavior toward others. Hostile motor activity is not directed against people around him. He is able to channel such feelings into appropriate angry words, or curb them altogether.	Home Session: Does not throw blocks at others instead of building with them (may have to be reminded). School: Does not hit or push other children unprovoked.
4. Expresses ideas in language. Uses words and/or sentences to convey his thoughts instead of just gestures, tone of voice, or facial expression.	Home Session: Describes in words or sentences the pictures in a book. Does not just point to picture. School: Tells a story or incident to the class or teacher.

ITEM AND EXPLANATION	EXAMPLES
5. Initiates non-destructive, goal directed activities. Shows independence and doesn't always rely on others to think up and begin activities, which will not hurt others, and have some constructive aim, however limited. The activity may not involve much thinking but does demonstrate initiative and direction toward a goal.	Home Session: Builds blocks into a boat shape and pushes the "boat" about the floor, singing or chanting appropriate words or sounds without having the idea suggested to him. School: During free play, organizes some children into a game. In the classroom, spontaneously brings a new picture for the bulletin board.
6. Accepts or asks for help when necessary. Permits or asks for help from adults or children without seeming to need their help for everything. Usually tries at least briefly to understand or master the task before asking for help.	Home Session: Asks for help in finding proper spaces for puzzle pieces. May try to fit them in first. School: Turns to teacher for help in pronouncing unfamiliar word in oral reading. May try to pronounce it first.
7. Is cooperative with adults. Is generally willing to follow the suggestions or orders of responsible adults, without arguing, objecting, or balking.	Home Session: Readily agrees to join mother and Toy Demonstrator in reading a book together. School: Complies with teacher's request to take book out for a reading lesson.
8. Seems to know difference between facts and make believe. If he " makes believe" in play, he clearly understands that the pretending is a game. Seems firmly based in reality.	Home Session: Pretends to pour milk from the pitcher of the toy set of dishes but is not disturbed when no milk appears in his cup. School: Tells the class an original story containing much fantasy and clearly conveys that he knows it is not true.
9. Is spontaneous without being explosive. Can freely express strong positive or negative feelings, but knows when and where to stop an outburst. Appears to exercise sufficient control over emotional behavior to avoid over-intense extremes inappropriate to the situation.	Home Session: May show anger at mother's insistence that he stop throwing blocks, and argues a bit, but anger soon subsides, and there is no temper tantrum. OR: laughs in delight when he completes puzzle. School: Claps hands happily at teacher's announcement of snack time but stops after a few seconds, instead of continuing to the point of boisterousness.
10. Understands and completes tasks without frequent urging. Seems to understand directions and goes about what has to be done in a self-directed manner. Continues task until done, at a fairly steady pace, with only occasional pauses. Does not have to be reminded frequently to finish.	Home Session: Soon figures out how the Magnetic Form Board works. Decides to build a man with the forms, finds all the pieces, and completes the man, with only occasional encouragement from mother. School: Writes arithmetic problems on paper at teacher's direction and fills in all the answers without reminders from the teacher to keep working.

ITEM AND EXPLANATION	EXAMPLES
11. Protects own rights appropriately for his age group. Tries to defend self or property from physical attack by others without over-reacting or carrying it out beyond the actual attack.	Home Session: Refuses to give up toy when sister grabs the one he is playing with. School: Stands firm when classmate tries to push him from his place in a line waiting for a turn at the water fountain.
12. Follows necessary rules in family or school. Complies with directives devised for social group harmony at home or school (but feels free to question the general necessity for a particular rule).	Home Session: Collects all parts of a toy and replaces them in box and Toy Chest when finished playing with the toys because he is supposed to pick up his toys. School: Asks teacher's permission to leave the classroom, or follows other procedure, according to pre-established rule, to keep school staff informed of his whereabouts within the school.
13. Is creative, inventive. Uses materials or ideas in original ways which may be different from those initially intended. The results may often be interesting and/or attractive.	Home Session: During a pretend tea party with Toy Dishes, puts small colored blocks on a plate and indicates they are cookies with different icings. School: Tells or writes a poem with original use of words and juxtaposition of ideas.
14. Tolerates necessary frustration (eg, awaiting turn at game). Can control need for immediate satisfaction of a wish, whether involving physical, emotional, social, or cognitive satisfaction. Appears to understand that at times he has to wait to get what he wants, and is willing to wait when he has to.	Home Session: Can wait for his own turn in playing Balloon Game. School: Waits in line for his turn at the drinking fountain even when very thirsty.
15. Enjoys mastering new tasks. Shows joy in mastering a new activity, especially showing a sense of accomplishment (efficacy) at completion of task.	Home Session: Laughs, claps hands on fitting all differently shaped blocks into the correct openings of the Form Ball. OR: immediately dumps them and starts all over again, with intent expression. School: In oral reading, smiles when he successfully sounds out and recognizes an unfamiliar looking word.

CBT Item Guide:1

ITEMS AND EXPLANATION	EXAMPLES
16. Seems self-confident, not timid. Is not shy in social interaction. Initiates interaction or responds to others with little hesitation. Appears to value himself and does not appear to fear people or tasks.	Home Session: Greets Toy Demonstrator at door and enters spontaneously into Home Session play. School: Contributes to class discussions, speaking up without too much hesitation, and appears to take for granted that others will be interested in what he has to say.
17. Can put own needs second to those of others. Understands that at times others have rights that transcend his own. Shows consideration for the physical, social, and emotional requirements of other people around him.	Home Session: Gives brother requesting it a turn to play with a new toy, although very eager himself to continue playing with it. School: Agrees willingly to play a game he doesn't particularly like, after most of the class voted for it.
18. Refrains from unnecessary physical risks. May enjoy physical challenge, as in sports, but does not expose himself to danger without good reason.	Home Session: Enjoys using the toy hammer but swings it carefully enough so that it will not hit his hand or leg. School: Does not sit on classroom window sills or stand on desks.
19. Seems free of sudden, unpredictable mood changes. Moods (happiness, sadness, anger, etc.) are usually obviously related to the situation at hand. His reactions follow a rather stable pattern. It is thus possible to forecast what his emotional behavior will be in most circumstances.	Home Session: Does not usually switch suddenly from happy to sad mood, erupt into a temper tantrum, burst into laughter, without apparent cause. School: Does not change quickly from being pleasantly engaged in a writing lesson, to being sullen and uncooperative, and then to laughter, all within a few minutes of time.
20. Is attentive and concentrates on tasks. Focuses visually and aurally, with little restlessness, first as task is explained, and then on carrying through its accomplishment. Appears to be intent on reaching goal set by the task and is not easily distracted by outside sights and sounds.	Home Session: After being shown how, builds a block tower as high as he can reach. When interrupted briefly by street noises he glances up from his task but doesn't run to see it. School: Listens and watches as teacher shows class how to cut out and paste together a paper basket. Stays in his chair until he has completed making one himself, perhaps occasionally chatting sociably with children around him, but generally absorbed in his task.

APPENDIX D

RAW DATA

		CODE	SEX	AGE	ORIGINAL	POPULAR
		KOHN1	KOHN2	RESIND	SOCCOOP	COGSKILL
		EMOTSTAB	TASKORIE	GROUP		
CASE	1	463.000	1.000	52.000	5.000	30.000
CASE	1	1.128	-0.850	15.000	14.000	19.000
CASE	1	15.000	16.000	1.000		
CASE	2	470.000	1.000	49.000	5.000	9.000
CASE	2	-0.651	-0.973	13.000	11.000	14.000
CASE	2	14.000	15.000	1.000		
CASE	3	436.000	1.000	60.000	9.000	14.000
CASE	3	-0.514	-0.174	18.000	19.000	19.000
CASE	3	19.000	18.000	1.000		
CASE	4	405.000	1.000	68.000	11.000	9.000
CASE	4	0.991	-1.404	15.000	12.000	19.000
CASE	4	12.000	16.000	1.000		
CASE	5	437.000	1.000	57.000	12.000	13.000
CASE	5	-0.480	-0.174	16.000	19.000	16.000
CASE	5	20.000	20.000	1.000		
CASE	6	404.000	1.000	59.000	12.000	14.000
CASE	6	-0.445	0.441	12.000	14.000	14.000
CASE	6	12.000	12.000	1.000		
CASE	7	516.000	1.000	45.000	12.000	11.000
CASE	7	-1.164	-0.789	11.000	9.000	13.000
CASE	7	10.000	12.000	1.000		
CASE	8	478.000	1.000	50.000	14.000	21.000
CASE	8	-0.069	0.165	13.000	12.000	13.000
CASE	8	17.000	11.000	1.000		
CASE	9	425.000	1.000	53.000	14.000	19.000
CASE	9	-0.822	-0.574	12.000	12.000	13.000
CASE	9	14.000	12.000	1.000		
CASE	10	461.000	2.000	51.000	3.000	36.000
CASE	10	1.025	1.026	18.000	19.000	18.000
CASE	10	18.000	19.000	1.000		
CASE	11	433.000	2.000	57.000	3.000	11.000
CASE	11	-0.445	0.165	17.000	19.000	16.000
CASE	11	18.000	18.000	1.000		
CASE	12	459.000	2.000	49.000	5.000	31.000
CASE	12	1.299	-0.051	16.000	13.000	18.000
CASE	12	15.000	15.000	1.000		
CASE	13	434.000	2.000	56.000	6.000	13.000
CASE	13	0.170	0.872	18.000	19.000	17.000
CASE	13	19.000	19.000	1.000		
CASE	14	320.000	2.000	61.000	6.000	17.000
CASE	14	0.615	1.794	15.000	17.000	20.000
CASE	14	18.000	19.000	1.000		
CASE	15	472.000	2.000	54.000	7.000	15.000
CASE	15	-0.582	1.272	18.000	18.000	19.000
CASE	15	20.000	19.000	1.000		
CASE	16	424.000	2.000	44.000	9.000	18.000
CASE	16	-1.574	-0.635	14.000	14.000	14.000
CASE	16	14.000	12.000	1.000		
CASE	17	465.000	2.000	53.000	11.000	12.000
CASE	17	0.649	1.179	15.000	19.000	15.000
CASE	17	18.000	18.000	1.000		
CASE	18	111.000	2.000	58.000	13.000	16.000
CASE	18	0.512	1.487	18.000	20.000	19.000
CASE	18	19.000	18.000	1.000		
CASE	19	115.000	2.000	65.000	14.000	19.000
CASE	19	0.786	0.749	19.000	20.000	19.000
CASE	19	20.000	20.000	1.000		

CASE	20	414.000	2.000	65.000	14.000	23.000
CASE	20	0.957	0.288	18.000	18.000	20.000
CASE	20	19.000	19.000	1.000		
CASE	21	417.000	2.000	65.000	14.000	13.000
CASE	21	1.196	-0.481	18.000	15.000	20.000
CASE	21	16.000	18.000	1.000		
CASE	22	515.000	1.000	48.000	18.000	18.000
CASE	22	0.410	0.903	17.000	17.000	16.000
CASE	22	16.000	15.000	2.000		
CASE	23	419.000	1.000	45.000	19.000	12.000
CASE	23	-1.608	1.179	15.000	17.000	13.000
CASE	23	16.000	12.000	2.000		
CASE	24	426.000	1.000	47.000	20.000	12.000
CASE	24	-0.616	-0.051	12.000	7.000	13.000
CASE	24	10.000	10.000	2.000		
CASE	25	107.000	1.000	63.000	24.000	19.000
CASE	25	1.299	-0.081	19.000	15.000	20.000
CASE	25	20.000	18.000	2.000		
CASE	26	420.000	1.000	57.000	24.000	16.000
CASE	26	-1.642	-1.619	12.000	9.000	14.000
CASE	26	9.000	10.000	2.000		
CASE	27	403.000	1.000	58.000	33.000	13.000
CASE	27	-0.206	-0.820	15.000	13.000	19.000
CASE	27	14.000	16.000	2.000		
CASE	28	442.000	1.000	53.000	37.000	27.000
CASE	28	-0.822	-2.019	13.000	11.000	13.000
CASE	28	11.000	14.000	2.000		
CASE	29	430.000	2.000	56.000	16.000	16.000
CASE	29	0.410	-0.051	20.000	18.000	18.000
CASE	29	18.000	15.000	2.000		
CASE	30	431.000	2.000	63.000	16.000	26.000
CASE	30	-0.274	-0.112	18.000	19.000	16.000
CASE	30	19.000	19.000	2.000		
CASE	31	423.000	2.000	67.000	19.000	17.000
CASE	31	0.786	0.657	17.000	17.000	19.000
CASE	31	20.000	19.000	2.000		
CASE	32	418.000	2.000	60.000	19.000	16.000
CASE	32	0.204	-1.435	16.000	14.000	19.000
CASE	32	14.000	15.000	2.000		
CASE	33	117.000	2.000	65.000	28.000	23.000
CASE	33	1.778	-1.312	20.000	17.000	19.000
CASE	33	18.000	18.000	2.000		
CASE	34	458.000	2.000	49.000	31.000	42.000
CASE	34	0.375	0.318	15.000	18.000	14.000
CASE	34	14.000	16.000	2.000		
CASE	35	468.000	2.000	45.000	34.000	33.000
CASE	35	-2.292	1.425	12.000	19.000	10.000
CASE	35	14.000	10.000	2.000		
CASE	36	410.000	2.000	66.000	36.000	14.000
CASE	36	0.204	-2.050	18.000	17.000	20.000
CASE	36	17.000	19.000	2.000		
CASE	37	427.000	2.000	58.000	36.000	24.000
CASE	37	0.581	0.042	18.000	16.000	20.000
CASE	37	18.000	18.000	2.000		
CASE	38	435.000	2.000	59.000	37.000	30.000
CASE	38	0.854	0.718	18.000	18.000	18.000
CASE	38	17.000	19.000	2.000		
CASE	39	439.000	2.000	63.000	55.000	32.000
CASE	39	0.204	-0.358	20.000	19.000	18.000
CASE	39	18.000	20.000	2.000		
CASE	40	428.000	2.000	55.000	59.000	14.000
CASE	40	-2.224	1.333	13.000	20.000	17.000
CASE	40	16.000	18.000	2.000		

SYSTAT PROCESSING FINISHED

INPUT STATEMENTS FOR THIS JOB:

APPENDIX E

ANOVA ANALYSES

DEP VAR: KOHN1 N: 40 MULTIPLE R: .308 SQUARED MULTIPLE R: .095

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
SEX	2.954	1	2.954	3.013	0.091
GROUP	0.755	1	0.755	0.770	0.386
GROUP* SEX	0.025	1	0.025	0.026	0.873
ERROR	35.294	36	0.980		

DEP VAR: KOHN2 N: 40 MULTIPLE R: .451 SQUARED MULTIPLE R: .203

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
GROUP	0.812	1	0.812	0.941	0.339
SEX	4.723	1	4.723	5.473	0.025
GROUP* SEX	1.639	1	1.639	1.899	0.177
ERROR	31.066	36	0.863		

DEP VAR: RESIND N: 40 MULTIPLE R: .541 SQUARED MULTIPLE R: .293

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
GROUP	1.963	1	1.963	0.377	0.543
SEX	71.397	1	71.397	13.728	0.001
GROUP* SEX	1.309	1	1.309	0.252	0.619
ERROR	187.234	36	5.201		

DEP VAR: SOCCOOP N: 40 MULTIPLE R: .641 SQUARED MULTIPLE R: .411

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
GROUP	1.366	1	1.366	0.179	0.675
SEX	191.718	1	191.718	25.076	0.000
GROUP* SEX	2.032	1	2.032	0.266	0.609
ERROR	275.234	36	7.645		

DEP VAR:COGSKILL N: 40 MULTIPLE R: .393 SQUARED MULTIPLE R: .154

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
GROUP	1.199	1	1.199	0.173	0.680
SEX	43.262	1	43.262	6.242	0.017
GROUP* SEX	0.495	1	0.495	0.071	0.791
ERROR	249.520	36	6.931		

DEP VAR:EMOTSTAB N: 40 MULTIPLE R: .521 SQUARED MULTIPLE R: .271

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
GROUP	9.322	1	9.322	1.254	0.270
SEX	93.102	1	93.102	12.526	0.001
GROUP* SEX	0.051	1	0.051	0.007	0.934
ERROR	267.567	36	7.432		

DEP VAR:TASKORIE N: 40 MULTIPLE R: .541 SQUARED MULTIPLE R: .292

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
GROUP	7.380	1	7.380	0.973	0.331
SEX	108.701	1	108.701	14.332	0.001
GROUP* SEX	0.437	1	0.437	0.058	0.812
ERROR	273.048	36	7.585		

APPENDIX F

INTERTASK CORRELATION MATRIX

PEARSON CORRELATION MATRIX

	KOHN1	KOHN2	RESIND	SOCCOOP	COGSKILL
KOHN1	1.000				
KOHN2	-0.033	1.000			
RESIND	0.654	0.122	1.000		
SOCCOOP	0.181	0.591	0.650	1.000	
COGSKILL	0.707	-0.011	0.756	0.368	1.000
EMOTSTAB	0.435	0.478	0.787	0.806	0.575
TASKORIE	0.563	0.215	0.781	0.702	0.769

	EMOTSTAB	TASKORIE
EMOTSTAB	1.000	
TASKORIE	0.792	1.000

APPENDIX G

ABBREVIATIONS KEY

Abbreviation		Variable
Int-Part	=	Interest Participation
Coop-Comp	=	Cooperation Compliance
Resp-Ind	=	Responsible Independence
Soc-Coop	=	Social Cooperation
Cog-Skill	=	Cognitive Skill
Emot-Stab	=	Emotional Stability
Task-Orie	=	Task Orientation

VITA

Delores Elaine Smith

Candidate for the degree of

Doctor of Philosophy

Thesis: THE SOCIAL AND EMOTIONAL FUNCTIONING OF CREATIVE PRESCHOOLERS

Major Field: Home Economics

Biographical:

Personal Data: Born in Ginger Hill, Jamaica, the daughter of the late Ruby Rhoden. Married to Michael O. Smith, April 1973.

Education: Graduated from May Pen Senior School, May Pen, Jamaica, in July 1967; received a Trained Teacher Certificate from the Mico Teacher's College, Jamaica, July, 1972; received a Bachelor of Science degree in Home Economics from Oklahoma State University in December 1984; and Master of Science degree in Family Relations and Child Development from Oklahoma State University in July, 1986; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in July 1989.

Professional Experience: Teaching Internship, Grove Town Primary School, Manchester, Jamaica, September, 1971 to July, 1972. Social Studies Teacher, Elim Agricultural School, Jamaica, August, 1979 to December, 1981. Teaching Assistant, Child Development Laboratory, Oklahoma State University, August, 1984 to December, 1984. Graduate Teaching Assistant, Child Development Laboratory, Oklahoma State University, January, 1985 to May, 1986. Graduate Teaching Associate, Oklahoma State University, August, 1988, to May, 1989

Professional Affiliations: American Home Economics Association, Omicron Nu; Phi Kappa Phi; Jamaica Teachers Assosiation.