

THE INTERPERSONAL COGNITIVE PROBLEM SOLVING
APPROACH AS UTILIZED BY MOTHERS AND
FATHERS DIFFERENTIALLY FOR THEIR
MALE AND FEMALE CHILDREN

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CHAPTER I

STATEMENT OF PROBLEM

Since the beginning of the current century, social scientists have become increasingly concerned with issues related to parent-child relationships and childrearing. Only within the last 20 years have social scientists attempted to delineate childrearing styles and their consequences.

Although the literature now documents the stability of some aspects of child personality from infancy on (Thomas, Chess & Birch, 1963, 1970; Thomas & Chess, 1977), there is agreement as to the importance of the child's environment in determining personality characteristics and specific behaviors. One important aspect of the environment is the parents' childrearing tactics. Researchers have examined the antecedent childrearing styles of many child behaviors. Among these are aggression, dependence, independence, and achievement (Sears, Maccoby & Levin, 1957; Becker, 1964).

More recently, there has been heightened interest in the antecedent childrearing style for the behavior of competence (Baumrind & Black, 1967; White, Kaban & Attanucci, 1979). However, the emphasis has been placed on the impersonal and cognitive aspects of competence development and has ignored the interpersonal aspect. The ability to solve interpersonal problems resourcefully, to learn to interact with others in consideration of one's own feelings and the feelings of others, is a central element in

interpersonal competence and is intimately related to adjustment and mental health. Development of such an ability has important implications for the individual and society as a whole. Serious consideration of the childrearing styles that produce this ability is of importance.

Some of the stronger voices in the childrearing literature today (Ginott, 1965; Gordon, 1970; Spock, 1976) propose a style of parenting which includes the encouragement of children in interpersonal competence to become more active in interpersonal problem solving and decision making. Their advice is that parents should socialize their children to consider the needs of others in their interpersonal interactions. In contrast, other contemporary professionals have placed more of an emphasis on the development of independence and productivity (impersonal competence) than on interpersonal skills. This emphasis upon impersonal skills is inevitably transmitted directly or indirectly to the growing children. However, it is not equally communicated to male and female children. Female children are more likely socialized to be sensitive to interpersonal dynamics, or interpersonal competence. If society continues to place higher value upon independence and productivity (and the resultant competitiveness that ensues) than upon interpersonal skills, it is likely that social problems will prevail (perhaps differentially for the sexes). As the traditional support systems for the individual (i.e., the immediate and the extended family) are being greatly reduced, more attention should be paid to developing the interpersonal skills of children.

Recently mental health researchers and practitioners have taken a preventative focus relative to early childhood development and education. Parents and teachers have been encouraged to focus upon interpersonal competency in children. Spivack and Shure (1974), Spivack, Platt and Shure

(1976), and Shure and Spivack (1978) have investigated a style of child-rearing which impacts upon the child's interpersonal cognitive problem solving skills (ICPS). One of the salient skills involved in ICPS is the ability to think of alternate solutions to interpersonal problems. These authors demonstrate that the ability to think of alternate solutions to interpersonal problems in preschool children is predictive of school adjustment. This ability can be easily taught to teachers and parents. Shure and Spivack (1978) state that mothers have the potential to transmit this skill to both male and female children. Their research results indicate that a mother's childrearing style is related to her female child's alternate solution thinking. However, this relationship was not found for mothers and their male children. These authors have not studied the fathers as socializing agent.

Whether mothers and fathers relate differentially to their male and female children is an important issue for those interested in childrearing practices. Gender is an important determinant of the childrearing attitudes a parent may adopt (Schell & Hall, 1979). The author proposes to examine two-parent families with male and female children ages four to five years old. The relationship of the parents' childrearing style to the child's alternate solution thinking will be compared for mothers and fathers of male and female children. In contrast to the previous studies, the role of father will be investigated in the present study.

CHAPTER II

REVIEW OF THE LITERATURE

Interpersonal Competence

In psychology the concept of competence was first introduced by White (1959). It was labeled and defined as "effectance motivation," a desire to master a new skill or perfect an old one to improve one's proficiency at a task. This definition implies that an attempt to master any skill, e.g., social poise or collecting stamps, is illustrative of effectance motivation (Kagan, 1971). Nevertheless, psychologists have generally focused upon only two areas of mastery, intellectual and athletic skills.

In spite of the importance of interpersonal skills, researchers have focused little attention upon competence in or the development of such skills in this area. As children may desire to perfect a skill, or learn a new ability, they may also desire to become interpersonally competent (Kagan, 1971). It may be argued that the ability to solve interpersonal problems is an aspect of a global construct of competence. This has been most thoroughly examined and researched by White (1975), White, Kaban, Attanucci and Shapiro (1978), and White, Kaban and Attanucci (1979). White et al. focused upon competence per se but their research also emphasized the social or interpersonal nature of competence. They argued that the first three years of life are most critical in the development of the foundations of competence. Infants who at the age of 12 to 15 months were better able to hold and get the attention of adults in socially acceptable

ways were found to be more competent at age three. It could be argued that in the second year of life the ability to hold social attention is crucial and predictive of later positive development. White et al.'s research and findings have important implications for early preschool development, especially social-personality development. Interpersonal competence is a topic which has been directly addressed (Spivack & Shure, 1974; Spivack, Platt & Shure, 1976; Shure & Spivack, 1978). They propose that cognitive problem solving skills are intimately related to social competence and later adjustment of preschool children.

Social Competence and Cognitive Problem Solving

D'Zurilla and Goldfried (1971) have extensively reviewed research in problem solving. They conclude that this body of knowledge is almost exclusively based on problem solving with impersonal tasks. Up to 1974, there had been numerous attempts to experimentally investigate problem solving in children (Duncan, 1959; Davis, 1966; Simon & Newell, 1971); however, such studies had concentrated on measurement of cognitive style and ability with tasks such as puzzles and anagrams.

Spivack et al. (1976) distinguished between problem solving initiated with impersonal cognitive tasks and the problem solving processes utilized with interpersonal problems. They argue that the quality of resolution of interpersonal problems is probably due to a complex of interacting factors, including the material and social resources available to the person at the time and the support that he/she receives from others during the problem solving process. The theory of cognitive problem solving (Spivack et al., 1976) suggests that there is a group of interpersonal cognitive

problem solving skills (ICPS) that mediate the quality of our social adjustment.

Four interpersonal thinking skills have been identified that differentiate children with regard to adjustment in early childhood: (1) the ability to conceptualize alternate solutions to typical age relevant interpersonal problems; (2) the ability to conceptualize potential consequences of an interpersonal act (e.g., grabbing a toy from another child); (3) the ability to conceptualize causality to explain the occurrence of particular acts (e.g., hitting another child); and (4) the desire to perceive a problem situation as an interpersonal one (Spivack & Shure, 1974; Spivack et al., 1976). According to the authors, the ability to generate alternate solutions for interpersonal problems (this skill is identified by the authors to be most discriminating and salient), knowledge of the consequences of interpersonal problems and sensitivity to interpersonal problems are behaviors that are related to each other. All three of these skills are related to the mother's cognitive ability to solve problems between a hypothetical mother and child (while child's impersonal alternate solution thinking is not). Furthermore, all three of the related interpersonal and thinking skills of the child which were mentioned above have been found related to the mother's problem solving style in handling problems that arise with her child at home.

Social Competence and Intelligence

As interpersonal cognitive problem solving involves some degree of logical analysis, one may speculate about its relationship to general intelligence.

Anderson and Messick (1974) agree that social intelligence (competence)

is something different than general intelligence. Among the varied facets of social intelligence defined by these authors were intrapersonal, interpersonal sensitivity, an appreciation of varied perspectives, and problem solving skills. Thorndike (1920) was among the first to suggest a social intelligence distinct from the conventional definition of intelligence. Attempts through the years to measure social intelligence, especially independent of verbal ability, have met with many problems. O'Sullivan and Guilford (1966) defined social intelligence as the ability to understand thoughts, feelings and intentions of others, and measured it using tasks that have a low loading on a verbal comprehension factor. Hoepfner and O'Sullivan (1968) found correlations between traditional IQ measures and Guilford's measures of social intelligence to fall mainly between 0.30 and 0.40. Findings of Shanley, Walker and Foley (1971) are confirmatory of Hoepfner and O'Sullivan's findings. Although the demonstrated correlations are significant, they account for little of the variance. While high IQ people usually have high social intelligence scores, low IQ people range from low to high on social intelligence (Hoepfner & O'Sullivan, 1968).

Furthermore, Schantz (1975) after reviewing the literature on social cognition, concluded that no data existed supporting the then current view that social cognitive skills are not different from general intelligence. Schantz noted that correlations between social cognitive skills and impersonal cognitive skills were in the low to moderate range at the best and varied with the SES, IQ, and the sex of the child. Jennings' (1975) findings confirm that intelligence tests best measure impersonal object classification. Muuss (1960) has reported that social causal thinking does not relate to measured intelligence; however, scores on a test measuring

causal thinking about impersonal events does relate to measured intelligence. Feffer and Gourevitch (1960), controlling for IQ, found a significant relationship between Piagetian impersonal decentering tasks and a social role taking task. Turnure (1975) found no relationship between Feffer and Gourevitch's role taking task and the measures of concrete and formal operational thought in children seven to nine years of age. Similarly, Rardin and Moan (1971) found that while measures of popularity and social awareness are related in young children, neither bears a significant relationship to the development of concepts about the physical world. Kurdek and Rodgon (1975) found little or no relationship between affective, perceptive and cognitive role taking among preschoolers. For example, awareness of how another child might feel if he/she saw his/her sibling take away his/her favorite toy (affective perspective) showed no consistent relationship to whether a child could turn a tray so that he/she could see cut-out characters from the same perspective as the experimenter (perceptual perspective taking) or the ability to predict a story their friend would tell based on differential information (cognitive perspective taking). The findings of Jennings (1975) both confirm those of Kurdek and Rodgon (1975) and add evidence indicating that IQ measures and tests of impersonal object classification represent a distinct and separate cognitive system from that of social knowledge.

The overall evidence would indicate that while skills in understanding certain aspects of social affairs are not totally independent of traditionally conceived intelligence, there is some justification not to view these as two faces of the same coin or as manifestations of identical underlying processes (Rardin and Moan, 1971). Having made this distinction, the area of interpersonal competence requires more research in

order to further delineate and explore the socializing agents which are influential in its development and its impact on mental health.

Social Competence and Mental Health

Social competence, especially the ability to problem solve, seems to be related to mental health. Jahoda (1953) first proposed the problem solving approach as an element in positive mental health. D'Zurilla and Goldfried (1971) suggested that training in psychotherapy may be viewed as teaching the person how to solve problems (interpersonal and intrapersonal). Weinstein (1966) offered a speculative paper on interpersonal competence, viewing it as the ability of people to achieve their purpose when dealing with others. Zigler and Trickett (1978) argued that social competence rather than IQ should be the primary measure of success of intervention efforts. These authors, however, acknowledged the historical difficulty in defining this construct.

Jennings (1975) discovered that four to five year old children exhibiting good interpersonal awareness and social role taking ability were not only more popular than others but also tended to display more leadership ability, initiative, and ability to get along with others. Iannotti (1975) found that training in role taking increased the willingness of the six year old children to share candy but that training did not affect scores on test of empathy. There is some evidence that a reverse relationship exists between empathy and the ability to take different social perspectives (Feshback, 1969; Chandler, 1973). These studies have suggested the fruitfulness of exploring social cognition as a mediator of social adjustment.

It is evident from the literature that the ability to solve interpersonal problems is an important aspect of socialization and mental health. Murphy and Moriarty (1976) designated problem solving ability as an important coping mechanism and resource. French and Berlin (1979) in a discussion of depression in children and adolescents addressed the need for children to explore various possible solutions to problems, to establish hypotheses, and to evaluate data in support of these hypotheses. Children need to learn to problem solve as an important element in life (Coles, 1976; Hann, Smith & Black, 1968; Piaget & Inhelder, 1969; White, 1973). Weinstein (1966) argued that if the social structure of our society is to be stable, individuals must become effective in achieving personal purposes. Role expectations and reciprocity as well as ability to negotiate with others whose purposes are not complementary to ours are important issues to consider in the area of interpersonal competence. Acquiring the interpersonal skills (competence) necessary to engage in such negotiations are central to the socialization process. If interpersonal competence is defined as the ability of individuals to function as adaptive members of the society, no set of skills is as essential as the ones that make us more effective in relating to others and help us in solving our interpersonal problems. Weinstein (1966) argued that a competent individual must possess a large and varied repertoire of lines of action and intrapersonal resources to be capable of using effective solutions in situations where they are appropriate. An important question for the area of child development is how interpersonal competence develops and, perhaps more importantly, what are its antecedent parenting qualities?

Childrearing Styles

Parental techniques should differ as a function of the chronological age of the children as well as their cognitive level of functioning. Shantz (1975) argued that the ability to understand what another person sees, feels, thinks, intends, and how he/she perceives others is a developmental phenomenon. Preschoolers have a primitive understanding that others have a different perceptual experience. They do not, however, have a perspective on how things are interpreted or processed by another person. The preschooler can take into account certain characteristics of a listener, and as such demonstrate a simple form of role taking ability. In contrast, somewhere between the ages of five and seven, a child begins to recognize different spatial perspectives and understand that others may have different thoughts than him/herself. Many children at this age can distinguish accidental from intended actions and some can attribute blame on the basis of intention, as long as the consequences of an action are not too negative.

Parenting techniques should also differ as a function of the child's psycho-social level of functioning. During the preschool years, when the development of the sense of initiative dominates life, it would seem more important for the child to get things started than to finish them. Planning, undertaking, exploring, and attacking are all important elements of this period (Smart & Smart, 1972). Achieving becomes much more important during the stage which follows, the period of the development of a sense of industry (Erikson, 1963). Since each stage of personality development builds on the preceding one, the foundations of later development can be studied during the preschool years. (For further information regarding

relevant behavior of young children the reader is referred to Kagan, 1971; Mussen, 1970; Helms & Turner, 1976; Biehler, 1976; Brophy, 1977).

Throughout history the manner in which children have been treated by their parents has been documented in the literature, in diaries and in novels, in historical works, and by legal documents and laws pertaining to parent-child or adult-child relationships. Only recently have behavioral scientists viewed parent-child interactions as an important element in the child's social-personality development. Two early articles that delineated current childrearing styles or aspects of styles are Baumrind and Black (1967) and Becker (1964). Becker, in an article that examined the consequence of parenting styles, summarized the effects on child behavior of parents' restrictiveness versus permissiveness behavior and warmth versus hostile behavior. He reported that warm restrictive parents tended to have passive and well socialized children. However, Becker indicated that restrictiveness may lead to fearful dependent and submissive behaviors in the child. Baumrind and Black (1967) defined four prototypes of parental practices: the authoritarian, the authoritative, the permissive, and the harmonious. These were delineated further in an article by Baumrind (1971). Baumrind found that warm controlling parents were found to have responsible, assertive, self-reliant children. These parents enforced directives and resisted the child's demands. Crandall, Preston and Rabson (1960) also discovered that mothers of achievement-oriented children tended to reward their children's achievement efforts and their seeking of approval and to ignore requests for help. These children were less dependent upon adults for help and emotional support. It seems as though helping the child when he/she is capable of doing it

for him/herself may hamper achievement orientation and certainly development of interpersonal competence later on in development.

Baumrind (1977) states that the following parental characteristics and behaviors facilitate the development of independence in young children: self-assertiveness and self-confidence, the moderate use of power-oriented techniques of disciplining by parents, the use of firm control, provided that it does not restrict the child's opportunity to experiment and make decisions within the limits that are defined, and parents' values that include respect for the child's individuality, self-expression, initiative, and divergent thinking. Parents who are overprotective and do not respect the child's individuality tend to inhibit the development of independence in the child.

It seems that despite our knowledge regarding the antecedents of competence, there had been little attempt until recently to systematically examine and apply such knowledge. Spivack and Shure (1974), Spivack et al. (1976), and Shure and Spivack (1978) propose a problem solving approach to childrearing which encourages more divergent and independent thinking on the part of the child, thus improving his/her interpersonal relationships and subsequent adjustment. Spivack and Shure, Spivack et al., and Shure and Spivack focused more upon the relationship between specific behaviors exhibited toward the child by the parent and the resultant child behaviors. In an attempt to discover the relationship among the social adjustment of young children and the interpersonal cognitive problem solving skills exhibited by these children as trained by the parents, a four-year research project was undertaken. Subjects were "inner city" black mothers (primarily single), their four and five year old children and the children's teachers at preschools and kindergartens.

Interpersonal cognitive problem solving skills were defined as the ability to experience and solve real life problems. Social adjustment was defined in terms of the ability to inhibit impulses (impulsivity--inhibition) in social interactions. The major goals of the four-year project were: (1) the definition and measurement of interpersonal cognitive problem solving skills in four and five year old children, (2) the demonstration of a relationship between these skills and actual social adjustment, and (3) the demonstration that it was possible to train or support the exhibition of these interpersonal thinking skills, thereby enhancing the quality of the child's behavior adjustment. A more detailed presentation of the project follows.

In year one of the project it was demonstrated that the ability to conceptualize alternate solutions to interpersonal problems (e.g., a child wants a toy that another child has) could discriminate adjusted from non-adjusted children as early as four years of age. This ability was found to be negatively related to the overt classroom behavior of impulsiveness and inhibitedness regardless of IQ, language ability, or the sex of the child. It would appear that the more options one has (as well as the ability to evaluate those options before acting), the more likely it is that one will socially succeed, experience less frustration, and display fewer signs of maladaptive functioning in interpersonal interactions Spivack et al. (1976). This finding supports the hypothesis that change in the mediating cognitive skills generate change in behavioral adjustment. It is important to note that these findings were independent of consequential thinking (e.g., what might happen if one takes a toy from another).

In the second year the finding of the relationship of the ability to conceptualize alternate solutions to overt classroom behavioral adjustment was replicated for kindergarten children. A major finding in this year was that the cognitive and behavioral changes occurring as the result of training, last for at least one year; that is, children who were trained as four year olds maintained these skills into the kindergarten year.

In year three the ability to conceptualize alternate solutions was again found to relate to behavioral adjustment for both male and female four year olds. Moreover, no sex differences were found on any of the ICPS scores. However, the relationship between children's alternate solution thinking scores and behavioral adjustment in school as judged by teachers and the relationship between the mother's childrearing style and ICPS skills were found to be different for male and female children. For mothers of girls, significant relationships were found among the mother's alternate solution thinking, her reported childrearing style, and her daughter's alternate solution thinking ability. These results suggested an intimate relationship between maternal problem solving thinking and maternal child rearing style as used in problem solutions when mothers interact with their four year old daughters. It is apparent that certain maternal qualities of thought, as manifested in both adult and childrearing interactions play a significant role in determining the ICPS ability of female children. No such findings occurred for male children.

In the fourth year, as in previous years, the ability of both male and female kindergarten children to conceptualize alternate solutions and consequences to interpersonal problems was significantly related to overt classroom behavior, while cognitive sensitivity to problems was not found to be significantly related to classroom behavior. As these results

relating ICPS skills with adjustment were consistently found for all four years that the phenomenon was studied, the finding would appear to be reliable.

Additionally in year four, as in year three, no consistent and significant relationships emerged between the mothers' ICPS skills and their male children's ICPS skills. Related to this finding is work by Howie (1978) revealing significant relationships between both maternal and paternal childrearing attitudes and preschool daughters' alternate solution thinking. Encouragement to verbalize feelings or to express oneself freely was associated with better problem solving thinking. Shure and Spivack's (1978) data described above clearly suggest sex differences in the development of a child's ICPS skills. While it is known that ICPS skills act as mediators to both male and female children's behavioral adjustment, it is suggested that mothers transmit these skills to their daughters but not to their sons. It is most likely that male children develop them through other channels. One possible channel is through the male child's relationship and interaction with the father. Another possible explanation for the differential transmission by mothers is that the development of sex identification affects this process. It is important to remember that male and female children may undergo different identification processes.

Sex Identification

Central to the thesis of the present study is the examination of differences in parental socialization as a function of the sex of the parent and the sex of the child. Relevant here is the material on identification per se and the possible differential process of identification in male and

female children. Several theoretical explanations of sex identification exist. The earliest theory was espoused by Freud (Biebler, 1976). Freud discussed two types of identification: (1) anaclitic identification, where male and female children first learn sex role behavior by identifying with their mother because she has been the primary individual to satisfy early needs; and (2) defensive identification where the male child fears and resents his father as a rival, recognizes that the father is more powerful and thus identifies with the "aggressor." Female children continue to identify with the mother in a phenomenon similar to anaclitic identification. Sears, Maccoby and Levin (1965) hypothesized that the development of sex appropriate and adult-like behavior would be strongly influenced by early dependency in the child. Sears et al. reason that if the mother responds positively to the children, both sexes initially adopt feminine-maternal ways of behavior. At age four male children start to imitate the father's actions, exhibiting masculine behavior. The male child identifies with the father not because he is dependent or feels dependent on him, but because he hopes to acquire some of the perceived power of the father. In disagreement with Freud, however, Sears et al. argue that masculinity and femininity appear to be more influenced by parental attitudes with regard to the control of sex and aggression than by any aspect of availability of the behavior of a model. If the parent encourages freedom of expression and is not punitive, both male and female children are likely to develop masculine traits.

An alternative theoretical approach is that of Bandura and Walters (1963) who conceived of identification in the context of imitation. They challenge earlier theories of identification on the basis of the data that indicate children have more than ample opportunity to observe the

behavior of both parents. They contend that children may learn appropriate behavior from both parents rather than from one or the other. Bandura and Walters argue that children may identify with the parent of the same sex not because of the reinforcement provided when they were dependent but because of a tendency to imitate those who provide or control rewards or possess some desired characteristic. Mischel (1970) also supports this theoretical approach and contends that sex-typed behavior is often learned through imitation of a variety of models and in the absence of any form of tangible reward.

Kohlberg (1966) argued that the cognitive level of the child predetermines the process of identification at different stages. He indicated that at age five children have a cognitive awareness of sex differences. In a process over time they learn about stereotypic masculine and feminine behavior and engage in types of behavior they think are consistent with and are appropriate for their sex. In support of this notion Parsons and Bales (1955) contended that children internalize cultural norms as represented by their parents' behavior. Father is seen as high in power and instrumentality and low in expressiveness. Mother is seen as the opposite. Instrumentality refers to task-oriented behavior with a focus upon more distinct goals. Expressiveness refers to behaviors that emphasize socio-emotional interactions. Female children thus internalize expressive behaviors, male children instrumental behaviors. It may be more sensible and safer to argue that sex role behavior is learned not only by identifying with or imitating parents but by observing and imitating behavior of many individuals. In a selected review of the literature on parental factors in childrearing, Hoyenga and Hoyenga (1979) conclude that children identify more with warm-dominant parents of either gender.

The majority of research has focused upon interaction with the mother; some researchers, however, do acknowledge the importance of the father in early life. Freud and Burlingham (1975) argue that the infant's emotional relationship to his/her father begins later in life than that of his/her mother, but from the second year onward the father is an integral part of the child's emotional life and a necessary ingredient in the complex forces which work toward the formation of his/her character and personality. Additionally, Burlingham (1973) has stressed the importance of the infant-father relationship in the preoedipal period. Sex-typing begins with infancy, and fathers engage in more direct sex role socialization than do mothers and are more concerned about it (Lewis, 1972; Rubin, Provenzano & Luria, 1974; Block, 1973; Goodenough, 1957; Will, Self & Datan, 1976; Seavey, Katz & Zalk, 1975). (While identification theories concur in attributing importance to the father, Bronfenbrenner [1960], Kohlberg [1963, 1969], and Piaget [1948] contend that the major exogeneous influence on moral development is that of peers.) It is worth noting that Kohlberg (1969) and Parsons and Bales (1955) emphasize the important role of the father in normal female development as well as that of male development. Although the different theories espouse and underline different socializing agents, it may be argued that both mothers and fathers are important socializing agents and important in the identification process.

Sex Differences in Parenting

As both mothers and fathers are important socializing agents, one may speculate about the possible differential manner in which they treat male and female children. Maccoby and Jacklin (1974) in a review of the

sex differences literature conclude that there are no consistent sex differences in parental treatment. They cite 12 studies that show no differences in parental contact with male and female children. Yet, 11 studies reviewed found more parental contact with male children, where only four found more parental contact with female children. The difficulty Maccoby and Jacklin had in generating a summary statement reflects the disorganized nature of knowledge in this area. Bronfenbrenner (1961) found that independence, initiative, and self-sufficiency is valued and required of male children. Rothbart and Maccoby (1966) found that parents were more submissive toward opposite sex children than toward same sex children. Blurton-Jones and Konner (1973) discovered that male children interacted more with other children than female children did. This is one possible explanation for female children being more susceptible to mothers' interpersonal and thinking style. Whiting (1963) and Whiting and Edwards (1973) have found that three to six year old female children tend to seek help more than male children. Female children were found to be more compliant to the mother's suggestions and commands. Female infants may receive more verbal stimulation from their mothers but fathers apparently reverse this sex difference (Rebelsky & Hanks, 1971; Moss, 1967; Lewis, 1972; Cherry & Lewis, 1976; Goldberg & Lewis, 1972; Thoman, Leiderman & Olson, 1972). Moss (1974) discovered that parents of females spent more time trying to get their infants either to smile or vocalize than did parents of males. Also Kagan (1971) argued that while mothers feel that male children have to learn to accept and cope with stress, they are more protective of female children and think that they need more care.

Sears, Maccoby and Levin (1957) interviewed mothers (but not fathers, as often is the case in the parent-child relationship research) of five

year old children. Fathers were reported to be the chief disciplinarian for the older children of both sexes. Mothers stated they were the main disciplinarian of younger female children whereas fathers were equally active with their wives in disciplining younger male children. In another study conducted only on mothers, Zunich (1971) found a closer relationship between mothers and their daughters than between mothers and their sons. Chodrow (1978) observed lower class mothers interacting in a play situation with their three to five year old children. Mothers communicated more to their daughters and more often sat near them than did mothers of male children. The "like mother, like daughter" statement common in the vernacular may indicate that the mother plays a larger part as a model for her daughter than for her son. (The reader is referred here to a book by Lynn [1979] on mothers, fathers, and daughters.)

In the literature the father's role seems to have been relatively ignored and unexamined until recently. The identification literature contends the father plays an important role in the development of both children, especially in combination and interaction with that of the mother. Lamb (1975) in a review of the literature on the role of the father, argued that both mothers and fathers play crucial and qualitatively different roles in the socialization of the child. More recently, social learning theorists Bandura and Walters (1963) have assumed that the mother is the most important person in the infant's life because she spends the most time with him/her. On the other hand, the conflicting evidence on the effects of day care on mother-infant relationship (Fein & Clark-Stewart, 1973) suggest that the duration of time in proximity to a caretaker may be a poor index of the intensity of the infant's attachment to either parent. Ainsworth (1969) stated that in caretaker-child interaction, the

important variable is not so much the amount of time spent together, but the sensitivity of the adult and infant to one another's behavioral signals. Pederson and Robson (1969) and Schaffer and Emerson (1964) also support the above contention.

Greenberg and Morris (1974) argued that if the neonate has an impact on both parents, probably both parents will become salient social objects. Ban and Lewis (1974), Lewis and Weinraub (1974), and Lewis (1972) state that attachment to the father is weaker than that of the mother, at age one, but is equally strong at two years of age. Lamb (1975) found that the nature of the interaction between children and their mothers differed qualitatively from that between children and their fathers. Mothers were more likely to hold their infants and to perform caretaking functions, whereas fathers held them most often to play. As a result, the infants responded more positively to play with their fathers. It seems that much of our knowledge about the role and importance of fathers is not derived from studies of interaction of fathers and their offspring, but from the extensive literature on the negative effects of father absence (Billler, 1970, 1971). Bearison (1979) states that the presence of sex-linked patterns of socialization in which different sex parents respond differently to their sons and daughters is of particular interest, given the recent focus on the depth and pervasiveness of sex roles in our culture. Lamb (1975) argues that there is obviously more need for research in this area, and suggests that the focus should be placed on the dyadic interaction. Additionally, he states that in many studies the father's behavior is not assessed directly but is reported by the mother or the child. Lamb (1975) argued that the father-child interaction is not limited to caretaking functions, but it is broader. It may be that the father is the primary medium

through which the child is introduced to the outside world. If this is true for both male and female children, one question to be explored is does the mother-child relationship become less important as the child becomes more competent and independent. As female children seem to receive more social training, especially from their mothers, it may be predicted that they are better interpersonal problem solvers than male children. Perhaps in the preschool years, female children are more effective in dealing with their mothers than their fathers. The reverse may be true for male children.

Summary

The preceding selective review of the sex differences literature indicates the possible existence of differential treatment of male and female children by male and female parents. The socialization literature suggests that compared to mothers of male children, mothers of female children are more inclined to be protective, to socially train and serve as a model for their female children. This body of literature is inconclusive regarding the relative influence that fathers have on their male children. Moreover, the sex identification literature suggests that mothers and fathers are both important and serve as models for both male and female children. However, mothers and fathers may influence their children through different modalities (e.g., caretaking versus play) and have differential influence depending on the age of the child.

General knowledge regarding the rearing of competent children is primitive at best. Only recently have professionals begun to systematically examine concrete parenting techniques that lead to the development of interpersonal competence. Shure and Spivack's (1978) findings

consistently demonstrate a significant relationship between the mothers' alternate solution thinking and childrearing style and their female children's alternate solution thinking. No similar relationships were demonstrated between mothers and their male children. The mothers' transmission of alternate solution thinking (or perhaps other ICPS skills) to female children may include modeling as well as more direct socialization tactics. Such tactics may include the mothers' tendency to help and encourage their children to think of solutions to interpersonal problems themselves rather than providing them with the solutions.

Subjects in the Shure and Spivack (1978) studies were black "inner city" low socio-economic status mothers, the majority of whom were single parents. Shure and Spivack did not investigate the role of the father in their paradigm. They discussed the results of one unpublished study which found, in middle class two-parent families, a significant relationship between both maternal and paternal childrearing values and attitudes, and preschools female children's alterate solution thinking. However, none of the correlations reported between fathers' childrearing values and attitudes and sons' alternate solution thinking were significant. The authors give no operational definitions of childrearing values and attitudes. Thus their reported findings are uninterpretable. They do, however, argue that future research should explore possible sex differences in the childrearing correlates of problem solving thinking.

There is some evidence that the father's availability affects impersonal problem solving in preschool male children. Reis and Gold (1977) investigated the relation of middle class fathers' availability to their four year old sons' impersonal problem solving and sex role orientation. Compared to male children with less available fathers, male children with

more available fathers performed better on the Guilford Visual-Figural problem solving test. These findings provide some support for Lynn's (1974) view that male children with moderately close fathers have better problem solving ability than male children with more distant fathers. Reis and Gold (1977) argued that the availability of the mother is also associated with the sons' problem solving, though to a lesser extent than the availability of the father.

The present author proposes to compare the relationship of the parents' childrearing style to the child's alternate solution thinking for mothers and fathers of male and female children. The childrearing style of mothers and fathers will be assessed using parent-child problems in a semi-structured interview. The ability of children to think of alternate solutions will be measured using the Preschool Interpersonal Problem Solving Instrument (PIPS).

The PIPS contains problems that involve interpersonal interaction with peers and mothers. In expanding the study to focus upon father-child effects, it was necessary to develop father problems (i.e., developing equivalent objects which could be substituted for mother objects). Given this expanded PIPS and the assessment of the childrearing of both mothers and fathers, the following hypotheses were tested.

1. Male children will produce as many solutions to problems that involve fathers as those that involve mothers.
2. Female children will produce as many solutions to problems that involve mothers as those that involve fathers.
3. Fathers of female children will be as problem solving oriented (i.e., as measured by their childrearing style score) as fathers of male children.

4. Mothers of female children will be as problem solving oriented as mothers of male children.
5. Male children's alternate solution thinking score will correlate as highly to their fathers' childrearing style score as to that of their mothers'.
6. Female children's alternate solution thinking score will correlate as highly to their fathers' childrearing style score as to that of their mothers'.

CHAPTER III

METHOD

Subjects

Subjects were forty white intact two-parent middle class families. All subjects resided in a South Mid-Western university community with a population of approximately 50,000. The families were carefully selected such that all the children had parents who either both worked or only the father worked. In no instance did the father spend more time with the children than did the mother. Each family had on the average two and a half children. Half of the families had a male child and the other half a female child who was four to five years old.

The subject families were recruited primarily from preschool agencies and by friendship pyramiding. In exchange for participation in the study, the parents were offered the opportunity to participate in a workshop providing them feedback as well as an introduction to one or more parenting styles. Sixteen families expressed an interest in participating in the workshop. Those parents who could not participate in the workshop received an abstract of the findings of the study. Refer to Appendix A for a copy of the consent form and the abstract of the findings given to the parents.

The following demographic data is presented to enable the reader to compare this sample to other samples. The average age of the fathers was 33 years (ranging from 25 to 50) and the average annual salary

of the families was \$26,000 dollars. The mothers' average age was 31 years (ranging from 23 to 41). The average age for male subject children was five years, the range being four years three months to five years nine months. The average age for female children was four years and eleven months, the range being four years three months to five years nine months. The parents in the present study had on the average been married for nine years and had lived five years in the city from which they were recruited. Ninety-nine percent of the subject families were of the Christian faith and attended church services, on the average, two times a month.

Material

The children's ability to think of alternate solutions to interpersonal problems (AST) was measured by the PIPS. The PIPS has two parts. The first part presents a series of at least seven problems depicting conflicts between peers. Each problem depicted one child wanting to play with a toy that another child has. Each child was asked to generate as many different solutions to these problems as he/she could. Shure and Spivack (1974) developed this instrument such that every child was presented with the first seven toys and only if the child offered seven new and relevant solutions, extra toys with problems were presented. In the second part of the test, the child was asked to conceptualize ways to avert his/her mother's anger for damaging property such as his/her mother's favorite glass. Every child was presented with at least five problems and only if he/she offered five new and relevant solutions, extra problems were presented. For the purposes of the present study, the same problems were used in a context that would include the father

with the exception that equivalent objects were selected that would be appropriate for use with the father. Refer to Appendix B for a description of the study in which the father equivalent objects were selected. Refer to Appendix C for a list of objects for mothers and fathers and peer, mother and father problems. The PIPS instrument originally contained line drawings of mothers for use with the mother problems. These were used in order to maintain the interest of children. Eight similar drawings were prepared for use with the father problems. Refer to Appendix D for copies of the original mother and the additional line drawings. Refer to Appendix E for information regarding the reliability and validity of PIPS as reported by Shure and Spivack (1974).

A child's total PIPS score consisted of the score (number of different solutions offered) from the peer problems plus the score (number of different solutions offered) obtained from the mother/father problems. These were calculated based on the criteria set forth by Shure and Spivack (1974). The higher the score the more solutions the child was provided.

Shure and Spivack's (1978) original six vignettes were used to assess the childrearing style (CRS) of the parents. These vignettes depicted parent-child interpersonal problems. A scale of 0 to 100 was used to score the responses of the parents (developed by Shure & Spivack, 1978). The higher the score, the more problem solving (PS) oriented was the response of the parent. Although the PS and non-problem solving (NPS) labels may appear as discrete categories, the responses of the parents are examined on a continuum and not discrete categories. For the present study minor modifications were made in the Shure and Spivack instructions and vignettes: (1) the word "mother" was replaced by the word "parent"

and, (2) the child characters in the vignettes had the same name as the parents' own four or five year old child. One score was obtained for each parent on a scale of zero to one hundred. This score will be referred to as the childrearing style (CRS) score in the text that follow. Refer to Appendix F for a copy of the Vignettes.

Procedure

One experimenter tested all children and interviewed all parents in their own homes. Each family was contacted by phone and the nature of the study was explained to them. If the family agreed to participate a two and a half to three hour appointment was made with them at their convenience. Only four families refused to participate in the study.

Within each family, the child was tested first while the parents were given the description of the study to read and the consent form to sign. Additionally, during this time they were asked to provide demographic information. Of the 20 male and 20 female children in the study, 10 male and 10 female children received the PIPS peer and mother problems, the remaining children received the PIPS, the peer, and father problems. The order of presentation of mother and father problems to the male children was counter balanced such that every other male child tested received the mother problems. The remainder received the father problems. The same counter balancing was used for the female children. It took, on the average, 40 minutes to establish rapport and test each child.

After the child was tested, parents were interviewed individually in the same room (usually the child's room). The mothers and fathers

were interviewed in a counter balanced fashion such that, across the families, half of the mothers and half of the fathers of each sex child were interviewed before their spouses. Parents' responses to the vignettes were tape recorded on cassettes and were subsequently transcribed verbatim. The average length of the interview for each parent was 45 minutes. The parent-child dialogues were transcribed and then scored. The parents' responses were scored in a randomized fashion with the restriction that half of the mothers and half of the fathers of each sex child's responses were scored before their spouses.

CHAPTER IV

RESULTS

The children's alternate solution thinking (AST) scores and the parents' childrearing style (CRS) scores served as dependent variables for the following analyses:

Hypotheses 1 and 2: A 2X2 (sex of child X sex of parent problem) complete factorial ANOVA of the dependent variable of AST (parent problems) scores yielded the following results. The main effect for the sex of the parent problems was significant. Neither the main effect for the sex of the child nor the interaction effect was significant. Table I depicts the summary table for the ANOVA. Table II summarizes means and standard deviations for these four groups. The results indicate that both male and female children generate more solutions to problems that involve mother problems than to those that involve father problems. Based on these findings hypothesis 1 (that male children will produce as many solutions to problems that involve fathers as those that involve mothers) and hypothesis 2 (that female children will produce as many solutions to problems that involve mothers as those that involve fathers) were rejected.

Hypothesis 3: A two sample independent t-test was conducted comparing the CRS scores of fathers of male children to those of fathers with female children. The two groups were not found to be significantly different, $t(38) = .82, p > .05$. Refer to Table III for a summary of means

TABLE I
ANALYSIS OF VARIANCE SUMMARY TABLE FOR THE SEX OF THE
CHILD AND SEX OF THE PARENT PROBLEM FOR THE
DEPENDENT VARIABLE OF AST

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio
Sex of the Child	2.025	1	2.025	1.41
Sex of the Parent Problem	9.025	1	9.025	6.29*
Interaction	2.025	1	2.025	1.41
Error	51.700	36	1.440	
Total		39		

* $\underline{P} < .05$

TABLE II
MEANS AND STANDARD DEVIATIONS FOR MALE AND FEMALE
CHILDREN AND MOTHERS AND FATHERS' PROBLEMS
FOR THE DEPENDENT VARIABLE OF AST

	Father Problems X (S.D.)	Mother Problems X (S.D.)
Male Children (N = 20)	3.2 (1.033)	4.6 (1.265)
Female Children (N = 20)	3.2 (1.023)	3.7 (1.252)

TABLE III
MEANS AND STANDARD DEVIATIONS OF CRS SCORES FOR MOTHERS
AND FATHERS OF MALE AND FEMALE CHILDREN

	Fathers of X (S.D.)	Mothers of X (S.D.)
Female Children (N = 20)	40.056 (11.67)	45.690 (11.65)
Male Children (N = 20)	43.415 (14.19)	44.185 (11.30)

and standard deviations. Hypothesis 3 was not rejected; fathers of female children were found to be as problem solving oriented as fathers of male children.

Hypothesis 4: A two sample independent t-test was conducted comparing the CRS scores of mothers of male children to those of mothers of female children. The two groups were not found to be significantly different, $t(38) = 0.42$, $p > .05$. Refer to Table III for a summary of means and standard deviations. Hypothesis 4 was not rejected; mothers of female children were found to be as problem solving oriented as mothers of male children.

Hypotheses 5 and 6: For mothers and fathers of male and female children, the CRS scores were correlated with the childrens' AST scores for (1) the PIPS peer problems, (2) the PIPS parent problems, and (3) the PIPS total score. Tables IV and V present a summary of means, standard deviations and correlation coefficients for the four groups separately, for the AST peer problem scores, the AST parent problem scores, and the AST total scores. The AST scores for male children did not correlate any higher to their fathers' CRS scores than to their mothers' CRS scores. Similarly, AST scores for female children did not correlate any higher with their mothers' CRS scores than to their fathers' CRS scores. Neither hypothesis 5 nor hypothesis 6 was rejected. Thus male children's alternate solution thinking score will correlate as highly to their fathers' childrearing score as to that of their mothers'. Also female childrens' alternate solution thinking score will correlate as highly to their fathers' childrearing style score as to that of their mothers'.

Even though the sex of child by sex of parent effect was not detected in the ANOVA, it is notable that the parents' CRS scores are found to

TABLE IV
MEANS AND STANDARD DEVIATIONS FOR TOTAL, PARENT AND
PEER AST SCORES FOR MALE AND FEMALE CHILDREN

	Male Children (N = 20) X (S.D.)	Female Children (N = 20) X (S.D.)
Total AST Score	8.70 (2.17)	7.90 (2.29)
Parent AST Score	3.90 (1.33)	3.45 (1.23)
Peer AST Score	4.80 (1.28)	4.45 (1.57)

TABLE V
 CORRELATION COEFFICIENTS FOR MOTHERS AND FATHERS' CRS
 SCORES WITH MALE AND FEMALE CHILDREN'S TOTAL,
 PARENT AND PEER AST SCORES

	Mothers of Male Children (N = 20)	Fathers of Male Children (N = 20)	Mothers of Female Children (N = 20)	Fathers of Female Children (N = 20)
	<u>r</u>	<u>r</u>	<u>r</u>	<u>r</u>
Total AST Score	.402*	.462**	.409*	.466**
Parent AST Score	.498**	.380*	.330	.391*
Peer AST Score	.165	.370	.350	.372

* P < .05.

** P < .025.

correlate significantly with the children's total AST scores. Refer to Table V for a summary of correlation coefficients and their significant levels. This finding supports a basic assumption underlying the present study that, the childrearing style of the parents (PS vs. NPS) is positively related to the children's ability to think of alternate solutions to deal with interpersonal conflict situations involving peers and parents.

The relationship between the parents' CRS scores and the children's AST scores was examined independent of the sex of the child. Table VI summarizes means, standard deviations and correlation coefficients. It is noteworthy that mothers' CRS scores do not differ significantly from the fathers' and that the mothers' and fathers' CRS scores correlate similarly to the AST scores of the children. The relationship between the parents' CRS scores and the children's AST scores becomes more outstanding when the ten top highest scoring and the ten lowest scoring children on the PIPS and their parents' corresponding CRS scores are more closely examined. Table VII summarizes means and standard deviations for the two highest and lowest groups. The total AST scores for the top ten children is almost twice as large as the one for the bottom ten, $t(18) = 7.5$, $p < .001$. Additionally, there is at least a twenty point discrepancy in the CRS scores between the parents of the top ten children and the parents of bottom ten children, with the former having higher CRS scores, $t(18) = 5.74$, $p < .001$, for mothers and $t(18) = 4.66$, $p < .001$, for the fathers. Generalizing from these descriptive data, it appears that children who have better ability to think of and generate solutions to interpersonal conflict situations, are likely to have parents who have a much higher CRS scores than those children who have low

TABLE VI
MEANS, STANDARD DEVIATIONS AND CORRELATION COEFFICIENTS
BETWEEN CRS SCORES OF MOTHERS AND FATHERS AND
CHILDREN'S TOTAL AST SCORES

	CRS Scores X (S.D.)	AST Scores X (S.D.)	<u>r</u>
Mothers (N = 40)	44.88 (11.326)	8.3 (2.240)	.414*
Fathers (N = 40)	41.24 (13.930)	8.3 (2.240)	.425*

* P < .005

TABLE VII
MEANS AND STANDARD DEVIATIONS FOR CHILDREN WITH TOP AND
BOTTOM TEN AST SCORES AND THEIR PARENTS' CRS SCORES

	Mothers CRS X (S.D.)	Fathers CRS X (S.D.)	Total AST X (S.D.)
Top Ten	57.14 (7.32)	53.54 (11.58)	10.60 (1.58)
Bottom Ten	35.07 (9.72)	33.19 (7.52)	5.90 (1.20)

AST scores. In other words, children who have this ability are more inclined to have parents who encourage and guide them to make their own decisions and are more supportive than the parents of the children who have less of this ability.

Two post-hoc analyses were conducted to examine assumptions that were not originally hypothesized. These analyses further explored child-rearing issues as a function of the sex of the child. Separately, for male and female children, the parents' CRS scores were correlated, that is, the child's mother's score was correlated with that for the child's father. Table III summarizes means and standard deviations for male and female children separately. It appears that the parents of male and female children are similar in their CRS scores, but the inter-consistency of the parents of female children ($r = .71$, $p < .005$) is much greater in dealing with their children than that of the parents of male children ($r = .14$, $p > .05$). When the CRS scores of mothers and fathers of female children are subjected to a two-sample dependent t-test, the result is highly significant, $t(19) = 2.81$, $p < .01$. Mothers of female children are more problem solving oriented than are their spouses. This picture is clearly different from the one for the mothers and fathers of male children, $t(19) = .21$, $p > .05$, where mothers and fathers of male children are similarly problem solving oriented.

CHAPTER V

DISCUSSION

This study supports the basic assumption underlying the thesis of this dissertation. That is, the childrearing style of parents is related to their children's ability to think of alternate solutions to deal with interpersonal conflict situations. Examination of the 10 highest and the 10 lowest scoring children on the PIPS even more strongly suggests a relationship between AST scores of children and CRS scores of parents. When children were selected on the basis of how well they were able to think of alternate solutions to interpersonal problems, the highest scoring children had parents who were highly problem solving oriented. In contrast, the lowest scoring children clearly had parents who were not highly problem solving oriented. It would appear that there is a predictive relationship between parents' CRS scores and children's AST scores. By having knowledge of parents' style of childrearing, one may be able to make explanatory statements regarding the children's ability or competency in dealing with interpersonal conflict situations.

Although for both mothers and fathers their childrearing style score related significantly to their male and female children's problem solving skills, such findings only partially support previous research by Shure and Spivack (1978). They reported that the childrearing style of inner city single black mothers related to their female children's problem solving ability. This relationship was not detected between such mothers and

their male children. Additionally, no information was available regarding the relationship of fathers' childrearing style and their children's problem solving skills. One possible reason for the discrepancy between the present findings and Shure and Spivack's findings is the difference in the two samples in terms of demographic variables. The present sample is from a different geographic region, is of different ethnic status, and different socioeconomic status class. Additionally, the present study focuses upon two parent intact families. Obviously, a number of possible variables are contributing to this difference. It is likely, however, that the ethnic status and family structure differences may be more salient variables. For Shure and Spivack's sample the absence of a relationship between the mothers' childrearing style and their male children's problem solving ability could be the result of marital discord and/or divorce and/or the absence of the father. The father's presence not only impacts upon the male child's sex role development but may in an indirect way affect the male child's relationship with his mother.

The sex of the parent was found to be an important variable in parent-child relationships. Both male and female children generated more solutions to interpersonal conflict situations that involved a mother than those that involved a father. The question is why? Assuming the equivalency of the mother and father problems, the sex of the parent seems to have an impact on how the child perceives the situation and how he/she decides to approach it. One possible explanation is that mothers, in spending more time with the children, allow them to observe their interpersonal style more and generally are more involved in their direct socialization. Notably, mothers in this sample were observed to be more traditional and conventional, and reported spending more time with their

children than did the fathers. Another possible explanation is that mothers are perceived as more flexible than fathers by their children.

The possibility that mothers are viewed as more flexible by male and female children has important and serious implications for the field of child psychology and psychopathology. The present study found that male and female children are more able to think of and generate solutions to avert their mothers' anger. It is noteworthy that many interpersonal problems arise as a result of an individual's (child or adult) inability to either express his/her anger or express it constructively. It may be that children are more likely to have this difficulty with their fathers. Consequently, children may feel more helpless in relating and dealing with their fathers and as such are less able to generate solutions.

The results discussed above pertaining to specific hypotheses can be viewed as inconsistent. The problem solving skills of male and female children were found to relate in a similar fashion to their mothers' and fathers' childrearing style. In contrast, when the number of solutions generated to interpersonal problems was measured, children responded differentially to the mother and the father problems. Both male and female children generated more solutions to problems that involved their mothers than those that involved their fathers. One possible explanation for this discrepancy is that the AST scores for children represent the number of different solutions offered to parent problems and not the style or the content of the responses that the children offered. There is a possibility that the content of responses made by male and female children differ; however, the present study did not analyze for content differences in the children's responses.

A second possible explanation for the discrepancy between hypotheses is that the measure used for the child is a quantitative measure (number of solutions), whereas the measure used for the parent is a qualitative measure (problem solving oriented versus nonproblem solving oriented). It is possible that the child's perception of parents, as flexible or inflexible (and the child's exposure to them) has an impact on the quantity of responses that children generate, but does not have an impact on the style (qualitative measure) that children display.

The sex of the child as well as the sex of the parent is an important variable in parent-child relationships. The presence of a highly positive relationship between the childrearing scores of the parents of female children and its absence for the parents of male children suggests possible interparental inconsistencies in the treatment of male children. Mothers and fathers of four to five year old children would appear to be more in agreement as to how to raise their female children than their male children. There are a number of possible explanations for this finding. One area of possible explanation is related to the interaction of age with gender in the identification process. Identification theory would predict that fathers and their male children would take a special interest in each other around the age of four to five years. The cognitive-developmental theory of Kohlberg (1966) proposes that about this age the child begins to perceive him/herself as more like the parent of same sex and desires to be more like him/her. More specifically, for male children this is exemplified in their attempts to imitate the fathers' actions and exhibit masculine behaviors which are reinforced by their fathers (Sears et al., 1965; Bandura & Walters, 1963; Parsons & Bales, 1955; Lewis, 1972; Will, Self & Datan, 1976). It may be that at this specific age the mother becomes

differentially or less involved in the socialization of the male children, thus allowing more influence by the fathers. Notably, fathers are the main transmitters of societal sex role standards, especially for the male child, and research has clearly indicated that the male child is sex role stereotyped by the age of four (Blurton-Jones & Konner, 1973; Bronfenbrenner, 1961; Whiting & Edwards, 1973).

Although the interparental consistency of parents of female children does not result in a greater ability to generate solutions to interpersonal conflict situations, it may make the expectations and demands regarding appropriate behavior of parents and other adults less confusing and more predictable. This may be particularly true of sex role behavior. On one hand, this consistency may reflect a mutually restrictive and inflexible perception of parents regarding female development and not male development. On the other hand, it may suggest that parents are more in agreement as to how to raise female children than male children.

No matter what the reasons, one may speculate about the consequences of such differential treatment upon the social and personality development of male children. Additionally, one may speculate about the relationship of parental inconsistency and child behavior disorders. Consistency between parents leads to a more predictable environment for the child. Expectations and rules of social behavior are endorsed and carried out similarly by both parents. Considering the level of cognitive development of children at the age of four and five and their vulnerability to unpredictability, the index of parental interconsistency becomes a very critical measure for future research. It should be noted, however, that inconsistency, detected by statistical tests, is not necessarily a negative sign.

In studying the relationship of any particular style of childrearing to a particular child behavior or characteristic, the following issues should be considered: (1) the complexity of the child's behavior and the parents' childrearing style; (2) the difficulty of measuring the child's behavior as well as the childrearing style of the parents; (3) parental inconsistency in their childrearing practice; and (4) interaction of all the above factors. Future research is needed to replicate and expand the findings of both Shure and Spivack and the present findings. Such studies should attempt to use male and female children, mothers and fathers, as well as the extended version of the PIPS found in the present study.

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APPENDIX A

CONSENT FORM AND ABSTRACT OF THE FINDINGS
GIVEN TO THE PARENTS

This study is being conducted as partial fulfillment for my doctoral degree in psychology. The purpose of this study is to gather normative information regarding certain typical problems involved in bringing up four to five year old children. There are no "right" or "wrong" answers; people have their own attitudes and opinions about the way children should be raised. Throughout the study, you will be asked to report what is true for you at the present time, not what you did or would like to do. You and your spouse and four or five year old child will be interviewed individually at your place of residence or another place provided by the experimenter and agreed upon by you. These interviews will be conducted at your convenience. Each interview will take an average of forty minutes. Many families similar to yours have been asked to participate in this study. The information gathered from you and your family will be used only for scientific research purposes. Anonymity and confidentiality are insured; the focus will be upon group responses and names will not be associated with individual records. Participation in this study is voluntary; therefore, you may withdraw from the study at any time you wish.

If you agree to participate please sign below.

Father _____	Mother _____
Full Name: _____	_____
Address: _____	_____
Telephone: (Res) _____	_____
(Ofc) _____	_____

In exchange for your cooperation in the study, I will offer a workshop to those parents interested in obtaining feedback as well as an introduction to one or more parenting styles. The date of this workshop will be set following the termination of this study.

Please check below if you are interested in participating.

Yes _____

No _____

Researcher:

Max Banilivy
 Psychology Department
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 Stillwater, OK 74078
 Tele: (405) 624-6025
 (405) 624-6024

Research Supervised By:

Vicki Green, Ph.D.
 Psychology Department
 Oklahoma State University
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Dear Mr. and Mrs.

You, your spouse and four or five year old son(daughter) and thirty-nine other families participated in a research study in the summer of 1980. The following is a summary of the findings.

The purpose of this study was to gather normative information regarding certain typical problems involved in bringing up four to five year old children. Each child was tested in order to assess his/her ability to think of different (alternate) solutions to typical peer and parent-child interpersonal conflict situations. Additionally, both parents within each family were asked to respond to some typical parent-child vignettes. The responses of the parents were scored on the basis of the following criterion: (1) to what extent parents used verbal and nonverbal cues to guide the child in solving his/her problem, (2) to what extent parents encouraged the child to verbalize about the problem, (3) to what extent the parents expanded on the "why" questions in the child's behavior, (4) to what extent parents paid attention to the reaction of his/her child, (5) to what extent the parent pointed out the consequences of what the child did, (6) to what extent parents discussed with the child different ways of handling such situations, and (7) to what extent parents took into account the reasonableness of the child's decisions. Parents who responded to their children in this fashion were labeled as being more problem-solving oriented than other parents who did the following: (1) typically told the child what to do (that is solve the problem for the child), (2) discouraged verbal interchange during the problem solving situations, (3) discouraged the child's bringing problems to them, and (4) resolved problems by calling upon parental authority, e.g., "because I said so."

The children's scores (i.e., how many solutions they generated) and the parents' childrearing style score were subjected to statistical analyses as a group and the following relationships were discovered: Both boys and girls tended to think of more solutions to avert their mothers' anger than their fathers' anger. For both mothers and fathers, the more problem solving they were in their parenting style, the more able were their children to think of solutions to interpersonal conflict situations. Additionally, the mothers and fathers of girls tended to be more in agreement as to how to raise their children than the parents of boys.

There are a number of practical implications of the present findings. It may be that boys and girls have less exposure to and contact with their fathers and consequently have less of an opportunity to learn to avert their anger, and less of an opportunity to learn to solve interpersonal conflicts between them. It is also suggested that as a group fathers may be less flexible in terms of what they accept in the way solutions from their children. The way parents interact with their children may affect how competent and adjusted the children will be later in life. More specifically, the problem solving approach as defined above, may help children to become more interpersonally competent.

It is noteworthy that parents in this study were more in agreement as to how to raise their daughters, than their sons. This finding requires further investigation, as it has important implications for the development of male children. Parents should be aware of possible differential treatment and possible differential expectations they may have of their sons and daughters and the possible consequences of such.

Please feel free to contact me for further information regarding this study at the following address:

Max Banilivy
Dept. of Psychology
Children's Hospital
300 Longwood Ave.
Boston, Mass. 02115
Tele: (617) 735-6946
735-7060

APPENDIX B

A DESCRIPTION OF STUDY IN WHICH THE FATHER
EQUIVALENT OBJECTS WERE SELECTED

Thirty-one undergraduate and graduate students in psychology in a South Mid-Western university were asked to respond to the following form. Responses with the highest frequency and face validity were selected for inclusion in the study.

Please answer the following as though you are doing analogies. You might give more than one answer.

1. A child breaking his/her mother's favorite flower pot is like the child breaking his/her father's favorite _____
2. A child scratching his/her mother's wooden table is like that child scratching his/her father's _____
3. A child having burned his/her mother's favorite dress is like that child having burned his/her father's favorite _____
4. A child having torn his/her mother's book is like that child having torn his/her father's _____
5. A child, while playing ball hits and breaks his/her mother's window. This is like that child playing ball and breaking his/her father's _____
6. A child, while playing ball hits and breaks his/her mother's window. This is like that child _____ and _____ his/her father's.
7. A child having broken his/her mother's favorite dish is like that child breaking his/her father's _____
8. A child knocking over and breaking his/her mother's ashtray is like that child knocking over and breaking his/her father's _____
9. A child breaking his/her mother's drinking glass is like that child breaking his/her father's _____
10. A child breaking his/her mother's chair is like that child breaking his/her father's _____

APPENDIX C

A LIST OF OBJECTS FOR MOTHERS AND FATHERS AND THE
PIPS PEER, MOTHER AND FATHER PROBLEMS

Mothers

1. Broken flower pot
2. Scratch on table
3. Burned hole in dress
4. Torn page in book
5. Broken window
6. Broken dish
7. Knocked over and broke an ashtry
8. Broke a drinking glass
9. Broke a chair

Fathers

- Broken garden shovel
- Scratch on wooden desk
- Burned hole in shirt
- Torn page in newspaper
- Broken car window
- Broken cup
- Knocked over and broke a bowl
- Broke a bottle
- Broke favorite stool

Peer Problems

1. Truck (Doll)

Now, A has been playing with the truck(doll) for a long time and B wants a chance to play with it. But A keeps on playing with it. What can B do so he/she can have a chance to play with the truck (doll)?

2. Shovel

Now, C has been playing with this shovel all morning and D wants to have a chance to play with this shovel. But C keeps on playing with it. What can D do so he/she can have a chance to play with the shovel?

3. Kite

This is E and this is F, this toy is a _____. In this story E has been playing with this kite for a long time, all morning, and F wants to play with this kite. E keeps on playing with it. What can F do so he/she can get a chance to play with the kite?

4. Swing

Here is G and here is H. Can you tell me what this is? Now G has been playing on this swing and H wants a chance on the swing. G keeps playing with it. What can H do so he/she can have a chance to play on the swing?

5. Drum

Here is J and this is K. And what is this toy? J keeps on playing with this drum and K would like to have a chance to play with this drum. What can K think of to do so he/she can have a chance to play with the drum?

6. Boat

This is L and this is M. And this toy is a _____. L keeps on playing with this boat and M wants a chance to play with it. What can M do so he/she can have a chance to play with the boat.

7. Guitar

Here is N and this is O. And what is this toy? Now N keeps on playing with this guitar and O would like a chance to play with it. But N keeps on playing with it. What can O do so he/she can get to play with the guitar?

Extra Stories

8. Piano
9. Teddy Bear
10. Telephone

Mother Problems

1M. Broken Flower Pot

(Very dramatically) Let's pretend that P just broke his/her mommy's favorite flower pot and he/she is afraid his/her mommy might be mad at him/her. What can P do so his/her mommy will not be mad?

2M. Scratch on Table

Now let's pretend that Q scratched his/her mother's wooden table and it made a big scratch or mark on the table. His/her mommy might be mad about that. What can Q do so his/her mommy will not be mad at him/her because he/she scratched her table?

3M. Burned Hole in Dress

Now let's say it's this way. R burned a hole in his/her mother's best dress and he/she is afraid his/her mother might be mad at him/her. What can R do so his/her mommy will not be mad at him/her?

4M. Torn Page in Book

One day S tore some pages in his/her mother's favorite book and he/she was afraid his/her mother might be mad. What can S do so his/her mommy won't be mad?

5M. Broken Window

T was playing ball. The ball hit a window, and the window _____ . He/she was afraid his/her mommy might be mad. What can T do so his/her mommy will not be mad at him/her?

Extra Stories

6M. Broken Dish

(Very dramatically) Let's pretend that _____ just broke his/her mommy's favorite dish and he/she is afraid his/her mommy might be mad at him/her. What can _____ do so his/her mommy will not be mad?

7M. Knocked Over and Broke an Ashtray

Now let's pretend that _____ knocked over and broke an ashtray. His/her mommy might be mad about that. What can _____ do so his/her mommy will not be mad at him/her because he/she broke the ashtray?

8M. Broke a Drinking Glass

Now let's say it is this way. _____ broke a drinking glass and he/she is afraid his/her mommy might be mad at him/her. What can _____ do so his/her mommy will not be mad at him/her?

9M. Broke a Chair

One day _____ broke his/her mommy's chair and he/she was afraid his/her mother might be mad. What can _____ do so his/her mommy won't be mad?

Father Problems

1F. Broken Garden Shovel

(Very dramatically) Let's pretend that _____ just broke his/her daddy's favorite garden shovel and he/she is afraid his/her daddy might be mad at him/her. What can _____ do so his/her daddy will not be mad?

2F. Scratch on Wooden Desk

Now let's pretend that _____ scratched his/her father's wooden desk and it made a big scratch or mark on his desk. His/her daddy might be mad about that. What can _____ do so his/her daddy will not be mad at him/her because he/she scratched his desk?

3F. Burned Hole in Shirt

Now let's say it's this way. _____ burned a hole in his/her father's best shirt and he/she is afraid his/her father might be mad at him/her. What can _____ do so his/her daddy will not be mad at him/her?

4F. Torn Page in Newspaper

One day _____ tore some pages in his/her father's favorite newspaper and he/she was afraid his/her father might be mad. What can _____ do so his/her daddy won't be mad?

5F. Broken Car Window

_____ was playing ball. The ball hit the car's window, and the window _____. He/she was afraid his/her daddy might be mad. What can _____ do so his/her daddy will not be mad at him/her?

Extra Stories

6F. Broken Cup

(Very dramatically) Let's pretend that _____ just broke his/her daddy's favorite cup and he/she is afraid his/her daddy might be mad at him/her. What can _____ do so his/her daddy will not be mad?

7F. Broke a Bowl

Now let's pretend that _____ knocked over and broke a bowl (cereal). His/her daddy might be mad about that. What can _____ do so his/her daddy will not be mad at him/her because he/she broke the bowl?

8F. Broke a Bottle

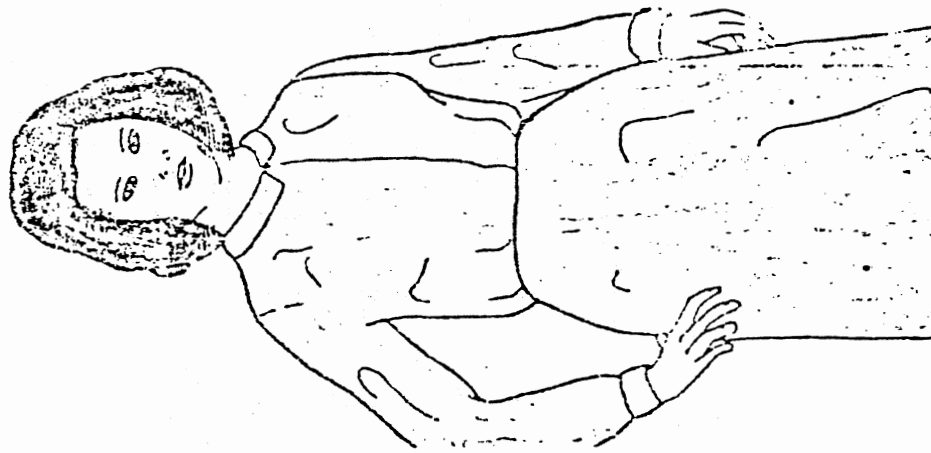
Now let's say it is this way. _____ broke a bottle and he/she is afraid his/her daddy might be mad at him/her. What can _____ do so his/her daddy will not be mad at him/her?

9F. Broke a Stool

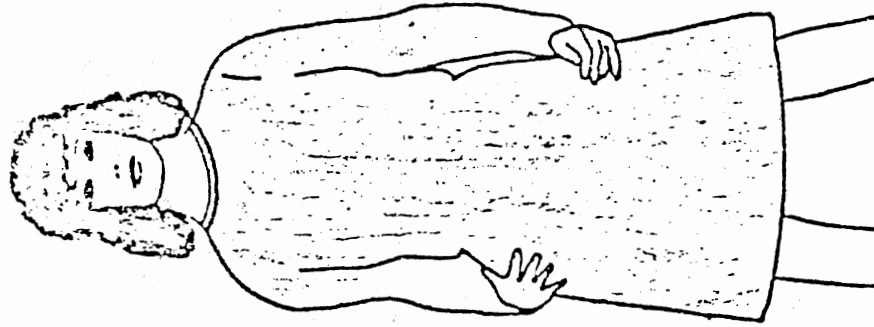
One day _____ broke his/her daddy's favorite stool and he/she was afraid his/her father might be mad. What can _____ do so his/her daddy won't be mad?

APPENDIX D

FATHER AND MOTHER LINE DRAWINGS



(a)



(b)

Figure 1. Mother Line Drawings

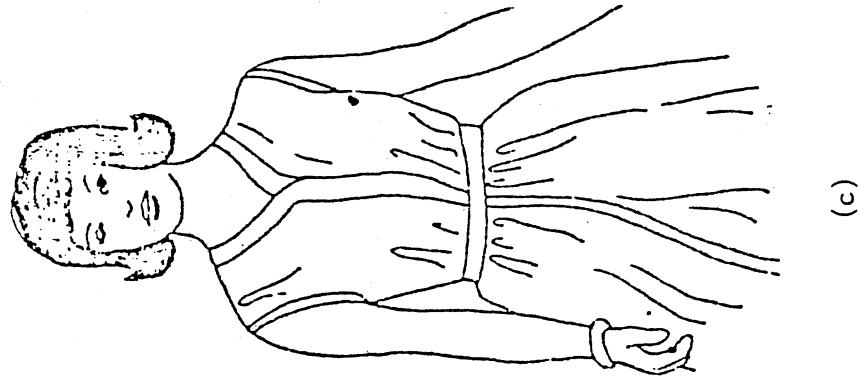
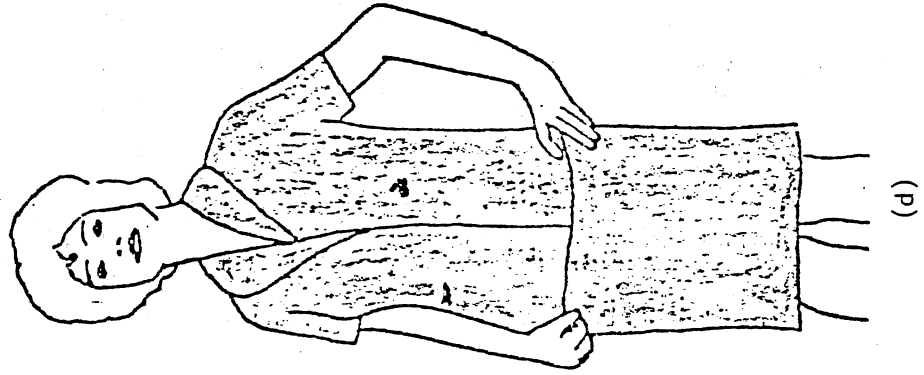
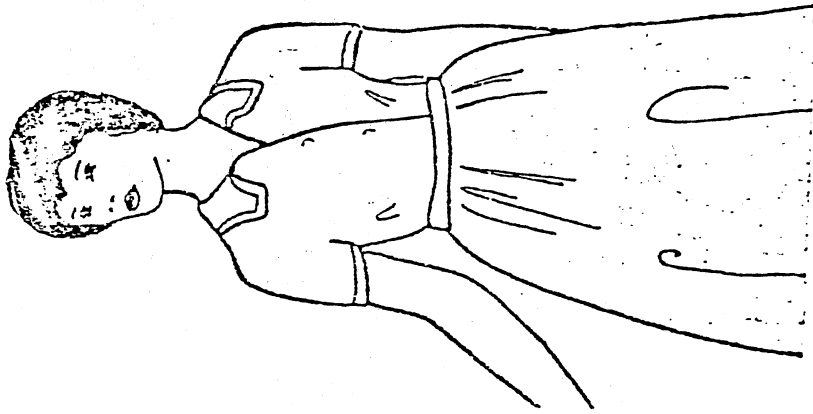
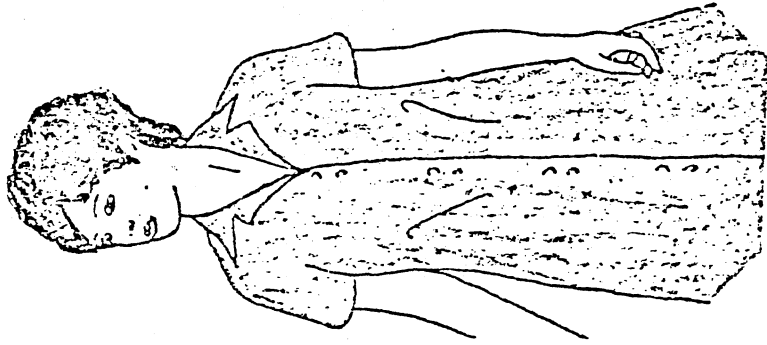


Figure 1. (Continued)

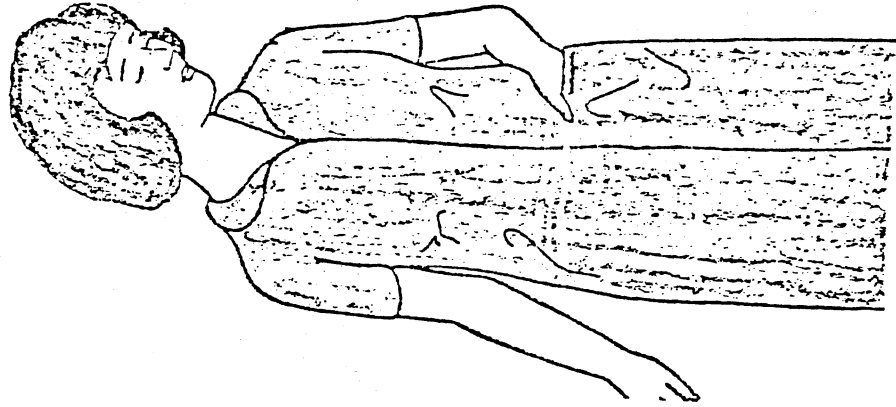


(f)

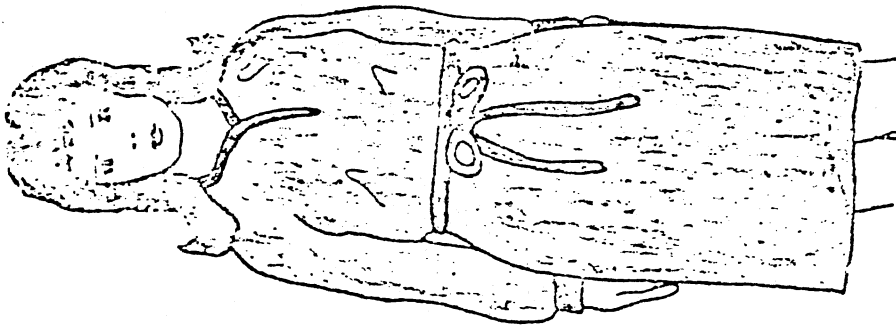


(e)

Figure 1. (Continued)

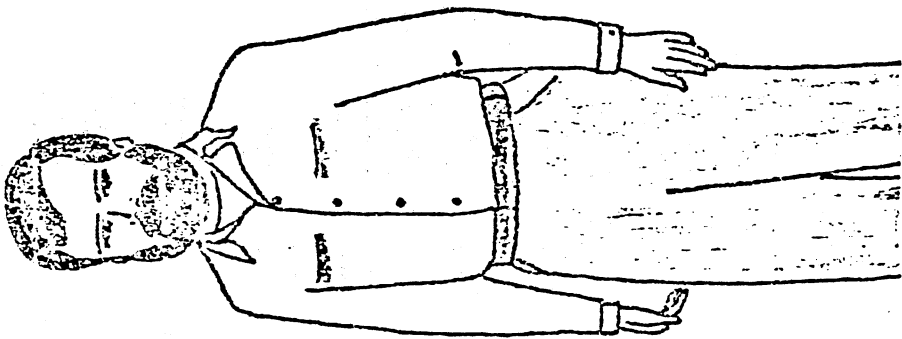


(h)

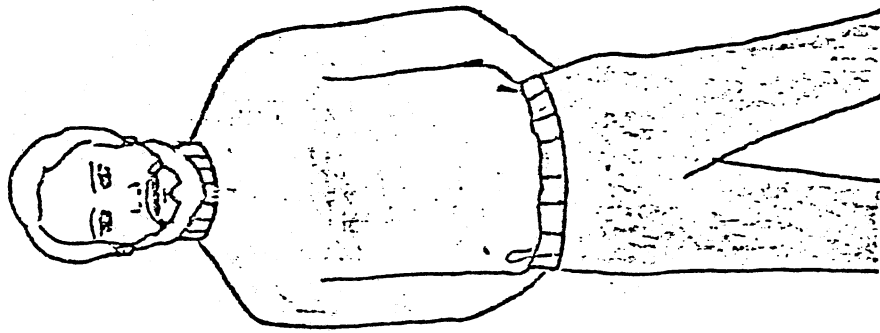


(g)

Figure 1. (Continued)

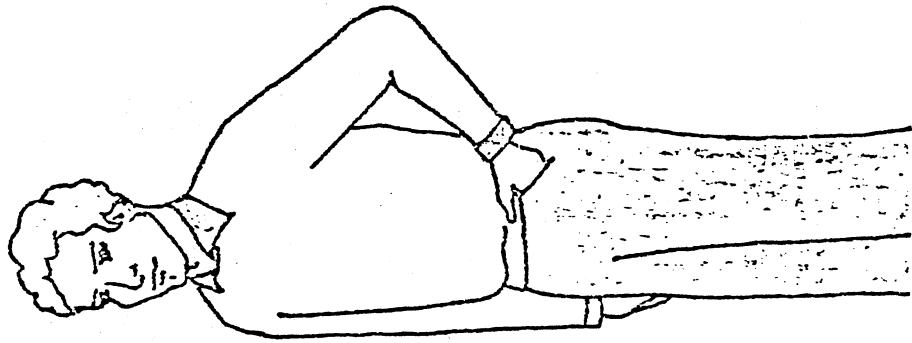


(a)

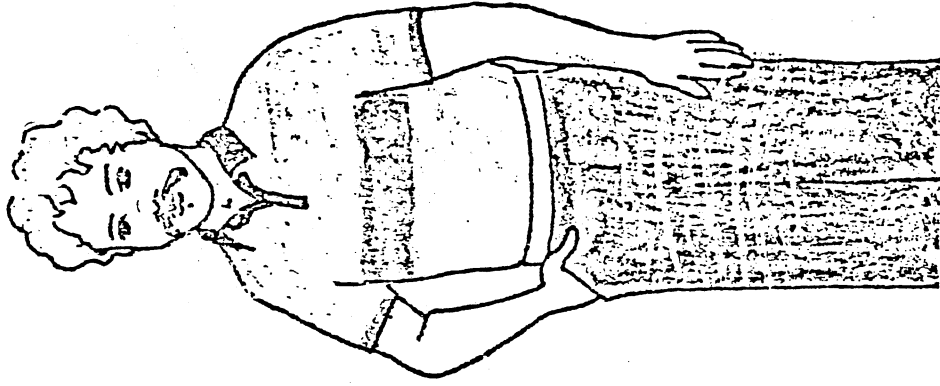


(b)

Figure 2. Father Line Drawings

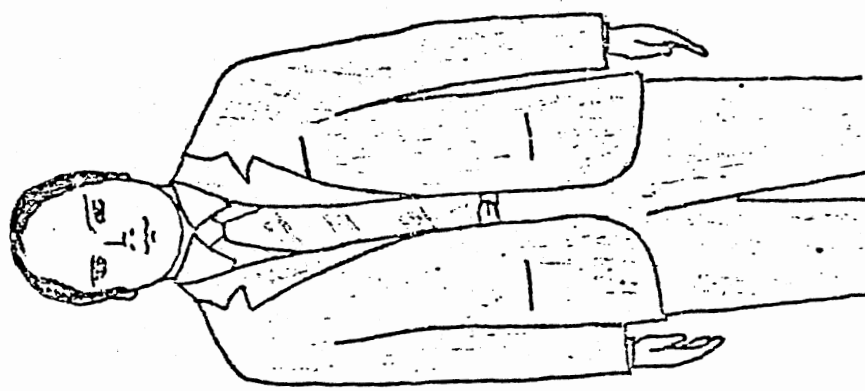


(c)

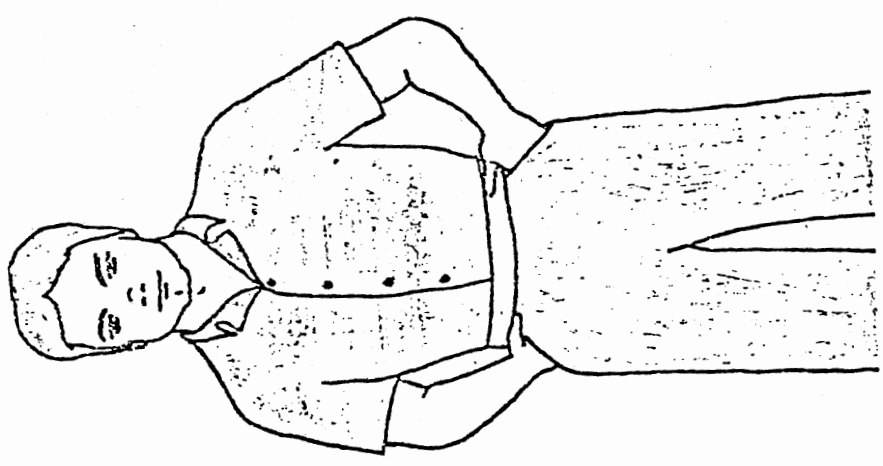


(d)

Figure 2. (Continued)

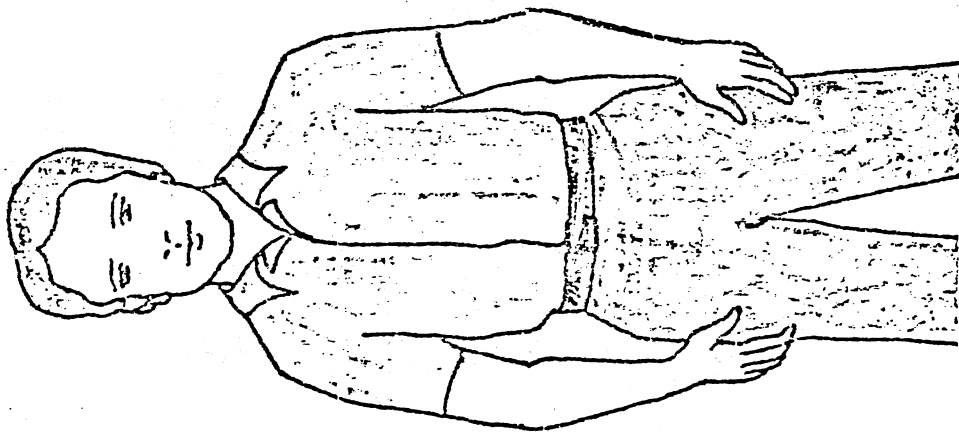


(e)

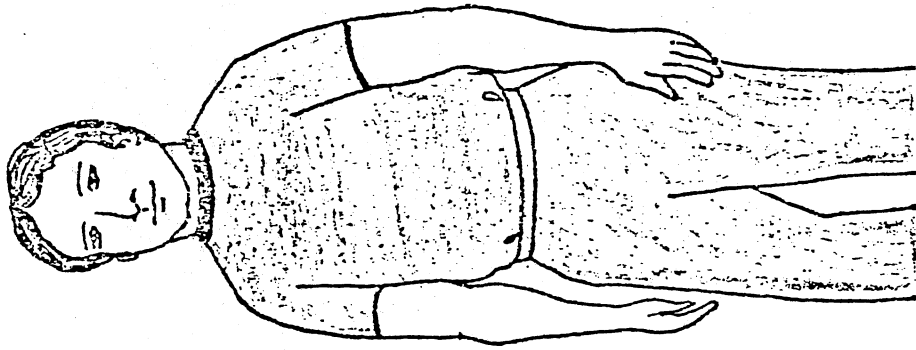


(f)

Figure 2. (Continued)



(g)



(h)

Figure 2. (Continued)

APPENDIX E
INFORMATION REGARDING RELIABILITY AND
VALIDITY OF PIPS

Reliability

Scorer Reliability

Scoring reliability of pairs of independent scorers has been obtained on samples of scored solutions and their categories as well as on relevancy, enumerations, and repetitions. Based on the formula

$$\frac{2 \text{ (number of common agreements)}}{\text{No. of judgments of A} + \text{No. of judgments of B}}$$

the percent agreements are shown in Table I. In the large majority of instances scorers were research assistants and apprentice trainees. They were divided into pairs and with some overlap of the same individuals from year to year, 10 pairs served as judge A and judge B. In training, each scorer first served as a tester. Because of the probing techniques employed it was necessary for the tester to be familiar with the categories and their relevant solutions. Therefore, scoring responses were facilitated by previous knowledge of response type. In addition, each pair scored practice protocols and initial disagreement was discussed with a member of the research staff. Any misunderstandings were clarified. Disagreement on final reliability protocols was due primarily to interpretation, not to lack of understanding the coding system.

The number of common agreements for each individual response provides a more stringent account of reliability than agreement of overall number. For example, out of seven total statements, both judges may agree on five relevant solutions and two irrelevant responses. However, judge A may interpret statements number 1, 2, 3, 4, and 5 as relevant solutions and 6 and 7 as irrelevant responses. Judge B may interpret

numbers 1, 2, 4, 5, and 6 as relevant and 3 and 7 as irrelevant. Therefore, while both agree an overall total of five relevant solutions exist, four statements, numbers 1, 2, 4, and 5 have common agreement for scoring solutions. Common agreement exists for one irrelevant statement, number 7, even though both judges agree that within the seven statements, a total of two of them are irrelevant. As shown in Table 1, common agreement as to whether a response was relevant occurred in 725 instances, yielding a reliability of 97 percent.

Two judges may agree in common that a response is a relevant solution, but each judge place that relevant solution into a different category. Table 1 indicates that reliable placement within the broad relevant category reached a percent agreement of .96.

With careful training and clarity of response classification as listed in the scoring section of this Manual, Table 1 clearly indicates that scorer reliability is quite high.

Test-Retest Reliability

Test-retest reliability was obtained by testing 57 randomly selected four-year-olds enrolled in "inner-city" preschools on two separate occasions, the second testing session being one week following the first. The reliability coefficient on these 57 youngsters was .72. The mean for the pretest was 5.39 (SD = 2.24) and 5.72 (SD = 2.56) for the post-test. This difference was not statistically significant ($t = -1.37$, $df = 56$). In addition, a standard error of measurement (SEM) was obtained, indicating the amount to which a score may change from one week to the next, within a group of "inner-city" four-year-olds chosen at random,

in two-thirds of the cases. The obtained SEM was 1.27, indicating that a change in score of two or more on the PIPS may be viewed as a significant change in ability to think of alternatives. Such change is not due to error in the measure itself.

On a separate occasion, 180 children were retested after a period of between three and five months. The reliability coefficient was found to be .59. This evidence indicates that the PIPS Test measures a property of thought that remains relatively stable even after longer periods of time.

Validity

Data indicating the validity of the PIPS test has already been presented in "Research Using the PIPS Test," wherein evidence has indicated that PIPS scores consistently differentiate groups of children who differ in behavioral adjustment, differ for different socio-economic groups, and change in a correlated way with change in behavioral adjustment as a consequence of training. Evidence was also presented demonstrating that scores correlated best with specific measures of interpersonal adjustment (i.e., concern for the feelings of others; being liked by peers), measured IQ playing no role in this relationship.

In addition to the above, norms have been developed which also reflect the validity of the PIPS procedure.

Over a four year period, a total of 469 inner city four-year olds, 220 boys and 249 girls, have been given the PIPS test, each year administered between the months of November and January. Because no sex differences occurred in any research year (see background research section) the normative data combines sexes. With the original purpose of the

test being to determine the relationship of its measured skills to behavioral adjustment, data is presented separately for those classified as adjusted, as impulsive, and as inhibited. All data is based on testing prior to exposure to the special training program aimed at enhancing problem-solving thinking and behavioral adjustment.

Based on the cumulative percentages shown in Table II, it is possible to detect efficient cutting scores that differentiate adjusted from maladjusted groups of children. For example, while 92 percent of adjusted children obtain scores exceeding 3, this is true of only 51 percent of impulsive and 34 percent of inhibited youngsters. At the other extreme, a score of 7 or more is extremely rare among poorly adjusted children, but is obtained by 54 percent of adjusted children.

Means and standard deviations of PIPS scores for each behavior group are shown in Table III. In addition to a child's solution score, a second score was given for the number of different solution-categories coded. Since it was possible for more than one solution to be placed into a single category, the range of different categories of thought was also of interest. Additional means and SD's are given for solution-categories (Table IV).

In sum, validity of the PIPS test is evidenced by the research differentiation of behavior groups, its relationship to socio-economic group, its consistent change with change in overt adjustment, and its relationship to specifically interpersonal behaviors. All of these findings suggest the PIPS measures what it purports to measure, other evidence indicating it is not measuring general cognitive "power" or IQ, nor general language skills.

TABLE VIII
 INTERCODER RELIABILITY FOR PIPS
 (BASED ON 255 Ss)

Classification	No. of Judgments		Common Response Agreement	Percent Agreement
	Judge A	Judge B		
<u>Peer Problem</u>				
Relevant Solutions	734	765	725	97%
Relevant Solution Categories	664	698	652	96%
No-Solution				
Related Goal	202	198	198	99%
Substitute Goal	126	120	120	98%
Irrelevant	480	467	455	96%
Enumerations	175	170	162	94%
Similar and Object- Specific Repetitions	1152	1145	1130	98%
Exact Repetitions	397	385	385	98%
<u>Mother Problem</u>				
Relevant Solutions	492	520	483	95%
Relevant Solution-Categories	465	495	450	94%
No-Solution Irrelevant	309	281	269	91%
Enumerations	150	145	138	94%
Similar and Object- Specific Repetitions	1035	1025	1002	97%
Exact Repetitions	70	62	62	94%

APPENDIX F

PARENT VIGNETTES

"Parents' Problem-Solving Childrearing-
Style Interview"

Introduction and Instructions

"I would like to talk to you about the little problems that turn up in bringing up four and five year olds. Having talked to many parents and children, I have discovered that all four and five year olds sometimes cause little problems for their parents. For example, they might do something they should not do, or they might fight with their brothers and/or sisters, or they may want something they cannot have, or a parent wants his/her child to do something and the child will not do it. Can you tell me what problems like these have recently come up with your child _____?"

I am interested in knowing:

1. What the problem was (stop and let parent tell problem)
2. What happened.
3. And what was said or done.

I want to be able to see it like a movie, you know, he says or does something, then you say or do something, then he says or does something. If the problem occurs frequently, I want to know what usually happens most of the time. I want to know everything that happens, O.K.

1. Parent's Stated Problem Situations

Problem 1: What happened, and what was said or done? First, tell me the problem. Let parent respond. Now, when that happens, what is the very first thing that is said or done? Let parent respond. As much as possible, elicit a dialogue between parent and child; for example,

"What does (child) do or say, if anything, after you (repeat what parent did or said)." Let parent respond. Follow with "What do you do or say, if anything, when (child) does or says that?"

Problem 2: Repeat above process, until parent can no longer offer problem situations.

II. Problems Stated by Experimenter

Well, now I would like to present some problems to you that I have made up, and I would like to ask you about them, O.K.? Here is the first one.

1. One night at the supper table _____ says he/she does not want to drink his/her milk. You want him to drink his/her milk.

Does anything like this ever happen? It can be not wanting to eat something, if you would like to talk about that. (If no) can you think of a problem like this one? (If yes). What happened right then? What did you do or say, if anything, when (repeat parent's problem)? What did (child) do or say? Follow same probing technique as in parent's stated problem.

2. You were shopping and had _____ with you. _____ came running over to say he/she wanted some candy he/she saw on the shelf. You said he/she could not have it. _____ began to cry, saying he/she wanted it. What happened next and what was said or done.

In this and all stated problems to follow, tell a parent who says such a problem never occurs, "Think of a problem that has occurred as much like this one as you can."

3. _____ was playing with a friend and all of a sudden he/she

snatched a toy from that friend. You saw him/her snatch that toy. What happened next and what was said or done?

4. You came into the kitchen and saw _____ writing on the wall with a pencil (or damaging anything in any way). What happened next and what was said or done?

5. One day _____ came into the house (or apartment) very unhappy. He/she told you that another boy/girl his/her age hit him/her. What happened next and what was said or done?

6. _____ was shopping with you. When you were not looking, _____ snatched a box of cookies and you did not find out about it until you got home. Or _____ took something from anywhere without asking. What happened next and what was said or done?

III. Additional Problems Offered by Parents

Did any of these stories remind you of any other problems you have with your child? What happened and what was said or done? Continue until parent no longer offers problems.

VITA²

Mansour Banilivy

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Doctor of Philosophy

Thesis: THE INTERPERSONAL COGNITIVE PROBLEM SOLVING APPROACH AS
UTILIZED BY MOTHERS AND FATHERS DIFFERENTIALLY FOR THEIR
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