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SIBLING RELATIONSHIPS IN
SINGLE-PARENT VERSUS MARRIED-PARENT FAMILIES

BY

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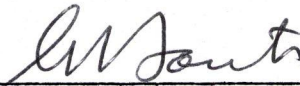
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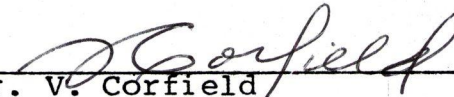
The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "Sibling Relationships in Single-Parent Versus Two-Parent Families," submitted by Cheryl A. Kier in partial fulfillment of the requirements for the degree of Master of Science.




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ABSTRACT

The purposes of the present research were to (a) examine the possible effects of parental marital separation or divorce on sibling interaction, and (b) investigate gender differences in sibling interaction. Eighteen 2- to 6-year old boys from mother-headed households (due to separation or divorce) with an older brother or sister, and 18 age-matched boys with their older siblings from two-parent families participated in the study. Each group consisted of 7 boy-boy dyads and 11 boy-girl dyads. Each sibling dyad played with a set of age-appropriate toys in a laboratory playroom; their mother was present. The children's interaction was videotaped by three remotely controlled cameras, and trained observers subsequently coded the children's behavior from these tapes. Questionnaires were given to the mothers to obtain their perceptions of their children's interactions and family life.

Two factor (marital status and gender of older sibling) between subjects multivariate and univariate analyses of covariance were conducted to test the predictions of group differences using the behavior data. The results did not support the prediction for the main

effect of marital status. The results indicated significant group differences for gender of older sibling, i.e., boys and their older brothers interacted more frequently than boys and their older sisters. There was also a significant marital status by gender interaction using total active interaction as the dependent variable. A separate two factor (marital status and gender of older sibling) between subject multivariate analysis of covariance was conducted on the maternal questionnaire data; the results indicated no significant differences between groups. The results were discussed in terms of similarities between single-parent families and married-parent families within the Canadian context. Limitations of the investigation and suggestions for future research were also discussed.

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TABLE OF CONTENTS

	PAGE
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF APPENDICES	xi
INTRODUCTION	1
Literature Review for Sibling Interaction	3
Descriptive Studies of	
Sibling Interaction	5
Functions of Siblings	7
Review of Divorce and Its Effects on	
Sibling Relationships	10
Siblings Rely Upon One Another When	
Parents Are Not Available	11
Sharing of Stress Among Siblings	12
Intensification of Sibling Relationships	15
Children Given Increased Responsibilities	18
Children From Divorced Families and	
Peer Interaction	20
Summary	21
Purpose of Present Study	22
Predictions	23

METHOD	26
Participants	26
Materials	28
Playroom and Materials	28
Questionnaires	29
Maternal Report	29
Procedure	31
Coding of Dependent Variables	34
Sibling Social Interaction	34
Questionnaires	36
Observer Training	37
RESULTS	39
Subjects	39
Matched Variables for Selection of	
Married-Parent Group	39
Additional Information on Single- and	
Married-Parent Groups	40
Reliability of Behavior Categories	44
Analyses on Behavioral Data	49
Dependent Variables Based Upon	
Behavioral Data	49
Predictions	52
Organization of Analyses	52
MANCOVA on Behavior Data	55
Subsidiary Analyses	59

Subsidiary Analysis: MANCOVA with	
Each Sibling	62
Analyses on Questionnaire Data	65
Dependent Variables for Questionnaire Data ...	65
MANCOVA on Questionnaire Data	67
Correlations Among Dependent Variables	67
DISCUSSION	68
Sibling Interaction in Single-parent	
versus Married-parent Families	70
Limitations of the Study	82
Heterogeneity of the Sample	82
Sample Size	84
Possible Confounding Variables	85
Reliability of Measures	87
Implications and Suggestions for Future Research .	93
REFERENCES	104

LIST OF TABLES

TABLE	PAGE
1 Matched Variables for Single-parent and Married-parent Groups	41
2 Descriptive Variables for Single-parent and Married-parent Groups	42
3 Means, Ranges, and Standard Deviations for Behavior Categories	53
4 Source Table for Main Behavioral Analysis	57
5 Examination of Simple Effects within Marital Status x Gender of Older Sibling Interaction	61
6 Means, Ranges, Standard Deviations for Subsidiary Analysis: MANCOVA for Each Sibling	64

LIST OF FIGURES

FIGURE	PAGE
1 Marital Status by Gender of Older Sibling Interaction for Total Active Interaction	58
2 Marital Status by Gender of Older Sibling Interaction for Prosocial Interaction	60

LIST OF APPENDICES

APPENDIX	PAGE
1 Diagram of Playroom	115
2 Information on Questionnaires used in Study	116
3 Maternal Questionnaire and Modified Maternal Questionnaire	121
4 Stolberg's Single Parent Questionnaire	135
5 Kohn Social Competence Scale	163
6 Parent Stress Index	170
7 Eyberg Child Behavior Inventory	180
8 Letter Sent to Mothers	181
9 Newspaper Advertisement and Poster	183
10 Telephone Interview	184
11 Instructions to Subjects	188
12 Consent Form for Participation in the Sibling Relationships Project at the University of Calgary	191
13 Behaviors Requiring Intervention During Sibling Interaction	192
14 Observer Training and Coding Manual	194
15 Scales on Stolberg's Single-parent Questionnaire .	231
16 Scoring Instructions for Parent Stress Index	236
17 Scoring the 64 Item Social Competence Scale for Half-Day Preschool or	

Kindergarten Programs	239
18 Tests of Matched and Equated Variables	241
19 Reliabilities for Original 26	
Behavior Categories	242
20 Reliability for Global Categories	245
21 Spearman Correlational Data for	
Negative Behaviors for 11 Families	248
22 Reliability for Final Categories	249
23 Correlations Between Behavioral and	
Questionnaire Data	256

SIBLING INTERACTION IN SINGLE-PARENT VERSUS MARRIED-PARENT FAMILIES

INTRODUCTION

The rate of divorce in Canada has been on the rise since the divorce reform laws were passed in 1968; therefore more and more children are spending their childhood in single-parent families. In 1979, the national divorce rate was 10.5 divorces per 1000 married women. Alberta's rate for that year was higher than the national average: 13.76 divorces per 1000 married women (Vital Statistics, 1981). Sixty percent of these divorcing couples have children, which means that each year, 30,000 Canadian children are experiencing the divorce of their parents. It is estimated that 20 to 30% of the children who were born in the 1970's will experience a parental divorce (Ambert, 1980). Because the population of single-parent families is becoming increasingly commonplace, research regarding this type of family structure is essential. The effects of post-divorce stresses on each of the parents, on parent-child relationships, on the child's personality and cognitive abilities, and on the child's peer relationships have been examined. But despite the assertion by several authors of the importance of research on potential external supports

such as siblings, grandparents, uncles, and teachers (Greenbaum & Landau, 1979; Herzog & Sudia, 1969; Hetherington, 1979; Hetherington & Duer, 1972; Hetherington, Cox, & Cox, 1979b; Kurdek, 1981; Wallerstein & Kelly, 1977) there is a paucity of research devoted toward these areas. The fact that a child may have a sibling, who shares the experience of parental divorce, may be an important variable in understanding the child's post-divorce adjustment. The present investigation examines the relationships between siblings and the possible effects that parental divorce may have on the nature and function of these sibling relationships.

There is a paucity of research devoted toward the study of sibling interaction patterns in either divorced or non-divorced families. In order to learn how divorce affects sibling relationships in single-parent families, it is necessary to be familiar with sibling relationships in married-parent families. A review of the sibling literature follows, describing the direct and indirect effects of having a sibling, as well as the functions provided by a sibling. Following this section is a review of the literature on the effects of divorce on children and how children tend to turn to one another in stressful situations when parents are not available. Finally, based

on the literature, predictions for the current study are presented.

Literature Review for Sibling Interaction

The importance of the family for a young child's development has been well documented. However, it is only within the past decade that the influence of individuals other than the mother has been explored. Schaffer and Emerson (1964) found that 18-month-old infants often formed multiple attachments, including attachments to their fathers, siblings, and other children. This indicates that caretaking is not the sole source for attachment and that infants can and do develop attachments to other salient individuals in their environment. For example, research on the role of the father in child development has increased in recent years (e.g., Cohen & Campos, 1974; Greenbaum & Landau, 1979; Kotelchuck, 1976; Lamb, 1976, 1977; Lynn, 1974). Yet, despite the recognition that there exist significant individuals other than the mother who may play a great part in the socialization of a young child, there is a shortage of research devoted toward the study of the other members of the immediate family, namely, the siblings. This is in spite of the fact that 80% of the children in the U.S. and Britain have at least one sibling (Dunn, 1983).

Siblings may serve some very important functions in the life of a child. Before a child enters school or day care, much of his social experience and play behavior is with his sibling. Dunn (1983) reported Lawson and Ingleby's (1974) finding that by the age of one year, the amount of time children spent with their siblings was greater than that spent with their fathers, and almost as great as that spent with their mothers. Bank and Kahn (1976) found that four- to six-year old children spent more than twice as much time alone with their siblings as with their parents. This experience with the sibling may influence the course of later socialization experiences, including interactions with peers (Abramovitch, Corter, & Lando, 1979; Abramovitch, Corter, & Pepler, 1980; Abramovitch, Pepler, & Corter, 1982; Bowerman & Dobash, 1974; Collard, 1968; Dunn & Kendrick, 1979; Hartup, 1979).

Older siblings often encourage their younger siblings' exploration of the environment and attainment of object mastery (Lamb, 1978a, 1978b; Samuels, 1980). They also have the potential to provide emotional support (Cicirelli, 1980). Older siblings may take some responsibility for the caretaking and protection of the younger children in the house (Bossard & Boll, 1960).

Close access between siblings leads to conflicts, but several authors have stated that verbal disagreements help

to create social skills for the children (Hartup, 1976; Kendrick & Dunn, 1983) and have pointed out that a strong relationship can withstand confrontations better than less strong relationships (Davis & Northway, 1957).

Descriptive Studies of Sibling Interaction. Recently, information on the roles that age and gender play in the sibling relationship has been provided by descriptive studies of children in play. Studies of siblings interacting in the home noted a great deal of interaction between the siblings (Abramovitch et al., 1979; Abramovitch et al., 1980; Dunn & Kendrick, 1979; Pepler, Abramovitch, & Corter, 1981). However, Lamb (1978a, 1978b), observing siblings in a laboratory setting, found that they did not seek out interaction with one another very often.

Dunn & Kendrick (1979) found that same-sex siblings showed a greater percentage of positive interactions and a lesser percentage of negative interactions. Abramovitch and her colleagues, found that as a whole, boys were more physically aggressive than girls (Abramovitch et al., 1979), and that boy-boy dyads exchanged a greater number of negative behaviors than positive ones, but that the opposite pattern occurred for girl-girl pairs. They noted that more prosocial behaviors performed by girls in their sample of two- to five-and-a-half-year olds, but this sex

difference disappeared at an 18-month follow-up. The Abramovitch group found that regardless of the sex composition of the dyad, older siblings initiated more positive as well as more negative interactions. Lamb found that the older siblings, especially if they were girls, were more likely to initiate prosocial acts. Similarly, Minnett, Vandell, and Santrock (1983), observing siblings in an unused classroom, found that girls were more likely than boys to praise their siblings.

A case report by Meyendorf (1971) revealed the potential strength of sibling attachment. He described a 19 month-old infant who showed signs of depression upon separation from her family. Her symptoms did not cease when she was first returned to her two parents, but only when she was also reunited with her two older siblings. Similarly, Heinicke & Westheimer (1965) found that children who were admitted to a residential nursery exhibited fewer distress behaviors if a sibling was admitted with them.

Other effects of the presence of a sibling have been revealed by comparing the behavior of infants with siblings to that of infants without siblings. Collard (1968) compared the social and play responses of first born infants 38 to 56 weeks old, infants with siblings at least six years older than themselves, and infants with siblings no more than six years older than themselves in a

laboratory playroom. The infants whose siblings were fairly close in age to them tended to hesitate less before picking up a toy, played more, cried less, and smiled earlier and more often than infants in the other two groups.

Easterbrooks and Lamb (1979) reported that infants with older siblings playing with an unfamiliar peer took toys from the peer less often and participated in fewer negative interactions than those infants without any siblings. Furman and Buhrmester (1982) reported findings by Howe (unpublished doctoral dissertation) that toddlers who had siblings were more social than children who did not have any brothers or sisters. These findings may reflect the possibility that the sibling relationship is influential for relationships with other individuals.

Functions of Siblings. There is some evidence that the sibling role includes some functions not entirely provided by the parents. Some investigators found that the sibling is an important influence for the attainment of object mastery and exploration of the environment. Samuels (1980) examined the behavior of 23 month old infants in the presence and absence of their 50 month old siblings. The setting was an unfamiliar backyard with the mother always present. Samuels found that when the older sibling was in

the yard with the infant, the infants left the mother more quickly, ventured further away from her, and spent more time away from her. They also cried less, and explored and manipulated the objects in the yard more frequently with the sibling present. In observations of infants less than a year old, Greenbaum and Landau (1979) found that siblings provided more verbal stimulation to the infants than did fathers.

Empirical evidence for the sibling as a potential support system is provided by a laboratory study by Stewart (1983). This investigator placed 10- to 20-month old infants in a playroom with their 30- to 58-month old siblings and their mothers. The mothers were asked to leave the room as in the traditional studies of child-mother attachment. However, in this case, the sibling remained in the room with the infant. All of the babies found the mother's departure to be stressful, and half of the 54 older siblings attempted to comfort the infants in some way. Stewart concluded that attachment between siblings is manifest in situations in which the parents are not available.

Dunn and Kendrick (1982), interviewing mothers about how their children got along together, noted that many mothers' reports of their 8- to 14-month old infants' relationships with their older siblings included many of

the elements of attachment, as defined by Ainsworth (Ainsworth & Bell, 1970; Ainsworth, Bell & Stayton, 1971; Ainsworth & Wittig, 1969) and Bowlby (1969); the infants seemed to miss their older siblings when they were not together, and would turn to them for solace when upset. The mothers reported that, in return, their first-borns would make an effort to comfort the younger siblings.

These observational studies provided a significant contribution to the study of sibling relationships as they helped establish that siblings do have some importance in the life of a child. However, more research is needed.

The research on infants and children indicates that siblings play an important role in the socialization process. Siblings may take on increased importance in times when parents are not available (Bank & Kahn, 1982a, 1982b; Furman & Buhrmester, 1982). One common situation of parental unavailability is marital separation, when one parent moves out of the household. This type of parental unavailability is becoming more and more common with the increasing rate of divorce in society. Although the experience of divorce has been described as a process which affects the entire family system (Hetherington, Cox, & Cox, 1976), most of the research in this area has focused on the effects of post-divorce stresses on each of the parents and

on the parent-child relationships. The sibling relationship has been a neglected topic. Thus, a purpose of the present investigation is to examine the relationship between siblings and the possible effects that divorce may have on the nature and function of these relationships.

Review of Divorce and Its Effects on Sibling Relationships

The divorce experience involves more than the legal separation of husband and wife, or from the child's perspective, mother and father. The divorce process includes a change in relationships between the ex-spouses, between each parent and the children, between one child and the other(s), as well as the individual adjustments of each of the family members to his/her new life situation. Pais and White (1979) discussed divorce in terms of redefining family relationships rather than ending them. Wallerstein and Kelly (1979) also stated that divorce changes, rather than ends, family interrelationships. Divorce and its subsequent re-adjustment have been found to be stressful for all those involved (Hetherington et al., 1976). Hetherington et al. (1976) described how a newly divorced family first experiences a period of disorganization, followed by a stage of experimentation with various new methods of organization in the attempt to re-establish an ordered lifestyle. The final outcome of this

working-through process is often a re-arrangement of traditional roles and lifestyles that are present in the married-parent family, but are no longer appropriate for the single-parent family. Single-parent families, then, create their own ways of running a household, which by necessity, will be different from those of the traditional nuclear family, but which are not necessarily pathological or inferior (Herzog & Sudia, 1969). Blechman (1982), in a methodological review of studies of children in single-parent families, warned that conventional behavior is not necessarily synonymous with healthy behavior. The following review presents some of the prominent effects of parental separation on sibling relationships.

Siblings Rely Upon One Another When Parents Are Not Available. Shortly after the initial separation of the parents, each adult may become self-engrossed. Evidence suggests that child care may suffer because the parent is concentrating on his/her own depression and self-pity and may not have the energy, insight, or sufficient knowledge to attend to the children (Rohrlich, Ranier, Berg-Cross, & Berg-Cross, 1977). Being overburdened is one of the key difficulties of the custodial parent (Brandwein, Brown, & Fox, 1974; Hetherington, 1979; Hetherington, Cox, & Cox, 1979a; Wallerstein & Kelly, 1980b). During this period,

the children may be doubly deprived; firstly because they may be feeling afraid, upset, and possibly guilty about the departure of their parent and are in need of parental reassurance more than usual; and secondly, if their parents are too self-absorbed, the usual amount of parental attention that all children need may be lacking. According to these authors, without a strong parental figure to turn to for help and reassurance, the child turns to the next most available person, the sibling, who may have the necessary empathy for the child because he/she is going through many of the same doubts and fears as is the child. Although in many cases stress for the family decreased after the divorce, Cline and Westman (1971) found that 52% of their sample of 105 divorced families required court intervention to deal with post-divorce disputes. A number of other researchers (Hetherington, 1979; Hetherington, Cox, & Cox, 1979b; Wallerstein & Kelly, 1980b) also reported that conflict in the family increased in the first year after divorce took place.

Sharing of Stress Among Siblings. Brandwein et al. (1974) suggested that because people become closer when sharing a stressful situation, the members of a single-parent family will become closely tied. Arkin (1979), interviewing adult male siblings, reported that

during times of crises the brothers became more intimate and less competitive with one another. Weiss (1974, 1979a, 1979b) claimed that the single-parent family necessitated greater cooperation, more sharing, greater closeness, and greater intensity of interaction (both positive and negative) among its members. The sharing of a stressful experience may serve to bring the siblings closer together. The experience of turning to one another for fulfilling needs may create a strong bond between the siblings that is difficult to dissipate. Bank and Kahn (1982b) stated that strong attachments form between siblings when the influence of the parents is less than adequate. These authors suggested that when other relationships in the children's lives are unreliable, their attachment to one another is strengthened. It is during times of stress and change, according to these authors, that the sibling relationship is intensified.

Irish (1964) also stated that siblings can act as parent substitutes when the parents are not capable of giving full attention to the children. Consistent with these theories is a finding by Dunn and Kendrick (1981a). These authors found that 18- to 43-month old first born girls whose relationship with the mother was characterized by frequent prohibition behaviors at the time of a sibling's birth displayed a high frequency of positive

behaviors toward the sibling 14 months later. The reverse was true for mother-daughter interaction involving little prohibition and a great deal of play and maternal attention. Additionally, these authors found that sibling relationships were especially strong in cases in which the mothers were suffering from depression and tiredness soon after the birth of the second-born, and were therefore less likely to devote attention to either child.

Freud and Dann (1951) described the case of six three- to four-year old orphans whose parents were killed in World War II. These children had been raised together in various group settings from the age of 6- to 12-months. When as toddlers they arrived at a nursery together, they refused to be separated from each other. They showed concern only for each other's needs and comforted and nurtured each other. There was little evidence of jealousy or competition among them. It seems that the early absence of parents helped create a situation in which the children turned to one another to satisfy their needs.

Kimball, Stewart, Conger, and Burgess (1980) found that children in single-parent families received as many physical contacts as did children in married-parent families. This was primarily due to the greater amount of physical contacts children in single-parent families gave to each other relative to children in married-parent

families. In addition, children in single-parent homes received more total positive contacts (verbal and physical combined) from each other than did children in married-parent families.

Cicirelli (1980), using a questionnaire with college females, found that women reported stronger feelings for their siblings than for their fathers on items related to emotional support. Although these women reported strongest feelings for their mothers on items related to obtaining help and advice, fathers and siblings were rated equally. Cicirelli concluded that if parents are neglectful in certain areas, the influence of siblings may become greater and perhaps take over some parental role functions.

Bryant and Crockenberg (1980) also stated that siblings may increase their prosocial interaction if they experience parental neglect, simply because of the greater opportunity the situation creates. Hartup (1975) reported that there have been cases of children showing reactions to separation from peers and that these were more acute when attachment to the mother had been impeded.

Intensification of Sibling Relationships. Anecdotal evidence suggests that children from divorced families have developed an intensified relationship with one another. Investigators have reported both more positive as well as

more negative interactions among siblings who have experienced a parental divorce. These authors have noted that siblings from divorced homes demonstrate increased loyalty to one another (Robson, 1979; Weiss, 1979b), are faster at recognizing the other's needs (Troyer, 1979), and show greater concern and support for one another (Robson, 1979; Tessman, 1978; Troyer, 1979; Weiss, 1979b). It is also noted, however, that greater conflicts sometimes arise as well (Robson, 1979; Springer & Wallerstein, 1983; Troyer, 1979). Weiss (1979b) suggested that sibling rivalry might be greater in single-parent families because the children need to share the attention of only one parent. This investigator found that pre-adolescents seemed to be helped by the presence of siblings because "siblings gave them someone else with whom to work out what was happening, someone else to rely on, and someone else to share the burdens as well as the gratifications of growing up in a single-parent home" (Weiss, 1975; p. 217)

Thomes (1968) studied 45 nine- to eleven-year-old children who had been separated from their fathers for at least two years because of divorce, desertion, or legal separation. A comparison group of 35 children from married-parent families was used. The subjects were asked what they would like to see changed in their families. Although the authors did not report significance levels,

22.6% of the children in the married-parent families as opposed to 11% of the children in the father-absent families wished for a change in sibling relationships. The two groups did not differ on responses such as wishing for a change in financial status, attainment of material items, and parental attributes, which suggests that children in father-absent homes may be more satisfied with their sibling relationships than are children in married-parent homes.

Earl and Lohmann (1978) asked 53 7- to 12-year old father-absent black boys who they "would go to for advice and help if they had a problem 'only a man could help them with'". Although 20 (37%) of the total replied they would seek out their fathers, of the eight boys who had an older brother, half reported that they would go to their brothers first.

Kelly and Wallerstein (1977) stated that singleton children appeared to have a more difficult time adjusting to the divorce than did children with brothers and sisters. These investigators stated that siblings have the potential for mutual support, thus relieving some of the stresses imposed by the divorce situation. They did add, however, that children can be very negative to one another, too. When questioned about their siblings, the adolescents in their sample claimed that conflict with their siblings had

increased, but stated that they would not have preferred to have been the only child in the family (Springer & Wallerstein, 1983). Some were more insistent upon remaining with their siblings than upon with which parent they would live. Springer and Wallerstein (1983) reported that the sibling relationship for these youngsters became more "meaningful" after their parents' separation, which included both more positive aspects, in terms of security and continuity, as well as more negative ones, in terms of conflict and competitiveness. Luepnitz (1979) conducted a retrospective interview of college students whose parents had divorced in their childhood. He found that the students often reported turning to their siblings for support.

Bank and Kahn (1982a) compared siblings who had lost a parent with those who came from large families in that there was a similar difficulty in getting enough parental attention. These authors attributed the tight bonds between siblings in large families (as described by Bossard and Boll, 1956) to the fact that the children could not always rely on their parents to stop their bickering but had to learn to cope with one another.

Children Given Increased Responsibilities. With only one parent in a household which previously had two

parents to help run it and keep it functioning, the single-parent often requires her children to take on more responsibilities than children in married-parent families (Brandwein et al., 1974; Hetherington, 1979; Weiss, 1979a, 1979b). The family's financial situation is not usually adequate enough to afford hiring outside help. Therefore, even young children may be asked to take care of the other children in the home, especially if the mother works (Brandwein et al., 1974; Weiss, 1979a). Decreased financial resources may also limit the number of possessions belonging to the single-parent family, and siblings may have to share toys and other items (Brandwein et al., 1974).

Children have a greater opportunity to spend time together after a divorce. Because less time is spent with the departed father, more time is available for the remaining members of the family. The mother in a divorced household may spend more time away from the house to go to work or may have less energy and time available for the children due to an increase in the number of functions she must perform (Brandwein et al., 1974) therefore the children may be provided with even more time to be together.

Children from Divorced Families and Peer Interaction. Although investigations of the effects of divorce on children have neglected the study of interactions between siblings, some information may be gathered from Hetherington et al.'s (1979c) study of peer interactions of children of divorced families and children of married-parent families. They found that the experience of parental divorce affected children's play behavior and social relationships with classmates. Two months after the divorce, children were more likely to entertain themselves rather than partake in cooperative group activities. Children of divorce did not share or help others as much as did children from married-parent families. They showed more frequent clinging behavior. Girls from divorced homes cried and whined more, and sought more attention and physical contact from adults. Boys from divorced families differed from boys from married-parent families in that they were more aggressive toward peers and more immature in their play.

For girls, most of these negative behaviors had decreased by two years after the divorce so that there were no differences between girls from divorced homes and girls from non-divorced homes. However, boys from single-parent families were still showing more immature play patterns than boys from married-parent families, and they were still

seeking more interactions with children younger than themselves.

Smith and Connolly (1972) also compared the play interaction of children of single-parent and married-parent families. They found that father-absent boys displayed more aggressive behaviors than did father-present boys.

Summary. A child's relationship with peers is similar to the relationship he has with his siblings in that, as children, they have in common a child's view of the world and share a social life and other interests. However, the two relationships are not entirely equivalent as peers are not kin, and the ties that hold a family together are lacking in a relationship with friends (Furman & Buhrmester, 1982). In the situation of parental divorce, siblings are the only people sharing the experience with the child, which may help create greater empathy and understanding, but also possibly greater conflicts for attention, as each child is in need of comfort and support. Therefore, it is not sufficient to generalize from the behavior of children with peers to that of children with siblings. Additional research is needed on sibling relationships.

Such literature seems to indicate that having a sibling may acquire greater importance in a child's

development in a single-parent family than in an intact family for several reasons: (1) Siblings may experience the stress involved with the divorce in a similar manner, thus having a common experience base. (2) The parents may be less available; therefore the siblings may increasingly rely upon one another. (3) Children may take on some of the parental functions, including both physical and emotional roles. (4) Children may be given increased responsibilities to take care of one another. (5) Children in single-parent homes may spend even more time together than children in married-parent families. (6) Children may be required to share toys and other possessions because of more limited finances. (7) Children may need to vie for the attention and energy of the parent remaining in the house.

Purpose of Present Study.

The entire family system is affected by the experience of divorce. The effects of post-divorce stresses on each of the parents, on parent-child relationships; and on the children's relationships with peers has been examined; but there has not been much research devoted to the study of changes in sibling relationships. The present study examined sibling relationships in two ways: (1) by

studying the social interaction of siblings during play and (2) by obtaining their mother's report of their behavior.

Two groups of 2- to 6- year old boys, with an older brother or sister within four years of age, were observed in a laboratory playroom with their mothers present (although preoccupied with completing questionnaires). One group was composed of single-parent families in which the mothers had been separated or divorced at least five months prior to their involvement in the study. The second group, consisting of married-parent families who had never experienced a divorce, were matched for age and sex of the children of the single-parent families. Measures were taken of the positive and negative behaviors of each individual, as well as their proximity to one another. Maternal questionnaires tapped additional information on the mothers' perceptions of their children's behavior, their family life, and the stresses they experienced as parents.

Predictions. From the review of the literature, the following predictions were made:

(1) Siblings from single-parent homes will spend more time playing together and less time in non-interaction activities than siblings from married-parent homes. This is based on the assumption of an increased intensity of

relationships between the siblings in divorced families due, in part, to more sharing of toys, spending more time together, and relying more upon one another than children from married-parent homes.

(2) Siblings from single-parent homes will spend more time in close proximity with one another than siblings from married-parent homes. This is based on the assumption that children from divorced homes are more used to the situation in which their mother is busy and may not be able to pay attention to them. Research also shows that they are likely to be given responsibility to take care of one another, and also possibly to entertain one another when their mother is not free for them. Therefore, in a laboratory situation, children from divorced families are more likely to respect the fact that their mothers are busy and will spend more time with one another than children from married-parent families.

(3) Children from single-parent homes will display more positive social behaviors toward one another than siblings from married-parent homes. However, children from single-parent homes will also display more negative interactions to one another. This is based upon the findings that closeness as well as conflict between siblings increased following parental divorce. It is

believed that these aspects of their relationship will reveal themselves in a play situation.

In addition, an attempt will be made to examine other variables such as the gender of the older sibling.

(4) Sibling dyads which include female siblings will display more positive social behaviors than will dyads with male siblings. Prosocial behaviors are expected to be greatest when the older sibling is a female, because research has generally indicated that girls initiate more positive behaviors to their siblings than do boys (Abramovitch et al., 1979; Abramovitch et al., 1980; Lamb, 1978a, 1978b), and tend to act like "little mothers" (Abramovitch et al., 1979).

(5) Sibling dyads which consist of an older male sibling will exhibit more negative interactions than will opposite-sex dyads. This is based on the findings that boys are more aggressive than girls (Abramovitch et al., 1979), and that boy-boy dyads exchange more negative than positive behaviors, whereas girl-girl pairs exhibit the opposite pattern (Abramovitch et al., 1982).

METHOD

Participants

The participants were 59 preschool-age boys (2.0 to 6.5 years mean age = 3.90 years) and their older siblings who were one year to four years older than the preschoolers (sibling mean age = 6.19 years). The participants came from white families with at least two children. Older siblings of both sexes were included because there is evidence to suggest that in both divorced and non-divorced families, children's behavior may be influenced by the gender of the older sibling (Hetherington et al., 1979a; Rosenberg & Sutton-Smith, 1964; Wohlford, Santrock, Berger, & Liberman, 1971).

Participants were selected from two different family situations: (1) Single Parent Families, in which single-parent mothers had been separated or divorced for at least five months (mean number of years separated = 2.14), and (2) Married Parent Families, in which the mothers were still living with the husbands of their first marriage. In the selection of participants, there was an attempt to equate the two family groups (single parents, married parents) on a number of variables: (1) the number of families in which the mother was working. The rationale were the following. Almost 65% of divorced mothers in

Canada work in the labor force, and half of the divorced mothers with children under six years of age are working. In addition, almost 50% of married women are in the labor force (Canada Bureau of Statistics, 1980). Divorced mothers often begin working at the time they separate from their husbands. Therefore, the number of families having a working mother was equated so that marital status of the mother was not confounded with maternal employment. (2) Socioeconomic status (SES) of the family, using Hollingshead's four factor index of social status (Hollingshead, 1975). The Hollingshead four factor index calculated the social status of mother-headed families by assigning values to the occupation and education of the mother. For married-parent families, the SES score was calculated by taking the mean of the values for both parents. Equating for SES was attempted because a major criticism of studies of divorced families is that the effects of living in a single-parent family are often confounded with the effects of living in poverty, or at the very least, in a family which has experienced a decrease in income level (Herzog & Sudia, 1971). (3) Occupation of mother, (4) Education of mother.

Materials

Playroom and Materials. The observation session took place in a 5.3 by 5.9-m playroom (see Diagram 1, Appendix 1) To the left of the entrance was a couch, and .84-m in front of the center of the couch were placed a Lego set and a box of plastic blocks. Directly across from the wall with the couch was a wall of curtained windows. A desk and chair for the mother were placed by these windows, 2.29-m away from and slightly to the left of the toys. The desk was placed on a slight angle so that the person in the chair would be facing the windows more than the toys. This was done as an attempt to discourage interaction between the children and their mother. On the wall to the right of the entrance was a tall cabinet, 2.44-m away from the toys, and to the right of the cabinet, there was a small .61 square meter table, 39-cm high. Inside the cabinet were stored the following toys: two cars from the "Dukes of Hazzard" television series, a Nursing Kit, the Etch-A-Sketch, a Nerf Ball, a coloring book and crayons, and two similar (though not identical) hand puppets. These toys were selected because it was thought that they represented a selection of items which had ranged from very passive to very active, so that children could play as they naturally would at home. The fourth wall, across from the

one containing the cabinet and table, had nothing in front of it. Hidden cameras were located behind one-way mirrors in three corners of the room. One camera was located in the corner to the left of the entrance, a second camera was in the corner connecting the wall of curtained windows with the wall that had nothing in front of it, and the third camera was placed in the corner connecting the wall of curtained windows with the wall containing the cabinet and table. With this camera arrangement, the mother could be kept on camera while recording on videotape, with the remaining two cameras being available for videotaping the children. Both the mother and the children were videotaped simultaneously using a split-screen technique.

Questionnaires

Maternal Report. The mothers were asked to complete questionnaires in order to provide subsidiary information not obtainable through laboratory observation of children's behavior. There were six questionnaires and a brief description of each follows. More detailed descriptions and information on validity and reliability can be found in Appendix 2.

The Maternal Questionnaire (Appendix 3) was created to measure mothers' perceptions of their children's interactions with one another. The Modified Maternal

Questionnaire (Appendix 3) was identical to the Maternal Questionnaire with the exception that it entailed a retrospective assessment of sibling interaction. Single mothers were requested to respond to the questions as to how their children got along together before the marital separation; married mothers were equated with the single mothers for an equivalent number of years back they had to recall. Stolberg's Single Parenting Questionnaire (Appendix 4) consisted of 88 multiple choice items relating to the life of the single-parent and her family (Stolberg, Cullen, & Garrison, 1982). Fourteen of the 88 items which referred specifically to the divorce experience were modified on the version given to the married mothers. The Kohn Social Competence Scale (Appendix 5) covered a range of child behaviors from emotional health to disturbance (Kohn & Rosman, 1973). The 64 item questionnaire consisted of two factors: Interest-Participation versus Apathy-Withdrawal and Cooperation-Compliance versus Anger-Defiance. The Parenting Stress Index (Appendix 6) was designed to measure maternal report of stress associated with being a parent (Burke & Abidin, 1978). There were four domains (Child Domain, Mother Domain, Mother-Child Interaction Domain, and Demographic Domain) yielding 126 items. The Eyberg Child Behavior Inventory (Appendix 7) consisted of 36 items that were typical

problem behaviors of conduct problem children (Robinson, Eyberg, & Ross, 1980).

Procedure

Participants were obtained by distributing letters (Appendix 8) to directors of day care centers who passed these letters on to the mothers of the children attending these centers. Those mothers who were interested in participating in the study were invited to phone the experimenter to volunteer. In addition, subjects were recruited via notices in community newsletters, (Appendix 9), letters to participants in classes at the YWCA, and through an advertisement in the local newspaper (Appendix 9). Volunteers were requested to name other mothers who they thought might also be interested in participating in the project.

During the telephone contact with the main experimenter (the author), the mothers were given further details about the study and were interviewed (Appendix 10) to determine whether they met the general criteria for inclusion in the study. The mother was informed that she would be receiving three questionnaires in the mail and was requested to return the completed questionnaires upon her visit to the Family Study Project on the University of Calgary campus. An appointment was then made for the

mother and two children to come to the University. Each mother was sent the Parenting Stress Index (Appendix 6) which measured the amount of stress the mother felt in her parental role, the Maternal Questionnaire (Appendix 3) requesting information on how her children get along together, and Stolberg's Single Parenting Questionnaire (Appendix 4) requesting information on the family's life situation.

On the day of the family's appointment, the experimenter greeted the mother and children at the door of the Family Study Project (Arts Building, Room 141). She aided them in removing their coats and boots and then escorted them to the playroom. The children were told, "_____ and _____, you can play with these toys over here while I talk to your mom, o.k.?" The experimenter then escorted the mother to the desk and chair at the opposite end of the playroom from the toys. Appendix 11 presents the detailed instructions to subjects. The experimenter first gave the mother a brief overview of what the session would entail; she then explained the questionnaires in some detail. After the mother indicated she understood the instructions, the mother was asked to read and sign the consent form (Appendix 12). The experimenter informed the mother that she had the right to decline from participating at any time during the study. The mother was told that the

questionnaires would probably require the entire 40 minute session to complete; and that if her children approached her, she should respond to them as she would while busy at home. The experimenter explained that she would leave the room while the mother was completing the questionnaires and the children were playing, but that she would return at the conclusion of the session. The mother was then asked if she had any questions. The experimenter left the mother with the Eyberg Child Behavior Inventory (Appendix 7) which tapped problem behaviors of children, the Kohn Social Competence Scale (Appendix 5) which assessed how the mother thought her younger child got along with peers, the Modified Maternal Questionnaire (Appendix 3) which asked how well the siblings got along together in the past, and with a sheet of paper headed by the statement, "In your own words, please describe how your children get along together".¹

The children were asked if they needed to go to the washroom. Then the experimenter took her chair and placed it next to the little table on the adjoining wall. She opened the cabinet, took out the police car from the "Dukes

¹ This open ended question was not analyzed due to the difficulty of scoring open ended material. It served to help the mothers occupy the time remaining in the play session after they had completed the structured questionnaires.

of Hazzard" set, the Nursing Kit, the Etch-A-Sketch, and the Nerf Ball, and placed them in front of the children. The doors of the cabinet were left open, and inside remained both puppets, the coloring book and crayons, and the other "Dukes of Hazzard" car. The experimenter said to the children, "O.k. _____ and _____, you can play with these toys while your mother is busy. See that cabinet over there? There are some more toys in there if you want some more. I'll be back in a little while. Bye "

The experimenter then left the playroom and entered the adjacent control room to begin videotaping. At no time did the experimenter indicate to the children that they were being observed and/or videotaped so as to prevent this information from affecting their behavior. During the 40-minute observation period of sibling interaction, the experimenter a priori decided to intervene only if the children were hurting themselves or each other, or if they were behaving destructively (see Appendix 13). This was not necessary for any of the 59 families. At the end of the observation period, the experimenter entered the room to thank the family for their participation.

Coding of Dependent Variables

Sibling Social Interaction. Sibling social interaction was coded from videotapes using a 26 category

system (Appendix 14). This coding system was based on the sibling interaction coding systems of Abramovitch et al. (1979), Dunn and Kendrick (1979), Eckerman, Whatley, and Kutz (1975), and Lamb (1978b), and the peer interaction categories of Parten (1932). These categories were selected because it was believed that they would reflect differences in the socialization, modeling, and caretaking dimensions of sibling interactions between single and married mother families.

The categories were divided into positive verbal and non-verbal behaviors, negative verbal and non-verbal behaviors, and neutral behaviors. Positive verbal behaviors were direction, request, assist, verbal positive, and laugh. Positive non-verbal behaviors were give object, show object, demonstrate, take toy, accept toy, positive physical contact, and imitate. Negative verbal behaviors were demand, refusal, disapproval, and cry. Negative non-verbal behaviors were object struggle, rejection, and negative physical contact. The neutral category consisted of the following behaviors: look, talk, response to question, solitary talk, cooperative play, and solitary play.

In addition to these measures, proximity (close, near, or far) was recorded between the siblings, and between the

mother and each child during those intervals in which the mother interacted with her children.

Questionnaires. Questionnaires were scored in the following way: (1) Maternal Questionnaire - the Maternal Questionnaire was scored by summing the circled values separately for the positive and negative items. Scores could potentially range from 36 to 180. (2) Modified Maternal Questionnaire - the Modified Maternal Questionnaire was scored in an identical fashion as the Maternal Questionnaire. (3) Stolberg's Single Parenting Questionnaire - separate scaled scores were obtained by applying the weights (Appendix 15) supplied by the author (Stolberg, 1982) to the various items. The potential range of scores was 88 to 352. (4) Parenting Stress Index - the Parenting Stress Index scaled scores were obtained by following the instructions (Appendix 16) provided by Abidin and Burke (1978). This entailed summing the weights assigned to various responses. (5) Kohn Social Competence Scale - the Kohn Social Competence Scale was scored according to the instruction manual (Appendix 17; Kohn, Parnes, & Rosman, 1979). This involved summing of the circled values of the items within each of the two factors, with some of the items assigned negative weights (due to the bi-polar nature of the scale). (6) Eyberg Child

Behavior Inventory - the Intensity scale of the Eyberg Child Behavior Inventory was scored by summing the values circled by the mother. The potential range of scores was 36 to 252. The Problem scale score was obtained by summing the number of "yes" responses circled. This scale had a range of 0 to 36.

Observer Training

Five observers, including the experimenter, coded the 59 videotapes.² Three of the observers were totally unaware of the experimental hypotheses and that there were two groups involved in the study. They were informed solely that the project involved an investigation of the interaction between siblings. Coders worked both in teams of two and individually in coding the tapes. They were trained using the coding manual (Appendix 14) until they achieved an agreement rate of at least 70% in the categories which occurred at least 10% of the time. Observer agreement was calculated by effective percent agreement (Hartmann, 1977): number of agreements on occurrences divided by number of agreements + number of disagreements. Twelve of the 59 videotapes (20%) were

² I would like to thank Margaret Flintoff, Judy Galsworthy, Susan Hewitt, and Alison MacDonald for the many hours they spent in the coding of videotapes, and also Layna Bateman, for her help in compiling the resulting coding sheets.

randomly selected to be coded by two observers (or teams of observers). The observers were aware that reliability checks were taken, but they were not informed as to which of the tapes would be coded by two observers.

RESULTS

Subjects.

Thirty six of the original 59 participants were selected as subjects for inclusion in the study. Two families of the original 20 in the single-parent sample were eliminated from the study for the following reasons. One mother was deleted because she had experienced the death of her husband rather than a marital separation. The literature suggests that the type of father-absence may differentially affect the behavior of the children (e.g., Herzog & Sudia, 1971; Hetherington, 1972; Wallerstein & Kelly, 1979); therefore, it was decided to eliminate this unique family from the analysis. Also deleted was a single-parent family in which the preschool boy was handicapped and did not have the use of his legs. It was believed that this family situation was not representative of the single-parent population. The 18 single-parent families that remained composed the final sample of the single-parent group.

Matched Variables for Selection of Married-Parent Group. Eighteen married-parent families were selected from the original sample of 39 families. They were matched with the single-parent families for age of the children and sex of the older sibling. In each group, seven of the older

siblings were male, 11 were female. There were no significant differences between the two groups for age and sex of children (see Appendix 18 and Table 1).

Additional Information on Single- and Married-Parent Groups. There were additional descriptive variables which were considered in the selection process. These were (a) working versus non-working mothers, (b) education of the mother, (c) age of the mother, (d) number of children in the family, (e) number of years married, (f) use of day care, (g) number of adopted children, (h) status of the mother's occupation, (i) family SES, and (j) number of additional members in the household other than the immediate family. There was an attempt to equate the two groups as much as possible on these variables; however, the following significant differences occurred: age of mother (married-parent > single-parent; $p < .007$), number of years married (married-parent > single-parent; $p < .012$), use of day care (single-parent > married-parent; $p < .023$), and SES (married-parent > single-parent $p < .005$). These data are presented in Table 1, Table 2, and in Appendix 18.

These differences are characteristic of the differences which occur naturally in the general population. Many authors have found that single-parent families have a lower SES than married-parent families

Table 1

MATCHED VARIABLES FOR SINGLE-PARENT AND MARRIED-PARENT GROUPS

	<u>Single</u> (N=18)			<u>Married</u> (N=18)		
	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>
Age of Younger Sibling	4.25	2.00-6.50	1.25	4.07	2.50-6.50	1.25
Age of Older Sibling	6.69	5.50-9.00	1.18	6.47	3.50-9.50	1.67

Each family type consisted of 11 older sisters and 7 older brothers.

Table 2

DESCRIPTIVE VARIABLES FOR SINGLE-PARENT AND MARRIED-PARENT GROUPS

	<u>Single</u>			<u>Married</u>		
	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>
# fams. 10 with working mothers				8		
# fams. 3 with mothers in school				3		
Mother's 5.33 4.00-7.00 .82 Education (1-7)				5.72 4.00-7.00 1.07		
Mother's 31.19 24.00-40.00 4.12 Age				34.78 28-41 3.17		
# fams. 4 with 3 children				3		
# years 7.78 3.00-13.00 3.06 Married				10.17 5.00-15.00 2.31		
# fams. 10 using day care				4		
# fams. 4 never using day care				12		
# fams. 2 with adopted child				3		
SES(O-66) 40.38 23.00-53.00 10.65				55.83 35.00-66.00 10.62		
Mother's 3.25 0.00-7.00 3.00 Occupation (1-9)				3.53 0.00-9.00 3.94		
# fams. 5 with additional household member				2		

(e.g., Atkeson, Forehand, & Rickard, in press; Blechman, 1982; Brandwein et al., 1974; Herzog & Sudia, 1971; Hetherington, 1979; Hetherington, Cox, & Cox, 1976, 1977, 1979a; Stein, 1970; Wallerstein & Kelly, 1980b). This has been found to be a difficult variable to control for since, as in the present study, even when the two groups of mothers are matched for education and occupation, the inclusion of the occupation and education of the fathers in the married-parent sample usually results in an increased family SES for that group. Because the average duration of marriage before divorce is six to ten years (Dominian, 1968), it is not surprising that the married-parent group was married longer than the single-parent group, especially since an average of two years has passed since the break-up of the marriage. The greater age of the married mothers was also not unexpected. Women who marry young are statistically more likely to divorce (England & Kunz, 1975; Makabe, 1980), and are more likely to have children at an earlier age. It is possible to match groups on this variable, but because of the numerous variables in the present study, age of the mother was given lower priority.³

³ SES was used as a covariate in the present study because of the vast amount of literature suggesting that it may play a large role in the behavioral differences between single-parent and married-parent families. Age of mother and number of years married were not used as covariates. A MANCOVA analysis (using SES as the covariate) examining

The descriptive data for the two groups are presented in Table 1. See Appendix 18 for tests of significance.

Reliability of Behavior Categories.

Based on the literature on sibling interaction, 26 behavior categories were initially defined (refer to Appendix 14 for list and definitions). These categories were scored for each member of the sibling dyad and the mother; included was toward whom the behavior was directed. Thus, for the younger sibling, there were 24 interactive behaviors that could be directed toward either the older sibling or the mother resulting in 48 dependent variables, plus two which were non-interactive (solitary play and solitary talk), thereby yielding a total of 50 dependent variables for the younger sibling. These 50 dependent variables were also scored for the older sibling. For the mother there were 22 behaviors which could be directed toward each child for a total of 44 dependent variables. Interobserver reliability was calculated for each of these

maternal age (under 31 years, 31 to 35 years, and over 35 years) on sibling interaction revealed no significant differences for either marital status or gender of older sibling. A MANCOVA was conducted for mothers married less than eight years, eight to ten years, and more than ten years. Results indicated no significant group differences for either marital status or gender of older sibling. A MANCOVA analysis was conducted to determine the effects of day care on children's behavior. There was no significant main effect of day care for either marital status or gender of older sibling.

144 categories. However, due to interobserver reliability being poor at this molecular level of analysis (144 dependent variables), categories were subsequently and repeatedly collapsed into broader categories (e.g., over toward whom the behavior was directed, type of behavior). Four categories were finally obtained which reached a reliability of .68 or above (prosocial interaction, total active interaction, non-interaction, and proximity). The following describes how interobserver agreement was calculated and the method of determining the final behavior categories.

Eleven of the 59 videotapes (4 single-parent families, 7 married-parent families) were randomly selected to be coded by two observers. Effective percent agreement for occurrences was calculated for the initial 26 behavior categories, collapsing over directionality of the behaviors. Point by point agreement was used so that an agreement was scored if during one 10-second interval, both observers marked a particular behavior as having occurred. If one observer marked a behavior as occurring but the other did not, this was scored as one disagreement. The total number of agreements for one category was divided by the total number of agreements plus disagreements for that category to obtain the reliability. A summed average was obtained by summing the individual numerators across the 11

families, summing the individual denominators, and using these numbers to obtain the final summed average. For example, for the behavior category direction, the scoring of the first family's behavior resulted in 21 agreements divided by 51 agreements plus disagreements. This procedure was followed across all 11 families. The total number of agreements for all families (e.g., for direction, $21+51+\dots+47 = 445$) was divided by the total number of agreements plus disagreements (e.g., for direction, $51+66+\dots+94 = 853$). This resulted in a summed average; for example, the summed average of reliability for direction was $445/853 = .52$ (See Appendix 19).

A reliability of .70 was considered to be indicative of adequate interobserver agreement for the behavior categories. Except for the proximity category, observer agreement did not indicate sufficient reliability for the initial 26 behavior categories (24 interactive and two non-interactive). The interobserver agreement ranged from .10 to .88 (see Appendix 19). Although observers had been trained to code behavior at this molecular level of analysis, it appeared that they did not apply the coding system reliably. It was believed that although observers did not reliably code the detailed behaviors, they may have classified the behaviors at a more global level, because a major difficulty appeared to be discriminating among

behaviors within a global category (e.g., within the negative verbal category, demand was often scored by one observer while the other scored refusal or disapproval). For this reason, the 26 categories were then collapsed into six global categories. These consisted of (1) positive verbal behaviors: direction, request, assist, verbal positive, laugh, talk, response to question; (2) positive non-verbal behaviors: give object, show object, demonstrate, take toy, accept toy, positive physical contact, imitate, look, cooperative play; (3) negative verbal behaviors: demand, refusal, disapproval, cry; (4) negative non-verbal behaviors: object struggle, rejection, negative physical contact; (5) non-interaction behaviors: solitary talk, solitary play; and (6) proximity. For example, using this system, if one observer recorded assist and the second observer recorded laugh, this would be scored as an agreement that a positive verbal behavior occurred. An analysis of the reliabilities revealed that although the reliabilities for non-interaction behaviors and proximity were adequate (.76 and .82, respectively), the other categories did not meet the criterion of .70 (see Appendix 20).

In order to determine whether observers were more reliable at the next more global level, categories were collapsed once more. The behaviors included in the

category neutral were also subsumed under Prosocial. This was done in an attempt to determine whether the neutral category on its own would obtain sufficient interobserver reliability, in the interest of maintaining categories at the most molecular level as possible. In addition, it was decided to assess observer agreement upon action versus non-interaction behaviors, and the category total active interaction was included. The resulting categories were: (1) total positive interaction: direction, request, assist, verbal positive, laugh, give object, show object, demonstrate, take toy, accept toy, positive physical contact, imitate; (2) neutral interaction: talk, response to question, look, cooperative play; (3) prosocial interaction: positive plus neutral behaviors combined - direction, request, assist, verbal positive, laugh, talk, response to question, give object, show object, demonstrate, take toy, accept toy, positive physical contact, imitate, look, cooperative play; (4) total negative interaction: demand, refusal, disapproval, cry, object struggle, rejection, negative physical contact; (5) total active interaction: any of the above categories; (6) non-interaction: solitary talk, solitary play; and (7) proximity. The positive and neutral categories were not considered reliable (.65 and .43 respectively) and were therefore excluded from any further analyses. Because

predictions were made for the negative interaction behaviors, the negative interaction category was included in the final analysis although it did not meet the stringent criterion for reliability initially established in this study (effective percent agreement = .47). However, a minimal level of reliability for this category was attained as indicated by Spearman rank order correlations between two coders for the 11 families; all were significant, with correlations of at least .83 and $p < .001$ (see Appendix 20).

The final behavior categories,⁴ therefore, consisted of (1) prosocial behaviors (reliability = .71), (2) total active interaction behaviors (reliability = .86), (3) non-interaction behaviors (reliability = .76), (4) proximity (reliability = .82), and (5) negative behaviors. See Appendix 21 for reliabilities of behavior categories.

Analyses on Behavioral Data

Dependent Variables Based Upon Behavioral Data. There was a low number of subjects in each cell (11 in the married-parent and single-parent older sister groups and seven in each of the older brother groups) in comparison to

⁴ Reliability for each reported behavior category is collapsed for person performing behavior and individual to whom behavior was directed.

the large number of original dependent variables (144 for both siblings and mother). The final number of dependent variables after determining acceptable interobserver agreement for both siblings and mother was 38. Since so many variables in comparison to the low number of subjects increases the risk of an inflated probability of obtaining significance (Koretz, 1979), the number of dependent variables was further reduced. Because no predictions were made for the mothers' behavior, data involving the mother, either as an actor or as a recipient of the children's behavior, were eliminated from the analysis. Thus, the final dependent variables were solely the behaviors the siblings directed toward one another, similar to the studies conducted by Dunn and Kendrick (1979), Lamb (1978a, 1978b), and Abramovitch and her colleagues (1979, 1980, 1981). Consequently, as the mother was present in the room and the children did interact with her in the present study, direct comparisons between this investigation and the previous literature must be made with caution.

In the first analysis, an average score was calculated for sibling behavior; i.e., in the interest of reducing variables, it was necessary to collapse the separate data for the two siblings, thus preventing an analysis of older versus younger sibling. Therefore, the variable non-interaction was the mean of the non-interaction scores

for the two siblings; sibling prosocial interaction was the mean of the number of prosocial behaviors the younger sibling directed toward the older sibling and the number of prosocial behaviors the older sibling directed toward the younger; the sibling total active interaction variable was the mean of total active behaviors each sibling directed toward the other; and the sibling negative interaction variable consisted of the mean of the negative behaviors each sibling directed toward the other. The final two categories consisted of close proximity between the siblings and far proximity between the siblings. The near proximity category (the middle distance range) was deleted in the attempt to decrease the number of dependent variables. This resulted in six dependent variables: (1) non-interaction (mean of the two siblings), (2) sibling prosocial interaction (mean of the prosocial behaviors the two siblings directed toward one another), (3) sibling total active interaction (mean of the total active behaviors the two siblings directed toward one another), (4) sibling negative interaction (mean of the negative behaviors the two siblings directed toward one another), (5) close proximity between siblings, and (6) far proximity between siblings. See Table 3 for means, ranges, and standard deviations for behavior data.

Predictions. The following predictions were made for the behavioral data: (1) Siblings from single-parent homes will spend more time playing together and in proximity to one another relative to children from married-parent homes. (2) Children in single-parent homes will be more likely to display positive social behaviors than children from married-parent homes. (3) Children from single-parent homes will display more negative interactions than children from married-parent homes. (4) Sibling dyads which include an older female sibling will display more positive social behaviors than will dyads with an older male sibling. (5) Sibling dyads which consist of an older male sibling will exhibit more negative interactions than will dyads which consist of an older female sibling.

Organization of Analyses. The organization of the statistical analyses conducted on the behavioral data involved a multivariate analysis of covariance using marital status and gender of older sibling as factors, mean scores of sibling behavior as dependent variables, and SES as a covariate. This analysis is described first, followed by a presentation of the results of the MANCOVA and related univariate ANCOVAs. A subsidiary analysis on marital

Table 3

Means, Standard Deviations and Ranges for Behavior Categories

	<u>Single-parent Families</u>			<u>Married-parent Families</u>				
	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>F</u>	<u>p</u>
NONINTERACTION	.46	.25-.84	.14	.48	.20-.74	.15	.09	NS
SIBPROSOCIAL	.28	.09-.67	.15	.27	.06-.62	.16	.19	NS
SIB ACTIVE	.32	.09-.70	.15	.31	.11-.70	.18	.20	NS
SIB NEGATIVE	.05	.00-.28	.07	.04	.00-.16	.04	.00	NS
CLOSE PROX	.27	.10-.59	.15	.24	.05-.65	.16	.62	NS
FAR PROXIMITY	.50	.18-.72	.17	.55	.13-.85	.21	.09	NS
	<u>Older Brother</u>			<u>Older Sister</u>				
	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>F</u>	<u>p</u>
NONINTERACTION	.38	.20-.62	.12	.52	.27-.84	.13	7.31	.01
SIB PROSOCIAL	.37	.10-.67	.18	.22	.06-.44	.10	6.00	.02
SIB ACTIVE	.41	.11-.70	.19	.26	.09-.53	.11	5.33	.03
SIB NEGATIVE	.06	.00-.28	.08	.04	.00-.18	.04	1.39	NS
CLOSE PROX	.26	.05-.65	.16	.25	.09-.59	.15	.81	NS
FAR PROXIMITY	.48	.13-.78	.18	.54	.18-.85	.19	1.56	NS
	<u>Single-parent Families</u>			<u>Married-parent Families</u>				
	<u>Older Brother</u>			<u>Older Sister</u>			<u>S.D. See Table 5 for Simple Effects</u>	
	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>		
NONINTERACTION	.39	.25-.62	.12	.50	.28-.84	.14		
SIB PROSOCIAL	.33	.10-.67	.19	.25	.09-.44	.10		
SIB ACTIVE	.36	.11-.70	.20	.29	.09-.53	.11		
SIB NEGATIVE	.06	.01-.28	.10	.04	.00-.18	.05		
CLOSE PROX	.22	.10-.42	.10	.30	.10-.59	.17		
FAR PROXIMITY	.52	.24-.65	.15	.48	.18-.72	.19		
	<u>Married-parent Families</u>			<u>Older Brother</u>			<u>Older Sister</u>	
	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>	<u>S.D.</u>	<u>Mean</u>	<u>Range</u>
NONINTERACTION	.37	.20-.52	.13	.54	.27-.74	.12		
SIB PROSOCIAL	.42	.17-.62	.16	.20	.06-.42	.10		
SIB ACTIVE	.47	.25-.70	.18	.23	.11-.50	.11		
SIB NEGATIVE	.06	.00-.16	.06	.03	.01-.11	.03		
CLOSE PROX	.31	.05-.65	.22	.20	.09-.43	.11		
FAR PROXIMITY	.44	.13-.78	.22	.60	.25-.85	.19		

NONINTERACTION = The mean of the non-interaction behaviors of each sibling.

SIB PROSOCIAL = The mean of the prosocial behavior each sibling directed toward the other sibling.

SIB ACTIVE = The mean of the total active behavior each sibling directed toward the other sibling.

SIB NEGATIVE = The mean of the negative behavior each sibling directed toward the other sibling.

CLOSE PROX = The proportion of intervals in which the siblings were in close proximity (less than 0.3-m) from one another.

FAR PROXIMITY = The proportion of intervals in which the siblings were in far proximity (greater than 0.9-m) from one another.

status alone was conducted which included the behaviors of each sibling rather than their mean scores. Following the MANCOVA and ANCOVA results from this analysis, an analysis of the questionnaire data was conducted. This involved a multivariate analysis of covariance using marital status and gender of older sibling as factors and SES as a covariate.

MANCOVA on Behavior Data. A two factor (marital status and gender of older sibling) between subjects multivariate analysis of covariance (MANCOVA) was conducted to test the predictions of group differences with the behavioral data. Results indicated no significant differences for the effect of marital status or the interaction effect. However, the effect of gender of older sibling revealed a significant effect at the $p < .05$ level. Inspection of the eigenvectors indicated that sibling prosocial behavior was the largest discriminant weight (.683) followed by the non-interaction category, (-.623). Thus, the predictions of behavioral differences in sibling interaction between single- and married-parent families was not supported. There was, however, some support for the prediction of differences between boys with older brothers and boys with older sisters.

Univariate analyses of gender of older sibling revealed that boys and their older brothers engaged in both more prosocial interactions ($p < .02$) and more total active interactions ($p < .03$) than boys and their older sisters (see Table 4). This result is contrary to the prediction that boys and their older sisters would engage in more prosocial interaction than boys and their older brothers. There was a significant marital status by gender of older sibling interaction effect for sibling total active interaction ($p < .04$, figure 1). Boys with older brothers from married-parent families engaged in the greatest number of total active behaviors, followed by boys with older brothers from single-parent families, boys with older sisters from single-parent families, and boys with older sisters from married-parent families. An analysis of the simple effects within the interaction was conducted. For married-parent families, there was significantly ($p < .001$) more total active interaction between boys and their older brothers than between boys and their older sisters. For single-parent families there was no significant ($p > .05$) difference in total active interaction between boys and their older brothers versus older sisters. Comparing the sibling total active interaction of boys and their older brothers, there was no significant difference ($p > .05$) between single-parent and married-parent families; there

Table 4

F-tests for Main Behavioral Analysis

Behavior Category	Status		Gender of Older- Sibling		Status by Sex In- teraction	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
NONINT	.09	.76	7.31	.01	.54	.47
PROSOCIAL	.19	.67	6.00	.02	3.85	.06
ACTINT	.20	.66	5.33	.03	4.52	.04
NEGATIVE	.00	.99	1.39	.25	.00	.98
CLPROX	.62	.44	.81	.38	.33	.57
FAR PROX	.09	.76	1.56	.22	.38	.54

NONINT = The mean of the non-interaction behaviors of each sibling.

PROSOCIAL = The mean of the prosocial behavior each sibling directed toward the other sibling.

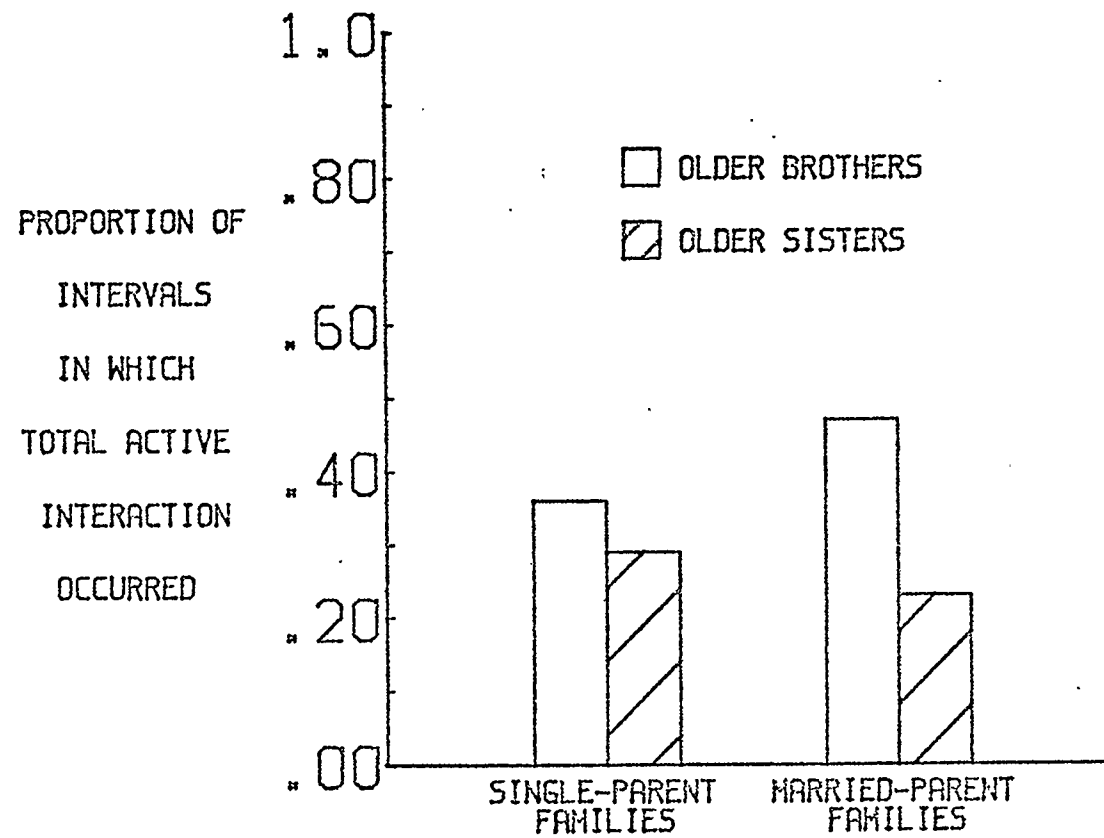
ACTINT = The mean of the total active behavior each sibling directed toward the other sibling.

NEGATIVE = The mean of the negative behavior each sibling directed toward the other sibling.

CLPROX = The proportion of intervals in which the siblings were in close proximity (less than 0.3-m) from one another.

FAR PROX = The proportion of intervals in which the siblings were in far proximity (greater than 0.9-m) from one another.

Figure 1
Proportion of Intervals in which
Total Active Interaction Occurred



was also no significant difference ($p > .05$) for boys and their older sisters between single-parent and married-parent families. Sibling prosocial interaction approached significance ($p = .06$). Although the results must be interpreted with caution, an analysis of simple effects was carried out. For married-parent families, there was significantly ($p < .002$, figure 2) more prosocial interaction between boys and their older brothers than between boys and their older sisters. For single-parent families, there was no significant ($p > .05$) difference in sibling prosocial interaction between boys and their older brothers versus older sisters. Comparing the sibling prosocial interaction of boys and their older brothers, there was no significant ($p > .05$) difference between single-parent and married-parent families. There was also no significant ($p > .05$) difference for boys and their older sisters between single-parent and married-parent families (see Table 5). These results provide partial support for the predictions that siblings from single-parent homes would interact differently than siblings from married-parent families.

Subsidiary Analysis

In order to obtain a more complete picture of the sibling interactions of children from single-parent versus married-parent families, a subsidiary analysis of the

Figure 2
Proportion of Intervals in which
Prosocial Interaction Occurred

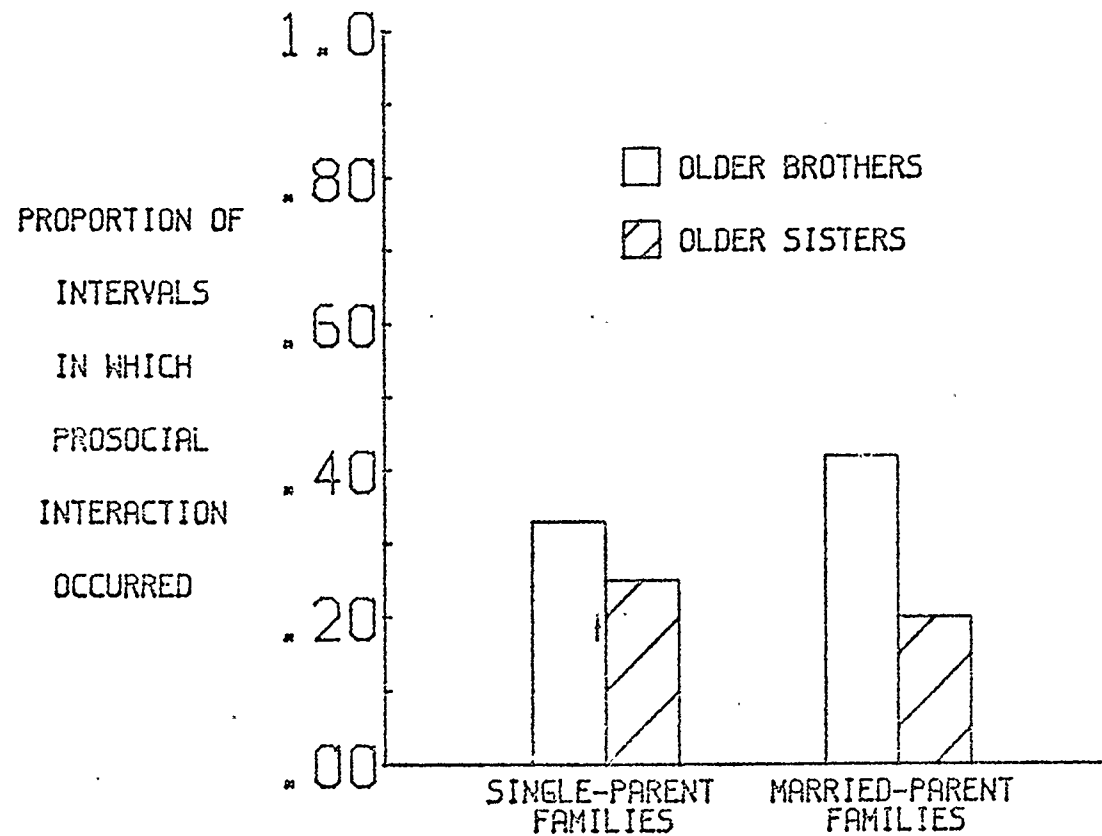


Table 5

Examination of Simple Effects within Status by Gender of Older
Sibling Interaction

Effect of:	Gender for Married- Parents		Gender for Single- Parents		Status for Brother Sibling		Status for Sister Sibling	
	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>	<u>F</u>	<u>p</u>
NONINT	6.97	.013	1.25	.273	.12	.563	.45	.506
PROSOCIAL	12.19	.002	.02	.898	1.46	.237	2.42	.131
ACTINT	12.43	.001	.00	.948	1.78	.193	2.77	.106
NEGATIVE	.81	.375	.48	.495	.00	.993	.00	.982
CLPROX	1.34	.257	.02	.882	1.14	.295	.02	.893
FAR PROX	2.11	.157	.11	.746	.53	.474	.04	.840

NONINT = The mean of the non-interaction behaviors of each sibling.
 PROSOCIAL = The mean of the prosocial behavior each sibling directed toward the other sibling.

ACTINT = The mean of the total active behavior each sibling directed toward the other sibling.

NEGATIVE = The mean of the negative behavior each sibling directed toward the other sibling.

CLPROX = The proportion of intervals in which the siblings were in close proximity (less than 0.3-m) from one another.

FAR PROX = The proportion of intervals in which the siblings were in far proximity (greater than 0.9-m) from one another.

behavioral data was conducted: a MANCOVA with each sibling.

Subsidiary Analysis: MANCOVA with Each Sibling. The subsidiary analysis on the behavioral data involved examining each sibling's behavior separately thereby allowing an analysis at a more discrete level than in the main analysis. The original six categories were used as the basis for expanding the number of variables included. Thus, in the category prosocial interaction (which was previously the mean of the two siblings), the younger sibling's prosocial behaviors which were directed toward the older sibling and the older sibling's prosocial behaviors which were directed toward the younger sibling were separate categories. In addition, each child's prosocial behaviors which were directed toward the mother were included. This same procedure was followed for each sibling's total active behavior and negative behavior. Each sibling's non-interaction activity was also considered separately. The resulting dependent variables for the subsidiary analysis were: (1) prosocial behavior by the younger sibling directed toward the older sibling, (2) prosocial behavior by the older sibling directed toward the younger sibling, (3) prosocial behavior by the younger sibling directed toward the mother, (4) prosocial behavior

by the older sibling directed toward the mother, (5) total active behavior by younger sibling directed toward the older sibling, (6) total active behavior by older sibling directed toward the younger sibling, (7) total active behavior by younger sibling directed toward the mother, (8) total active behavior by older sibling directed toward the mother, (9) negative behavior by the younger sibling directed toward the older sibling, (10) negative behavior by the older sibling directed toward the younger sibling, (11) negative behavior by the younger sibling directed toward the mother, (12) negative behavior by the older sibling directed toward the mother, (13) non-interaction behavior by the younger sibling, (14) non-interaction behavior by the older sibling, (15) close proximity between the siblings, and (16) far proximity between the siblings. See Table 6 for means, ranges, and standard deviations for MANCOVA for each sibling.

A significant effect for marital status was found using 16 variables to discriminate groups ($F(16,17) = 2.49, p < .04$). Inspection of the eigenvectors revealed that negative behavior of the younger sibling which was directed toward the mother had the largest discriminant weight (.528). Second was the total active behavior of the younger sibling which was directed toward the mother (-.506), and third was the prosocial behavior of the

Table 6

Means, Ranges, Standard Deviations for Subsidiary Analysis
MANCOVA for Each Sibling

	Single-parent Families			Married-parent Families			F	p
	Mean	Range	S.D.	Mean	Range	S.D.		
SES	42.67	23.0-53.0	9.68	55.47	35.0-66.0	8.89		
PROSOCIAL LTOB	.28	.08-.64	.14	.28	.10-.61	.17	.15	NS
PROSOCIAL LTOM	.23	.07-.48	.12	.16	.03-.45	.13	3.23	.08
ACTIVE L TO B	.32	.08-.69	.15	.32	.11-.70	.18	.19	NS
ACTIVE L TO M	.27	.07-.54	.14	.19	.03-.45	.13	1.73	NS
NONINTERACT L	.41	.24-.82	.16	.49	.23-.79	.16	2.30	NS
PROSOCIAL BTOL	.28	.08-.62	.16	.27	.01-.62	.16	1.07	NS
PROSOCIAL BTOM	.16	.06-.27	.06	.19	.02-.42	.11	1.43	NS
ACTIVE B TO L	.31	.08-.70	.16	.30	.10-.70	.17	.84	NS
ACTIVE B TO M	.17	.07-.28	.07	.21	.02-.47	.12	1.75	NS
NONINTERACT B	.51	.24-.85	.14	.47	.16-.73	.17	.00	NS
CLOSEPROX SIBS	.27	.10-.59	.15	.24	.05-.65	.16	.45	NS
FAR PROX SIBS	.50	.18-.72	.17	.55	.13-.85	.21	.01	NS
NEGATIVE LTOB	.04	.00-.18	.05	.03	.00-.09	.03	.28	NS
NEGATIVE LTOM	.04	.00-.18	.05	.02	.00-.08	.03	.11	NS
NEGATIVE BTOL	.06	.00-.50	.12	.05	.00-.28	.07	.03	NS
NEGATIVE BTOM	.02	.00-.07	.02	.01	.00-.05	.02	1.83	NS

SES = Socio Economic Status
 PROSOCIAL LTOB = The prosocial behavior the younger sibling directed toward the older sibling.
 PROSOCIAL LTOM = The prosocial behavior the younger sibling directed toward the mother.
 ACTIVE L TO B = The total active behavior the younger sibling directed toward the older sibling.
 ACTIVE L TO M = The total active behavior the younger sibling directed toward the mother.
 NONINTERACT L = The non-interaction behavior performed by the younger sibling.
 PROSOCIAL BTOL = The prosocial behavior the older sibling directed toward the younger sibling.
 PROSOCIAL BTOM = The prosocial behavior the older sibling directed toward the mother.
 ACTIVE B TO L = The total active behavior the older sibling directed toward the younger sibling.
 ACTIVE B TO M = The total active behavior the older sibling directed toward the mother.
 NONINTERACT B = The non-interaction behavior performed by the older sibling.
 CLOSEPROX SIBS = The proportion of intervals in which the siblings were in close proximity (less than 0.3-m) to one another.
 FAR PROX SIBS = The proportion of intervals in which the siblings were in far proximity (greater than 0.9-m) to one another.
 NEGATIVE LTOB = The negative behavior the younger sibling directed toward the older sibling.
 NEGATIVE LTOM = The negative behavior the younger sibling directed toward the mother.
 NEGATIVE BTOL = The negative behavior the older sibling directed toward the older sibling.
 NEGATIVE BTOM = The negative behavior the older sibling directed toward the mother.

Note. All behaviors are reported as the proportion of intervals in which they occurred.

younger sibling toward the mother (.484). These results provided partial support for the predictions of group differences in sibling behavior between single-parent and married-parent families. Although a group difference was found, no predictions were made on the variables that seem to carry the most weight: the younger sibling's behavior directed toward the mother.

Analyses on Questionnaire Data

Dependent Variables for Questionnaire Data. In an attempt to gain information and help explain the results with the behavioral data, the questionnaire data were analyzed. The large ratio of questionnaire variables to subjects would have inflated the probability of obtaining significance (Koretz, 1979). Therefore, the number of dependent variables was decreased from 39 to five. Rather than to include all the scales of each questionnaire, only the totals were used for Stolberg's Single Parenting Questionnaire (which assessed the daily life situation of the family) and the Parenting Stress Index (which examined self-reported parental stress). Additionally, the two scores on the Child Behavior Inventory (which assessed child behavior problems) were summed to yield one total, and the same procedure was followed for the Interest-Participation and Apathy-Withdrawal factors of the

Kohn Social Competence Scale, and for the Maternal Questionnaire (which examined the mother's report of how her children get along together). The Revised Maternal Questionnaire, a retrospective version of the Maternal Questionnaire, was not analyzed, as questions arose as to its validity.⁵ This resulted in five final dependent variables for the questionnaire data: (1) Child Behavior Inventory total, (2) Stolberg Single Parenting Questionnaire total, (3) Parenting Stress Index total, (4) Kohn Social Competence Scale total, and (5) Maternal Questionnaire total.

⁵ The Modified Maternal Questionnaire was designed to assess sibling relationships before the parental marital separation for a baseline measure with which to compare maternal reports of current (post-separation) sibling relationships (Maternal Questionnaire). Married mothers were to supply a retrospective account of their children's relationship to serve as a control for developmental changes. However, no information is available on the validity and reliability of the Maternal Questionnaire, therefore the validity of a measure (the Modified Maternal Questionnaire) which required the mothers to report how their children got along together a number of years ago is unknown. The accuracy of retrospective accounts are often suspect. In addition, because of the young age of the sample (two-to nine-years of age), many of the children were infants at the time of the marital separation, and mothers were unable to describe interaction between their children at that time. Since it was necessary to reduce the final number of variables to be analyzed, it was decided to eliminate the Modified Maternal Questionnaire, with its unknown validity, from the analysis.

MANCOVA on Questionnaire Data. A separate two factor (marital status and gender of sibling) between subjects MANCOVA was conducted to test the hypotheses of group differences on questionnaire data. Results indicated no significant ($p > .05$) differences on the MANCOVA, either for the main effects of marital status and gender of sibling or for the status by gender interaction. None of the univariate analyses revealed significance on these variables.

In summary, questionnaire data did not yield information on group differences.

Correlations Among Dependent Variables. As an aid to interpretation of the behavioral results, a correlation matrix was calculated for the six behavioral and five questionnaire dependent variables. Sibling Negative Interaction was correlated with the Parenting Stress Index total score ($r = .304$, $p < .05$); Far Proximity between the siblings was negatively correlated with the Child Behavior Inventory total score ($r = -.322$, $p < .05$; see Appendix 22.) The correlations among the behavioral measures and among the questionnaire measures are also presented in the appendix.

DISCUSSION

The primary aim of this study was to compare sibling interactions in single-parent and married-parent families. A subsidiary goal was to examine whether the presence of either an older brother or an older sister had an effect on the sibling interaction. In this section, after a brief general description of the sibling interaction which occurred in this study, the predictions formulated for the investigation and the findings relevant to each will be reviewed and discussed. Suggested explanations for the findings and integration of the results with previous research will also be presented. Following the review of the predictions and findings, limitations of the present investigation will be acknowledged and discussed. And finally, the implications of this investigation for further research will be outlined.

Sibling interaction was characterized by a great deal of solitary play. Forty-seven percent of the intervals consisted of non-interaction. This is consistent with the low levels of sibling interaction found in the laboratory by Lamb (1978b), but is at variance with the high levels of sibling interaction found by Abramovitch and her colleagues (Abramovitch et al., 1979, 1980, 1981; Corter et al., 1982; Pepler et al., 1981) while observing in the

home. Abramovitch et al. (1982) observed that "speculation about sibling interaction suggests that it is both more pervasive, and on occasion, more hostile than laboratory observations would suggest" (p. 71). They suggested that the differences in environment between the home and laboratory may account for the behavioral differences found. The unfamiliarity and brevity of the sessions may be contributing factors, as well as the large number of new toys which may capture a child's attention, thus distracting him away from his sibling.

Lamb (1978b) found that while children interacted more frequently with their parents than with their siblings, they maintained closer proximity to their siblings. The findings from the present study are not consistent with this, as children spent only 26% of the intervals in close proximity to their siblings (less than 0.3-m from one another), and more than half of the intervals (56%) in far proximity (more than 0.9-m from one another).

In 31% of the total intervals there was active interaction between the siblings. Prosocial behavior occurred in 28% of the total intervals; negative interaction occurred in less than five percent of the total intervals.

Sibling Interaction in Single-parent versus Married-parent Families

The present study predicted that siblings from single-parent homes would spend more time playing together and in proximity to one another relative to children from married-parent homes. This was based on the literature which suggested that children turn to one another when parents are less available. It was also thought that because the children shared a stressful experience (i.e., parental divorce), this would draw them closer together than children from married-parent families, as the literature has suggested for children experiencing other forms of disrupted parenting (e.g., Bank & Kahn, 1982b; Freud & Dann, 1951). The limited literature that does exist on sibling relationships in divorced families suggests that the relationship between the children should be more intense.

The results of the present study did not support this prediction. There were no significant main effects for the marital status variable. Although there was a significant marital status by gender of older sibling interaction for active interaction, examination of the simple effects indicated no effects of marital status. Children from single-parent homes did not interact more frequently nor remain in close proximity more frequently than children

from married-parent families. This seems to suggest the possibility that marital separation may not have been as stressful for the single-parent families in the present study as for the single-parent families studied in the literature.

The prediction that children from single-parent homes would display more positive social behaviors and also more negative interaction to one another relative to children from married-parent families was not supported. It was hypothesized that conflict as well as closeness increased between siblings following parental divorce, and that this would be apparent in the children's play interaction. The main analysis revealed no significant differences between children from each family type. There was a nonsignificant trend ($p = .06$) for a marital status by gender of older sibling interaction for prosocial behavior; however, the simple effects revealed no effects of marital status. Again, the possibility is raised that single-parent families are not highly stressed; therefore the children and their behavior are no different from that of children from married-parent families.

There may be several reasons why no significant effects (main or simple) were found for the difference between single-parent and married-parent families. One

possibility is that the divorce of the parents of young children was not as stressful for the present sample as has commonly been described in the literature. Many authors have emphasized the concomitants of divorce which affect a child's adjustment (e.g., Brandwein et al., 1974; Herzog & Sudia, 1971; Hetherington, 1979). Common stressors that accompany divorce include a reduction in economic status, a change of residence (often to a poorer neighborhood), change of school, and decreased contact with each parent. Herzog and Sudia (1971) went so far as to claim that the negative effects of divorce could be almost entirely eliminated if financial issues could be eliminated. An examination of the present sample revealed that it consisted of fairly well educated women (the mean educational level was five out of seven on Hollingshead's four-factor index of social status, 1975, which indicates partial college experience or specialized training) with moderately high status employment (three on Hollingshead's seven point scale, the level of semi-skilled workers). It may also be significant that the vast majority of published research on divorce and its effects has been carried out in the United States. Socialized medicine and the greater availability of subsidized day care in Canada than in the United States may help to attenuate some of the reported stresses faced by single-parent families. Thus, the

present sample may not have had to suffer many of the hardships described in the literature and may have had more resources and supports available to them, thereby decreasing the possible effects of marital separation on the children.

A second possibility is that in an era in which divorce is commonplace, adjustment to life in a single-parent family may not be as difficult as in the past. In a middle-class neighborhood with resources for child care, housework, medicare, and with a large number of other single-parent families, it may be that single mothers today receive more social and emotional support than in the past. Rutter (1979) suggested that if some of the stresses can be decreased for a child, even if other stresses remain, he/she may not suffer negative effects. Perhaps in the present study, their middle-class status helped to relieve some of the family stresses associated with marital separation; therefore the children were not as affected by divorce as children from single-parent homes studied in the literature. Thus, unlike previous studies of children of divorce, there may be no behavioral differences associated with marital separation between middle-class children from single-parent and married-parent homes.

Another related variable which may have mitigated against an effect of marital separation was suggested by

Rutter (1979), who has found that a single stress (such as parental divorce) has little lasting effect on a child if it is not coupled with several other stressors.

Hetherington (1979) also stated that most children can adjust to the effects of divorce unless there are multiple stresses and continued conflict in the family. In the present study, most of the single-parent children (56%) had been in day care, and had been attending day care for many years. Thus, the regularity of a daily routine may have served as a stabilizing factor for these children. For example, some investigators have suggested school and its routine can help children adjust more quickly after parental divorce (Belsky, Steinberg, & Walker, 1982; Wallerstein, 1977). Two- to nine-year olds still go to bed quite early, so after a day in day care, and three to five hours (Liebert, Sprafkin, & Davidson, 1982) in front of the television, children of these ages may have little time to feel the effects of an absent father.

The presence of substitute male models may have also attenuated the effects of father-absence associated with divorce on sibling relationships. Five out of 18 of the single-parent women in this sample lived with either a boyfriend or a male relative. In the past, some investigators (e.g., Hetherington, 1972) have selected their samples so that there were no males living in the

home since the divorce; however, there has been no systematic study using this as a variable. One of the few studies that did examine the effect of an older brother on the sex-typing of Black pre-school children from low SES families (Wohlford et al., 1971) found that those father-absent children who had an older brother were not deficient in their sex-typing, but children without an older brother were deficient. Hetherington, Cox, and Cox (1982) reported that boys from divorced families sought contact and attention from the male adults at school more than did other boys. Albeit a small literature from which to generalize, these studies lend some support for the assumption that a surrogate male model may help attenuate the effects of father-absence.

It was assumed that children in single-parent families would have busy mothers who had little time to pay attention to them; thus, the children would develop a pattern of interacting more with one another. However, it may be that by using such a young sample (two to nine years), the children went to bed early so that the children in the single-parent family would not experience the effects of an overburdened mother any more than children from married-parent families in which both adults work. Therefore, at least for the children in this study, there may be no differences between single-parent and

married-parent families in exposure to an overburdened mother.

Another possible explanation for the lack of significant findings is that perhaps sufficient time had not passed since parental marital separation to affect the children's closeness and/or conflictual relationship. The length of time since the marital separation in the present study ranged from five months to five years (mean = 2.14 years). As researchers have described changes in behavior between two months, two years, and five years after the marital separation (Hetherington, 1979; Hetherington et al., 1976, 1977, 1979b, 1979c, 1982; Wallerstein, 1977; Wallerstein & Kelly, 1974, 1975, 1979, 1980a, 1982), it is possible that families in the present investigation were at different stages of the adjustment process. Due to the small sample size it was not possible to include within-group comparisons of this nature.

Alternatively, research (Hetherington, 1979; Weiss, 1979a) has suggested that the child may acquire greater autonomy as a result of experience of the parental divorce. Independence, earlier maturity, and a sense of responsibility may be the possible positive benefits of this, but it may be at the cost of emotional sharing. The child of divorce may learn to rely upon his/her own devices and not become either closer to his siblings, nor more

antagonistic to them. Although the present study does not lend support to this possibility, the expected effects of divorce may have been nullified by these positive effects, thus resulting in no significant differences between children from single-parent and married-parent families.

A final possibility is that by attempting to equate groups in the present study for the number of working mothers and the occupational and educational levels of the mothers, the variables which tend to be characteristic of single-parent families may have been eliminated. This would tend to support Herzog and Sudia's (1971) contention that father-absence per se, or the mere experience of living in a single-parent home is not the crucial factor affecting children, but it is the concomitants of the divorce situation which affect the children and their behavior.

Although there was no significant main effect for marital status in the main analysis, the MANCOVA with each sibling, which collapsed across gender of older sibling and examined the behavior of each sibling separately, did reveal a significant MANCOVA for marital status. These results must be interpreted with caution because an increase in the number of variables (although the number of subjects was also increased), runs the risk of an inflated

F (Koretz, 1979). Although none of the univariates were significant, the eigenvectors indicated that the younger sibling's negative behavior directed toward the mother was weighted most heavily. This is consistent with the literature in that single mothers report a great deal of negative behavior from their sons. However, the next greatest weight (which was weighted negatively) was the younger sibling's total active behavior towards his mother, and thirdly was the younger sibling's prosocial behavior directed toward his mother. In all cases, the younger sibling in single-parent families exhibited a greater frequency of these behaviors than the younger sibling in married-parent families. Future researchers may wish to examine the mother-son or mother-younger sibling relationship. Dunn and Kendrick (1981a, 1981b, 1982) have found that the mother's relationship with her children is related to how the children get along with one another. This is an area which deserves further study, especially in the area of single-parent families and also how the sibling relationship may affect the mother's behavior.

The findings provided strong evidence that boys and their older brothers interacted significantly differently than boys and their older sisters. There was a significant main effect for gender of older sibling in the MANCOVA.

The findings from the MANCOVA eigenvectors appear to indicate that boys and their older sisters spent more time in solitary play and more time further apart than boys and their older brothers. Univariate analyses of gender of older sibling revealed that the prediction of more positive interaction in dyads which included an older sister was not supported. In fact, the opposite situation occurred; boy-boy interactions were significantly more positive than boy-girl interactions. Total active interaction between siblings was also significantly higher among same-sex than opposite-sex dyads as indicated by the univariate analyses of gender of older sibling.

There was a significant marital status by gender of older sibling interaction for total active interaction. Examination of the simple effects revealed that boy-boy dyads interacted significantly more frequently than boy-girl dyads in married-parent families but not in single-parent families. There was a trend toward a significant marital status by gender of older sibling interaction for sibling prosocial behavior. The simple effects analysis indicated that boys and their older brothers engaged in more prosocial interaction than boys and their older sisters in married-parent families, but not in single-parent families.

The results from the MANCOVA eigenvectors, the ANCOVAs, and the simple effects analyses appear to indicate that at this young age, male children prefer to play with a child of their own sex. Dunn and Kendrick (1979) discussed several reasons why same-sex siblings would be more attracted to one another. It may be that children of opposite sexes enjoy different sorts of activities and therefore do not interact as often. A second possibility is that early in the relationship, the older sibling is more attracted to a child of the same sex, and this establishes a pattern of frequent interaction. Finally, it may be that the younger child is more drawn to a sibling of the same sex whom he can imitate and with whom to identify.

The findings that boys and their older brothers interacted more frequently than boys and their older sisters in married-parent families but not in single-parent families provide some evidence that children in single-parent families may be deficient, or at least different, in their same-sex play. In married-parent families, boys appear to prefer to interact more with other boys, but in single-parent families, boys do not appear to have this preference. They appear to interact with both sexes equally frequently. Hetherington et al. (1976) found that boys from divorced homes tended to play with girl peers more frequently than did boys from married-parent

homes. This may be because the boys' play interests became less of the rough and tumble variety and more passive so that girls made suitable playmates. In the present study, the possibility also exists that the older sisters in the single-parent families were less traditional in sex-typing and preferred rough and tumble activities to passive activities. This may have made them more attractive playmates for their younger brothers than were older sisters in married-parent families. Previous research (Hetherington et al., 1979b) has indicated that fathers appear to be more influential in maintaining sex-typing than are mothers. The sex-typing of boys who become father-absent before the age of five years appear to be more deficient in sex-typing than boys who become father-absent after the age of five years (Hetherington, 1966; Hetherington et al., 1979a). With the departure of the father, the main influence for sex-typing may be absent, thus the children may not be as sex-role stereotyped as children from married-parent families.

The prediction of greater negative interaction between boy-boy dyads than between boy-girl dyads was not supported by the main analysis, as no significant differences were found for this variable. A possible explanation for this is that negative behavior occurred so infrequently in the

laboratory setting that no significant differences were evident.

The results indicated that, overall, children from single-parent families did not interact with their siblings differently than children from married-parent families. In married-parent families, boys and their older brothers appear to interact more frequently and to engage in prosocial behaviors more frequently than boys and their older sisters. In single-parent families, there were no differences in frequency of total active interaction nor prosocial interaction between boys and their older brothers versus older sisters.

Limitations of the Study

Although the findings of this study may be useful in understanding sibling relationships in single-parent and married-parent families, these findings should be interpreted with some caution due to various limitations of the investigation. Limitations of the present research include possible homogeneity of the sample, a small sample size, possible confounding variables, and possible limited reliability and insensitivity of the dependent measures.

Heterogeneity of the Sample. One of the important cautions in considering the findings is the homogeneity of the single-parent sample as well as the homogeneity between

the two selected groups. Previous research has indicated that the population of single-parent families is not homogeneous, but that variables such as time since separation (Atkeson, Forehand, & Rickard, in press; Lowenstein & Koopman, 1978), relationship with the father (Hetherington, 1979; Hetherington et al., 1976; Lowenstein & Koopman, 1978; Wallerstein & Kelly, 1979), availability of surrogate male figures (Hetherington & Duer, 1972; Marino & McCowan, 1976; Wohlford et al., 1971), and the quality of relationship between the parents post-divorce (e.g., Atkeson et al., in press; Brandwein et al., 1974; Emery, 1982; Hetherington et al., 1977) may be important within-group variables for which to control. Because of the small number of available subjects, it was not possible to examine these factors in the present study.

Additionally, there were many similarities between the two groups of families as they were equated for number of working mother, occupational and educational levels of the mother, number of children in the family, number of families with adopted children, and number of families with a non-family member living in the house. By equating the two groups on these variables, the usual variables which distinguish single-parent and married-parent families and which may affect the children's behavior may have been eliminated. Since there appear to be more similarities

than differences between the two groups, this may indicate that it is not the number of parents which is important in influencing sibling's behavior, but the other variables which directly and indirectly result from the marital separation.

Sample Size. The small sample size necessitates caution in interpreting the findings. Only seven boy-boy dyads and 11 boy-girl dyads from each family type participated in the study. Given the results from previous research that time since divorce, age of child at the time of divorce, quality of the child's continuing relationship with his non-custodial parent, and presence of surrogate male role models may be important variables, the representativeness of the groups of children from single-parent families used in this investigation is unknown. Additionally, the low number of subjects relative to the number of dependent variables required that several originally planned informative dependent variables be eliminated from the analyses. Given the limitations imposed by this restricted sample size, the present findings are to be viewed as suggestive and replication of the investigation using a larger sample is suggested.

Possible Confounding Variables. The occurrence of variables which significantly differed between the single-parent group and married-parent group may have been confounds in the present study. Although every effort was made to equate the SES of these two groups by matching on maternal occupation and education, by the very fact that the single-parent families were missing a wage earner, their SES was significantly lower than that of the married-parent families. Additionally, SES in families with an older brother was higher than families with an older sister (52.92 versus 46.50). Although an attempt was made to statistically control this variable by using it as a covariate, the effects that differences in SES may have had on this sample are unknown. A MANOVA analysis conducted without using SES as a covariate resulted in eliminating the significant marital status by gender of older sibling interaction. Results continued to reveal no differences between groups based on marital status, but the differences between boys with older brothers versus older sisters were increased. Future studies may attempt to select a comparison sample better matched for SES.

Another variable which differentiated between the two groups was the age of the mother. Single-parent mothers (mean age 31) were significantly younger than married-parent mothers (mean age 35). A MANCOVA analysis,

using maternal age (under 31 years of age, 31 to 35 years, and over 35 years of age) on sibling interaction revealed no differences for either marital status or gender of older sibling. It is not known what effects, if any, this variable may have had on the results.

The effect of number of years married on sibling interaction was examined by conducting a MANCOVA for mothers married less than eight years, eight to ten years, and those married more than ten years. Results indicated no group differences for either marital status or gender of older sibling.

A MANCOVA analysis was conducted to determine the effects of day care on children's behavior. There was no overall significant main effect of day care for either marital status or gender of older sibling.

While there was some attempt to screen out married-parent families with marital difficulties based on their responses on the life events subscale of the Parenting Stress Index, there was no separate questionnaire specifically addressed to marital stability. It is possible that mothers from intact families with poor marriages may be more attracted to a study on children of divorce than mothers from good marriages. Mothers who are considering leaving their husbands may be interested in learning what the effects of marital separation may be on

their own children. There is a great deal of literature addressing the issue of whether it is marital discord or physical separation of the parents which negatively affects the children in a divorce situation (e.g., Emery, 1982). If marital discord was high in some of the married-parent families, this may have attenuated any group differences attributed to marital status.

Reliability of Measures. Caution also needs to be used in interpreting results due to limitations in the reliability of some of the dependent measures. The original categories had to be collapsed several times due to limited interobserver reliability. Additionally, one of these general categories, the negative interaction category, attained only a minimal level of reliability. Collapsing categories also likely resulted in a very gross and insensitive measure of sibling interaction. Thus, it is suggested that a replication of the present investigation utilizing either more intensive and extensive observer training and/or a more reliably applied coding system would be warranted.

One way to accomplish this would be to use more extensive training of observers. Suggestions for this include a longer training period incorporating overpractice, in which observers continue to code tapes

after they have reached the criterion set for adequate reliability. A more strict criterion for attaining adequate reliability (e.g., .90 rather than .70) is a suggested method by which to improve the reliability of the observers and to maintain a higher level of interobserver reliability over time. The time constraints encountered in the present study made it difficult for this to be carried out.

The demands of the coding situation for the observers in the present study were quite heavy, which may have served to decrease motivation and performance. Each tape required approximately three hours to code, with 26 categories for each the three actors (mother, older sibling, younger sibling) of which to be aware. Decreasing the task requirements for the observers may be one way to preserve reliability. One way this could be accomplished would be to decrease the number of tapes each observer was required to code. However, this would involve training a larger number of observers, and would thus increase the load for the person training the observers. A second trainer, therefore, would be very helpful in relieving some of the workload.

An increase in the number of observers would also necessitate an increase in the number of calculations necessary. If funding permitted, a separate person could

be hired for performing the calculations. During the training sessions, this person would be useful for computing the daily reliabilities of each observer's scoring sheets with the pre-coded training tapes; during the actual scoring of the tapes this person could assess interobserver reliability of the double-coded tapes, and also, he/she could be responsible for tabulating the proportion of intervals in which each behavior occurred. With all these tasks taken care of, the trainer(s) would be freed to devote more time and effort to the actual training of observers or to coding more tapes him/herself.

The task of coding tapes might be made easier and more reliable if observers were trained to record a smaller number of more global categories. Perhaps the category system used in the present study, with 26 initial categories, attempted to undertake too fine an analysis, and that differences in sibling behavior may not be as easily detected at this molecular level. Dunn and Kendrick (1979) in their studies of sibling interaction, utilized positive, negative, and neutral behaviors for their comparisons. This may be the level at which differences in sibling behaviors may become apparent.

Additionally, it is important to note that the families were observed in an unfamiliar setting for only one 40-minute session and that they willingly participated

and were paid for their involvement. There is some evidence that sibling behavior may differ in different settings (Corter et al., 1982; Dunn & Kendrick, 1979; Lamb 1978a, 1978b). For example, Lamb (1978a, 1978b) found that there was little interaction between siblings in a laboratory environment. The results from the present study are consistent with this trend, as a majority of behavior exhibited by all the children was non-interaction activity; this occurred during approximately 47% of the 240 10-second play intervals. Mash and Mercer (1979), using the same laboratory playroom as the present study, also found that non-interaction behavior occurred more frequently than interaction between siblings. Mash and Mercer (1979) reported that negative behavior rarely occurred during sibling interaction, which is in agreement with the findings of the present study that siblings engaged in negative behaviors in fewer than five percent of the intervals. Leitenberg, Burchard, Burchard, Fuller, and Lysaght (1977) found that in home observations there was less negative interaction occurring between siblings when an outside observer was present than when he was absent. This seems to suggest that although some empirical studies on sibling interaction indicate few negative exchanges between the children, their actual behavior when not observed may actually consist of more antagonistic

interaction. Leitenberg et al. (1977) reported that non-interaction occurred in nearly 47 percent of the observation period in the presence of the observer, whereas it decreased to 34 percent when the mother was alone with the children. These researchers suggested that either non-interaction is a prepotent behavior for children or that siblings have learned that staying away from one another is the best means for avoiding fights and arguments. It is possible that extended observations in a natural environment may yield different information than that found in the laboratory.

The analysis of the questionnaire data and how maternal reports related to sibling interaction revealed very little. There were few significant correlations between the questionnaire and behavioral data which may suggest that each type of measure may be assessing different aspects of children's behavior.

The possibility of social desirability playing a role in the responses given by the single-parent mothers must be taken into account. Single-parent mothers may have hoped that their children were no different than children from married-parent families, thus they completed the questionnaires in a manner as to indicate no differences between children from the two types of families.

Another consideration is that the reliability of some of the questionnaires is unknown. Two questionnaires had little empirical evidence for their reliability and validity. The Maternal Questionnaire and the Revised Maternal Questionnaire (the latter of which was not included in the final analysis) were developed for a class project and modified for use in this investigation. They have not been utilized extensively enough to determine their reliability or validity. The Kohn Social Competence Scale was designed for use by preschool teachers rather than mothers, who completed the questionnaires in the present study. A child's behavior in a day care setting may be different than in the home, and a teacher's perceptions may be different than those of a mother. Thus, the reliability of the questionnaire used in this manner is unknown. Stolberg's Single-parent Questionnaire was normed on a population consisting of mostly school-aged children. Many of the questions referred to homework, chores, and other items which were not relevant to the children of preschool age studied in the present investigation. Thus, the reliability and validity of the questionnaire used for this sample is a question. Stolberg's Single-parent Questionnaire was created to assess the difficulties faced by custodial parents after a marital separation. However, results from the present study suggest that mothers of

single-parent and married-parent families responded to the questionnaire in much the same fashion. If this is indeed so, it implies that the questionnaire may assess difficulties encountered by all mothers, not only single-parent mothers.

Implications and Suggestions for Future Research

Given the above limitations, the findings from the present study must be interpreted with caution. However, they do provide some suggestions for future research. Because variables such as amount of time since the separation, changes in the father-child/ mother-child/ mother-father relationships, and developmental level of the child have been found to affect children's behavior and adjustment post-divorce, a longitudinal investigation would help provide information on the sibling relationship after a parental marital separation and which variables affect it as well as which are affected by it.

A second and possibly more economical approach would be to replicate the present study with a larger sample. This would enable within-group comparisons to be conducted on each of these variables, to help isolate the factors which are active in influencing the relationship between siblings. For example, day care is a variable which distinguished single-parent and married-parent families in

the present sample (single-parent families utilized day care significantly more than did married-parent families). This may have been an artifact of the procedure used to locate potential participants; however, the possibility exists that day care may have served as a stabilizing influence for the single-parent families in this study, and therefore contributed to the lack of differences between groups based on marital status. Future studies may provide information by comparing sibling interaction of children in day care to that of children not in day care. It would be informative to conduct both between-group and within-group comparisons, as it is not known whether day care affects single-parent and married-parent families in the same way (Belsky et al., 1982). A second example would be to conduct comparisons of single-parent families in which the children had a good relationship with their fathers with those families in which the children had a poor relationship with their fathers. This would help lend information as to the role of the father-child relationship after marital separation.

A further suggestion would be to either restrict the single-parent families to those who have no adult males living in the home, or to systematically examine the effects of a male figure on the children. This would contribute information to the issue of whether

father-absence is a crucial variable for children growing up in a single-parent family. Research seems to suggest that there are differences in children's behavior, including their interpersonal relationships (e.g., Hetherington 1972), depending on the type of father-absence they have experienced. More research is needed in this area. Additionally, previous research on divorce has suggested (Wallerstein & Kelly, 1977, 1980a, 1982) that the availability of the non-custodial father is related to a child's adjustment. The effects that father availability may have on the sibling relationship are as yet unexplored. Also, the influence of substitute male figures, such as a stepfather, an older brother, or community supports (e.g., Big Brothers) is an area which requires further investigation.

The significant findings for gender of older sibling in different family types raises interesting questions about sibling interaction in other gender combinations. Studies examining how preschool girls interact with their older brothers and sisters would yield more information on sibling relationships in same-sex versus opposite-sex dyads, as well as male-female differences and how they are affected by parental marital separation.

Given the present results on sibling interaction and gender effects, how well these findings generalize to peer

relationships is of interest. Utilizing an identical procedure for a child with his sibling and subsequently with a peer would aid in making direct comparisons for examination of a child's interpersonal relations. Peers, who are increasingly likely to have experienced living in a single-parent family themselves, are a potential source of support for a child experiencing the marital separation of his parents. The extant literature is deficient in enabling conclusions to be drawn regarding the association between sibling and peer relationships (e.g., Brody, Stoneman, & MacKinnon, 1982).

Future researchers may wish to include observations from a home or school environment in addition to the laboratory observations, as there is evidence suggesting situational specificity of behavior, which may well apply to the interaction between siblings. This appears to be especially important in light of the fact that researchers of sibling interactions have reported different types of behavior in laboratory versus home observations (Abramovitch et al., 1982; Corter et al., 1982; Lamb, 1978b).

Research controlling for the quality of the marriage in married-parent families would be helpful. It would serve to decrease similarities between the two groups and would also provide information on the controversy of

whether marital discord or marital separation is the more influential variable in affecting children. Families which consist of two parents who experience a great deal of conflict and discord may best serve as a separate comparison with married-parent families having little dissension between the spouses. This would lend information on whether sibling relationships are differentially affected by different family types as well as by different levels of parental conflict.

The relationship between the parents post-divorce is another important variable which requires further investigation. Conflict between the parents has been shown to be correlated with poor adjustment of the child (Hetherington et al., 1979b). Whether parental conflict after divorce affects the sibling relationship is an area to be explored.

The utilization of a more reliable coding system would be most useful. This could be accomplished by either more extensive training of observers and/or by utilizing categories which permit higher reliabilities. This would eliminate the problem of a potential decrease in reliability and sensitivity of the measures which may have resulted from the necessity of repeatedly collapsing categories in the present study.

In light of the preceding limitations of the present study, the following presents suggestions for future research designs for investigators interested in exploring sibling relationships in single-parent and married-parent families.

The single-parent sample would consist of two-child families with a preschool child two- to four-years of age and one older brother or sister either one- to two-years or three- to four-years older than the second-born child in which the parents are experiencing a separation due to marital discord. Both sexes would be included, so that all four gender combinations of two-child families and two age intervals would be represented. In order to best assess sibling relationships after the marital separation, longitudinal assessments would be conducted two- to four-months after the marital separation, and one year and two years after the separation. The married-parent sample would consist of two-parent families who have never experienced a separation between the parents due to marital discord, and would be matched for the ages of the children. These families would also be assessed at the same times as the single-parent families.

All families included in the study would have only two children, neither of whom are adopted. Adults living in common-law would be excluded from the sample, as well as

those who have been married more than once. Families would be matched for age of the mother as well as number of years the parents have/had been married.

The married-parent families would be divided into those with poor marital adjustment versus adequate marital adjustment, based upon their responses to the Short Marital Adjustment Test (Locke & Wallace, 1959). Thus, three family types would be examined: single-parent families, two-parent families with poor marital adjustment, and two-parent families with adequate marital adjustment.

Families with a range of SES levels would be selected, so that within each of the three groups a subsample of lower to lower-middle and middle- to upper-middle class groups could be observed.

Each family would be assessed for the quality of the father-child relationship; poor or positive, as assessed by individual parental interviews. Each family would complete questionnaires assessing their propensity toward responding in a socially desirable manner and their reported stress as a parent (via the Parenting Stress Index). In addition, one-parent families would be interviewed for information regarding the amount of acrimony pre- and post- separation.

At the first two testing sessions, sibling dyads would be observed in an Ainsworth strange-situation paradigm in the laboratory, in which the younger child's reaction to

the departure as well as return to the room would be observed. In addition, sibling interaction in free play would be observed. Finally, a structured situation such as the puzzle task used by Mash and Johnston (1982) in which the children were required to work cooperatively or a teaching situation as used by Cicirelli (1972, 1973 1974, 1975) would be given to the children. The siblings would also be observed in a freeplay situation in the home.

The present study was unable to examine differences in children's behavior toward their mother and the mothers' behaviors toward their children in single-parent and married-parent families. These may be important variables in determining sibling interactions and should be the subject of future investigations. Dunn and Kendrick (1981a, 1981b, 1982) found that the mothers' interactions with their first-born children were related to how her children got along together 14 months later. The possibility exists that the relationship between the siblings may play a part in influencing the mother's relationships with her children. This possibility was suggested by the significant correlation between the Parenting Stress Index and negative sibling interaction. The correlational nature of this finding precludes conclusions regarding whether it is a mother who feels highly stressed who behaves in a manner which causes her

children to react negatively to one another, or if children who interact in a negative manner create stress for their mother. The latter possibility leads to the suggestion that if negative sibling interaction results in a more highly stressed mother, positive sibling interaction may help relieve some of the mother's stresses. This is consistent with Mash and Johnston's (1983) finding that a high level of negative interaction between siblings was correlated with a high level of reported maternal stress on the child domain of the Parenting Stress Index. In addition, these researchers found that for hyperactive children, the amount of sibling interaction was negatively correlated with the child and mother domains of the Parenting Stress Index. This may indicate that a mother may be relieved of some stress if her children interact a great deal (possibly thus spending less time with her). However, if a high proportion of their interaction is negative, she may be required to spend time and effort intervening in the children's fights, thus increasing rather than decreasing her perceived stress. Rutter (1971) suggested that the availability of a peer playmate for a child may remove some pressure for the caretaker. The same function may be provided by the availability of siblings. If it is possible to teach siblings to spend a lot of time together without bickering or fighting, this may be a

potential support for the mother. A mother who is less stressed may be a better parent, and the children may benefit from this as well. Thus the potential exists for intervention which improves sibling relationships while also acting as a benefit for the mother, which may be especially helpful for an overburdened mother in a single-parent family.

Although few significant findings were evident in this study, future research on the sibling relationships of single-parent versus married-parent families is warranted, as interpersonal interactions with peers and adults are often reported trouble spots for children of divorce. If future studies find further differences in sibling interaction, suggested intervention for children of divorce may include utilizing the sibling relationship for mutual support as well as possible prevention of other interpersonal difficulties. For example, Mash, Johnston, and Kovitz (1982) pointed out that teaching conflict resolution skills to siblings may help alleviate not only the dissension between them, but also may transfer to peer interaction, an area in which it has been found that children from divorced homes have difficulty. Secondly, Mash et al. suggested that this may stimulate the positive aspects of sibling interaction such as caretaking, teaching, and prosocial modeling, all of which may be

especially important in a family with only one parent. Finally, according to these authors, teaching conflict resolution skills to siblings may also positively affect mother-child relationships, which is another commonly reported problem area for single-parent families. Although the present study did not find differences in negative interaction between single-parent and married-parent families, sibling conflict is a major complaint for many families of all types (Kelly & Main, 1979). These suggestions may be beneficial for all families, especially in light of the present findings that sibling relationships show more similarities than differences between single-parent and married-parent families.

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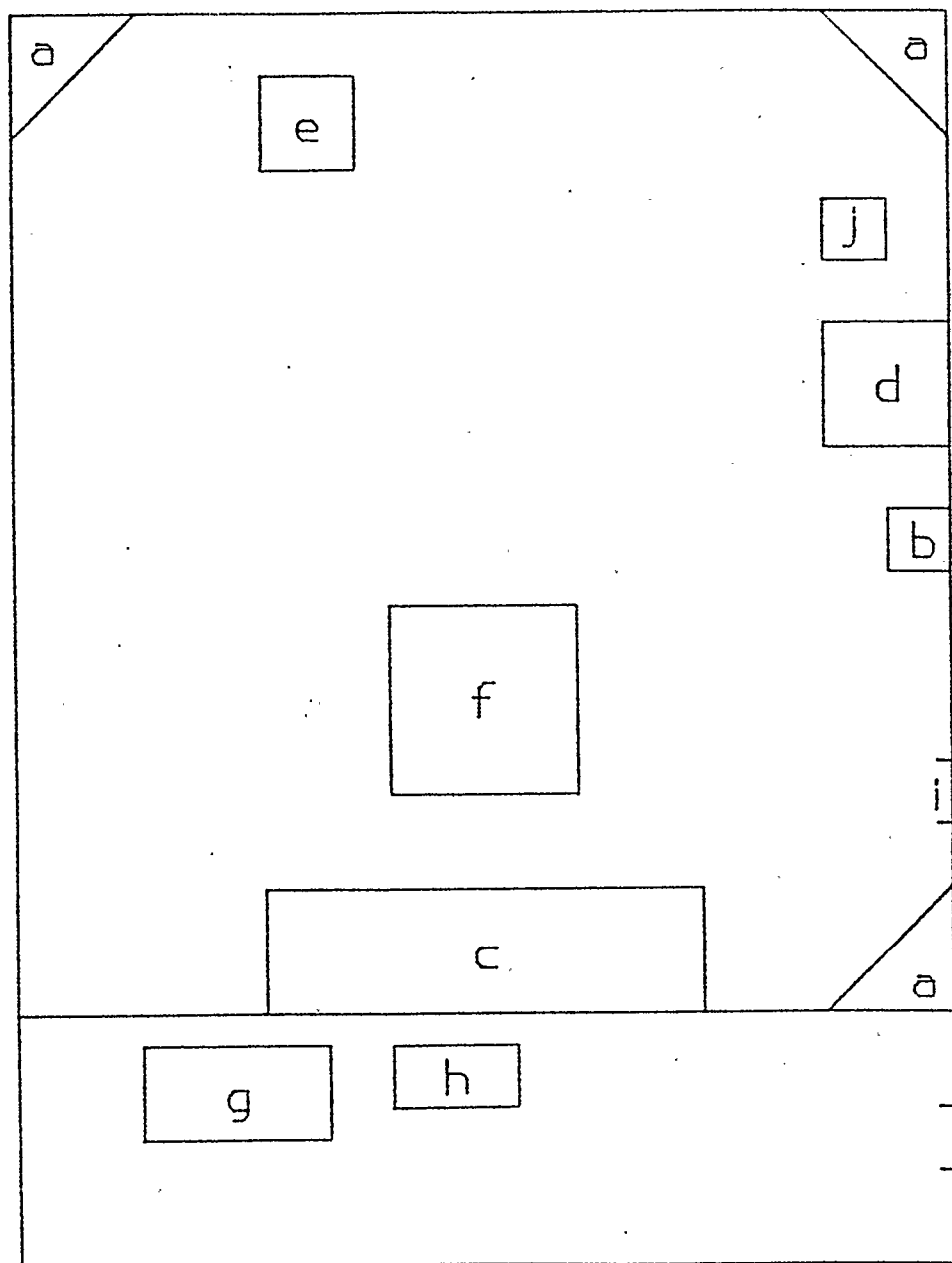
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APPENDIX 1

Diagram of Playroom



- | | |
|------------------------------|--------------------------------|
| a. Hidden cameras | f. Initial placement of toys |
| b. Bookshelf with extra toys | g. Remote controls for cameras |
| c. Couch | h. Videocassette recorder |
| d. Child's table | i. Entrance to playroom |
| e. Mother's desk and chair | j. Chair |

APPENDIX 2

Information on Questionnaires used in Study

Maternal Questionnaire. The first part of the Maternal Questionnaire consisted of 18 items describing interactions between siblings. Half of these items were examples of positive interaction (items 1, 2, 3, 5, 6, 8, 12, 14, and 18), and half of the items were examples of negative interaction (items 4, 7, 9, 10, 11, 13, 15, 16, and 17). Mothers were to rate the degree of their agreement or disagreement with the items on five-point scale. An example of a question tapping positive interactions is, "My children get along together better than do most brothers and sisters." An example of an item measuring negative interaction is, "My children don't talk to each other very much."

The second part of the Maternal Questionnaire included nine items indicating positive attachment between siblings and nine items indicating negative, or a lack of, attachment. Questions indicating a positive attachment included those demonstrating shared interests (items 1, 14, and 15), positive social interaction (items 9, 12, 16, and 17), and caretaking behavior (items 3 and 6). An example of an item reflecting positive attachment is, "Goes along with his sibling's ideas." Items measuring negative attachment were those indicating physical aggression between siblings (items 5, 7, 10, and 13), verbal aggression between siblings (items 8, 11, and 18), and a lack of closeness between siblings (items 2 and 4). An example of an

item reflecting negative attachment is, "Butts into games or activities when he has not been invited by his sibling."

Approximately seven minutes were required to complete both parts of the questionnaire.

Modified Maternal Questionnaire. The Modified Maternal Questionnaire was very similar to the Maternal Questionnaire; however, this entailed a retrospective assessment through single mothers responding to the questions as to how their children got along together before the marital separation. Married mothers were equated with the single mothers for an equivalent number of years back they had to recall. The Modified Maternal Questionnaire also required approximately seven minutes to complete both parts.

Stolberg's Single Parenting Questionnaire. Stolberg's Single Parenting Questionnaire included 88 multiple choice items relating to the life situation of the single-parent and her family (Stolberg, Cullen, & Garrison, 1982). There were ten scales including communication, warmth, discipline/control, rules, routines, value of parenting, child involvement in decision making, parent-child activities, support systems, and problem solving. Fourteen of the 88 items which referred specifically to the divorce experience were modified on the version given to the non-divorced mothers. An attempt was made to slightly reword these questions so that they were more appropriate for married mothers, but remained within the same scale as the original items. For example, item 8, "Do you have

the opportunity to date?" was changed to, "Do you have the opportunity to be alone with your husband?" so that in both forms the item was included in the scale "support systems". Test-retest reliability was found to range from .54 to .71 (mean = .59; Stolberg & Ullman, 1983). Approximately 15 minutes were required to complete this questionnaire.

Parenting Stress Index. The Parenting Stress Index was designed to measure maternal report of stress associated with being a parent (Burke & Abidin, 1978). There were 126 multiple choice items in the questionnaire. It consisted of four domains representing various sources of stress a parent may encounter. Each domain was subdivided into various subscales. The Child Domain was made up of the following five subscales: Child Adaptability/Plasticity; Acceptability of Child to Mother; Child's Demandingness/Degree of Bother; Child's Mood; and Child's Distractibility/Activity. The Mother/Child Interaction Domain consisted of the subscale, Mother is Reinforced by Child. The Mother Domain contained eight subscales: Mother's Depression, Unhappiness, Guilt; Mother Attachment; Restriction Imposed by the Parental Role; Mother's Sense of Competence; Social Isolation; Realistic Attitude Towards Children; Relationship with Husband; and Parental Health. The Situational/Demographic Domain was composed of the Situational Stress scale and the Life Stress scale. Three-week test-retest reliability for the total score was found to be .82 (Abidin, 1982). Abidin (1982) reported that Lafiosca (1981) found that the domain scores and total scores

successfully differentiated clinic-referred children from a matched non-referred group. Twenty to 30 minutes were required to complete the Parenting Stress Index.

Kohn Social Competence Scale. The Kohn Social Competence Scale covered a range of child behaviors from emotional health to disturbance (Kohn & Rosman, 1973). The 64 item questionnaire consisted of two factors. Factor I measured Interest-Participation versus Apathy-Withdrawal. Factor II measured Cooperation-Compliance versus Anger-Defiance. An example of a Factor I item is, "Other children copy this child's ideas for play". An example of a Factor II item is, "Child has to be a leader in order to participate with other children". Originally designed for preschool teachers to provide information on the child's adjustment to the social and disciplinary demands of a preschool setting, for the purposes of this study, items mentioning the word "teacher" were changed to read "mother" or "adult" and the questionnaire was used in the attempt to gain information about the children's peer relationships. Items were rated on a five-point Likert scale. Inter-rater reliability for Factor I was found to be .69; for Factor II, inter-rater reliability was .77 (Kohn & Rosman, 1973). Approximately five minutes were required to complete this questionnaire.

Eyberg Child Behavior Inventory. The Eyberg Child Behavior Inventory consisted of 36 items that were typical problem behaviors of conduct problem children (Robinson, Eyberg, & Ross, 1980). It consisted of two scales: the Problem Scale, which

required a yes/no response and had a range from 0 to 36; and the Intensity Scale, which was rated on a 1 to 7 scale with a range of 36 to 252. A sample question from the Eyberg Child Behavior Inventory is, "Dawdles in getting dressed". The questionnaire demonstrated significant discriminant validity in differentiating between conduct problem and non-problem children (Robinson, Eyberg, & Ross, 1980). It required approximately five to ten minutes to complete.

Name _____

APPENDIX 3

Date _____

Maternal Questionnaire

A. On a scale from one to five, where one is "strongly disagree" and five is "strongly agree", where would you place your children at the present time? When answering, please think about your younger child first and then your older one.

Strongly Disagree			Strongly Agree	
1	2	3	4	5

1) My children get along better than most brothers and sisters do.

1 2 3 4 5

2) My children play well together.

1 2 3 4 5

3) My children can work cooperatively without causing much friction.

1 2 3 4 5

4) My children do not talk to each other very much.

1 2 3 4 5

5) My children like one another more than most brothers and sisters do.

1 2 3 4 5

6) My children stand up for one another.

1 2 3 4 5

7) My children destroy each others' property.

1 2 3 4 5

8) My children are helpful towards one another.

1 2 3 4 5

9) My children tease one another.

1 2 3 4 5

10) My children fight with one another.

1 2 3 4 5

11) My children dislike each other.

1 2 3 4 5

12) My children share with one another.

1 2 3 4 5

13) My children boss each other around.

1 2 3 4 5

14) My children ask for each other when separated.

1 2 3 4 5

15) My children criticize each other a lot.

1 2 3 4 5

16) My children spend very little time together compared to most brothers and sisters.

1 2 3 4 5

17) My children disrupt one another's activities.

1 2 3 4 5

18) My children are able to get one another interested in an activity.

1 2 3 4 5

B. Below is a series of descriptions of behavior often shown by children during their interactions with their siblings (brothers and sisters). Please answer for your younger child.

1) Goes along with his sibling's ideas

1 2 3 4 5

2) Has difficulty getting his sibling's attention

1 2 3 4 5

3) Is at a loss without his sibling directing him or
organizing activities

1 2 3 4 5

4) Keeps to himself and remains aloof from his sibling

1 2 3 4 5

5) Butts into games or activities when he has not been
invited by his sibling

1 2 3 4 5

6) Accepts criticism well from his sibling

1 2 3 4 5

7) Grabs for sibling's toys or belongings

1 2 3 4 5

8) Interrupts when his sibling is having a conversation with
someone else

1 2 3 4 5

9) Shows patience with his sibling (able to wait for his
sibling to do something)

1 2 3 4 5

10) Bothers his sibling when his sibling is playing

1 2 3 4 5

11) Blames his sibling for his own misdeeds

1 2 3 4 5

12) Plays fair with his sibling (follows rules, waits turn)

1 2 3 4 5

13) Physically aggressive with his sibling (hits, kicks, or
bites)

1 2 3 4 5

14) Likes his sibling's friends

1 2 3 4 5

15) Plays with his sibling's friends

1 2 3 4 5

16) Apologizes when he does something wrong to his sibling

1 2 3 4 5

17) Asks permission to use his sibling's possessions

1 2 3 4 5

18) Argues with his sibling over any little thing

1 2 3 4 5

Name _____

Date _____

Modified Maternal Questionnaire

Maternal Questionnaire-R

A. On a scale from one to five, where one is "strongly disagree" and five is "strongly agree", where would you place your children

	Strongly		Strongly		
	Disagree		Agree		
	1	2	3	4	5

1) My children got along better than most brothers and sisters did.

1 2 3 4 5

2) My children played well together.

1 2 3 4 5

3) My children worked cooperatively without causing much friction.

1 2 3 4 5

4) My children did not talk to each other very much.

1 2 3 4 5

Strongly Disagree			Strongly Agree	
1	2	3	4	5

5) My children liked one another more than most brothers and sisters did.

1	2	3	4	5
---	---	---	---	---

6) My children stood up for one another.

1	2	3	4	5
---	---	---	---	---

7) My children destroyed each others' property.

1	2	3	4	5
---	---	---	---	---

8) My children were helpful towards one another.

1	2	3	4	5
---	---	---	---	---

9) My children teased one another.

1	2	3	4	5
---	---	---	---	---

Strongly Disagree			Strongly Agree	
1	2	3	4	5

10) My children fought with one another.

1	2	3	4	5
---	---	---	---	---

11) My children disliked each other.

1	2	3	4	5
---	---	---	---	---

12) My children shared with one another.

1	2	3	4	5
---	---	---	---	---

13) My children bossed each other around.

1	2	3	4	5
---	---	---	---	---

14) My children asked for each other when separated.

1	2	3	4	5
---	---	---	---	---

15) My children criticized each other a lot.

1	2	3	4	5
---	---	---	---	---

Strongly			Strongly	
Disagree			Agree	

1	2	3	4	5
---	---	---	---	---

16) My children spent very little time together compared to most brothers and sisters.

1	2	3	4	5
---	---	---	---	---

17) My children disrupted one another's activities.

1	2	3	4	5
---	---	---	---	---

18) My children were able to get one another interested in an activity.

1	2	3	4	5
---	---	---	---	---

B. Below is a series of descriptions of behavior often shown by children during their interactions with their siblings (brothers and sisters). Please answer for your younger child.

1) Went along with his sibling's ideas

1	2	3	4	5
---	---	---	---	---

Strongly Strongly
Disagree Agree

1 2 3 4 5

2) Had difficulty getting his sibling's attention

1 2 3 4 5

3) Was at a loss without his sibling directing him or
organizing activities

1 2 3 4 5

4) Kept to himself and remained aloof from his sibling

1 2 3 4 5

5) Butted into games or activities when he had not been
invited by his sibling

1 2 3 4 5

6) Accepted criticism well from his sibling

1 2 3 4 5

Strongly Disagree			Strongly Agree	
----------------------	--	--	-------------------	--

1	2	3	4	5
---	---	---	---	---

7) Grabbed for sibling's toys or belongings

1	2	3	4	5
---	---	---	---	---

8) Interrupted when his sibling was having a conversation with someone else

1	2	3	4	5
---	---	---	---	---

9) Showed patience with his sibling (was able to wait for his sibling to do something)

1	2	3	4	5
---	---	---	---	---

10) Bothered his sibling when his sibling was playing

1	2	3	4	5
---	---	---	---	---

11) Blamed his sibling for his own misdeeds

1	2	3	4	5
---	---	---	---	---

Strongly Disagree			Strongly Agree	
----------------------	--	--	-------------------	--

1	2	3	4	5
---	---	---	---	---

12) Played fair with his sibling (followed rules, waited turn)

1	2	3	4	5
---	---	---	---	---

13) Physically aggressive with his sibling (hit, kicked, or bit).

1	2	3	4	5
---	---	---	---	---

14) Liked his sibling's friends

1	2	3	4	5
---	---	---	---	---

15) Played with his sibling's friends

1	2	3	4	5
---	---	---	---	---

16) Apologized when he did something wrong to his sibling

1	2	3	4	5
---	---	---	---	---

Strongly Disagree			Strongly Agree	
----------------------	--	--	-------------------	--

1	2	3	4	5
---	---	---	---	---

17) Asked permission to use his sibling's possessions

1	2	3	4	5
---	---	---	---	---

18) Argued with his sibling over any little thing

1	2	3	4	5
---	---	---	---	---

Name _____ APPENDIX 4 Date _____

Stolberg's Single Parent Questionnaire - Original Form
PARENT QUESTIONNAIRE

Instructions: Please answer these questions the way things really are, not just the way you would like them to be. Circle the answer that best describes you and _____

1. How often does your child come and talk to you about a problem?
 - a. I think my child talks to me whenever he/she has a problem.
 - b. I think my child usually talks to me whenever he/she has a problem
 - c. I think my child keeps most of his/her problems to him/herself, but sometimes talks to me.
 - d. My child rarely discussed his/her problems with me.
2. How often is your child late for school (or day care) or the school bus
 - a. Once or twice a year.
 - b. Three or four times a year.
 - c. Five or six times a year.
 - d. More than six times a year.
3. How much difficulty do you have handling your financial (paying bills, budgeting, etc.) responsibilities?
 - a. I can't pay 50% of the bills most months.
 - b. I can't pay 25% of the bills most months.
 - c. I can pay all but one or two bills most months.
 - d. I can pay all of my bills most months.
4. Of the things you have planned to get done every day, how many of these things do you actually get done?
 - a. About one fourth of what I plan gets done.
 - b. About one half of what I plan gets done.
 - c. About three quarters of what I plan gets done.
 - d. Everything I plan gets done.
5. How often does your child get up late for school (or day care)?
 - a. Once a week or more.
 - b. About three times a month.
 - c. About once or twice a month.
 - d. Just a few times a year.
6. My child's father
 - a. Has regular visitations which he never misses.
 - b. Visits my child more than the regular visitation, or has joint custody, or sees my child more than twice a week.
 - c. Has regular visitations but misses them fairly frequently.
 - d. Does not visit my child.

7. What kinds of rules have you set about the cleanliness of your child's room?
 - a. My child's room must be kept neat at all times.
 - b. My child's room must be kept reasonably neat most of the time.
 - c. My child is required to clean up the room whenever it gets too messy.
 - d. My child's room is his/her own and can be as neat or messy as the child pleases.
8. Do you have the opportunity to date?
 - a. At least once a month.
 - b. Once every two or three months.
 - c. Once every six months or so.
 - d. I never have the opportunity to date.
9. When I am not at home, my child knows how I can be reached
 - a. At all times.
 - b. About three quarters of the time.
 - c. About half the time.
 - d. About a quarter of the time.
10. When it comes to telling your child about divorce, would you
 - a. Discuss what divorce means to your child and ask how he/she feels about it.
 - b. Tell him/her what divorce means without discussion.
 - c. Mention divorce in terms of its happening, but don't go into detail.
 - d. Not discuss it.
11. Given the changes in family responsibilities and demands and my earlier feelings about parenting, I now find childrearing
 - a. Much less satisfying.
 - b. Less satisfying.
 - c. Equally satisfying.
 - d. More satisfying.
12. Do you have anyone to talk to about how you really feel about the divorce?
 - a. I have four or five people I can talk to.
 - b. I have two or three people I can talk to .
 - c. I have one person I can talk to.
 - d. I can't talk to anyone about it.
13. If an appliance in your house broke down, what would you do?
 - a. Try and fix it yourself.
 - b. Try to do without the appliance.
 - c. Call a repair person (plumber, electrician).
 - d. Call a friend for advice.

14. Have you ever taken a class or workshop on parenting?
 - a. Have completed more than one class.
 - b. Have completed a class, or am presently taking a class.
 - c. Started a class but dropped it.
 - d. Never.
15. If you wanted to talk to someone about a personal problem, are there people to whom you could talk?
 - a. I could talk to four or five people.
 - b. I could talk to two or three people.
 - c. I could talk to one person.
 - d. I can't think of anyone I could talk to.
16. How do you respond when your child does a chore he/she was assigned to?
 - a. I say nothing since I expect it to be done.
 - b. I usually don't say anything unless the job was exceptionally well done.
 - c. I praise my child or say thank you.
 - d. I praise my child and say thank you.
17. How often do you take an active part in one of your child's activities (Boy or Girl Scout leader, sponsor, coach, aid in classroom, going to games, swim meets, etc.)?
 - a. I am almost always actively involved in one or more of my child's activities.
 - b. I am usually involved.
 - c. I'm sometimes involved but I'm usually too busy.
 - d. I have rarely been actively involved.
18. Is your child involved in making decisions regarding himself/herself (choosing clothes, TV programs, what to eat, etc.)?
 - a. Not at all.
 - b. Only in minor decisions.
 - c. About half the decisions.
 - d. Almost all decisions.
19. When your child gets a minor cut or scrape, how do you respond?
 - a. Tell the child to take care of it without any help.
 - b. Send the child to clean and bandage it, and check on it later.
 - c. Clean and bandage it while treating it matter-of-factly.
 - d. Clean and bandage it while showing much concern and sympathy.

20. How often do you feel you and your child have a good time or fun together?
- We rarely seem to have a good time.
 - About half the time is good and half bad.
 - Once in a while we don't have a good time together, but our times together are usually good.
 - Most of the time I feel good about our times.
21. Is your child involved in making financial decisions (budgeting, major purchases, expenses, etc.)?
- Almost all the decisions.
 - About half the decisions.
 - Only in minor decisions.
 - Not at all.
22. As far as discussing divorce with your child is concerned:
- I talked to my child about divorce but we haven't discussed it much.
 - My child has asked a few questions, or no questions.
 - My child and I have talked about some of his/her questions, but my child hasn't talked about his/her feelings.
 - My child seems to have talked about most of his/her concerns and feelings and has asked many questions.
23. When your child does extra housework, yardwork, or some other favor without being asked, what do you do?
- My child never does more than what's expected.
 - I don't say anything.
 - Give my child some praise.
 - Give my child some praise and some sign of affection.
24. When you feel really low about your situation do you:
- Go to bed.
 - Sit and stew about it.
 - Call a friend or family member for support and advice.
 - Think of something you can do to improve your situation and then do it.
25. We have a regularly scheduled mealtime:
- Only on special occasions, or less than once a week.
 - One to three times a week.
 - Four or five times a week.
 - Every day.
26. When it comes to matters about raising my children:
- I talk to my child's father regularly about matters pertaining to their development.
 - I talk to my child's father only about really big problems (serious illness, major school problems, peer problems).
 - I talk to my child's father only about money.
 - I never talk to my child's father.

27. When your child has a problem with a friend, how often are you able to listen to his/her side of the story?
- I almost always listen and give my child my full attention.
 - I usually try to listen, but I'm often listening and doing something else at the same time.
 - I rarely have time to listen.
 - I'm never able to listen.
28. The money (allowance or spending money) I give my child
- Can be spent on anything the child wants.
 - Can be spent in ways the child and I have agreed on together.
 - Can partly be spent as the child wants and partly the way I say.
 - Can only be spent with my permission.
29. My child is permitted to watch TV on week nights
- Never.
 - After completion of homework and/or chores with supervision by me.
 - After completion of homework and/or chores without supervision.
 - Whenever he/she wants to.
30. How often do you drive your child to some event other than to school (or day care)?
- Only on rare occasions.
 - About once a week.
 - About two or three times a week.
 - Almost every day (4 or more times a week).
31. What rules do you have about your child leaving the house after school (or day care) during free time?
- My child is not allowed to leave the house/yard.
 - My child is allowed to leave to play in specific areas (neighborhood park, certain friends' houses).
 - My child is allowed to leave if he/she informs me or leaves a note as to where he/she is going.
 - My child is allowed to leave the house whenever he/she wants to.
32. When it comes to discussing matters related to your divorce, how do your parents react?
- Are available when you need them.
 - Offer brief suggestions.
 - Don't want to talk about it.
 - Get angry.

33. Is your child involved in making decisions regarding household management (who cleans the house, does yardwork etc.)?
- a. Not at all.
 - b. Only in minor decisions.
 - c. About half the decisions.
 - d. Almost all the decisions.
34. Approximately how many hours a week do you usually get out by yourself or with friends for some type of recreation or other nonwork activity?
- a. 0 to 1 hours per week.
 - b. 2 to 4 hours per week.
 - c. 5 to 10 hours per week.
 - d. More than 10 hours per week.
35. If your child doesn't approve of one of your dates, do you:
- a. Continue to see the person and ignore your child's disapproval.
 - b. Continue to see the person and hope that the child will accept the person.
 - c. Find out why the child doesn't like him and talk to him/her about that.
 - d. Stop seeing the person.
36. When you were little, did you ever think about what it would be like to be a parent?
- a. I never thought about it.
 - b. I thought about it once or twice.
 - c. I thought about it somewhat.
 - d. I thought about it a great deal.
37. My child is permitted to have snacks between meals
- a. Whenever he/she wants.
 - b. Usually, but must ask me first.
 - c. Only for a special treat.
 - d. I don't allow eating between meals but sometimes my child eats snacks outside the house.
38. how often do you and your child(ren) go somewhere together?
- a. Once a week or more.
 - b. Two or three times a month.
 - c. Once a month.
 - d. Less than once a month.
39. What kind of rules do you have about curfews (or will you when your child is older)?
- a. The child may come home whenever he/she wants to.
 - b. My child has a curfew but often stays out later.
 - c. My child has a curfew but it is often extended.
 - d. My child must be home by a certain time with no exceptions.

40. If you needed help with your children (babysitter, advice, carpooling) are there people whom you could ask?
- a. I have four or five people I could ask.
 - b. I have two or three people I could ask.
 - c. I have one person I could ask.
 - d. I can't think of anyone I could ask.
41. How many times do you have to ask your child to do something before he/she will actually do it?
- a. My child rarely does what I ask him/her to do.
 - b. Four or five times.
 - c. Two or three times.
 - d. Only once.
42. My child's daily diet
- a. Is up to my child.
 - b. I sometimes supervise what my child eats.
 - c. I usually know if my child is eating a balanced diet.
 - d. I strictly monitor my child's diet to make sure it is well balanced.
43. Do you have a daily routine with your child (for meals, getting up, doing chores, etc.) during the school year?
- a. We don't follow any routine and things get done in whatever order seems right at the time.
 - b. We don't have a daily routine but usually things get done around the same time.
 - c. Yes, we have a daily routine which we usually follow.
 - d. Yes, we have a daily routine that we almost always follow.
44. How often does it happen that you and your child have pleasurable times alone together?
- a. I have time to be alone with my child once a week or less often.
 - b. I have time to be alone with my child about 2 to 3 times or less a week.
 - c. I have time to be alone with my child 4 to 5 times a week.
 - d. I have time to be alone with my child at least once a day.
45. Is being a parent like you expected it to be?
- a. Much harder than I expected.
 - b. A little harder than I expected.
 - c. About the same as I expected.
 - d. Easier than I expected.

46. What rules do you have about bedtime (or did you, if your children are too old for bedtimes) on week nights?
- The child has no set bedtime.
 - The child has a set bedtime that is often extended.
 - The child has a set bedtime that is occasionally extended.
 - The child has a set bedtime which is never extended.
47. My child is left unsupervised by an adult:
- Never.
 - Only on rare occasions.
 - Several times a week but only during the day.
 - Several times a week both during the day and at night.
48. If you wanted to socialized with someone (call on phone, go out for an evening) do you have people to contact?
- I have four or five people I could call.
 - I have two or three people I could call.
 - I have one person I could call.
 - I can't think of anyone I could call.
49. In the mornings before my child leaves for school (or day care)
- I make sure my child is well dressed, has eaten breakfast, and has lunch money or a lunch.
 - I ask my child if she/he has had breakfast, and has money for lunch or a bag lunch, but I don't closely supervise my child in the morning.
 - I say good bye to my child but I'm not sure if she/he has eaten or has what she/he need.
 - My child leaves before I get up or I leave before my child gets up.
50. What rules do you have about household chores?
- My child is expected to help when asked.
 - My child does not have regular chores.
 - My child has regular chores and usually does them.
 - My child has regular household chores which must be done by a certain time.
51. My child's appearance
- Is up to my child all of the time.
 - Must meet with my approval only for special occasions.
 - Must meet with my approval for school, church and for special occasions.
 - Must meet with my approval all of the time.

52. Do you feel overwhelmed by your job, child care and/or household responsibilities?
- Always, nearly every day.
 - Often, at least once a week.
 - Sometimes once or twice a month.
 - Never.
53. If your children were having trouble getting along with or didn't like a person you were seeing regularly, what would you do?
- Keep seeing the person regardless.
 - Find out why your children didn't like him/her and talk about that.
 - Tell your children how to get along with this person.
 - Stop seeing the person.
54. Have you ever read a book on parenting?
- Never.
 - Started one but didn't/haven't finished it.
 - Have read one or two.
 - Have read more than two.
55. How often do you praise your child (with a special treat) for doing an especially good job in school (or day care) or for improving?
- I almost always praise my child
 - I usually give my child some praise.
 - I sometimes give my child praise.
 - I almost never give my child praise.
56. My child shows affection (verbal or physical) towards me
- Once a month or less.
 - Two or three times a month.
 - Two or three times a week.
 - Once a day or more.
57. Do you ask your child what the trouble is when he/she seems sad or upset?
- I always ask my child what's wrong.
 - I usually ask my child what's wrong.
 - I sometimes ask my child what's wrong, but I don't like to interfere in my child's business.
 - I let my child handle his/her own problems.
58. Do you have the opportunity to meet new people (through groups, friends, meetings)?
- At least once a week.
 - At least every two or three weeks.
 - Every few months.
 - Not in the last six months.

59. What do you do about your child's birthday?
- Birthdays are very special, and my child gets gifts, a party or a special dinner to celebrate.
 - Birthdays are somewhat special and my child gets one special thing (i.e., gift, a choice of dinner, etc.).
 - Birthdays are celebrated once in a while.
 - Birthdays aren't celebrated in our home.
60. When your child does something you don't like or makes you angry, how often do you calmly discuss this with your child?
- I always calmly discuss it with my child.
 - More often than not I calmly discuss it with my child.
 - Once in a while I calmly discuss it with my child.
 - I never calmly discuss it with my child.
61. Do you find that being responsible for car care is a difficult task?
- Often.
 - Sometimes.
 - Rarely.
 - Never.
62. When your child does something that makes you angry, how often do you tend to "fly off the handle" and yell at your child?
- I only yell about once or twice a month or less.
 - I yell about once or twice a week.
 - I yell about three or four times a week.
 - I yell about five times a week or more.
63. Since having become a single parent, have you found that you have more or fewer responsibilities?
- A few less.
 - Same amount.
 - A few more.
 - Many more.
64. If your child go in trouble at school (or day care) or on the school bus would you
- Punish the child strongly.
 - Punish the child moderately.
 - Talk to and maybe punish the child.
 - Say nothing and let the child face the consequences of his/her actions.
65. How often do you praise your child for good behavior at home or at school (or day care)?
- At least once a day.
 - About once or twice a week.
 - About two or three times a month.
 - About once a month or less.

66. How much time do you spend talking to your child?
- Fifteen minutes or less a day.
 - One half hour each day.
 - An hour each day.
 - Two hours or more every day.
67. My child is permitted to have guests in the house
- Guests can only come on special occasions.
 - Most of the time but an adult must be present.
 - Most of the time but must ask first.
 - Whenever the child wants.
68. When your child misbehaves how often do you punish him/her?
- Always.
 - Usually, three out of four times.
 - Seldom one out of four times.
 - Hardly ever, less than one out of five times.
69. If you saw your child's bed unmade after he/she left for school (or day care), would you
- Not make it and mention it to your child.
 - Make it yourself and mention it to your child.
 - Make it yourself and not say anything.
 - Not do anything.
70. When you have trouble "making ends meet" do you
- Ignore the bills.
 - Ask for help from a friend or family.
 - Pay part of the bills or pay the important ones.
 - Talk to the people to whom you owe the money.
71. If a person you were seeing regularly had trouble getting along with (or didn't like) your children, what would you do?
- Keep seeing the person regardless.
 - Tell him/her ways to get along with your children.
 - Ask why he/she doesn't like your children and talk about that.
 - Stop seeing the person.
72. Do you have relaxing time to be alone for an hour or two (to read a book, watch TV, write letters, etc.)?
- Once a month or less.
 - A couple of times a month.
 - A couple of times a week.
 - Almost every day.

73. If your child's grade went down, would you
- Punish or get angry with the child.
 - Talk to your child and go to the school.
 - Talk to your child and try to find out what the problem is.
 - Do nothing
74. On the weekends, I have a planned activity (movie, dinner, big chore, etc.) together with my child(ren)
- At least once every weekend.
 - About two or three times a month.
 - About once a month.
 - Every few months or less.
75. Do you have family traditions surrounding holidays?
- We have few, if any, family traditions.
 - We don't follow the family traditions that we have very well.
 - We have a few family traditions we keep most of the time.
 - We have a great many which we follow.
76. After school (or day care) my child is supervised
- By me.
 - By a sitter, day care facility or an adult relative/friend.
 - By an older sibling or neighbor.
 - By no one.
77. What kind of rules do you have about roughhousing (noise, jumping on beds, breaking things, etc.)?
- I believe my child should be able to play any way he/she chooses.
 - My child can play mostly as he/she chooses.
 - My child is not permitted to break things and do things to hurt others or him/herself.
 - The type of play and amount of noise is limited while in the house to quiet games and reading.
78. If my child broke an important household rule, I would most likely
- Ignore the misbehavior.
 - Talk to the child and warn him/her of the consequences of the misbehavior.
 - Talk to the child and punish him/her moderately (restrict privileges, for a short time, take away allowances).
 - Strongly punish the child.

79. If your child was afraid of something (going to the dentist or doctor, giving a talk at school, taking a test, etc.), how would you respond?
- Ignore the child's fear and hope it will go away.
 - Tell the child he/she is a big boy or girl and there is nothing to fear.
 - Let the child know you understand and give your child some support.
 - Allow your child to express why he/she is frightened and talk about it.
80. How frequently do you show affection to your child (verbally or physically)?
- About once or twice a month or less.
 - About once a week.
 - Several times a week.
 - At least once a day.
81. Decisions concerning a family vacation
- Are made jointly with my child.
 - Are made by me but are discussed with my child first.
 - Are usually made by me.
 - Are always made by me.
82. We make some plans for the weekends
- Almost always prior to the weekend.
 - Usually prior to the weekend.
 - We sometimes make plans, but weekends are usually unscheduled.
 - We don't make plans, but do whatever comes up.
83. What kind of rules do you have about homework?
- Homework is closely supervised by me.
 - Homework must be done by a certain or before TV or play.
 - The child's homework is the child's responsibility but I remind him/her to do it.
 - I usually don't know if my child's homework is done.
84. If I disapproved of a friend of my child I would
- Say nothing.
 - Express my disapproval and discuss with my child the possibility of seeing that friend less and let him/her decide.
 - Express my disapproval and request that my child spend less time with the friend.
 - Forbid my child from seeing the friend.

85. Are there people from whom you could count on for help with some household chore or in an emergency?
- a. I don't feel that I could count on anyone.
 - b. I could count on one person.
 - c. I could count on two or three people.
 - d. I could count of four or five people.
86. My child and I
- a. Spend 7 to 10 hours a week doing activities together (reading a book, going to the park, playing a game).
 - b. Spend 4 to 7 hours a week doing activities together.
 - c. Spend 1 or less hours a week doing activities together.
87. Do you introduce your dates to your children?
- a. I don't bring my dates to the house.
 - b. Only if it happens by chance.
 - c. If I really like the person.
 - d. I almost always introduce my dates to my kids.
88. How often does your child tell you about his/her day?
- a. My child never tells me about his/her day.
 - b. My child tells me about his/her day about once a week or less.
 - c. My child tells me about his/her day several times a week.
 - d. My child tells me about his/her day almost every day.

Name _____

Date _____

Stolberg's Single Parent Questionnaire - Married-parent Form
PARENT QUESTIONNAIRE
Form M

Instructions: Please answer these questions the way things really are, not just the way you would like them to be. Circle the answer that best describes you and _____

1. How often does your child come and talk to you about a problem?
 - a. I think my child talks to me whenever he/she has a problem.
 - b. I think my child usually talks to me whenever he/she has a problem
 - c. I think my child keeps most of his/her problems to him/herself, but sometimes talks to me.
 - d. My child rarely discussed his/her problems with me.
2. How often is your child late for school (or day care) or the school bus
 - a. Once or twice a year.
 - b. Three or four times a year.
 - c. Five or six times a year.
 - d. More than six times a year.
3. How much difficulty do you have handling your financial (paying bills, budgeting, etc.) responsibilities?
 - a. I can't pay 50% of the bills most months.
 - b. I can't pay 25% of the bills most months.
 - c. I can pay all but one or two bills most months.
 - d. I can pay all of my bills most months.
4. Of the things you have planned to get done every day, how many of these things do you actually get done?
 - a. About one fourth of what I plan gets done.
 - b. About one half of what I plan gets done.
 - c. About three quarters of what I plan gets done.
 - d. Everything I plan gets done.
5. How often does your child get up late for school (or day care)?
 - a. Once a week or more.
 - b. About three times a month.
 - c. About once or twice a month.
 - d. Just a few times a year.
6. My husband and my child
 - a. Spend 7 to 10 hours a week doing activities together (reading a book, going to the park, playing a game).
 - b. Spend 4 to 7 hours a week doing activities together.
 - c. Spend 1 or less hours a week doing activities together.

7. What kinds of rules have you set about the cleanliness of your child's room?
 - a. My child's room must be kept neat at all times.
 - b. My child's room must be kept reasonably neat most of the time.
 - c. My child is required to clean up the room whenever it gets too messy.
 - d. My child's room is his/her own and can be as neat or messy as the child pleases.
8. Do you have the opportunity to be alone with your husband?
 - a. At least once a month.
 - b. Once every two or three months.
 - c. Once every six months or so.
 - d. I never have the opportunity to be alone with my husband.
9. When my husband and I are not at home, my child knows how we can be reached
 - a. At all times.
 - b. About three quarters of the time.
 - c. About half the time.
 - d. About a quarter of the time.
10. When it comes to telling your child about death, would you
 - a. Discuss what death means to your child and ask how he/she feels about it.
 - b. Tell him/her what death means without discussion.
 - c. Mention death in terms of its happening, but don't go into detail.
 - d. Not discuss it.
11. Given the changes in family responsibilities and demands as my children get older and my earlier feelings about parenting, I now find childrearing
 - a. Much less satisfying.
 - b. Less satisfying.
 - c. Equally satisfying.
 - d. More satisfying.
12. Do you have anyone to talk to about how you really feel about your marriage?
 - a. I have four or five people I can talk to.
 - b. I have two or three people I can talk to .
 - c. I have one person I can talk to.
 - d. I can't talk to anyone about it.
13. If an appliance in your house broke down, what would you do?
 - a. Try and fix it yourself.
 - b. Try to do without the appliance.
 - c. Call a repair person (plumber, electrician).
 - d. Call a friend for advice.

14. Have you ever taken a class or workshop on parenting?
 - a. Have completed more than one class.
 - b. Have completed a class, or am presently taking a class.
 - c. Started a class but dropped it.
 - d. Never.
15. If you wanted to talk to someone about a personal problem, are there people to whom you could talk?
 - a. I could talk to four or five people.
 - b. I could talk to two or three people.
 - c. I could talk to one person.
 - d. I can't think of anyone I could talk to.
16. How do you respond when your child does a chore he/she was assigned to?
 - a. I say nothing since I expect it to be done.
 - b. I usually don't say anything unless the job was exceptionally well done.
 - c. I praise my child or say thank you.
 - d. I praise my child and say thank you.
17. How often do you take an active part in one of your child's activities (Boy or Girl Scout leader, sponsor, coach, aid in classroom, going to games, swim meets, etc.)?
 - a. I am almost always actively involved in one or more of my child's activities.
 - b. I am usually involved.
 - c. I'm sometimes involved but I'm usually too busy.
 - d. I have rarely been actively involved.
18. Is your child involved in making decisions regarding himself/herself (choosing clothes, TV programs, what to eat, etc.)?
 - a. Not at all.
 - b. Only in minor decisions.
 - c. About half the decisions.
 - d. Almost all decisions.
19. When your child gets a minor cut or scrape, how do you respond?
 - a. Tell the child to take care of it without any help.
 - b. Send the child to clean and bandage it, and check on it later.
 - c. Clean and bandage it while treating it matter-of-factly.
 - d. Clean and bandage it while showing much concern and sympathy.

20. How often do you feel you and your child have a good time or fun together?
- a. We rarely seem to have a good time.
 - b. About half the time is good and half bad.
 - c. Once in a while we don't have a good time together, but our times together are usually good.
 - d. Most of the time I feel good about our times.
21. Is your child involved in making financial decisions (budgeting, major purchases, expenses, etc.)?
- a. Almost all the decisions.
 - b. About half the decisions.
 - c. Only in minor decisions.
 - d. Not at all.
22. As far as discussing death with your child is concerned:
- a. I talked to my child about death but we haven't discussed it much.
 - b. My child has asked a few questions, or no questions.
 - c. My child and I have talked about some of his/her questions, but my child hasn't talked about his/her feelings.
 - d. My child seems to have talked about most of his/her concerns and feelings and has asked many questions.
23. When your child does extra housework, yardwork, or some other favor without being asked, what do you do?
- a. My child never does more than what's expected.
 - b. I don't say anything.
 - c. Give my child some praise.
 - d. Give my child some praise and some sign of affection.
24. When you feel really low about your situation do you:
- a. Go to bed.
 - b. Sit and stew about it.
 - c. Call a friend or family member for support and advice.
 - d. Think of something you can do to improve your situation and then do it.
25. We have a regularly scheduled mealtime:
- a. Only on special occasions, or less than once a week.
 - b. One to three times a week.
 - c. Four or five times a week.
 - d. Every day.
26. When it comes to matters about raising my children:
- a. I talk to my child's teacher regularly about matters pertaining to their development.
 - b. I talk to my child's teacher only about really big problems (serious illness, major school problems, peer problems).
 - c. I talk to my child's teacher only at conference time.
 - d. I never talk to my child's teacher.

27. When your child has a problem with a friend, how often are you able to listen to his/her side of the story?
- I almost always listen and give my child my full attention.
 - I usually try to listen, but I'm often listening and doing something else at the same time.
 - I rarely have time to listen.
 - I'm never able to listen.
28. The money (allowance or spending money) I give my child
- Can be spent on anything the child wants.
 - Can be spent in ways the child and I have agreed on together.
 - Can partly be spent as the child wants and partly the way I say.
 - Can only be spent with my permission.
29. My child is permitted to watch TV on week nights
- Never.
 - After completion of homework and/or chores with supervision by me.
 - After completion of homework and/or chores without supervision.
 - Whenever he/she wants to.
30. How often do you drive your child to some event other than to school (or day care)?
- Only on rare occasions.
 - About once a week.
 - About two or three times a week.
 - Almost every day (4 or more times a week).
31. What rules do you have about your child leaving the house after school (or day care) during free time?
- My child is not allowed to leave the house/yard.
 - My child is allowed to leave to play in specific areas (neighborhood park, certain friends' houses).
 - My child is allowed to leave if he/she informs me or leaves a note as to where he/she is going.
 - My child is allowed to leave the house whenever he/she wants to.
32. When it comes to discussing matters related to your marriage, how do your parents react?
- Are available when you need them.
 - Offer brief suggestions.
 - Don't want to talk about it.
 - Get angry.

33. Is your child involved in making decisions regarding household management (who cleans the house, does yardwork etc.)?
- Not at all.
 - Only in minor decisions.
 - About half the decisions.
 - Almost all the decisions.
34. Approximately how many hours a week do you usually get out by yourself or with friends for some type of recreation or other nonwork activity?
- 0 to 1 hours per week.
 - 2 to 4 hours per week.
 - 5 to 10 hours per week.
 - More than 10 hours per week.
35. If your child feels uncomfortable with one of your friends, do you:
- continue to see the person and ignore your child's discomfort.
 - continue to see the person and hope that the child will become more comfortable.
 - Find out why the child feels uncomfortable and talk to him/her about that.
 - Stop seeing the person.
36. When you were little, did you ever think about what it would be like to be a parent?
- I never thought about it.
 - I thought about it once or twice.
 - I thought about it somewhat.
 - I thought about it a great deal.
37. My child is permitted to have snacks between meals
- Whenever he/she wants.
 - Usually, but must ask me first.
 - Only for a special treat.
 - I don't allow eating between meals but sometimes my child eats snacks outside the house.
38. how often do you and your child(ren) go somewhere together?
- Once a week or more.
 - Two or three times a month.
 - Once a month.
 - Less than once a month.
39. What kind of rules do you have about curfews (or will you when your child is older)?
- The child may come home whenever he/she wants to.
 - My child has a curfew but often stays out later.
 - My child has a curfew but it is often extended.
 - My child must be home by a certain time with no exceptions.

40. If you needed help with your children (babysitter, advice, carpooling) are there people whom you could ask?
- I have four or five people I could ask.
 - I have two or three people I could ask.
 - I have one person I could ask.
 - I can't think of anyone I could ask.
41. How many times do you have to ask your child to do something before he/she will actually do it?
- My child rarely does what I ask him/her to do.
 - Four or five times.
 - Two or three times.
 - Only once.
42. My child's daily diet
- Is up to my child.
 - I sometimes supervise what my child eats.
 - I usually know if my child is eating a balanced diet.
 - I strictly monitor my child's diet to make sure it is well balanced.
43. Do you have a daily routine with your child (for meals, getting up, doing chores, etc.) during the school year?
- We don't follow any routine and things get done in whatever order seems right at the time.
 - We don't have a daily routine but usually things get done around the same time.
 - Yes, we have a daily routine which we usually follow.
 - Yes, we have a daily routine that we almost always follow.
44. How often does it happen that you and your child have pleasurable times alone together?
- I have time to be alone with my child once a week or less often.
 - I have time to be alone with my child about 2 to 3 times or less a week.
 - I have time to be alone with my child 4 to 5 times a week.
 - I have time to be alone with my child at least once a day.
45. Is being a parent like you expected it to be?
- Much harder than I expected.
 - A little harder than I expected.
 - About the same as I expected.
 - Easier than I expected.

46. What rules do you have about bedtime (or did you, if your children are too old for bedtimes) on week nights?
- The child has no set bedtime.
 - The child has a set bedtime that is often extended.
 - The child has a set bedtime that is occasionally extended.
 - The child has a set bedtime which is never extended.
47. My child is left unsupervised by an adult:
- Never.
 - Only on rare occasions.
 - Several times a week but only during the day.
 - Several times a week both during the day and at night.
48. If you wanted to socialized with someone (call on phone, go out for an evening) do you have people to contact?
- I have four or five people I could call.
 - I have two or three people I could call.
 - I have one person I could call.
 - I can't think of anyone I could call.
49. In the mornings before my child leaves for school (or day care)
- I make sure my child is well dressed, has eaten breakfast, and has lunch money or a lunch.
 - I ask my child if she/he has had breakfast, and has money for lunch or a bag lunch, but I don't closely supervise my child in the morning.
 - I say good bye to my child but I'm not sure if she/he has eaten or has what she/he need.
 - My child leaves before I get up or I leave before my child gets up.
50. What rules do you have about household chores?
- My child is expected to help when asked.
 - My child does not have regular chores.
 - My child has regular chores and usually does them.
 - My child has regular household chores which must be done by a certain time.
51. My child's appearance
- Is up to my child all of the time.
 - Must meet with my approval only for special occasions.
 - Must meet with my approval for school, church and for special occasions.
 - Must meet with my approval all of the time.

52. Do you feel overwhelmed by your job, child care and/or household responsibilities?
- Always, nearly every day.
 - Often, at least once a week.
 - Sometimes once or twice a month.
 - Never.
53. If your children were having trouble getting along with or didn't like a person you were seeing regularly, what would you do?
- Keep seeing the person regardless.
 - Find out why your children didn't like him/her and talk about that.
 - Tell your children how to get along with this person.
 - Stop seeing the person.
54. Have you ever read a book on parenting?
- Never.
 - Started one but didn't/haven't finished it.
 - Have read one or two.
 - Have read more than two.
55. How often do you praise your child (with a special treat) for doing an especially good job in school (or day care) or for improving?
- I almost always praise my child
 - I usually give my child some praise.
 - I sometimes give my child praise.
 - I almost never give my child praise.
56. My child shows affection (verbal or physical) towards me
- Once a month or less.
 - Two or three times a month.
 - Two or three times a week.
 - Once a day or more.
57. Do you ask your child what the trouble is when he/she seems sad or upset?
- I always ask my child what's wrong.
 - I usually ask my child what's wrong.
 - I sometimes ask my child what's wrong, but I don't like to interfere in my child's business.
 - I let my child handle his/her own problems.
58. Do you have the opportunity to meet new people (through groups, friends, meetings)?
- At least once a week.
 - At least every two or three weeks.
 - Every few months.
 - Not in the last six months.

59. What do you do about your child's birthday?
- Birthdays are very special, and my child gets gifts, a party or a special dinner to celebrate.
 - Birthdays are somewhat special and my child gets one special thing (i.e., gift, a choice of dinner, etc.).
 - Birthdays are celebrated once in a while.
 - Birthdays aren't celebrated in our home.
60. When your child does something you don't like or makes you angry, how often do you calmly discuss this with your child?
- I always calmly discuss it with my child.
 - More often than not I calmly discuss it with my child.
 - Once in a while I calmly discuss it with my child.
 - I never calmly discuss it with my child.
61. Do you find that being responsible for car care is a difficult task?
- Often.
 - Sometimes.
 - Rarely.
 - Never.
62. When your child does something that makes you angry, how often do you tend to "fly off the handle" and yell at your child?
- I only yell about once or twice a month or less.
 - I yell about once or twice a week.
 - I yell about three or four times a week.
 - I yell about five times a week or more.
63. Since having become a parent, have you found that you have more or fewer responsibilities?
- A few less.
 - Same amount.
 - A few more.
 - Many more.
64. If your child go in trouble at school (or day care) or on the school bus would you
- Punish the child strongly.
 - Punish the child moderately.
 - Talk to and maybe punish the child.
 - Say nothing and let the child face the consequences of his/her actions.
65. How often do you praise your child for good behavior at home or at school (or day care)?
- At least once a day.
 - About once or twice a week.
 - About two or three times a month.
 - About once a month or less.

66. How much time do you spend talking to your child?
- Fifteen minutes or less a day.
 - One half hour each day.
 - An hour each day.
 - Two hours or more every day.
67. My child is permitted to have guests in the house
- Guests can only come on special occasions.
 - Most of the time but an adult must be present.
 - Most of the time but must ask first.
 - Whenever the child wants.
68. When your child misbehaves how often do you punish him/her?
- Always.
 - Usually, three out of four times.
 - Seldom one out of four times.
 - Hardly ever, less than one out of five times.
69. If you saw your child's bed unmade after he/she left for school (or day care), would you
- Not make it and mention it to your child.
 - Make it yourself and mention it to your child.
 - Make it yourself and not say anything.
 - Not do anything.
70. When you have trouble "making ends meet" do you
- Ignore the bills.
 - Ask for help from a friend or family.
 - Pay part of the bills or pay the important ones.
 - Talk to the people to whom you owe the money.
71. If a person you were seeing regularly had trouble getting along with (or didn't like) your children, what would you do?
- Keep seeing the person regardless.
 - Tell him/her ways to get along with your children.
 - Ask why he/she doesn't like your children and talk about that.
 - Stop seeing the person.
72. Do you have relaxing time to be alone for an hour or two (to read a book, watch TV, write letters, etc.)?
- Once a month or less.
 - A couple of times a month.
 - A couple of times a week.
 - Almost every day.
73. If your child's grade went down, would you
- Punish or get angry with the child.
 - Talk to your child and go to the school.
 - Talk to your child and try to find out what the problem is.
 - Do nothing

74. On the weekends, my husband and I have a planned activity (movie, dinner, big chore, etc.) together with my child(ren)
- At least once every weekend.
 - About two or three times a month.
 - About once a month.
 - Every few months or less.
75. Do you have family traditions surrounding holidays?
- We have few, if any, family traditions.
 - We don't follow the family traditions that we have very well.
 - We have a few family traditions we keep most of the time.
 - We have a great many which we follow.
76. After school (or day care) my child is supervised
- By my husband or me.
 - By a sitter, day care facility or an adult relative/friend.
 - By an older sibling or neighbor.
 - By no one.
77. What kind of rules do you have about roughhousing (noise, jumping on beds, breaking things, etc.)?
- I believe my child should be able to play any way he/she chooses.
 - My child can play mostly as he/she chooses.
 - My child is not permitted to break things and do things to hurt others or him/herself.
 - The type of play and amount of noise is limited while in the house to quiet games and reading.
78. If my child broke an important household rule, I would most likely
- Ignore the misbehavior.
 - Talk to the child and warn him/her of the consequences of the misbehavior.
 - Talk to the child and punish him/her moderately (restrict privileges, for a short time, take away allowances).
 - Strongly punish the child.
79. If your child was afraid of something (going to the dentist or doctor, giving a talk at school, taking a test, etc.), how would you respond?
- Ignore the child's fear and hope it will go away.
 - Tell the child he/she is a big boy or girl and there is nothing to fear.
 - Let the child know you understand and give your child some support.
 - Allow your child to express why he/she is frightened and talk about it.

80. How frequently do you show affection to your child (verbally or physically)?
- About once or twice a month or less.
 - About once a week.
 - Several times a week.
 - At least once a day.
81. Decisions concerning a family vacation
- Are made jointly with my child.
 - Are made by my husband and me but are discussed with my child first.
 - Are usually made by my husband and me.
 - Are always made by my husband and me.
82. We make some plans for the weekends
- Almost always prior to the weekend.
 - Usually prior to the weekend.
 - We sometimes make plans, but weekends are usually unscheduled.
 - We don't make plans, but do whatever comes up.
83. What kind of rules do you have about homework?
- Homework is closely supervised by me.
 - Homework must be done by a certain or before TV or play.
 - The child's homework is the child's responsibility but I remind him/her to do it.
 - I usually don't know if my child's homework is done.
84. If I disapproved of a friend of my child I would
- Say nothing.
 - Express my disapproval and discuss with my child the possibility of seeing that friend less and let him/her decide.
 - Express my disapproval and request that my child spend less time with the friend.
 - Forbid my child from seeing the friend.
85. Are there people from whom you could count on for help with some household chore or in an emergency?
- I don't feel that I could count on anyone.
 - I could count on one person.
 - I could count on two or three people.
 - I could count of four or five people.
86. My child and I
- Spend 7 to 10 hours a week doing activities together (reading a book, going to the park, playing a game).
 - Spend 4 to 7 hours a week doing activities together.
 - Spend 1 or less hours a week doing activities together.

87. Do you introduce your work associates to your children?
- a. I don't bring my work associates to the house.
 - b. Only if it happens by chance.
 - c. If I really like the person.
 - d. I almost always introduce my work associates to my kids.
88. How often does your child tell you about his/her day?
- a. My child never tells me about his/her day.
 - b. My child tells me about his/her day about once a week or less.
 - c. My child tells me about his/her day several times a week.
 - d. My child tells me about his/her day almost every day.

APPENDIX 5

Kohn Social Competence Scale

Sociability Scale

This scale consists of 64 statements about a child's behavior. You are asked to rate each statement in terms of the frequency with which you observed the behavior during the most recent week.

The ratings consist of five categories of frequency ranging from "Hardly ever or never" to "Very often or always". You are asked to circle the number (1,2,3,4,or 5) that corresponds to the category which, in your judgment, is most descriptive of _____'s behavior during the most recent week.

RATING INSTRUCTIONS

1. Base your ratings on _____'s behavior during the most recent week. Consider only what he did during that time period and try to disregard prior behavior and actions.
2. Consider each statement independently. It is well known that children may exhibit seemingly contradictory behavior.
3. Some items contain a number of specific behaviors that are only slightly different from each other. Do not hesitate to make a rating even though the child does not exhibit all of the specific behaviors.
4. Answer every item. Do not leave any blanks.
5. Do not hesitate to use the extreme points where appropriate.

	Hardly ever or never	Seldom	Some- times	Often	Very often or al- ways
1. Child seems eager to try new things	1	2	3	4	5
2. Child seeks adult attention by crying	1	2	3	4	5
3. Child easily loses interest and flits from one activity to another	1	2	3	4	5
4. Child is responsible in carrying out requests and directions	1	2	3	4	5
5. Child seeks physical contact with mother	1	2	3	4	5
6. Child adds freely (verbally or non- verbally) to mother's suggestions	1	2	3	4	5
7. When making a change from one activ- ity to another, child resists entering the new activity	1	2	3	4	5
8. Child shies away and withdraws when approached by other children	1	2	3	4	5
9. Child responds with immediate com- pliance to mother's direction	1	2	3	4	5
10. Child shows enthusiasm about work or play	1	2	3	4	5
11. Child frowns, shrugs shoulders, pouts, or stamps foot when suggestion is made by mother	1	2	3	4	5

	Never	Seldom	Some- times	Often	Al- ways
12. Other children copy this child's ideas for play	1	2	3	4	5
13. Excessive praise and encouragement from mother is required for child to participate in activities	1	2	3	4	5
14. Other children seem unwilling to play with this child	1	2	3	4	5
15. Child is unwilling to carry out reasonable suggestions from mother even when having difficulty	1	2	3	4	5
16. Child feels comfortable enough with other children to be able to express his/her own desires or opinions	1	2	3	4	5
17. Child hits mother	1	2	3	4	5
18. Child is fearful in approaching other children	1	2	3	4	5
19. Child can accept mother's ideas and suggestions for play or ways of playing	1	2	3	4	5
20. Child gets will cooperation from most other children	1	2	3	4	5
21. Child gives the appearance of complying with mother's suggestions, but does not do suggested activity	1	2	3	4	5

	Never	Seldom	Some- times	Often	Al- ways
22. Child is bossed and dominated by other children	1	2	3	4	5
23. Child's ideas have impact on many children	1	2	3	4	5
24. Child rebels physically, for ex- ample: hits, kicks, etc.	1	2	3	4	5
25. Child easily gets attention of other children	1	2	3	4	5
26. Child has difficulty defending his/her own rights with other children	1	2	3	4	5
27. Child cooperates with rules and regulations	1	2	3	4	5
28. Child dawdles when required to do something	1	2	3	4	5
29. In play with other children, child can shift between leading and following, depending on the situation	1	2	3	4	5
30. Child reacts negatively to mother's ideas and suggestions for play activities	1	2	3	4	5
31. Child is unable to occupy himself/ herself without other children directing activities for him/her	1	2	3	4	5

	Never	Seldom	Some- times	Often	Al- ways
32. Child is willing to turn to other children for help and assistance	1	2	3	4	5
33. Child actively defies mother's rules and regulations	1	2	3	4	5
34. Child can give ideas to other children as well as go along with their ideas	1	2	3	4	5
35. Child expresses open defiance against authority	1	2	3	4	5
36. Child appears at a loss in unstructured free-play types of activities	1	2	3	4	5
37. Child easily makes the change from one activity to the next	1	2	3	4	5
38. Child seems to enjoy both play with others and by himself/herself	1	2	3	4	5
39. Child is hostile or aggressive with other children, for instance: pushes, taunts, bullies, etc.	1	2	3	4	5
40. Child can be independent of adult in overcoming difficulties with other children or activities	1	2	3	4	5
41. Child has to be a leader in order to participate in activities with other children	1	2	3	4	5

	Never	Seldom	Some- times	Often	Al- ways
42. Child participates in a half-hearted way	1	2	3	4	5
43. Child takes possession of other children's equipment without their permission	1	2	3	4	5
44. Child demonstrates little interest in things and activities	1	2	3	4	5
45. Child is open to the ideas and suggestions of other children	1	2	3	4	5
46. Child is responsible in following through on routines, for example: getting dressed or undressed, washing hands	1	2	3	4	5
47. Child is quarrelsome	1	2	3	4	5
48. Child can communicate his/her needs to mother	1	2	3	4	5
49. Child is bossy and dominating with other children	1	2	3	4	5
50. Child spends time sitting around, looking around, or wandering around aimlessly	1	2	3	4	5
51. Child can remain alert and interested in an activity	1	2	3	4	5
52. Child prevents other children from carrying out routines	1	2	3	4	5

	Never	Seldom	Some- times	Often	Al- ways
53. Child succeeds in getting others interested in what he/she is doing	1	2	3	4	5
54. Child shows interest in only a few types of things	1	2	3	4	5
55. Child puts things away carefully	1	2	3	4	5
56. Child is unwilling to play with other children except on his/her own terms	1	2	3	4	5
57. Child responds well when the activity is planned or directed by mother	1	2	3	4	5
58. Child disrupts activities of others	1	2	3	4	5
59. Child seeks adult aid for each step of activity	1	2	3	4	5
60. Child can participate actively in structured activities as well as free- play type of activities	1	2	3	4	5
61. Child resists going along with the ideas of other children	1	2	3	4	5
62. Child easily gives up when confronted with a difficulty	1	2	3	4	5
63. Child can be independent of adult in having ideas about or planning activities	1	2	3	4	5
64. Child has trouble keeping to the rules of the game (disregard when child does not know or understand rules)	1	2	3	4	5

Parent Questionnaire

Instructions:

In answering the following questions, please think about your younger child

The questions on the following pages ask you to mark an answer which best describes your feelings. While you may not find an answer which exactly states your feelings, please mark the answer which comes closest to describing how you feel.

Please mark the degree to which you agree or disagree with the following statements by circling the letter which best matches how you feel. If you are not sure, please circle the question mark.

SA	a	?	d	SD
Strongly	Agree	Not	Disagree	Strongly
Agree		Sure		Disagree

Example: I enjoy going to the movies.

SA a ? d SD

- | | | | | | |
|----|---|---|---|----|--|
| SA | a | ? | d | SD | 1. When my child wants something, my child usually keeps trying to get it. |
| SA | a | ? | d | SD | 2. Compared to the average child, my child has a great deal of difficulty in getting used to changes in schedules or changes around the house. |
| SA | a | ? | d | SD | 3. My child is so active that it exhausts me. |
| SA | a | ? | d | SD | 4. When I do things for my child I get the feeling that my efforts are not appreciated very much. |
| SA | a | ? | d | SD | 5. My child smiles at me much less than I expected. |
| SA | a | ? | d | SD | 6. My child makes more demands on me than most children. |
| SA | a | ? | d | SD | 7. As my child has grown older and become more independent, I find myself more worried that my child will get hurt or into trouble. |
| SA | a | ? | d | SD | 8. My child looks a little different than I expected and it bothers me at times. |
| SA | a | ? | d | SD | 9. In some areas my child seems to have forgotten past learning and has gone back to doing things characteristic of younger children. |
| SA | a | ? | d | SD | 10. My child has had more health problems than I expected. |
| SA | a | ? | d | SD | 11. Sometimes I feel my child doesn't like me and doesn't want to be close to me. |

- SA a ? d SD 12. My child doesn't seem to learn as quickly as most children.
- SA a ? d SD 13. There are some things my child does that really bother me a lot.
- SA a ? d SD 14. My child appears disorganized and is easily distracted.
- SA a ? d SD 15. I feel that my child is very moody and easily upset.
- SA a ? d SD 16. My child reacts very strongly when something happens that my child doesn't like.
- SA a ? d SD 17. My child generally wakes up in a bad mood.
- SA a ? d SD 18. My child gets upset easily over the smallest thing.
- SA a ? d SD 19. When playing, my child doesn't often giggle or laugh.
- SA a ? d SD 20. My child easily notices and overreacts to loud sounds and bright lights.
- SA a ? d SD 21. My child doesn't seem to smile as much as most children.
- SA a ? d SD 22. My child usually avoids a new toy for a while before beginning to play with it.
- SA a ? d SD 23. My child seems to cry or fuss more often than most children.
- SA a ? d SD 24. My child doesn't seem comfortable when meeting strangers.
- SA a ? d SD 25. It takes a long time and it is very hard for my child to get used to new things.
- SA a ? d SD 26. Leaving my child with a babysitter is usually a problem.
- SA a ? d SD 27. Compared to most, my child has more difficulty concentrating and paying attention.
- SA a ? d SD 28. My child does a few things which bother me a great deal.
- SA a ? d SD 29. My child will often stay occupied with a toy for more than 10 minutes.
- SA a ? d SD 30. My child is not able to do as much as I expected.
- SA a ? d SD 31. Most times I feel that my child likes me and wants to be close to me.
- SA a ? d SD 32. My child wanders away much more than I expected.
- SA a ? d SD 33. My child makes more demands on me than most children.

- SA a ? d SD 34. My child is always hanging on me.
- SA a ? d SD 35. My child seems to be much harder to care for than most.
- SA a ? d SD 36. My child rarely does things for me that make me feel good.
- SA a ? d SD 37. My child is much more active than I expected.
- SA a ? d SD 38. My child does not like to be cuddled or touched very much.
- SA a ? d SD 39. My child turned out to be more of a problem than I had expected.
- SA a ? d SD 40. My child squirms and kicks a great deal when being dressed or bathed.
- SA a ? d SD 41. My child's sleeping or eating schedule was much harder to establish than I expected.
- SA a ? d SD 42. My child can be easily distracted from wanting something.

For each question, please circle the letter which best describes your feelings about _____.

43. Which statement best describes your child?
- A. Almost always likes to play with me.
 - B. Sometimes likes to play with me.
 - C. Usually doesn't like to play with me.
 - D. Almost never likes to play with me.
44. If your child is age 1 mo. to 18 months answer Item A. If your child is 19 months or older answer Item B. (Answer Item A or Item B.)
- Item A. When my child cries, I can tell whether it is hunger or something that hurts.
- SA a ? d SD
- Item B. It is hard for me to know when my child is unhappy until a big upset occurs.
45. My child cries and fusses:
- A. much less than I had expected.
 - B. less than I expected.
 - C. about as much as I expected.
 - D. much more than I expected.
 - E. it seems almost constantly.
46. When upset, my child is:
- A. easy to calm down.
 - B. harder to calm down than I expected.
 - C. very difficult to calm down.
 - D. nothing I do helps to calm my child.

47. How easy is it for you to understand what your child wants or needs? 173
 A. Very easy.
 B. Easy.
 C. Somewhat difficult.
 D. It is very hard.
 E. I usually can't figure out what the problem is.
48. When my child cries it usually lasts:
 A. Less than 2 minutes.
 B. 2-5 minutes.
 C. 5-10 minutes.
 D. 10-15 minutes.
 E. more than 15 minutes.
49. How much difficulty does your child have getting used to changes in schedules or changes around the house.
 A. A great deal of difficulty.
 B. A moderate amount of difficulty
 C. Some difficulty.
 D. A little difficulty
 E. No difficulty.

Answer Key to questions 50 - 88.

					SA Strongly Agree	a Agree	? Not Sure	d Disagree	SD Strongly Disagree	
SA	a	?	d	SD	50.	During the past six months I have been sicker than usual or have had more aches and pains than I normally do.				
SA	a	?	d	SD	51.	I feel that I am successful most of the time when I try to get my child to do or not do something.				
SA	a	?	d	SD	52.	Since I brought my child home from the hospital, I find that I am not able to take care of this child as well as I thought I could. I need help.				
SA	a	?	d	SD	53.	When I think about the kind of parent I am, I often feel guilty or bad about myself.				
SA	a	?	d	SD	54.	It takes a long time for a mother to develop close, warm feelings for her children.				
SA	a	?	d	SD	55.	Most of my life is spent doing things for my child.				
SA	a	?	d	SD	56.	I believe that my child can tell how I feel.				
SA	a	?	d	SD	57.	I often have the feeling that I cannot handle things very well				
SA	a	?	d	SD	58.	I expected to have closer and warmer feelings for my child than I do and this bothers me.				
SA	a	?	d	SD	59.	I feel alone and without friends.				

- SA a ? d SD 60. I am unhappy with the last purchase of clothing I made for myself.
- SA a ? d SD 61. I never expected that punishing my child would hurt me as much as it does.
- SA a ? d SD 62. When my child misbehaves or fusses too much I feel responsible, as if I didn't do something right.
- SA a ? d SD 63. When I left the hospital with my child, I had doubtful feelings about my ability to handle being a parent.
- SA a ? d SD 64. Since having my child, I have had less interest in sex.
- SA a ? d SD 65. Being a parent is harder than I thought it would be.
- SA a ? d SD 66. Sometimes my child does things that bother me just to be mean.
- SA a ? d SD 67. When I was young, I never felt comfortable holding or taking care of children.
- SA a ? d SD 68. I find myself giving up more of my life to meet my children's needs than I ever expected.
- SA a ? d SD 69. I feel trapped by my responsibilities as a parent.
- SA a ? d SD 70. I feel everytime my child does something wrong it is really my fault.
- SA a ? d SD 71. I feel capable and on top of things when I am caring for my child.
- SA a ? d SD 72. Physically, I feel good most of the time.
- SA a ? d SD 73. I don't enjoy things as I used to.
- SA a ? d SD 74. I feel that I have been a better parent than I thought I would be.
- SA a ? d SD 75. I expected that being a parent would be much easier than it has been.
- SA a ? d SD 76. My child knows I am his or her mother and wants me more than other people.
- SA a ? d SD 77. I often feel guilty about the way I feel towards my child.
- SA a ? d SD 78. I often feel that my child's needs control my life.
- SA a ? d SD 79. There are quite a few things that bother me about my life.

- SA a ? d SD 80. I felt sadder and more depressed than I expected after leaving the hospital with my baby.
- SA a ? d SD 81. I can't make decisions without help.
- SA a ? d SD 82. When I go to a party I usually expect not to enjoy myself.
- SA a ? d SD 83. I wind up feeling guilty when I get angry at my child and this bothers me.
- SA a ? d SD 84. I am not interested in people as I used to be.
- SA a ? d SD 85. I often have the feeling that other women my own age don't particularly like my company.
- SA a ? d SD 86. I have had many more problems raising children than I expected.
- SA a ? d SD 87. I enjoy being a parent.
- SA a ? d SD 88. After being home from the hospital for about a month, I noticed that I was feeling more sad and depressed than I had expected.

89. When I think about myself as a parent I believe:
- A. I can handle anything that happens.
 - B. I can handle most things pretty well.
 - C. Sometimes I have doubts, but find that I handle most things without any problems.
 - D. I have some doubts about being able to handle things.
 - E. I don't think I handle things very well at all.
90. Raising children is:
- A. a lot of trouble.
 - B. hard but manageable.
 - C. difficult at times.
 - D. a good experience - there are a few problems.
 - E. a real joy - not hard at all.
91. I feel that I am:
- A. a very good parent.
 - B. a better than average parent.
 - C. an average parent.
 - D. a person who has some trouble being a parent.
 - E. not very good at being a parent.
92. Which statement best describes you?
- A. I have always liked and been interested in children.
 - B. When I was younger I liked children but didn't want to spend time around them.
 - C. I was never really interested in children.
 - D. I have never really liked being around children. They still bother me.

93. When my children do things that bother me it is:
- A. on purpose to be mean.
 - B. to get attention.
 - C. for no reason; they are just being children.
 - D. for a lot of different reasons.
 - E. because they haven't learned to do what is expected yet.
94. If my child does something bad (like biting another person) I find that the best way to get the child to stop is:
- A. ignore it.
 - B. looking angry.
 - C. yelling in an angry voice, "No" or "stop it".
 - D. spanking.
 - E. biting.
95. Since I've had my child:
- A. I have been sick a great deal.
 - B. I haven't felt as good.
 - C. I haven't noticed any change in my health.
 - D. I have been healthier.
96. When I think about my life I find that:
- A. I feel happy and satisfied.
 - B. most of the time I feel happy.
 - C. I am unhappy and dissatisfied about a few things.
 - D. I am dissatisfied and unhappy about most things.
 - E. if I could start over again I would change most things in my life.
97. Think carefully and count the number of things which _____ does which bothers you. For example - ~~dawdles~~, refuses to listen, over-active, interrupts, cries, fights, whines, etc. Please ~~circle the letter~~ which includes the number of things which you counted.
- A. 1-3
 - B. 4-5
 - C. 6-7
 - D. 8-9
 - E. 10+
98. I have found that getting my child to do something ~~or stop doing something~~ is:
- A. much harder than I expected.
 - B. somewhat harder than I expected.
 - C. about as hard as I expected.
 - D. somewhat easier than I expected.
 - E. much easier than I expected.

SA a ? d SD 114. Since having my _____ child, my child's father has been busy and does not spend as much time with the child and the family as I had expected.

These questions ask you to provide some information about your family. Your answers will be kept confidential.

115. When were you born? Self _____ Your child's father _____
Year Year

116. What are your ethnic backgrounds?

Self: _____ American Indian	Child's father: _____ American Indian
_____ Black	_____ Black
_____ Oriental	_____ Oriental
_____ White	_____ White
_____ Other	_____ Other

117. What were the highest levels in school or college you and the child's father have completed?

Self: _____ 1-8th grade	Child's father: _____ 1-8th grade
_____ 9-12th grade	_____ 9-12th grade
_____ Vocational or some college	_____ Vocational or some college
_____ College graduate	_____ College graduate
_____ Graduate or professional School	_____ Graduate or professional School

118. Are you currently living with your spouse?

_____ Yes	_____ No: never married
_____ No: separated	_____ No: divorced
	_____ No: widowed

119. How old are the children living in your home?

Girls: _____
Boys: _____

120. Are persons other than your children living with you?

_____ No _____ Yes (who? _____)

121a. Are you employed now?

_____ No
_____ Yes, full time
_____ Yes, part time job title _____

121b. If you are not currently employed, what is the main reason?

(Check all that apply.)

_____ Temporarily laid off	_____ Student
_____ Not employed, looking for work	_____ Health reasons
_____ Not employed, <u>not</u> looking for work	_____ Retired
_____ Homemaker	_____ Doing volunteer work
	_____ Other _____

122a. Is your husband employed now?

☐ No
☐ Yes, full time ☐ Yes, part time job title _____

122b. If he is not currently employed, what is the main reason? (Check all that apply.)

☐ Temporarily laid off ☐ Student
☐ Not employed, looking for work ☐ Health reasons
☐ Not employed, not looking for work ☐ Retired
☐ Homemaker ☐ Doing volunteer work
☐ Other _____

123. What is your family's total annual income?

☐ Less than \$5,000 ☐ \$10,000 to \$15,000 ☐ \$20,000 to \$25,000
☐ \$5,000 to \$10,000 ☐ \$15,000 to \$20,000 ☐ over \$25,000

124. During the last 6 months, have any family members been in the hospital for at least 3 days?

☐ No
☐ Yes ☐ Total number of days

125. What is the total number of times members of your family saw a doctor during the last 6 months? (Do not count checkups)

☐ 0-2 times ☐ 6-10 times ☐ More than 20 times
☐ 2-5 times ☐ 11-20 times

126. During the last 12 months, have any of the following events occurred in your immediate family? Please check any that have occurred.

<input type="checkbox"/> Divorce	<input type="checkbox"/> Income decreased substantially
<input type="checkbox"/> Marital reconciliation	<input type="checkbox"/> Alcohol or drug problem
<input type="checkbox"/> Marriage	<input type="checkbox"/> Death of close family friend
<input type="checkbox"/> Separation	<input type="checkbox"/> Began new job
<input type="checkbox"/> Pregnancy	<input type="checkbox"/> Entered new school
<input type="checkbox"/> Other relative moved into household	<input type="checkbox"/> Trouble with superiors at work
<input type="checkbox"/> Income increased substantially (20% or more)	<input type="checkbox"/> Trouble with teachers at school
<input type="checkbox"/> Went deeply into debt	<input type="checkbox"/> Legal problems
<input type="checkbox"/> Moved to new location	<input type="checkbox"/> Graduation from school
<input type="checkbox"/> Promotion at work	<input type="checkbox"/> Death of immediate family member

Name _____

Date _____

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 "yes" or "no" to indicate whether the behavior is *currently a problem* for you.

	How often does this occur with your child?							Is this a problem for you?	
	<u>Never</u>	<u>Seldom</u>	<u>Sometimes</u>	<u>Often</u>	<u>Always</u>			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
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
36. Wets the bed	1	2	3	4	5	6	7	Yes	No

APPENDIX 8

Letter Sent to Mothers

Family Study Project

June 1982

Dear Mother,

We are interested in learning more about the relationships between brothers and sisters, and also, the possible effects of parental divorce on these relationships. We are studying two- to six-year-old boys who have an older brother or sister not more than three years older than themselves and whose mothers are working. We are seeking the participation of both two-parent families who have never been divorced and single-parent families who have been separated or divorced for at least one year, but not more than four years. This study is being carried out by Ms. Cheryl Kier and Dr. E. J. Mash of the Psychology Department at The University of Calgary.

Your participation would involve one visit by yourself and your two children to the Family Study Project at the University of Calgary campus. This visit would be for about an hour and would be arranged at a time that is convenient for you, including weekends, if desired. Your involvement will include the completion of questionnaires concerning your children's relationship and your family, a brief interview with you about your children, and observation of the interactions that take

place between your two children.

If necessary, a babysitter can be provided and one dollar and fifty cents will be given to each of your children as a token of thanks. Upon completion of the study, we will also send you a brief description of our general findings and conclusions.

The relationship between brothers and sisters in both divorced and non-divorced families is an area that has received little study and we hope that you will consider participating.

If you think you might be interested, or would like more information, please call Cheryl Kier at 284-5205 or leave a message at 284-7130 and we will return your call.

Thank you for your help.

Yours sincerely,

Cheryl Kier

Eric J. Mash, Ph.D.

Department of Psychology

University of Calgary

APPENDIX 9

Newspaper Advertisement and Poster

NEEDED: WORKING MOTHERS WITH 2 CHILDREN

SINGLE-PARENT AND TWO-PARENT

FAMILIES NEEDED TO PARTICIPATE IN A STUDY ON SIBLING INTERACTION
PATTERNS

(at the Family Study Project, University of Calgary)

Family should include a 2-6 year-old boy in day care, with one
brother or sister not more than 3 years older.

This project involves the completion of several questionnaires
concerning how your children get along together, and one visit to
the University, where the children will be observed playing
together.

The children will receive one dollar and fifty cents for their
participation.

IF INTERESTED, PLEASE CALL 284-5205 OR 284-7130

APPENDIX 10

Telephone Interview

Hello, Mrs. _____, I really appreciate your taking the time to call. First I'd like to tell you a little more about the project, and give you the opportunity to ask me any questions that you have. We are interested in learning more about the relationship between brothers and sisters. There are several things that we will be studying in an attempt to learn more about the sibling relationship.

If you and your family agree to participate, this is what we'd be asking you to do.

First, I'd like to take about five minutes in a moment to ask you some questions about your family to determine if your family is appropriate for the study. These will include questions about your occupation, education, and your children's ages. This type of information is important for us so that we find families that are as similar as possible.

Secondly, I will set up an appointment for you and your two children to come to the University for about an hour. We will be asking you to fill out some questionnaires while we observe your children playing together. We will be filming your children so that their behavior can be coded at a later time. Each child will receive one dollar and fifty cents to thank him for his participation. The questionnaires we will be giving you will be asking about your children's behavior. They will include items that ask if your child dawdles while getting dressed, if he fails

to finish tasks or projects, and if he cries easily. There will also be questions such as "How often does your child seem eager to try new things?" and "How often does he seek adult attention by crying?" Let me emphasize that all the information which you give to us and the films of your children will remain strictly confidential.

Finally, before your visit to the University, we'd like to mail you three questionnaires for you to complete at home and bring with you when you arrive at the University. These questionnaires will include questions on how your children get along together, and also about what it's like for you to be a parent. These questionnaires will include items which ask whether you agree with statements such as, "When my child wants something he usually keeps trying to get it", and "I believe that my child can tell how I feel." There will also be items such as "My children get along well and like each other more than other brothers sisters do", " My children destroy each other's property", and "Of the things you have planned to get done every day, how many of these things do you actually get done?" These questionnaires will take about 30 to 35 minutes altogether to complete, and we'd appreciate your taking the time to fill them out. We will also send you a map with directions to the University, and when we've completed the project we'll send you a brief description of the findings.

Do you have any questions?

Do you think you would be interested in participating?

O.k. then, I'd like to first ask you a few brief questions about your family.

How did you find out about this study? _____

Mother's Name _____

Address _____

Telephone (Home) _____ (Work) _____

Marital Status _____

(Was/Is) this your first marriage? _____

Length of Marriage _____

(Length of Time Since Divorce/Separation) _____

(Has there been a man in the house since the divorce/separation?)

Mother's Occupation _____

Length of Time at this Job _____

Mother's Education _____

Mother's Birthdate _____

Children in Family

Name Age Birthdate Sex

1. _____

2. _____

How many times have you moved in the past two years?

Is the child; natural _____

adopted _____

Now I'd like to set up a time that's convenient for you to come to the University.

APPENDIX 11

Instructions to Subjects

Thank you so much for coming. _____ and _____, you can play with the toys over here while I talk to your mom, o.k.? Please have a seat, Mrs. _____. Just to give you an overview first, there are basically four things we'll be doing today. First, I'll describe to you what we'd like to have you do. Then, I'll go over any questions that you might have. Thirdly, I'd like you to read and sign the consent form. Finally, I will leave you and your children here for 40 minutes. During that time we have some questionnaires for you to fill out, and we have some more toys for _____ and _____ to play with.

O.k., so now I'd like to explain what we're going to be doing in a little more detail. During the time that your children are playing, we have three questionnaires for you to fill out. They should take the full 40 minutes to complete, and I'd appreciate it if you would try to finish them during that time. If you should finish early, please go over your responses and I'll come in at the end of the session.

O.k. This questionnaire describes a number of common child behaviors that parents sometimes find to be a problem. For each item, first circle the number which best corresponds to how often _____ does this behavior, and then circle yes or no as to whether or not you find this behavior to be a problem for you at the present time.

This next questionnaire asks about how _____ gets along with other children, not including _____. Please circle the number that best corresponds with how true this statement was of _____ during the past week.

This questionnaire is the same as the one that we sent you in the mail that asked about how your children get along together. This time, though, we'd like you to try to remember how they got along together (_____ years ago/before the marital separation), and to try to answer the questionnaire as to how your children got along at that time. Again, please be sure to answer every item and circle only one response per item.

Finally, I give you the chance to explain in your own words how your children get along together, just so I can get a more personal view of things. Sometimes questionnaires don't cover everything that happens in your family, so this is an opportunity for you to add your own thoughts.

Here is a consent form which assures your rights to confidentiality. It states that you have the right to decline from participating at any time during the study and that when we have collected all our information, we will send you a brief description of our general findings and conclusions.

So, please read this first and then sign the consent form and then we'll be all set to begin.

So, you can work here on the questionnaires while your children play by themselves with the toys I'm going to give them, and I'll be back in 40 minutes. If the children should approach

you, please respond to them as you would while busy at home. If there is some reason you or your children may need to leave the room, I'll try to come around to meet you and give you any assistance you might need. I'd like to check to see if the children have to go to the bathroom first, before we begin.

O.k., _____ and _____, you can play with these toys while your mom is busy. See that cabinet over there? There are more toys in there if you want them. I'll be back in a little while. Bye!

APPENDIX 12

Consent Form for Participation in the Sibling Relationships
Project at the University of Calgary

I, _____, the mother of _____ and _____, am aware of the nature of the research and the way in which it will be conducted. I know that the research is being conducted by Cheryl Kier and Dr. E. Mash at the University of Calgary. I understand that my children and I may withdraw our participation at any time, and that the information acquired from us will remain confidential, being used solely for the purpose of the described research. I give my consent for my children and myself to be videotaped. I am aware that my identity and those of my children will be concealed both in written and verbal reports of the research, and that I will receive a general report of the study's findings after its completion.

Mother's signature

Witness

Date

Address

APPENDIX 13

Behaviors Requiring Intervention During Sibling Interaction

1. Physical harm to self:

- jumping off sofa or chair close to coffee tables
- playing with electrical outlets
- banging on windows or mirrors
- breaking glass ornaments or light bulbs
- attempting to knock over bookcase
- self-mutilating behavior, e.g. head-banging

2. Physical harm to others:

- hitting, kicking, biting, etc. to inflict pain
- pushing or shoving other child into furniture, walls, tables, etc.
- throwing toys or ornaments in a manner which might inflict harm to other

3. Verbal aggression:

- teasing other child to the point of tears
- frightening other child to the point of tears

4. Destruction:

- pulling at the curtains
- hitting tables with hard objects so as to scar them
- pulling down microphones

5. Other:

- child indicates he/she has to go to the bathroom
- nosebleeds, seizures, etc.

The observer's discretion will have to be used in determining if the behavior is "serious" enough to warrant intervention. When intervention is required, the experimenter should enter the room and direct the children to specifically stop the behavior which lead to the intervention.

Note: the above listed behaviors are meant as examples, other behaviors similar to them would also warrant intervention.

APPENDIX 14

Observer Training

Each observer received a copy of the coding manual and a set of flash cards with the code abbreviations on one side and the behavioral definitions on the other side in order to facilitate familiarity with the categories. The observers were requested to begin memorizing the categories and definitions before the first group meeting.

Observers were trained in two separate groups with three observers per group. After group training, two of the three observers in the second group withdrew, leaving a total of four observers plus the experimenter.

Session I

The first group meeting covered ethics and basic procedures. Observers were informed that they would be coding tapes as part of a study of sibling relationships. They were told that the sibling relationship was being studied by taking a sample of two children in a play situation with their mother present, just as might commonly occur in the home. It was explained to them that the Sibling Interaction Behavior Scale (SIBS) coding system was devised to describe and categorize that behavior, and that the coder's job was to apply the coding system reliably to each of the videotapes so that some conclusions could be drawn about how siblings get along together in a play situation.

Coders were told that there would be four more group training sessions, and then coders would practice using the coding system on some precoded practice tapes, sometimes alone, and sometimes with a partner, until they were able to reliably code the precoded tapes. Observers were informed that the five group sessions would consist of discussions of what was expected from the coders, quizzes on the category definitions, and practice applying the coding system to some videotaped intervals.

Observers were made aware that there were 59 total tapes, half of which would be coded by single observers and half of which would be coded by partners. In addition, they were told that some of the tapes would be double-coded, i.e., coded again by an additional team or individual observer in order to make sure that all observers were using the coding system in the same way. They were told that they would be requested to code no more than 20 tapes, each of which would take two to three hours to code. The commitment would involve each person coding one tape each day, over a five day week. Observers were then given a contract specifying the above terms of their commitment.

During the first group session observers were also informed about the necessity for confidentiality. They were requested to inform the investigator if they should recognize any of the families on the videotapes, and to please not discuss the videotapes outside of the laboratory. They were discouraged from answering the phone if it were to ring while they were coding,

but if they were free, to answer it by stating, "Family Study Project, _____ speaking."

The procedures and set up for an observation session were described next. Observers were told that they would schedule times that they would be coming to the laboratory for coding. They were told to call the experimenter if they could not make their appointed time. They were told that the experimenter would meet them at the Family Study Project at the scheduled time to let them in the door, but on weekends, she would meet them at the first floor corridor to enable them to get downstairs. The experimenter would then hand the observers the tapes that they were to code. Blank coding sheets would be stored on top of the white filing cabinet, and pencils would be found on the desk. Clipboards would be found in the rooms with the Beta Max machines, and "Do not disturb" signs would be found on the white filing cabinet, and were to be taped on the outside of the door whenever coders were busy.

After completion of the coding session, observers were to make sure that all the equipment and lights were turned off, and to put the materials away where they were stored. Videotapes and completed coding sheets were to be returned to the experimenter.

Questions observers had about the coding manual were discussed next.

The experimenter demonstrated the use of the Beta Max equipment and showed five minutes of a training tape without any attempt at coding. The importance of familiarity with the codes

was stressed, as well as the amount of interaction that was actually occurring and the level of difficulty of seeing and hearing the tapes.

The first meeting ended with the observers being reminded of the date and time for the second group meeting, and they were requested to bring their coding manuals with them.

Session II

The experimenter called out a category name and waited for a reply from the group with the appropriate definition. Then she quizzed the group on the code abbreviations and pointed out where the observers needed more work. Next a videotape was viewed and observers called out the categories they thought were appropriate.

Session III

Session three consisted of the observers viewing a precoded tape and practicing applying the categories.

Session IV

Session four was similar to session three except that a segment of the tape was chosen to demonstrate some of the negative behaviors.

Session V

During the fifth session, observers split into two groups to practice coding as partners and using the coding sheets. After half an hour, the teams exchanged the tapes, and during the final half hour, the group reconvened and discussed the differences between what they had coded and what the precoded scoring sheets had indicated.

During the remaining sessions, the observers, singly or in pairs, practiced coding the pre-coded training tapes. After each session the experimenter would mark the discrepancies between the responses of the coders and that of the precoded responses, and would review the segment of the tape the coders had observed in the attempt to become familiar with the types of errors observers were making. Upon the observers' arrival the following day, the experimenter and the observers would review the tapes once more and discuss their discrepancies before the observers would begin coding a new segment of tape.

Reliability (Kappa) was calculated daily for each behavior category, and when approximately 70% reliability was reached for categories that occurred a minimum of 10% of the time, and when the coders seemed to reach a plateau, coding of actual videotapes began. This required an average of 41 hours of training per coder. Kappa was utilized as the coefficient for reliability during the training of observers. However, because the coding system used in the present study did not meet the assumption of mutually exclusive categories for the use of Kappa, effective

percent agreement was utilized for all other reliability estimates. The advantage of using Kappa during observer training was that patterns of discrepancies of occurrences and nonoccurrences (rather than simply agreements versus disagreements) for each observer could be detected and therefore served as an aid to training. Inspection of the values for effective percent agreement of observers during training revealed slightly lower values for reliability. Although the Kappa statistic tends to be a more conservative measure than effective percent agreement (Hartmann, 1977; Kazdin, 1982), in the situation in which there is a low frequency of occurrences (as in the present study), Kappa may yield a larger value than effective percent agreement (Hartmann, 1977).

Observer Contract

This contract specifies the terms of the project with which you are about to become involved.

When you have signed the contract you will have agreed to fully participate in coding videotapes of sibling interaction.

1. I, _____, agree to participate in the coding of videotapes of sibling interaction.
2. I understand that this will involve the viewing of no more than 20 videotapes at approximately three hours a piece.
3. I am also aware that an additional 15 hours (approximately) of training will be required to become familiar with the coding system.
4. In the probable event that the principal investigator's research grant is made available to her, I understand that I will receive an equal share of the money available (no less than \$70) upon the completion of the required number of videotapes.
5. I understand the importance of confidentiality and I agree to preserve it under the terms discussed.

It is understood that this contract can be revised at any time by agreement between the observers and the principal investigator.

Date _____

Observer _____

Principal Investigator _____

CODING MANUAL FOR THE SIBLING INTERACTION BEHAVIOR SCALE (SIBS)

Cheryl Kier

Family Study Project

Department of Psychology

The University of Calgary

284-6169

March, 1983

SIBLING INTERACTION BEHAVIOR SCALE (S.I.B.S.)

Preliminary Instructions to Observers

This project will be concerned with the description and categorization of videotaped interaction between pre-school boys with an older brother or sister in a laboratory playroom.

You will be viewing videotapes of two children at play with an adult female sitting apart from them, completing questionnaires. Using standard behavioral codes, you will categorize the behaviors of each individual.

In order to code behaviors accurately, you must first familiarize yourself with this coding manual. You should initially read through the entire manual to get an overall picture of the task at hand. Following this, you should memorize the behavior code abbreviations and their definitions. Flash cards are provided to help you accomplish this. If any questions arise while reading the material, please make a note of them so that we can discuss them at subsequent observer meetings.

You will be contacted soon regarding the date and time of the first observer meeting.

Cheryl Kier

284-5205

Sibling Interaction Behavior Scale (S.I.B.S.)

INTRODUCTION

This observational system is designed to record the interactions between two siblings in a play situation with their mother present. It is based on the sibling interaction coding systems of Abramovitch, Corter, and Lando (1979), and Lamb (1978), and the peer interaction categories of Parten (1932). Categories from these systems were combined and modified to result in the present method of recording interactions between two siblings and their mother.

Twenty-six categories were selected to reflect positive, negative, and neutral behavior, with socialization, modeling, caretaking, and conflict dimensions of sibling interaction represented. Both verbal and non-verbal behaviors are included and proximity between the participants is also monitored.

The emphasis of the coding system is on the relationship between the siblings. However, their mother will be present in the room, and although she will be occupied with completing questionnaires, it is likely that some interactions will take place between the mother and the children. Therefore, the coding system is designed to consider mother-child and child-mother interactions as well.

Since it is difficult to draw conclusions based on global observations of play behavior, specific categories of behavior have been selected and operationally defined. The category

system is exhaustive so that any behavior emitted by the children will fit into one of the categories. No behavior emitted by the children should remain uncoded. Some categories are not mutually exclusive, so that two or more child behaviors may be coded in the same interval. However, not all of the mother's behaviors will be coded as the majority of her time will be spent in non-interactive behavior (i.e., completing questionnaires).

A list of category definitions follows. Note that although definitions refer to interactions between two siblings, the same rules apply for mother-child and child-mother interactions.

Sibling Interaction Behavior Scale (S.I.B.S.)

I. POSITIVE

A. VERBAL

DT - Direction - imperatives or interrogatives verbalizing thoughts, ideas, or suggestions for activities stated in a friendly, calm, positive, or neutral manner. May include instructions or descriptions of the rules of a game telling siblings how to act. Differs from DE (Demand) in that tone of voice and facial expression are calm, positive, or neutral. If command is not said in a positive or neutral way, score as DE. Differs from RQ (Request) in that DT involves child instructing sibling as to what child wants sibling to do, whereas RQ involves child asking sibling to do something for child.

Examples:

- (1) "You stay here"
- (2) "Watch me!"
- (3) "Here, take this"
- (4) "See"
- (5) "Come..."
- (6) "I want you..."
- (7) "Come on!" (said in pleasant, inviting voice)
- (8) "Now it's my turn."
- (9) "Why don't you go play for a couple minutes?"
- (10) "I think you better leave the floor alone."
- (11) "Careful!"
- (12) "You gotta give me a chance."
- (13) "Let me just finish this one."
- (14) "Show me how it did it."
- (15) "Hey Mom!"

Statements that reflect an invitation to do something together or in cooperation are to be included in this category. Includes questions which indicate that sibling is invited to join child in an activity.

Examples:

- (1) "Let's make another one."
- (2) "You do _____ and I'll do _____"
- (3) "Let's take turns"
- (4) "Come here"
- (5) "Do you want to _____?"
- (6) "Want to color?"
- (7) "Let me color."

RQ - request - Asking for something from sibling (e.g., a toy, help, information) in a polite manner and low tone of voice, often accompanied by a positive facial expression. Also includes all simple questions that seek an answer from sibling.

Examples:

- (1) "Could you give me the _____?"
- (2) "Will you help me with this?"
- (3) "Can I play with _____?"
- (4) "Can you take care of this for me?"
- (5) "Can I have a try?"
- (6) "How do I do this?"
- (7) "Let me see that."
- (8) "Let me open the book."
- (9) "Guess what I'm making."
- (10) "Guess what?"
- (11) "Know what I did?"
- (12) "What?"
- (13) "Is 'fatso' impolite to say?"
- (14) "Want him to do a wheely?"

Also includes using sibling's name as an interrogative, with the child's voice rising in pitch at the end of the name to form a question. The child's tone of voice should determine whether the item should be coded as RQ.

Examples:

- (1) "Jason?"
- (2) "Mommy?"

Requests which direct sibling's performance (e.g., "I want you to do _____") are not to be scored as RQ but as DT.

AS - assist - Child gives verbal instructions or explanations, help, or reassurance to sibling. Child may describe how something works, or offer assistance to sibling. Also child may help in response to a request for assistance from sibling.

Examples:

- (1) "I'll show you how to do that."
- (2) "You have to turn the knob for it to work."
- (3) "This is how it's done"
- (4) "O.k., I'll do it" (child open Nursing Kit for sibling --[DM])
- (5) "The orange tile goes here"

Also includes any verbal consolation, comfort, or reassurance child may provide when sibling is in some way distressed.

Examples:

- (1) "Don't worry."
- (2) "It won't hurt."

VP - verbal positive - Verbal statements of approval, agreement, admiration, or acceptance directed at the sibling or his behavior. Includes statements indicating a willingness to share or cooperate with sibling.

Examples:

- (1) "That's good."
- (2) "I like that."
- (3) "That's right."
- (4) "That's nice."
- (5) "Isn't this fun?"
- (6) "Good."
- (7) "Perfect"

- (8) "You did that nicely."
- (9) "Thanks."
- (10) "Sure."
- (11) "O.k." (when used to indicate agreement)
- (12) "Yes." (when used to indicate agreement)
- (13) "Please."
- (14) "I made something for you."
- (15) "You're welcome."

LA - laugh - An explosive sound of joy, or expression of amusement or mirth while watching the sibling. Facial expressions that are directed toward sibling in which corners of the mouth are retracted and raised are also included. Instances of giggling in response to or with regard to sibling are also coded LA.

B. NON-VERBAL

GV - give object - Child gives or attempts to give an object spontaneously or on request. Also includes letting other sibling share an object with which child is already playing - spontaneously or on request. Includes passive letting go of toy when sibling attempts to take toy from child (TT). This is a discrete behavior so that it is not scored as ongoing behavior. Score GV only in the interval in which it is initiated.

Examples:

- (1) Child asks sibling, "Do you want to try it?" (DT) and hands Etch-A-Sketch to sibling.
- (2) Child says to sibling, "Now it's your turn to be the doctor" (DT) and gives stethoscope to sibling.
- (3) Sibling asks child for police car (RQ) and child hands it to him.

SH - shows - child physically shows or points out object or behavior to sibling. May be accompanied by verbalization.

Examples:

- (1) "Look" (DT) Child makes car jump.
- (2) "Watch me!" (DT) Child throws Nerf ball into the air and catches it.
- (3) "Mom, I made a tower!" (TK) Child stands back from object and looks at mother.
- (4) "It went like this, Mom." (TK) Child flips car upside down.
- (5) "There's Big Bird, right there." (TK) Child points to page in coloring book.

DM - demonstrate - Child gives aid to sibling by physically guiding or showing sibling how to perform behavior. May be preceded by statements such as "I'll show you how to do that" (AS) or in response to a request for help from sibling. DM includes helping child in behaviors other than play, such as aiding him to pull up his socks or to blow his nose. Differs from SH (shows) in that DM is an action with the purpose of aiding sibling, whereas SH is usually to gain sibling's admiration for an object or behavior with which the child himself is occupied.

Examples:

- (1) Taking Etch-A-Sketch and shaking it to erase it when sibling is having trouble.
- (2) Taking blocks apart when sibling is having difficulty doing so.
- (3) Helping child put floor tiles back into correct design.

TT - take toy - Child takes unoffered toy from sibling. TT is coded rather than OS (object struggle) when child does not hastily snatch toy but neutrally removes object from sibling.

AC - accept toy - Takes a toy offered by sibling.

Examples:

(1) Child is working of Lego and takes new piece that is handed to him by sibling.

(2) Child takes stethoscope that is handed to him by sibling.

(3) Sibling asks child to help him open Nursing Kit (RQ) and hands it to child (GV) -- Child takes kit from sibling (AC) and opens it (DM).

PC - positive physical contact - Positive physical contact occurs between siblings. Includes touches, hugs, pats, sitting on lap, and all non-aggressive physical contact.

NP - non-verbal positive - Non-verbal gestures of approval, agreement, or acceptance directed at the sibling or his behavior. Often in the form of a head nod.

IM - Imitate - *Includes both verbal and non-verbal imitation.*

Verbal - Repeating the vocalizations of the sibling that have occurred within the past two intervals. Includes repeating a portion of the sibling's vocalizations with some modifications. Includes sounds such as the revving of a car engine.

Examples:

(1) One sibling: "I'll catch it in my mouth." -- Other sibling: "I'll catch it in my mouth, too."

(2) One sibling, holding puppet: "Hi, I'm Orangey." -- Other sibling, holding puppet: "Hi, I'm Pinkey."

(3) One sibling "I had a nice hat on, but not any more." -- Other sibling: "I had a nice hat on, but not any more."

Non-Verbal - Duplication of sibling's activity (that has occurred within the past two intervals) preceded by watching sibling's behavior; behaviors usually involve object-directed action, but might consist of a distinctive motor response such as

jumping. IM is coded only in the interval in which it is initiated.

II. NEGATIVE

A. VERBAL

DE - demand - An imperative or order stated with authority. May be accompanied by threatening facial expressions or gestures. Includes negatively valenced commands prohibiting sibling's behavior.

Examples:

- (1) "Give me the police car!"
- (2) "I want it!"
- (3) "Give it back!"
- (4) "Don't touch his toys."
- (5) "You don't pull hair."
- (6) "Don't do that."
- (7) "You can't have everything."
- (8) "You can't climb on here."
- (9) "You musn't play inside this."
- (10) "That doesn't go in thers."
- (11) "Don't hit it -- catch it!" (DT)
- (12) "I'm not going to do it 'till you help me."
- (13) "You better not touch it."
- (14) "We go right now."
- (15) "I want to play with this!"

RF - refusal - Includes statements indicating disagreement or refusal (to comply) in response to behavior initiated by sibling. May differ from DE in that RF is coded only if it is directly in response to a behavior initiated by sibling. Includes shrieks indicating Refusal. RF may occur in response to either a verbal or non-verbal behavior by sibling.

In response to verbal:

- (1) "You can only step on the brown squares" (DT) -- "No!"
- (2) "Give me the police car!" (DE) -- "No!"
- (3) "I'll show you how to do that" (AS) -- "I can do it myself."

In response to non-verbal:

- (1) If sibling hands child piece of Lego (GV) and child says, "Go away!"
- (2) If sibling reaches for Etch-A-Sketch that child is holding and helps to shake it to erase it (DM) and child replies, "Cut it out!" or "Quit it!"
- (3) If sibling puts arm around child to lift him in the air (PC) and child yells, "Leave me alone!"

DI - disapproval - Verbal statements of disapproval. Teasing, name-calling, unfavorable judgments, statements of intent to harm, take toys away, or to tell adult about sibling's "wrong doing". Also includes actual instances of tattletelling to mother. Disagreements between siblings are also scored as DI. Also includes loud shouting of child's name in a manner indicating annoyance.

Examples:

- (1) "Don't you dare!"
- (2) "I'm going to tell the lady you did that"
- (3) "Sammy won't share!"
- (4) "No you didn't!"
- (5) "Bug off."
- (6) "Stewart is writing on all my paper."
- (7) "TREVOR!!!"

CR - cry - Any distress-type vocalization including whining, whimpering, and complaining in response to statement or behavior by sibling. Includes complaints using a slurring, high-pitched, nasal, falsetto voice.

Examples:

- (1) "Mommy, it's hot in here" (said in whiny voice).
- (2) "B-i-l-l-y!" (stretched out and said in a nasal, falsetto voice).

B. NON-VERBAL

OS - object struggle - Child attempts to gain sole possession of toy that is in sibling's possession; may involve pulling, grabbing, pushing, etc. Includes physically taking or attempting to grab toy away from sibling. May be accompanied by protests from the sibling who has possession of toy.

RJ - rejection - Physical movements indicating disagreement or refusal (to comply) in response to behavior initiated by sibling.

Examples:

- (1) Shaking head "no".
- (2) Hugging toy to chest.

NC - Negative physical contact - Negative physical contacts by person or objects that have the potential for harm or injury. Includes hit, push, pull, shove, kick, bite, pinch, pull hair, etc. Includes negative or threatening facial gestures. NC is also coded in cases in which child destroys or physically threatens to destroy sibling's property.

Examples:

- (1) Child throws toy at sibling.
- (2) Child sticks tongue out at sibling.
- (3) Child raises fist over sibling's Lego structure in threat to ruin it.

III. NEUTRAL

With the exception of TK (Talk - see below), all the behaviors in this section are coded ONLY when no other positive or negative behaviors have occurred in that interval.

LO - look - Direction of gaze toward sibling or activity in which sibling is engaged. Short glances are also scored as LO. Coded only when no other positive or negative behaviors have occurred during the interval.

Examples:

- (1) Sibling is playing with Etch-A-Sketch (SP) and child is standing near sibling with his eyes focussed on the Etch-A-Sketch.
- (2) Mother is working on questionnaire and glances up to watch child.

TK - talk - Includes all nondistress vocalizations except giggling or laughing which are directed toward the sibling. Coded only when no other positive or negative verbal behaviors have occurred during that interval (although TK may be coded while other non-verbal behaviors are occurring). Differs from RS (responds to question) in that TK is scored only when it is spontaneously initiated by the child and is not in response to a request from sibling.

Examples:

- (1) "I like the Duke's car."
- (2) "I can make the car jump."
- (3) "Some cars really go like that."
- (4) "I'm trying to see if there are any more little boxes."
- (5) "This wasn't like this before."

RS - responds to question. *Includes both verbal and non-verbal responses to question.* A statement or action is coded as RS only when it is preceded by a request (RQ) from the sibling and when it does not fit into any other positive or negative categories. Differs from TK in that all RS statements are in response to a question from the sibling. For cases in which the

child responds to a question and then continues talking, the first statement is coded as RS and the remainder as TK. RS may be either verbal or nonverbal.

Examples:

Verbal:

- (1) "Doesn't it work?" (RQ) -- "No, it doesn't."
- (2) "What are you making?" (RQ) -- "I'm making a house."

Non-Verbal:

- (1) "Did that hurt?" (RQ) -- Child shakes head from side to side indicating "no".
- (2) "Where did the lady go?" (RQ) -- Child shrugs shoulders indicating "I don't know."

ST - solitary talk - Child vocalizes or sings to self or object. Not directed toward any individual. Includes statements made without any intention of interaction. Does not include audible yawns, sighs, or other sounds unrelated to play.

Examples:

"I'm going to make a tower" (said to no one).

Includes hums or noises pertaining to operating objects (e.g., police car siren). Coded only when no other positive or negative behaviors are occurring during that interval.

CP - cooperative play - Child is acting together with sibling to perform a common task. Usually this involves playing with the same play materials as sibling with mutual enjoyment. Includes activities in which children are taking turns.

Examples:

- (1) Children are playing catch with Nerf ball.
- (2) Children are taking turns making the puppets talk. (When this happens, do not score the "puppets'" verbalizations separately; code entire interval as CP.)

(3) Children are putting Lego pieces onto the same structure. (If the children are both playing with Lego pieces but are creating separate items, this would be scored as SP.)

Coded only when no other positive or negative behaviors are occurring during that interval.

SP - solitary play - Child plays alone and independently with toys that are different from those of sibling, without effort to get close to the sibling, and without reference to what he is doing. May include vocalizations related to play, but not directed to sibling. (These non-communicative vocalizations are coded as ST [Solitary Talk].) Also includes unoccupied play in which child is not playing, but occupies himself with watching anything that happens to be of momentary interest. When there is nothing of interest, he plays with his own body, gets on and off chairs, etc. Coded only when no other positive or negative behaviors are occurring during that interval.

IV. NON-CODABLE DATA

In some instances, the observer will be unable to code a behavior using the above categories. In such instances, one of the following categories should be used. Use these categories only on the rarest of occasions, as infrequently as possible. Only use these categories when behavior cannot be covered by any other category. Videotape interval should be replayed at least three times before decision to score as non-codable is made.

NS-V - nonscorable-verbal - Use this category when behavior cannot be scored because it is not just difficult to make out, but is inaudible.

Examples:

- (1) Child is talking in an unknown language.
- (2) Two children are talking at the same time and one cannot be heard.
- (3) Child is whispering too far away from the microphones so that speech cannot be made out.

NS-N - nonscorable-non-verbal - Use this category when behavior cannot be scored because it cannot be properly seen.

Examples:

- (1) Child is out of camera range.
- (2) One child is blocking view of the other.
- (3) Child has back to camera.

HOW TO USE THE CODE SYSTEM

The observation period will consist of ten-second observation intervals. (See Appendix for sample coding sheet.) After each ten-second interval shown by the time generator in the upper right-hand corner of the screen, the tape will be put on "pause" (which will freeze the picture) so that both children's behavior can be recorded. Each member of the coding team will decide for him/herself how the interval should be coded. Then, a comparison will be made of their codes. If there is agreement between the coders, they will record the correct responses on the coding sheet. If there is disagreement between the coders, the interval will be viewed again, and the observers will reach a consensus for recording on the coding sheet. Intervals in which the mother is involved in interaction with one or both of her children will be replayed and coded at the end of the ten-second interval, after the behaviors of the siblings have been observed and recorded.

Place a checkmark in each of the boxes beside the row headed "L" (Little Sibling) that correspond with behaviors that the younger sibling has directed toward his older sibling. Also, behaviors which are not directed toward any individual (ST - Solitary Talk, and SP - Solitary Play) will be recorded with a checkmark.

For example, if in one ten-second observation interval the younger child hits his sibling on the arm, calls his sibling a

bully, and starts to cry, the younger child's behavior would be coded in the following way after the tape is stopped:

	DE	RF	DI	CR	OS	RJ	NC
L			✓	✓			✓

B

M

(DI = Disapproval)

(CR = Cry)

(NC = Negative Physical Contact)

Because the mother is present in the room with the children, it is likely that the younger child will direct some of his behaviors toward his mother. If the younger child directs his behavior toward the mother, put an X in each of the boxes beside the row headed L which correspond to the mother-directed behaviors which the younger sibling performed in the preceding ten-second observation interval.

For example, if during one ten-second interval the younger sibling sits in his mother's lap and asks, "Mom, can you help me with this?", his behavior would be coded in the following way:

	DT	RQ	AS	VP	LA	GV	SH	DM	TT	AC	PC
L		X									X

B

M

(RQ = Request)

(PC = Positive Physical Contact)

If the behavior is directed toward BOTH the mother AND the older sibling, put a circle in each of the boxes beside the "L" which corresponds to the behaviors of the younger sibling directed toward both individuals.

For example, if the younger sibling asks, "Will somebody help me with this? I can't do it" and starts to cry, his behavior would be coded in the following way:

	RQ	AS	VP	RF	DI	CR
L	○					○
B						
M						

(RQ = Request)

(CR = Cry)

If during one interval there are two instances of a single category, these are not scored separately unless one instance is directed toward the sibling and one is directed toward the mother. For situations in which two separate instances of a behavior occur and each is directed toward a different individual, do not place two notations in the appropriate row, but use a circle with a slash (⊕) instead. Therefore, a behavior which is directed toward two individuals simultaneously is scored by a circle; two instances of the same behavior, each directed to a different individual, is recorded by a circle with a slash.

Example: If during one-ten second interval the mother asks, "Do you want to put some Lego into the Lego box?", the younger sibling answers, "No!", the older sibling then says, "Help, Neil!", and the younger sibling again says, "No!", the younger child's behavior would be coded as follows:

	DT	RQ	AS	VP	LA	DE	RF	DI	CR
L								⊖	
B									
M									

(RF = Refusal)

Example: If during one ten-second observation interval the younger sibling hits his older sibling on the arm, calls him a dummy, and whines, "Mommy, Billy won't let me have the police car!", his behavior would be coded in the following way:

	RF	DI	CR	OS	RJ	NC
L		✓	X			✓
B						
M						

(DI = Disapproval)

(CR = Cry)

(NC = Negative Physical Contact)

For the behaviors of the older (big) sibling (B), a similar coding format is used in that a checkmark is placed in the boxes beside the row marked "B" which correspond to the behaviors

directed toward his sibling; or to non-directed behaviors (ST - Solitary Talk, and SP - Solitary Play); an X is used for those behaviors the older sibling directs toward his mother, a circle is used for the behaviors the older sibling directs toward both individuals simultaneously, and a circle with a slash is used to indicate two separate instances of one behavior; one of which is directed toward the younger sibling and one of which is directed toward the mother.

For example, if the older sibling grabs some Lego from the younger sibling and says to him, "Give me that, you dummy!", his behavior would be coded as follows:

	DE	RF	DI	CR	OS	RJ	NC
L							
B	✓		✓		✓		
M							

(DE = Demand)

(DI = Disapproval)

(OS = Object Struggle)

Example 2: If the older sibling says to the mother, "Ma-a-am, Junior hit me!", in a whining voice with a long face and then asks, "Can I play with the Nerf ball?", his behavior would be coded as follows:

DT RQ AS VP RF DI CR

L

B X X

M

(RQ = Request)

(CR = Cry)

Example 3: If the older sibling has momentarily stopped playing with the Etch-A-Sketch to watch his younger sibling and mother who are putting together an object with Lego, code as follows:

LO TK RS ST CP SP

L

B ○

M

(LO = Look)

Note that if the older sibling had CONTINUED to play with the Etch-A-Sketch while watching his younger sibling and his mother his behavior would be coded as follows:

LO TK RS ST CP SP

L

B ○ ✓

M

(LO = Look)

(SP = Solitary Play - Remember that a checkmark is used for all non-directed behaviors.)

For the mother's behavior, a circle is placed around the "M" on the right-hand side of the coding sheet for each interval in which she is a participant. Next, an arrow facing downward (\downarrow) is placed beside the row marked "M" for those behaviors which are directed to the younger sibling; an arrow facing upward (\uparrow) is used for behaviors which are directed toward the older sibling; a circle is used for behaviors which are directed toward both children, and a circle with a slash is used for situations in which one instance of a given behavior is directed toward one child and a separate instance is directed toward the other child. When she is engaged in answering the questionnaires and is not interacting with her children, the row beside "M" is left blank, and the "M" on the far right-hand side of the page is not circled.

For example, if the mother puts her arm around the younger child, dries his eyes, and says, "There, there, Junior, you'll be all right. Why don't you go play with the Lego over there? Debbie, show Junior how to put the Lego together", code as follows:

DT	RQ	AS	DM	TT	AC	PC	IM	NP	LO	TK	RS	ST
L												
B												
M	\bigcirc		\downarrow				\downarrow					

(DT = Direction)

(PC = Positive Physical Contact)

(AS = Assist)

PROXIMITY CODE

Proximity between the siblings will be scored at the end of each ten-second observation interval. A checkmark is to be placed under one of three columns marked "C" (Close), "N" (Near), or "F" (Far) on the right-hand side of the coding sheet. If any of the sibling's body parts are within one foot of any of the other sibling's body parts, a checkmark is to be placed underneath the column marked "C", corresponding to the correct ten-second interval. If the siblings are more than one foot apart, but less than three feet apart (two floor tiles), a checkmark is to be made under the column headed "N". Finally, if the siblings are more than three feet apart, a checkmark is to be made under the column headed "F". If the distance between the siblings changes during the course of one ten-second interval, the proximity of the siblings at the end of the interval is what is to be coded.

Proximity between the mother and her children will be recorded two rows beneath that in which proximity between the two siblings is recorded. This will be done only for those intervals in which the mother's behavior is recorded. An "L" is placed in one of the three proximity columns (C, N, or F) which corresponds to the distance between the mother and the younger sibling. A "B" is to be placed under one of the three proximity columns corresponding to the distance between the mother and the older sibling.

RULES AND PROCEDURES FOR AN OBSERVATION SESSION

It is essential that each observer follow identical procedures so that data from different observers are comparable.

In the space labelled "Tape No." on the first page, the observer is to write down the number written on the top of the videotape he/she is observing. The observer should then record his/her name in the space designated "Name". The date should be written in the space designated "Date". On each succeeding page, the page number is listed in the upper right-hand corner. In addition, the tape number and observer initials should be recorded in the appropriate blanks.

At times the tape is stopped because one or both of the children left the playroom. In these instances, there will be a brief pause in the videotape and the time generator (in the upper right-hand corner of the screen) will skip ahead a few minutes. When this happens, put an "S" in the space for the next interval, and continue recording at the first possible interval. For example, if a child left the playroom after 11:15 minutes, put an "S" in the interval "11:15 - 11:25". If the child then returned to the room at 13:52, recording would begin again at the next __:00 time interval. The number "14" would then be filled in in the blank (to correspond with the time generator), and scoring will continue as before.

If there are any unusual events which occurred in the videotape, the observer should note these on the back of the last page of the coding sheets. Comments may include mentioning that

sound track was of poor quality thus making it difficult to code verbal behaviors; one child was extremely sullen and removed throughout the interaction, or any other notable events.

The observer should strive to be as accurate and consistent as possible in his/her use of the coding system. The above rules are to be followed precisely.

RELIABILITY

Reliability is essential for any observational system. Therefore, two types of reliability will be assessed. One is the reliability of each coder with precoded videotapes, and the other is reliability of the coders with one another. Each coder will first be trained to become reliable with a set of precoded videotapes. It is possible for coders to be in agreement with one another, but no longer reliable with the original behavioral definitions. Therefore it may be necessary to conduct periodic reliability checks of each coder with the training tapes.

In addition to the coders being reliable with the training tapes, it is also important that there is agreement among the coders. Therefore tapes will be randomly selected to be recoded by two (or three) teams of observers. The coders will not know which of the tapes will be double coded, therefore it is important to be as accurate as possible in coding each and every tape.

If there is a lack of agreement among observers, it may mean that more practice is needed by the observers with precoded

training tapes, or, that the behavioral definitions are not clearly defined. Therefore, it may be necessary to go over and discuss ambiguities in the behavioral definitions and/or request the coders to again obtain reliability with training tapes.

[illegible]

APPENDIX 15

Scales on Stolberg's Single-parent Questionnaire

1. ROUTINES

Regularity of household routines, such as mealtimes, bedtimes, child supervision times, etc. Relates to amount of structure in family activities.

Operationally defined by frequency of repeated task or family pattern, or in one case (Item 76) by rank of the responsible party performing the task.

A high score on this scale indicates a highly structured family environment.

Items on Scale 1 -- 6, 25, 43, 47, 49, 75, 76, 82.

2. RULES

Amount and pervasiveness of household rules, regulations, and behavioral structure.

Operationally defined by the frequency and degree to which rules are implemented.

A high score on this scale denotes a rigidly maintained system of rules.

Items on Scale 2 -- 7, 28, 29, 31, 37, 39, 46, 50, 67, 77, 83.

3. CHILD INVOLVEMENT IN DECISION MAKING

Extent to which the child is involved in household rules, regulations, and his/her own personal structure. Also, includes the impact of the child's decision on parent's dating behavior, financial decisions, and vacation planning.

Operationally defined as the degree and frequency of child decision making input.

A high score is indicative of major involvement by the child in important family and self decisions.

Items on Scale 3 -- 18,21,28,35,42,51,53,71,81,82.

4. PARENT-CHILD ACTIVITIES

Measures actual level of activity oriented involvement of the parent with her/his child. Primarily taps positive parent-child involvement.

Operationally defined by the frequency of times spent with child across a number of activity areas.

A high score on this scale denotes a high level of parent-child activity.

Items on Scale 4 -- 17,20,30,38,44,66,74,86.

5. COMMUNICATION

Measures openness concerning feelings and constructive issues, as well as tapping quality of listening by parent.

Operationally defined as the amount of verbal exchange between the parent and the child.

A high score on this scale indicates high levels of parent-child communication.

Items on Scale 5 -- 1,10,22,27,41,57,60,66,79,88.

6. PROBLEM SOLVING

Measures flexibility and constructiveness in dealing with problematic situations that may arise in the day to day life of

the parent.

Operationally defined as frequency of success or effectiveness of response in problematic situations by the parent.

A high score indicates independence and self sufficiency in coping with problem situations promptly and constructively.

Items on Scale 6 -- 3,4,13,24,52,61,69,70,73.

7. SUPPORT SYSTEMS

Measures the parent's accessibility to family/peer support.

Operationally defined as the frequency of access to, or the extent of, social supports.

A high score denotes a strong support system.

Items on Scale 7 -- 8,12,15,32,34,40,48,58,63,85.

8. VALUE OF PARENTING

Measures the parent's perception of parenting as regards the constructiveness and enjoyability of parenting.

Operationally defined as the level of perceived parenting satisfaction.

A high score is indicative of high parental satisfaction.

Items on Scale 8 -- 11,14,17,20,30,36,38,45,54.

9. WARMTH

Measures parent's use of positive reinforcement, reciprocal affection between parent and child and the parent's attuneness to the needs of her/his child.

Operationally defined as the frequency and hierarchical

level of positive reinforcement, affection, or care giving behavior (the latter two of which may be generally grouped under positive reinforcement).

Items on Scale 9 -- 16,19,23,55,56,65,79,80.

10. DISCIPLINE/CONTROL

Measures the extent and degree of parental discipline and exercise of parental authority, expressed through level of verbal/physical reprimands.

Operationally defined as the intensity and frequency of parental punishment and active implementation of structure.

High score indicates high levels of active discipline and control.

Items on Scale 10 -- 41,64,68,78,84.

Scoring Stolberg's Single-parent Questionnaire

1a4	9a4	17a4	25a1	33a1	41a1	49a4	57a4	65a4	73a2	81a4
b3	b3	b3	b2	b2	b2	b3	b3	b3	b4	b3
c2	c2	c2	c3	c3	c3	c2	c2	c2	c3	c2
d1	d1	d1	d4	d4	d4	d1	d1	d1	d1	d1
2a4	10a4	18a1	26a4	34a1	42a4	50a1	58a4	66a1	74a4	82a4
b3	b3	b2	b3	b2	b3	b2	b3	b2	b3	b3
c2	c2	c3	c2	c3	c2	c3	c2	c3	c2	c2
d1	d1	d4	d1	d4	d1	d4	d1	d4	d1	d1
3a1	11a1	19a1	27a4	35a1	43a1	51a4	59a4	67a4	75a1	83a4
b2	b2	b2	b3	b3	b2	b3	b3	b3	b2	b3
c3	c3	c3	c2	c4	c3	c2	c2	c2	c3	c2
d4	d4	d4	d1	d2	d4	d1	d1	d1	d4	d1
4a1	12a4	20a1	28a1	36a1	44a1	52a1	60a4	68a4	76a4	84a1
b2	b3	b2	b2	b2	b2	b2	b3	b3	b3	b2
c3	c2	c3	c3	c3	c3	c3	c2	c2	c2	c3
d4	d1	d4	d4	d4	d4	d4	d1	d1	d1	d4
5a1	13a4	21a4	29a4	37a1	45a1	53a1	61a1	69a3	77a1	85a1
b2	b1	b3	b3	b2	b2	b4	b2	b4	b2	b2
c3	c3	c2	c2	c3	c3	c3	c3	c2	c3	c3
d4	d2	d1	d1	d4	d4	d2	d4	d1	d4	d4
6a4	14a4	22a1	30a1	38a4	46a1	54a1	62a4	70a1	78a1	86a4
b3	b3	b2	b2	b3	b2	b2	b3	b2	b2	b3
c2	c2	c3	c3	c2	c3	c3	c2	c3	c3	c1
d1	d1	d4	d4	d1	d4	d4	d1	d4	d4	d*
7a4	15a4	23a1	31a4	39a1	47a4	55a4	63a4	71a2	79a1	87a1
b3	b3	b2	b3	b2	b3	b3	b3	b3	b2	b2
c2	c2	c3	c2	c3	c2	c2	c2	c4	c3	c3
d1	d1	d4	d1	d4	d1	d1	d1	d1	d4	d4
8a4	16a1	24a1	32a4	40a4	48a4	56a1	64a4	72a1	80a1	88a1
b3	b2	b2	b3	b3	b3	b2	b3	b2	b2	b2
c2	c3	c3	c2	c2	c2	c3	c2	c3	c3	c3
d1	d4	d4	d1	d1	d1	d4	d1	d4	d4	d4

* On item 86 if they have an answer other than one listed on the questionnaire that item would rank as a two.

APPENDIX 16

Scoring Instructions for Parenting Stress Index

Responses are scored according to the following:

sa - 5 - A
 a - 4 - B
 ? - 3 - C
 d - 2 - D
 sd - 1 - E

Exceptions include items which are marked "R"; on these the direction of scoring is reversed and the following weights are used;

sa - 1 - A
 a - 2 - B
 ? - 3 - C
 d - 4 - D
 sd - 5 - E

Special cases:

Item 43: A - 1
 46: B - 2
 C - 4
 D - 5

Item 44: sa - 5
 a - 4
 ? - 3
 d - 2
 sd - 1

Item 92: A - 1
 B - 2
 C - 4
 D - 5

Item 95: A - 5
 B - 4
 C - 2
 D - 1

Item 116: Code average of self and husband ratings:
 American Indian - 5

Black - 4
Oriental - 3
White - 2
Other - 2

Item 117: Code average of self and husband ratings:
1-8 grade - 5
9-12 grade - 4
Vocational - 3
College - 2
Grad. school - 1

Item 118: Yes - 1
No, never married - 2
No, divorced - 3
No, widow - 4
No, separated - 5

Item 119: 1 - 1
2 - 2
3 - 3
4 - 4
5 - 5

Item 121a: No - 5
Yes, full time - 1
Yes, part time - 3

Item 121b: Code if checked:
Not employed, looking - 5
Temporarily laid off - 3

Item 122a: No - 5
Yes, full time - 1
Yes, part time - 3

Item 123: less than 5 - 5
5-10 - 4
10-15 - 3
15-20 - 2
20+ - 1

Item 124: Code the total number of days in the hospital.

Item 125: 0-2 - 1
2-5 - 2
6-10 - 3
11-20 - 4
greater than 20 - 5

Item 126: Divorce - 7
Marital rec. - 4
Marriage - 5

Separation - 6
Pregnancy - 4
Other rel. - 4
Debt - 4
Moved - 2
Promotion - 3
Income - or + - 4
Alcohol - 7
Death of friend - 4
Began job - 4
Enter school - 3
Trouble work - 2
Trouble school - 2
Legal problem - 2
Graduation - 2
Death of family member - 6

Scale scores are sums of item weights; grand total score is sum of all scale scores.

APPENDIX 17

Scoring the 64 Item Social Competence Scale for Half-Day
Preschool or Kindergarten Programs

The Social Competence Scale for half-day programs consists of 64 statements describing different ways in which a preschool or kindergarten child may interact with various aspects of a half-day program. Each item on the 64 item Social Competence Scale is given a numerical score ranging from 1 (hardly ever or never) to 5 (very often or always) depending on the frequency with which the specific behavior was observed. One of the five numbers following each item on the scale will have been circled by the rater. A child's score on any item is the number which has been circled.

Factor analysis of the Social Competence Scale has revealed two major factors or dimensions of social competence: Factor I is called Interest-Participation versus Apathy-Withdrawal. Factor I items are presented in Table A. Factor II is called Cooperation-Compliance versus Anger-Defiance. Factor II items are presented in Table B.

Table A

Factor I (35 items)

1 (+)	3 (-)	4 (+)	6 (+)	8 (-)	10 (+)
12 (+)	14 (-)	16 (+)	18 (-)	20 (+)	22 (-)
23 (+)	25 (+)	26 (-)	29 (+)	31 (-)	32 (+)
34 (+)	36 (-)	38 (+)	40 (+)	42 (-)	44 (-)

46 (+) 48 (+) 50 (-) 51 (+) 53 (+) 54 (-)
 57 (+) 59 (-) 60 (+) 62 (-) 63 (+)

Table B

Factor II (29 items)

2 (-) 5 (-) 7 (-) 9 (+) 11 (-) 13 (-)
 15 (-) 17 (-) 19 (+) 21 (-) 24 (-) 27 (+)
 28 (-) 30 (-) 33 (-) 35 (-) 37 (+)
 39 (-) 41 (-) 43 (-) 45 (+) 47 (-) 49 (-)
 52 (-) 55 (+) 56 (-) 58 (-) 61 (-) 64 (-)

The value for some items is positive and for others, negative. This is due to the fact that both factors of the Social Competence Scale are bi-polar (both interest and apathy, cooperation and defiance are detected). The appropriate sign for each item, as indicated in Tables A and B must be assigned to each child's score for that item.

Each child receives two scores on the Social Competence Scale--a Factor I and a Factor II score. The Factor I score is the algebraic sum of the scores of all the Factor I items (items listed in Table A). The Factor II score is likewise the algebraic sum of the scores of all the Factor II items (listed in Table B). A negative, as well as a positive score, is possible.

APPENDIX 18

Tests for Matched and Equated Variables

MATCHED VARIABLES

Age Y.S.	$\underline{t}(34) = -.43$	$\underline{p} < .669$
Age O.S.	$\underline{t}(34) = -.46$	$\underline{p} < .649$

ADDITIONAL VARIABLES

# fams. with working mother	$\underline{x}^2(1) = .02$	$\underline{p} < .90$
Mother's Education	$\underline{x}^2(3) = 3.53$	$\underline{p} < .32$
Mother's Age	$\underline{t}(32) = 2.87$	$\underline{p} < .007^*$
# fams. with 3 children	$\underline{x}^2(1) = .18$	$\underline{p} < .67$
# years married	$\underline{t}(34) = 2.64$	$\underline{p} < .012^*$
# fams. using day care	$\underline{x}^2(1) = 5.14$	$\underline{p} < .023^*$
# fams. with adopted children	$\underline{x}^2(1) = .23$	$\underline{p} < .63$
Fam. SES	$\underline{t}(18) = 3.19$	$\underline{p} < .005^*$
Mother's Occupation	$\underline{x}^2(7) = 10.78$	$\underline{p} < .149$
# fams. with additional household member	$\underline{x}^2(1) = 2.57$	$\underline{p} < .11$

APPENDIX 19

Reliabilities for Original 26 Behavior Categories

<u>TAPE#</u>	<u>DT</u>	<u>RQ</u>	<u>AS</u>	<u>VP</u>	<u>LA</u>
1	21/51	41/75	0/8	15/27	21/44
2	51/66	71/94	2/11	19/39	15/52
3	44/91	65/121	2/6	9/22	28/66
4	39/75	44/80	0/2	3/11	2/9
5	54/103	68/114	4/26	5/16	1/4
6	14/45	18/28	0/5	2/9	57/89
7	57/92	84/116	3/6	13/26	38/65
8	36/65	28/53	2/12	20/38	7/14
9	32/66	60/103	1/4	2/14	0/1
10	50/105	61/98	6/21	15/46	11/37
11	47/94	59/109	1/17	13/52	8/20
	445/853=	559/991=	21/118=	116/300=	188/401= *
	.52	.60	.18	.39	.47

<u>TAPE#</u>	<u>Sum'd</u>	<u>GV</u>	<u>SH</u>	<u>DM</u>	<u>TT</u>
1	98/205	7/9	11/28	0/8	1/2
2	158/262	7/8	43/66	2/6	5/7
3	148/306	6/12	25/60	12/15	3/6
4	88/177	6/10	13/33	---	1/3
5	132/263	6/15	17/43	6/11	1/6
6	91/176	---	9/20	0/2	---
7	195/305	3/8	23/42	3/4	4/7
8	93/182	9/19	12/35	0/5	5/11
9	95/188	12/22	19/54	1/4	11/19
10	143/307	5/10	9/39	1/11	1/4
11	128/292	6/25	14/55	0/2	0/4
	1369/2663=	67/138=	195/475=	25/68=	32/69=
	.51	.49	.41	.38	.46

<u>TAPE#</u>	<u>AC</u>	<u>PC</u>	<u>IM</u>	<u>Sum'd</u>	<u>DE</u>
1	5/8	1/2	1/7	26/64	0/1
2	1/2	---	---	58/89	2/7
3	2/9	---	0/4	48/106	7/14
4	3/6	1/7	2/2	26/61	0/4
5	1/13	40/101	---	71/189	2/16
6	---	23/46	0/2	32/70	0/1
7	1/4	0/5	4/7	38/77	8/16
8	3/9	5/15	1/1	35/45	0/4
9	1/5	1/1	0/1	45/106	1/4
10	3/6	3/7	1/10	23/87	1/10
11	5/22	2/14	0/3	27/125	0/2
	25/84=	76/198=	9/37=	429/1059=	21/79=
	.30	.38	.24	.41	.27

<u>TAPE#</u>	<u>RF</u>	<u>DI</u>	<u>CR</u>	<u>Sum' d</u>	<u>OS</u>
1	---	1/4	0/2	1/7	1/2
2	1/9	4/16	1/2	8/34	2/5
3	1/11	23/51	1/9	32/85	3/5
4	8/22	3/12	5/25	16/63	---
5	3/19	8/29	40/68	53/132	3/8
6	0/1	2/10	---	2/12	0/5
7	2/4	20/42	7/19	37/81	0/2
8	4/19	4/13	9/16	17/52	4/9
9	0/4	0/13	2/3	3/24	0/4
10	1/10	4/26	5/18	11/64	1/4
11	0/5	0/5	1/7	1/19	0/3
	20/104=	69/221=	71/169=	181/573=	14/47=
	.19	.31	.42	.32	.30

<u>TAPE#</u>	<u>RJ</u>	<u>NC</u>	<u>Sum' d</u>	<u>LO</u>	<u>TA</u>
1	0/1	---	1/3	20/50	25/78
2	1/5	0/1	3/11	36/67	26/64
3	2/4	---	5/9	49/96	74/154
4	---	---	---	18/51	41/123
5	1/10	0/6	4/24	37/90	22/84
6	---	---	0/5	23/50	6/35
7	1/3	---	1/6	32/79	32/85
8	2/8	0/1	6/18	27/71	31/83
9	1/2	0/1	1/7	22/62	33/117
10	0/3	1/1	2/8	28/85	20/77
11	0/4	---	0/7	28/71	42/142
	8/40=	1/10=	23/98=	320/772=	352/1042=
	.20	.10	.23	.42	.34

<u>TAPE#</u>	<u>RS</u>	<u>ST</u>	<u>CP</u>	<u>SP</u>	<u>Sum' d</u>
1	12/21	72/149	32/79	237/258	398/635
2	17/32	71/85	0/1	241/273	391/522
3	9/20	26/54	0/3	81/125	239/452
4	8/25	55/127	0/2	217/271	339/599
5	8/25	12/40	0/2	138/200	217/441
6	8/11	6/21	1/7	173/194	217/318
7	14/26	50/78	4/23	127/172	259/463
8	3/13	66/96	17/30	225/267	369/560
9	7/20	51/123	7/18	173/243	293/583
10	6/27	21/40	12/47	142/193	229/469
11	14/41	77/118	3/26	194/242	358/640
	106/261=	507/931=	76/238=	1948/2438=	3309/5682=
	.41	.54	.32	.80	.58

PROXIMITY

<u>TAPE#</u>	<u>TOTAL SUM'D</u>	<u>BTWN</u> <u>SIBS</u>	<u>Y</u> & <u>MOM</u>	<u>O</u> & <u>MOM</u>
1	524/914	225/240	98/112	101/112
2	618/917	211/240	46/60	52/60
3	472/958	226/240	95/110	92/110
4	469/900	211/240	45/55	46/55
5	477/1049	198/240	17/22	17/22
6	342/581	217/240	45/71	63/71
7	530/931	213/240	53/66	53/66
8	520/907	207/232	109/134	121/134
9	437/908	190/240	91/134	116/134
10	408/935	197/213	29/40	30/40
11	514/1083	208/238	48/95	62/95
5311/10,083=		2303/2603=	676/899=	753/899=
.53		.88	.75	.84

DT: Direction, RQ: Request, AS: Assist, VP: Verbal Positive,
 LA: Laugh, GV: Give Object, SH: Show Object, DM: Demonstrate,
 TT: Take Toy, AC: Accept Toy, PC: Positive Physical Contact,
 IM: Imitate, DE: Demand, RF: Refusal, DI: Disapproval, CR:
 Cry, OS: Object Struggle, RJ: Rejection, NC: Negative Physical
 Contact, LO: Look, TA: Talk, RS: Response to Question, ST:
 Solitary Talk, CP: Cooperative Play, SP: Solitary Play.

* Summed average for the category DT was calculated in the
 following manner:

$$\begin{array}{r} 21+51+\dots+47 \quad 445 \\ \hline = = .52 \\ 51+66+\dots+94 \sim 853 \end{array}$$

TOTAL SUM'D = The summed average per tape which was obtained by
 summing the fractions for the entire tape (e.g., the summed
 average of 524/914 = .57 for the first tape was obtained from

$$\begin{array}{r} 98+26+1+1+398 \\ \hline = = .52 \\ 205+64+7+3+635. \end{array}$$

APPENDIX 20

Reliability for Global Categories

POSITIVE VERBAL (DT,RQ,AS,VP,LA,TA,RS)

TAPE#	Y SIB	O SIB	MOTHER	CATEGORY TOTAL:
1	102/135	91/137	78/105	
2	70/94	67/114	43/56	
3	107/137	47/63	81/113	
4	84/135	151/225	34/58	
5	82/117	89/139	12/18	
6	51/87	69/93	57/69	
7	45/74	81/123	54/74	
8	66/104	44/74	103/142	
9	103/164	63/80	96/141	
10	58/80	58/79	21/29	
11	72/124	100/143	56/77	
COLUMN TOTAL:	840/1251= .67	860/1270= .68	635/882= .72	2335/3403= .69

POSITIVE NONVERBAL (GV,SH,DM,TT,AC,PC,IM,LO,CP)

TAPE#	Y SIB	O SIB	MOTHER	CATEGORY TOTAL:
1	43/80	32/68	7/25	
2	42/75	31/70	12/28	
3	47/76	29/45	21/32	
4	57/98	38/74	10/19	
5	39/79	41/91	3/5	
6	41/85	37/64	15/27	
7	18/43	15/39	13/21	
8	42/122	15/57	58/82	
9	33/107	12/46	21/53	
10	26/49	25/55	10/19	
11	36/82	21/74	16/41	
COLUMN TOTAL:	424/896= .47	296/683= .43	186/352= .53	906/1931= .47

NEGATIVE VERBAL (DE,RF,DI,CR)

TAPE#	Y SIB	O SIB	MOTHER	CATEGORY TOTAL:
1	7/13	21/32	13/25	
2	1/4	0/3	---	
3	5/6	9/18	4/5	
4	20/49	15/37	1/5	
5	3/16	3/6	---	
6	12/23	7/10	2/5	
7	10/23	9/37	1/1	
8	3/9	4/12	---	

9	1/13	1/3	0/2	
10	0/5	---	---	
11	10/32	4/14	3/13	
COLUMN	72/193=	73/172=	24/56=	169/421=
TOTAL:	.37	.42	.43	.40

NEGATIVE NONVERBAL (OS,RJ,NC)

TAPE#	Y SIB	O SIB	MOTHER	CATEGORY TOTAL:
1	1/2	0/2	---	
2	1/1	0/2	---	
3	3/5	1/3	1/1	
4	2/5	3/4	---	
5	1/5	0/2	---	
6	2/6	2/3	1/1	
7	---	---	---	
8	3/9	4/12	---	
9	1/4	0/2	---	
10	0/5	---	---	
11	1/2	2/5	---	
COLUMN	15/44=	12/35=	2/2=	29/81=
TOTAL:	.39	.34	1.0	.36

NON-INTERACTION (ST & SP)

TAPE#	Y SIB	O SIB	CATEGORY TOTAL:
1	63/102	114/147	
2	160/186	121/185	
3	133/158	175/196	
4	58/98	38/58	
5	111/117	113/188	
6	159/213	151/182	
7	155/207	119/189	
8	30/54	117/169	
9	80/125	189/233	
10	118/127	106/132	
11	79/108	88/123	
COLUMN	1146/1495	1331/1802	2477/3297=
TOTAL:	.77	.74	.75

PROXIMITY

TAPE#	BTWN SIBS	Y & MOM	O & MOM
1	225/240	98/112	101/112
2	211/240	46/60	52/60
3	226/240	95/110	92/110

4	211/240	45/55	46/55
5	198/240	17/22	17/22
6	217/240	45/71	63/71
7	213/240	53/66	53/66
8	207/232	109/134	121/134
9	190/240	91/134	116/134
10	197/213	29/40	30/40
11	208/238	48/95	62/95

COLUMN 2303/2603= 676/899= 753/899=
TOTAL: .88 .75 .84

Y SIB = younger sibling

O SIB = older sibling

DT: Direction, RQ: Request, AS: Assist, VP: Verbal Positive,
LA: Laugh, GV: Give Object, SH: Show Object, DM: Demonstrate,
TT: Take Toy, AC: Accept Toy, PC: Positive Physical Contact,
IM: Imitate, DE: Demand, RF: Refusal, DI: Disapproval, CR:
Cry, OS: Object Struggle, RJ: Rejection, NC: Negative Physical
Contact, LO: Look, TA: Talk, RS: Response to Question, ST:
Solitary Talk, CP: Cooperative Play, SP: Solitary Play.

The Fraction column represents the number of agreements between observers divided by the number of agreements plus disagreements for each behavior category for each individual. Below each Fraction column is presented the summed average (e.g., for the positive verbal behavior of the younger sibling, $102+70+\dots+72 = 840$; $135+94+\dots+124 = 1251$; $840/1251 = .67$).

The numbers on the far right of the bottom row for each global behavior category represent a summed total for that category (e.g., for the positive verbal category, $840+860+635 = 2335$; $1251+1270+882 = 3403$; $2335/3403 = .69$).

APPENDIX 21

Spearman Correlational Data for Negative Behaviors for 11 Families.

Fam- ily	YtoO 01 02	YtoM 01 02	YtoA 01 02	OtoY 01 02	OtoM 01 02	OtoA 01 02	MtoY 01 02	MtoO 01 02	MtoA 01 02
#1	11 08	01 01	12 09	12 07	01 00	54 07	00 00	01 01	01 02
#2	02 02	03 01	05 03	00 01	01 01	01 02	01 00	00 00	01 00
#3	05 03	00 00	05 03	02 02	00 00	02 02	00 00	00 00	00 00
#4	05 07	01 01	06 08	01 02	05 08	07 10	00 00	01 01	01 01
#5	06 05	01 01	06 05	09 09	02 01	10 10	05 07	01 03	06 10
#6	05 04	26 15	31 22	05 05	07 05	12 10	02 03	04 03	06 07
#7	02 01	01 00	02 01	01 01	00 00	01 01	00 00	00 00	00 00
#8	04 03	00 00	04 03	04 05	00 00	05 05	02 02	00 00	02 02
#9	07 05	03 38	10 09	03 02	01 02	04 04	02 02	02 01	04 03
#10	04 03	05 04	10 08	04 03	02 01	06 04	01 02	01 01	02 03
#11	02 02	01 00	03 02	03 02	00 00	03 02	01 01	01 01	02 01
rho	.9177	.8317	.9768	.9484	.8680	.9025	.9147	.8865	.9031
p<	.001	.001	.001	.001	.001	.001	.001	.001	.001

Y = younger sibling

O = older sibling

M = mother

A = anyone

The headings represent the individual who performed the behavior and to whom it was directed (e.g., YtoO means that the younger sibling performed a behavior directed toward the older sibling). Behavior directed toward A (anyone) means that an agreement was scored between observers when they agreed upon the individual who performed the behavior, but did not agree as to whom the behavior was directed.

APPENDIX 22

Reliability for Final Behavior Categories

POSITIVE (DT,RQ,AS,VP,LA,GV,SH,DM,TT,AC,PC,IM)

TAPE #	YtoO	YtoM	YtoBOTH	YtoANYONE	
1	12/22	50/93	0/2	54/101	CATEGORY
2	40/52	11/15	---	54/70	TOTALS:
3	40/68	42/52	0/1	77/107	(First three
4	15/17	60/69	---	80/92	Columns)
5	35/57	17/25	---	49/73	
6	39/73	18/32	---	57/98	
7	20/41	15/33	1/2	31/72	
8	15/30	58/89	0/5	69/111	
9	40/67	10/18	---	53/86	
10	12/24	11/29	0/4	30/52	
11	51/79	10/14	1/2	61/89	
	319/530=	302/469=	2/16=	615/952=	623/1015
	.60	.64	.13	.65	.61

TAPE #	OtoY	OtoM	OtoBOTH	OtoANYONE	
1	17/28	11/27	---	27/51	CATEGORY
2	43/54	5/8	---	51/62	TOTALS:
3	50/72	29/38	0/1	84/110	
4	11/15	20/27	0/1	28/41	
5	37/54	14/22	0/1	49/71	
6	51/87	11/25	0/1	68/104	
7	34/45	17/24	0/2	52/67	
8	11/24	27/35	0/2	40/57	
9	75/114	21/31	0/2	97/143	
10	31/43	19/32	0/2	49/73	
11	62/95	3/5	---	61/94	
	422/631=	177/274=	0/12=	606/873=	599/917=
	.67	.65	.00	.69	.65

TAPE #	MtoY	MtoO	MtoBOTH	MtoANYONE	
1	78/94	23/33	3/5	99/121	CATEGORY
2	10/18	1/3	0/1	14/21	TOTALS:
3	24/34	29/39	1/2	54/71	
4	41/58	11/17	0/1	58/81	
5	20/24	10/10	0/5	26/31	
6	24/36	17/26	0/2	41/56	
7	33/42	17/23	0/2	45/52	
8	48/75	23/36	1/5	70/102	
9	13/14	15/23	1/1	30/38	
10	6/12	26/38	1/2	35/48	
11	6/9	1/1	0/1	9/11	

303/416=	173/249=	7/27=	481/632=	483/692=
.73	.69	.26	.76	.70

NEUTRAL (TA,RS,LO,CP)

TAPE #	YtoO	YtoM	YtoBOTH	YtoANYONE	
1	18/46	18/45	2/9	42/92	CATEGORY TOTALS:
2	6/17	5/14	0/1	12/30	
3	29/59	24/46	0/6	57/97	
4	12/21	27/41	1/6	42/62	
5	40/64	6/14	1/4	50/78	
6	26/51	13/35	1/8	43/85	
7	29/74	3/21	0/2	31/90	
8	17/32	37/86	4/8	60/121	
9	69/113	7/13	0/3	68/118	
10	22/55	7/20	2/3	27/68	
11	31/70	4/11	0/1	35/82	
	299/602=	151/346=	11/51=	467/923=	463/999=
	.50	.44	.22	.51	.46

TAPE #	OtoY	OtoM	OtoBOTH	OtoANYONE	
1	14/31	11/32	4/18	36/70	CATEGORY TOTALS:
2	13/35	11/15	0/5	27/44	
3	13/33	11/31	1/6	29/65	
4	10/21	12/27	3/10	34/48	
5	26/54	5/14	0/1	35/65	
6	24/32	6/14	2/6	27/77	
7	17/54	6/13	4/11	33/50	
8	11/30	8/17	3/11	26/54	
9	41/81	7/11	2/9	45/86	
10	17/40	17/36	0/1	32/72	
11	35/93	6/11	0/1	44/114	
	221/504=	100/221=	19/79=	368/735=	340/804=
	.44	.45	.24	.50	.42

TAPE #	MtoY	MtoO	MtoBOTH	MtoANYONE	
1	5/19	1/6	0/5	7/29	CATEGORY TOTALS:
2	3/10	5/7	3/4	10/20	
3	10/19	6/16	3/8	25/40	
4	15/30	4/14	4/9	21/43	
5	8/15	7/10	3/13	21/32	
6	2/8	3/11	3/6	20/38	
7	5/21	7/12	5/14	7/21	
8	17/42	9/20	0/5	25/63	
9	0/3	6/10	2/5	11/16	
10	5/10	8/21	1/3	11/24	
11	5/8	---	1/5	6/6	

75/185=	56/127=	25/77=	164/332=	156/389=
.41	.44	.32	.49	.40

PROSOCIAL (POSITIVE PLUS NEUTRAL)

TAPE #	YtoO	YtoM	YtoBOTH	YtoANYONE	
1	33/53	63/105	2/9	112/167	CATEGORY TOTALS:
2	55/59	16/25	0/1	73/86	
3	81/109	61/78	0/3	146/178	
4	25/31	86/96	1/4	126/143	
5	87/102	25/29	1/3	115/128	
6	82/117	29/42	0/2	120/152	
7	60/79	31/51	2/8	93/125	
8	32/55	106/127	3/10	149/183	
9	120/157	18/27	0/4	139/177	
10	42/67	21/37	2/7	71/103	
11	92/126	15/18	1/3	106/141	
	709/955=	471/635=	12/54=	1250/1583=	1192/1644=
	.74	.74	.22	.79	.73

TAPE #	OtoY	OtoM	OtoBOTH	OtoANYONE	
1	35/56	21/48	5/16	69/110	CATEGORY TOTALS:
2	62/84	16/22	0/5	83/98	
3	70/91	45/60	1/6	127/149	
4	20/31	33/44	3/8	66/81	
5	77/91	20/30	0/2	101/111	
6	85/115	21/34	4/12	120/151	
7	59/68	24/31	3/8	90/107	
8	29/46	39/47	4/13	76/97	
9	129/158	29/40	1/9	165/195	
10	55/73	42/62	0/3	95/130	
11	108/147	9/13	0/1	122/160	
	729/960=	299/431=	21/83=	1114/1389=	1049/1474=
	.76	.69	.25	.80	.71

TAPE #	MtoY	MtoO	MtoBOTH	MtoANYONE	
1	88/101	23/36	4/7	120/131	CATEGORY TOTALS:
2	19/29	6/11	3/5	28/38	
3	37/48	35/46	5/8	84/105	
4	67/74	17/25	6/13	97/105	
5	26/34	17/20	6/17	52/61	
6	29/46	22/33	4/13	68/88	
7	36/43	21/30	3/6	60/64	
8	81/95	37/40	0/9	124/135	
9	13/16	21/29	5/9	43/55	
10	15/20	39/48	2/5	58/63	
11	13/15	1/1	1/5	16/17	

424/521=	239/319=	39/97=	750/862=	702/937=
.81	.75	.40	.87	.75

NEGATIVE (DE,RF,DI,CR,OS,RJ,NC)

TAPE #	YtoO	YtoM	YtoBOTH	YtoANYONE	
1	4/14	34/61	0/6	47/73	CATEGORY TOTALS:
2	0/5	0/2	---	0/7	
3	7/18	1/1	0/1	9/18	
4	8/10	---	---	8/10	
5	2/3	0/1	---	2/4	
6	10/24	1/10	---	7/22	
7	6/12	9/13	0/1	14/24	
8	1/9	1/8	0/1	5/16	
9	18/25	1/4	0/1	19/30	
10	10/19	1/3	---	11/22	
11	5/14	---	---	5/16	
	71/153=	48/103=	0/10=	127/242=	119/256=
	.46	.47	.00	.52	.46

TAPE #	OtoY	OtoM	OtoBOTH	OtoANYONE	
1	9/13	11/17	---	19/29	CATEGORY TOTALS:
2	1/6	---	---	1/6	
3	18/24	2/5	---	21/29	
4	8/13	---	0/1	8/14	
5	0/4	---	---	0/4	
6	4/10	2/5	---	5/11	
7	5/11	3/4	0/1	9/15	
8	0/3	1/2	---	1/4	
9	15/33	0/1	---	15/31	
10	0/8	7/23	---	8/32	
11	3/6	---	---	3/6	
	63/131=	26/57=	0/2=	90/181=	89/190=
	.48	.46	.00	.50	.47

TAPE #	MtoY	MtoO	MtoBOTH	MtoANYONE	
1	4/9	4/12	0/1	9/23	CATEGORY TOTALS:
2	2/2	0/1	---	2/3	
3	11/16	2/8	0/1	13/24	
4	5/5	---	---	5/5	
5	---	---	---	---	
6	3/7	0/5	0/1	1/9	
7	3/5	0/2	---	3/7	
8	0/1	---	---	0/1	
9	---	1/3	0/2	1/5	
10	---	1/1	---	1/1	
11	---	---	---	---	

28/45=	8/32=	0/5=	35/78=	36/77=
.62	.25	.00	.45	.47

TOTAL INTERACTION

TAPE #	YtoO	YtoM	YtoBOTH	YtoANYONE	
1	41/66	102/132	1/14	168/191	CATEGORY
2	53/61	20/25	0/1	76/84	TOTALS:
3	90/117	63/81	0/7	158/184	
4	35/45	88/105	1/6	131/148	
5	88/103	25/30	1/4	118/129	
6	63/78	40/57	1/9	142/166	
7	96/131	34/46	0/2	112/141	
8	38/63	108/129	2/11	159/184	
9	135/168	20/28	0/6	164/194	
10	57/81	24/36	2/7	87/112	
11	94/124	16/19	1/3	113/145	
	790/1037=	540/688=	9/70=	1428/1678=	1339/1795
	.76	.78	.13	.85	.75

TAPE #	OtoY	OtoM	OtoBOTH	OtoANYONE	
1	39/60	34/63	4/19	86/119	CATEGORY
2	62/82	16/22	0/5	84/98	TOTALS:
3	86/108	49/66	1/8	143/160	
4	30/42	36/50	3/12	75/84	
5	76/88	20/29	0/2	102/112	
6	62/76	27/33	2/9	131/158	
7	90/123	24/38	3/12	96/111	
8	30/47	39/47	5/13	76/98	
9	148/168	28/41	2/11	190/206	
10	59/73	59/76	0/4	118/145	
11	114/153	9/14	0/1	125/162	
	796/1020=	341/479=	20/96=	1226/1453=	1157/1595=
	.78	.71	.21	.73	.84

TAPE #	MtoY	MtoO	MtoBOTH	MtoANYONE	
1	47/62	30/46	2/9	128/134	CATEGORY
2	19/28	9/12	2/4	31/39	TOTALS:
3	50/58	39/49	5/10	102/112	
4	70/79	18/29	6/13	103/111	
5	26/33	14/15	6/15	55/63	
6	33/39	21/28	3/9	80/96	
7	33/47	29/38	3/14	63/68	
8	81/97	38/43	1/10	124/134	
9	13/18	21/32	4/9	47/56	
10	16/21	38/48	2/4	60/65	
11	12/14	0/2	1/4	18/22	

400/496=	257/342=	35/101=	811/900=	692/939
.81	.75	.35	.90	.74

NON-INTERACTION (ST & SP)

TAPE #	Y SIB	O SIB
1	63/102	114/147
2	160/186	121/185
3	133/158	175/196
4	58/98	38/58
5	111/117	113/188
6	159/213	151/182
7	155/207	119/189
8	30/54	117/169
9	80/125	189/233
10	118/127	106/132
11	79/108	88/123

1146/1495=	1331/1802=	2477/3297=
.77	.74	.75

PROXIMITY

TAPE #	BTWN SIBS	Y & MOM	O & MOM
1	225/240	98/112	101/112
2	211/240	46/60	52/60
3	226/240	95/110	92/110
4	211/240	45/55	46/55
5	198/240	17/22	17/22
6	217/240	45/71	63/71
7	213/240	53/66	53/66
8	207/232	109/134	121/134
9	190/240	91/134	116/134
10	197/213	29/40	30/40
11	208/238	48/95	62/95

2303/2603=	676/899=	753/899=
.88	.75	.84

Y = younger sibling

O = older sibling

M = mother

The headings represent the individual who performed the behavior and to whom it was directed (e.g., YtoO means that the younger sibling performed a behavior directed to the older sibling. Behavior directed toward "ANYONE" means that an agreement was scored between observers when they agreed upon the individual who performed the behavior, but did not agree as to whom the behavior was directed.

APPENDIX 23

Correlations Between Behavioral and Questionnaire Data

	NONINT	PRSOCL	ACTINT	NEGINT	CLSIB	FRSIB	STOL- TOT	PSI- TOT	MAT	KOHN	CBI
NONINT	1.000										
PRSOCIAL	-.764**	1.000									
ACTINT	-.825**	.975**	1.000								
NEGINT	-.481*	.222	.185	1.000							
CLSIB	-.315	.324	.342	.231	1.000						
FRSIB	.103	-.280	-.265	-.129	-.747**	1.000					
STOLTOT	.110	-.103	-.109	.020	.027	.128	1.000				
PSITOT	-.184	.063	.141	.304	-.144	.208	.135	1.000			
MAT	-.080	.072	.116	.099	-.259	.256	.023	.834**	1.000		
KOHN	.098	.061	-.018	-.121	-.189	.159	-.093	-.408*	-.079	1.000	
CBI	.115	-.104	-.090	-.021	.186	-.322	-.080	-.022	-.150	-.604**	1.000

* p<.01
 - p<.05
 **p<.001

NONINT = The mean of the non-interaction behaviors of each sibling.
 PRSOCL, PRSOCIAL = The mean of the prosocial behavior each sibling directed toward the other sibling.
 ACTINT = The mean of the total active behavior each sibling directed toward the other sibling.
 NEGINT = The mean of the negative behavior each sibling directed toward the other sibling.
 CLSIB = The proportion of intervals in which the siblings were in close proximity (less than one foot) from one another.
 FRSIB = The proportion of intervals in which the siblings were in far proximity (greater than three feet) from one another.
 STOLTOT = The total score from Stolberg's Single-parent Questionnaire.
 PSITOT = The total score from the Parent Stress Index.
 MAT = The mean score from the two scales of the Maternal Questionnaire.
 KOHN = The mean score from the two factors of the Kohn Social Competence Scale.
 CBI = The total score from the Eyberg Child Behavior Inventory.