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The Relation Between Child and Parent Verbal Behavior in
Parent-Child Dyadic Interactions and their Relation
to Ratings of Conduct Disorder

by

Debra L. Warner

B.S., Illinois State University, 1981

Presented in Partial Fulfillment of the Requirements

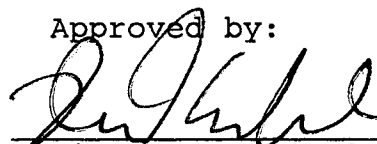
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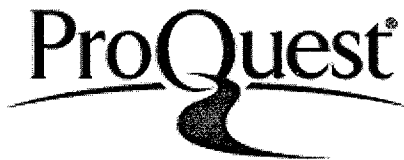


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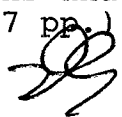
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The Relation Between Child and Parent Verbal Behavior in Parent-Child Dyadic Interactions and Their Relation to Ratings of Conduct Disorder (57 pp.)

Director: David A. Schuldberg 

Many programs of treatment and research with children with conduct problems have targeted behavior management practices of parents. This study presents a treatment program, Parent-Child Interaction Therapy, that trains parents to alter their verbal style with their child even when allowing the child to play freely, as well as when they seek to manage the child's behavior. Research is reviewed that suggests this method of training parents may enhance the child's language skills. Another body of research is reviewed that suggests improving a child's language skills may reduce problematic behaviors.

This study analyzed the language used by both parent and child in fifty parent-child dyads. Each parent with her/his child played in a small room while being videotaped. The parent was first instructed to follow the child's play. After 5 minutes, the parent was instructed to direct the play for 5 minutes. Tapes were then coded using the Dyadic Parent-Child Interaction Coding System which uses the sentence as the basic unit of analysis. The parents also completed the Eyberg Child Behavior Inventory which surveys the presence and frequency of thirty-six common problematic behaviors of children.

Analyses were performed to determine correlations between parent verbalizations and the behavior inventory scores, between child verbalizations and the inventory scores, and between parent verbalizations and child verbalizations. Few correlations were found between either parent or child verbalizations and the inventory scores. It was suggested that this sample of non-treatment-referred children did not contain a wide enough range of child deviancy to obtain many predicted correlations. Analyses of the correlations of parent verbalizations and child verbalizations were discussed as providing support for the efficacy of Parent-Child Interaction Therapy.

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The Relation Between Child and Parent Verbal Behavior in
Parent-Child Dyadic Interactions and Their Relation to
Ratings of Conduct Disorder

A mental health professional who sees children clinically will certainly be confronted with child aggressiveness, as children with aggressive disorders have been shown to comprise from one-third to three-fourths of all child referrals (Wells & Forehand, 1985). Due to the prevalence of these cases, various programs of systematic research and clinical intervention have been established to understand and treat aggressive behavior in children. This study briefly reviews these programs and proposes and evaluates a further step in the understanding of child aggressive behavior through an examination of child and parent verbal behavior in dyadic interactions.

Diagnosis and Classification of Childhood Aggression

Confusion currently surrounds the diagnostic labels assigned to aggressive children. Some recent history of these labels follows. The Diagnostic and Statistical Manual of Mental Disorders - Third Edition (DSM-III; American Psychiatric Association, 1980) included two major types of antisocial disorders: Conduct Disorder and Oppositional Disorder. The Conduct Disorder category was divided into four subtypes that varied along two dimensions. The subtypes were: (1) undersocialized,

aggressive; (2) undersocialized, nonaggressive; (3) socialized, aggressive; and (4) socialized, nonaggressive. These subcategories are defined using a 2 x 2 matrix. The aggressive-nonaggressive dimension separated conduct violating the rights of others via physical violence against persons or property from conduct which involves rule violations that do not involve confrontations with a victim. The socialized-undersocialized dimension differentiates children based on the presence or absence of attachment to other persons and feelings of remorse or guilt for wrongdoing. The Oppositional Disorder diagnosis was applied to children who are argumentative, stubborn, or have temper tantrums but who do not violate basic rights of others or break major social norms or rules. Reliability of these DSM-III categories reported in 1980 by the American Psychiatric Association was poor (.52 using the Kappa statistic when defining any diagnosis of Conduct Disorder as an agreement among clinicians regardless of subtype). Even poorer reliability was reported by other researchers (Mattison, Cantwell, Russell, & Will, 1979). Validity information, other than from one study involving adjudicated children (Henn, Bardwell, & Jenkins, 1980), was not available. The Henn et al. (1980) study did find predictive validity for the socialized-undersocialized dimension in that socialized delinquents had fewer returns to training school and fewer reports of adult criminal

activity than did undersocialized aggressive delinquents. Between the two types of undersocialized delinquents, total number of arrests did not differ, but aggressive delinquents were arrested for more violent crimes.

In contrast to the paucity of empirical studies to provide validity data for the DSM-III categories is the number of independent factor-analytic reviews of aggressive behavior in children. These reviews address the suggestion by Wells (1981) and Achenbach (1982) that empirically-derived behavior clusters may more reliably describe aggressive children than do the committee-generated DSM-III diagnostic labels. In reviewing factor-analytic studies, Achenbach and Edelbrock (1978) found evidence for two major antisocial behavior-clusters that they labeled "Aggressive" and "Delinquent." Quay (1979) found two related factors labeled "Conduct Disorder" and "Socialized Aggressive Disorder." Achenbach (1980) examined the correspondence of these empirically derived categories to the DSM-III categories. He concluded that Quay's "Conduct Disorder" and Achenbach's "Aggressive" clusters correspond to DSM-III's "Conduct Disorder; undersocialized, aggressive" category. He further concluded that the difference between the DSM-III socialized subtypes was a sex difference, with boys falling into the aggressive subtype and girls into the nonaggressive subtype. Therefore, Achenbach's "Delinquent" and Quay's "Socialized Aggressive Disorder" correspond to a

combination of two DSM-III subtypes into one class of Conduct Disorder: Socialized. Achenbach found no empirical support for a separate category corresponding to DSM-III's Oppositional Disorder.

Quay (1986) recently published results of his review of 61 factor-analytic studies spanning almost 40 years. He has newly labeled two factors corresponding to those just described: "Undersocialized Aggressive Conduct Disorder" and "Socialized Aggressive Conduct Disorder." Quay (1979) had earlier labeled a third dimension "Immaturity" which he classified in 1986 as "Attention Deficit Disorder." Table 1 shows a list of characteristic behaviors corresponding to these three factors.

A more behavioral approach to diagnosis of Conduct Disorder is used by a research group at the Oregon Social Learning Center (OSLC). This group has analyzed child behaviors at referral to their clinic specializing in treatment of aggressive children. They labeled three progressions of behavior that follow from initial complaints of noncompliant behavior (Lorber & Patterson, 1981). These potential progressions from noncompliance were labeled "Stealer," "Social Aggressive," and "Immature." Researchers at OSLC have shown that Stealers and Social Aggressives respond differently to their treatment program (Patterson, 1982). Specifically, children classified as Stealers had a higher rate of court-recorded offenses two

to nine years after treatment than did children classified as Aggressive (Moore, Chamberlain, & Mukai, 1979). Therefore, differences between subtypes of aggressive children are only present an issue for reliable and valid classification "for classification's sake", but, more importantly, they become essential to providing successful treatment. The OSLC group has designed a treatment package for Stealers that goes beyond their standard treatment package for Social Aggressives. These researchers are planning to report its effectiveness as follow-up data become available (Patterson, 1982).

In summary, it appears that at least two clear clusters of aggressive behavior emerge from reviews of factor-analytic studies such as Quay's (see Table 1). A third antisocial subtype, Immature, has been identified by Quay and by researchers at OSLC. OSLC has not yet reported evidence of differential treatment effects with this group and Quay has recently determined that this behavior cluster may represent Attention Deficit Disorder.

The revised edition of DSM-III modified diagnostic labels to reflect results of field trials with several hundred children (APA, 1987). DSM-III-R lists two subtypes of Conduct Disorder with a third subtype for cases that do not clearly fit these two (Conduct Disorder - Undifferentiated Type). The first two subtypes, Conduct Disorder - Isolated Aggressive Type and Conduct Disorder -

Group Type, correspond to Quay's Undersocialized and Socialized groups. DSM-III-R also includes a diagnosis, Oppositional Defiant Disorder, for conduct problems that are exhibited more exclusively when the child interacts with adults or peers whom the child knows well (e.g. parents, siblings). These symptoms may not be readily detected in a clinical interview. This suggests a need for behavioral observation to diagnose Oppositional Defiant Disorder reliably. Table 2 presents the DSM-III-R criteria for Conduct Disorder and Oppositional Defiant Disorder.

Table 1

Quay's 1986 Factors of Aggressive Behavior

Characteristics of Undersocialized Aggressive
Conduct Disorder

Fighting, hitting, assaultive
 Disobediant, defiant
 Temper tantrums
 Destructiveness
 Impertinent, "smart," impudent
 Uncooperative, resistant, inconsiderate, stubborn
 Attention-seeking, "show-off"
 Dominates, bullies, threatens
 Disruptive, interrupts, disturbs others
 Boisterous, noisy
 Irritability, "blows up" easily
 Negative, refuses directions
 Restless
 Untrustworthy, dishonest, lies
 Hyperactivity

Characteristics of Socialized Aggressive Conduct Disorder

Has "bad" companions
 Truant from school
 Truant from home
 Steals in company with other children
 Belongs to a gang
 Is loyal to delinquent friends
 Stays out late at night
 Steals at home
 Lies, cheats.

Characteristics of Attention Deficit Disorder

Poor concentration
 Daydreaming
 Poor coordination
 Preoccupied, stares into space
 Passive, easily led
 Fidgety
 Fails to finish tasks
 Sluggish
 Impulsive
 Lacks interest, bored
 Hyperactive
 Drowsy

Table 2

DSM-III-R Criteria for Conduct Disorder

A disturbance of conduct lasting at least six months, during which at least three of the following have been present:

1. has stolen without confrontation of a victim on more than one occasion (including forgery)
2. has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning)
3. often lies (other than to avoid physical or sexual abuse)
4. has deliberately engaged in fire-setting
5. is often truant from school
6. has broken into someone else's house, building, or car
7. has deliberately destroyed others' property (other than by fire-setting)
8. has been physically cruel to animals
9. has forced someone into sexual activity with him or her
10. has used a weapon in more than one fight
11. often initiates physical fights
12. has stolen with confrontation of a victim (e.g., mugging, purse-snatching, extortion, armed robbery)
13. has been physically cruel to people

GROUP TYPE: The essential feature is that conduct problems occur mainly as a group activity with peers.

SOLITARY AGGRESSIVE TYPE: The essential feature is the predominance of aggressive physical behavior, usually toward both adults and peers, initiated by the person (not as a group activity).

DSM-III-R Criteria for Oppositional Defiant Disorder

A disturbance of at least six months during which at least five of the following are present:

1. often loses temper
2. often argues with adults
3. often actively defies or refuses adult requests
4. often deliberately does things that annoy other people, e.g., grabs other children's hats
5. often blames others for his or her own mistakes
6. is often touchy or easily annoyed by others
7. is often angry and resentful
8. is often spiteful or vindictive
9. often swears or uses obscene language

OVERVIEW OF CHILD AGGRESSION

Influences of Age and Gender

Patterson (1982) reviewed several independent studies that identify a trend toward decreased incidence in antisocial behaviors as a function of age. He also reported his own data showing this trend for both referred children and for normals. However, the referred children consistently exhibited more aggressive behaviors, and at ages 10 to 11 were exhibiting levels of aggressiveness similar to normals who were 2, 3, and 4 years old. Patterson concluded that the behavior of antisocial children represents a form of arrested socialization. Another consistent finding in studies of aggressive children concerns a gender difference. Reviews of the literature note higher rates of physical aggression for boys than for girls (see, for example, Maccoby & Jacklin, 1974). The question, of course, remains as to the cause of this difference: Is it innate or learned? Studies of the etiology of aggressiveness have found both constitutional and social variables to be related to aggression. As will be shown below, current research and theory indicate social variables may be primary.

Etiology

Some researchers have investigated psychophysiological differences that might be causally related to aggression. For example, a recent study of delinquent boys at a state

correctional facility found that psychomotor epilepsy was far more prevalent in their sample of 97 than in the general population (Lewis, Pincus, Shanok, & Glaser, 1982). These children were selected on the basis of their extreme aggressive behavior rather than of any suspected neurological disorder; however, the nonblind nature of the study must be addressed in future research of this kind. Others have studied the notion that child temperament is predictive of later aggression. For example, Webster-Stratton and Eyberg (1982) demonstrated that child temperament was significantly related to two measures of aggressive behavior. Children identified as more active with a low attention span on the Colorado Childhood Temperament Inventory (Rowe & Plomin, 1977) were rated by parents as having more behavior problems. They were also observed to be more noncompliant in their interactions with their mothers. In a study using path analysis to test familial and temperamental determinants of aggressive behavior, Olweus (1980) found four factors that contributed to the development of aggression in boys, with temperament being of lesser importance than social variables. These factors, listed in order of importance, were (1) mother's negativism, (2) mother's permissiveness for aggression, (3) mother's and father's use of power-assertive methods, and (4) boy's temperament. Although temperament significantly

contributed to aggressiveness, the first two familial factors above accounted for the greatest causal impact.

Two other familial variables have been frequently cited as causal factors in the etiology of conduct disorders: low socioeconomic status and broken, primarily father-absent, homes. Robins (1979) has analyzed the effect of socioeconomic status and family structure and has concluded that these variables themselves are attributable to processes within the family. In other words, parental lack of social skills contributes to low socioeconomic status, to disrupted marriages, and also to child aggression. There is evidence that antisocial child behavior increases following a divorce (Wallerstein & Kelly, 1976) especially for boys (Hetherington, Cox, & Cox, 1978). Patterson (1982) proposes that divorce creates a disruption in family management that can lead to increased aggression.

Treatment Programs

The concept that family interactions are central to the development of child aggressiveness underlies two systematic approaches to clinical intervention. A description of these programs follows.

The first program described here is that of Gerald Patterson and the Oregon Social Learning Center. This treatment package can be divided into three stages. The ultimate goal is to help parents reprogram their family

environment to decrease aggressiveness and increase prosocial behavior in children. In the first stage, parents read about social learning theory and answer questions to demonstrate knowledge of the material. During the second stage, parents are asked to gather baseline data on two deviant and two prosocial behaviors for their child. In the third stage, parents are trained to develop contingency programs in which their child earns or loses points for positive and negative behaviors, respectively. The points are exchanged daily for rewards selected by the child. Additionally, parents are taught to use labeled praise to reward positive behaviors and time-out to treat negative behaviors.

A second program of intervention also seeks to reprogram the family environment. Eyberg (1979) presents a description of this program, called Parent-Child Interaction Therapy. Parent-Child Interaction Therapy is divided into two phases. The goal of the first phase, called Child Directed Interaction (CDI), is to enhance the parent-child relationship by introducing new skills to parents, skills that have been used by play therapists when interacting with children. The goal of the second phase, called Parent Directed Interaction (PDI), is to help the parents develop more effective behavior management skills. In the first phase the therapist models for the parents specific means of engaging in nondirective play with the

child, including making reflective and descriptive statements and praising prosocial behavior. Parents are also taught not to give commands, ask questions, or criticize the child during CDI. The parent then practices these skills, receiving feedback and encouragement throughout observed play sessions with the child. During these play sessions, the therapist observes the parent-child interaction from behind a one-way mirror and coaches the parent via a "bug-in-the-ear" system. The parent is also encouraged to practice these skills for 5 minutes each day at home with the child. Parents must reach a pre-set criterion level of descriptions, reflections, and praises before moving to the second phase. It is interesting to note that many children show decreases in noncompliant behavior after parents have completed only the first phase.

The second phase of therapy focuses on behavior management skills. Parents are taught to make commands that clearly label the response desired from the child. They are taught not to repeat a command, but to allow the opportunity for compliance. Noncompliance is followed by a warning of consequences. Upon noncompliance with the warning, a time-out procedure is used. Following the appropriate completion of time-out, the parent then returns to the original command. This phase of the treatment also occurs in the clinic, where the therapist observing the

parent-child interaction from behind the one-way mirror can provide feedback and support to the parent.

Both the Patterson and Eyberg treatment programs were designed to alter family interactions in order to decrease aggressiveness and coercive interaction patterns. An advantage of Eyberg's Parent-Child Interaction Therapy is that the specific positive interaction skills taught to the parent model important verbal skills for children. The role of verbal skills in conduct disorders is discussed below.

Verbal Skills and Conduct Disorders

There is some evidence that aggressive children may lack essential verbal skills. One study by Richman and Lindgren (1981) began with a sample of children exhibiting a pattern of WISC-R scores that is often of concern to clinicians. These children had a Verbal IQ Score at least 15 points lower than their Performance IQ Score. This pattern is seen as a potential indicator of academic difficulties. The sample was separated, based on subjects' WAIS-R factor scores, into three groups exhibiting deficits in abstract reasoning, sequential reasoning, and language. The language disability group was the highest in conduct problems and lowest in academic achievement in both reading and arithmetic. Huesman, Eron, and Yarmel (1987) have recently published data from a 22-year longitudinal study of intellectual functioning and aggression. Based on the

results of their study they suggest the following for strategies of intervention with aggressive children.

At a very early age interventions directed at improving a child's cognitive skills could also be expected to decrease the likelihood of aggressive behavior in the child. However, by age 8, intervention should be targeted directly at teaching nonaggressive strategies for behavior, as most children will already have developed a reasonably stable pattern of aggressive or nonaggressive behavior. (p. 240, emphasis added)

Hogan and Quay (1984) offer an explanation for the relationship between verbal skills and aggression. They suggest language deficits may play a causal role in the development of undersocialized aggressive disorders because these deficits decrease a child's repertoire of appropriate behaviors necessary to meet both academic and social demands.

Other research has shown that verbal deficits affect social performance as well. Tremblay, Strain, Hendrickson, and Shores (1981) reported that among preschool children with high rates of positive peer interactions, the social behaviors most likely to elicit a positive response were asking questions, giving commands, and making neutral statements. Ladd (1981) showed that verbalizations such as asking questions and making positive statements were associated with social competence.

LANGUAGE ACQUISITION

Given that language development is related to a child's academic and social performance, a review of some research on language acquisition follows. Studies of language development show that parent-child interactions are central to the child's language acquisition. Nelson, Carskaddon, and Bonvillian (1973) studied the effectiveness of various adult-child interactions in developing language. Children ages 32 to 40 months received 20 minutes of language intervention twice a week for 11 weeks. The children were divided into two treatment groups and one control group. Children in Treatment 1 experienced adult expansions in response to their utterances; those in Treatment 2 were responded to with new sentences (different nouns, verbs, and adverbs); and the Control children received the same amount of contact-time with no special language intervention. Children who were responded to with expansions of their own utterances performed significantly better than the others on five language measures. Controversy exists regarding the merits of the Chomskian theory of naturally unfolding language structures versus the social-learning theory of language acquisition; however, the Nelson et al. results do indicate that expansions of a child's speech enhance the child's verbal skills. Conversely, other parent communication styles have

been shown to be predictive of difficulties for the child. Ditton, Green, and Singer (1987) demonstrated that high Communication Deviance scores from parents were related to their children's placement in a learning disability class. Communication Deviance refers to verbal messages that may distract or confuse a listener.

A Harvard language researcher, Catherine Snow, summarizes findings of language acquisition research (Snow & Hall, 1984). She states that the most "reproducible finding about social interaction and language acquisition is that semantically contingent speech facilitates children's learning of language" (p. 86). She lists the following as components of semantically contingent speech: adult repetitions of child utterances, expansions of child utterances, responses to child questions, and acknowledgments or confirmations of child assertions. She lists the following as having a negative effect on language acquisition: expressions of rejection or disapproval of child utterances, directives to initiate new actions, sudden changes of topic, and negative commands. Eyberg's Parent-Child Interaction Therapy trains parents to use verbal skills that enhance children's language acquisition in the ways mentioned above. Parents are trained to make expansions (Reflections), use semantically contingent speech (Descriptions), and refrain from making commands.

RATIONALE FOR THE PRESENT STUDY

Current research and treatment programs for aggressive children implicate family interactions as both causal and potentially curative in child aggressiveness. To date, the focus in treatment has been on changing behavior management practices and styles of parental verbalizations. However, research reviewed above suggests that the child's language skills influence her/his ability to behave according to social standards and also deserve attention.

One treatment approach, Parent-Child Interaction Therapy, contains a phase of treatment, CDI, that is particularly well suited to foster the language development of children. The purpose of the present study is to observe child verbalizations within the context of parent-child dyadic interactions central to this treatment program.

Two questions are addressed by examining correlations between verbalizations in parent-child interactions and ratings of behavior problems. The first question is: Are child verbalizations correlated with parental ratings of behavior problems? The second question is: Are parental verbalizations correlated with parental ratings of behavior problems? This second question involves a replication of part of an earlier study (Robinson & Eyberg, 1981), that reported a strong multiple correlation, $R = .94$, $p < .001$,

between the parent verbal categories and parental ratings of the child on a behavior problem inventory.

Finally, the study addresses a third question: Are child verbalizations correlated with parental verbalizations? A correlation matrix is constructed to examine relations between parent and child language.

METHOD

Subjects

Subjects were solicited from the University of Montana pre-school programs. Fifty parent-child dyads volunteered to participate. Demographic information was gathered using the second page of the Eyberg Child Behavior Inventory (Appendix A). Twenty-five girls and twenty-five boys participated with forty-two mothers and eight fathers. The children's ages ranged from 3 to 5 years with 22% being 3 years old, 42% 4 years old, and 36% 5 years old. Most of the children lived with both mother and father (66%), though some lived with mother only (26%), with father only (4%), and with mother and step-father (4%). The mean level of education of the parents involved in the interactions was 15 years of schooling. Family income for these subjects was as follows: 6% of the families had annual incomes of \$4,999 or less, 46% of the families earned from \$5,000 to \$19,999, and another 46% earned \$20,000 or more, with 2% not reporting this information. Ninety-two percent of the children were white non-hispanic, 6% were Native American, and one child's race was not reported.

Instruments

Eyberg Child Behavior Inventory (ECBI). The ECBI (see Appendix A) surveys 36 typical problem behaviors reported by parents of conduct problem children and children with other behavioral problems. It assesses the

type of problem behaviors a child exhibits as well as the intensity or frequency of these behaviors. The ECBI thus provides two ratings of the child's behavior: (1) a Problem Score (i.e., the number of the 36 behaviors that the parents perceive as being a problem) and (2) an Intensity Score (i.e., the frequency at which the parents perceive the 36 behaviors' occurring).

The inventory has been shown to discriminate between conduct problem and normal children (Eyberg & Ross, 1978). Furthermore, it has been shown to be sensitive to treatment effects with a variety of treatment methods for conduct problems when pre- to post-treatment scores are compared (Eyberg & Ross, 1978). Normative data are available for each of the 36 behaviors along with cut-off points, for ages two through twelve, to discriminate conduct problem children from normal children (Robinson, Eyberg, & Ross, 1980).

Dyadic Parent-Child Interaction Coding System (DPICS).

The DPICS (Eyberg & Robinson, 1983), a behavioral coding system, is used to record the frequency of different child and parent verbalizations. The sentence is the basic unit of behavior in this coding system. Table 2 lists the categories of verbalizations in parent-child dyadic interactions. Definitions for these categories can be found in Appendix B. Rules for coding and specific examples of each category can be found in the coding

Table 3
Verbalization Categories

Irrelevant Verbalization (Coded for Parent Only)
Acknowledgement
Descriptive/Reflective Question
Reflective Statement
Descriptive Statement
Praise of Parent (Coded for Child Only)
Praise of Child (Coded for Parent Only)
Praise of Activity
Praise of Self
Playtalk
Laugh
Critical Statement about Parent (Coded for Child
Only)
Critical Statement about Child (Coded for Parent
Only)
Critical Statement about Activity
Critical Statement about Self
Direct Command
Indirect Command
Cry (Coded for Child Only)
Whine (Coded for Child Only)
Yell (Coded for Child Only)

manual.

This study coded child categories that parallel the manual's parent categories with the following modifications. The "Irrelevant Verbalization" category is coded only for parents. Since the category was designed to assess parental attending to the child rather than the child's adherence to task-associated comments, it is not coded for the child. A new category, "Playtalk," was added for both parent and child. "Playtalk" is coded when a child or parent pretends to be a character in a game and speaks as the character. The categories of "Praise" and "Critical Statement" were separated into sub-categories differentiated by the object of the comment. Different sub-categories are coded depending on whether the statement is a praise or criticism of the self, of the other person in the interaction, or of the activity. This modification is intended to be used in future research and clinical work. Praise is also coded as either Labeled or Unlabeled. Labeled Praise states the specific behavior the parent wishes to reinforce. An example is: "I like the way you color between the lines." Unlabeled Praise involves a positive evaluation without a specific explanation. An example is: "Good job!" For this study, analyses were conducted using a combined category including Unlabeled Praise of Other and Labeled Praise of Other. This praise of the other individual in the interaction reflects the

kind of praise that is taught to parents in the CDI phase. Appendix C shows the data coding form for scoring parent and child verbalizations.

Robinson and Eyberg (1981) have shown that the parent verbalizations discriminate well between families with a conduct problem child and families with a normal child. They found that parents of conduct problem children made more critical statements and gave more commands than parents of normal children. They found relatively few and then small differences between fathers and mothers in their interactions with their children.

The procedure for the DPICS is as follows. Each parent-child dyad participates in two five-minute play sessions. During the child-directed interaction (CDI), the parent is instructed to allow the child to choose any activity and to play along with the child according to the child's rules. The exact instructions given to the parent are as follows:

"In this situation, tell (child's name) that he/she may play whatever he/she chooses. Let him/her choose any activity he/she wishes. You just follow his/her lead and play along with him/her."

During the parent-directed interaction (PDI), the parent is instructed to select an activity and to keep the child playing according to parent's rules. The instructions here are:

That was fine. Now we'll switch to another situation. Tell (child's name) that it is your turn to choose the

game. You may choose any activity. Keep him/her playing with you according to your rules."

A standard set of toys was used for the parent-child interaction assessment (i.e., Leggos, Tinker-Toys, Blocks, Toy Animals).

Procedure

Each parent was greeted and given the ECBI to complete. The parent then participated with her/his child in the CDI and PDI sessions. The parent and child were brought into a playroom with a small table, two chairs, three boxes of toys, and a video camera with a microphone extension. When both were seated, the parent was told the CDI instructions by the investigator, the camera was turned on, and the investigator left room stating she would return in 5 minutes. After 5 minutes elapsed, the investigator entered the room, gave the PDI instructions, and then left the room. After 5 minutes, the investigator returned, thanked the parent and child, and answered any further questions at that time. The order of CDI and PDI sessions remained constant as this is the order in which they are used for clinical assessment and treatment. All sessions were video-taped. The full 5-minute segments of CDI and PDI were coded, making a total of 10 minutes per dyad. The video-tapes were later coded according to the DPICS. Interrater reliability was established using a second experienced rater's codings of 20% of the tapes.

RESULTS

The reliability obtained for the ECBI was consistent with previous research. The reliability coefficient (Cronbach's alpha) for the Intensity Score was .89 and for the Problem Score it was .81. Interrater reliability data for the parent and child verbal categories are presented in Tables 4 and 5. Interrater reliability was determined using a percent agreement method based on the two raters' codings of 20% of the tapes.

Tables 6 and 7 present the differences in the verbal categories seen in CDI versus PDI, presenting means and standard deviations for the verbal categories. Paired t-tests reveal significant differences in parent verbalizations in directions that reflect the task instructions. For example, parents gave more commands during parent-directed play. Of the child verbal categories, the only significant differences observed are in the Descriptive Statement and Playtalk categories. Children made fewer descriptive statements and spoke less through play characters when the parents were directing the play.

Correlations of the ECBI Problem and Intensity Scores with parent and then child verbal categories are presented in Table 8 and 9. The ECBI was given to both parents, if both agreed to complete it, in order to use this data for future research. For this study, the ECBI of the parent

who participated in the parent-child interaction was used in analyses. Gender combinations for the parent-child dyads were as follows: 20 were mother-son dyads, 22 were mother-daughter dyads, 5 were father-son, and 3 were father-daughter. Previous research indicates analyses of gender interactions may be helpful (Robinson & Eyberg, 1981). However, the present study's gender combinations do not provide adequate cell sizes to investigate such interactions. In correlating the ECBI to the verbal categories, data for CDI and PDI were combined in order to analyze the general tone of the parent-child interaction and to simplify the results. For parents, the Laugh category is significantly negatively correlated, $r = -.31$, $p = .028$, with the Intensity Score. For children, the Playtalk category is significantly correlated, $r = .34$, $p = .017$, with the Intensity Score.

In light of stable gender differences found in previous studies of child conduct problems, the correlations between verbal categories and ECBI Scores were analyzed separately for boys and for girls. For boys, the child verbal categories are not significantly correlated to ratings of their behavior. The boys' parents' verbalizations were also analyzed. No significant correlations to the ECBI were obtained. Table 10 presents correlations obtained for girls. Playtalk is significantly correlated to the Intensity Score, $r = .56$, $p = .004$, as

had been found when analyzing data for boys and girls combined. A second verbal category, Descriptive Statements, is significantly negatively correlated with both the Problem Score, $r = -.57$, $p = .003$, and the Intensity Score, $r = -.40$, $p = .047$. A stepwise multiple regression analysis, using Descriptive Statements, Playtalk, and Critical Statements as predictors, reveals that Critical Statements do not add to the predictive power. Descriptive Statements and Playtalk together account for 50% of the variance on the ECBI Intensity Score for these girls. Correlational analysis of the girls' parents' verbalizations reveals that Playtalk is significantly correlated to the Intensity Score on the ECBI, $r = .41$, $p = .041$.

A correlation matrix of the more frequent verbal categories is presented in Table 11. The matrix presents correlations between parent verbalizations and child verbalizations. Given the total number of correlations calculated and using a .05 level of significance, one would expect to find about 3 significant correlations merely by chance. The following results are, therefore, discussed with this caution in mind. Parent Acknowledgments are significantly correlated with child Descriptions, $r = .41$, $p = .003$. Parent Questions are positively correlated with child Acknowledgments, $r = .43$, $p = .002$, and negatively correlated with child Questions, $r = -.34$, $p = .016$.

Finally, parent Reflections are significantly correlated with child Acknowledgments, $r = .32$, $p = .021$.

An analysis was performed on parent verbalizations. Intercorrelations of parent verbal behaviors are presented in Table 12. The following parent verbal categories are significantly correlated: Questions and Reflections, $r = .39$, $p = .004$, Reflections and Descriptions, $r = .29$, $p = .038$, Descriptions and Praise, $r = .29$, $p = .045$, Criticism and Indirect Commands, $r = .36$, $p = .011$, and Indirect Commands and Direct Commands, $r = .47$, $p = .001$. Acknowledgments are significantly negatively correlated with Criticism, $r = -.33$, $p = .017$. The interpretation and meaning of these results is discussed below.

Table 4

Interrater Reliability Data for Parent Verbal Behavior
Percent Agreement Based on Occurrence

	CDI	PDI
Acknowledgement	.91 (154)	.79 (93)
Descriptive/ Reflective Question	.93 (392)	.91 (242)
Reflective Statement	.85 (89)	.79 (25)
Descriptive Statement	.93 (330)	.94 (441)
Praise	.88 (30)	.94 (4)
Critical Statement	1.00 (6)	1.00 (36)
Playtalk	.89 (53)	--- (0)
Laugh	.82 (31)	1.00 (6)
Indirect Command	.87 (30)	.91 (199)
Direct Command	1.00 (14)	.91 (63)

Note: Number of occurrences in parentheses

--- No occurrences

Table 5

Interrater Reliability Data for Child Verbal Behavior
Percent Agreement Based on Occurrence

	CDI	PDI
Acknowledgement	.89 (66)	.80 (63)
Descriptive/ Reflective Question	.94 (140)	.83 (128)
Reflective Statement	.67 (5)	.80 (9)
Descriptive Statement	.96 (403)	.97 (240)
Praise	1.00 (2)	--- (0)
Critical Statement	1.00 (14)	.88 (30)
Playtalk	.86 (54)	1.00 (2)
Laugh	1.00 (4)	1.00 (2)
Indirect Command	.86 (13)	.88 (15)
Direct Command	.75 (7)	1.00 (4)

Note: Number occurrences in parentheses

--- No occurrences

Table 6

Parent Verbal Behavior Across CDI and PDI

	CDI		PDI		t
	<u>x</u>	<u>sd</u>	<u>x</u>	<u>sd</u>	
Acknowledgement	5.92	3.76	3.46	3.47	4.48***
Descriptive/ Reflective Question	21.14	9.23	15.04	7.81	4.32***
Reflective Statement	3.08	4.15	1.22	1.83	3.34 **
Descriptive Statement	13.46	6.80	20.32	7.18	-5.57***
Praise	1.08	1.40	2.34	2.88	2.87 **
Critical Statement	.36	.80	1.42	1.72	-4.22***
Playtalk	.86	2.63	.30	.86	1.41 NS
Laugh	.90	1.45	.46	.91	2.11 *
Indirect Command	2.48	2.31	8.64	6.33	-6.35***
Direct Command	1.22	1.09	3.04	3.18	-4.01***

*** p < .001

** p < .01

* p < .05

Table 7

Child Verbal Behavior Across CDI and PDI

	CDI		PDI		<u>t</u>	
	<u>x</u>	<u>sd</u>	<u>x</u>	<u>sd</u>		
Acknowledgement	4.84	3.86	4.62	4.08	.36	NS
Descriptive/ Reflective Question	5.38	3.68	5.74	3.86	-.56	NS
Reflective Statement	.34	.66	.48	.71	-1.07	NS
Descriptive Statement	20.58	7.25	14.58	6.67	5.00***	
Praise	.08	.27	---	---	---	
Critical Statement	.76	1.00	1.14	1.49	-1.65	NS
Playtalk	1.48	3.07	.24	.72	2.93	**
Laugh	.38	.95	.42	1.28	-.28	NS
Indirect Command	.58	.99	.50	.81	.41	NS
Direct Command	.44	.81	.72	1.20	-1.35	NS

*** p < .001

** p < .01

--- No occurrence

Table 8

Correlations of Parent Verbal Categories with ECBI Scores:
Entire Sample

	ECBI Intensity Score	ECBI Problem Score
Acknowledgement	-.12	.05
Descriptive/ Reflective Question	-.03	-.01
Reflective Statement	-.12	-.09
Descriptive Statement	.12	.16
Praise	.25	.11
Critical Statement	.03	.14
Playtalk	.23	.06
Laugh	-.31**	-.15
Indirect Command	-.06	-.03
Direct Command	.10	.14

$\underline{n} = 50$

** $p < .05$

Table 9

Correlations of Child Verbal Categories with ECBI Scores:
Entire Sample

	ECBI	
	Intensity Score	Problem Score
Acknowledgement	-.08	-.10
Descriptive/ Reflective Question	.14	.12
Reflective Statement	.04	-.06
Descriptive Statement	-.16	-.20
Praise	.04	.00
Critical Statement	.23	.11
Playtalk	.34**	.14
Laugh	-.02	.09
Indirect Command	.11	-.08
Direct Command	.27	.09

n = 50

** $p < .05$

Table 10
Correlations of Girl's Verbal Categories with ECBI Scores

	ECBI	
	Intensity Score	Problem Score
Acknowledgement	-.10	-.02
Descriptive/ Reflective Question	.25	.11
Reflective Statement	.04	-.10
Descriptive Statement	-.57***	-.40**
Praise	-.16	-.14
Critical Statement	.34	.19
Playtalk	.56***	.22
Laugh	.07	.09
Indirect Command	.00	-.01
Direct Command	.07	-.13

$\underline{n} = 25$

*** $p < .01$

** $p < .05$

STEPWISE MULTIPLE REGRESSION ANALYSIS
(Intensity Score)

Variable	df	SS	F	p	Variance Accounted For	Beta
Descriptive Statements	1	2779.13	14.24	< .01	.33	-.45
Playtalk	1	1451.10	7.44	< .025	.17	.43
Error	22	4292.33				

Table 11
Correlations of Parent Verbalizations
with Child Verbalizations

Child Verbalization Categories
(Labels Abbreviated. See Legend Below)

<u>Parent</u>	Ack	D/R	Ref	Des	Pra	Cri	IC	DC
Ack	.24	.06	-.15	.41**	.03	-.18	.07	-.19
D/R	.43**	-.34*	-.09	.14	-.05	-.03	.07	-.24
Ref	.33*	-.01	.15	.27	-.11	-.17	-.08	-.16
Des	.02	.20	.03	.01	-.06	.07	.07	-.09
Pra	-.14	-.08	-.09	-.27	-.06	-.04	-.10	-.11
Cri	-.25	.12	-.05	-.14	-.15	.12	.17	-.02
IC	-.05	.05	-.03	-.03	-.15	-.12	.09	-.16
DC	.16	-.03	.01	-.22	-.11	-.14	.02	-.02

Legend:

Ack Acknowledgement
D/R Descriptive/Reflective Question
Ref Reflective Statement
Des Descriptive Statement
Pra Praise
Cri Critical Statement
IC Indirect Command
DC Direct Command

$\bar{n} = 50$

** $p < .01$

* $p < .05$

Table 12
Intercorrelations of Parent Verbalizations

	Ack	D/R	Ref	Des	Pra	Cri	IC	DC
Ack	---	.28	.26	.09	-.02	-.33*	-.10	-.01
D/R		---	.34**	.16	-.12	-.05	-.01	.20
Ref			---	.29*	.05	.04	.19	.06
Des				---	.29*	.09	-.09	-.06
Pra					---	-.18	.13	.28
Cri						---	.36*	.10
IC							---	.47***
DC								---

Legend:

Ack Acknowledgement
D/R Descriptive/Reflective Question
Ref Reflective Statement
Des Descriptive Statement
Pra Praise
Cri Critical Statement
IC Indirect Command
DC Direct Command

$\underline{n} = 50$

** $p < .01$
* $p < .05$

DISCUSSION

This study addresses several questions concerning the relation between child and parent verbal behavior in parent-child dyadic interactions and the relation between verbal behavior and ratings of conduct disorder. Many treatment programs for conduct disordered children have focused on training parents to reprogram their behavior management techniques and their verbal styles. This study focuses attention on the verbal styles of children as well as parents. Research reviewed here suggests improving a child's language skills may reduce the frequency of problem behaviors.

This study presents a treatment program, Parent-Child Interaction Therapy, that trains parents to alter their verbal styles in ways that foster the parents' use of semantically contingent speech. Research reviewed indicates semantic contingency enhances child language abilities.

In analyzing verbal style, this study addresses the question: How do the kinds of verbalizations a child makes relate to his/her scores on a conduct problem inventory? The only child verbal category that is significantly correlated to the ECBI, for both boys and girls, is that of Playtalk. Playtalk is coded for verbalizations made as if they were from a toy, often an animal or doll. Perhaps this bit of data, showing that those children who expressed

themselves via play characters were also rated as having a higher frequency of problem behaviors, suggests a need of these children to communicate that they meet via indirect means. From subjective observation, Playtalk often has an aggressive tone. It appears that the Child Directed Interaction may pull for, or allow for the expression of, more aggressive themes. Therapists should be aware of this pull for aggression in CDI and help parents understand and manage a child's expression of these feelings in play.

For girls, data obtained support the notion that the child's use of particular verbal skills is negatively related to being rated as having behavior problems. Specifically, girls who made more Descriptive Statements were rated as having fewer behavior problems and exhibiting problem behaviors less frequently. From the stepwise multiple regression analysis, the presence of Descriptive Statements and the absence of Playtalk are predictive of a low frequency of behavior problems. These two verbal categories account for 50% of the variance of the girls' Intensity Scores on the ECBI. Therefore, one may wish to increase use of Descriptive Statements in children who already exhibit problem behaviors, while decreasing the frequency of the target problem behaviors.

However, even though previous research reviewed here indicates a child's verbal skills relate to conduct problems, data from this study fail to provide strong

support for this relationship in both boys and girls. One explanation is that the verbal behavior captured within 10 minutes of play does not provide a sufficiently large verbal behavior sample to demonstrate the hypothesized correlations. Table 7 presents the means and standard deviations for child verbal categories. It is clear that many verbal categories were infrequently coded for children. A larger behavior sample is necessary to assess whether these categories are empirically relevant for children. These categories reflect desired changes, within Parent-Child Interaction Therapy, for parent speech. They may not be the most useful categories for analyzing child speech. A second explanation is that while the relationship between deficits in verbal skills and conduct problems may be noticeable from clinical observation of children referred for treatment, it may not be sufficiently strong to reach statistical significance within this sample of normal children. Future research should include treatment-referred children.

It is unclear why boys' verbal categories are not correlated to ratings of their behavior in the same fashion as are girls' verbal categories. The mean Descriptive Statements for boys is similar to the mean for girls, so it is not a matter of different frequency of verbalization. The difference that is observed, even within this sample of

normal children, suggests data for boys and girls should be analyzed separately in future research.

Secondly, this study addresses the question: How do the kinds of verbalizations a parent makes relate to his/her ratings of the child as having behavior problems? The present study finds only one parent verbal category to be significantly correlated to the ECBI. Robinson and Eyberg's (1981) strong multiple correlation, in which the DPICS predicted 61% of the variance in the ECBI, was obtained when analyzing DPICS data collected from both a normal group and a group of children who had been referred for active behavior problems in the home. The present study's DPICS mean values for parent verbalizations are similar to the means for Robinson and Eyberg's normal group. This suggests that greater variance in child deviance is necessary to obtain strong correlations between parent verbal categories and ratings of child behavior problems. The DPICS does not predict variation found within the limits of this study's non-clinic-referred sample. The one verbal category that is significantly correlated reveals that the more a parent laughs with her/his child, the less she/he rates the child as exhibiting problem behaviors. (The family that laughs together hath less wrath together.) This finding has face validity without, perhaps, great clinical utility in and of

itself. Analyses were conducted separately for parents of boys and parents of girls. When boys' parents' verbalizations were analyzed, no significant correlations are obtained. Girls' parents' data reveal a significant correlation for Playtalk with the Intensity Score. In this case, the more a parent engages in Playtalk with his/her daughter, the more the parent reports behavior problems occurring at home. The Playtalk category appears to be an important variable for this sample of girls and their parents. Future research using this variable would be aided by recording specific Playtalk content. This would facilitate greater understanding of the affective tone associated with speaking through toy characters.

It is important to note that even within this sample of non-clinic-referred families, there are significant differences in the parents' verbal styles based upon the instructions to either follow or lead in play. Since differences are found based on instructions consisting of only a few sentences, it appears that it is important to consider both play situations when assessing the general nature of the parent-child relationship. Future research should look at these situations separately.

Also of note is the lack of interdependence between the parents' verbalizations and the childrens' verbalizations. The parents' verbal category means are significantly different across CDI and PDI while child

verbal category means are not significantly different. It does not appear that the influence of parent verbalizations on child verbalizations is an immediate one. Time-sequence coding would provide a clearer picture of contingencies and the influence of one person's speech on the other's. Treatment outcome studies would assess the impact of changed parent speech on child speech. These designs would better address the interdependence of parent and child verbal behavior.

To summarize, this study asks two questions regarding the relation of verbal behavior in a parent-child interaction to ratings of the child's problem behaviors seen at home. The correlations reported here are in the expected directions; however, the DPICS does not emerge as a powerful predictor of problem behavior within this normal population. Suggestions for future research include the following: 1) record longer play sessions to determine whether these verbal categories are relevant to children, 2) eliminate categories with infrequent occurrences, 3) analyze data for boys and girls separately, 4) analyze CDI data separately from PDI data, 5) using more frequently observed categories, code occurrences in time sequence to ascertain contingencies, and 6) analyze changes in child speech after parent speech has changed over time during treatment.

This study addresses a third question: How are parent verbalizations and child verbalizations related to one another? Significant correlations, presented in Table 10, offer preliminary support for the theory underlying Parent-Child Interaction Therapy. For example, when a parent's speech is contingent upon the child's verbalizations (by making Acknowledgments and Reflections), the child is observed to produce more Descriptions and Acknowledgments. These are verbal skills that allow the child's self-expression in a socially appropriate manner. Furthermore, when the parents are observed to ask more questions, their children are observed to give more "yes / no" responses (Acknowledgments) and to ask fewer questions of the parent. This suggests children do not necessarily model their verbalizations after the parent's verbalizations. Rather the child's behavior exhibits a complementary "fit" with the parent's. The above mentioned recommendations for future research may be helpful in clarifying the nature of complementary verbal styles.

It is important to recall Hogan and Quay's (1984) suggestion that language deficits may decrease a child's repertoire of appropriate behaviors. Therefore, if a therapy serves to develop appropriate verbal skills in a child, the child has greater means of meeting her/his needs in socially condoned ways. The CDI phase of Parent Child Interaction Therapy appears to be well suited for this goal

because it trains parents to use semantically contingent speech.

Behavior therapists speak of the need to extinguish problem behaviors in children with conduct problems. When targeting behaviors to be extinguished (e.g. crying, whining), a therapist must reinforce behavior substitutes (e.g. descriptive statements, acknowledgments) so that the child can replace the negative behaviors with positive ones. By increasing the child's behavior repertoire, undesirable behaviors can be extinguished while new, positive behaviors are reinforced. Again, with Parent-Child Interaction Therapy, it is the CDI phase of treatment that serves to strengthen parental verbal styles that, in turn, enhance child verbal skills.

A final look at the DPICS data, presented in Table 12, reveals support for the premises of Parent-Child Interaction Therapy. Significant correlations are found between the following parent verbal categories: Questions and Reflections, Reflections and Descriptions, Descriptions and Praises, Criticism and Indirect Commands, and Indirect Commands and Direct Commands. Acknowledging the child is negatively correlated with Criticizing the child. In the CDI phase, these relations are reinforced and sharpened through training when parents are instructed to increase Reflections, Descriptions, and Praises while eliminating Criticisms and Commands. This sample's data show that

these relations occur naturally in the speech of parents who have non-clinic-referred children.

In conclusion, this study reveals some important information about Parent-Child Interaction Therapy. First, CDI and PDI instructions are shown to influence the verbal behavior of parents even without the practice and training that parents are given when involved in on-going therapy. Second, the study reveals a lack of interdependence of parents' speech with childrens' speech using 10 minute interaction sessions coded according to the DPICS. Given that language acquisition research has shown that parental speech influences child speech over time, suggestions were made for future research regarding language of children referred for treatment of conduct problems. These suggestions are offered to further facilitate the assessment and treatment of such children and their families.

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Rater's Name _____ Child's Name _____
 Relationship to Child _____ Child's Age _____
 Date of Rating _____ Birthdate _____ Sex: Boy Girl

EYBERG CHILD BEHAVIOR INVENTORY

Directions: Below are a series of phrases that describe children's behavior. Please (1) circle the number describing how often the behavior currently occurs with your child, and (2) circle either "yes" or "no" to indicate whether the behavior is currently a problem.

	How often does this occur with your child?							Is this a problem for you?	
	<i>Never</i>	<i>Seldom</i>	<i>Sometimes</i>	<i>Often</i>	<i>Always</i>			Yes	No
1. Dawdles in getting dressed	1	2	3	4	5	6	7	Yes	No
2. Dawdles or lingers at mealtime	1	2	3	4	5	6	7	Yes	No
3. Has poor table manners	1	2	3	4	5	6	7	Yes	No
4. Refuses to eat food presented	1	2	3	4	5	6	7	Yes	No
5. Refuses to do chores when asked	1	2	3	4	5	6	7	Yes	No
6. Slow in getting ready for bed	1	2	3	4	5	6	7	Yes	No
7. Refuses to go to bed on time	1	2	3	4	5	6	7	Yes	No
8. Does not obey house rules on his own	1	2	3	4	5	6	7	Yes	No
9. Refuses to obey until threatened with punishment	1	2	3	4	5	6	7	Yes	No
10. Acts defiant when told to do something	1	2	3	4	5	6	7	Yes	No
11. Argues with parents about rules	1	2	3	4	5	6	7	Yes	No
12. Gets angry when doesn't get his own way	1	2	3	4	5	6	7	Yes	No
13. Has temper tantrums	1	2	3	4	5	6	7	Yes	No
14. Sasses adults	1	2	3	4	5	6	7	Yes	No
15. Whines	1	2	3	4	5	6	7	Yes	No
16. Cries easily	1	2	3	4	5	6	7	Yes	No
17. Yells or screams	1	2	3	4	5	6	7	Yes	No
18. Hits parents	1	2	3	4	5	6	7	Yes	No
19. Destroys toys and other objects	1	2	3	4	5	6	7	Yes	No
20. Is careless with toys and other objects	1	2	3	4	5	6	7	Yes	No
21. Steals	1	2	3	4	5	6	7	Yes	No
22. Lies	1	2	3	4	5	6	7	Yes	No
23. Teases or provokes other children	1	2	3	4	5	6	7	Yes	No
24. Verbally fights with friends his own age	1	2	3	4	5	6	7	Yes	No
25. Verbally fights with sisters and brothers	1	2	3	4	5	6	7	Yes	No
26. Physically fights with friends his own age	1	2	3	4	5	6	7	Yes	No
27. Physically fights with sisters and brothers	1	2	3	4	5	6	7	Yes	No
28. Constantly seeks attention	1	2	3	4	5	6	7	Yes	No

OVER

	How often does this occur with your child?							Is this a problem for you?	
	Never	Seldom	Sometimes	Often	Always			Yes	No
29. Interrupts	1	2	3	4	5	6	7	Yes	No
30. Is easily distracted	1	2	3	4	5	6	7	Yes	No
31. Has short attention span	1	2	3	4	5	6	7	Yes	No
32. Fails to finish tasks or projects	1	2	3	4	5	6	7	Yes	No
33. Has difficulty entertaining himself alone	1	2	3	4	5	6	7	Yes	No
34. Has difficulty concentrating on one thing	1	2	3	4	5	6	7	Yes	No
35. Is overactive or restless	1	2	3	4	5	6	7	Yes	No
38. Wets the bed	1	2	3	4	5	6	7	Yes	No

BACKGROUND INFORMATION: Please circle the appropriate answer or fill in the blank.

1. Child currently lives with: 1=mother and father, 2=mother only, 3=father only, 4=mother and stepfather, 5=father and stepmother, 6=foster parents, 7=other _____.
2. Number of brothers and sisters of the child: _____
3. Grade your child is in: _____
4. Highest grade you finished: _____
5. Highest grade your spouse finished: _____
6. Your occupation: _____
7. Your spouse's occupation: _____
8. Currently yearly income of family where the child lives:
 - a. 0 - 4,999
 - b. 5,000 - 9,999
 - c. 10,000 - 14,999
 - d. 15,000 - 19,999
 - e. 20,000 - 24,999
 - f. 25,000 - 29,999
 - g. over 30,000
9. Race: _____
10. Has your child ever received treatment for a learning disability? NO YES WHEN DATE _____
11. Has your child ever received treatment for behavioral problems? NO YES WHEN _____

Appendix B

Definitions of Verbalization Categories

Irrelevant Verbalization (Coded for Parent Only)

A comment or question by the parent that pertains to an event, individual, or object that is unrelated to the ongoing activity of the parent or child.

Acknowledgement

An acknowledgement is a brief response to another's verbalization or behavior that contains no manifest content other than simple yes or no response to a question.

Descriptive/Reflective Question

A descriptive/reflective comment expressed in question form. Descriptive/reflective questions follow the other's activity rather than attempting to lead it.

Reflective Statement

A reflective statement is a declarative phrase or statement which immediately repeats the other's verbalizations. The reflection may be exactly the same words, may contain synonymous words, or may contain some elaboration upon the other's statement, but basic content must remain the same.

Descriptive Statement

A descriptive statement is a declarative sentence or phrase that gives an account of the objects or people in the situation or activity occurring the interaction.

Praise of Parent/Child

A specific or nonspecific verbalization that expresses a favorable judgment on an activity, product, or attribute of the other person in the interaction.

Praise of Activity

A specific or nonspecific verbalization that expresses a favorable judgment on an activity or object that does not refer to either person present in the interaction.

Praise of Self

A specific or nonspecific verbalization that expresses a favorable judgment on an activity, product, or attribute of the speaker.

Playtalk

A comment spoken as if by a character or toy.

Laugh

Chuckling or giggling which does not belittle the other person.

Critical Statement about Parent/Child

A verbalization that finds fault with an activity, product, or attribute of the other involved in the interaction.

Critical Statement about Activity

A verbalization that finds fault with an activity or object not present in the interaction.

Critical Statement about Self

A verbalization that finds fault with an activity, product, or attribute of the self.

Direct Command

A clearly stated order, demand, or direction in declarative form. The statement must be sufficiently specific as to indicate the behavior that is expected from the other person.

Indirect Command

An order, demand, or direction for a behavioral response that is implied, nonspecific, or stated in question form.

Cry (Coded for Child Only)

Inarticulate utterances of distress (audible weeping) at or below the loudness of normal conversation.

Whine (Coded for Child Only)

Words uttered by the child in a slurring, nasal, high-pitched, falsetto voice.

Yell (Coded for Child Only)

A loud screech, scream, shout, or loud crying. The sound must be loud enough so that it is clearly above the intensity of normal indoor conversation.

APPENDIX C
DATA RECORDING SHEET: CHILD TALK

Family Name: _____ Child: _____ Observer: _____ Date: _____
 Mother _____ Father _____ CDI _____ PDI _____ Clean Up _____ Time _____

PARENT BEHAVIORS			TOTAL	CHILD BEHAVIORS			TOTAL
Acknowledge				Acknowledge			
Desc/Ref: Question				Desc/Ref: Question			
Reflective Statement				Reflective Statement			
Descriptive Statement				Descriptive Statement			
Praise: Child	Labeled	Unlabeled		Praise: Parent	Labeled	Unlabeled	
	Activity				Activity		
	Self				Self		
Criticism: Child				Critical Statement: Parent			
	Activity				Activity		
	Self				Self		
Playtalk				Playtalk			
Laugh				Laugh			
Physical Positive				Physical Positive			
Irrelevant Verbalizations				Space			
Physical Negative				Physical Negative			
Indirect command followed by:				Indirect command followed by:			
No Opportunity				No Opportunity			
Compliance				Compliance			
Noncompliance				Noncompliance			
Direct command followed by:				Direct command followed by:			
No Opportunity				No Opportunity			
Compliance				Compliance			
Noncompliance				Noncompliance			
				Changes Activity			
				Ignored			
				Responded to			
				Destructive			
				Ignored			
				Responded to			
				Physical Negative			
				Ignored			
				Responded to			
				Yell			
				Ignored			
				Responded to			
				Cry			
				Ignored			
				Responded to			
				Whine			
				Ignored			