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FATHERS AND INFANTS: A STUDY OF FATHER
CAREGIVING AND INTERACTION

A Dissertation Presented

By

BEVERLY SCHWARTZ KATSH

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 1979

Education

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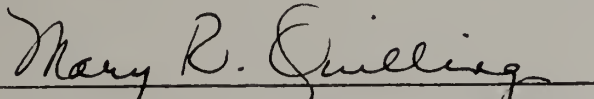
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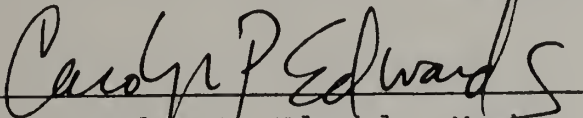
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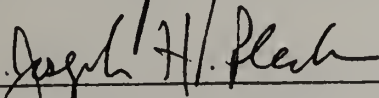
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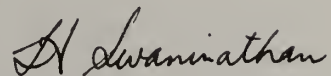
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ABSTRACT

Fathers and Infants: A Study of Father
Caregiving and Interaction

(September 1979)

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A great deal of the literature in child development has been devoted to the influence of early family life experience on growth and development. Particular attention has been paid to the influence of the mother and to the impact of the mother-infant and mother-child relationships. By comparison, the father's role in the life of his child has been neglected in the empirical and theoretical literature, particularly in evaluating the father's involvement in physical care and non-care activities with an infant.

The purpose of the present study was to assess how fathers involve themselves with their first infants, what factors influence the type of care he provides, and how these interactions change from the neonatal to the post-neonatal time. The sample of subjects consisted of 169 couples having their first child.

The design of the study was a pretest-posttest two

group design with differences between the groups only in that one group received prenatal questionnaires. The instrumentation consisted of three sets of short answer and multiple choice response form questionnaires answered prenatally, 3 weeks and 3 months after the birth of the infant. Each set of questionnaires contained separate mother and father forms. Of the original 169 couples participating, 120, or 71% completed the study.

Among the sample of couples in this study, mothers assumed major responsibility for the routine care of the infant. Fathers of non-breastfed infants were generally more involved in caregiving than were fathers of breastfed infants, and significantly so at age 3 weeks. Among all fathers there was a tendency to perform less complex tasks and to be more participatory when the mother was present than when the father was alone. There was also a tendency for fathers to do more care on a non-workday than on a workday, even for those tasks performed during non-working hours. At age 3 months, fathers assumed a somewhat greater percentage of the total care required by the infant than they had performed at age 3 weeks. Although mothers assumed major responsibility for infant care, about three-fourths of them were satisfied with the level of father involvement.

Fathers were more involved in non-care activities

with the infant than in routine care. At age 3 weeks fathers played and comforted the baby almost twice as often as they performed any care task; at age 3 months they played with the babies more than they had at age 3 weeks but they comforted less.

Half of the fathers were questioned prenatally about how actively involved they thought they would be in infant care at ages 3 weeks and 3 months. Of the fathers who made such predictions, most overestimated their future involvement in both physical caregiving and non-care interaction.

Several demographic and personalogical variables were found to have negligible correlations with frequency and type of involvement and with satisfaction with fatherhood. However, there was a modest relationship between fathers who performed more traditionally female-oriented household tasks prenatally and performance of infant care. Other variables, including infant sex and temperament, also showed low correlations with father involvement.

The findings indicated that fathers in this study participated more in social interactions than in routine physical caregiving. Fathers were selective in what care they provided and were influenced by the type of feeding modality (breastfeeding versus non-breastfeeding) and by the presence of the mother. Prenatally fathers had anticipated being more involved than they actually were in both

physical care and non-care interaction. The fathers also assumed more child care responsibility at the post-neonatal than at the neonatal time, although mothers still assumed most of the infant care responsibility.

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C H A P T E R I

THE PROBLEM

There is a widespread belief that early experiences have a disproportionately powerful effect on both cognitive and affective development, and many consider the nuclear family to be a major factor in socialization. (Lamb, 1975, p. 245)

A great deal of the empirical and theoretical literature in child development has been devoted, particularly in the last quarter century, to the influence of the early family life experience on growth and development. Since the publication in 1951 of Maternal Care and Mental Health by John Bowlby, particular attention has been devoted to the influence of the mother and the impact of mother-infant and mother-child relationships. Bowlby, among others (Ainsworth, 1962; Harlow, 1958; Harlow, Harlow, & Suomi, 1971; Heinicke & Westheimer, 1965; Provence & Lipton, 1962; Rutter, 1971, 1972; Yarrow, 1964, 1972), has suggested that the absence of a positive and satisfying relationship between child and mother figure may lead to serious and possibly permanent personality distortions.

A logical related question is what role does the father play in the beginning nuclear family? In trying to find information about the father's role, one is struck by the neglect of this topic in both theoretical and empirical

literature. Peterson, Becker, Hellmer, Shoemaker, and Quay (1959) noted that between 1929 and 1956 there had been 109 publications on the mother-child relationship and only 12 such publications on the father-child relationship. Although there has been somewhat more attention paid to the father in recent years, one finds still a tremendous disparity in the research and theoretical literature, with 197 citations on mothers and the mother-child relationship in one semi-annual index of Psychological Abstracts for 1976 and 35 citations on fathers during that same period. A 1974 semi-annual index cited 74 articles on the mother-child relationship and 20 on father-child. A 1971 index showed 112 citations under mothers and 17 under maternal behavior; there were 37 entries for father and none for paternal behavior. The father's role in infancy has been particularly neglected (Pedersen & Robson, 1969; Lamb, 1975; Lamb & Lamb, 1976; Lynn, 1974), although it is apparent that there has been a burgeoning of interest in the last 5 years. In the following section, research on father involvement with infants up to 1 year of age is reviewed with respect to the variables of caretaking and non-caretaking or social interactions, particularly play.

Review of Relevant Literature

The first real contact that the father has with the infant is in the neonatal stage, that is in the first few

weeks immediately after birth. There have been only a few empirical studies of father behavior during this period, and these studies have tended to assess mostly non-caregiving tasks. Parke and O'Leary (1976) conducted two studies to discover how fathers interacted with their newborns and to compare the patterns of interaction of mothers and fathers. Both studies were performed in the hospital, shortly after the delivery, and assessment was made of 12 parent behaviors, 11 of which were non-caregiving actions; the only caregiving task that was assessed was feeding. Results from the first study, which involved 19 middle-class families, in half of which the fathers had attended Lamaze classes, showed that the father was a very active participant during this early neonatal time. Fathers tended to interact as often as mothers in these non-caregiving tasks and even surpassed mothers on two measures, holding and rocking. In the second study, which involved 51 white and 31 black families of lower socioeconomic status, the findings were similar; again fathers tended to equal or surpass mothers on most measures.

Using similar parental behaviors as indicators of involvement, Parke, O'Leary and West (1972) assessed the influence of changes in infant behavior caused by medication and labor. The sample consisted of 19 white, first-born infants and families. Results for most measures indicated that the father was as likely to interact as the

mother but that with increased medication and labor and consequent heightened lethargy of the infants, paternal interaction tended to decrease. Fathers apparently preferred a more active, responsive infant.

Only one study found has involved assessment of father caretaking during the neonatal period. Parke and Swain (1976) studied parent-infant interaction in the context of feeding. They found that mothers spent more time in feeding and general caretaking, but that when fathers fed their infants, they were as sensitive to infant cues during the feeding process, when adjustments were made in the data to correct for the smaller quantity of time during which the father engaged in feeding. No data were provided on the amount of feeding or caretaking actually performed by the fathers.

One other study on father-neonate behavior involved neither caregiving nor non-caregiving tasks, but instead studied the possibility of a critical period in the development of attraction and interest of fathers in their newborns. Greenberg and Morris (1974) questioned 30 first-time fathers, half of whom had witnessed the delivery. Among the sample, 97% rated their feelings toward their infants as high and 76% indicated that this feeling began immediately after birth. Greenberg and Morris postulated that a strong bond, which they called engrossment, began to develop between father and infant within the first three

days after birth. No significant differences were found between fathers who witnessed the birth and those who did not.

Going beyond the neonatal stage, there have been few studies of interaction patterns of fathers and young infants, assessing either caretaking or social and play interaction. The few studies that have quantified the variety and frequency of caregiving have revealed a picture of typically little routine infant care by fathers.

Pedersen and Robson (1969) explored eight measurable paternal behaviors and their impact on infant differences, particularly attachment behavior. One variable dealt with types and frequency of routine care. Results showed that 6 of the 45 fathers involved performed two or more care tasks per day and that caretaking positively correlated with attachment for boy infants. No other data on caretaking were provided.

Rebelsky and Hanks (1971), reporting on the verbal interaction of fathers, found that fathers verbally interacted very little with their infants. The mean number of daily verbal interactions was 2.7, averaging 37.7 seconds overall per day. Of the total verbal interaction, 54% took place during routine care. No data were provided on actual caregiving tasks performed during these episodes.

Rendina and Dickersheid (1976) conducted an exploratory study of the interaction of 40 fathers with

first-born infants, ages 5.5 to 6.8 months or 11.3 to 15 months. Of the total observation time of approximately 90 minutes, fathers were involved an average of 36% of the time interacting with their infants, with a range of 12% to 84% of the time. Rendina and Dickersheid found that considerably more time was spent in social and affective proximal attention than in caregiving. Routine care accounted for only 3.8% of the average observed time.

Kotelchuck and others (Kotelchuck, 1975, 1976; Ross, Kagan, Zelazo, & Kotelchuck, 1975; Spelke, Zelazo, Kagan, & Kotelchuck, 1973) investigated infant attachment to the father through evaluation of separation reaction of infants 6 to 24 months of age. In their investigations, some data were collected on the caretaking activities of the 300 middle class fathers involved. Among all groups sampled, 64% of the mothers had primary responsibility for the child, with only 7.6% of the fathers sharing equally in child care and only 25% of the fathers having regular daily care duties of any kind or frequency. Among the samples, 43% of the fathers reported never having changed a diaper. Ban and Lewis (1974), in investigating attachment in 20 upper middle-class 1-year-olds, found that fathers spent an average of only 15 to 20 minutes per day with their infants, including all caregiving and non-care activities. Lewis, Weinraub and Ban (1972) found similar results of only 15 to 20 minutes of total interaction time among the 20 fathers

they studied.

The research investigating social interaction, including play behavior of fathers, provided some additional information on father-infant interaction, although again there were few empirical studies in this area. Pedersen and Robson (1969) had among their eight paternal variables two factors involving play--time spent in play and stimulation level of play. Those investigators found that the mean time spent in play for their sample, in which infants were 8 and 9 1/2 months of age, was slightly less than 8 hours per week and even this figure may have been inflated by the inclusion of time spent with the child as part of play. Among the 45 fathers, 10 were considered very gentle in play and 14 were considered very rough. These researchers also had a paternal variable which they called "overall availability." An estimate of the number of hours per week that the father was in the home when the baby was awake, overall availability averaged 26 hours per week for the sample, with a range of 5 to 47 hours. These numbers of hours indicated a considerable amount of potential time for father-infant interaction. One potential type of interaction, verbal interaction, was investigated by Rebelsky and Hanks (1971), discussed above, who also looked at non-care contexts. They found an average of only 37.7 seconds of father verbal interaction per day, with a range of 0 to 1370 seconds per day. Rebelsky and Hanks found that of this

small amount of verbal interaction, 46% came during non-care activities, which presumably would include play. Even though Pedersen and Robson's sample is not comparable with the Rebelsky and Hanks sample, it is still apparent from the latter that fathers did not choose to interact verbally very much with their infants.

Pedersen (1975), in a subsequent study of middle-class, first-time fathers and their infants and wives, interviewed the fathers when the infants were 4 to 5 weeks of age. Although he collected data on the amount of play activity, caregiving and affective reaction, Pedersen failed to report the data and gave only his summary interpretations. However, one practically important finding with implications for the present study was that irritability of the infant was important as it related to father behavior. Fathers played more with irritable male babies but also reacted more negatively to them and fathers appeared to influence mothers' performance. Unfortunately, the report of the research was so sketchy that one learned little about fathers' frequency or types of involvement with their infants.

Rendina and Dickersheid (1976) found that during observations fathers spent more time in social and affective proximal activities than in caregiving. Fathers were involved with their infants an average of 36% of the observed time and fathers generally spent more time

socializing and giving affective proximal attention than giving physical care. Social involvement accounted for 10.4% of the total observed involvement time and affective proximal attention took 9.2% of that time. Play accounted for 6.2% of the observed involvement time and all fathers, except one, engaged in so-called rough and tumble games. Certain infant characteristics had some influence on father involvement. Fathers of boys were somewhat more involved than fathers of girls but the differences in amount of social, affective proximal or play behavior because of infant sex was not significant. However, although temperament did not have a significant effect on father involvement, temperament and sex together affected social interaction. Fathers were involved in social activities more with difficult boys than difficult girls and with "easy" girls more than with "easy" boys. Fathers also talked more to "easy" girls than "easy" boys and to difficult boys more than to difficult girls.

Lamb and Lamb (1976) observed mother and father interaction in play and physical contact with infants of 7 to 13 months of age. Fathers engaged more in rough and physically stimulating play than did mothers, and infants preferred this type of play. While mothers usually held babies for physical care, fathers were more likely to hold the baby to play or because the baby wanted to be held. Lamb (1976) also found that although the infant spent

approximately equal time in play with each parent, the response to play with fathers was significantly more positive. Fathers initiated different types of games from those which mothers initiated; fathers tended to initiate more physical and idiosyncratic games which may have accounted for the infant preference.

The bulk of the remaining studies of father-infant interaction dealt with infant displays of attachment behavior and with family transition patterns upon the arrival of a child. No additional information came out of either area of investigation about father involvement in caregiving or play and social interaction.

The previously discussed studies of father-infant interaction generally confirm the belief that there are differences in patterns of mother-infant versus father-infant interactions and these differences may highlight the different roles that the typical father assumes. Despite the fact that the father seems to spend so little time with his infant, his influence may be great because of the different type of parenting he performs in comparison with the mother. The father may be the source of more intense stimulation and attention fixation than the mother, who is so often with the infant. Rather than there being a duplication of roles, mothers and fathers may each be providing part of a total parental style which the typical infant needs to experience for maximal development. None of the

studies above contained follow-through components to assess the father's influence and style of parenting over time.

One can see that there has been a truly meager amount of research on father-infant interaction to assess either caretaking or non-caretaking modes. The few studies on father-neonate interaction suggest a possibly high level of interest and non-caretaking involvement of fathers immediately after birth. Yet the studies of the involvement of fathers with infants after the neonatal stage are so few in number and so neglectful of presenting data on caretaking and non-care tasks, that one cannot draw any firm conclusions about these two possible kinds of interaction. The samples of fathers in these studies have also been quite small and whatever data were collected on father involvement were often done so as a secondary function to assessing other variables, such as attachment behavior. None of the studies covered both the neonatal and post-neonatal periods to see whether there were any changes in patterns of interaction from one stage to the other; we are thus left with areas of father-infant interaction which are unexplored and undocumented.

Purpose of the Present Study

The purpose of the present study was to add to the meager body of literature by providing data on fathers' early parenthood experiences. This exploratory study

focused on how the typical father participated in child care and non-care tasks with his infant and what factors affected the frequency and types of activities. The emphasis in the study was on types and frequency of routine involvement of fathers and first-born infants.

The specific research objectives were as follows:

1. To determine frequency and types of involvement of fathers in routine infant care.

2. To examine types and frequency of non-care involvement of fathers with their infants.

3. To examine the degree to which there is a congruence between fathers' prenatal expectations about involvement and actual levels and types of involvement after birth and to determine whether there are changes in care and non-care involvement from the neonatal to the post-neonatal time.

4. To find attitudes of mothers towards fathers' involvement.

5. To determine whether certain demographic characteristics correlate with types and frequency of involvement and satisfaction with fatherhood.

- a. age
- b. educational background
- c. profession
- d. marriage history
- e. experience with children

6. To determine whether certain variables are related to frequency and types of interaction of fathers with

their infants:

- a. sex of child
- b. preferred sex
- c. planning of pregnancy
- d. preparation for parenthood
- e. infant behavioral temperament

Significance of the Investigation

Few areas of study have had as much popular and scholarly appeal as has the topic of childrearing. The proliferation of research, journal articles, books, magazine pieces, book clubs and even audiovisual material on parenting has been bolstered by a strong public demand for courses on the high school, college and adult education levels to prepare men and women for their roles as parents. One could surmise that people are now seeing parenting as a serious avocation requiring sufficient understanding of children and family relations. Yet, whereas parenting literature to deal with children over age 2 years emphasizes the relational aspects of parenting and how to provide an appropriate emotional climate for the child, the corresponding literature about children under age 2, and particularly about infants, usually focuses more on the physical care and management of the infant. Considerably less attention is devoted to the emotional and social needs of infants and this situation exists even though extensive research has been accumulated about infancy and the needs of the infant.

One explanation for this gap between research knowledge and public practice may come from the misconception of many laypersons that infancy is a relatively insignificant time of life. Students of child development are keenly aware of the significance of infancy for later development, and researchers are struck by the findings that early life experiences have an enormous and disproportionately more potent effect on later development than does any other time of life. It would seem that current infant parenting practice needs to take into account more than physical caretaking alone.

Some of what we now know about the non-physical needs of infants has come about through the study of the effects of deprivation of a consistent parental figure, usually referred to as maternal deprivation. The emphasis in the study of children who have suffered from this loss has been on the role of the mother and her early and continuing importance in the life of the child. For most researchers, even up to the present time, parental deprivation and parental involvement have meant only maternal involvement. The father's role has been seriously neglected as a source of study vis à vis infants and his influence in the life of the infant is barely understood. Because so little is known about the father's role in the infant's life, there is little information that developmentalists can share with the father to help him become a more effective

parent.

The present study sought to provide much needed information about the father's role in infancy. The father's caretaking and non-caretaking involvement with the infant were assessed through analysis of the collected data. Both caretaking and non-caretaking tasks were evaluated to provide an avenue for appraising the relative emphasis on each type of task that fathers place in their interactions with their infants. Such data should help those studying infancy to understand better the impact that the father has on the infant. The data may also help those involved in social service programs for families to provide more appropriate intervention that takes into account the roles of both parents. Such direct intervention is particularly crucial for families in crisis, such as those involved in neglect and abuse of young children and those who have special needs children.

Methodology

The literature on father-infant interaction consists primarily of research on small samples that examined father involvement as secondary to the research of areas of infant development, such as attachment behavior and vocalization. As noted in the initial literature review, few studies have focused on father-infant interaction, particularly with respect to the frequency and type of daily

involvement and in no study have the shifts involved in paternal behavior from the neonatal to the post-neonatal time been investigated. The present study was intended to add to this meager knowledge of father-infant interaction by determining how the typical father interacts in routine care and social functions with his infant and how these interactions change from the neonatal to the post-neonatal period.

Subjects. The sample consisted of couples having their first child. Couples were drawn from a metropolitan urban area, including suburbs and rural fringes, with the intention of securing a sample representing a broad spectrum of socioeconomic and educational backgrounds. The demographic features of the subjects were variables that were taken into account in analyzing the data.

At the outset of the study, it was decided that a final sample size of 100 was desirable. The sample size was chosen because such a size is adequate for correlational analysis without being so large as to be unmanageable by one person. Because of the 4 1/2 month period of data collection, it was anticipated that some subjects would be lost through general attrition. Therefore, an initial sample size of approximately 150 was established to ensure complete data from approximately 100 couples.

Subjects were recruited at childbirth preparation

courses sponsored by a local hospital and by a childbirth education league. Such classes are attended by couples during the last trimester of the wife's pregnancy and at the time of the selection, most couples were expecting their infant's birth within two months. The courses are offered every 6 to 7 weeks. Recruitment was conducted through personal appearance by the investigator. At the time of the initial contact, an explanation of the project was made, with an emphasis on the infant and family aspects of the research. Potential volunteers were apprised of what was required of them and the approximate amount of time necessary to complete the questionnaires. Participants were also promised a summary report of the findings.

Answers to questions of the study were provided by data contributed by mothers or fathers, and in some instances by both mothers and fathers. As seen in Table 1, research objectives 1 and 2, assessing frequency and types of interaction of fathers in care and non-care tasks, utilized data contributed by mothers and fathers. Objective #3, concerning the degree of congruence between fathers' prenatal expectations about levels of involvement and actual postnatal involvement, including changes in such involvement, used data from mother and father subjects. Objective 4, dealing with maternal attitude, was answered with data from mothers only. Objectives 5 and 6, assessing the influence of certain demographic and personalogical

TABLE 1

SOURCES OF INFORMATION FOR EACH RESEARCH OBJECTIVE

Research Objective	Instrumentation					
	Prenatal (T ₁) Mother	Prenatal (T ₁) Father	Postnatal (T ₂) Mother	Postnatal (T ₂) Father	Postnatal (T ₃) Mother	Postnatal (T ₃) Father
1. To determine frequency and types of involvement of fathers in routine infant care.		X	X	X	X	X
2. To examine types and frequency of non-care involvement of fathers with their infants.		X	X	X	X	X
3. To examine the degree to which there is a congruence between the father's prenatal expectations about involvement and actual levels and types of involvement after birth and to determine whether there are changes in care and non-care involvement from the neonatal to the post-neonatal time.		X	X	X	X	X
4. To find attitudes of mothers toward fathers' involvement.			X		X	
5. To determine whether certain demographic characteristics correlate with types and frequency of involvement and satisfaction with fatherhood.		X	X	X	X	X
6. To determine if certain variables are related to frequency and types of interaction of fathers with their infants.	X	X	X	X	X	X

characteristics of the father subjects and certain other variables, used data from fathers, with the exception of two parts of objective 6 which had data contributed by mothers also. The use of data from both parents provided a means for studying the reliability of the data by corroborating information provided by each parent.

Design. The design of the research was a pretest-posttest two group design. One group, Group A, was questioned prenatally (T_1) and contributed to the data for objective #3. The reasons for the prenatal questioning of one group of subjects was to ascertain whether there was any sensitizing effect caused by the use of the instrumentation. The act of prenatal testing alone may have affected the responses of subjects on the postnatal questionnaires (T_2 and T_3) and this extraneous variable had to be controlled to improve internal validity of the study (Campbell & Stanley, 1963). Having the subjects exposed prenatally to questions which may have aroused ideas and thoughts which would otherwise not have been aroused could have caused some variation in later responses at T_2 and T_3 . All subjects were questioned postnatally at approximately ages 3 weeks (T_2) and 3 months (T_3) of the infants.

Instrumentation. The instruments used in this study were three sets of short answer and multiple choice response form questionnaires distributed to Group A only prenatally

(T₁) and to both Group A and Group B at age 3 weeks of the baby (T₂) and 3 months (T₃). Each set of questionnaires consisted of two forms--mother's form and father's form. The two forms had questions appropriate for that parent only. The prenatal questionnaires were distributed at the time of the initial contact in the childbirth preparation classes. Subjects had an opportunity to complete the forms during the class break or before the class started. The two postnatal questionnaires (T₂ and T₃) were mailed to the subjects, with cover letters containing necessary instructions and with a stamped, addressed envelope for return. Follow-up telephone calls were used to increase the rate of returns.

Data from each question on any of the questionnaires was utilized in accomplishing one or more of the six research objectives. In some instances, both mothers and fathers contributed data, while at other times data was derived from responses of one class of parents only. Additionally, adapted forms of the Infant Temperament Questionnaire by Carey (see Appendix A) was part of the mothers' postnatal questionnaires (T₂ and T₃) and data from this scale was used to classify the infants' general behavioral temperament on objective #6. The full version of the Infant Temperament Questionnaire can be seen in Appendix B.

Data collection. From each session of the childbirth classes, random selection was made of classes for pre-testing and for non-pretesting. Half of the selected classes filled out the prenatal questionnaires and half did not. Pretest group members were given the questionnaires at the time of the introduction of the study to the childbirth classes. The researcher remained after the classes to collect the completed forms. Non-pretest classes were asked to fill out an information sheet with their names, addresses, due dates and some demographic and personal information.

The researcher determined actual dates of birth through perusal of hospital admissions lists and through telephone calls. The T_2 and T_3 timings were made individually according to the date of birth of the child.

Limitations of the Study

The present study has several limitations. The use of self-report instead of interview or observation substantively limits what can be studied. Because the researcher was relying on self-report, the instruments and the test taking themselves may have affected what the father actually did. Further, self-report does not permit verification of the honesty and accuracy of the answers and one must rely solely on the subjects' responses. The use of questionnaires instead of personal interview also

does not allow an opportunity for requesting expansion of answers by the researcher or an opportunity for subjects to ask for clarification of the questions.

The major methodological limitation of this study was the problem of the rate of return of questionnaires. Use of interview or observation increases the opportunity to collect data and decreases the rate of attrition from T_1 to T_2 and T_3 . Questionnaire return rates are substantially lower than are other methods of data collection.

Organization of the Study

The material in this study is presented in five chapters. An introduction to the problem, purpose and significance of the study and brief explanation of the study itself are contained in the preceding pages of this first chapter. Chapter II contains a review of the literature, including research in the areas of father-infant studies and parent-child interaction. Also included in Chapter II are reviews of techniques for recording parent-child involvement, family division of labor studies and attitudes of men and women toward father participation in infant care. Chapter III presents a description of the research methodology, including the design of the study, selection and characteristics of subjects, the instrumentation used and procedures used in carrying out the research. The fourth chapter provides information on the findings of

the study and is organized according to the six research objectives discussed above. The final chapter presents a summary and conclusions and also includes recommendations for needed research.

C H A P T E R I I

LITERATURE REVIEW

Father-Infant Studies

As previously discussed, the father has generally been neglected in the child development literature. There has been some speculation about why this neglect has taken place. Some researchers (Greif, 1976; Parke & O'Leary, 1976; Rebelsky & Hanks, 1971; Taconis, 1969) have noted an unavailability of the fathers, implying that the research has taken place during normal working hours rather than at a time when fathers could have been available.

A far more potent reason for disregard of the father may come from the psychological attitude toward the father role. The psychological viewpoint, as originally postulated by Freud, was that the father was an intruder on the mother-child relationship and the source of the Oedipal conflict. As Lamb (1975a) pointed out, for Freud, a satisfactory mother-child relationship was the prerequisite for all satisfactory development and the prototype for all later relationships. Most psychoanalytically oriented theorists after Freud (e.g., Bowlby, 1951, 1969) concurred with his viewpoint (Lamb, 1975a) and proposed that the mother-child relationship was unique. Burlingham (1973)

suspected that psychoanalysts may have neglected the father-infant relationship because they so often encountered fathers who had little feeling toward their infants, a phenomenon which was perhaps more common in past generations.

Psychological theorists outside the psychoanalytic tradition have also given a secondary position to the father (Lamb, 1975a; Parke & O'Leary, 1976; Rebelsky & Hanks, 1971), among them the Social Learning theorists, the Cognitive Developmentalists and those who subscribed to an availability theory and suggested that the mother was most important because she was most often with the child (Lamb, 1975a). Although most theorists seemed to imply that the mother-infant interaction occurred apart from any influence by the father (Pedersen, 1975), other evidence pointed to crises resulting from the absence of the father, particularly during the earliest years of life (Biller, 1971, 1974; Lamb & Lamb, 1976; Pedersen & Robson, 1969; Pedersen, Rubenstein & Yarrow, 1973), and one might have thus inferred a major role of the father in the child's life.

Sociological literature also relegated the father to a secondary position. Sociologists of the 1940s and 1950s most often portrayed the father as a nonparticipating, authoritarian figure (Taconis, 1969). This may have resulted in part from the belief that although the nurtur-

ing behavior of the female was instinctual, the father's role was socially defined (Benson, 1968; Lewis & Weinraub, 1976; Mead, 1949). Indeed, Mead (1949) felt that fatherhood was a learned "social invention" and because this role was not bolstered by biological forces, it varied more (Lewis & Weinraub, 1976; West & Konner, 1976). West and Konner found eight variables which affected the style of fathering in both industrialized and non-industrialized societies. These elements included the father's involvement in family events and his role as a source of support and authority. We thus find that both the societal structure and the nature of the economy influenced the social view of the father's role. In our Western, industrialized countries, the father was often seen as chiefly a breadwinner (Biller, 1971), and child care was primarily or solely maternal care (Biller, 1971; Howells, 1969; Taconis, 1969) and many thus assumed that the father was not interested in being with the child (Biller, 1971). This viewpoint was further bolstered by the social position and esteem attached to the child caring role, with the tasks of child rearing often devalued or held in low esteem in Western societies.

Current interest in the father's role. Although there has been neglect in the literature in dealing with the father, there has been greater interest in the father in the last

few years. The new interest may be due to the realization of the possibility of the father being influential in the lives of his children in several areas of development. Pedersen and Robson (1969) felt that the father may have greater stimulus value because he was less often with the child and was a source of contrast and novelty to the daily routine established by the mother. There have also been studies of the possible influence of the father on moral development (Greif, 1976), cognitive/academic achievement (Radin, 1976), and sex role development (Biller, 1971, 1974; Lamb, 1975a; Taconis, 1969). Most studies of the father's role have compared children, particularly boys, reared in father-absent homes with children reared in father-present situations (Pedersen & Robson, 1969). In reviewing the literature on father absence, Biller (1971), Pedersen and Robson (1969) and Lamb (1975a) found significant differences in children reared in father-absence with respect to sex role identification, cognitive style, intellectual level and factors related to behavioral disturbance. Biller and Lamb also found abnormal development in inhibition of aggression and delay of gratification. The impact of father absence appeared to have been most profound for those children who were young (Biller, 1971; Lamb, 1975a). Although severe criticism could be made of the methodology used in many studies (Biller, 1971; Lamb, 1975a), there was still such overwhelming evidence of the

negative effects of father absence, that one might assume the effects to be quite real.

The factors involved in the changing American family have also been of interest to researchers in the last decade. The American middle-class family has been experiencing some role re-definition, with the father relinquishing some authoritarian power and taking more child caring and nurturing duties (Bronfenbrenner, 1961; Lynn, 1974; Pedersen & Robson, 1969). The impetus from the Women's Movement, pushing for egalitarian roles in work and home, has also caused many middle-class parents to redesign both their attitudes toward child care responsibility and the actual implementation of these responsibilities in the home.

Father-infant interaction and attitude. The purpose of this chapter was to review the literature on the father-infant relationship. For purposes of this review, infancy included children from birth to approximately 1 year of age.

Among the earliest studies of the father's role were attitudinal questionnaires given to fathers. Although these studies did not always involve fathers of infants, they did provide some insight into the earliest work on father-child relations. Gardner (1943) interviewed 300 fathers and concluded that most fathers gave little conscious thought to their roles. Tasch (1952) interviewed 85

fathers, particularly questioning their participation in their children's lives. Most fathers saw themselves as active participants in the child's daily care and regretted not having more time to spend with their children. Taconis (1969) interviewed 80 fathers of 5-year-old children and asked the fathers to keep a record of their activities for one week. Most of the fathers reported enjoying and accepting their roles, with interest and responsibility being the second most dominant attitude. Newson and Newson (1963) interviewed mothers in England with 1-year-old children about father participation, as part of a larger study they were conducting; approximately 700 mothers participated. Fathers in the study performed many child care tasks and the authors classified 52% of the fathers as highly participatory and 27% as moderately involved; 21% were considered non-participatory in child care routines but 99% of the total sample played at some time with the child. The above studies provided little specific information on the father's role, although there seemed to be generally positive attitudes among the fathers interviewed.

Father-neonate studies. Although the first real contact that the father has with the infant is in the neonatal stage, that is the first few weeks immediately after birth, there has been little empirical data on father behavior in this period. Parke and O'Leary (1976) conducted two

studies designed to discover the way in which fathers interacted with their newborns, to compare the interaction patterns of mothers and fathers, and to determine the impact of the presence of one parent on the interaction of the other parent. In the first study, they observed 19 middle-class, well-educated couples interacting with their infants 6 to 48 hours after delivery. All infants were full term and 50% of the couples had attended Lamaze classes. The researchers conducted two sets of observations: mother-father-infant and mother-infant, with each group being observed two times and three times respectively. A time sampling procedure was used and seven infants behaviors and twelve parent behaviors (including looking, smiling, vocalizing, holding, kissing, touching, imitating, exploring, feeding, handing over to other parent, holding arms and changing position) were noted with a mean frequency of each behavior determined. Results showed that the father was a very active participant. In the triadic situation, analysis of variance indicated only one significant¹ effect--mothers smiled more than fathers. Two other effects were of borderline significance: fathers tended to hold babies more than mothers ($\underline{p} < .09$, $\underline{N} = 19$) and rock babies in their arms more ($\underline{p} < .09$, $\underline{N} = 19$). On

¹Whenever significance is used in this paper, it refers to values of $\underline{p} < .05$, $\underline{p} < .01$ or greater, unless otherwise noted.

all other measures, fathers were as likely as mothers to interact with their babies. The effect of the presence of the father on mother-infant interaction was evaluated and the results showed that the presence of the father reduced the amount of interaction between the mother and infant. Mothers were less likely to hold, to change position, to rock, to touch or to vocalize when the father was present. One sex difference was noted: both parents touched male babies significantly more but this did not occur when mothers were alone.

In the second study, Parke and O'Leary observed 51 white and 31 black families of lower socioeconomic status. Fathers in this sample did not attend childbirth classes or attend the delivery. Three types of observations, mother-infant, mother-father-infant, father-infant, were made within 48 hours of delivery. All 82 families were observed in the triadic situation and half of the fathers and half of the mothers were observed a second time alone with the infants. Mean frequencies of parent behaviors were reported. The father was found to be a very active participant and was significantly more likely to hold, visually attend to the infant and provide physical and auditory stimulation. Only in smiling did mothers perform higher than fathers. To determine whether each parent acted differently when alone with the infant, a comparison of scores was made for the triadic and dyadic situations.

The father was significantly more likely to touch and rock the infant when alone and thus did not show need for the mother's presence to motivate him to interact with his infant. The only difference noted was that the father smiled more when the mother was present. Overall, mother-infant interaction was higher when the father was not present and the mother was significantly less likely to hold, touch, rock, vocalize, imitate and feed the infant when the father was present. All of the latter measures were $p < .01$. However, the mother was more likely to explore the infant and smile at the infant when the father was present ($p < .05$, $N = 82$). A comparison of mothers and fathers when alone with their infants ($N = 42$) showed that each parent interacted very similarly, except for mothers feeding more often than did fathers ($p < .01$).

Analysis of the fathers' behavior vis à vis sex of child and birth order showed that fathers touched first-born boys more than later-born boys or any girls and vocalized more to first-born boys than to first-born girls; both situations occurred regardless of whether the mother was present or not. When mother and father were together, parents tended to hold first-born children in their arms ($\bar{X} = 16.06$ for first-born versus $\bar{X} = 13.67$ for later-born) but they held later-born more often in their laps ($\bar{X} = 4.31$ versus $\bar{X} = 2.04$). Parents were more likely to walk with their first-born infants, particularly boys; they

walked girls equally often regardless of birth order. Fathers touched first-born more than later-born while mothers touched later-born more often.

Several general findings of this study were particularly important. Fathers interacted frequently with their newborn infants and this involvement was found in middle-class and non-middle-class groups. The mother's differential response to first-born versus later-born was modified by the presence of the father but the father's involvement with his first-born son was unaffected by the presence of the mother. There can be methodological questioning of the setting in which this study took place. Hospital environments are restrictive and may impede the most natural responses of the parents and there remains the question of the predictive validity of this parental behavior for later home interactions. Further, the timing of these observations, so soon after delivery, may have meant that the parents, particularly the mothers, were tired and perhaps not interacting as much as they would at a later time. The experimenters did observe each group at least twice, and found no substantial differences from first to second observation when mothers were more rested, so the above criticism may not be valid.

The Parke and O'Leary study raised the question of the importance of early contact between fathers and infants. Parke and O'Leary pointed out that fathers may not be

"biologically or culturally primed to be responsive to infant cues" (p. 662) and may have needed early and frequent exposure to their newborn infants to develop responsive modes of behavior. Greenberg and Morris (1974) studied the possibility of a critical period in development of attraction and interest of fathers in their newborns. Thirty first-time fathers, half of whom were present at the delivery of their infants, were given a questionnaire dealing with their attitudes and feelings about their children between 48 and 72 hours after the birth. This study took place in England. In addition, eight of the fifteen fathers who observed the delivery and seven of the fifteen who did not, were interviewed.

Among the fathers who answered the questionnaire, almost all (97%) rated their feelings toward their infants as average to high and 67% indicated that this feeling began immediately after birth. From the interviews, Greenberg and Morris found that a strong bond, which they called engrossment, began to develop between the father and infant within the first 3 days after the birth. This engrossment was more than just interaction. The fathers were intensely interested and absorbed in their newborns' activities and abilities and the natural reactions of the baby, such as head and eye movements, helped to cement the bond with the father. No significant differences were found between the fathers who witnessed the birth and those

who did not, but the authors postulated that the first hour after birth may have been a significant period because the infant may be more active during that time than in subsequent hours. No comparison was made between fathers who interacted with infants during the early neonatal stage with those who were absent, but the Greenberg and Morris study suggested great interest and happiness among fathers in their sample and a possible mechanism for triggering so-called paternal feelings. This study contradicted Burlingham's (1973) findings of little paternal interest immediately after birth and for several weeks thereafter.

The question of the influence of changes in infant behavior, caused by medication and labor, on paternal reaction was earlier investigated by Parke, O'Leary and West (1972). Nineteen white, first-born infants and families were used in the sample. All parents were well-educated and 18 of the fathers were present during labor and delivery. The length of labor and amount and type of maternal medication were noted. Infants were observed with parents 6 to 48 hours after delivery. A time sampling procedure, noting five infant and eleven parent behaviors, was used. Results indicated that the father was twice as likely to hold the infant and as likely to look at, touch and talk to the infant as was the mother. Analysis on differential behavior because of infant's sex showed that both parents were more likely to touch a male

infant. Analysis of the effects of medication level and length of labor indicated maternal interaction with the infant increased as medication increased while the father's interaction tended to decrease as medication increased, although the father's behavior was not statistically significant. The authors postulated that the differences in behavior between mothers and fathers may have resulted from the father preferring an active infant while the mother was more worried about the negative effects of the drugs and tried to stimulate the infant.

Parke and Sawin (1976) examined early parent-infant interaction in one specific context--feeding. They found that mothers spent more time in feeding and caretaking tasks but that there was also role differentiation between mothers and fathers and how they fed infants even at this early time. The authors further examined paternal competence, as measured in sensitivity to infant cues during feeding, by measuring the degree to which the parent modified feeding behavior as infant behavior changed. Their results indicated that fathers were as sensitive to infant cues during feeding as were mothers, when adjustments were made in the data for the smaller quantity of time that the fathers engaged in feeding. The authors felt that such findings indicated competence and sensitivity to the newborn infant by fathers in their sample.

Manion (1977) studied what caretaking activities

fathers performed with their young infants and what variables influenced participation. The sample consisted of 45 primiparous fathers and mothers, mostly middle-class and well-educated, who were given two sets of questionnaires. The first questionnaires, which asked primarily demographic and personal data, were administered during the postpartum stay in the hospital. The second questionnaires, dealing with actual caretaking, were given at age 6 weeks of the infant.

Results indicated that fathers had very limited experience with actual child care before the birth of their own baby. However, fathers in the study were found to provide some caretaking, with all performing at least one direct care activity on the selected day of questioning. Analysis of the types of care provided by fathers indicated a tendency for fathers to participate in less complex tasks more often, with the number of fathers performing an act decreasing as the complexity of the task increased. For example, fathers were more likely to rock a baby than to change a diaper. Manion found that several factors related to the levels of participation. Father participation in labor and delivery positively related to later participation in infant care ($p = .01$) as did the father's own parental relationships ($p = .02$). The sex of the infant was also found to be important, with fathers of girls participating significantly more than fathers of boys.

From this meager data on father-neonate interaction, it is impossible to draw many firm conclusions about father behavior toward their infants. Perhaps one could say that in all studies, fathers were interested, active participants with their infants and that some paternal feeling, biologically triggered or not, emerged in most instances. Some factors emerge as possibly influential, including participation in the delivery and an opportunity for early physical contact with the infant. Lewis and Weinraub (1976) felt that fathers who did not have contact with their infants during the earliest months had difficulty showing affection in later months and years and Manion (1977) also felt that her data indicated a possible need for very early touching, even from the first hours of the infant's life, for paternal feeling to develop most strongly.

Father-infant interaction and father attitude. Little research has focused on the relationship between the father and infant. In one of the few studies of father attitudes toward a new infant, Knox and Gilman (1974) reviewed 102 questionnaires given to first-time fathers. All fathers were white and resided in North Carolina. Their mean age was 30 years and the mean length of fatherhood was 26 weeks. Findings showed that fathers had had little preparation for their new role. Although childbirth and parenthood

preparation classes were available to 98% of the fathers, only 1/3 attended Lamaze classes. Most fathers participated minimally in daily care of the child; the fathers in the sample fed the baby an average of five times a week and changed diapers an average of six times per week. All fathers responded positively toward their new infant and 85% described the feeling as love plus extreme happiness.

The authors found, however, that the fathers' feelings were not entirely blissful. Although all fathers reported loving their babies, 25% said that they sometimes wished that they could return to the days before the baby had been born and 40% agreed that their feelings had changed since the birth of the child, although only 6% of that group stated how their feelings had changed, all positively. The marital relationship seemed unchanged to the fathers in the sample since the birth of their infant. Of the sample, 75% reported no effect and 20% said that their marriages had improved; only 3% reported that their marriages had deteriorated. The infant also had little effect on relationships with fathers' own parents or in-laws; only 10% reported a change and this was an improvement.

Knox and Gilman attempted to determine what variables related to difficulty in fatherhood. Only three variables out of approximately twenty were significant: fathers whose wives complained a great deal about new

responsibilities, fathers who went out socially less often with their wives, and fathers whose marriages had deteriorated in their own eyes. From all of this data, Knox and Gilman concluded that mothers still had major child care responsibility and fathers had a positive attitude toward fatherhood, even with minimal preparation for the role. Personal dissatisfaction with fatherhood was probably linked with the three variables found significant above and thus suggested that the fathers' attitude may have been influenced by the mothers' adaptation. No analysis was performed on this data to test the hypothesis of father adaptation on maternal attitude nor were any fathers who had primary child care responsibility included in the sample.

Although this study provided interesting and much needed data on paternal attitude, the results must be reviewed keeping in mind the source of the data. Even though 102 fathers responded, another 280 who received the questionnaire never replied. It is thus difficult to determine if the sample is truly representative of all fathers or only of white, positively inclined fathers. Furthermore, no follow-up personal interview was included and the reliability of the father in assessing his own and his wife's feelings, without in-depth and clarifying questioning, was questionable.

The first study on interactive patterns of fathers

and young infants was conducted by Pedersen and Robson (1969). They sought to explore measurable effects of paternal behavior in early infancy and the relationship between specific paternal behavior and infant differences. Forty-five families with first-born infants were included in the study and the sample included fathers with educational levels from 11th grade of high school to professional degree, with a mean educational level of 3 years of college. Data were obtained from two home visits when infants were 8 and 9 1/2 months old and included direct observation, as part of a larger study being conducted, and interview of the mother (sic) to obtain data on the father's caretaking behavior. The infant measure primarily concerned with the relationship with the father was attachment, and this was evaluated in terms of "age of onset and intensity of greeting behavior" (p. 470) directed toward the father. This greeting behavior was defined as excitement and increased activity toward the father upon his appearance after absence. Infants were evaluated on a 5-point scale and approximately 75% of the infants obtained a score of three or above. There was no sex difference among the infants and among the 25% who did not exhibit this greeting behavior, two infants displays negative behavior toward the father and one infant displayed negative behavior but had earlier shown positive behavior toward the father. These measures of attachment were correlated with

eight measures of father behavior: caretaking (variety and frequency), emotional investment, time spent in play, irritability level, apprehension over well-being, authoritarian control, stimulation level of play, and overall availability. Results of the sample population on these eight variables revealed that 6 out of the 45 fathers performed two or more caretaking tasks daily and the mean time spent in play was slightly less than 8 hours per week, with two fathers spending 19 to 20 hours and one spending 26 hours, but one father spent only 45 minutes in play per week. The time spent in play may have been inflated by the inclusion of "being with" the child in total hours of play. Among the sample, 9 out of 45 were judged as being very patient with their children, but 10 out of 45 were considered often angry and irritable. Eleven out of 45 were very permissive and tolerant and 5 out of the 45 were considered very restrictive. Other fathers were somewhere in between the two extremes on all of these scores, but no data provided showed the actual distribution. For the stimulation level of play, 10 of the 45 were very gentle and 14 of the 45 were very rough in play. The only measure which had a significant sex difference was apprehension over well-being, with 13 of the 45 fathers being very apprehensive; 10 of these 13 fathers were fathers of girls. Overall availability, which was an estimate of the number of hours per week that the father was in the home when the

baby was awake, averaged 26 hours for the group, with the range of 5 to 47 hours. The authors considered this last variable indicative of "considerable time for potential interactions" (p. 469).

The eight paternal variables were correlated with levels of attachment shown by the infants. Four scores were significant for boys and one was significant for girls; no variable was significant for both sexes. For boys, caretaking, emotional investment, and stimulation level of play were positively correlated with attachment and irritability of father was negatively correlated. For girls, apprehension over well-being was negatively correlated with attachment.

Although this study provided interesting insights into father interaction, the review of the data must be tempered by methodological criticisms, among which the predominant one is the method of data collection through interviewing mothers. The authors themselves apologized for this technique, but one is still left with data on interaction patterns that were not observed and were possibly tainted by the mother's viewpoint. The study also had a dearth of statistical information, with only summary data on group means and ranges for some variables, so that the reader could not have determined the actual distribution of scores within the range. And finally, conclusions about the relationship between father action and infant behavior

could be made only for greeting behavior, an attachment index, because no other correlational information was provided. Although this may have been the general focus of the paper, one wonders about other infant measures which were obtained as part of the larger study, of which this report was only part. Even with all of these criticisms, one must give some serious consideration to this study because of its pioneering nature.

Rebelsky and Hanks (1971) reported the second study of father-infant behaviors after studying verbal patterns of fathers. This report was part of a larger research project dealing with infant vocalization.

The sample consisted of the fathers of 10 white, lower middle to upper middle-class infants, of which 7 were boys and 3 were girls; only 2 babies were first-born. The procedure involved attaching a microphone to the infant for 24 hour periods every 2 weeks for 3 months, beginning when the infant was 2 weeks old. There were, therefore, six such tapes for each infant and these recordings were coded by two judges who rated duration of father vocalization, time of day and activity. Results showed that fathers spent little time interacting with their infants; the mean number of daily interactions was 2.7, involving an average of 37.7 seconds per day. Among the group there were large individual variations, but the father who spent the most time had an average of 10 minutes, 26 seconds per day. The

range of interactions for the sample was 0 to 1,370 seconds of total time and 0 to 17 interactive episodes per day, each ranging from 4 to 220 seconds in length. The means for the sample were 37.7 seconds of total interaction time, 2.7 interactions and 13.9 seconds per average interactions. Coding of recordings also revealed that fathers spoke most often to babies in the morning before going to work (41% of all interactions) and in the evening (33%). The amount of interactions varied with age and sex: 7 of the 10 fathers spoke less to infants at age 8 to 12 weeks than at age 2 to 6 weeks. The decrease was more marked among fathers of female babies: all three fathers of females decreased in the second half of the study and 4 of 7 fathers of males decreased during that time. Of the total verbal interactions of the fathers, 54% were during caretaking and 46% were during non-caretaking activities. There was a decrease in speaking during caretaking over the length of the study. This was the major reason for decreased vocalizations, because vocalization during non-caretaking remained constant for male infants and decreased slightly for females during the study. What was interesting was that mothers in the study increased vocalization with increasing infant age from birth to 3 months of age.

Criticisms can be made about this study, including the small size of the sample (10), and the fact that only verbal interaction was taken into account with other non-

verbal activities between father and infant being disregarded. The method of observing the pairs, with the microphone so prominent, may have inhibited the fathers' natural behavior and may have interfered with physical contact between the infant and father. If the conclusions were accurate, that fathers interacted infrequently and for very brief periods of time, a pattern of low father-infant interactions may be predicted in the general population.

Pedersen (1975) also studied very young infants, but chose to study the family triad--mother, father, and infant. He studied 39 first-born, white, middle-class infants (20 male and 15 female) and their families and he had three sources of data--Brazelton Neonatal Assessment Scale given to the infant at age 3 days, two home observations of the mother and infant at age 4 weeks, and an interview with the father when the infant was 4 to 5 weeks of age. Different staff collected each set of data and the parents were not present for the other person's session. For the mother-infant assessment, seven variables had been rated, but only one, feeding competence, was selected for use because of its importance. During the interview of the father, the father was asked to report on his relationship with the infant in three areas: how much he played with the infant, caregiving, and affective reaction. The father was also asked to evaluate the husband-wife relationship in

terms of the father's supportiveness of the mother's role, his evaluation of her performance and any conflict or tension that existed.

The results provided information on the relationship among all three family members, and results were given for each sex separately. For male babies, alertness and motor maturity related to the parental relationship. Fathers of alert baby boys evaluated the mother more positively and there was less conflict among parents of motorically mature infants. The husband-wife relationship also influenced the mother's performance; when the husband rated the wife's performance well and was supportive of her, the mother's feeding skills were generally better. The feeding skill was also associated with family tension (high tension being associated with poor feeding ability) and with alertness and motor maturity of the infant.

The irritability of the infant was important, as it related to father behavior. Fathers played more with irritable babies but the father tended to show more negative affect to an irritable son. The father's attitude toward the irritability of his son may have indirectly affected mother's behavior by affecting the husband-wife relationship.

Not one correlation between parental and infant behavior was significant for females. Pedersen felt that this finding may have been "devastating to a theory of

family as interactive system" (p. 9). He explained this lack of correlation as perhaps a function of the disappointment over having a female baby since every family had indicated, during a prenatal interview, preference for a male child.

Because this report contained no statistical data, one had to rely on the author's reliability in interpreting significance or lack of it. Thus the results reported above were the author's interpretation of significance and one must accept that to accept the findings of the study. Although this study provided little information about paternal interaction, it did highlight the importance of the father's influence on the mother and the fact that fathers played more with irritable male infants but reacted more negatively toward them. For this sample, the father also expressed a preference for a male child which may have influenced his interaction pattern, although Pedersen reported no significant differences between boys and girls in the means for any parental or infant measure.

Rendina and Dickersheid (1976) conducted an exploratory study of father interaction with first-born infants in a naturalistic home setting. Forty white, predominantly middle-class fathers comprised the sample and the infants were divided into two groups by sex and developmental level; level one contained 10 male and 10 female infants ages 5.5 months to 6.8 months, none of whom

were walking or speaking and level two included 10 male and 10 female infants, ages 11.3 to 15 months of age, all of whom were walking and speaking at least a few words.

Through 7-minute observational sequences, repeated 13 times for each of two visits, father involvement in caretaking, affective proximal and social activities were assessed.

Infant temperament prior to observation was determined by use of the Carey Survey of Temperamental Characteristics and was qualified as easy or difficult (baby). An interview with the father was also conducted. Results of this study indicated that fathers were involved with infants 36% of the observed time, but there was a wide range (12%-84% of observed time) and much individual difference.

Generally, the father spent more time socializing and giving affective proximal attention than giving physical care. Social involvement accounted for 10.4% of the total observed involvement time, with affective proximal and routine care accounting for 9.2% and 3.8% respectively. Fathers spent more time watching infants than doing any other activity (12.8% of total observed time and 28% of total involved time). The second most common activity was social activities with the child (10.4% of observed time) which included play (6.2% of observed time) and all fathers except one engaged in so-called "rough and tumble" play with their infants. When asked to rate themselves for participation with their infants on a scale from 0 to 5, fathers'

own scores correlated highly with observers' scores.

Analysis of variance was conducted to determine the influence of infant characteristics on father involvement patterns. The sex of the infant had some effect on father involvement. Fathers of boys were generally more involved than fathers of girls, but not at a significant level; fathers watched boys significantly more than girls but there was no significant difference in the amount of caretaking, social or affective proximal activities or play behavior because of sex. Developmental stage did not have a significant effect on measured father behaviors except that fathers talked more to older children and fathers of younger children were more involved than fathers of older children. The decrease in father involvement in affective proximal action for older children may have accounted for this and there was a trend for fathers to be more involved with younger boys than girls and with older girls than boys.

Temperament did not have a significant effect on the time that the father spent overall in the amount of activity in the three areas measured--caretaking, affective proximal and social activities. There was, however, a significant effect of temperament and sex on social involvement. Fathers were involved in social activities far more with difficult boys than difficult girls and with easy girls somewhat more than with easy boys. Fathers generally talked more to easy girls than easy boys and to difficult

boys more than to difficult girls. Information obtained through interview did not differ significantly from that observed.

Rendina and Dickersheid thus found that fathers spent more time in social activities than caregiving, which was different from the mother's usual role. The authors hypothesized that the father provided an added and important source of stimulation for the infant, and they questioned the contention that the father should assume a role comparable to that of the mother, as had been suggested by some women's groups.

The issue of whether the father provided a different experience for the infant from that which the mother traditionally has provided was examined by Lamb and Lamb (1976) and by Michael Lamb (1975b, 1976b, 1977). Lamb and Lamb studied infants 7 to 13 months old, observing two particular types of interaction, play and physical contact. Their analysis showed that mothers and fathers played differently with their infants and initiated physical contact for different reasons. Mothers more often participated in "conventional games" (p. 381) such as pat-a-cake or in play with toys. Fathers engaged more in rough and physically stimulating play and in play which was less predictable; infants preferred the fathers' novel play. Specifics of the variation in play and statistics on infant reaction were not provided in the study. The authors did state that the

above differences were not large. However, reasons for holding the babies were very different; again no statistics were given. Mothers usually held babies for physical care and to restrict exploration. Fathers were more likely to hold the baby just to play or because the baby wanted to be held.

Lamb (1976b) observed 10 male and 10 female infants at ages 7 and 8 months in their homes. The observer dictated a running narrative of infant and parent actions and these behaviors were later coded for parent behavior and infant responses. Results showed that although the infant spent approximately equivalent time in play with each parent, the response to play with the father was significantly more positive. Lamb also found that each parent tended to initiate different types of play. Fathers tended to initiate more physical games, to an almost significant level ($p < .10$) and they initiated more "idiosyncratic games" (p. 319) to a significant level. Mothers tended to initiate more play with daughters, but fathers showed no such bias and mothers initiated and engaged in more conventional games with daughters. Girls responded significantly more positively to toy-mediated play with the father than did the boys.

Although the infants in this study did not reveal a preference for physical contact with either parent, mothers held the babies significantly more often and for

significantly longer periods of time than did fathers. Infants still responded significantly more positively to being held by fathers and the explanation may have been that the fathers held the babies much more often for play whereas mothers held the babies more often for physical caretaking and control. When Lamb excluded play from his analysis of infant response, there was no difference in response to mother and father.

The previous studies found some differences in the patterns of mother-infant versus father-infant interactions, and these differences highlighted the type of role that the father may have been assuming. Lamb and Lamb's and Michael Lamb's studies indicated that although mothers were still the primary caregivers and fathers were only occasionally involved in caregiving tasks, the father played an important, albeit different, role for the child. The father was seen more as a source of stimulation and attention fixation for the infant and may have provided an important function that the mother could not or did not assume.

Father-infant attachment. Although some important information on father-infant interaction could be learned from the previously discussed studies, the amount of data available was scant because of the small number of studies on direct father-infant interaction. I turned, therefore, to a

related body of literature on attachment behavior to cull what might have been relevant to the study of father-infant interaction. Because of the nature of the topic, the methodology for studying attachment often involved some collection of data on patterns of interaction. The attachment studies also provided information on the emergence of the bond of infant to parent and therefore shed light on the relative importance of certain paternal behaviors for the infant as well as for the family cluster.

To put these recent studies of attachment behavior in proper perspective, one can look at an earlier work on development of social attachments (Schaffer & Emerson, 1964). Schaffer and Emerson pointed out that up to the time of their study, learning theory had dominated the explanation of why infants develop early emotional dependence. Learning theorists had seen the bond between parent, particularly mother, and child evolving from the parent's ability to reduce the infant's drive (hunger). But two sets of events clouded the certainty of this explanation: the work of Harlow (1958, 1971) who showed that among monkeys drive reduction was not the essential feature of an affectional bond, and the work of Bowlby (1951, 1958, 1969, 1972) who espoused the theory that certain innate behaviors helped to bind the infant to the mother. It was Bowlby who used the term attachment to describe the relationship he saw between mother and child. At the foundation of this

attachment behavior were proximity-seeking behaviors, which the infant displayed, such as clinging, sucking, crying and smiling. Cognitive theorists, such as Jean Piaget (Phillips, 1975; Pulaski, 1971; Wadsworth, 1971) also showed that for attachment to be achieved, certain developmental milestones must have been passed. The infant had to have developed perceptual discrimination, at approximately 2 to 3 months of age, when he or she could recognize and distinguish the attachment figure. The infant must have also developed object permanence, at about 8 months, realizing that the attachment figure continued to exist even when out of sight. Children under 8 months of age could not develop focused attachment relationships (Bowlby, 1969; Lamb & Lamb, 1976; Schaffer, 1971; Schaffer & Emerson, 1964; Yarrow, 1972) because they lacked this necessary cognitive development.

Schaffer and Emerson (1964) studied 60 full-term infants, 31 male and 29 female, with a minimum DQ of 75. Infants were 5 to 23 weeks of age at the beginning of the study and came from predominantly working-class families living in Glasgow, Scotland. Mothers of all infants had the major responsibility for child care. Schaffer and Emerson used the separation situation and concomitant protest and distress reaction exhibited by infants as an index of attachment and they gathered their data through interview of mothers on age of onset of attachment behavior,

intensity and number of attachment figures. Data from this study, which followed some infants to age 18 months, showed that most infants exhibited attachment to a specific figure at approximately 6 to 7 months of age.

Schaffer and Emerson found that the father played an important role in the development of attachment. Although the mother was most often chosen as an attachment figure, alone or with other figures, the father was chosen as the sole object of attachment in two cases. In 27% of the cases, the father was chosen as the joint object with the mother, one month after the onset of attachment behavior, and with increasing age more children became attached to the father as well as to the mother. By age 18 months, 75% were attached to the father, including two children who were attached only to the father.

The Schaffer and Emerson study was important because of its pioneering work in studying attachment. However, some criticism can be made about the methodology. Because the authors gathered their data from interview of the mothers, there may be some question of reliability. Actual observation of infant reaction to separation would have been more appropriate. The study would have also been strengthened by interviewing the father about the infants' reactions to separation from him as well as to gather data on father involvement.

Kotelchuck and others (Kotelchuck, 1972, 1975, 1976;

Ross, Kagan, Zelazo, & Kotelchuck, 1975; Spelke, Zelazo, Kagan & Kotelchuck, 1973) also investigated the infant's attachment to the father through evaluation of separation reaction. The researchers had four studies which used a similar paradigm and were based on a study originally performed by Kotelchuck in 1972. All studies involved direct observation of infants and parents in dyadic as well as triadic situations. The four studies involved 300 families, with children ages 6 to 24 months, mostly from middle-class Boston area families. Data on caregiving in the home were gathered through interviews. The experimental model involved a laboratory playroom and the manipulation of the presence or absence of the mother, father and a female stranger. Infant reactions to each change were noted in 13 episodes over a 39 minute period of time.

Although these studies focused on the infant behavior involved, some data on fathering styles were accumulated through the interviewing. Among all groups, 64% of the mothers had primary responsibility for the child, with 9.1% having shared responsibility with another person. Only 7.6% of the fathers shared equally in child care and only 25% of the fathers had regular daily care duties. Among the sample, 43% of the fathers reported never having changed a diaper. Although the fathers spent less overall time with the child than did mothers, they used more of their time in play activities (37.5%) than did mothers (25%).

From the comparison of paternal styles and infant laboratory behavior, the researchers found that children of all the ages they involved related very similarly to both parents with no pattern of preference for mothers and irrespective of differences in father caretaking involvement. In assessing parental preference by age (Kotelchuck, 1976) the researchers found that among 6-month-olds, 9 out of 27 preferred the mother, 14 had equal preference and 1 had greater father preference. Among 24 1-year-olds, 14 preferred the mother, 6 had equal preference and 4 preferred the father. There was no significant correlation between the amount of time the father cared for the child and how the child related to the father in the laboratory. However, a minimal level of caretaking had been found to be necessary in an earlier study, and reported here, for a relationship to exist. The child's preference and level of interaction in the laboratory were partially related to caregiving at home. Kotelchuck (1972 reported in Kotelchuck, 1976) found measures of caregiving were somewhat predictive of paternal preference, with the highest intercorrelation ($r = .51$) between paternal proximity when both parents were present and the number of diapers changed per week. Kotelchuck (1975) felt that these measures of caregiving activity were more predictive of paternal preference than were play or interactive studies.

In these studies the researchers also found that the

length of time of intense protest to parental separation that the child normally goes through in development was shortened for children with multiple caregivers. Children for whom both parents provided care developed separation protest later and ended it sooner than children for whom the mother was the sole caregiver.

A replication of these studies was done (Ross, Kagan, Zelazo, & Kotelchuck, 1975) evaluating separation protest in a home situation. The only significant difference found was that when children showed distress they exhibited less distress in the home than in the laboratory.

All of these studies demonstrated the father's importance and the influence of paternal behavior on social development of the infant. Great similarity between infant separation reaction to mothers and fathers, as contrasted with such behavior toward a stranger, was noted and extensive caregiving by the father was related to any preference for the father in the experimental situation.

Ban and Lewis (1974) investigated attachment in 20 upper middle-class 1-year-olds, using a low stress laboratory situation in which infants and parents were observed. The authors used broader behavioral parameters for assessing attachment than had the previously discussed studies. Ban and Lewis focused on proximal behaviors initiated by the infant, such as touching and action to be physically close to the parent, and distal behaviors, such as looking and

vocalizing. Their results conflicted with the Kotelchuck work. Ban and Lewis found that boys and girls showed different attachment behaviors toward each parent. Both sexes spent approximately twice as much time in proximity seeking and touching directed toward the mother as compared with such behavior directed toward the father. However, in distal behaviors, boys looked more at fathers and girls looked more at mothers. The summary results were that for this sample, mothers received more contact behavior and fathers received as much or more looking behaviors. Fathers were also asked about time spent daily with infants and the average was 15 to 20 minutes per day, with a low of no minutes. The authors felt that the amount of time reported by the fathers may have been inflated because of the desire by the fathers to seem involved with their infants. Ban and Lewis performed four correlations between amount of time and infant behavior but found no significant results. The differential behavior exhibited toward mothers and fathers contradicted studies cited above (Kotelchuck, 1972, 1975; Ross, Kagan, Zelazo & Kotelchuck, 1975; Spelke, Zelazo, Kagan & Kotelchuck, 1973). Lewis and Ban felt that differences between their findings and the Kotelchuck and Spelke results may have been a function of the stress situation which existed in the Kotelchuck and Spelke experiments, thereby indicating a possibility that infants exhibited different attachment behaviors when under

stress.

In an earlier study, Lewis, Weinraub and Ban (1972) investigated attachment in 20 children, first assessing the behavior at age 1 year and then again at age 2 years. They categorized infant behaviors as proximal or distal and they found that attachment behaviors were a function of sex of child and sex of parent. At age 1 year, there were no significant differences by sex of child, but there were significant parental differences. Almost twice as much proximal behavior was exhibited toward the mother as toward the father. Distal behaviors showed less difference because of sex of parent; girls looked equally at both parents; boys looked significantly more at fathers. By age 2, differential behaviors shown to each parent at age 1 had disappeared and there was a shift from mostly proximal to more distal behaviors overall. The authors interpreted the findings to indicate that the attachment bond to the mother was stronger in the first year and this was due to the greater amount of time and closer physical contact involved in routine child care, which the mother performed. As the child got older, the relationship with the parents changed from mostly caretaking to more play and the authors postulated that fathers were then more willing to participate. By the second year of the infant's life, the infant looked more at the father and sought more proximity to him and the proximity behavior toward the father approached the

level directed toward the mother. What was further interesting was that although infants became more attached to fathers with age, fathers estimated spending little time with their children; the average time spent by members of this sample was 15 to 20 minutes per day in the first year of life. No figures were given for interaction during age 1 to 2 years.

Cohen and Campos (1974) compared mothers, fathers and strangers as elicitors of attachment behavior. Their sample population consisted of 60 infants, ages 10 months, 13 months, and 16 months and they used three infant behaviors to assess attachment: proximity-seeking actions, distress vocalization and stranger eye contact from a secure base. Cohen and Campos found fathers to be superior to strangers in eliciting attachment behaviors but second to mothers. When both parents were present, infants approached the mother twice as often as they approached the father. When parents were tested separately, infants were found to travel to mothers in shorter time and to spend significantly a greater proportion of time near the mother. Further, the amount of eye contact directed toward the stranger was significantly greater when the infants were near their mothers. On only one measure, distress vocalization during separation from parent, did infants exhibit no differentiation of mother and father.

Lamb (1975b, 1976b) observed infants and parents in

their own homes; his subjects were 20 infants, half male and half female. He observed the subjects at age 7 months and then again at age 8 months. Lamb looked for 10 infant behaviors (e.g., smiling, vocalizing, looking at, reaching to) directed toward mother, father or female stranger. His results indicated no difference related to age. In an analysis of variance of attachment and affiliative behaviors, he found a significant preference for father over mother and visitor and a significant preference for mother over visitor. Although neither parent generally played more with the infant, the average response to play with the father was significantly more positive and Lamb attributed that result to the variation in the type of play initiated by each sex parent; fathers tended to initiate more "physical and idiosyncratic games" (1976b, p. 319). An analysis of sex differences revealed that mothers tended to initiate more play with female infants and spent more time on conventional games with girls. Fathers, however, did not discriminate by sex. The data on physical contact also showed variation in mother/father behaviors. Mothers held infants more, but fathers held infants more for play. Boys were held longer by fathers and mothers and boys were held more often for comforting.

Lamb's results were different from those of Kotelchuck and associates (Kotelchuck, 1972, 1975; Ross et al., 1975; Spelke et al., 1973), Ban and Lewis (1974), Lewis,

Weinraub and Ban (1972) and Cohen and Campos (1974). Lamb concluded that infants related differently to mothers and fathers and this difference may have resulted from the different parenting role assumed by the average parent. Mothers held infants more overall but they also performed more physical caretaking. Fathers performed little caretaking but initiated contact more for play and fun activities.

In another study, Lamb (1976a) observed 20 18-month-olds in a laboratory setting. He found that infants showed more affiliative behavior to fathers than mothers but when a stranger entered, infants sought proximity to mothers more often. He hypothesized that the entry of the stranger caused stress and the infant shifted from affiliative to attachment behavior, which was directed more towards the mother than father. Fathers still remained a focus of affiliative behavior and were, perhaps, secondary attachment figures where mothers were primary ones.

The question of the role of stress in eliciting proximity seeking and more mother-directed behavior was also investigated by Lamb (1976d) in a study of 12-month-olds and their parents in a laboratory situation. In free play, infants generally directed more distal-affiliative behavior to fathers but showed no preference in proximity-attachment behaviors. When a stranger entered, however, more social behavior was suddenly shown toward the mother,

in the form of proximity-attachment actions. In a more recent study (1977) Lamb found again among infants 7, 8, 12 and 13 months, no preference for either parent in attachment behaviors in a stress free situation.

Although there was contradiction among the findings of the attachment studies, the contradiction may be resolved by evaluating the presence or absence of stress (Lamb and Lamb, 1976). The infant sought comfort from either parent when alone with that parent and exposed to stress, but chose the mother over the father when both parents were present. In unstressful situations, infants seem to have no preference, except for the Ban and Lewis (1974) study in which infants preferred mothers in low stress situations.

Another reason for the contradictory results may have been the differing measures for assessing attachment. Schaffer and Emerson (1964) and Kotelchuck and associates (Kotelchuck, 1975; Ross et al., 1975; Spelke et al., 1973) used separation anxiety as a measure of attachment whereas Ban and Lewis (1974) and Lewis, Weinraub and Ban (1972) used proximal and distal behaviors initiated by the infant. Cohen and Campos (1974) had three key behaviors and Lamb (1975b, 1976b, 1976d, 1977) evaluated attachment using ten infant actions. It would thus be very difficult to compare attachment findings in the absence of agreement on how to evaluate this phenomenon called attachment. But even with

this lack of agreement, there still emerged strong evidence that the father was an important person in the infant's environment.

Although the above-mentioned attachment studies provided more data on infant development than on father interaction and attitude, some minimal secondary data on father involvement emerged from some of the interviews of parents. What information was available indicated that the fathers interacted little with their infants. Kotelchuck and associates found that among 300 families only 7.6% shared equally in child care and only 25% of the fathers had regular daily care responsibilities. Ban and Lewis (1974) reported father caretaking of only 15 to 20 minutes per day. These findings were in agreement with previously discussed studies of father-infant interaction which indicated minimal involvement.

Even though fathers interacted appreciably little with infants, their influence may have emerged from the quality of interaction rather than from the quantity. Lamb (1975b, 1976b) and Kotelchuck (1975) found that fathers were very likely to spend the time that they were with the infants in play, which is stimulating for the child. Lamb (1975b, 1976b) found that infants responded more positively to father-initiated activities than they responded to mother-initiated ones and he postulated that infants reacted differently because of the novelty and pleasure that

the infants derived from play with their fathers. Fathers played differently also and were more likely to initiate unusual games. Because the quality of interaction which the father carried out was different from that of the mother, the father may have assumed a different, rather than duplicate, parental role from that provided by the mother.

Transition to fatherhood. Because of the paucity of data on father interaction and attitude during the early months of infancy, I turned to another related body of literature dealing with attitudes toward the new paternal role for any additional information on father attitude. The experiences of men before and immediately after childbirth have been very neglected in the literature and what was available tended to emphasize the clinical or crisis attitude toward this transition (Fein, 1976).

LeMasters (1957) conducted an unstructured interview of 46 couples who had had their first child. All couples were urban-suburban, 29 to 30 years of age, college graduates (husbands), middle-class and families in which the wives did not work after the birth of the child. Of his sample, 83% reported extensive or severe crisis in adjustment to the child, even though the child had been wanted and even in the absence of any marital or psychiatric problems. Dyer (1963) replicated the LeMasters study and also

found much difficulty in adaptation to the first child, with 53% of the couples having severe or extensive crisis and 38% experiencing moderate crisis. Dyer explored variables which might have influenced adjustment to parenthood and he found significant relationships between parental adjustment and marital adjustment, courses in marriage preparation, number of years married, educational level, planning of pregnancy and age of the child. Fathers reported several specific problem areas which caused difficulty in adjusting to their new role, including loss of sleep, adjusting to new routines, upset in daily schedule, and financial worry. Hobbs (1965) found that 75% of the fathers he interviewed were bothered by interruptions in daily routines and 60% complained of financial worries. Hobbs, however, reported much less severe crisis attitude, with 86.6% falling into the mild crisis area and none being in the extensive or severe category. In a subsequent study of 28 middle-class couples, Hobbs and Cole (1976) found three couples in the no crisis category, 23 couples in the slight category and two in the moderate category; no couples in the sample were experiencing severe transitional problems. Russell (1974) also found less difficulty in transition than LeMasters (1957) or Dyer (1964) had found. Russell explained the variation in data as possibly resulting from different data collection techniques, with personal interviews perhaps capturing more severe crisis

cases than did mailed questionnaires. Benson (1968) concluded that the key factors in the father's long range accommodation to fatherhood may be his response to daily decision making and domestic responsibilities.

Cronewett and Newmark (1974) questioned 152 fathers on their response to childbirth itself. They found no measurable difference between fathers who witnessed the delivery and those who did not on questions about the infants. However, fathers who attended childbirth classes and/or attended the birth answered 11 out of 19 statements significantly more positively and they rated the experience during the birth significantly higher.

Fein (1976) conducted an exploratory study of fathers' perinatal experiences. He interviewed 30 middle-class couples from the Boston area, all of whom had attended childbirth preparation classes. The interviews were conducted approximately 4 weeks before and 6 weeks after the birth and although no statistics were provided, significance was interpreted by the author. Fathers decreased significantly in levels of wishes for emotional support, general anxiety and infant-related anxiety from before to after the birth. Overall general anxiety decreased after the birth even more markedly and Fein postulated that the crisis for fathers came before and immediately after birth. Although there was a decrease in general anxiety regardless of involvement in infant care,

men who participated more in child care decreased significantly more in infant-related anxiety. Fein interpreted his results as indicating that effective adjustment to fatherhood demanded assumption of a coherent role which satisfied the needs of both husband and wife. This role could have been either traditional father, who assumed little or no child care but who was fully responsible for financial support, or non-traditional father, who shared heavily in infant care. Among his sample, those who adjusted well fell almost half and half into one of those role models; difficulty came for those fathers who were unsure of which model to follow.

Gubman and Feldman (Note 1) studied the prenatal expectations of husbands and wives towards husbands' future participation in child care. Forty-four primiparous couples, mostly well-educated, were given questionnaires during a childbirth preparation class. Husbands were questioned about female sex-role attitudes and later categorized as traditional or equalitarian. Husbands were also questioned about anticipated participation and how much their wives would like them to do. Wives were asked about their desired levels of husband participation and both spouses were asked to identify reasons for husband's participation or lack of it. Results indicated that the husband's attitude toward sex-roles related to his expectations for future involvement and to his wife's expectations.

Both traditional and non-traditional husbands wanted to participate in child care and both groups advocated equality of responsibility for child care. However, traditional husbands thought that their wives wanted more help even though the opposite was true. Gubman and Feldman felt that because wives of traditional husbands did not want and did not encourage participation, husbands would be less involved in child care. Such wives were unaware of their husbands' preference for participation, which was not true for egalitarian wives, who were aware of their husbands' preference. This information would agree with Fein's (1976) findings that the wife's expectations for husband participation predicted such participation better than did the husband's own expectations.

Wente and Crockenberg (1976) chose to investigate the extent to which first time fathers' adjustment was linked to perceived changes in relationships to wives and how much childbirth training affected the adjustment. Forty-six white men from Northern California answered a questionnaire and participate in an interview. The authors found that variables involving husband and wife relationship directly correlated highly and significantly with total adjustment difficulty. Three other items which also correlated highly were being tied down, lack of knowledge of parenting and missing sleep. Other items, such as financial expenses, more housework and baby's crying,

correlated significantly but less highly. There was no significant difference in adjustment between Lamaze-trained and untrained fathers; many fathers revealed a feeling of being unprepared for the needs and demands of an infant after the birth.

The studies on transition to fatherhood, although difficult to interpret because of methodological inconsistencies and conflicting results, may indicate a starting point in the father-infant relationship. One would assume that the mother's feelings about the infant emerge from prenatal and perinatal experiences. For the father, it is more difficult to pinpoint a time of emergence of a feeling of bonding and no literature appears to exist which documents the signs of a developing father-infant bond (Cronewett & Newmark, 1974). One can only speculate on the influence of this early transitional difficulty on attitudes and interaction toward the infant.

Early social environment. The importance of the early social environment of the infant has been recognized by many researchers in child development. Certainly the work of those studying the effects of institutionalization and maternal deprivation (Bowlby, 1951, 1958, 1960, 1961, 1969, 1973; Goldfarb, 1945; Provence & Lipton, 1962; Rutter, 1972; Yarrow, 1961, 1964) have shown a serious negative effect from inappropriate early caregiving. However, it is not

clear that a child under the age of 6 months has yet developed an attachment to a caregiver (Bell, 1970; Bowlby, 1969; Lamb & Lamb, 1976; Schaffer, 1971; Schaffer & Emerson, 1964; Yarrow, 1972) primarily because of a lack of necessary cognitive skills. Therefore, the question of whether only one primary caregiver is necessary at this age is unclear. The work of Brossard and Décarie (1972) and Rheingold (1960) showed that although infants of ages 2 to 4 months were in institutional settings, without a primary caregiver, adequate development could be maintained with appropriate stimulation.

Although a focused attachment between infant and caregiver may not have yet developed, the relationship of the parent and infant is important because of the pattern being established for future interaction. As Yarrow (1967) pointed out, a focused relationship develops gradually and presumably on a foundation of an already existing parent-child relationship. Studies with respect to mothers indicate that the sooner there is contact between the mother and infant after birth, the better the pattern of interaction that develops because early contact meets certain emotional needs of the mother. Klaus, Kennell, Plumb and Zuehlke (1970) found that mothers of full-term infants had an orderly and predictable pattern of behavior with their newborns and eye-to-eye contact with the infant was useful for development of an affectional bond. They felt that the

early days, immediately after birth, may have been the most sensitive for development of ties with the infants. Klaus, Jerauld, Kreger, McAlpine, Steffa and Kennell (1972) also found that mothers who had had extended contact with their infants in the first days showed behavior indicative of greater attachment and soothability and such mothers exhibited significantly more eye contact and fondling than mothers who had missed this extended contact. Seashore, Leifer, Barnett and Leiderman (1973) found that the denial of early mother-infant contact had a negative effect on maternal self-confidence and that primiparous mothers and those with already existing poor self-confidence were most vulnerable. Sugarman (1977), after reviewing many research studies, felt that early mother-infant interaction could improve maternal attachment.

Although no evidence exists that fathers also benefit from early contact in the development of attachment to their infants, the work of Greenberg and Morris (1974), Parke and O'Leary (1976) and Manion (1977), previously discussed, would indicate a possible need for early and frequent contact with the newborn for a paternal attachment. Lewis and Weinraub (1976) also felt that fathers who failed to have contact with their infants during the neonatal time had difficulty showing affection later because they may have missed a critical period in the development of a close bond with their infants. One may, however, postulate that

fathers who failed to have close physical contact with their newborns chose not to do so because of their own personality dictates. A different explanation could also be that the mother and infant establish an exclusive relationship which acts as an impediment to the father's involvement.

Methodological Issues in Studying Parent-Child Interaction and Involvement

Although the focus of this study was on how the typical father interacts with his infant, one could not review only the techniques used in studying father-infant interaction because of the scarcity of research in this area. Instead, one could turn to the rich literature on mother-child involvement for a review of the methodologies used in investigating interaction between a parent and infant. Most research in the mother-child area has been undertaken on the premise that a relationship exists between parent variables and the child's subsequent behavior (Medinnus, 1967), although more recent research has recognized the mutuality of the mother-child relationship and the two-way influence involved.

In analyzing the mother-child relationship, five major areas of interest have been studied: varying child-rearing practices, differences among infants, the influence of infants on caregivers, analysis of frequency and sequence

of behaviors in dyadic situations and what each parent does with the infant.

Childrearing practices. The first area of interest involves what childrearing practices the mother has used and possible changes in child behavior and personality resulting from varying practices. Childrearing has been a very broad category of study and has included all interactions between parent and child (Sears, Maccoby, & Levin, 1957), although in the course of study, specific techniques and attitudes were often singled out. For example, Sears, Maccoby and Levin (1957), in an investigation of over 300 mothers of 5-year-old children, focused on five major dimensions of maternal behavior. They used a retrospective, open-ended interview, a method which seems to have some validity problems (Yarrow, Campbell, & Burton, 1968). Their general conclusions were that childrearing practices were important factors in shaping a child's personality by age 5, and that child care techniques and maternal attitude were associated with development of varying personality dimensions in young children.

Yarrow, Campbell and Burton (1968) sought to review the effect of maternal rearing antecedents on the consequent behavior of young children. They reviewed studies in the field and replicated the Sears, Maccoby and Levin study because the latter had "served as a prototype

for numerous investigations" (Yarrow, Campbell, & Burton, 1968, p. 13). Yarrow, Campbell and Burton questioned conclusions made by other investigators about childrearing practices because of serious methodological weaknesses they had found in many studies and because of the "inconclusiveness" and "instability of association" between mother behavior and child behavior. They felt that what had often been treated as conclusions from various studies were in fact really hypotheses that still needed verification.

Among the many variables that have been thought to influence maternal childrearing practices, one which was frequently studied was the social class of the mother. Studies which sought to investigate this variable generally contrasted middle and lower socioeconomic class parent practices, attitudes and values and then looked at differences among children reared in these two types of environments (Caldwell & Richmond, 1967). Tulkin and Kagan (1972), for example, compared mother-infant interaction among middle-class ($N = 30$) and working-class ($N = 26$) Caucasian mothers and their 10-month-old daughters. Differences between the two groups were minimal in physical contact and nonverbal behaviors but substantial in areas of verbal interaction. Among their sample, middle-class mothers demonstrated all verbal behaviors more frequently than did working-class mothers. Tulkin and Cohler (1973), using the same sample as above, related mother attitude toward child-

rearing and practice as observed in the home among middle and working-class mothers. Working-class mothers exhibited few behaviors with significant correlations between their attitude and their behavior, although their middle-class counterparts had several significant correlations, primarily between feelings that reflected encouragement of reciprocity and specific maternal behaviors. Tulkin and Cohler attributed this class difference to possible feelings among working-class mothers that they could not influence a child's development as much as middle-class mothers thought they could. Tulkin and Kagan had suggested that their class findings may have resulted from feelings by working-class mothers that infants were incapable of communication and it was therefore unnecessary for mothers to interact verbally. Mills (1974) had found that mothers' attitudinal scores had some relationship to maternal behavior, particularly in vocalization and mothers with higher scores on the HOME (Caldwell, 1968) were more likely to vocalize during observation. Mills also found that mothers who talked more were less punitive, provided more appropriate toys and were more involved with their infants' development. Zegiob and Forehand (1975) looked at maternal interaction as a function of race, sex of child and socioeconomic status for mothers of children age 4 years 3 months to 6 years 6 months ($N = 40$). Of the three variables, socioeconomic status was the most significant in

determining maternal behavior.

In contrast to the above differences found among middle-class and working-class mothers and their interaction with their infants, Schlieper (1975) found few differences in maternal behavior when she performed a time sample observation of mothers ($N = 23$) with children ages 2 years 10 months to 4 years 2 months. Significant differences were found primarily in areas dealing with control of the child, with low socioeconomic mothers directing and restricting their children more often than did middle-class mothers.

Differences among infants and influence of infant on caregiver. Two other major areas of interest in studying mother-child interaction have been differences among infants and the influence of such differences on parental behavior. Although many researchers, as previously noted, had studied the parent's contribution to an interactional system, there has been a shift toward looking at the interactional system itself and thus the influence of the infant has become of greater interest (Osofsky, 1976). Theoretical and empirical studies of infants have included research on individual differences (e.g., Escalona, 1968), including differences in physical dimensions, even from birth (Tanner, 1974), and in temperament and adaptation (Carey, 1970; Korner, 1971; Osofsky, 1976; Moss, 1967;

Thomas, Chess, Birch, Hertzog, & Korn, 1964). The focus of these studies has been on investigating the effect of temperament and related infant qualities of state on the infant's other behavior and on interaction between caregiver and infant (Osofsky, 1976). These studies indicate the existence of infant behavioral differences even from birth (Korner, 1971, 1974; Osofsky, 1976; Richards & Bernal, 1972) and that these temperamental differences may possibly be influenced, at least partly, by perinatal events, such as length of labor and maternal medication (Osofsky, 1976; Parke, O'Leary & West, 1972; Richards & Bernal, 1972). The style of mother-infant interaction is based on a reciprocal relationship (Bell, 1974) in which varying infant characteristics, including sex (Moss, 1967), parity (Parke & O'Leary, 1976), arousal level (Korner, 1971, 1974; Moss, 1967; Osofsky, 1976) and shifts in state (Korner, 1971, 1974; Moss, 1967), may have influenced and been influenced by varying maternal styles.

Analysis of frequency and sequence of behavior. In studying the interactional pattern of the mother-infant dyad, a fourth criterion of interest has emerged: analysis of the frequency and sequence of behaviors in the interaction. This analysis has developed out of the category above but looks more specifically at the context of the interactional pattern. Lewis and Lee-Painter (1974) found three general

models for describing this dyadic interplay: element model, interactionalist approach and flow model. Those who have studied the element model have looked at the infant element and caregiver element and asked what each does. Schlieper (1975), for example, used a time-sample observation and recorded the frequency of 12 maternal behaviors for every 5 seconds of 30 minutes observation time. Tulkin and Kagan (1972) and Tulkin and Cohler (1973) noted the presence of specific predetermined maternal and infant behaviors every 5 seconds of observation time. Richards and Bernal (1972) recorded 12 mother variables and 16 infant behaviors. They did not simply look at the behaviors of each party in isolation, but instead took into account the interaction itself. They had three types of behavior categories which assessed the frequency and sequence of behaviors in the encounter: descriptive (e.g., mother talks to infant), locational (e.g., infant position relative to mother), and outcome (e.g., mother stimulates sucking). Such a focus on the interaction has represented Lewis and Lee-Painter's interactionalist approach. The interactionalist approach was also seen in the studies of mother-infant and father-infant interaction previously discussed (e.g., Kotelchuck, 1975, 1976; Lamb, 1975b, 1976b, 1977; Lamb & Lamb, 1976; Parke & O'Leary, 1976; Parke, O'Leary, & West, 1972; Parke & Sawin, 1976; Pedersen, 1975; Rebelsky & Hanks, 1971; Rendina & Dickersheid, 1976; Ross, Kagan, Zelazo & Kotel-

chuck, 1975; Spelke, Zelazo, Kagan & Kotelchuck, 1973), as well as in Stern (1974), who described mother and infant interaction in a play situation, focusing on facial, vocal and looking behaviors.

Brazelton, Koslowski and Main (1974) studied in depth the interaction of five mother-infant pairs, using primarily the looking mode. Their findings indicated a typical sequence of interaction consisted of seven stages, beginning with an initiation, occasioned by the infant's looking at the mother, through stages of increasing involvement and arousal to deceleration and finally withdrawal. In this research the infant's behavior was the focus of study, and thus represented an example of Lewis and Lee-Painter's (1974) third model of study, the flow model. The flow model traced interaction from one step to the next, using as its focal point infant behavior which was in response to or initiated maternal behavior. Lewis and Lee-Painter studied 55 infants and caregivers, recording infant and mother behaviors every 10 seconds. Their research provided data on frequency of behaviors and also included simultaneous action, directional interactive analysis and sequential analysis. Their data also indicated the relationship of each infant behavior as a response or initiator of each maternal behavior.

What each parent does with the infant. Up to this point,

the analyses of areas usually assessed in parent-child interaction have focused on the literature of mother-child interaction. The fifth area of study, however, involved what each parent did with the infant. This criterion departed slightly from those discussed above because it entailed examination of not only the mother-infant research, but also the available literature on father-infant involvement and studies of triadic interaction. Mothers and fathers, it was previously seen, have an influence on each other. One saw that each parent's behavior, in a parent-infant encounter, could have been affected by the presence of the other parent (Ban & Lewis, 1974; Kotelchuck, 1975; Parke & O'Leary, 1976; Pedersen, 1975). Mother and father interaction in the early neonatal time was studied by Manion (1977), Parke and O'Leary (1976), Parke, O'Leary and West (1972) and Parke and Sawin (1976). The Parke studies involved observation of the family triad and Manion used questionnaires. All four studies indicated that fathers and mothers were both very active and involved with their neonates, even across class lines. Studies of mother and father involvement during the first year of the infant's life entailed primarily observation and questioning of parents (e.g., Kotelchuck, 1975, 1976; Lamb, 1976b; Lamb & Lamb, 1976; Pedersen, 1976). These studies noted the relative responsibilities for each parent and patterns of interaction of mothers and fathers. Results indicated that

mothers were almost exclusively responsible for child care and that fathers interacted appreciably little with their infants. The studies also indicated varying patterns of involvement of fathers and mothers, with fathers spending a much larger proportion of their interaction time in play and being initiators of different types of play activities from those initiated by mothers. Newsom and Newsom (1963) and Sears, Maccoby and Levin (1957) used interviews of large samples of mothers to assess relative involvement of each parent.

Techniques for recording behaviors. Among all of the studies cited, a series of techniques has been developed for recording the behavior being studied. One such technique involved observation with precoded scales. Cohen and Beckwith (1977) observed 54 preterm infants and caregivers in a home situation, sampling the infant and caregiver behaviors every 15 seconds using a checklist. Tulkin and Kagan (1972) and Tulkin and Cohler (1973) also observed in the home using precoded behavior checklists every 5 seconds. Caldwell (cited in Lytton, 1973) developed an alphanumeric code for observing preschool interaction and this code was adapted by Lytton (1973) for assessing parent-child interaction. Lytton's code, called PACIC (Parent-Child Interaction Code) represented the behavior sequence in six letters and numbers. Bakeman and Brown (1977) used 100

hierarchically structured codes in analyzing what they called a behavior dialogue between infant and mother. In some instances, running records were kept by observers and coding was performed afterwards, as Lamb (1976b) did.

While using precoded scales, it was quite common for researchers also to use a time sampling approach to recording behavior, thereby noting interactions at pre-determined time intervals. The relationship between time sampling and precoded scales is obvious because time sampling requires the use of precoded scales. For example, Tulkin and Kagan (1972) used 5 second intervals with their scales. Schlieper (1975), Moss (1967), Parke and O'Leary (1976) and Lewis and Lee-Painter (1974), among others, have also used time samples of varying interval sizes.

Brazleton, Koslowski and Main (1974) added the technique of mechanical recording of interaction, making a frame by frame analysis of one minute of action on videotape. Sander, Stechler, Burns and Julia (1970) used a device called an Esterline Angus Event Recorder and Stern (1974) used a television camera. Records of interaction were also kept in diary form, usually by the mother, as in the Richards and Bernal (1972) and Lytton (1973) studies and by fathers in the Taconis (cited in Taconis, 1969) study.

In addition to the above methods for recording behaviors, primarily in an observation situation, data have

also been collected through interviewing and questionnaires. Both interviews and questionnaires require that the participants provide the raw data. Sears, Maccoby and Levin's (1957) study was a model for many of the later studies (Yarrow, Campbell & Burton, 1968) and utilized an in-depth semi-structured interview of mothers. Newsom and Newsom (1963) also interviewed a large sample of mothers ($N = 700$) using a preset questionnaire. Schaffer and Emerson (1964) combined interview of mothers with observation of child behavior, and Pedersen (1975) similarly interviewed fathers and observed triadic interaction. Other data on father attitude and participation previously described, was obtained through interview of fathers by Cronewett and Newmark (1974), Fein (1976), Tasch (1952) and Taconis (cited in Taconis, 1969). Wente and Crockenberg (1976) interviewed fathers and gave them questionnaires dealing with adjustment to fatherhood, while Manion (1977), Greenberg and Morris (1974) and Knox and Gilman (1974) used questionnaires only. Manion (1977) gave primiparous fathers two questionnaires, one soon after the birth and the second 6 weeks later.

Both interviews and questionnaires represent data collection using a self-report scheme, thereby raising the question of the validity of the techniques. Yarrow (1963) cautioned that mother interviews, for example, are "self descriptions by extremely ego-involved individuals" (p. 217)

and therefore some precautions must be taken in using that technique. Among the problems encountered in self-report was an apparent lack of agreement between interview and observed behavior, thus raising the question of the self reporter's veracity, found by Yarrow, Campbell and Burton (1968). Smith (1958), however, found consistency between the two data sources when dealing with mothers' reports of their own behavior. Douglas, Lawson, Cooper and Cooper (1968) found a high agreement ($\underline{r} = .90$) between mother self-reports and observed behavior in areas of play and basic care of children. Hoffman (1967) cautioned about three possible sources of error: forgetting due to passage of time, deliberate withholding or falsification of information and unconsciously motivated omissions and distortions.

Hoffman (1967) recommended ways in which the problems of self-report could be overcome, as have other researchers, including selecting the day before as the one to describe and dealing with details to reduce distortions and omissions. Rutter and Brown (1966) found that a high level of agreement could be reached when husbands and wives were questioned if one focused on recent events and kept questions dealing with emotional issues separate. Douglas, Lawson, Cooper and Cooper (1968) increased the reliability of their data by confining questions to actions and events during the preceding 24 hours. Lytton (1971) also felt that data collection from parents reporting on their own

behavior could be an important source of information, particularly in activities that were inaccessible to observation and for information about "internal cues" (p. 677) and therefore self-report should not be abandoned as a data source.

Family Division of Labor

The area of study referred to as family division of labor encompasses research on how family members share the necessary household tasks so as to allow the family to continue functioning as a unit. Two major methodologies have been used for studying this division of labor: time use and relative task participation.

Time use assessment of family division of labor has generally meant two approaches to research, respondents' summary estimates and the "time diary" approach. In the former technique, a respondent estimates how much he or she participates in family tasks or groups of tasks. The "time diary" method asks subjects to reconstruct a diary of how they spent a particular day, usually the previous day, indicating primary activity, secondary activity and who else was present. Most of the literature dealing with time use has used the "time diary" approach but more recent research has used the simpler respondent estimate forms (e.g., Pleck, 1977; Seashore, Quinn, Staines, & Pleck, Note 3), as does the present study.

The time budget studies have provided an opportunity to "document clearly how a parent's use of time is affected by the arrival and presence of children" (Robinson, 1977, p. 69). Robinson has developed three estimates of child care involvement from the time budget studies, with each estimate defining the intensity of direct care of the child. The first estimate, "primary child care," includes those times when respondents reported involvement with the child as the major activity, and averaged about 4 hours per week for all respondents in Robinson's research, with men averaging 1.4 hours per week. Even within this category of child care, there was great variation in the amount of time devoted to specific child care activities by men, with basic care being only a small portion of child care and more social activities, particularly indoor play, being considerably more common. "Secondary child care" consisted of time spent in primary care plus time in which interactions with children was noted by respondents as secondary activities. Secondary care averaged 6.3 hours per week for all respondents. Finally, Robinson developed a "total child contact" estimate, including primary and secondary care plus time when the child was reported as being present with the parent but was not the focus of the parent's activity. Parents with children under 18 years of age averaged 30 hours of contact time per week, with mothers having considerably more contact time than fathers

(36.4 versus 21.0 hours).

The age and number of children can greatly affect the amount of child care given by a parent. Robinson (1977), for example, found that for women, age and number of children had an effect on the amount of care given, with age of children being more influential. Younger children required considerably more care but each additional child also increased the amount of child care somewhat. For men, the pattern was different. The greatest amount of child care performed by men usually took place when there was only one child under age 4, and declined as the number of children under age 4 increased. Men provided even less care when children were over age 4 years, regardless of number.

In another major study employing time diaries, Walker and Woods (1976) assessed physical and nonphysical care tasks as they related to age and number of children. Physical care, which included activities such as dressing, feeding and bathing, accounted for about 47% of all reported family care time. Nonphysical care, which included social and educational types of activities, accounted for 53% of reported time. There was great variation in the amount of time spent on each category of activity, depending upon age and number of children. Total time spent on any kind of care by any family member was greatest with a child under age 1 year and declined as the age of the

youngest child increased. Younger children required more physical care, with an average of 3 hours per day for a child under age 1 year. As the age of the youngest child increased, the amount of time devoted to physical care decreased. More time was spent on nonphysical care when the child was over 2 years of age but decreased again as children became older. In terms of the population most relevant to the present study, that is the family with one child under age 1 year, Walker and Woods found an average of 2.7 hours per day was used for physical care and 1.6 hours for nonphysical care by all family members. The mothers spent an average of 2.3 hours of physical care versus .8 hours of nonphysical care. Fathers contributed .3 hours of physical care and .4 hours of nonphysical care, thereby showing the opposite trend from that of their wives (Table 5.6). Overall, the tendency for the wives' use of time on all family care relating to age and number of children followed a pattern; there was an increase in time devoted to all care as family size increased and as age of the youngest child was lower. Husbands' time in family care also increased as the age of the child was lower but there was no consistent tendency for increase with additional family members. The findings for the fathers would tend to disagree with some of Robinson's (1977) findings. Woods and Walker did find more time being devoted by the father when there were one or two children under age 1 year

(.7 and .6 hours respectively) then declining with more children but again increasing with four or more children, the youngest under age 1 year (1.0 hours).

The second methodology for studying family use of time, noted above, is relative task participation. Relative task participation refers to the proportion of selected household tasks performed by each spouse (Silverman & Hill, 1967). The format asks respondents to indicate how the task is divided between the husband and wife (e.g., husband always, husband and wife exactly the same, wife more than husband). The data yield a relative division of labor which can be used to compare family members' participation in family work (Pleck, Note 2). The Blood and Wolfe study (1960), the paradigm for this method, and its replications (e.g., Lamouse, 1969; Michel, 1971; Silverman & Hill, 1967) have focused on only household tasks that do not involve child care. The present study will include child care items at T_2 and T_3 , using the relative task participation format.

Attitudes of men and women toward men's participation.

Pleck (Note 2) has reviewed several recent large scale studies of attitudes toward men's participation in family tasks. Yankelovich (cited in Pleck, Note 2), for example, surveyed 1006 college students and 2516 non-college youths. The general finding was that men are still valued in

traditional roles as breadwinners, with little value attached by either group to participation in household chores.

Harris (cited in Pleck, Note 2) questioned a national sample of men and women about their satisfaction with men's levels of participation. Only 20% to 40% of either sex thought that men should do more. In the area of child care, 33% of the women thought that men should do more, but 56% thought that men should continue doing about the same and 11% thought that they should do less. Among the men, 34% thought that men should do more child care, 49% thought that they should do the same and 17% that they should do less than they are now doing.

Gecas and Slocum and Nye (cited in Pleck, Note 2) collected data from 210 couples concerning husbands' and wives' views of who should do child care and housekeeping. Very few respondents felt that husbands should do child care entirely or more than the wife. A higher percentage of the husbands than wives believed that fathers should share certain child care tasks equally with mothers. Nye and Slocum (cited in Pleck, Note 2) found a very small percentage of families in which fathers share equally or do more housework than mothers do. In analyzing responses to questions about housekeeping and child care, the researchers found that more fathers than mothers felt that fathers should do more in the home. Some husbands (12% to

17%) felt that fathers should do more child care; mothers generally did not think that fathers should do more child care.

Robinson (1977) asked women, "Do you wish your husbands would give you more help with household chores?" Of the total sample of women, 19% in 1965-1966 and 23% in 1973 said yes, with slightly more college educated women and considerably more black women saying yes.

In a 1976 Gallup poll (cited in Pleck, Note 2) about half of the men thought that husbands should do an equal amount of housework and child care if women worked but almost half also said, under those circumstances, men should do none, very little or help only part of the time.

Pleck has summarized these findings on the attitudes of men and women toward men's participation into three major findings. First, only a minority of the population thinks that men should do more housework and child care. This finding is naturally most relevant in terms of the generally low participatory rates among men. Second, attitudes toward men's family work are changing very slowly. And finally, few differences in attitudes were found among men and women and generally one found men having a more positive attitude toward male participation than did women.

Summary

One major objective of this chapter was to review the relevant literature on father-infant involvement and attitude. Both empirical and theoretical research in this area have been sparse and it is thus very difficult to make many generalizations from what resource is available. There are, however, several features which are most salient to the present study.

The father is probably a very potent figure in the infant's life. The literature on father absence provides a strong argument for that point of view. However, researchers have noted that father presence does not guarantee either adequate interaction (Biller; 1974; Lamb, 1976c; Lynn, 1974) or a consistent fathering style. Indeed, a review of the literature discussed earlier in the chapter indicates that fathers interact differently in the neonatal period from the way that they interact in later infancy. The neonatal research indicated a high level of interest and active involvement by fathers (Greenberg & Morris, 1974; Manion, 1977; Parke & O'Leary, 1976; Parke, O'Leary & West, 1972; Parke & Sawin, 1976). Some infant variables, such as activity level, sex and parity of the infant were found to affect the father's level of interaction, but fathers were generally very involved with their newborns and showed positive feelings toward their child. This interest and

involvement emerged despite feelings of being inadequately prepared for their new role (Wente & Crockenberg, 1976) and despite the apprehension that accompanies the arrival of the first child (Fein, 1976).

The studies on father-infant interaction after the neonatal period seem to indicate a shift in paternal involvement. After the first month, there was generally minimal involvement by fathers in terms of the available time of the average father (Ban & Lewis, 1974; Kotelchuck, 1975; Pedersen & Robson, 1969; Rebelsky & Hanks, 1971). Fathers tended to have little or no routine care responsibility for the child and performed few direct care tasks, a notion which is further substantiated by the findings of the family division of labor studies. Even with this limited interaction, some variables influenced the amount of direct involvement by the father, including sex of the infant (Manion, 1977; Pedersen, 1975; Pedersen & Robson, 1969; Rebelsky & Hanks, 1971; Rendina & Dickersheid, 1976), age of the infant (Rebelsky & Hanks, 1971), infant temperament (Pedersen, 1975) and a combination of variables, such as sex and temperament (Rendina & Dickersheid, 1976) and age and number of children (Robinson, 1977; Walker and Woods, 1976). The mother may also have determined the father's involvement with the infant (Pedersen, 1975) either by directly shaping the role assumed by the father or, more usually, by indirectly approving or disapproving of the

father's role style (Wente & Crockenberg, 1976; Gubman & Feldman, Note 1). The literature on transition to fatherhood indicates that for some fathers being a parent may be a difficult new role to assume and that the resolution of role conflict (Fein, 1976) may affect his attitude toward himself, his wife and his child. None of the studies, however, explored the paternal role from neonatal to post-neonatal period to assess the apparent shift in levels of interaction or to evaluate what may have influenced the shift. The studies also did not explore the effect of other personal variables of the fathers, such as own parity, previous experience with children or paternal age.

Even with the influence of the parent on the developing relationship with the child, the child under 6 months of age lacks the cognitive foundation for forming a true attachment to a parent. The relationship of the parent and child before that time may be significant principally because of the pattern of interaction being established. There is evidence that mothers bond more strongly to infants when close physical contact takes place immediately after birth. Although no evidence concerning fathers has been found in this area, it is possible that such contact between father and child is also important to the father's attachment to the infant.

In reviewing the methodologies utilized in studying the parent-child social system, five areas of investigation

were explored. The techniques for recording behaviors being studied have generally evolved from observational explorations, although interviewing and questionnaires have also been used as data sources. Some questions have been raised about data collection from self-report schemes, such as interviews and questionnaires, particularly in terms of reliability of the reporters. Although self-report has been shown to have some problems attached to it, with the modifications described above, including focusing on very recent behavior, asking about details and keeping activity questions and feelings questions separate, the reliability can be kept high.

C H A P T E R I I I

METHODOLOGY

The present study was a multi-staged survey of approximately 170 couples having their first infant. In the sections that follow, various aspects of the methodology of the study are discussed. First, the design of the study is explained followed by a description of the subjects. A description of the instrumentation follows. Finally, an accounting of data procedures is given, including information of subject attrition.

Design

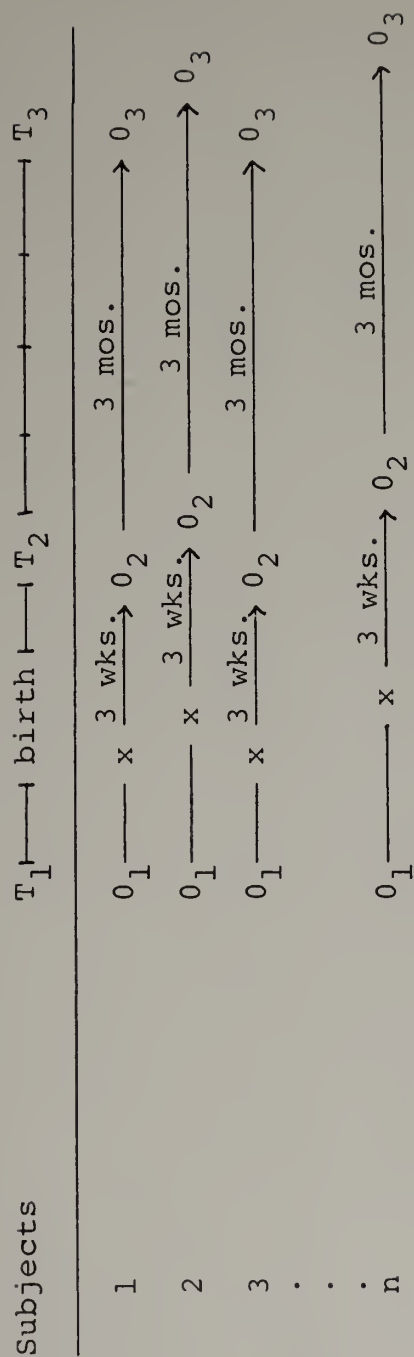
The design of the present study was a pretest-posttest two group design. Participants in the two groups differed only in that Group A received a complete prenatal questionnaire approximately 6 weeks before the birth of their babies. Group B completed the first sheet of the questionnaire which asked only for personalogical and demographic data. This scheme involving a variation in the T_1 instrumentation was employed in order to permit examination of any sensitizing effects of the T_1 instrumentation on the subsequent behavior exhibited by parents toward their infants. Both groups were surveyed two times after

the child's birth, at approximately ages 3 weeks (T_2) and 3 months (T_3) of the infant, with no differentiation in the instrumentation for the two groups.

The time of T_1 was at the initial contact with subjects at childbirth education classes. The exact date of the contact was established by the instructors of each class and took place approximately 1 month to 6 weeks before the projected date of birth, that is, toward the end of the childbirth education course. At T_1 , members of Group A received either the father prenatal questionnaire or the mother prenatal questionnaire (see Appendix C) and members of Group B received the first sheet only. The T_2 and T_3 data collection dates were individually chosen according to the infant's birth date. Figure 1 depicts the timing used in the study.

The choice of ages 3 weeks and 3 months for the T_2 and T_3 data collection was based on child development research and on family considerations. A neonatal date was chosen because of the indications in the literature of the importance of this stage for father-infant involvement. Age 3 weeks is within the neonatal stage and yet comes at a time when families have had an opportunity to recover from the experiences of labor and delivery. By age 3 weeks, parents have been able to establish a household routine that responds to the infants' needs. At this age, new parents would also be more cognizant of their infant's

Group 1



Group 2

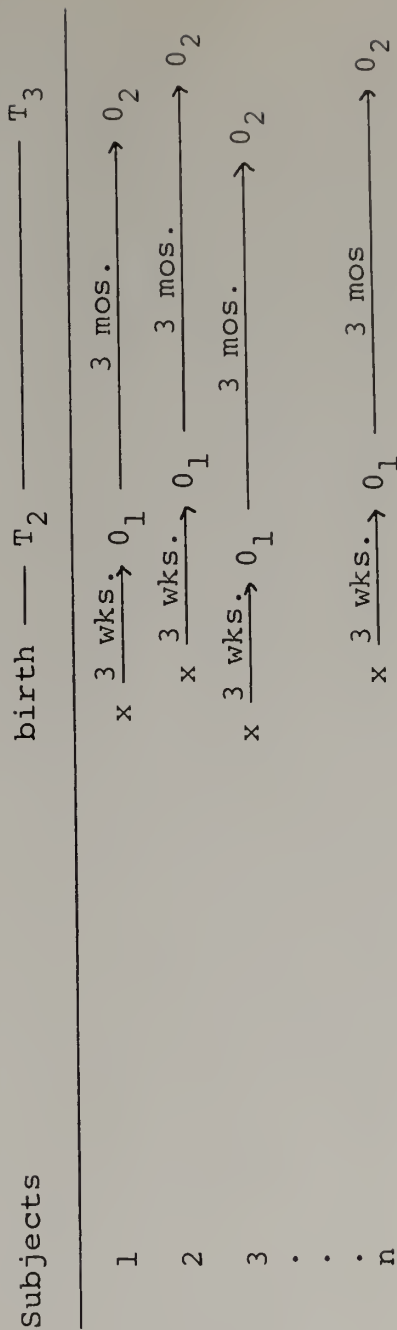


Figure 1. Schema of the scheduled test times for each group.

behaviors, personality and needs than they would have been earlier in the neonatal period. Age 3 months was chosen because a time early in infancy was needed for the comparison of infant and parental behavior and age 3 months is considered a significant post-neonatal time. At approximately age 3 months, a transition in infant development generally occurs, with infants becoming more alert and responsive to their environment and beginning to exhibit different reactions to familiar and unfamiliar persons (Caplan, 1973; Stone & Church, 1973). Physical body rhythms also become more stabilized at this time with respect to sleeping and eating patterns (Stone & Church, 1973).

The study began with approximately 170 couples in anticipation of concluding the T_3 data collection with about 100 couples who had completed all questionnaires. In fact, 120 couples responded to all questionnaires. Because of the time lapse between T_1 and T_3 of about 4 1/2 months, it was expected that some subjects would be lost because of general attrition, family difficulties or failure to return either the T_2 or T_3 questionnaires. The target number of 100 couples was sought because of its adequacy for statistical conclusions while still being manageable for one researcher.

Subjects

The sample of subjects in the present study consisted of 169 couples having their first child between May and August of 1978. All subjects had to meet three criteria in order to participate: be expectant parents of a primiparous infant, be attending particular childbirth preparation classes and intending to share a household with the infant. Subjects were drawn from the Springfield, Massachusetts metropolitan area and included residents of urban, suburban and rural areas. All subjects were participants in childbirth preparation courses given by two childbirth education programs. One program was sponsored by a local hospital and the other was offered by a local chapter of a national childbirth education league. The content and format of both courses offered by the two organizations were similar, focusing on the events of pregnancy, labor and delivery. In both courses, participants began instruction approximately two months before the due date of the birth and they met in classes of eight to twelve couples for six or seven sessions. Because of the similarity of the courses and the non-distinguishing features of the couples attending one or the other course, participants in both courses were combined for purposes of assigning classes to one of the two subject groups.

Subjects were assigned to either Group A or Group

B depending upon their class membership. For both sponsoring agencies, assignment of couples to a particular class or instructor was performed non-systematically by a person unfamiliar with the future participants, except for the due date of the birth. Whole classes were randomly designated as continuing either Group A or Group B members.

The two subject groups consisted of Group A, whose individual participants received the complete prenatal questionnaires during one of the childbirth classes ($N = 82$) and Group B ($N = 87$) whose members received a partial questionnaire. This partial questionnaire requested data on demographic and personalogical features, including age, occupation, education, number and ages of siblings, marriage history, planning of pregnancy, experience with children, courses in child development and reading related to the forthcoming birth. At the time of the T_1 instrumentation, all subjects were given an informed consent form (see Appendix C).

As previously mentioned, several pieces of personalogical data were collected on all subjects in both Group A and Group B. Among the data collected was information on subject age. Age is reported as the subjects so stated, with any fraction being eliminated and the age being recorded to the nearest whole year (e.g., 21 1/2 became 21). The age range for mothers in Group A was 17 to 40 years, with the modal age being 25 years and a mean age of 24.4

years. For Group B mothers, the age range was 17 to 35 years, with a modal age of 26 years and a mean age of 24.5 years. The age range for fathers in Group A was 20 to 35 years, with the modal age of 25 years and a mean of 26.0 years, and for Group B, a 19 to 38 year age range, with the modal age being 27.0 years and a mean of 26.6 years. The ages of both mothers and fathers in the two groups are similar, with a mean age difference of only 0.1 year for mothers and 0.6 years for fathers.

The occupation of each subject was classified into 16 categories using the Classified Index of Industries and Occupations of the 1970 Census of the Population conducted by the U.S. Department of Commerce, Bureau of the Census (see Appendix D). Three additional categories (military, students, and housewife/househusband, unemployed) were added to those of the Index to include all possible responses of this sample. Reference to Table 2 indicates that for Group A, the modal occupational category of fathers was category 1, professional, technical and kindred workers ($\underline{N} = 18, 22\%$), with almost as many fathers being in category 5, craftspersons and kindred workers ($\underline{N} = 17, 20.7\%$). For Group A fathers, over half (53%) fell into one of three occupational groups (professional/technical, craftperson, manager/administrator) with the remaining 47% spread among other categories, but with no fathers in category 9 (farmers), 10 (farm laborers) or category 12

TABLE 2

DISTRIBUTION OF OCCUPATIONS OF MOTHERS AND FATHERS

Occupational Category	Group A (N=82)		Group B (N=87)	
	Mothers	Fathers	Mothers	Fathers
1. Professional, technical	21 (25.6%)	18 (22.0%)	26 (29.9%)	21 (24.1%)
2. Managers, administrators	3 (3.7%)	9 (11.0%)	5 (5.7%)	8 (9.2%)
3. Salesworkers	4 (4.9%)	7 (8.5%)	3 (3.4%)	9 (10.3%)
4. Clerical & kindred	24 (29.3%)	8 (9.8%)	31 (35.6%)	9 (10.3%)
5. Craftspersons & kindred	1 (1.2%)	17 (20.7%)	1 (1.1%)	15 (17.2%)
6. Operatives, except transport	3 (3.7%)	3 (3.7%)	1 (1.1%)	7 (8.0%)
7. Transport equipment operatives	0	2 (2.4%)	0	4 (4.6%)
8. Laborers, except farm	0	4 (4.9%)	0	5 (5.7%)
9. Farmers and farm managers	1 (1.2%)	0	0	0
10. Farm laborers and foremen	0	0	0	0
11. Service workers, except private household	11 (13.4%)	5 (6.1%)	10 (11.5%)	2 (2.3%)
12. Private household workers	0	0	0	0
13. Military	0	1 (1.2%)	0	0
14. Students	2 (2.4%)	2 (2.4%)	1 (1.1%)	3 (3.4%)
15. Housewife/househusband, unemployed	12 (14.6%)	2 (2.4%)	5 (5.7%)	1 (1.1%)
16. No answer	0	4 (4.9%)	4 (4.6%)	3 (3.4%)

(private household workers). Group B fathers followed a similar pattern of occupational positions, with the modal category being professional/technical ($\underline{N} = 21, 24\%$) and with the second most common category being craftpersons ($\underline{N} = 15, 17.2\%$). Group B fathers also had several salespersons (10.3%) and clerical workers (10.3%). Like Group A fathers, Group B fathers had no representatives in categories 9, 10, 12 and additionally none in category 13 (military). More mothers in Group A were clerical workers ($\underline{N} = 24, 29.3\%$) than any other occupation, but almost as many were professional or technical workers ($\underline{N} = 21, 25.6\%$). Over half of the Group A mothers fell into those two categories (54.9%), with the remaining mothers spread over all categories except transport equipment operatives, laborers, farm laborers, private household workers and military. Mothers in Group B also had clerical work as the most frequent category ($\underline{N} = 31, 35.6\%$) with nearly as many professional and technical workers ($\underline{N} = 26, 29.9\%$). These two categories accounted for 65.5% of the mothers in Group B, with others in categories similar to those of Group A.

Education was assessed in five levels. Category 1 contained subjects having 5 or more years of higher education beyond high school and included persons possessing J.D., M.A., C.A.G.S., M.B.A., M.D., and Ph.D. degrees or the equivalent. Category 2 contained subjects having a

Bachelor's degree. Category 3 included those with some higher education but less than a Bachelor's degree and included 1 to 3 years of college, an Associate's degree, technical school and nursing training. If a subject responded with just the word college, he or she was assigned to category 3, some higher education. This was done because it was unclear whether the subject meant that a Bachelor's degree had been completed. If the subject wrote college graduate, he or she was assigned to category 2. Categories 4 and 5 contained subjects having a high school diploma and some high school respectively. Table 3 depicts the educational level for subjects in both groups. Reference to Table 3 indicates that for both groups, the educational levels of mothers and fathers are essentially the same, with categories 3 and 4 each representing approximately 30% of each group.

Information was obtained from all subjects on the size of the family from which each person came and the parity position of the subjects. The range of family size, described as the number of siblings, was 0 to 12 for all subjects, with a mean of 3.1 siblings for mothers and fathers in Group A, and a mean of 2.46 for fathers and 2.9 for mothers in Group B. For all subject subgroups, the modal number of siblings was 2.

Parity of the subject is described in terms of younger siblings. For all parent groups, the modal number

TABLE 3
EDUCATIONAL LEVELS OF MOTHERS AND FATHERS

Educational Level	Group A (N=82)		Group B (N=87)	
	Mothers	Fathers	Mothers	Fathers
1 5+ years of higher education	5 (6.1%)	11 (13.4%)	7 (8.0%)	11 (12.6%)
2 Bachelor's degree	18 (22.0%)	14 (17.1%)	19 (21.8%)	12 (13.8%)
3 Some higher education	24 (29.3%)	22 (26.8%)	27 (31.0%)	28 (32.2%)
4 High school graduate	30 (36.6%)	28 (34.1%)	28 (32.2%)	28 (32.2%)
5 Some high school	3 (3.7%)	6 (7.3%)	5 (5.7%)	6 (6.9%)
No answer	2 (2.4%)	1 (1.2%)	1 (1.1%)	2 (2.3%)

of younger siblings was 1.0, with the mean number of younger siblings ranging from 1.44 for fathers in Group B to 1.85 for mothers in Group A.

A simple index of marriage history was obtained by asking respondents how long they had been married to their present spouse at the time of the T_1 data collection. Marriage history is reported as the number of years indicated by respondents, with any fraction over 1 year being deleted (e.g., 7 1/2 becomes 7 years). For those couples married less than 1 year, the length of marriage to the nearest quarter is reported, with 1 to 3 months reported as 0.25 years, 4 to 6 months as 0.50 years, 7 to 9 months as 0.75 years, and 10 to 12 months as 1.0 years. There were 3 couples in the total sample who were not married but who were included in the sample because they had been living together prior to the birth and would continue to share a household and the care of the infant after the birth. The range of marriage length was from 0 to 8 years for Group A, with a mean of 2.7 years, and from 0 to 10 years for Group B, with a mean of 2.5 years. For both groups the modal marriage length was 1 year.

Both parents were asked to indicate whether the pregnancy had been planned. Data are reported as yes or no if both parents so indicated or as a discrepancy if the parents failed to agree. Two types of discrepancies were noted, with type 1 discrepancy being one in which the

mother said yes and the father said no, and a type 2 being the opposite disagreement. Reference to Table 4 indicates that more couples in Group A than in Group B had planned the pregnancy. In each group there was a similar number of type 1 discrepancies; there were no type 2 discrepancies in either group.

In summary, the subjects in both Groups A and B were comparable on the personalogical variables examined.

Instrumentation

The instruments used in this study were three sets of questionnaires distributed at T_1 , T_2 and T_3 , each having two forms, one for the mother and another for the father. A questionnaire approach to this study was selected for several reasons. First, the sample size was large and questionnaires were the most efficient method for collecting large amounts of data. Second, a questionnaire format was deemed to be the most practical system for eliciting the type of data needed. Much of the data consisted of short, factual questions which could be easily and reliably answered by the individuals involved and which required little or no interpretation. Third, using a questionnaire enabled the researcher to reach couples in a wide geographic area, encompassing approximately a 15 mile radius of Springfield, Massachusetts, and including persons in urban, suburban, semi-rural and rural areas. Using a

TABLE 4
 RESPONSE TO PLANNING OF PREGNANCY QUESTION

	Planned Pregnancy	Non-Planned Pregnancy	Discrepant Response-- Type 1	Discrepant Response-- Type 2
Group A (N=82)	53 (64.4%)	22 (28.8%)	7 (8.5%)	0
Group B (N=87)	48 (55.2%)	31 (35.6%)	8 (9.2%)	0

questionnaire also allowed persons to participate who had varied work schedules, including persons who worked days and nights or on shifting schedules. Because a questionnaire could be filled out at one's convenience and over a period of time, rather than in one sitting, persons could also be included with varying work and personal demands, particularly fathers who were away from the home for many hours during the day and evening. One of the major criticisms of past studies of infant-parent interaction has been the virtual exclusion of fathers from the data collection. The unavailability of the fathers during the usual working day has been the major factor for this exclusion and this lack of availability now extends to some working mothers as well. And finally, because participants in this study could answer at their leisure, two additional advantages became available: parents were able to take time for considered answers and the absence of the interviewer posing the questions reduced the inhibition effect of the interviewer.

The issue of the use of self-report schemes of data collection was discussed earlier. Although self-report has been shown to have some problems attached to it, with the modifications described in the literature section, including focusing on very recent behavior, and on details and the separation of activity and attitudinal questions, the reliability of self-report data can be kept at a level high

enough for research purposes. Such modifications were incorporated into this study. Furthermore, the particular goals of this study and the large sample size required self-report. Because the focus was on the fathers, who were often unavailable for observation and on activities and attitudes which are outside of the purview of observation or other methods of data collection, and because responses were wanted from mothers and fathers, a self-report, questionnaire format was deemed imperative.

Nature of the questionnaires. The final questionnaires may be found in Appendix C. The T_1 questionnaires gathered data on attitudes toward the forthcoming birth of the child and sought projectives of expected levels of involvement of both parents in routine care and social interaction. Respondents were asked to predict involvement separately for the neonatal time, defined as the first 3 weeks after the birth, and post-neonatal time, after the first 3 weeks. Both parents were also asked questions about parental sharing of duties and about primary care by the father. Fathers were asked to react to a hypothetical situation in which they alone were responsible for their infant's care. Finally, all subjects were asked to complete a 10-item relative task distribution of household duties. These ten items contained five traditionally female tasks and five traditionally male-oriented tasks. From their responses,

subjects could be evaluated on their belief in traditional sex roles vis-à-vis household management and their actual sharing of household responsibilities.

The T_2 and T_3 questionnaires, given to all subjects in both groups, were largely the same, each containing a mother form and a father form. In contrast to the T_1 questionnaires, the mother and father forms for T_2 and T_3 were quite different. The mother form at T_2 asked about circumstances surrounding the delivery and at both T_2 and T_3 consisted primarily of a 25-item revised Carey Infant Temperament Scale. The father form asked about the father's availability to interact with the infant in terms of hours at home and about actual tasks performed involving the baby, including care and social interaction. Fathers were also asked to evaluate their enjoyment of performing baby care tasks and any feelings about lack of effectiveness in performing such tasks. The father form also contained measures of satisfaction with fatherhood and with circumstances surrounding the baby's arrival and a question about perceived benefit to all family members of father involvement. Mothers and fathers were given expanded relative task distribution questions involving routine household and baby care items.

Although the baby care involvement of fathers was of primary interest, the mother form also contained a question dealing with the performance of routine tasks. This

question on the mother form was included to provide balance in the types of questions being asked each parent so as not to draw undue attention to the researcher's primary interest in baby care performed by the father. The inclusion of this question on the mother form was also done partly as a way of comparing mother and father involvement, if that were to prove important. Mothers alone were also asked to evaluate their satisfaction with the father's level of baby care.

The revision of the Carey Infant Temperament Questionnaire was performed by the researcher and Dr. Carolyn Edwards. The original instrument (see Appendix B) consisted of nine categories of behavior, each containing an average of ten items, and was designed for use with infants 4 to 8 months of age. In order to make the questionnaire appropriate for younger infants, an item by item review of the instrument was performed, looking for items applicable to the behavior of the typical neonate and infant of age 3 months. From this scrutiny, 28 items were chosen, with eight from the activity scale and five each from rhythmicity, adaptability, intensity and mood scales. The other four scales, approach, persistence, distractibility, and threshold were deleted because they contained no suitable items. The scoring of this revised instrument followed the format designed for the original instrument, with a score for each scale. Infants in this sample were then compared

with each other on general easy-difficult behavior, using scores of rhythmicity, adaptability, intensity, and mood and activity level.

Relationship of instrumentation to research objectives.

Together with the actual information contained in the questionnaires (see Appendix C) and Table 5, one can see the sources of information for each research objective.

Research objectives #1 and #2, which assess the types and frequency of involvement of fathers in routine infant care and noncare tasks, use data from both mothers and fathers. The questioning of mothers and fathers about fathers' involvement permits a cross-validation of information. Objective #3 deals with fathers' prenatal expectations for involvement and actual involvement at the neonatal (T_2) and post-neonatal (T_3) time and has data contributed by both parents. Objective #4 assesses maternal attitude only and therefore uses data supplied by mothers only. Objectives #5 and #6 evaluate the influence of several demographic and personalogical factors, and use data from mother and father subjects, with the exception of #6e, which uses data from mothers only. The use of mothers only in evaluating infant behavioral patterns is based upon the work of Rutter and Brown (1966) who found a high level of agreement between mothers and fathers on such questions. Furthermore, since mothers are more often with

TABLE 5

RELATIONSHIP OF INSTRUMENTATION TO RESEARCH OBJECTIVES

Research Objective	Instrumentation
1. To determine frequency and types of involvement of fathers in routine infant care.	Father form - T ₂ & T ₃ - Ques. 8, a, b, c, d, g, 9 h-n, 10, 12 Mother form - T ₂ & T ₃ - Ques. 13 h-n, 14 a, b, c, d, g
2. To examine types and frequency of noncare involvement of fathers with their infants.	Father form - T ₂ & T ₃ - Ques. 8 e, f, 11, 13 Mother form - T ₂ & T ₃ - Ques. 14 e, f
3. To examine the degree to which there is a congruence between the father's prenatal expectations about involvement and actual levels and types of involvement and to determine whether there are changes in this involvement from the neonatal to post-neonatal time.	Father form - T ₁ ¹ - Ques. 21-25 T ₂ ² & T ₃ ³ - Ques. 8, 9 1-n, 10, 11, 12, 13 Mother form - T ₂ & T ₃ - Ques. 13 1-n, 14
4. To find attitudes of mothers toward fathers' involvement.	Mother form - T ₂ & T ₃ - last question (unnumbered)
5. To determine whether certain demographic characteristics correlate with types and frequency of involvement and with satisfaction with fatherhood: (a) age; (b) educational background; (c) profession; (d) marriage history; (e) experience with children.	Father form - T ₁ ¹ - Ques. 4, 5, 6, 8, 10, 11 T ₂ ² & T ₃ ³ - Ques. 8, 9, 16, 17 Mother form - T ₂ & T ₃ - Ques. 13, 14

TABLE 5--Continued.

Research Objective	Instrumentation
<p>6. To determine whether certain variables are related to frequency and types of interaction of fathers with their infants: (a) sex of child; (b) preferred sex; (c) planning for pregnancy; (d) preparation for parenthood; (e) infant behavioral temperament.</p>	<p>Father form - T₁ - Ques. 9,14,15,18 T₂ & T₃ - Ques. 8a,b,c,d,g, 9 h-n, 11,13</p> <p>Mother form - T₁ - Ques. 9 T₂ & T₃ - Behavioral instrument</p>

the infant for long periods of time, they are more likely to be aware of nuances of behavior and changes in infant behavior.

Pilot testing. Because the subjects in the study came from various educational and social backgrounds, it was deemed essential to have a straightforward format. All questions were either fill-in or multiple choice and there was a mixture of each (see Appendix E). Other item formats, such as semantic differential, were deemed inappropriate for such a population of subjects.

Pilot testing of the instruments was conducted to evaluate the clarity of the forms, appropriateness of the language and willingness of subjects to answer such questions. Each set of instruments was tested on five couples of varied educational levels and socioeconomic backgrounds. Persons used in the pilot testing were chosen to provide a distribution of people from low to high socioeconomic status so that a variety of reading and educational levels would be involved in the testing of the instruments. Such variety was also wanted in order to test the attitude of persons of different backgrounds toward the instrument and content of the questions. The T_1 form was given to five couples expecting a child, including three who were expecting their first child. The T_2 and T_3 forms were given to five couples having infants from 1 month to 7 months of age.

On all piloted forms, subjects indicated that almost all questions were clear and no one indicated a problem with the level of language. Responses were appropriate and showed an understanding of the questions. Although the researcher gave the piloting subjects the option of not answering any question, all subjects answered all questions and did not show a reluctance to divulge personal information or feelings.

On the T₁ revision, minor wording changes were made and three of the first fifteen questions which were all personal in nature and dealt with occupation, education, family size, planning of the pregnancy, experience with children and preparation for the child. Question #16, which asked about feelings toward the impending birth, was divided into two questions. More categories of responses were added to two questions about the responsibility for infant care to facilitate later analysis. Questions 23 and 24, which asked about projected involvement in routine care, were given an additional response (never) and the format was changed to provide boxes for the respondents' checks. On these questions, the piloting revealed that in the original order of items, mothers may have gone down the list of items, checking the same answer for every item without discriminating one item from another. Therefore, in the revised edition, bathing was moved because it was the item most likely to cause the respondents

to stop and discriminate it from other items in terms of how often they would perform this task.

On the household relative task distribution, one item was reworded and an additional response (does not apply to us) was added. For purposes of piloting, the wife's score was compared with that of a traditional female and the husband's score was compared with that of a traditional male. Of the piloting subjects, none responded strongly to tasks traditionally associated with the opposite sex. In as much as the researcher knew the pilot subjects, the scores obtained on the relative task distribution reflected the actual division of labor.

On the T_2 and T_3 questionnaires, several changes were made on the mothers' form. The request for name and address was deleted and the decision was made to have the researcher put the name on before mailing. Any change in address was recorded, if applicable, at the end of the form. The baby's name was no longer requested and instead the sex of the child was requested. Question #7, dealing with the infant's temperament, was changed to a multiple choice format from an open-ended one. A new question, #14 on the revised edition, was added, asking about actual number of care tasks performed. On the relative task distribution question, one question was reworded and as on the T_1 form, an additional response was added. The 25-item revision of the Carey scale was added to the mother form and the factual

questions were separated from a question dealing with feelings in order to improve the reliability as was recommended in the literature section and discussed above.

Question #16 on the pilot version was reworded and #17 was deleted because of its repetitiousness. For the T_3 questionnaire, questions 1 through 5, dealing with the labor and delivery, were omitted. The remaining questions were the same as on T_2 , except for the addition of one more question about the family's sleeping pattern.

As with the mother form, changes were made on the T_2 and T_3 father forms deleting the name and address requests. Question 2 on the revision, dealing with the infant's temperament, was reworded, as it had been on the mother form. A question dealing with the hours at home was reworded to ask the subject to think back to the last day of work instead of "yesterday." A question was added about any extra work (#7) and changes on the relative task distribution were the same as on the mothers' form. For question #10, two additional categories of responses were added (both of you, other person) and the order of the question was shifted to economize on space. Minor wording changes were made on questions #11, #12, and #13, and #14 response choices were changes to reflect degrees of positiveness in relation to the baby. A neutral category of "neither agree nor disagree" was added to #16 and the responses on #17 were reworded slightly (e.g., from highly

satisfied to extremely satisfied). Three additional questions, numbers 15, 18, and 19 on the revised edition, were added to secure additional paternal attitudes about effectiveness and perceived benefit of the father's involvement. The T₃ father form was substantially the same as the T₂ one with deletion only of part of question #1, the addition of question 6B and one change on question #17 asking about satisfaction with the physician rather than with the hospital.

Reliability of instruments. The reliability of the instruments was studied in several ways, depending upon the data.

In some instances data were collected from an individual parent while in other cases both parents supplied information. Further, because of the nature of the questionnaires, more than one measure of father behavior in a particular area was provided. This redundancy in the data permitted the investigation of correlations, cross-tabulations and percentages of agreement. New variables were also created from data provided by both mothers and fathers, and those new variables were then compared with other responses.

In certain instances, scales were created to analyze the data. For these scales, the internal consistency reliability and item statistics were examined. Further information about contents of the scales and the reliability

of the instruments will be reported as the data are presented in Chapter IV.

Procedures

Contact was initiated with each of the two child-birth education programs through telephone conversations with key persons in each group. In the case of the hospital-sponsored program, the researcher spoke with the director of the program and subsequently met with her to discuss the research proposal. The researcher then spoke with the hospital administrator who in turn discussed the project with a hospital committee. It took approximately 2 1/2 months from the initial contact to the granting of permission by the hospital. The researcher also met with the class instructors during that time to discuss the procedure for data collection.

For the association-sponsored classes, a shortened version of the proposal was submitted to the group president who in turn presented the proposal to the board of directors. Permission was granted approximately a month after submission of the proposal and after several lengthy telephone conversations with the group president and the registrar of the classes and the educational coordinator. Contact with the instructors of these classes was done individually through telephone conversations, which included an explanation of the project and the procedures for

collecting the data in the classes.

Contact with participants. The researcher visited sessions of each class, usually during the last two or three sessions of the course, presenting the project at either the beginning of the class or during the break, depending upon the preference of the instructor. The researcher generally introduced herself and explained the nature of the study and the obligations of the participants, following a prepared text (see Appendix F). Questions about the project, the questionnaires or the researcher's area of study were answered and questionnaires were distributed to all volunteers. The researcher waited for the respondents to complete the questionnaires.

The birth of the baby was determined in most cases through weekly perusal of the admission and discharge lists of the local maternity hospital. For those persons not delivering at that hospital, which was approximately 10% of the total sample, the birth date was determined by contact with the childbirth instructor, who generally was contacted soon after the birth. Telephone calls were also made to the couples approximately 1 1/2 weeks after the due date if the wife's name had not appeared on either the hospital list or the instructors' lists

The second questionnaires were mailed when the infants were approximately 2 1/2 weeks old and included a

self-addressed, stamped envelope for returning the completed questionnaire, the questionnaire and a cover letter (see Appendix C). Each parent received a separate mailing and couples' questionnaires were mailed several days apart to discourage further cooperative answering of a questionnaire by a couple rather than by the individual parent.

The third questionnaire was mailed only to respondents who had returned the T_2 questionnaires and only if both parents had returned the earlier instruments. The T_3 questionnaire was mailed when the infant was approximately 3 months of age, and included an envelope and a cover letter (see Appendix C). A similar mailing schedule for mothers and fathers was followed as for T_2 .

For those respondents who failed to return mailed questionnaires within 2 weeks of receipt, the researcher called to inquire whether the participants had received the forms, asking them to return the questionnaires as soon as possible. Telephone follow-up was needed in about 20% of the T_2 sample and 10% of the T_3 mailing.

For purposes of this study, only healthy, normal children and their parents were included in the final analysis of data. At the T_1 collection, all couples who met the criteria of having a primiparous child and planning to share child care were included in the study. However, for later purposes, certain infant criteria needed to be met in order to insure that the child was indeed healthy.

Such criteria required that the infant had gone home with the mother from the hospital or had been discharged within 2 1/2 weeks after the mother's discharge. The actual date of discharge was determined through the hospital records and through a question on the T₂ instrument. Further, no couple with a child who returned to the hospital for more than one week during the first month or who had health problems necessitating hospitalization for more than 2 weeks during the first 3 months was included. No couple was included if their child would require major surgery in the future or would be qualified as a special needs child in the future, based on present condition.

For those families in which the infant remained in the hospital beyond the usual postpartum stay of the mother, the T₂ questionnaire mailing was advanced for a comparable length of time. That is, if an infant had remained hospitalized for 1 week after the mother had returned home, the T₂ instrument was given at age 3 1/2 weeks. This was considered a suitable way of compensating for the lack of contact between the infant and parent, without excluding families with infants who had minor health problems.

Return rate. The issue of return rate is frequently a problem in mailed questionnaire data collection techniques. Because the T₁ instrument was collected at the administration, the return rate was 100%. For the T₂ instrument, the

return rate was 85% of those eligible, counting only those couples in which both partners had returned the instruments. Approximately 4% of the couples had been disqualified from the sample because they no longer met subject criteria, and included couples in which a parent was unable to interact with the infant due to serious illness, as well as couples whose infants had medical problems. The return rate for the T_3 instruments was 88% of those eligible and 71% of the initial sample, leaving a final subject group of 120 couples. The persons who returned their questionnaires differed from those who failed to do so in that they had somewhat less education and fewer white collar jobs.

Several procedures were introduced to try to improve the return rate. First, the initial contact with all subjects was face to face in the childbirth classes. It was hoped that having an opportunity to meet the researcher and ask any questions would help the participant motivation. Second, because many of the mothers delivered well after the due date, the researcher had an opportunity to speak with a number of parents before the T_2 instruments were mailed. Further, the cover letter (see Appendix C) contained a handwritten note at the bottom of each, congratulating the parent and thanking him/her for participating. And finally, if after 2 weeks after receipt of the instrument, either or both parents had not returned it, the researcher telephoned to inquire if it had been received

and if he or she could return it soon. This call allowed the researcher to determine if the instrument had been mislaid or lost, in which case she mailed another one.

Data used for analysis were ordinarily individual parent responses. In a few instances, a derived measure of couple agreement or disagreement was utilized, based on individual responses to the same items. For example, when asked if the child's birth had been planned, answers were collected from both parents. Parental responses were analyzed to reveal whether the couple agreed that the baby had been planned or not or whether they disagreed. For other questions, individual parent responses about performance of various baby care and household tasks were compared. Specific details for the analytic procedures will be described in Chapter IV.

C H A P T E R I V

FINDINGS

The involvement of fathers with their primiparous infants was the focus of this research study. In this fourth chapter results of the research are presented, with findings organized according to the six research objectives. The first and second research objectives deal with the frequency and types of involvement of fathers in routine infant care and non-care interaction, particularly play and comforting. Objective #3 concerns the fathers' prenatal expectations for involvement as compared with actual levels of involvement at the two postnatal data collection points of ages 3 weeks and 3 months. Objective #3 also involves comparisons of 3 week and 3 month levels of involvement of fathers. In analyzing objective #4, mothers' attitudes toward fathers' involvement are reported and discussed for both the 3 week and 3 month times. And finally, objectives #5 and #6 deal with the relationship between several demographic and personalogical variables of fathers and the extent of infant care.

Father Involvement in Routine Care

The first objective of this research was to evaluate

the frequency and types of involvement of fathers in routine physical care activities with their infants. In this section of the reporting of results, the nature of the data will be discussed first, along with evidence of reliability. Then, scales that were established to summarize the data will be described. Finally, data on father interaction, first at 3 weeks and then at 3 months, will be reported and discussed.

Responses to Questions 8, 9, 10 and 12 of the fathers' questionnaires and Questions 13 and 14 of the mothers' questionnaires, both at T_2 , age 3 weeks, and T_3 , age 3 months, provided the requisite information. Question 9 on the fathers' form and Question 13 on the mothers' required parents to respond to a 5-point relative task distribution scale, indicating which parent usually performed various household and baby care tasks. The relative participation of each parent ranged from 1, when the mother always performed the task, to 5, when the father always provided that care. A score of 3 indicated equal sharing of the responsibility. Question 8 of the fathers' questionnaire and Question 14 of the mothers' asked parents how many times during the last week each had performed certain care and non-care tasks. Questions 10 and 12 on the fathers' form required the father to think back to the most recent non-work and workday and to indicate who had performed several routine baby care tasks on those days.

Because information was solicited from both mothers and fathers regarding the relative task distribution and number of times each performed several care tasks, there was a redundancy in the data provided by the respondents. This redundancy permitted the investigator to cross-validate information given. The number of respondents contributing data ranged from 110 to 135 at T_2 and from 112 to 120 at T_3 , depending upon the question.

Reliability of instrumentation. One measure of father behavior was the proportion of routine baby care performed by the father. Both parents indicated who usually performed selected baby care tasks and the data thus provided made possible cross-validation of the information. Tables 6 and 7 present corroborative data from mother and father reports on the four tasks of diapering, bathing, putting the baby to sleep and getting up during the night to attend to the baby, using this relative task scheme. Inspection of Table 6 indicates that when infants were 3 weeks of age agreement among mothers and fathers was greater for the tasks of diapering and bathing, with somewhat less agreement about who usually put the baby to sleep and which parent generally got up during the night to attend to the baby. Mothers who disagreed with the father tended to report less involvement on the father's part than the father had reported. At age 3 months, mothers who disagreed also reported less

TABLE 6

AGREEMENT OF MOTHER AND FATHER REPORTS OF DIVISION
OF LABOR ON FOUR BABY CARE TASKS AT AGES
3 WEEKS AND 3 MONTHS

Task	Baby's Age	Agreement Mother and Father Reports	Mothers Reporting Less Father Involvement Than Fathers Reported	Mothers Reporting More Father Involvement Than Fathers Reported
Diaper- ing	3 weeks	82.2%	10.5%	8.1%
	3 months	70.0%	15.8%	14.2%
Bathing	3 weeks	73.9%	17.1%	8.9%
	3 months	83.3%	10.8%	5.9%
Putting to sleep	3 weeks	56.6%	21.7%	21.6%
	3 months	58.1%	24.3%	17.6%
Getting up during night	3 weeks	57.4%	28.3%	14.5%
	3 months	69.0%	23.9%	7.2%

TABLE 7

CORRELATIONS BETWEEN MOTHER AND FATHER REPORTS OF
PARTICIPATION IN FOUR BABY CARE TASKS WHEN
INFANT AGES 3 WEEKS AND 3 MONTHS

Task		Correlation Between:		
		Mother and Father Reports on Relative Task Distribution	Mother Reports of Relative Task Distribution and Compared Couple Data	Father Reports of Relative Task Distribution and Compared Couple Data
Diapering	T ₂	.71***	.53***	.70***
	T ₃	.51***	.45***	.62***
Bathing	T ₂	.41***	.59***	.60***
	T ₃	.78***	.66***	.80***
Putting to Sleep	T ₂	.35***	.36***	.38***
	T ₃	.60***	.58***	.66***
Getting up During the Night	T ₂	.59***	.59***	.61***
	T ₃	.76***	.34***	.44***

***p < .001

father involvement on all four items than fathers had reported. In comparing the parental agreement on division of labor on the four baby care tasks from 3 weeks to 3 months, one finds that the percentage of couples agreeing rose except for diapering for which the level of agreement decreased.

Table 7 presents further data on the correlation between mother and father reports. In this table there are three kinds of correlations:

1. correlation between mother and father reports of relative task distribution
2. correlation between mother self-reports on the relative task distribution and a category assigned by the investigator upon comparison of the number of times a task was done by mother and father (hereafter called compared couple data)
3. correlation between father self-reports on the relative task distribution and the compared couple data.

The first column of data in Table 7 presents the correlations between mother and father reports using relative task distribution data for the four tasks discussed above. The Pearson correlations ranged from .35 to .71 at age 3 weeks and from .51 to .78 at age 3 months. Correlation values suggest that information provided about diapering and getting up during the night when the infant was age 3 weeks was more trustworthy than information about putting the child to sleep and bathing. At age 3 months, one finds more accurate reporting for bathing, putting the baby to sleep

and getting up during the night.

The remaining two columns of Table 7 also present cross-validation information about what parents reported for the same tasks on two different measures. Corroboration of parental judgment about the four tasks was attempted by direct comparison of the actual numbers of times in a given week each parent performed each task. Couples were assigned to one of five participation categories (mother always, mother more than father, mother and father equally, father more than mother, father always). These were the same categories utilized by parents in the relative task distribution scale. For instance, if a mother reported diapering the baby 40 times in a week and the father reported doing it 10 times, the couple was assigned to the category of "mother more than father." Reference to Table 7 indicates that agreement between parent's own report and assigned categories ranged from .36 to .70 at T_2 . With the exception of "putting to sleep," the data show adequate concurrent reliability between various measure of similar father behavior, using an adequacy criterion of .45. The data indicate that at T_3 agreement between parents' reports and assigned categories ranged from .34 to .80 and all correlations were again significant. The data for age 3 months show adequate concurrent reliability for the various measures on all tasks except "getting up during the night." The task of putting the baby to sleep, which had inadequate

reliability at T_2 , had adequate reliability at T_3 . All of the correlations in Table 7 were significantly different from .00, indicating some degree of relationship between two ways of measuring father performance.

Four scales were formed to evaluate the degree to which fathers participated in routine physical care of their infants. In two of the scales, Care Scale 1 at T_2 and Care Scale 3 at T_3 , both mothers and fathers were asked to evaluate the relative participation of each parent, using the 5-point relative task distribution format, on six routine care items. These six items included two feeding items and diapering, bathing, putting the baby to sleep and getting up during the night with the baby. Care Scale 3, for age 3 months, contained five of the same items as had Care Scale 1. However, because 71% of the mothers indicated that at age 3 months their infants no longer awoke during the night on a regular basis, thus not requiring parental attention, the item dealing with getting up during the night was not used in Care Scale 3. To the scale was added an item of care required by all babies of this age: taking the child to the doctor. On these 5-point scales, the score for each subject could range from 6 to 30, with 30 indicating maximum father performance. Two other scales, Care Scales 2 and 4, contained the four non-feeding items appropriate at ages 3 weeks and 3 months, respectively. The range of possible answers for Care

Scales 2 and 4 was from 4 to 20, with the latter score indicating maximal father performance. The internal consistency reliabilities of the four scales are reported in Table 8 for both mothers and fathers. The reliabilities reported are modest but were judged adequate for research purposes considering the small number of items contributing to each coefficient.

Because analysis of variance, discussed below, revealed a significant difference on these scaled scores for father care of breastfed versus non-breastfed infants, but not for fathers of Group A, who had made predictions about future involvement, and those of Group B, who had not predicted, the descriptive statistics that follow focus on the breastfed/non-breastfed dimension but not on the Group A/Group B contrast.

Father involvement--age 3 weeks. The data from Care Scales 1 and 2, not surprisingly, suggest that mothers assumed substantial responsibility for infant care on the six tasks involved in the scales. Indeed, as the data in Table 9 suggest, mothers performed many tasks alone and others with minimal assistance from fathers. Not one task mean indicated an equal sharing of care responsibility by fathers. The data in Table 9 also indicate that fathers of non-breastfed infants received consistently higher scores, indicating greater father involvement than by

TABLE 8
INTERNAL CONSISTENCY RELIABILITY OF CARE SCALES

	Fathers'	Mothers'
Care Scale 1 (T_2)	.68	.72
Care Scale 2 (T_2)	.54	.65
Care Scale 3 (T_3)	.70	.70
Care Scale 4 (T_3)	.58	.55

TABLE 9
 ITEM AND SCALE MEANS OF RATINGS ON RELATIVE TASK
 DISTRIBUTION OF INFANT CARE TASKS AT
 AGE 3 WEEKS

<u>Care Scale 1</u> Activities	<u>Breastfeeding</u>		<u>Non-Breastfeeding</u>	
	Mother Report	Father Report	Mother Report	Father Report
Feeding breakfast	1.0	1.2	1.7	1.8
Diapering ^a	1.8	1.8	1.9	1.9
Feeding dinner	1.1	1.1	2.1	2.2
Bathing ^a	1.2	1.3	1.4	1.5
Putting to sleep ^a	2.1	2.1	2.3	2.3
Getting up during night to attend to baby ^a	1.6	1.8	2.0	2.2
Care Scale 1 Mean	8.8	9.1	11.3	11.8
Care Scale 2 Mean	6.7	6.9	7.5	7.8

^aItems contributing to Care Scale 2.

fathers of breastfed infants. Analysis of variance on the data reported by the fathers, as shown in Table 10, indicated further that a significant difference between father participation of breastfed and non-breastfed infants did exist even when feeding tasks were discounted, as in Care Scale 2. A further comparison of scores reported by mothers and fathers, as seen in Table 9, revealed that mothers often reported less father participation than fathers themselves had reported and the scale scores on both scales and for both feeding modalities, were slightly higher for the father reports.

Table 11 presents data on the average number of times that fathers reported performing five routine physical care tasks required daily by the infants at age 3 weeks. The data in Table 11 show that fathers of breastfed infants generally performed all care tasks less than one time per day, while the fathers of non-breastfed infants performed three of the five tasks about once a day. For both groups of fathers, bathing the baby was particularly infrequently performed. Inspection of the table suggests that fathers of non-breastfed infants performed all care tasks somewhat more frequently than did fathers of breastfed infants and analysis of variance showed significant differences between the two father groups in performance of bathing and feeding. For the other tasks, differences were not significant.

TABLE 10
 ANALYSIS OF VARIANCE ON SCALE OF FATHER PERFORMANCE OF
 ROUTINE CARE EXCLUDING FEEDING AT AGE 3 WEEKS
 (Care Scale 2)

	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>
Breastfed/ Non-Breastfed Comparison	30.53	1	30.53	12.28***
Predicting Dimension (Groups A & B)	1.49	1	1.49	.60
Interaction	3.63	1	3.63	1.46
Residual	318.40	128	2.49	
Total	354.27	131		

*** $p < .001$

TABLE 11
 MEAN NUMBER OF ROUTINE TASKS PERFORMED BY FATHERS
 DURING PRECEDING 7 DAYS WHEN INFANTS
 AGE 3 WEEKS

Activity	Breast- feeding \bar{X} (SD) N=75	Non- Breastfeeding \bar{X} (SD) N=60	ANOVA
Put baby to sleep	5.6 (4.9)	6.3 (5.4)	$F_{(1,125)} = .68$
Diapered baby	5.9 (7.4)	6.1 (6.4)	$F_{(1,127)} = .06$
Bathed baby	0.3 (0.7)	0.7 (1.4)	$F_{(1,130)} = 4.24^*$
Fed baby	1.7 (3.9)	8.1 (6.1)	$F_{(1,127)} = 53.16^{***}$
Got up during night to attend to baby	2.7 (2.9)	3.2 (4.1)	$F_{(1,124)} = .63$

* $p < .05$

*** $p < .001$

A comparison of frequency of performance of the five tasks by mothers and fathers is depicted in Table 12. Mothers of breastfed infants reported performing all tasks more frequently than did mothers of non-breastfed infants. The needs of the typical infant in each area of care can be estimated by summing the number of times the mother and father performed each task. The proportion of the needs fulfilled by the father can then be expressed as a percentage of the sum of care provided by both parents; such percentages are indicated in the table. Comparison of the fathers' performance of tasks with that of the mothers reveals that fathers reported performing tasks in varying degrees of demand, with bathing by both groups of fathers and diapering and feeding by fathers of breastfed infants being performed less than 10% of the times needed. Of the remaining tasks, all were performed less than 20% of the time needed, except for putting the baby to sleep and getting up during the night, which fathers of non-breastfed infants performed 20.6% and 24.2% of the time respectively. One sees again that fathers of non-breastfed infants assumed a greater proportion of the care needed by their 3-week-old infants and yet, even though they participated more, they assumed less than 20% of the care required, with mothers thus being responsible for the remaining 80%.

To ascertain further how fathers participated in

TABLE 12

COMPARISON OF MEAN NUMBER OF ROUTINE CARE TASKS PERFORMED
BY MOTHERS AND FATHERS DURING PRECEDING 7 DAYS WHEN
INFANTS AGE 3 WEEKS

Activity		Breastfeeding $\bar{X}(\underline{SD})/(\%)^a$ $\underline{N}=75$	Non- Breastfeeding $\bar{X}(\underline{SD})/(\%)^a$ $\underline{N}=60$
Put baby to sleep	Mother	25.9 (16.0)	24.3 (15.4)
	Father	5.6 (<u>17.7%</u>)	6.3 (<u>20.6%</u>)
Diapered baby	Mother	54.4 (18.7)	46.2 (15.9)
	Father	5.9 (<u>9.8%</u>)	6.1 (<u>11.7%</u>)
Bathed baby	Mother	6.4 (1.5)	6.4 (1.6)
	Father	0.3 (<u>4.4%</u>)	0.7 (<u>9.9%</u>)
Fed baby	Mother	49.3 (12.4)	34.9 (12.2)
	Father	1.7 (<u>3.3%</u>)	8.1 (<u>18.8%</u>)
Got up during night to attend to baby	Mother	12.7 (8.2)	10.0 (8.5)
	Father	2.7 (<u>17.5%</u>)	3.2 (<u>24.2%</u>)

^a \underline{SD} given for mothers. For fathers, percent of total performance by parents provided (e.g., 5.6 = 17.7% of 25.9 + 5.6). Refer to Table 11 for \underline{SD} of fathers.

routine care of their infants, fathers were asked to think back to the most recent non-working day and to recall who performed six care tasks on that day. Table 13 presents fathers' responses for performance of these tasks either alone or with the mother. Fathers reported performing considerably more tasks with the mother than alone. In several instances, notably bathing, no fathers or very few fathers reported doing activities alone, but some did perform the activity when assisted by the mother. As expected, considerably more fathers of non-breastfed infants performed feeding tasks; in fact, over half of these reported participating in feeding at three mealtimes. These fathers also performed all other tasks more frequently than had fathers of breastfed infants, particularly when assisted by the mother.

Table 14 depicts fathers' performance of these same six care tasks on a workday. Again one finds that fathers performed more tasks when accompanying the mother. But, on a working day, fathers were generally less involved in infant care even for those tasks performed during non-working hours than they had been on a non-working day. There were a few exceptions to this general trend, but the differences were small. The information in both Tables 13 and 14 suggest that fathers performed few care tasks alone, with fathers of non-breastfed infants generally being more inclined to participate without the mother. When the mother

TABLE 13
 FATHERS' REPORTED INVOLVEMENT IN ROUTINE CARE ON LAST
 NON-WORKDAY FOR INFANTS AGE 3 WEEKS

Activity	Group	Performed Alone N(%)	Performed with Mother N(%)
<u>Feeding Tasks</u>			
Fed baby in morning	Breastfeeding	1 (1.4%)	2 (2.7%)
	Non-Breastfeeding	10 (16.9%)	20 (33.9%)
Fed baby at midday	Breastfeeding	2 (2.7%)	3 (4.1%)
	Non-Breastfeeding	7 (11.9%)	23 (39.0%)
Fed baby at dinnertime	Breastfeeding	0	7 (9.6%)
	Non-Breastfeeding	11 (18.6%)	31 (52.5%)
<u>Non-Feeding Tasks</u>			
Got baby up and dressed	Breastfeeding	1 (1.4%)	21 (28.8%)
	Non-Breastfeeding	0	19 (32.2%)
	All Fathers	1 (0.8%)	40 (30.3%)
Bathed baby	Breastfeeding	0	11 (15.3%)
	Non-Breastfeeding	0	17 (29.3%)
	All Fathers	0	28 (21.5%)
Put baby to sleep	Breastfeeding	5 (6.8%)	41 (56.2%)
	Non-Breastfeeding	6 (10.5%)	38 (66.7%)
	All Fathers	11 (8.5%)	79 (60.8%)

TABLE 14
 FATHERS' REPORTED INVOLVEMENT IN ROUTINE CARE ON LAST
 WORKDAY FOR INFANTS AGE 3 WEEKS

Activity	Group	Performed Alone N(%)	Performed with Mother N(%)
<u>Feeding Tasks</u>			
Fed baby in morning	Breastfeeding	1 (1.4%)	1 (1.4%)
	Non-Breastfeeding	5 (10.2%)	6 (12.2%)
Fed baby at midday	Breastfeeding	2 (2.9%)	4 (5.3%)
	Non-Breastfeeding	4 (8.3%)	10 (20.8%)
Fed baby at dinnertime	Breastfeeding	3 (4.3%)	6 (8.7%)
	Non-Breastfeeding	8 (16.7%)	13 (27.1%)
<u>Non-Feeding Tasks</u>			
Got baby up and dressed	Breastfeeding	4 (6.5%)	5 (8.1%)
	Non-Breastfeeding	2 (4.3%)	5 (10.9%)
	All Fathers	6 (5.6%)	10 (9.3%)
Bathed baby	Breastfeeding	1 (1.4%)	4 (5.8%)
	Non-Breastfeeding	1 (1.8%)	9 (15.8%)
	All Fathers	2 (1.6%)	13 (10.3%)
Put baby to sleep	Breastfeeding	7 (10.9%)	30 (46.9%)
	Non-Breastfeeding	7 (15.2%)	20 (43.5%)
	All Fathers	14 (12.7%)	50 (45.5%)

was present, and also performing the care task, fathers were much more likely to become involved. There was also one task which parents seemed more likely to share, on both the father's workday and non-working day, and that was putting the infant to sleep.

Fathers were also asked how many times they had diapered the baby on the last non-work and workday. On the non-workday, fathers of breastfed infants reported diapering an average of 1.5 times and fathers of non-breastfed babies reported an average of 1.7 times. On the working day, fathers of both breastfed and non-breastfed infants reported 1.4 diaperings on the average. These levels of performance were minimal in comparison with those of mothers who reported diapering about 7 times on a typical day.

Father involvement--age 3 months. Care scales similar to those formed to evaluate father participation when infants were 3 weeks of age were also formed to analyze father participation when babies were 3 months of age. However, analyses of variance showed that there was no longer a significant difference in care involvement between fathers of breastfed and non-breastfed infants when feeding items were excluded (see Table 15). Care Scale 3 contains six routine care tasks regularly performed in caring for an infant of about 3 months of age and Care Scale 4 contains

TABLE 15

ANALYSIS OF VARIANCE ON SCALE OF FATHER PERFORMANCE OF
 ROUTINE CARE EXCLUDING FEEDING AT AGE 3 MONTHS
 (Care Scale 4)

	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>
Breastfed/ Non-Breastfed Comparison	8.78	1	8.78	2.29
Predicting Dimension (Groups A & B)	8.40	1	8.40	2.20
Interaction	.39	1	.39	.10
Residual	401.98	105	3.83	
Total	420.75	108		

the four non-feeding items. Again, scale scores for the longer and shorter scales could have ranged from 6 to 30 and from 4 to 20 respectively. Table 16 contains the item and scale means for the two scales. The data in Table 16 suggest that when the infant was 3 months of age mothers continued to assume responsibility for most care, performing care tasks alone or with minimal assistance from fathers. No task scores indicated an equal sharing of care responsibility by both parents. The data also suggest that fathers of non-breastfed infants received consistently higher scores indicating more father involvement. However, analysis of variance, as shown in Table 15, indicated that when feeding was excluded, these differences in father participation between fathers of breastfed and non-breastfed infants were not significant. As was seen in the scale data for age 3 weeks, mothers tended to report somewhat less father involvement than the fathers themselves reported.

In comparing scale and item means at ages 3 weeks and 3 months, one sees that fathers of breastfed infants were slightly more participatory at age 3 months than they had been at age 3 weeks, but that fathers of non-breastfed infants were slightly less involved at age 3 months than they had been at age 3 weeks.

Table 17 provides data on the average number of times that fathers reported performing five routine care

TABLE 16
 ITEM AND SCALE MEANS OF RATINGS ON RELATIVE TASK
 DISTRIBUTION OF INFANT CARE TASKS AT
 AGE 3 MONTHS

<u>Care Scale 3</u> Activities	<u>Breastfeeding</u>		<u>Non-Breastfeeding</u>	
	Mother Report	Father Report	Mother Report	Father Report
Feeding breakfast	1.2	1.3	1.6	1.7
Diapering ^a	1.8	1.8	1.9	1.9
Feeding dinner	1.2	1.3	2.1	2.0
Bathing ^a	1.4	1.4	1.4	1.5
Putting to sleep ^a	1.8	1.9	2.3	2.4
Taking to doctor ^a	1.7	1.8	1.7	1.8
Care Scale 3 Mean	9.0	9.6	11.0	11.3
Care Scale 4 Mean	6.7	7.0	7.4	7.6

^aItems contributing to Care Scale 4.

TABLE 17

MEAN NUMBER OF ROUTINE CARE TASKS PERFORMED BY FATHERS
DURING PRECEDING 7 DAYS WHEN INFANTS
AGE 3 MONTHS

Activity	Breast- feeding \bar{X} (SD) N=57	Non- Breastfeeding \bar{X} (SD) N=63	ANOVA
Put to sleep	3.2 (3.5)	4.1 (4.1)	$F_{(1,112)}=1.72$
Diapered baby	6.9 (8.8)	6.3 (6.3)	$F_{(1,113)}=.26$
Bathed baby	0.6 (1.1)	0.7 (1.5)	$F_{(1,112)}=.23$
Fed baby	2.2 (5.0)	7.0 (4.9)	$F_{(1,112)}=27.09^{***}$
Got up during night to attend to baby	1.1 (2.2)	1.3 (2.3)	$F_{(1,86)}=.77$

*** $p < .001$

tasks during a typical week when the infant was 3 months of age. The data suggest that fathers performed some tasks less than once a day, while performing others about once a day. No task was performed more often than once a day on the average and bathing of the baby still was performed only occasionally. Fathers of non-breastfed infants generally participated slightly more in routine care, except for diapering. Analyses of variance, however, indicated significant differences between performance of tasks by fathers of breastfed and non-breastfed infants only in the area of feeding.

Because infant needs change as the infant develops, it is necessary to look at the performance of care by fathers in relation to need. Table 18 presents data on mother and father performance of five routine care tasks. Mothers of breastfed infants continued to report performing all tasks, except bathing, more frequently than did mothers of non-breastfed infants. However, a comparison of performance of these routine care tasks from age 3 weeks to age 3 months shows that mothers reported performing all care tasks less frequently at age 3 months than they had reported at age 3 weeks. Again the needs of the infants in each area of care can be estimated by adding the number of times that mothers and fathers performed the tasks. The percentage of need performed by the fathers is shown in Table 18. When comparing relative participation of fathers

TABLE 18

COMPARISON OF MEAN NUMBER OF ROUTINE CARE TASKS PERFORMED
BY MOTHERS AND FATHERS DURING PRECEDING 7 DAYS WHEN
INFANTS AGE 3 MONTHS

Activity		Breastfeeding \bar{X} (<u>SD</u> /%) ^a	Non- Breastfeeding \bar{X} (<u>SD</u> /%) ^a
Put baby to sleep	Mother	18.0 (12.7)	14.5 (11.6)
	Father	3.2 (<u>15.1%</u>)	4.1 (<u>22.0%</u>)
Diapered baby	Mother	50.1 (19.6)	42.8 (18.9%)
	Father	6.9 (<u>12.1%</u>)	6.3 (<u>12.8%</u>)
Bathed baby	Mother	5.8 (1.9)	6.0 (2.0)
	Father	0.6 (<u>9.4%</u>)	0.7 (<u>10.4%</u>)
Fed baby	Mother	35.1 (13.3)	25.4 (9.1)
	Father	2.2 (<u>5.9%</u>)	7.0 (<u>21.6%</u>)
Got up during night to attend to baby	Mother	3.3 (4.5)	2.1 (3.4)
	Father	1.1 (<u>25.0%</u>)	1.3 (<u>38.2%</u>)

^aSD given for mothers. For fathers, percent of total performance by parents provided (e.g., 3.2 = 15.1% of 18.0 + 3.2). Refer to Table 17 for fathers' SD.

from 3 weeks to 3 months, one finds that fathers generally performed a greater percentage of needed tasks at age 3 months. Fathers performed the five care tasks from about 6% to 38% of the time needed, depending upon the task involved. Bathing by fathers of breastfed and non-breastfed infants and feeding by fathers of breastfed infants were performed less than 10% of the time needed, with the latter level of involvement expected. Other tasks were performed by fathers between 10% and 25% of the time needed and getting up during the night by both groups of fathers was performed 25% to 38% of the time. The trend for fathers to be more participatory at age 3 months was true for fathers of both breastfed and non-breastfed infants. One exception to this trend was in the area of feeding, where both groups of fathers reported less participation than they had at age 3 weeks. Fathers of breastfed infants also reported putting the baby to sleep less frequently than needed at age 3 months than at age 3 weeks.

When the infants were age 3 months, fathers were again asked to indicate who performed six care tasks on selected non-working and working days. Table 19 presents these data for a non-workday, indicating the percentage of fathers who reported performing these tasks either alone or with the mother. Fathers generally indicated performing more tasks with the mother than alone, with one exception. Fathers of breastfed infants, when they did undertake to

TABLE 19

FATHERS' REPORTED INVOLVEMENT IN ROUTINE CARE ON LAST
NON-WORKDAY FOR INFANTS AGE 3 MONTHS

Activity	Group	Performed Alone N(%)	Performed with Mother N(%)
<u>Feeding Tasks</u>			
Fed baby in morning	Breastfeeding	3 (5.3%)	2 (3.5%)
	Non-Breastfeeding	13 (21.0%)	14 (22.6%)
Fed baby at midday	Breastfeeding	6 (10.5%)	4 (7.0%)
	Non-Breastfeeding	9 (14.5%)	18 (29.0%)
Fed baby at dinnertime	Breastfeeding	6 (10.5%)	6 (10.5%)
	Non-Breastfeeding	11 (17.7%)	28 (45.2%)
<u>Non-Feeding Tasks</u>			
Got baby up and dressed	Breastfeeding	9 (15.8%)	15 (26.3%)
	Non-Breastfeeding	7 (11.3%)	18 (29.0%)
	All Fathers	16 (13.4%)	23 (19.3%)
Bathed baby	Breastfeeding	6 (10.5%)	9 (15.8%)
	Non-Breastfeeding	3 (4.9%)	16 (26.2%)
	All Fathers	9 (7.6%)	25 (21.2%)
Put baby to sleep	Breastfeeding	6 (10.5%)	25 (43.9%)
	Non-Breastfeeding	10 (16.1%)	31 (50.0%)
	All Fathers	16 (13.4%)	56 (47.1%)

feed the baby, tended to do this alone. Generally, however, fathers were considerably more participatory when accompanying the mother. As expected, fathers of non-breastfed infants fed the babies more often than did fathers of breastfed infants; the fathers of non-breastfed infants also performed other non-feeding tasks more often when accompanying the mother. However, in two instances, getting the baby up and dressed and bathing, a few more fathers of breastfed infants reported performing these tasks alone. When comparing performance of these tasks at ages 3 weeks and 3 months, one sees somewhat more performance of baby care tasks alone as the infant becomes older. There was at the same time a decrease in the percentage of fathers reporting performing the task with the mother at age 3 months.

Table 20 presents similar data on performance of these six tasks on a recent workday when infants were 3 months of age. One finds again that fathers usually participated more when the mother was also involved. The data indicate that on a workday fathers usually were less involved than they had been on a non-workday in all aspects of infant care, including involvement in tasks generally performing during non-working hours. Unlike the data for a non-working day, when comparing reported performance of these tasks at ages 3 weeks and 3 months for a workday, one does not see a trend for more or less performance alone or

TABLE 20

FATHERS' REPORTED INVOLVEMENT IN ROUTINE CARE ON LAST
WORKDAY FOR INFANTS AGE 3 MONTHS

Activity	Group	Performed Alone N(%)	Performed with Mother N(%)
<u>Feeding Tasks</u>			
Fed baby in morning	Breastfeeding	4 (7.1%)	1 (1.8%)
	Non-Breastfeeding	6 (9.8%)	7 (11.5%)
Fed baby at midday	Breastfeeding	3 (5.4%)	1 (1.8%)
	Non-Breastfeeding	4 (6.6%)	8 (13.1%)
Fed baby at dinnertime	Breastfeeding	2 (3.6%)	3 (5.4%)
	Non-Breastfeeding	8 (13.1%)	18 (29.5%)
<u>Non-Feeding Tasks</u>			
Got baby up and dressed	Breastfeeding	4 (7.1%)	4 (7.1%)
	Non-Breastfeeding	2 (3.3%)	6 (9.8%)
	All Fathers	6 (5.0%)	10 (8.4%)
Bathed baby	Breastfeeding	0	4 (7.1%)
	Non-Breastfeeding	1 (1.6%)	8 (13.1%)
	All Fathers	1 (0.9%)	12 (10.3%)
Put baby to sleep	Breastfeeding	4 (7.3%)	17 (30.9%)
	Non-Breastfeeding	9 (14.8%)	25 (41.0%)
	All Fathers	13 (11.2%)	42 (36.2%)

with the mother. That is, in some tasks, fathers had been more participatory either alone or with the mother at age 3 weeks, while in other tasks they were more involved at age 3 months.

Fathers were again asked, at age 3 months, how often they diapered the baby. On a non-working day, fathers of breastfed and non-breastfed infants reported diapering an average of 2.1 times. On a working day, the average number reported was 1.2 for fathers of breastfed infants and 1.3 for fathers of non-breastfed infants. While there was some increased involvement in diapering by fathers on a non-workday as compared with performance at age 3 weeks, fathers continued to perform minimally in this area as compared with mothers, who reported performance of an average of 6.5 diaperings per day for 3-month-old infants.

Summary. This research objective assessed fathers' involvement in routine physical care tasks with their 3-week-old and 3-month-old infants. Mothers dominated in performing infant care. The overall participation of fathers was relatively small; nonetheless, some patterns emerged.

Fathers of non-breastfed infants tended to perform more physical care tasks at age 3 weeks than did fathers of breastfed infants. Although this trend continued at age 3 months, the differences in performance between the two

groups of fathers were considerably smaller at age 3 months. Fathers of breastfed infants were somewhat more participatory overall at age 3 months than at age 3 weeks, whereas fathers of non-breastfed infants were slightly less involved at age 3 months than they had been at age 3 weeks. Both groups of fathers performed more care tasks, at both ages 3 weeks and 3 months, when accompanying the mother than when doing them alone; both groups also performed more care tasks on a non-workday than on a workday.

Non-Care Involvement of Fathers

Because physical caretaking represented only one dimension of the interaction of parent and child, father involvement with infants in non-care activities was assessed in research objective #2. Responses to Questions 8, 11 and 13 on the fathers' questionnaire and Question 14 on the mothers', at both ages 3 weeks and 3 months, provided necessary data. In view of the fact that tests of significance revealed that the main effects of the type of feeding modality employed by the mother (breastfeeding versus non-breastfeeding) and membership in either Group A or Group B were not significant in either play or comforting performance, data are reported below for combined groups of subjects.

To examine non-care interaction of fathers with their infants, the areas of play and comforting activities

were studied. Table 21 contains data on the average number of play and comforting episodes reported by fathers and mothers during a 7 day period when infants were 3 weeks of age. The data show that fathers reported playing with their infants on the average of more than once but less than twice a day, as compared with mothers who reported playing between three and four times a day. Table 21 also presents data on the frequency of comforting activities by mothers and fathers during the same 7 day period. Both fathers and mothers reported comforting the baby about as often as they played with the infant, and again mothers performed this task approximately twice as often as did fathers.

Fathers were also asked to report how much time they spent in play on two particular days, the last non-workday and the last workday. Data in Table 22 indicate that on a non-workday, fathers reported playing with their 3-week-old infants approximately 2 hours, 90% of which time was spent solely in play with the baby, without engaging in any other activity. About three-quarters of the fathers indicated they did not engage in any other activity during play with their baby, as Table 23 shows. Of those who said they engaged in another activity while playing with the baby, most reported watching television.

Data on the reported time in play on a working day are also contained in Table 22. Fathers reported

TABLE 21

MEAN NUMBER OF PLAY AND COMFORTING TASKS REPORTED
 BY MOTHERS AND FATHERS DURING PAST 7 DAYS
 WHEN INFANTS AGE 3 WEEKS

Activity	Mother \bar{X} (SD)	Father \bar{X} (SD)
Played with baby	25.3 (14.4)	12.4 (7.6)
Comforted baby	25.3 (17.4)	11.2 (9.4)

TABLE 22

MEAN AMOUNT OF TIME REPORTED BY FATHERS IN PLAY
ACTIVITIES ON NON-WORKDAY AND WORKDAY
WHEN BABY AGE 3 WEEKS

	<u>Non-Workday</u>		<u>Workday</u>	
	<u>Minutes</u> \bar{X} (SD)	<u>Hours</u> \bar{X} (SD)	<u>Minutes</u> \bar{X} (SD)	<u>Hours</u> \bar{X} (SD)
Total time	114.2 (83.6)	1.9 (1.4)	87.9 (76.0)	1.5 (1.3)
Time in baby focused play	102.8 (81.0)	1.7 (1.4)	71.0 (67.5)	1.2 (1.1)

playing with their infants about 1 1/2 hours on a working day, with approximately 80% of the time devoted solely to the infant. Of the fathers who responded about simultaneous activity during this play time, about half reported engaging in no other activity during baby play, as is seen in Table 23. In comparing time in play reported by fathers on days in which they worked and those in which they did not work, one finds that on a working day fathers spent about 25% less time in play.

When infants were 3 months of age, fathers and mothers were again questioned on the frequency of play and comforting. Table 24 contains data showing that fathers played with their infants on the average about twice a day and comforted their babies somewhat less, between once and twice a day. Mothers, in contrast, reported playing on the average of almost eight times a day, while comforting about three times a day. At this age, both mothers and fathers apparently play with their babies more than they comfort them. This finding differs from that found when the babies were 3 weeks of age, when parents comforted and played with approximately the same frequency. A further comparison between the non-care interaction at ages 3 weeks and 3 months indicates that both parents played more often with their infants at age 3 months but comforted less often than at that age.

Fathers again reported on how much time they had

TABLE 23
PERCENTAGE OF FATHERS REPORTING SIMULTANEOUS
ACTIVITY WITH BABY PLAY WHEN BABY
AGE 3 WEEKS

Activity	Non-Workday	Workday
Television	15.4	12.7
Radio, Music	1.5	2.2
Hobbies	0.8	2.2
Reading	0.8	1.5
No Activity	74.6	51.5
No Response	6.9	29.9

TABLE 24

MEAN NUMBER OF PLAY AND COMFORTING TASKS REPORTED BY
MOTHERS AND FATHERS DURING PAST 7 DAYS WHEN
INFANTS AGE 3 MONTHS

Activity	Mother \bar{X} (SD)	Father \bar{X} (SD)
Played with baby	31.7 (13.8)	14.3 (10.3)
Comforted baby	22.1 (15.0)	9.1 (6.8)

spent playing with their 3-month-old babies on the last non-work and workday. As seen in Table 25, on a non-workday fathers spent about 2 1/2 hours playing with their babies, of which time 87% was devoted to play without any simultaneous activity. Data in Table 26 show that most fathers who replied (80.8%) indicated not doing anything else while playing with their babies. Of those who did engage in another activity, watching television continued to be the most popular.

Tables 25 and 26 also contain data on the play activities of fathers on a working day. On such a day, fathers reported spending an average of 1 1/2 hours in play, of which 92% of the time was spent focusing attention only on the baby. Again most of the fathers (79.2%) reported engaging in no other activity while playing with their babies; television watching was the most popular activity performed while playing with the baby.

In comparing the play activities of fathers from the time babies were ages 3 weeks to when they were 3 months old, one finds that fathers reported playing somewhat more with 3-month-old infants, particularly on a non-working day, when they reported an average of 41 minutes more per day in play. When infants were 3 months of age, more fathers also reported not engaging in any other activity while playing with their babies, on both non-work and workdays.

TABLE 25

MEAN AMOUNT OF TIME REPORTED BY FATHERS IN PLAY
 ACTIVITIES ON NON-WORKDAY AND WORKDAY WHEN
 BABY AGE 3 MONTHS

	<u>Non-Workday</u>		<u>Workday</u>	
	<u>Minutes</u> \bar{X} (SD)	<u>Hours</u> \bar{X} (SD)	<u>Minutes</u> \bar{X} (SD)	<u>Hours</u> \bar{X} (SD)
Total time	154.9 (105.7)	2.6 (1.8)	92.9 (77.6)	1.5 (1.3)
Time in baby focused play	135.0 (102.2)	2.3 (1.7)	85.7 (79.3)	1.4 (1.3)

TABLE 26
PERCENTAGE OF FATHERS REPORTING SIMULTANEOUS
ACTIVITY WITH BABY PLAY WHEN BABY
AGE 3 MONTHS

Activity	Non-Workday	Workday
Television	9.2	9.2
Radio, Music	0.8	0.8
Hobbies	3.3	0.8
Reading	0	1.7
No Activity	80.8	79.2
No Response	6.2	8.3

Anticipated and Actual Involvement of
Fathers at Ages 3 Weeks and 3 Months

The purpose of research objective #3 was to assess the congruence between fathers' prenatal expectations about involvement with their infants at ages 3 weeks and 3 months and their actual interaction at those times. Also of interest was the comparison of levels of performance of routine care and social interaction at the neonatal and post-neonatal times. In this section the data on father anticipation and actual performance of routine physical care tasks will be provided first, followed by data on performance of play and comforting activities. Finally the outcome of tests of significance on comparative performance of tasks at T_2 and T_3 will be reported.

Responses to Questions 21 through 25 of the father prenatal questionnaire (T_1) and answers to Questions 8, 9, 10, 11, 12 and 13 of the two postnatal questionnaires (T_2 and T_3) provided the necessary information for this objective. Data from mothers' Questions 13 and 14 of the postnatal questionnaires were also used. Information on the reliability of the instrumentation can be found in the earlier section on research objective #1.

Comparison of anticipated and actual performance. Because the objective involved comparison of predicted and actual performance at three data collection points, it was

necessary to limit the analysis of data elements in complete data sets; only those subjects who were members of the predicting group, Group A, and who returned all data sets were included in this analysis. There were 63 couples who fit these criteria.

Table 27 presents data on fathers' anticipated and actual frequency of performance of three routine care tasks--diapering, bathing and feeding. Four possible responses (never, occasionally, once or twice a day, several times a day) were given to respondents in the prenatal questionnaire. Postnatally, fathers were asked how many times they had actually performed those tasks during the preceding 7 days. Responses to the postnatal questions were then categorized into the four categories used prenatally.

Inspection of Table 27 shows that fathers generally overestimated at the prenatal data collection time how involved they were going to be with their infants. The inaccuracy in predictions for diapering and bathing are particularly noteworthy in the comparison of the percent of fathers who anticipated and who actually never performed either task. Considerably more fathers did not diaper or bathe their babies at ages 3 weeks and 3 months than had so anticipated. For bathing, particularly, fathers participated considerably less than they had anticipated. Tests of correlated proportions between predicted and actual bathing data were statistically significant for both

TABLE 27

COMPARISON OF FATHERS' ANTICIPATED FREQUENCY OF PERFORMANCE OF
THREE ROUTINE CARE TASKS AND MEAN NUMBER OF TASKS REPORTED
BY FATHERS DURING PAST 7 DAYS

Frequency	Task: Diapering (N=63)		Task: Bathing (N=63)	
	Three Weeks Anticipated	Actual	Three Weeks Anticipated	Actual
Never	4.8%	15.9%	9.5%	76.2%
Occasionally (1-6 times/week)	52.4%	50.7%	77.8%	23.8%
Once or twice a day (7-14 times/week)	27.0%	20.7%	12.7%	0%
Several times a day (15+ times/week)	15.9%	12.8%		
	Three Months Anticipated		Three Months Actual	
Never	1.6%	19.0%	4.8%	74.2%
Occasionally (1-6 times/week)	49.2%	46.0%	81.0%	25.7%
Once or twice a day (7-14 times/week)	30.2%	25.4%	14.3%	0%
Several times a day (15+ times/week)	19.0%	9.6%		
	Three Months Anticipated		Three Months Actual	
Never	1.6%	19.0%	4.8%	74.2%
Occasionally (1-6 times/week)	49.2%	46.0%	81.0%	25.7%
Once or twice a day (7-14 times/week)	30.2%	25.4%	14.3%	0%
Several times a day (15+ times/week)	19.0%	9.6%		

not applicable

TABLE 27: continued

<u>Task: Feeding by Fathers of Breastfed Infants</u>		<u>Three Weeks</u> (N=46)		<u>Three Months</u> (N=43)	
Frequency	Anticipated	Actual	Anticipated	Actual	Actual
Never	50.0%	63.0%	33.3%	44.2%	
Occasionally (1-6 times/week)	32.4%	24.0%	43.3%	46.5%	
Once or twice a day (7-14 times/week)	17.6%	8.7%	23.3%	6.9%	
Several times a day (15+ times/week)	0%	4.4%	0%	2.3%	
<u>Task: Feeding by Fathers of Non-Breastfed Infants</u>					
Frequency	<u>Three Weeks</u> (N=25)		<u>Three Months</u> (N=31)		
	Anticipated	Actual	Anticipated	Actual	Actual
Never	8.0%	4.0%	3.4%	9.7%	
Occasionally (1-6 times/week)	32.0%	28.0%	27.6%	38.7%	
Once or twice a day (7-14 times/week)	40.0%	64.0%	51.7%	48.5%	
Several times a day (15+ times/week)	20.0%	4.0%	17.2%	3.2%	

T_2 ($\chi^2(3) = 45.0, p < .001$) and T_3 ($\chi^2(3) = 44.0, p < .001$). Data on anticipated versus actual performance of diapering were not significant for T_2 but were significant for T_3 ($\chi^2(6) = 13.87, p < .05$).

Similar data are reported for feeding except that data for fathers of breastfed and non-breastfed infants are separate. Considerably more fathers of both breastfed and non-breastfed infants had anticipated feeding once or twice a day than actually did so at age 3 weeks and considerably more fathers of non-breastfed infants also had predicted feeding several times a day. For age 3 months, again considerably more fathers of breastfed infants had anticipated feeding once or twice a day and considerably more fathers of non-breastfed infants had anticipated feeding several times a day than actually did so. These differences in predicted versus actual performance were not significant for either fathers of breastfed or non-breastfed infants at T_2 or at T_3 .

Table 28 contains data on the anticipated and actual performance of play and comforting tasks. The same four response categories used for the care items were used for reporting play and comforting involvement. For both ages 3 weeks and 3 months fathers were inaccurate in their predictions. Although more than 3/4 of the fathers had anticipated playing with their babies several times a day, most played only once or twice a day. These differences

TABLE 28

COMPARISON OF FATHERS' ANTICIPATED PERFORMANCE OF PLAY AND COMFORTING TASKS AND MEAN NUMBER OF TASKS REPORTED BY FATHERS DURING PAST 7 DAYS

Frequency	Task: Playing (N=63)		Task: Comforting (N=63)	
	Three Weeks Anticipated	Three Weeks Actual	Three Weeks Anticipated	Three Weeks Actual
Never	1.6%	1.9%	1.6%	1.9%
Occasionally (1-6 times/week)	4.8%	15.3%	6.3%	27.8%
Once or twice a day (7-14 times/week)	17.5%	49.8%	23.8%	46.4%
Several times a day (15+ times/week)	76.2%	32.6%	68.3%	24.3%
			Task: Comforting (N=63)	
			Three Months Anticipated	Three Months Actual
Never			0%	1.8%
Occasionally (1-6 times/week)			4.8%	36.9%
Once or twice a day (7-14 times/week)			30.2%	52.7%
Several times a day (15+ times/week)			65.1%	8.9%

were statistically significant for both age 3 week data ($\chi^2(6) = 18.23, p < .01$) and 3 month data ($\chi^2(6) = 27.15, p < .001$). A similar overestimation of comforting performance was seen in the data and again the differences between predicted and actual performance were statistically significant at both ages 3 weeks ($\chi^2(6) = 22.46, p < .001$) and 3 months ($\chi^2(6) = 34.89, p < .001$).

Comparison of T₂ and T₃ performance. In addition to the significance tests on anticipated and actual performance reported above, comparison of actual performance at ages 3 weeks and 3 months is provided by analysis of data from the complete sample of subjects who returned all questionnaires. There were 120 such couples. Similar data reported for any couple returning questionnaires were discussed earlier in objective #1. The comparative statistical analysis, however, was necessarily restricted to data from those couples providing complete data sets. Tables containing descriptive statistics on the 120 couples can be found in Appendix G.

For purposes of comparative analysis, fathers were divided into three groups according to feeding modalities of their infants at both T₂ and T₃. These groups were fathers of infants breastfed at both ages 3 weeks and 3 months (Group 1), fathers of infants not breastfed at either data collection time (Group 2) and fathers of infants

breastfed at age 3 weeks but not at age 3 months (Group 3). Table 29 presents results of tests of significance on father performance of five routine tasks at ages 3 weeks and 3 months. Because comparison was made of T_2 to T_3 performance by fathers, positive \underline{t} values represent decreases in father performance at T_3 and negative \underline{t} values represent increases in performance at T_3 . Significant differences in fathers' performance from T_2 to T_3 were observed for all three father groups on the tasks of putting the baby to sleep and getting up during the night. In both cases, fathers performed significantly fewer tasks at age 3 months than at age 3 weeks. Also, for the group of fathers of infants breastfed at both ages 3 weeks and 3 months, a significant difference in bathing was observed, with fathers participating more at age 3 months than at age 3 weeks.

Tables 30 and 31 present results of tests of significance on father versus mother performance of the five care tasks at ages 3 weeks and 3 months. Results indicate that mothers did significantly more than fathers did for all care tasks at both infant ages, except for one variable at T_3 .

Tests of significance on fathers' play activities for ages 3 weeks and 3 months are shown in Table 32. For this analysis, all fathers were combined into one subject group. Results show significant differences in most areas

TABLE 29

TESTS OF SIGNIFICANCE ON FATHER PERFORMANCE OF FIVE
ROUTINE CARE TASKS AT AGES 3 WEEKS AND 3 MONTHS

Activity	<u>N</u>	<u>t</u>	<u>p</u>
Putting to Sleep			
Group 1	54	3.76	.000
Group 2	44	2.47	.018
Group 3	14	2.43	.030
Diapering Baby			
Group 1	54	-.53	.597
Group 2	45	-.02	.984
Group 3	15	-.26	.801
Bathing Baby			
Group 1	55	-2.08	.043
Group 2	44	-.72	.474
Group 3	15	.20	.843
Feeding Baby			
Group 1	55	-1.32	.192
Group 2	45	.81	.424
Group 3	15	-1.20	.249
Getting up during Night			
Group 1	53	4.08	.000
Group 2	46	3.61	.001
Group 3	15	2.45	.028

TABLE 30

TESTS OF SIGNIFICANCE ON MOTHER VERSUS FATHER
PERFORMANCE OF FIVE ROUTINE CARE TASKS
AT AGE 3 WEEKS

Activity	<u>N</u>	<u>t</u>	<u>p</u>
Putting to Sleep			
Group 1	47	-8.80	.000
Group 2	38	-6.81	.000
Group 3	11	-4.07	.002
Bathing Baby			
Group 1	49	-25.87	.000
Group 2	45	-15.29	.000
Group 3	13	-14.41	.000
Diapering Baby			
Group 1	45	-16.90	.000
Group 2	37	-13.94	.000
Group 3	12	-9.48	.000
Feeding Baby			
Group 1	45	-30.87	.000
Group 2	38	-11.23	.000
Group 3	11	-9.05	.000
Getting up during Night			
Group 1	46	-9.46	.000
Group 2	43	-4.82	.000
Group 3	11	-3.67	.004

TABLE 31
 TESTS OF SIGNIFICANCE ON MOTHER VERSUS FATHER
 PERFORMANCE OF FIVE ROUTINE CARE TASKS
 AT AGE 3 MONTHS

Activity	<u>N</u>	<u>t</u>	<u>P</u>
Putting to Sleep			
Group 1	55	-8.30	.000
Group 2	41	-4.96	.000
Group 3	12	-4.84	.001
Diapering Baby			
Group 1	53	-15.82	.000
Group 2	35	-10.80	.000
Group 3	13	-6.45	.000
Bathing Baby			
Group 1	55	-18.92	.000
Group 2	42	-11.71	.000
Group 3	14	-8.68	.000
Feeding Baby			
Group 1	50	-16.32	.000
Group 2	41	-12.33	.000
Group 3	14	-6.20	.000
Getting up during Night			
Group 1	54	-3.39	.001
Group 2	45	-1.28	.21
Group 3	15	-.97	.35

TABLE 32
 TESTS OF SIGNIFICANCE ON FATHER PLAY ACTIVITIES
 AT AGES 3 WEEKS AND 3 MONTHS

Activity	<u>N</u>	<u>t</u>	<u>p</u>
Total Play Time			
Non-Workday	97	-3.79	.000
Workday	77	-.74	.463
Baby-Focused Play			
Non-Workday	93	-2.61	.010
Workday	76	-5.38	.000
Total Play versus Baby only Play			
Non-Workday			
3 weeks	102	3.34	.001
3 months	107	3.48	.001
Workday			
3 weeks	82	3.73	.000
3 months	108	3.15	.002

of time spent in play from the 3 week to the 3 month data collection times. Fathers spent significantly more time in total play on a non-workday and in baby focused play on a non-workday and a workday at age 3 months than they had at age 3 weeks. When the amount of total play time was compared with baby focused play time, one finds fathers also spending significantly more time in total play than in baby focused play at all times.

Summary. Objective #3 assessed fathers' anticipated and actual performance of care and non-care activities with their infants. Fathers generally overestimated how much care and social involvement they would be providing at both ages 3 weeks and 3 months, with differences significant for most measures.

The objective also compared fathers' performance of care and non-care tasks from the time that the infants were age 3 weeks to when they were 3 months of age. These data showed significant differences in performance of some areas of care from T_2 to T_3 . Significant differences in the time that fathers spent in play from ages 3 weeks to 3 months were also found. Differences in mother and father performance were significant for all care tasks performed by fathers of infants breastfed at both data collection times and for all but one care task for the other father groups.

Mother Attitude Toward Father Involvement

Because the mother's attitude may influence the extent of father participation in the care of his infant, objective #4 examined mothers' attitudes toward fathers' involvement at ages 3 weeks and 3 months. Data for this objective were supplied by responses to the last question given to mothers on the T₂ and T₃ questionnaires, asking them to evaluate their satisfaction with their husband's level of participation in caring for the infant. The number of mothers responding was 135 at T₂ and 119 at T₃.

Table 33 contains data on this question for both the 3 week and 3 month collection times. Reference to the table indicates that at both ages 3 weeks and 3 months about three-quarters of the mothers preferred their husbands' level of involvement. Conversely, one-fifth to one-fourth of mothers, depending on the type of feeding modality, wished their husbands would help more. More mothers of breastfed than of non-breastfed infants preferred the level of participation at age 3 weeks, while slightly more mothers of non-breastfed infants were satisfied at age 3 months. Among all mothers, slightly more preferred the level of involvement at age 3 weeks than at age 3 months.

TABLE 33
 MOTHERS' ATTITUDES TOWARD EXTENT OF FATHER
 INVOLVEMENT IN BABY CARE AT 3 WEEKS
 AND 3 MONTHS

	<u>Responses</u>		
	Helps too Much	Helps Just Enough	Should Help More
<u>Age 3 Weeks</u>			
Breastfeeding	2.7%	79.5%	17.8%
Non-Breastfeeding	1.7%	75.0%	23.3%
All Mothers	2.3%	77.4%	20.3%
<u>Age 3 Months</u>			
Breastfeeding	0%	73.2%	26.8%
Non-Breastfeeding	1.6%	79.4%	19.0%
All Mothers	0.8%	76.5%	22.7%

Relationship of Demographic Variables
to Father Involvement

The purpose of the fifth research objective was to determine whether six demographic and personalogical characteristics of fathers correlated with the fathers' satisfaction and involvement with their infants. These six characteristics were father age, education, profession, number of years married, previous experience with children and household participation. In discussing this research objective, the nature of the data will be described first, followed by a discussion of the household scale information. This will be followed by information about the satisfaction with fatherhood scales. And finally, a reporting of the findings of the correlations between father involvement and satisfaction and the six characteristics will be given. The number of respondents contributing data ranged from 169 for some of the prenatal questions to 63, depending upon the specific question involved.

Data in this objective were contributed by responses to Questions 4, 5, 6, 8, 10 and 11 of the fathers' questionnaire at the prenatal data collection, T_1 . These questions were answered by all fathers. Information on father age, education, profession, and years married was recorded as discussed earlier in Chapter III. For purposes of this analysis, experience with children was categorized in four categories: professionally trained to work with

children, informal experience as an adult, informal experience only as an adolescent, and no experience. Responses to Questions 8, 9, 11, 13, 16 and 17 of the father forms at T₂ and T₃ also provided data, as did Questions 13 and 14 on the mothers' forms. Question 9 on the father form and Question 13 on the mothers', as previously discussed, requested that parents respond on a 5-point relative task distribution scale indicating which parent generally performed several household and baby care tasks. Question 8 of the fathers' questionnaire and Question 14 on the mothers' version requested information from each parent about how many times they had performed care and non-care activities during the last week. In Questions 11 and 13, on the fathers' forms, information was requested about time spent in play on both work and non-work days. Questions 16 and 17 asked fathers to show their levels of satisfaction with various aspects of involvement with their infants, including satisfaction with their new parenthood role.

Measures of household participation. Two approaches were taken to examine father involvement in household tasks. The first approach was to use seven items necessary to family functioning, and, giving each equal weight, to reflect in the Household Scales the degree to which these tasks were performed by the husband and wife. A second

approach was to dichotomize 10 household tasks in terms of their being performed traditionally by males and females, and to form male-oriented and female-oriented task scales. Each of these two approaches to examining father involvement is discussed in this section.

First, Household Scales were formed to assess the level of participation of fathers in routine household care that was exclusive of any child care at the three time points considered. In all three scales, Household Scales 1, 2 and 3, both mothers and fathers were asked to evaluate the relative participation of each parent on seven items, using a 5-point relative task distribution format similar to that used on the care scale items. These household items included grocery shopping, meal preparation, dishes and cleanup from meals, doing laundry, keeping track of money and bills, housecleaning, and earning money to support the family. Item scores reported by parents could have ranged from 1, indicating total performance by the wife, to 5, showing that the husband performed the task entirely. A score of 3 would have indicated an equal sharing of responsibility. Scale scores for each subject could have thus ranged from 7 to 35, with the latter indicating maximum assumption of household responsibility by the father. The internal consistency reliability for this scale was found to be .65 for the fathers' and .36 for the mothers'.

Because both parents responded to the relative task distribution questions on household division of labor, cross-validation of responses was possible. Table 34 contains data on the corroboration of mother and father reports on the division of labor for the seven household items in the scales at the three data collection times for respondents returning all questionnaires. Inspection of the data in the table indicates a high degree of agreement between mother and father reports on the household scales of all three data collection points and therefore show adequate interrater reliability.

Tables 35, 36, and 37 show item and scale means for the household scales at the three data collection times. For the prenatal time, only fathers and mothers in Group A answered these questions and subjects were considered as one group because no feeding modality (breastfeeding or non-breastfeeding) differentiated the subjects yet. All subjects responded to the questions about household tasks performed at T_2 and T_3 and responses of fathers and mothers of breastfed infants were analyzed separately from those of parents of non-breastfed infants. Reference to Table 35 indicates that before the baby was born, mothers performed most tasks alone or with minimal assistance from the fathers, with nearly equal sharing of the responsibility for attending to household money and bills. Fathers assumed greater responsibility for earning the family

TABLE 34

AGREEMENT OF MOTHER AND FATHER REPORTS OF DIVISION
OF LABOR ON HOUSEHOLD SCALES AT THE PRENATAL,
AGE 3 WEEK AND AGE 3 MONTH DATA COLLECTIONS

Data Collection	<u>N</u>	Pearson Correlation
Prenatal	81	.79
3 Week	119	.83
3 Month	116	.81

TABLE 35

ITEM AND SCALE MEANS OF RATINGS ON RELATIVE TASK
DISTRIBUTION OF HOUSEHOLD TASKS AT PRENATAL
DATA COLLECTION TIME

<u>Household Scale 1</u> Activities	Mother Report (<u>N=81</u>)	Father Report (<u>N=81</u>)
Grocery shopping	2.1	2.4
Meal preparation	1.9	1.9
Dishes and cleanup	1.9	2.1
Laundry	1.7	1.7
Money and bills	2.8	3.1
Housecleaning	1.9	2.1
Earning money	4.0	3.9
<u>Scale Mean</u>	16.2	17.2

TABLE 36

ITEM AND SCALE MEANS OF RATINGS ON RELATIVE TASK
DISTRIBUTION OF HOUSEHOLD TASKS AT
AGE 3 WEEKS

<u>Household Scale 2</u> Activities	<u>Breastfeeding</u>		<u>Non-Breastfeeding</u>	
	Mother Report (<u>N=75</u>)	Father Report (<u>N=75</u>)	Mother Report (<u>N=60</u>)	Father Report (<u>N=60</u>)
Grocery shopping	3.4	3.5	3.6	3.5
Meal preparation	2.3	2.3	2.2	2.4
Dishes and cleanup	2.4	2.5	2.5	2.5
Laundry	2.3	2.3	2.3	2.2
Money and bills	3.2	3.3	2.7	2.9
Housecleaning	2.1	2.3	2.3	2.5
Earning money	4.8	4.7	4.7	4.8
<u>Scale Mean</u>	20.4	21.1	19.9	20.4

TABLE 37

ITEM AND SCALE MEANS OF RATINGS ON RELATIVE TASK
DISTRIBUTION OF HOUSEHOLD TASKS AT
AGE 3 MONTHS

<u>Household Scale 3</u> Activities	<u>Breastfeeding</u>		<u>Non-Breastfeeding</u>	
	Mother Report (<u>N=57</u>)	Father Report (<u>N=57</u>)	Mother Report (<u>N=60</u>)	Father Report (<u>N=60</u>)
Grocery shopping	2.2	2.5	2.1	2.3
Meal preparation	1.8	1.8	1.6	1.8
Dishes and cleanup	1.7	2.1	2.1	2.3
Laundry	1.5	1.6	1.5	1.6
Money and bills	2.9	3.1	2.6	2.7
Housecleaning	1.6	1.9	1.7	1.9
Earning money	4.9	4.6	4.3	4.4
<u>Scale Mean</u>	16.3	17.5	16.0	16.9

income. Mothers reported slightly less father participation on most tasks than fathers themselves reported.

At age 3 weeks, as seen in Table 36, both mothers and fathers in both subject groups reported greater father participation in many areas of household care and these differences in performance from T_1 to T_2 were found to be significant for those fathers who were members of Group A ($t(58) = -6.17, p < .00$). Data in Table 37 show that when infants were 3 months of age fathers performed fewer household tasks than they had performed at age 3 weeks and had returned to levels of involvement comparable to those found prenatally. The t tests of significance showed no significant differences between participation at T_1 and T_3 for fathers of Group A but data in Table 38 show significant differences between father and mother performance at all three data collection times for those subjects who had been members of Group A and had returned all questionnaires ($N = 63$).

To determine whether father participation was significantly different from T_2 to T_3 , tests of significance were performed, as seen in Table 39. To perform this analysis, three groups of subjects were again formed depending upon feeding modality at both the T_2 and T_3 times because feeding modality (breastfeeding or non-breastfeeding) could have changed from T_2 to T_3 . Data in Table 39 indicate significant differences were found between household

TABLE 38
 TESTS OF SIGNIFICANCE ON HOUSEHOLD SCALE SCORES
 FOR MOTHERS AND FATHERS AT T₁,
 T₂ and T₃

Data Collection	<u>N</u>	<u>t</u>	<u>p</u>
Prenatal	63	3.79	.000
3 Weeks	57	1.79	.08
3 Months	62	4.11	.000

TABLE 39
 TESTS OF SIGNIFICANCE ON HOUSEHOLD SCALE SCORES
 FOR FATHERS AT T₂ AND T₃ DATA COLLECTIONS

Feeding Group	<u>N</u>	<u>t</u>	<u>p</u>
Group 1 (Breastfeeding only)	54	7.25	.000
Group 2 (Non-Breastfeeding only)	52	6.30	.000
Group 3 (Breastfeeding to Non-Breastfeeding)	12	3.41	.006

scale scores at T_2 and T_3 for all groups of fathers, with decreases in participation at the T_3 data collection time.

To ascertain whether there was a relationship between father participation in household chores at the three data collection points, correlations among scores were obtained. Reference to Table 40 reveals that a modest relationship existed between the scores obtained at T_1 and T_3 as well as between scores at T_2 and T_3 but that a less strong relationship was evident between household participation at T_1 and T_2 .

In order to determine whether father participation in household tasks was related to participation in baby care tasks, correlations were obtained among the scales at the 3 week and 3 month times. Data in Table 41 indicate little relationship between the two areas of father participation.

The second approach to analyzing father involvement in household tasks, as discussed above, was to analyze father performance of tasks traditionally performed by males and females. At the prenatal data collection time, fathers of Group A completed a relative task distribution on 10 household chores, five of which were traditionally performed by women (e.g., grocery shopping, housecleaning, meal preparation) and five of which men usually did (e.g., earning the household income, care of the car, keeping track of money and bills). (A complete list of tasks can

TABLE 40
CORRELATIONS BETWEEN FATHER HOUSEHOLD SCALE
SCORES FOR T_1 , T_2 AND T_3

	T_2	T_3
T_1	.42	.63
T_2		.61

TABLE 41
 CORRELATIONS BETWEEN BABY CARE AND HOUSEHOLD
 SCALE SCORES AT AGES 3 WEEKS AND 3 MONTHS

	Care Scale 1 (T ₂)	Care Scale 2 (T ₂)	Care Scale 3 (T ₃)	Care Scale 4 (T ₃)
<u>Household Scale 2</u> (T ₂)				
Mother	.21	.21		
Father	.19	.26		
<u>Household Scale 3</u> (T ₃)				
Mother			.25	.31
Father			.06	.11

be found in the prenatal questionnaire in Appendix C.) Using responses to those tasks, fathers were assigned to categories of traditionalness in their orientation toward sex roles. Five categories were formed for the responses to male-oriented tasks--very traditional, traditional, egalitarian, nontraditional, and very nontraditional. The very traditional category included husbands who performed all or almost all traditionally male tasks; traditional included scores showing that husbands did most, but not all, male-oriented tasks. The egalitarian category indicated a sharing of these tasks by husbands and wives and nontraditional and very nontraditional indicated that the wife performed most and almost all of these male-oriented tasks, respectively. The same five categories were used to categorize the husbands' performance of traditional female-oriented tasks and ranged from very traditional, where the wife did all of such tasks, to very nontraditional, where the husband performed all of the tasks. Analysis of respondents' category assignments revealed that for the male-oriented tasks, most fathers were very traditional (49.1%) or traditional (41.8%), with some sharing tasks equally with their wives (9.1%). No fathers were either nontraditional or very nontraditional. For the so-called female-oriented tasks, fathers were somewhat less traditional, with 23.9% being categorized as very traditional, 61.2% as traditional and 14.9% being egali-

tarian. Again none of the fathers were nontraditional or very nontraditional, using the criteria discussed above, in their sex role orientation.

Satisfaction with fatherhood scales. Three scales were formed to analyze satisfaction of fathers with their new roles. The first scale involved combining the five items in Question 16 of the fathers' questionnaires at T_2 and T_3 and the second scale combined the five items of Question 17. A combination of all 10 items of both questions made up Satisfaction Scale 3. The internal consistency reliability of each scale is presented in Table 42. Because Satisfaction Scale 3 had the greatest, albeit a modest, reliability, this scale was used in the analysis of the correlations between father satisfaction and the demographic variables.

Demographic and personalogical variables and father involvement. Correlations were obtained on all pairs of the following predictor and outcome variables: father age, father education, father profession, years married, experience with children, male task traditionality, female task traditionality and Household Scales, and the Care Scale, five routine care items, playing time and satisfaction with fatherhood. As seen in Tables 43 and 44, these values ranged from .00 to .43. The highest values, which were moderate, were all related to household participation

TABLE 42
INTERNAL CONSISTENCY RELIABILITY OF
SATISFACTION SCALES

Scale 1	Scale 2	Scale 3
.55	.48	.63

TABLE 43

CORRELATIONS BETWEEN FATHER DEMOGRAPHIC AND PERSONALOGICAL VARIABLES AND FATHER INVOLVEMENT AND SATISFACTION AT AGE 3 WEEKS

Outcome Variables	Predictor Variables							T ₂ Household Scale
	Age	Education	Occupation	Years Married	Experience With Children	T ₁ ^a Male Task Traditionality	T ₁ ^a Female Task Traditionality	
Care Scale 1	.03	.17	.20*	-.09	-.13	-.03	.31***	.19*
Care Scale 2	.01	.10	.18*	-.07	-.04	-.06	.41***	.26**
Putting to sleep	-.02	-.13	.02	.22**	.14	-.13	.11	.16
Diapering	.05	-.13	-.01	.16	.04	-.10	.43***	.26**
Bathing	-.02	.03	.03	-.08	.17*	.12	.02	.07
Feeding	.07	.07	.02	-.03	.22**	.04	.15	-.05
Getting up during night	.04	-.10	.00	.14	-.13	.07	.35**	.26**
Playing: Workday	-.02	.16	.05	-.03	.07	-.15	-.04	-.22*
Playing Baby Only: Workday	.01	.12	.06	.00	.03	-.12	-.29	-.12
Playing: Non-workday	-.15	.16	.12	-.01	-.07	-.02	-.04	.00
Playing Baby Only: Non-Workday	-.10	.08	.09	.01	-.11	-.06	-.10	.02
Satisfaction with Fatherhood	.17	.10	-.18	.12	.16	-.01	-.07	.00

* $P < .05$ ** $P < .01$ *** $P < .001$ ^a These data based on $N=63$.

TABLE 44
CORRELATIONS BETWEEN FATHER DEMOGRAPHIC AND PERSONALOGICAL VARIABLES AND
FATHER INVOLVEMENT AND SATISFACTION AT AGE 3 MONTHS

Outcome Variables	Predictor Variables							T ₃ Household Scale
	Age	Education	Occupation	Years Married	Experience With Children	T ₁ ^a Male Task Traditionality	T ₁ ^a Female Task Traditionality	
Care Scale 3	-.01	.09	.10	-.07	-.01	-.05	.30*	.06
Care Scale 4	-.01	-.03	.08	-.09	.06	-.02	.33**	.11
Putting to sleep	-.03	-.03	.10	.00	.06	-.07	.19	.18
Diapering	.01	.03	.00	.11	.11	-.03	.11	.27**
Bathing	.00	.00	-.03	-.14	-.05	.04	.06	-.02
Feeding	-.01	.16	.02	-.02	-.06	-.05	.22	.03
Getting up during night	.00	-.05	-.03	.15	-.14	-.03	.24	.16
Playing: Workday	-.13	.12	.00	-.14	-.16	-.09	-.29*	-.22
Playing Baby only: Workday	-.12	.18	.05	-.18	-.16	-.14	-.21	-.23*
Playing: Non-Workday	-.07	.01	.01	.02	.02	-.27	.09	-.09
Playing Baby Only: Non-Workday	-.06	.06	-.04	.01	.01	-.22	.06	-.10
Satisfaction with Fatherhood	-.06	-.02	-.17	.14	.06	.00	-.06	-.04

* p < .05

** p < .01

*** p < .001

^a These data based on N=63.

indices. The data on the correlations between scores on the male-oriented and female-oriented tasks and scores obtained on Care Scales 1 and 2 at T_2 and Care Scales 3 and 4 at T_3 were for the 63 subjects who were members of Group A and therefore had made predictions prenatally, and who completed all questionnaires. The data indicate that little relationship existed between fathers' prenatal performance of traditionally male tasks and later baby care. However, a modest relationship existed between performance of traditionally female tasks by fathers prenatally and baby care, with the strongest relationship between such tasks and Care Scale 2 at age 3 weeks. That is, fathers who performed more traditionally female tasks prenatally were somewhat more involved in routine baby care, exclusive of feeding tasks, when the infants were age 3 weeks. None of the other values seen in Tables 43 and 44 were large enough to be of interest for further analysis.

Summary. Research objective #5 analyzed whether father performance of household tasks related to his infant caregiving and whether certain demographic and personalogical variables related to performance of care or to satisfaction with fatherhood. Fathers in this study assumed somewhat greater responsibility for household chores at the neonatal time but reverted to less household care responsibility when the infant was 3 months of age. Mothers were

generally responsible for household care while fathers generally earned all or most of the family income. Father performance of household tasks did not relate to their performance of infant care and therefore failed to show an assumption of more household responsibility by fathers who provided more or less infant care. There was a modest relationship between those fathers who performed more traditionally female-oriented tasks prenatally and their performance of infant care. However, no systematic relationship existed between father categorization as traditional or nontraditional in sex role orientation and care of the infant. Further, little or no relationship existed between father age, education, occupation, years married or previous experience with children and type of infant care, including play, or with satisfaction with fatherhood or performance of household chores.

Relationship of Five Variables to Father Involvement

The sixth objective was to ascertain whether five variables related to the frequency and types of interaction of fathers with their infants. The five variables were sex of infant, preferred sex of infant, planning of pregnancy, preparation for parenthood, and infant behavioral temperament. Data for this objective were provided by responses on the fathers' questionnaire to Questions 9, 14,

15 and 18 of the prenatal forms and Question 9 of the mothers' prenatal form. Question 9 asked each parent if the pregnancy had been planned and answers were recorded as either yes, no, or a discrepancy in responses between parents. In Questions 14 and 15 fathers were asked if they had taken any child development or child psychology courses and if they had done any reading in preparation for their child's arrival. Data from these two questions were combined to form categories of preparation for parenthood: courses only, reading only, courses and reading, neither form of preparation. Question 18, which was asked of Group A fathers only, requested any preference for the sex of the child. Postnatally, the sex of the infant was ascertained and compared with prenatal preference to form three categories: (1) preferred boy, girl born or preferred girl, boy born; (2) no preference; (3) preferred boy, boy born, or preferred girl and girl born.

Postnatally other data were contributed by fathers at T_2 and T_3 from Questions 8, 9, 11 and 13 which again dealt with routine care and play. Specifics of these questions and Care Scales formed from Question 9 have been previously discussed, along with information on reliability of this instrumentation.

Mothers contributed necessary information on infant temperament on the 25-item revision of the Carey Infant Temperament Questionnaire. Five scores were obtained at

both ages 3 weeks and 3 months: activity, rhythmicity, adaptability, intensity and mood. The number of subjects responding to any of the questions in this objective ranged from 169 couples at the T_1 data collection to 116 at later times, depending upon the question.

Predictor variables and father interaction. Tables 45 and 46 present data for 3 weeks and 3 months, respectively, on the correlations between sex of child, preferred sex, planning of pregnancy, and preparation for parenthood and the measures of father interaction. Correlational values ranged from .00 to .23 and none was great enough to be of interest for further investigation. Table 47 presents the correlations among the five temperament measures at ages 3 weeks and 3 months and the father involvement measures. The numbers given to the scores, from 1 to 5, correspond to the measures of activity, rhythmicity, adaptability, intensity and mood. Again, correlations were low and not of interest for further study.

Summary. Although certain variables were thought to be possibly related to the frequency and types of father involvement in either care or non-care areas, no relationship was found.

Follow-up Study

Because the type of feeding modality, breastfeeding

TABLE 45

CORRELATIONS BETWEEN FOUR VARIABLES AND FATHER
INVOLVEMENT AT AGE 3 WEEKS

	Sex of Child	Preferred Sex	Planning of Pregnancy	Preparation for Parenthood
Care Scale 1	.07	-.01	-.08	.05
Care Scale 2	.04	.01	-.07	.08
Putting to sleep				
Diapering	.04	.09	.07	.16
Bathing	.09	.01	-.04	.04
Feeding	.05	.09	-.03	.00
Getting up at night	-.01	.00	.03	.15
Playing: Workday	.02	.05	.23	-.14
Playing Baby Only: Workday	.11	.01	.14	-.04
Playing: Non- Workday	.08	.18	.02	.01
Playing Baby Only: Non- Workday	.07	.14	.08*	.06

* $\underline{p} < .05$

TABLE 46

CORRELATIONS BETWEEN FOUR VARIABLES AND FATHER INVOLVEMENT AT AGE 3 MONTHS

	Sex of Child	Preferred Sex	Planning of Pregnancy	Preparation for Parenthood
Care Scale 3	.03	-.15	.01	-.07
Care Scale 4	-.02	-.12	.01	-.01
Putting to sleep				
Diapering	-.08	-.06	.07	-.06
Bathing	-.03	-.10	.19*	-.07
Feeding	.11	-.03	.03	-.06
Getting up at night	-.07	-.02	.00	-.15
Playing: Workday	.02	.09	.18	-.07
Playing Baby Only: Workday	.00	.10	.20*	-.13
Playing: Non- Workday	.02	.17	.17	.04
Playing: Baby Only: Non- Workday	-.01	.21*	.18	.02

* $\underline{p} < .05$

TABLE 47
 CORRELATIONS BETWEEN FIVE INFANT BEHAVIORAL TEMPERAMENT SCORES AND
 FATHER INVOLVEMENT AT AGES 3 WEEKS AND 3 MONTHS

	Temperament Scores									
	Age 3 Weeks		Age 3 Months							
	Activity	Rhythmicity	Adaptability	Intensity	Mood	Activity	Rhythmicity	Adaptability	Intensity	Mood
Care Scale 1	.12	-.27*	-.11	.12	-.11					
Care Scale 2	.06	-.23*	-.08	.01	-.12	.06	-.04	-.09	.14	-.17
Care Scale 3						.02	.01	-.10	.09	-.21*
Care Scale 4						-.01	-.14	-.19*	.01	-.03
Diapering	.10	-.06	.07	-.02	-.12	.02	-.07	-.10	.05	-.20*
Bathing	-.02	-.07	-.15	-.13	-.19*	.03	-.19*	-.07	.19*	-.10
Feeding	.13	-.14	.02	.18*	-.04	-.09	-.04	.05	-.03	-.01
Getting up at night	.30***	-.01	.16	.14	.13	-.05	-.05	-.07	-.07	-.06
Playing: Workday	-.21*	-.03	-.04	.01	-.19	-.04	-.06	-.04	-.04	-.02
Playing: Workday Baby Only	-.19	-.13	-.10	-.03	.23*	.09	.05	.01	.08	-.09
Playing: Non-Workday	-.10	-.06	-.08	-.12	-.26**	.07	.04	-.02	.08	-.05
Playing: Non-Workday Baby Only	-.10	-.07	-.07	-.08	-.20*	.07	.04	-.02	.08	-.05

* p < .05

** p < .01

*** p < .001

or non-breastfeeding, chosen by the mother was found to be related to some of the variables measuring fathers' involvement with their infants, a follow-up study was done to ascertain whether families had decided upon one method of feeding over the other for particular reasons. The follow-up procedure was utilized on a subsample of 20 mothers, 10 of whom were breastfeeding at age 3 weeks and 10 of whom were not. The follow-up was conducted when the infants were approximately 6 months of age.

Mothers who were breastfeeding were asked why they had chosen that modality, how long they had been breastfeeding and why they had stopped, if they had. Among the 10 mothers in the subsample, 6 indicated that they had chosen this method because of the healthful benefits to the baby. Two other mothers said that they had hoped that breastfeeding would make them feel closer to their infants and one mother said that she had done it for convenience. The mothers had breastfed from 1 month to 6 months. Of the five who had stopped, two said that they had done so because of insufficient milk production, one stopped when the baby began teething and two found this method too restrictive because the baby could not be left with anyone else.

Non-breastfeeding mothers were asked why they had chosen not to breastfeed. Among the reasons were no interest in doing so, discomfort when first tried, modesty and a

desire to be able to leave the baby. One mother indicated that she had chosen this modality so that her husband could also be involved in feeding the baby.

C H A P T E R V

CONCLUSIONS

Summary

Few studies have focused on the involvement of fathers with their young infants, particularly in evaluating the father's role in routine physical care and non-care interaction. The purpose of the present study was to assess how the typical father involves himself with his first child and what factors influence the type of care he provides. Both mothers and fathers were questioned about their usual involvement and data were collected at two points in early infancy, ages 3 weeks and 3 months.

Among the sample of couples studied, mothers assumed almost total responsibility for routine care of the infant. Fathers did become involved in several areas of both physical caretaking and social interaction, but their level of involvement was related to certain factors. At age 3 weeks, the percentage of care provided by all fathers averaged about 13%. Fathers of non-breastfed infants were generally more involved in routine care than were fathers of breastfed infants, although the former group assumed less than 20% of the care needed by the infant. Among all fathers there was a tendency to perform certain tasks more

frequently than others, such as putting the baby to sleep and getting up during the night, and to refrain from doing other routine care, notably bathing. Even when fathers were involved in such care, they were less inclined to perform the tasks alone than when the mother was also present. For instance, fathers rarely bathed the baby alone but did do some bathing of the infant with the mother. Fathers were also most likely to perform one task together with the mothers--putting the baby to sleep. Fathers performed more care tasks on a non-workday than on a workday, even those tasks performed during non-working hours.

At age 3 months, fathers assumed a somewhat greater percentage of the care needed by the infant, averaging about 17% for all fathers, with mothers still taking major responsibility. Although the participation in some tasks showed a decrease in actual frequency from 3 weeks to 3 months, total infant demand also showed a decrease. For example, fathers reported getting up during the night more often at age 3 weeks than at age 3 months; data showed that infants needed less parental care in this area at age 3 months. In addition to reporting that they assumed more responsibility for care at age 3 months, fathers also showed a tendency to perform more tasks alone. The differences between fathers of breastfed and non-breastfed infants in levels of performance decreased, with only the

difference in amount of feeding remaining significant. Fathers continued to perform more routine care on a non-workday than on a workday at age 3 months.

Although fathers performed few routine care tasks, they were more involved in non-care activities, particularly play and comforting. At age 3 weeks, fathers played and comforted almost twice as often as they performed any routine physical care task--they reported an average of almost two hours of play on a non-workday and of about one and one-half hours on a workday. At age 3 months, fathers spent more time in play, particularly on a non-workday, but they comforted infants less often. The additional time in play at age 3 months also included a greater proportion of time in play with the baby only and without engaging in any other activity.

Some fathers were questioned prenatally to determine how actively involved they thought they would be in infant care after the child's birth. The fathers who made such predictions generally overestimated how much they would participate in physical care and social activities at both ages 3 weeks and 3 months. A number of fathers inaccurately predicted that they would be involved in certain tasks, notably bathing, when in actuality they did not perform the task.

Even though mothers accepted most responsibility for care of their infants, they generally preferred the

level of father involvement. Mothers reported slightly greater preference for the fathers' levels of involvement at 3 weeks of infant age than at age 3 months.

Several variables had been thought to be possibly related to the frequency or types of involvement of fathers and with their satisfaction with fatherhood: the father's age, education, profession, years married, prior experience with children, and household participation. In general the correlations between these variables were negligible. Surprisingly, five other variables, sex of infant, preferred sex, planning of pregnancy, preparation for parenthood and five indicators of infant temperament were also unrelated to care provided by fathers. The finding of a low correlation between infant sex and father involvement in this study contradicted the findings of Manion (1977), who had studied father caretaking with neonates and 6-week-olds. Pedersen (1975) had found infant temperament, particularly irritability, to be important in fathers' behavior toward their infants of ages 4 to 5 weeks. Rendina and Dickersheid (1976) had found sex and temperament influential on father behavior with older infants.

Conclusions

It would appear from the findings summarized above, that fathers in this study were more involved in social interaction rather than in routine physical care. This may

suggest that fathers are still influenced by a traditional cultural norm prescribing that mothers perform physical care for the infant. This suggestion is supported by the apparent satisfaction of mothers with the existing levels of involvement of fathers. It may be that in choosing what tasks to perform and with what frequency, fathers were taking cues from their wives. When the father was providing care, the mother was also usually present. One might ask why fathers provided so little care alone and what influence the mothers' presence had on the fathers. Indeed, Pedersen (1975) felt that it was erroneous to assume that a high level of involvement was always a good idea and that many mothers might find such an arrangement threatening.

The selectivity of fathers in choosing which tasks to perform tends to support the findings of Manion (1977) that fathers choose less complex tasks in which to participate. In the present study, fathers were more likely to play with the infant, put the baby to sleep and get up during the night, but less likely to bathe the child.

The question arises whether the fathers viewed their roles as complementary to those of the mother. Lamb and Lamb (1976) and Michael Lamb (1975b, 1976b, 1977), who observed parents and infants ages 7 to 13 months of age, found that fathers played a different sort of role in the childrearing network; fathers were not caregivers but were

sources of stimulation and novel play. Rendina and Dickersheid (1976) who also observed fathers interacting with infants of approximately 6 months and 1 year of age, suggested that duplication of the maternal role by fathers, that is having fathers share in physical care, might diminish the father's unique position in the life of his infant. The findings in this study verify those of the recent research; the fathers in this study assumed an auxiliary role to the mother in many care tasks and were more inclined to play with the infant.

Directions for Future Investigation

Many other questions and ideas arise from the findings of this study and could perhaps be addressed in future research. Some of the possibilities for such research are addressed below.

1. Why did fathers of breastfed infants remain less involved even at age 3 months? Could they have perhaps have seen a unique relationship between mother and child, as suggested by Freud and the psychoanalysts, into which they could not or would not intrude?

2. Unlike the findings of Manion (1977), sex of the infant did not significantly influence father participation in this study. Would a third study uncover attitudes about the infant's sex which refute Manion's suggestion that fathers see female children as needing greater

care and protection?

3. Other variables, in addition to infant sex, were found to be unrelated to the amount of care or play of fathers in this study. Future investigation might attempt to isolate such variables, with perhaps ones such as life satisfaction, satisfaction with marriage and own childhood experiences being among those considered. Such investigation could look at the extent to which maternal and paternal childrearing patterns follow patterns experienced in the parents' own childhood homes.

4. An attempt could be made to locate a sample of couples in which child care responsibility is truly shared, or in which househusbands take major responsibility. One might see if a shift in the mothers' role occurs, with mothers acting more like the fathers that Lamb (1975b, 1976b, 1977) and Rendina and Dickersheid (1976) had discussed, that is, providing more physical stimulation and novel play.

5. Findings in the present study point to possibly differential behavior on the father's part when the mother was present. Fathers tended to do more care when accompanied by the mother. Research using observational techniques, perhaps including videotaping or television monitors, could focus on the fathers' performance of child care and play when alone and when with the mother to see if the mother's presence indeed modifies the father's per-

formance.

6. The findings of this study also pointed to a slight increase in involvement of fathers from age 3 weeks to age 3 months. A follow-up study, at age 1 year, could investigate the fathers' levels of involvement and determine any increases, decreases or shifts in interaction with the child.

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A P P E N D I X A

REVISED INFANT TEMPERAMENT QUESTIONNAIRE

The following questions ask about the typical behavior of a young infant. Please circle the number that indicates what the infant's behavior has been like in each item during the last week or so.

Answers: 1-- almost never
 2-- rarely
 3-- varies, usually does not
 4-- varies but usually does
 5-- frequently
 6-- almost always

	<u>almost never</u>	<u>rarely</u>	<u>varies usually does not</u>	<u>varies usually does</u>	<u>frequent- ly</u>	<u>almost always</u>
1. The infant is fussy on waking up and going to sleep (frowns, cries).	1	2	3	4	5	6
2. The infant accepts his/her bath any time of day without resisting.	1	2	3	4	5	6
3. The infant takes feedings quietly with mild expressions of likes and dislikes.	1	2	3	4	5	6
4. The infant lies quietly in the bath.	1	2	3	4	5	6
5. The infant wants and takes milk feedings at about the same times (within 1 hour) from day to day.	1	2	3	4	5	6
6. The infant moves about much (kicks,grabs,squirms) during diapering and dressing.	1	2	3	4	5	6
7. The infant vigorously resists additional food or milk when full (spits out,clamps mouth shut, bats at spoon,etc.)	1	2	3	4	5	6
8. The infant resists changes in feeding schedule (1 hr. or more) even after two tries.	1	2	3	4	5	6
9. The infant makes happy sounds (coos,smiles,laughs)when being diapered or dressed.	1	2	3	4	5	6
10. The infant reacts mildly(just blinks or startles briefly) to bright light such as flash bulb or letting sunlight in by pulling up shade.	1	2	3	4	5	6
11. The infant gets sleepy at about the same time each evening (within ½ hour).	1	2	3	4	5	6
12. The infant accepts regular procedures(hair brushing,face washing)	1	2	3	4	5	6

	almost never	rarely	varies usually does not	varies usually does	frequent- ly	almost always
13. The infant sits still (little squirming) in car seat or carriage.	1	2	3	4	5	6
14. The infant moves much (squirms, bounces, kicks) while lying awake in crib.	1	2	3	4	5	6
15. The infant is pleasant (coos, smiles, etc.) during procedures like hair brushing and face washing.	1	2	3	4	5	6
16. The infant plays actively with parents--much movement of arms, legs, body.	1	2	3	4	5	6
17. The infant adjusts within 10 mins. to new surroundings (home, store, play area).	1	2	3	4	5	6
18. The infant's daytime naps are about the same length from day to day (under 2 hr. difference).	1	2	3	4	5	6
19. The infant moves about much during feedings (squirms, kicks, grabs).	1	2	3	4	5	6
20. The infant displays much feeling (vigorous laugh or cry) during diapering or dressing.	1	2	3	4	5	6
21. The infant lies still when asleep and wakes up in the same place.	1	2	3	4	5	6
22. The infant is content (smiles, coos) during interruptions of milk or solid feeding.	1	2	3	4	5	6
23. The infant shows much bodily movement when crying (kicks, waves arms).	1	2	3	4	5	6
24. The infant continues to react to a loud noise (hammering, barking dog, etc.) heard several times in the same day.	1	2	3	4	5	6
25. The infant's time of waking in the morning varies greatly (by 1 hr. or more) from day to day.	1	2	3	4	5	6
26. The infant's fussy periods occur at about the same time of day (morning, afternoon, night).	1	2	3	4	5	6
27. The infant is calm in the bath. Like or dislike is mildly expressed (smiles or frowns).	1	2	3	4	5	6

	<u>almost never</u>	<u>rarely</u>	<u>varies usually does not</u>	<u>varies usually does</u>	<u>frequent- ly</u>	<u>almost always</u>
28. The infant is fussy or cries during a physical exam by the doctor.	1	2	3	4	5	6

A P P E N D I X B

CAREY INFANT TEMPERAMENT QUESTIONNAIRE

USING THE FOLLOWING SCALE, PLEASE CIRCLE THE NUMBER THAT INDICATES HOW OFTEN THE INFANT'S RECENT AND CURRENT BEHAVIOR HAS BEEN LIKE THAT DESCRIBED BY EACH ITEM.

	Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5					Almost always 6	
1. The infant eats about the same amount of solid food (within 1 oz) from day to day.	almost never			almost never	1	2	3	4	5	6	almost always
2. The infant is fussy on waking up and going to sleep (frowns, cries)	almost never			almost never	1	2	3	4	5	6	almost always
3. The infant plays with a toy for under a minute and then looks for another toy or activity.	almost never			almost never	1	2	3	4	5	6	almost always
4. The infant sits still while watching TV or other nearby activity.	almost never			almost never	1	2	3	4	5	6	almost always
5. The infant accepts right away any change in place or position of feeding or person giving it.	almost never			almost never	1	2	3	4	5	6	almost always
6. The infant accepts nail cutting without protest.	almost never			almost never	1	2	3	4	5	6	almost always
7. The infant's hunger cry can be stopped for over a minute by picking up, pacifier, putting on bib, etc.	almost never			almost never	1	2	3	4	5	6	almost always
8. The infant plays continuously for more than 10 min. at a time with a favorite toy.	almost never			almost never	1	2	3	4	5	6	almost always
9. The infant accepts his/her bath any time of the day without resisting it.	almost never			almost never	1	2	3	4	5	6	almost always
10. The infant takes feedings quietly with mild expression of likes and dislikes.	almost never			almost never	1	2	3	4	5	6	almost always
11. The infant indicates discomfort (fusses or squirms) when diaper is soiled with bowel movement.	almost never			almost never	1	2	3	4	5	6	almost always
12. The infant lies quietly in the bath.	almost never			almost never	1	2	3	4	5	6	almost always
13. The infant wants and takes milk feedings at about the same times (within one hour) from day to day.	almost never			almost never	1	2	3	4	5	6	almost always
14. The infant is shy (turns away or clings to mother) on meeting another child for the first time.	almost never			almost never	1	2	3	4	5	6	almost always

2.

Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5	Almost always 6			
15. The infant continues to fuss during diaper change in spite of efforts to distract him/her with game, toy or singing, etc.	almost never	1	2	3	4	5	6	almost always
16. The infant amuses self for $\frac{1}{2}$ hour or more in crib or playpen (looking at mobile, playing with toy).	almost never	1	2	3	4	5	6	almost always
17. The infant moves about much (kicks, grabs, squirms) during diapering and dressing.	almost never	1	2	3	4	5	6	almost always
18. The infant vigorously resists additional food or milk when full (spits out, clamps mouth closed, bats at spoon, etc.)	almost never	1	2	3	4	5	6	almost always
19. The infant resists changes in feeding schedule (1 hour or more) even after two tries.	almost never	1	2	3	4	5	6	almost always
20. The infant's bowel movements come at different times from day to day (over one hour difference).	almost never	1	2	3	4	5	6	almost always
21. The infant stops play and watches when someone walks by.	almost never	1	2	3	4	5	6	almost always
22. The infant ignores voices or other ordinary sounds when playing with a favorite toy.	almost never	1	2	3	4	5	6	almost always
23. The infant makes happy sounds (coos, smiles, laughs) when being diapered or dressed.	almost never	1	2	3	4	5	6	almost always
24. The infant accepts new foods right away, swallowing them promptly.	almost never	1	2	3	4	5	6	almost always
25. The infant watches other children playing for under a minute and then looks elsewhere.	almost never	1	2	3	4	5	6	almost always
26. The infant reacts mildly (just blinks or startles briefly) to bright light such as flash bulb or letting sunlight in by pulling up shade.	almost never	1	2	3	4	5	6	almost always
27. The infant is pleasant (smiles, laughs) when first arriving in unfamiliar places (friend's house, store).	almost never	1	2	3	4	5	6	almost always
28. The infant gets sleepy at about the same time each evening (within $\frac{1}{2}$ hr.)	almost never	1	2	3	4	5	6	almost always
29. The infant accepts regular procedures (hair brushing, face washing, etc.) at any time without protest.	almost never	1	2	3	4	5	6	almost always

3.

	Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5						Almost always 6
13) 30. The infant sits still (little squirming) while traveling in car seat or stroller.	Almost never			Almost never	1	2	3	4	5	6	almost always
31. The infant's initial reaction to a new baby sitter is rejection (crying, clinging to mother, etc.)	almost never			almost never	1	2	3	4	5	6	almost always
32. The infant keeps at it for many minutes when working on a new skill (rolling over, picking up object, etc.)	almost never			almost never	1	2	3	4	5	6	almost always
33. The infant moves much (squirms, bounces, kicks) while lying awake in crib.	almost never			almost never	1	2	3	4	5	6	almost always
34. The infant objects to being bathed in a different place or by a different person even after 2 or 3 tries.	almost never			almost never	1	2	3	4	5	6	almost always
35. The amount of milk the infant takes at feedings is quite unpredictable (over 2 oz. difference) from feeding to feeding.	almost never			almost never	1	2	3	4	5	6	almost always
36. For the first few minutes in a new place or situation (new store or home) the infant is fretful.	almost never			almost never	1	2	3	4	5	6	almost always
37. The infant notices (looks carefully at) changes in the appearance or dress (hairdo, unfamiliar clothing) of the mother.	almost never			almost never	1	2	3	4	5	6	almost always
38. The infant reacts strongly to foods, whether positively (smacks lips, laughs, squeals) or negatively (cries).	almost never			almost never	1	2	3	4	5	6	almost always
39. The infant is pleasant (coos, smiles etc.) during procedures like hair brushing or face washing.	almost never			almost never	1	2	3	4	5	6	almost always
40. The infant continues to cry in spite of several minutes of soothing.	almost never			almost never	1	2	3	4	5	6	almost always
41. The infant keeps trying to get a desired toy, which is out of reach, for 2 min. or more.	almost never			almost never	1	2	3	4	5	6	almost always
42. The infant greets a new toy with a loud voice and much expression of feeling (whether positive or negative)	almost never			almost never	1	2	3	4	5	6	almost always
43. The infant plays actively with parents-much movement of arms, legs, body.	almost never			almost never	1	2	3	4	5	6	almost always

4.

Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5	Almost always 6					
			almost never	1	2	3	4	5	6	almost always
44. The infant watches another toy when offered even though already holding one.										
			almost never	1	2	3	4	5	6	almost always
45. The infant's initial reaction at home to approach by strangers is acceptance.										
			almost never	1	2	3	4	5	6	almost always
46. The infant wants daytime naps at differing times (over 1 hour difference) from day to day.										
			almost never	1	2	3	4	5	6	almost always
47. The infant continues eating solid foods without reacting to differences in taste or consistency.										
			almost never	1	2	3	4	5	6	almost always
48. The infant cries when left to play alone.										
			almost never	1	2	3	4	5	6	almost always
49. The infant adjusts within 10 min. to new surroundings (home, store, play area).										
			almost never	1	2	3	4	5	6	almost always
50. The infant's daytime naps are about the same length from day to day (under one half hour difference).										
			almost never	1	2	3	4	5	6	almost always
51. The infant moves about much during feedings (squirms, kicks, grabs).										
			almost never	1	2	3	4	5	6	almost always
52. The infant reacts (stares or startles) to sudden changes in lighting (flash bulbs, turning on light).										
			almost never	1	2	3	4	5	6	almost always
53. The infant can be soothed by talking or games when sleepy.										
			almost never	1	2	3	4	5	6	almost always
54. The infant displays much feeling (vigorous laugh or cry) during diapering or dressing.										
			almost never	1	2	3	4	5	6	almost always
55. The infant lies still when asleep and wakes up in the same place.										
			almost never	1	2	3	4	5	6	almost always
56. The infant adjusts easily and sleeps well within 1 or 2 days with changes of time or place.										
			almost never	1	2	3	4	5	6	almost always
57. The infant reacts to changes in temperature or type of milk or substitution of juice.										
			almost never	1	2	3	4	5	6	almost always
58. The infant watches television for more than 5 minutes at a time.										
			almost never	1	2	3	4	5	6	almost always
59. The infant can be calmed for a few minutes by being picked up, played with, T.V., if fussing about soiled diaper.										
			almost never	1	2	3	4	5	6	almost always
60. The infant wants and takes solid food feedings at about the same time (within 1 hour) from day to day.										
			almost never	1	2	3	4	5	6	almost always

5.

Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5	Almost always 6			
61. The infant is content (smiles, coos) during interruptions of milk or solid feeding.	almost never	1	2	3	4	5	6	almost always
62. The infant accepts within a few minutes a change in place of bath or person giving it.	almost never	1	2	3	4	5	6	almost always
63. The infant cries for less than one minute when given an injection.	almost never	1	2	3	4	5	6	almost always
64. The infant shows much bodily movement (kicks, waves arms) when crying.	almost never	1	2	3	4	5	6	almost always
65. The infant continues to react to a loud noise (hammering, barking dog, etc.) heard several times in the same day.	almost never	1	2	3	4	5	6	almost always
66. The infant's initial reaction is withdrawal (turns head, spits out) when consistency, flavor or temperature of solid foods is changed.	almost never	1	2	3	4	5	6	almost always
67. The infant's time of waking in the morning varies greatly (by 1 hour or more) from day to day.	almost never	1	2	3	4	5	6	almost always
68. The infant continues to reject disliked food or medicine in spite of parents' efforts to distract with games or tricks.	almost never	1	2	3	4	5	6	almost always
69. The infant reacts even to a gentle touch (startle, wriggle, laugh, cry).	almost never	1	2	3	4	5	6	almost always
70. The infant reacts strongly to strangers: laughing or crying.	almost never	1	2	3	4	5	6	almost always
71. The infant actively grasps or touches objects within his/her reach (hair, spoon, glasses, etc.).	almost never	1	2	3	4	5	6	almost always
72. The infant will take any food offered without seeming to notice the difference.	almost never	1	2	3	4	5	6	almost always
73. The infant's period of greatest physical activity comes at same time of day.	almost never	1	2	3	4	5	6	almost always
74. The infant appears bothered (cries, squirms) when first put down in a different sleeping place.	almost never	1	2	3	4	5	6	almost always
75. The infant reacts mildly to meeting familiar people (quiet smiles or no response).	almost never	1	2	3	4	5	6	almost always

6.

	Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5	Almost always 6		
76. The infant is fussy or moody throughout a cold or an intestinal virus.	almost never	1	2	3	4	5	6	almost always
77. The infant wants an extra feeding at a different time each day (over one hour difference).	almost never	1	2	3	4	5	6	almost always
78. The infant is still wary or frightened of strangers after 15 minutes.	almost never	1	2	3	4	5	6	almost always
79. The infant lies still and moves little while playing with toys.	almost never	1	2	3	4	5	6	almost always
80. The infant can be distracted from fussing or squirming during a procedure (nail cutting, hair brushing, etc.) by a game, singing, TV, etc.	almost never	1	2	3	4	5	6	almost always
81. The infant remains pleasant or calm with minor injuries (bumps, pinches).	almost never	1	2	3	4	5	6	almost always
82. The infant's initial reaction to seeing doctor is acceptance (smiles, coos).	almost never	1	2	3	4	5	6	almost always
83. The infant reacts to a disliked food even if it is mixed with a preferred one.	almost never	1	2	3	4	5	6	almost always
84. The infant plays quietly and calmly with toys (little vocalization or other noise).	almost never	1	2	3	4	5	6	almost always
85. The infant's fussy period occurs at about the same time of day (morning, afternoon or evening.)	almost never	1	2	3	4	5	6	almost always
86. The infant lies still during procedures like hair brushing or nail cutting.	almost never	1	2	3	4	5	6	almost always
87. The infant stops sucking and looks when he/she hears an unusual noise (telephone, door bell) when drinking milk.	almost never	1	2	3	4	5	6	almost always
88. The infant pays attention to game with parent for only a minute or so.	almost never	1	2	3	4	5	6	almost always
89. The infant is calm in the bath. Like or dislike is mildly expressed (smiles or frowns).	almost never	1	2	3	4	5	6	almost always
90. The infant requires introduction of a new food on 3 or more occasions before he/she will accept (swallow) it.	almost never	1	2	3	4	5	6	almost always

7.

Almost never 1	Rarely 2	Variable usually does not 3	Variable usually does 4	Frequently 5	Almost always 6						
				almost never	1	2	3	4	5	6	almost always
91.The infant's first reaction to any new procedure (first haircut, new medicine, etc.) is objection.											
				almost never	1	2	3	4	5	6	almost always
92.The infant acts the same when the diaper is wet as when it is dry. (no reaction)											
				almost never	1	2	3	4	5	6	almost always
93.The infant is fussy or cries during the physical examination by the doctor.											
				almost never	1	2	3	4	5	6	almost always
94.The infant accepts changes in solid food feedings (type, amount, timing) within 1 or 2 tries.											
				almost never	1	2	3	4	5	6	almost always
95.The infant moves much and for several minutes or more when playing by self (kicking, waving arms and bouncing).											
				almost never	1	2	3	4	5	6	almost always

Additional Comments

INFANT TEMPERAMENT QUESTIONNAIRE - PROFILE SHEET

for 4 to 8 month old infants

Revised 1977 by William B. Carey, M.D., and Sean C. McDevitt, Ph.D.

Name of child _____ Date of rating _____

Age at rating: _____ months _____ days. Sex _____

Category score from Scoring Sheet:

Profile: Place mark in appropriate box below:

	Activity	Rhythmicity	App/With	Adapt.	Intens.	Mood	Persist.	Distract.	Thresh.
6	high	arrayth.	withdr.	slowly adapt.	intense	negative	low per.	low dist	low
+1 S.D.	4.96	3.05	3.05	2.61	4.13	3.48	3.85	2.84	4.55
mean	4.40	2.36	2.27	2.02	3.42	2.81	3.03	2.23	3.79
-1 S.D.	3.83	1.68	1.50	1.42	2.71	2.13	2.20	1.63	3.04
1	low	very rhyth.	app.	very adapt.	mild	positive	high per	high distr.	high

Diagnostic clusters:

Easy		rhyth.	app.	adapt.	mild	positive			
Diff		arrayth.	withdr.	slowly adapt.	intense	negative			
STWU	low		withdr.	slowly adapt.	mild	negative			

Definition of diagnostic clusters used for individual scoring:

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

Difficult- 4 or 5 scores greater than mean in difficult/easy categories (rhythmicity, approach, adaptability, intensity, & mood). These must include intensity and two scores must be greater than 1 standard deviation)

Slow-to-warm-up- as defined above, but, if either withdrawal or slow adaptability is greater than 1 standard deviation, activity may vary up to 4.68 and mood may vary down to 2.47.

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

This child's diagnostic cluster _____ Date of scoring _____

Comments: _____

Scorer _____

INFANT TEMPERAMENT QUESTIONNAIRE (Rev. 1977) - Scoring Sheet

Name of child _____		Date of rating _____		Age at rating _____													
Activity	Rhythmicity		Approach		Adaptability		Intensity		Mood		Persistence		Destructibility		Threshold		
	Low	High	Rhythm	App	With	Adap.	NonAd	Mild	Int.	Pos.	Neg	Pers	Non	Dist.	Men	High	Low
4)	654321	11654321	5654321	654321	654321	654321	654321	10654321	2123456	3123456	7654321	3123456	7654321	15123456	11123456	123456	
12)	654321	13654321	14123456	654321	654321	654321	654321	18123456	23654321	654321	10654321	10654321	10654321	21654321	21654321	21654321	
17)	23456	20123456	24654321	654321	654321	654321	654321	24654321	27654321	25123456	25123456	25123456	25123456	25123456	25123456	25123456	
38)	654321	28654321	31123456	654321	654321	654321	654321	31123456	37654321	32654321	32654321	32654321	32654321	40123456	40123456	40123456	
35)	23456	35123456	36123456	654321	654321	654321	654321	36123456	4123456	41654321	41654321	41654321	41654321	41654321	41654321	41654321	
13)	23456	40123456	45654321	654321	654321	654321	654321	42123456	48123456	48123456	48123456	48123456	48123456	58654321	58654321	58654321	
51)	23456	50654321	654321	654321	654321	654321	654321	5123456	58123456	58123456	58123456	58123456	58123456	58654321	58654321	58654321	
20)	654321	10654321	12654321	654321	654321	654321	654321	12654321	61654321	61654321	61654321	61654321	61654321	61654321	61654321	61654321	
54)	23456	67123456	64123456	654321	654321	654321	654321	70123456	63654321	63654321	63654321	63654321	63654321	64123456	64123456	64123456	
71)	23456	73654321	79123456	654321	654321	654321	654321	75654321	76123456	76123456	76123456	76123456	76123456	76123456	76123456	76123456	
78)	54321	177123456	22654321	654321	654321	654321	654321	28654321	81654321	81654321	81654321	81654321	81654321	81654321	81654321	81654321	
21)	654321	18654321	31123456	654321	654321	654321	654321	35654321	113123456	113123456	113123456	113123456	113123456	113123456	113123456	113123456	
15)	23456	98654321						98654321									
Total																	
Factor	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456	123456
Duct																	
Sum																	
Prod																	
Mean																	
Std																	

Resulting products are added and divided by number of items rated, producing category score. 3) Nine category scores are transferred to Profile Sheet.

Instructions to scorer: 1) Check off above responses on questionnaire. 2) For category score add checks in 6 columns and multiply sums by factors indicated.

Infant Temperament Questionnaire

Revised, 1977

Basic Information

I. Purpose of Revision - to improve psychometric characteristics of original infant temperament questionnaire published in 1970, especially to increase the internal consistency of the 9 categories.

II. Methods and Subjects

Strategy of revision: 1. number of items increased; 2. rating options expanded from 3 to 6; 3. more high-low item reversals; and 4. items randomized both as to content area and category.

Subjects - standardized on 203 4-8 month old infants in 3 suburban pediatric practices.

III. Results

Means and standard deviations - see Profile Sheet
Sex differences - females significantly less approaching

Age differences - none significant

Clinical diagnoses - difficult - 9.4%, slow-to-warm-up - 5.9%, intermediate high - 11.3%, intermediate low - 31.0%, easy - 42.4%.

Test-retest reliability - range 0.66 - 0.81 for 9 categories, median 0.75. Subsample of 41 with mean interval of 25.1 days.

Internal consistency - range 0.49 - 0.71, median 0.57, for total instrument 0.83

IV. Paper containing these data in greater detail with discussion is in preparation now.

William B. Carey, M.D.

Sean C. McDevitt, Ph.D.

June, 1977

A P P E N D I X C

COVER LETTERS AND QUESTIONNAIRES, INCLUDING
INFORMED CONSENT FORMS

To the Participants

Thank you for helping me out with this project. This study involves parents with their first infant.

All of your answers will be kept strictly confidential. I need your names and addresses only so that I can mail you the other questionnaires later and then match up your questionnaires. I will be the only person to see your answers. Your names or any other information about you will never be revealed to anyone. If you do not want to answer a particular question, you do not have to.

This is an independent project that I am conducting and it is not sponsored by Wesson Women's Hospital or any other institution.

Please sign below that you have read this page and that you are willing to participate.

Thanks again. I really appreciate your help.

Mother's Prenatal Questionnaire

1. Your name _____ Due date of birth _____
2. Your spouse's name _____
3. Address _____ City _____
4. Your age _____ Phone number _____
5. Were you employed immediately before this pregnancy? _____
 If yes, what was or is your occupation? _____
 Do you plan to return to work after the birth? _____
 If yes, how soon after the birth? _____
6. What school grade or level of education have you completed? _____
7. How many brothers and sister do you have and how old are they? List each one separately and give his or her age. (Example: brother 25 yrs.)

8. How long have you been married? (If this is not your first marriage, please indicate how long you have been married to your present husband.) _____
9. Was this pregnancy planned? _____
10. Did you ever regularly do any babysitting or caring for children in your family? _____
 If so, how old were you at the time? _____
 How often did you do this? (Example: every day, once a week, once in a while)

11. Have you had any recent, regular experience with children? _____
 If so, what kind of experience? _____

12. Whose idea was it to attend these childbirth preparation classes? _____
13. How much have you enjoyed these classes? Please circle your answer.
 Very much Somewhat Not too much Not at all
14. Have you ever taken any courses in child development or child psychology? _____
 If yes, where and what courses? _____

15. Have you done any reading on your own in preparation for your new baby? _____
 If yes, what have you read? _____

16. Circle the statement below that you agree with most.

When I think about the forthcoming arrival of my baby:

- a. I am extremely pleased.
- b. I am very pleased.
- c. I am somewhat pleased.
- d. I am not too pleased.

17. Circle the statement below that you agree with most.

When I think about the forthcoming arrival of my baby:

- a. I am extremely concerned about being a good parent.
- b. I am very concerned about being a good parent.
- c. I am somewhat concerned about being a good parent.
- d. I am not too concerned about being a good parent.

18. Would you prefer a girl or boy baby? _____

19. Are you going to be using the services of a babysitter, relative or other person to help take care of the baby after the first 3 weeks after the birth? _____

20. How much time do you think you will spend with the baby on a work day? (Example: 1 hr., 2 hrs., 5 hrs.) _____

How much time do you think you will spend with the baby on a non-work day? _____

If someone is going to help you care for the baby, such as a babysitter or relative, disregard the amount of time that person will be taking care of the baby when you answer Questions 21 and 22.

21. During the first 3 weeks after the birth, about how much of the daily responsibility for the baby do you think that you will have?

Circle your answer.

- a. none of it
- b. 0-20%
- c. 20%-40%
- d. 40%-60%
- e. 60%-80%
- f. 80%-100%
- g. all of it

22. How much of the daily responsibility do you think that you will have after the first 3 weeks. Circle your answer.

- a. none of it
- b. 0-20%
- c. 20%-40%
- d. 40%-60%
- e. 60%-80%
- f. 80%-100%
- g. all of it

23. During the first 3 weeks after the birth, how often do you think you will be doing each of the following?

Put an X in the box of your answer.

	<u>Never</u>	<u>Occasionally out not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Bathing the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Feeding the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Playing with the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Comforting the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. After the first 3 weeks, how often do you think that you will be doing each of the following. Put an X in the box of your answer.

	<u>Never</u>	<u>Occasionally but not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Bathing the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Feeding the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Playing with the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Comforting the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. After the first 3 weeks, when each of the following needs to be done, how often do you think you will be doing it? Put an X in the box of your answer.

	<u>Never</u>	<u>Occasionally</u>	<u>Regularly</u>
a. Getting up during the night to attend to the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Taking the baby to doctor's visits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Putting the baby to sleep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Suppose that a husband and wife take an equal role in caring for their infant. What do you think about this arrangement? Do you think that it is good for the baby?

27. Suppose that you met a man who told you that he had quit his job to stay home and take care of his infant while his wife went to work. What do you think of this arrangement?

Household Tasks

Who usually does each of the following tasks in your house?

Put the letter of your answer in the box next to the item.

For example:

1. Grocery shopping A

Answers:

- A. Husband always
- B. Husband more than wife
- C. Husband and wife exactly the same
- D. Wife more than husband
- E. Wife always
- F. Does not apply to us

- | | |
|--|----------------------|
| 1. Grocery shopping | <input type="text"/> |
| 2. Preparation of meals | <input type="text"/> |
| 3. Dishes and cleanup from meals | <input type="text"/> |
| 4. Laundry | <input type="text"/> |
| 5. Keeping track of money and bills | <input type="text"/> |
| 6. Repairing things around the house | <input type="text"/> |
| 7. Getting the car fixed | <input type="text"/> |
| 8. House cleaning | <input type="text"/> |
| 9. Earning money to support the family | <input type="text"/> |
| 10. Doing yard work | <input type="text"/> |

To the Participants

Thank you for helping me out with this project. This study involves parents with their first infant.

All of your answers will be kept strictly confidential. I need your names and addresses only so that I can mail you the other questionnaires later and then match up your questionnaires. I will be the only person to see your answers. Your names or any other information about you will never be revealed to anyone. If you do not want to answer a particular question, you do not have to.

This is an independent project that I am conducting and it is not sponsored by Wesson Women's Hospital or any other institution.

Please sign below that you have read this page and that you are willing to participate.

Thanks again. I really appreciate your help.

Father's Prenatal Questionnaire

1. Your name _____
2. Your wife's name _____
3. Address _____ City _____
4. Your age _____ Phone number _____
5. Occupation _____ Due date of birth _____
6. What school grade or level of education have you completed? _____
7. How many brothers and sisters do you have and how old are they? List each one separately and give his or her age. (Example: brother 25 yrs.)

8. How long have you been married? (If this is not your first marriage, please indicate how long you have been married to your present wife.) _____
9. Was this pregnancy planned? _____
10. Did you regularly do any babysitting or caring for children in your family? _____
 If so, how old were you at the time? _____
 How often did you do this? (Example: every day, once a week, once in a while) _____
11. Have you had any recent regular experience with children? _____
 If so, what kind of experience? _____

12. Whose idea was it to attend childbirth preparation classes? _____
13. How much have you enjoyed these classes. Circle your answer.
 Very much Somewhat Not too much Not at all
14. Have you ever taken any courses in child development or child psychology? _____
 If yes, where and what courses? _____

15. Have you done any reading on your own in preparation for your new baby? _____
 If yes, what have you read? _____

16. Circle the statement below that you agree with most.

When I think about the forthcoming arrival of my baby:

- a. I am extremely pleased.
- b. I am very pleased.
- c. I am somewhat pleased.
- d. I am not too pleased.

17. Circle the statement below that you agree with most.

When I think about the forthcoming arrival of my baby:

- a. I am extremely concerned about being a good parent.
- b. I am very concerned about being a good parent.
- c. I am somewhat concerned about being a good parent.
- d. I am not too concerned about being a good parent.

18. Would you prefer a girl or boy baby? _____

19. Are you going to be using the services of a babysitter, relative or other person to help take care of the baby after the first 3 weeks after the birth? _____

20. How much time do you think you will spend with the baby on a work day? (Example: 1 hr., 2 hrs., 5 hrs.) _____

How much time do you think you will spend with the baby on a non-work day? _____

If someone is going to help you care for the baby, such as a babysitter or relative, disregard the amount of time that person will be taking care of the baby when you answer Questions 21 and 22.

21. During the first 3 weeks after the birth, about how much of the daily responsibility for the baby do you think that you will have?

Circle your answer.

- a. none of it
- b. 0-20%
- c. 20%-40%
- d. 40%-60%
- e. 60%-80%
- f. 80%-100%
- g. all of it

22. How much of the daily responsibility do you think that you will have after the first 3 weeks. Circle your answer.

- a. none of it
- b. 0-20%
- c. 20%-40%
- d. 40%-60%
- e. 60%-80%
- f. 80%-100%
- g. all of it

23. During the first 3 weeks after the birth, how often do you think you will be doing each of the following?

Put an X in the box of your answer.

	<u>Never</u>	<u>Occasionally out not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Bathing the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Feeding the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Playing with the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Comforting the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. After the first 3 weeks, how often do you think that you will be doing each of the following. Put an X in the box of your answer.

	<u>Never</u>	<u>Occasionally out not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Bathing the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Feeding the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Playing with the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Comforting the baby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. After the first 3 weeks, when each of the following needs to be done, how often do you think you will be doing it? Put an X in the box of your answer.

	<u>Never</u>	<u>Occasionally</u>	<u>Regularly</u>
a. Getting up during the night to attend to the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Taking the baby to doctor's visits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Putting the baby to sleep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. Suppose that a husband and wife take an equal role in caring for their infant. What do you think about this arrangement? Do you think that it is good for the baby?

27. Suppose that you met a man who told you that he had quit his job to stay home and take care of his infant while his wife went to work. What do you think of this arrangement?

28. Suppose that your wife had to leave home for a week or two (such as to return to the hospital or to visit a sick relative) when the baby is 6 weeks old. Suppose also that she could not take the baby with her but that the baby would be cared for during your working hours.

How would you feel about taking care of the baby?

Household Tasks

Who usually does each of the following tasks in your house?
Put the letter of your answer in the box next to the item.

For example:

1. Grocery shopping

Answers:

- A. Husband always
- B. Husband more than wife
- C. Husband and wife exactly the same
- D. Wife more than husband
- E. Wife always
- F. Does not apply to us

- | | |
|--|--|
| 1. Grocery shopping | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 2. Preparation of meals | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 3. Dishes and cleanup from meals | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 4. Laundry | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 5. Keeping track of money and bills | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 6. Repairing things around the house | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 7. Getting the car fixed | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 8. House cleaning | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 9. Earning money to support the family | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |
| 10. Doing yard work | <input style="width: 40px; height: 15px; border: 1px solid black;" type="text"/> |

42 Elwood Drive
Springfield, Mass. 01108

Dear New Mother !!!!

Congratulations on the birth of your baby. I hope that you and your baby are feeling well.

Enclosed is the second questionnaire that I promised you and a stamped envelope. Please try to do the questionnaire in the next day or so.

Thanks again for volunteering to help me. My study is coming along and I am looking forward to completing it and sharing the findings with you. If you have any questions or want to tell me anything, my phone number is 733-4725. The best time to call is in the early evening.

Thanks a lot and good luck .

Sincerely,

Beverly S. Katsh

(Family infant study)

Mother's Postnatal Questionnaire
Age 3 weeks

All of your answers will be kept strictly confidential. Your names will never be revealed to anyone. If you do not want to answer a particular question, you do not have to.

Please answer the questionnaire without consulting with your husband. If you do share your answers with him after you have finished, please do not change any answers.

Today's date _____

1. Date of birth of your baby _____
Is your baby a boy or girl? _____
Weight at birth _____
2. How long were you in labor? _____
3. Was the delivery normal? _____
4. Did you receive any kind of medication during labor or delivery? _____
If so, what kind of medication? _____ How many times? _____
5. Did the baby come home with you from the hospital? _____
If not, when did the baby come home? _____
If not, why didn't the baby come home with you? _____
6. Does the baby have any medical problems? _____
If so, what kind of problem? _____
7. How would you describe your baby's temperament? Please circle your answer.
Usually happy Sometimes happy, sometimes fussy Often fussy
8. Are you breastfeeding? _____
If yes, do you give any supplemental bottles? _____ How many per day? _____
9. If you were working before the baby's birth, have you returned to work? _____
If yes, how many hours per week are you now working? _____
10. Do you have anyone helping you to care for the baby, such as a relative or babysitter? _____
If yes, how many hours per day does this person care for the baby? _____
Does anyone help to care for the baby regularly on weekends? _____
If yes, about how many hours on Saturdays? _____
on Sundays? _____
11. About how many hours per night does your baby usually sleep? _____
12. What time does your baby usually get up in the morning? _____

13. During the last week or two, who has been doing each of the following tasks in your home:

For those items dealing with the baby, do not include care performed by a babysitter, nurse or person other than you and your husband. Consider only things done by you and your husband.

Put your answer on the line next to the item.

- Answers: 1.-- husband always
 2.-- husband more than wife
 3.-- husband and wife exactly the same
 4.-- wife more than husband
 5.-- wife always
 6.-- Does not apply to us.

- a. Grocery shopping _____
 b. Preparation of meals _____
 c. Dishes and cleanup from meals _____
 d. Laundry _____
 e. Keeping track of money and bills _____
 f. House cleaning _____
 g. Earning money to support the family _____
 h. Feeding the baby breakfast _____
 i. Diapering the baby _____
 j. Feeding the baby dinner _____
 k. Bathing the baby _____
 l. Taking the baby to the doctor _____
 m. Putting the baby to sleep _____
 n. Getting up when the baby needs attention during the night _____

14. During the last week (7 days) how many times have you done each of the following? Put the number of your answer on the line next to the question.

- a. Put the baby to sleep _____
 b. Diapered the baby _____
 c. Bathed the baby _____
 d. Fed the baby _____
 e. Played with the baby _____
 f. Comforted the baby _____
 g. Got up during the night to attend to the baby _____

The following questions ask about the typical behavior of a young infant. Please circle the number that indicates what the infant's behavior has been like in each item during the last week or so.

- Answers: 1-- almost never
 2-- rarely
 3-- varies, usually does not
 4-- varies but usually does
 5-- frequently
 6-- almost always

	<u>almost never</u>	<u>rarely</u>	<u>varies usually does not</u>	<u>varies usually does</u>	<u>frequent- ly</u>	<u>almost always</u>
1. The infant is fussy on waking up and going to sleep (frowns, cries).	1	2	3	4	5	6
2. The infant accepts his/her bath any time of day without resisting.	1	2	3	4	5	6
3. The infant takes feedings quietly with mild expressions of likes and dislikes.	1	2	3	4	5	6
4. The infant lies quietly in the bath.	1	2	3	4	5	6
5. The infant wants and takes milk feedings at about the same times (within 1 hour) from day to day.	1	2	3	4	5	6
6. The infant moves about much (kicks,grabs,squirms) during diapering and dressing.	1	2	3	4	5	6
7. The infant vigorously resists additional food or milk when full (spits out,clamps mouth shut, bats at spoon,etc.)	1	2	3	4	5	6
8. The infant resists changes in feeding schedule (1 hr. or more) even after two tries.	1	2	3	4	5	6
9. The infant makes happy sounds (coos,smiles,laughs)when being diapered or dressed.	1	2	3	4	5	6
10. The infant reacts mildly(just blinks or startles briefly) to bright light such as flash bulb or letting sunlight in by pulling up shade.	1	2	3	4	5	6
11. The infant gets sleepy at about the same time each evening (within ½ hour).	1	2	3	4	5	6
12. The infant accepts regular procedures(hair brushing,face washing)	1	2	3	4	5	6

	almost never	rarely	varies usually does not	varies usually does	frequent- ly	almost always
13. The infant sits still (little squirming) in car seat or carriage.	1	2	3	4	5	6
14. The infant moves much (squirms, bounces, kicks) while lying awake in crib.	1	2	3	4	5	6
15. The infant is pleasant (coos, smiles, etc.) during procedures like hair brushing and face washing.	1	2	3	4	5	6
16. The infant plays actively with parents--much movement of arms, legs, body.	1	2	3	4	5	6
17. The infant adjusts within 10 mins. to new surroundings (home, store, play area).	1	2	3	4	5	6
18. The infant's daytime naps are about the same length from day to day (under 1/2 hr. difference).	1	2	3	4	5	6
19. The infant moves about much during feedings (squirms, kicks, grabs).	1	2	3	4	5	6
20. The infant displays much feeling (vigorous laugh or cry) during diapering or dressing.	1	2	3	4	5	6
21. The infant lies still when asleep and wakes up in the same place.	1	2	3	4	5	6
22. The infant is content (smiles, coos) during interruptions of milk or solid feeding.	1	2	3	4	5	6
23. The infant shows much bodily movement when crying (kicks, waves arms).	1	2	3	4	5	6
24. The infant continues to react to a loud noise (hammering, barking dog, etc.) heard several times in the same day.	1	2	3	4	5	6
25. The infant's time of waking in the morning varies greatly (by 1 hr. or more) from day to day.	1	2	3	4	5	6
26. The infant's fussy periods occur at about the same time of day (morning, afternoon, night).	1	2	3	4	5	6
27. The infant is calm in the bath. Like or dislike is mildly expressed (smiles or frowns).	1	2	3	4	5	6

	<u>almost never</u>	<u>rarely</u>	<u>varies usually does not</u>	<u>varies usually does</u>	<u>frequent- ly</u>	<u>almost always</u>
28. The infant is fussy or cries during a physical exam by the doctor.	1	2	3	4	5	6

Circle the statement below that you agree with most.

In caring for the baby, I think that my husband:

- a. Helps me too much.
- b. Helps me just enough.
- c. Should be helping me more.

THANK YOU for completing the questionnaire !!!

Are your address and telephone number still the same? If not, could you please write down any changes on the lines below.

New Address: _____

New phone number : _____

42 Elwood Drive
Springfield, Mass. 01108

Dear New Father !!!

Congratulations on becoming a father!

Enclosed is the second questionnaire that I promised you and a stamped envelope. Please try to complete the questionnaire in the next day or so.

Thanks again for helping me out. When my study is finished, I will send you a copy of the results. I think that I am going to find some interesting things about infants and families.

If you or your wife have any questions, call me at 733-4725. The best time to reach me is early evening.

Enjoy your new baby and thanks again for your help.

Sincerely,

Beverly S. Katsh
(Family infant study)

Father Postnatal Questionnaire

Age 3 weeks

All of your answers will be kept strictly confidential. Your names will never be revealed to anyone. If you do not want to answer a particular question, you do not have to.

Please answer the questionnaire without consulting with your wife. If you do share your answers with her after you have finished, please don't change any answers.

Today's date _____

1. Date of birth of your baby _____
Is your baby a boy or girl? _____
Is your wife breastfeeding the baby? _____
2. How would you describe your baby's temperament? Please circle your answer.
Usually happy Sometimes happy, sometimes fussy. Often fussy
3. What time do you usually leave for work? _____ a.m. / _____ p.m.
4. What time do you usually get home from work? _____ a.m. / _____ p.m.
5. On the last day that you worked, what hours were you at home? _____
6. On the next to the last day that you worked, what hours were you at home? _____
7. Have you taken an extra job or been doing any overtime since the baby's birth? _____
If yes, how many extra hours per day have you been working? _____
8. During the last week (7 days) how many times have you done each of the following?
Put the number of your answer on the line next to the question.
 - a. Put the baby to sleep _____
 - b. Diapered the baby _____
 - c. Bathed the baby _____
 - d. Fed the baby _____
 - e. Played with the baby _____
 - f. Comforted the baby _____
 - g. Got up during the night to attend to the baby _____

2.

9. During the last week or two, who has been doing each of the following tasks in your home?

For those items dealing with the baby, do not include care performed by a babysitter, nurse or person other than you and your wife. Consider only things done by you and your wife.

Put your answer on the line next to each item.

- Answers: 1-- husband always
2-- husband more than wife
3-- husband and wife exactly the same
4-- wife more than husband
5-- wife always
6-- Does not apply to us

- a. Grocery shopping _____
b. Preparation of meals _____
c. Dishes and cleanup from meals _____
d. Laundry _____
e. Keeping track of money and bills _____
f. House cleaning _____
g. Earning money to support the family _____
h. Feeding the baby breakfast _____
i. Diapering the baby _____
j. Feeding the baby dinner _____
k. Bathing the baby _____
l. Taking the baby to the doctor _____
m. Putting the baby to sleep _____
n. Getting up when the baby needs attention during the night _____

10. Think back to last weekend or to the last days that you were off from work. Pick the day that you were home the most.

Who did each of the following on that day? Circle your answer.

- | | | | | |
|---------------------------------------|---|-----------|-------------|--------------|
| a. Got the baby up and dressed. | You | Your wife | Both of you | Other person |
| b. Fed the baby in the early morning. | You | Your wife | Both of you | Other person |
| c. Fed the baby at midday. | You | Your wife | Both of you | Other person |
| d. Fed the baby near dinner time. | You | Your wife | Both of you | Other person |
| e. Bathed the baby. | You | Your wife | Both of you | Other person |
| f. Put the baby to sleep. | You | Your wife | Both of you | Other person |
| g. Diapered the baby. | You-- How many times? _____
Your wife--How many times? _____ | | | |

11. On the same day, about how much time did you spend playing with the baby? _____
What kinds of things did you do when you played with the baby? _____
When you were playing with the baby, were you usually doing something else? _____
If yes, what other things were you doing? _____
If yes, about how much time did you spend just playing with the baby without doing anything else? _____

}

12. Think back to yesterday or another weekday.

Who did each of the following on that day? Circle your answer.

- | | | | | |
|---------------------------------------|--|-----------|-------------|--------------|
| a. Got the baby up and dressed. | You | Your wife | Both of you | Other person |
| b. Fed the baby in the early morning. | You | Your wife | Both of you | Other person |
| c. Fed the baby at midday. | You | Your wife | Both of you | Other person |
| d. Fed the baby near dinner time. | You | Your wife | Both of you | Other person |
| e. Bathed the baby. | You | Your wife | Both of you | Other person |
| f. Put the baby to sleep. | You | Your wife | Both of you | Other person |
| g. Diapered the baby. | You--How many times? _____
Your wife--How many times? _____ | | | |

13. On the same day, about how much time did you spend playing with the baby? _____
What kinds of thing did you do when you played with the baby? _____

When you were playing with the baby, were you usually doing something else? _____

If yes, what other things were you doing? _____

If yes, about how much time did you spend just playing with the baby without doing anything else? _____

14. Please rate your enjoyment of each of the following baby care tasks. Put your answer on the line next to the item.

- Answers: 1. enjoy it very much
2. enjoy it somewhat
3. enjoy it not too much
4. do not enjoy it

- a. Diapering the baby _____
b. Bathing the baby _____
c. Quieting the baby when he or she is crying _____
d. Putting the baby to sleep _____
e. Dressing the baby or changing the baby's clothes _____
f. Playing with the baby when he or she is quiet _____
g. Playing with the baby when he or she is crying _____

15. Do you feel awkward or ineffective in doing any of the tasks listed above? _____
If yes, which ones? (Use the letters a to g to answer) _____

16. For each question below, please tell whether you agree or disagree.
Give your answer by putting an X in the right box.

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neither Agree nor Disagree</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
a. Having a baby is as enjoyable as I thought it would be.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Having a baby is more work than I thought it would be.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I am bothered by losing sleep because of the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. I wish that my wife and I had more free time to spend together now that the baby is here.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. I think that we should have postponed having the baby for a while.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. In your present situation, how satisfied are you with each of the following?
Put an X in the box of your answer.

	<u>Extremely Satisfied</u>	<u>Very Satisfied</u>	<u>Somewhat Satisfied</u>	<u>Not too Satisfied</u>
a. The way your wife and baby were treated at the hospital.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The interest taken by your family in the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Being a father.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. The amount of time that you spend with the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. The way that your baby reacts when you approach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. When the father does baby care tasks, such as diapering, feeding and bathing
- a. How much does the baby benefit? a lot a little none (Circle your answer.)
- b. How much does the mother benefit? a lot a little none
- c. How much does the father benefit? a lot a little none
19. When the father plays with the baby or comforts the baby,
- a. How much does the baby benefit? a lot a little none
- b. How much does the mother benefit? a lot a little none
- c. How much does the father benefit? a lot a little none

THANKS VERY MUCH for completing the questionnaire!!!
Are your address and telephone number still the same? If not, could you please write down any changes on the lines below.

New address: _____
New telephone number: _____

42 Elwood Drive
Springfield, Mass. 01108

Dear Mother,

I hope that everything continues to go well for you and your baby.

Enclosed is the third and final questionnaire that I promised you, along with a stamped envelope. Please try to complete the questionnaire in the next day or two.

Thank you very much for returning your previous questionnaire. People are returning the questionnaires and the study is progressing well. I am looking forward to finishing the study and sharing the findings with you. I think that everyone will enjoy reading the results.

Thanks again for being a participant and good luck to you and your baby. My phone number is 733-4725, in case I can be of help to you or you have any questions.

Sincerely,

Beverly S. Katsh

(Family-Infant study)

P.S. The questionnaire is printed on both sides of the sheets.

Mother Postnatal Questionnaire

Age 3 months

All of your answers will be kept strictly confidential. Your name will never be revealed to anyone. If you do not want to answer a particular question, you do not have to.

Please answer the questionnaire without consulting with your husband. If you do share the answers with him after you have finished, please don't change any answers.

Today's date _____

1. Has your baby had any medical problems since he or she was 3 weeks of age? _____
If yes, what kinds of problems? _____
2. Has the baby had any problems requiring a hospital stay? _____
If so, how old was the baby at the time of the hospital stay? _____
How long was the baby in the hospital? _____
3. How would you describe your baby's temperament? Please circle your answer.
Usually happy Sometimes happy, sometimes fussy Often fussy
4. Are you breastfeeding? _____
If yes, do you give any bottles? _____ How many per day? _____
5. If you were working before the baby's birth, have you returned to work? _____
If yes, how many hours per week are you now working? _____
6. Do you have anyone helping to care for the baby during the week, such as a relative or babysitter? _____
If yes, how many hours per day does this person care for the baby? _____
7. Does anyone help to care for the baby regularly on weekends? _____
If yes, about how many hours on Saturdays? _____
on Sundays? _____
8. Does your husband do any of the baby care alone during the week? _____
If yes, about how many hours per day? _____
9. Does your husband do any of the baby care alone regularly on weekends? _____
If yes, about how many hours on Saturdays? _____
on Sundays? _____
10. About how many hours per night does your baby usually sleep? _____
11. What times does your baby usually get up in the morning? _____
12. How many times does your baby usually wake up during the night? _____

13. During the last week or two, who has been doing each of the following tasks in your home?

For those items dealing with the baby, do not include care performed by a babysitter, nurse or person other than you and your husband. Consider only things done by you and your husband.

Put your answer on the line next to the item.

- Answers: 1.-- husband always
 2.-- husband more than wife
 3.-- husband and wife exactly the same
 4.-- wife more than husband
 5.-- wife always
 6.-- Does not apply to us.

- a. Grocery shopping _____
 b. Preparation of meals _____
 c. Dishes and cleanup from meals _____
 d. Laundry _____
 e. Keeping track of money and bills _____
 f. House cleaning _____
 g. Earning money to support the family _____
 h. Feeding the baby breakfast _____
 i. Diapering the baby _____
 j. Feeding the baby dinner _____
 k. Bathing the baby _____
 l. Taking the baby to the doctor _____
 m. Putting the baby to sleep _____
 n. Getting up when the baby needs attention during the night _____

14. During the last week (7 days) how many times have you done each of the following? Put the number of your answer on the line next to the question.

- a. Put the baby to sleep _____
 b. Diapered the baby _____
 c. Bathed the baby _____
 d. Fed the baby _____
 e. Played with the baby _____
 f. Comforted the baby _____
 g. Got up during the night to attend to the baby _____

The following questions ask about the typical behavior of a young infant. Please circle the number that indicates what the infant's behavior has been like in each item during the last week or so.

Answers: 1-- almost never
2-- rarely
3-- varies, usually does not
4-- varies but usually does
5-- frequently
6-- almost always

	<u>almost never</u>	<u>rarely</u>	<u>varies usually does not</u>	<u>varies usually does</u>	<u>frequent- ly</u>	<u>almost always</u>
1. The infant is fussy on waking up and going to sleep (frowns, cries).	1	2	3	4	5	6
2. The infant accepts his/her bath any time of day without resisting.	1	2	3	4	5	6
3. The infant takes feedings quietly with mild expressions of likes and dislikes.	1	2	3	4	5	6
4. The infant lies quietly in the bath.	1	2	3	4	5	6
5. The infant wants and takes milk feedings at about the same times (within 1 hour) from day to day.	1	2	3	4	5	6
6. The infant moves about much (kicks, grabs, squirms) during diapering and dressing.	1	2	3	4	5	6
7. The infant vigorously resists additional food or milk when full (spits out, clamps mouth shut, bats at spoon, etc.)	1	2	3	4	5	6
8. The infant resists changes in feeding schedule (1 hr. or more) even after two tries.	1	2	3	4	5	6
9. The infant makes happy sounds (coos, smiles, laughs) when being diapered or dressed.	1	2	3	4	5	6
10. The infant reacts mildly (just blinks or startles briefly) to bright light such as flash bulb or letting sunlight in by pulling up shade.	1	2	3	4	5	6
11. The infant gets sleepy at about the same time each evening (within ½ hour).	1	2	3	4	5	6
12. The infant accepts regular procedures (hair brushing, face washing)	1	2	3	4	5	6

	almost never	rarely	varies usually does not	varies usually does	frequent- ly	almost always
13. The infant sits still (little squirming) in car seat or carriage.	1	2	3	4	5	6
14. The infant moves much (squirms, bounces, kicks) while lying awake in crib.	1	2	3	4	5	6
15. The infant is pleasant (coos, smiles, etc.) during procedures like hair brushing and face washing.	1	2	3	4	5	6
16. The infant plays actively with parents--much movement of arms, legs, body.	1	2	3	4	5	6
17. The infant adjusts within 10 mins. to new surroundings (home, store, play area).	1	2	3	4	5	6
18. The infant's daytime naps are about the same length from day to day (under 1/2 hr. difference).	1	2	3	4	5	6
19. The infant moves about much during feedings (squirms, kicks, grabs).	1	2	3	4	5	6
20. The infant displays much feeling (vigorous laugh or cry) during diapering or dressing.	1	2	3	4	5	6
21. The infant lies still when asleep and wakes up in the same place.	1	2	3	4	5	6
22. The infant is content (smiles, coos) during interruptions of milk or solid feeding.	1	2	3	4	5	6
23. The infant shows much bodily movement when crying (Kicks, waves arms).	1	2	3	4	5	6
24. The infant continues to react to a loud noise (hammering, barking dog, etc.) heard several times in the same day.	1	2	3	4	5	6
25. The infant's time of waking in the morning varies greatly (by 1 hr. or more) from day to day.	1	2	3	4	5	6
26. The infant's fussy periods occur at about the same time of day (morning, afternoon, night).	1	2	3	4	5	6
27. The infant is calm in the bath. Like or dislike is mildly expressed (smiles or frowns).	1	2	3	4	5	6

	<u>almost never</u>	<u>rarely</u>	<u>varies usually does not</u>	<u>varies usually does</u>	<u>frequent- ly</u>	<u>almost always</u>
28. The infant is fussy or cries during a physical exam by the doctor.	1	2	3	4	5	6

Circle the statement below that you agree with most.

In caring for the baby, I think that my husband:

- a. Helps me too much.
- b. Helps me just enough.
- c. Should be helping me more.

THANK YOU for completing the questionnaire !!!

Are your address and telephone number still the same? If not, could you please write down any changes on the lines below.

New Address:

New phone number :

42 Elwood Drive
Springfield, Mass. 01108

Dear Father,

I hope that everything is going along well for you and your new baby.

Enclosed is the third and final questionnaire that I promised you, along with a stamped envelope. Please try to finish the questionnaire in the next day or so.

Thanks for being so cooperative. I am getting many returns and I look forward to sharing the findings with you. I think that the final results will be interesting to everyone who participated.

Thanks again for being a participant.

Sincerely,

Beverly S. Katsh
(Family-Infant study)

P.S. The questionnaire is printed on both sides of the blue sheets.

Father Postnatal Questionnaire

Age 3 months

All of your answers will be kept strictly confidential. Your name will never be revealed to anyone. If you do not want to answer a particular question, you do not have to.

Please answer the questionnaire without consulting with your wife. If you do share your answers with her after you have finished, please don't change any answers.

Today's date _____

1. Is your wife ~~breast~~feeding the baby? _____
2. How would you describe your baby's temperament? Please circle your answer.

Usually happy	Sometimes happy, sometimes fussy	Often fussy
---------------	----------------------------------	-------------
3. What time do you usually leave for work? _____

a.m.
p.m.
4. What time do you usually get home from work? _____

a.m.
p.m.
5. On the last day that you worked, what hours were you at home? _____
6. On the next to the last day that you worked, what hours were you at home? _____
is what time do you usually go to sleep? _____
7. Have you taken an extra job or been doing any overtime in the last month? _____
 If yes, how many hours extra per day have you been working? _____
8. During the last week (7 days) how many times have you done each of the following?

Put the number of your answer on the line next to the question.

- a. Put the baby to sleep _____
- b. Diapered the baby _____
- c. Bathed the baby _____
- d. Fed the baby _____
- e. Played with the baby _____
- f. Comforted the baby _____
- g. Got up during the night to attend to the baby _____

2

9. During the last week or two, who has been doing each of the following tasks in your home?

For those items dealing with the baby, do not include care performed by a babysitter, nurse or person other than you and your wife. Consider only things done by you and your wife.

Put your answer on the line next to each item.

- Answers: 1-- husband always
2-- husband more than wife
3-- husband and wife exactly the same
4-- wife more than husband
5-- wife always
6-- Does not apply to us

- a. Grocery shopping _____
b. Preparation of meals _____
c. Dishes and cleanup from meals _____
d. Laundry _____
e. Keeping track of money and bills _____
f. House cleaning _____
g. Earning money to support the family _____
h. Feeding the baby breakfast _____
i. Diapering the baby _____
j. Feeding the baby dinner _____
k. Bathing the baby _____
l. Taking the baby to the doctor _____
m. Putting the baby to sleep _____
n. Getting up when the baby needs attention during the night _____

10. Think back to last weekend or to the last days that you were off from work. Pick the day that you were home the most.

Who did each of the following on that day? Circle your answer.

- | | | | | |
|---------------------------------------|---|-----------|-------------|--------------|
| a. Got the baby up and dressed. | You | Your wife | Both of you | Other person |
| b. Fed the baby in the early morning. | You | Your wife | Both of you | Other person |
| c. Fed the baby at midday. | You | Your wife | Both of you | Other person |
| d. Fed the baby near dinner time. | You | Your wife | Both of you | Other person |
| e. Bathed the baby. | You | Your wife | Both of you | Other person |
| f. Put the baby to sleep. | You | Your wife | Both of you | Other person |
| g. Diapered the baby. | You-- How many times? _____
Your wife--How many times? _____ | | | |

11. On the same day, about how much time did you spend playing with the baby? _____
What kinds of things did you do when you played with the baby? _____
When you were playing with the baby, were you usually doing something else? _____
If yes, what other things were you doing? _____
If yes, about how much time did you spend just playing with the baby without doing anything else? _____

12. Think back to yesterday or another weekday.

Who did each of the following on that day? Circle your answer.

- | | | | | |
|---------------------------------------|--|-----------|-------------|--------------|
| a. Got the baby up and dressed. | You | Your wife | Both of you | Other person |
| b. Fed the baby in the early morning. | You | Your wife | Both of you | Other person |
| c. Fed the baby at midday. | You | Your wife | Both of you | Other person |
| d. Fed the baby near dinner time. | You | Your wife | Both of you | Other person |
| e. Bathed the baby. | You | Your wife | Both of you | Other person |
| f. Put the baby to sleep. | You | Your wife | Both of you | Other person |
| g. Diapered the baby. | You--How many times? _____
Your wife--How many times? _____ | | | |

13. On the same day, about how much time did you spend playing with the baby? _____

What kinds of thing did you do when you played with the baby? _____

When you were playing with the baby, were you usually doing something else? _____

If yes, what other things were you doing? _____

If yes, about how much time did you spend just playing with the baby without doing anything else? _____

14. Please rate your enjoyment of each of the following baby care tasks. Put your answer on the line next to the item.

- Answers: 1. enjoy it very much
2. enjoy it somewhat
3. enjoy it not too much
4. do not enjoy it

- a. Diapering the baby _____
b. Bathing the baby _____
c. Quieting the baby when he or she is crying _____
d. Putting the baby to sleep _____
e. Dressing the baby or changing the baby's clothes _____
f. Playing with the baby when he or she is quiet _____
g. Playing with the baby when he or she is crying _____

15. Do you feel awkward or ineffective in doing any of the tasks listed above? _____
If yes, which ones? (Use the letters a to g to answer) _____

16. For each question below, please tell whether you agree or disagree.
Give your answer by putting an X in the right box.

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Neither</u> <u>Agree nor</u> <u>Disagree</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
a. Having a baby is as enjoyable as I thought it would be.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Having a baby is more work than I thought it would be.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I am bothered by losing sleep because of the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. I wish that my wife and I had more free time to spend together now that the baby is here.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. I think that we should have postponed having the baby for a while.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. In your present situation, how satisfied are you with each of the following?
Put an X in the box of your answer.

	<u>Extremely</u> <u>Satisfied</u>	<u>Very</u> <u>Satisfied</u>	<u>Somewhat</u> <u>Satisfied</u>	<u>Not too</u> <u>Satisfied</u>
a. The way that the doctor cares for your baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The interest taken by your family in the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Being a father.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. The amount of time that you spend with the baby.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. The way that your baby reacts when you approach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. When the father does baby care tasks, such as diapering, feeding and bathing
- a. How much does the baby benefit? a lot a little none (Circle your answer.)
- b. How much does the mother benefit? a lot a little none
- c. How much does the father benefit? a lot a little none
19. When the father plays with the baby or comforts the baby,
- a. How much does the baby benefit? a lot a little none
- b. How much does the mother benefit? a lot a little none
- c. How much does the father benefit? a lot a little none

THANKS VERY MUCH for completing the questionnaire!!!
Are your address and telephone number still the same? If not, could you please write down any changes on the lines below.

New address:

New telephone number:

A P P E N D I X D

CLASSIFIED INDEX OF INDUSTRIES AND OCCUPATIONS
OF 1970 CENSUS OF THE POPULATION

OCCUPATIONAL CLASSIFICATION SYSTEM

Equivalent alphabetic codes follow some codes. Either code may be utilized, depending on the processing method. "N.e.c." means "not elsewhere classified."

Occupation Code	PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS	Occupation Code	PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS—Continued
001	Accountants		Nurses, dietitians, and therapists
002	Architects	074	Dietitians
	Computer specialists	075	Registered nurses
003	Computer programmers	076	Therapists
004	Computer systems analysts		Health technologists and technicians
005	Computer specialists, n.e.c.	080	Clinical laboratory technologists and technicians
	Engineers	081	Dental hygienists
006	Aeronautical and astronautical engineers	062	Health record technologists and technicians
010	Chemical engineers	083	Radiologic technologists and technicians
011	Civil engineers	084	Therapy assistants
012	Electrical and electronic engineers	085	Health technologists and technicians, n.e.c.
013	Industrial engineers		Religious workers
014	Mechanical engineers	086	Clergymen
015	Met.,urgical and materials engineers	090	Religious workers, n.e.c.
020	Mining engineers		Social scientists
021	Petroleum engineers	091	Economists
022	Sales engineers	092	Political scientists
023	Engineers, n.e.c.	093	Psychologists
024	Farm management advisors	094	Sociologists
025	Foresters and conservationists	095	Urban and regional planners
026	Home management advisors	096	Social scientists, n.e.c.
	Lawyers and judges		Social and recreation workers
030	Judges	100	Social workers
031	Lawyers	101	Recreation workers
	Librarians, archivists, and curators		Teachers, college and university
032	Librarians	102	Agriculture teachers
033	Archivists and curators	103	Atmospheric, earth, marine, and space teachers
	Mathematical specialists	104	Biology teachers
034	Actuaries	105	Chemistry teachers
035	Mathematicians	110	Physics teachers
038	Statisticians	111	Engineering teachers
	Life and physical scientists	112	Mathematics teachers
042	Agricultural scientists	113	Health specialties teachers
043	Atmospheric and space scientists	114	Psychology teachers
044	Biological scientists	115	Business and commerce teachers
045	Chemists	116	Economics teachers
051	Geologists	120	History teachers
052	Marine scientists	121	Sociology teachers
053	Physicists and astronomers	122	Social science teachers, n.e.c.
054	Life and physical scientists, n.e.c.	123	Art, drama, and music teachers
055	Operations and systems researchers and analysts	124	Coaches and physical education teachers
056	Personnel and labor relations workers	125	Education teachers
	Physicians, dentists, and related practitioners	126	English teachers
061	Chiropractors	130	Foreign language teachers
062	Dentists	131	Home economics teachers
063	Optometrists	132	Law teachers
064	Pharmacists	133	Theology teachers
065	Physicians, medical and osteopathic	134	Trade, industrial, and technical teachers
071	Podiatrists	135	Miscellaneous teachers, college and university
072	Veterinarians	140	Teachers, college and university, subject not specified
073	Health practitioners, n.e.c.		

Occupation Code	PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS- Continued	Occupation Code	MANAGERS AND ADMINISTRATORS, EXCEPT FARM- Continued
141	Teachers, except college and university	230	Restaurant, cafeteria, and bar managers
142 (N)	Adult education teachers	231	Sales managers and department heads, retail trade
143	Elementary school teachers	233	Sales managers, except retail trade
144	Prekindergarten and kindergarten teachers	235	School administrators, college
145	Secondary school teachers	240	School administrators, elementary and secondary
	Teachers, except college and university, n.e.c.	245	Managers and administrators, n.e.c.
	Engineering and science technicians		
150	Agriculture and biological technicians, except health		SALES WORKERS
151	Chemical technicians		
152	Draftsmen	260	Advertising agents and salesmen
153	Electrical and electronic engineering technicians	261	Auctioneers
154	Industrial engineering technicians	262	Demonstrators
155	Mechanical engineering technicians	264	Hucksters and peddlers
156	Mathematical technicians	265	Insurance agents, brokers, and underwriters
161	Surveyors	266	Newsboys
162	Engineering and science technicians, n.e.c.	270	Real estate agents and brokers
	Technicians, except health, and engineering and science	271	Stock and bond salesmen
		280	Salesmen and sales clerks, n.e.c. ¹
163	Airplane pilots		
164	Air traffic controllers		CLERICAL AND KINDRED WORKERS
165	Embalmers		
170	Flight engineers		
171	Radio operators		
172	Tool programmers, numerical control	301	Bank tellers
173	Technicians, n.e.c.	303	Billing clerks
174	Vocational and educational counselors	305 (P)	Bookkeepers
	Writers, artists, and entertainers	310	Cashiers
175	Actors	311	Clerical assistants, social welfare
180	Athletes and kindred workers	312	Clerical supervisors, n.e.c.
181	Authors	313	Collectors, bill and account
182	Dancers	314	Counter clerks, except food
183	Designers	315	Dispatchers and starters, vehicle
184	Editors and reporters	320	Enumerators and interviewers
185	Musicians and composers	321	Estimators and investigators, n.e.c.
190	Painters and sculptors	323	Expeditors and production controllers
191	Photographers	325	File clerks
192	Public relations men and publicity writers	326	Insurance adjusters, examiners, and investigators
193	Radio and television announcers	330	Library attendants and assistants
194	Writers, artists, and entertainers, n.e.c.	331	Mail carriers, post office
195	Research workers, not specified	332	Mail handlers, except post office
		333	Messengers and office boys
		334	Meter readers, utilities
	MANAGERS AND ADMINISTRATORS, EXCEPT FARM		Office machine operators
201	Assessors, controllers, and treasurers; local public administration	341	Bookkeeping and billing machine operators
202	Bank officers and financial managers	342	Calculating machine operators
203	Buyers and shippers, farm products	343	Computer and peripheral equipment operators
205	Buyers, wholesale and retail trade	344	Duplicating machine operators
210	Credit men		
211	Funeral directors		
212	Health administrators		
213	Construction inspectors, public administration		
215	Inspectors, except construction, public administration		
216	Managers and superintendents, building		
220	Office managers, n.e.c.		
221	Officers, pilots, and pursers; ship		
222	Officials and administrators, public administration, n.e.c.		
223	Officials of lodges, societies, and unions		
224	Postmasters and mail superintendents		
225	Purchasing agents and buyers, n.e.c.		
226	Railroad conductors		

¹Category "280 Salesmen and sales clerks, n.e.c." was subdivided in the Census into 5 occupation groups dependant on industry. The industry codes are shown in parentheses.

Occ. Code	
281	Sales representatives, manufacturing industries (Ind. 107-309)
282	Sales representatives, wholesale trade (Ind. 017-039, 507-509)
283	Sales clerks, retail trade (Ind. 603-699 except 61B, 639, 640, 667, 688, 689)
284	Salesmen, retail trade (Ind. 607, 61B, 639, 649, 667, 638, 688)
285	Salesmen of services and construction (Ind. 057-070, 407-499, 707-947)

Occupation Code	CLERICAL AND KINDRED WORKERS—Continued	Occupation Code	CRAFTSMEN AND KINDRED WORKERS—Continued
	Office machine operators—Continued		
345	Key punch operators	453	Jewelers and watchmakers
350	Typing machine operators	454	Job and die makers, metal
355	Office machine operators, n.e.c.	455	Locomotive engineers
360	Payroll and timekeeping clerks	456	Lozengete firemen
361	Postal clerks	461	Machinists
362	Proofreaders	462	Machinist apprentices
363	Real estate appraisers		Mechanics and repairmen
364	Receptionists	470	Air conditioning, heating, and refrigeration
	Secretaries	471	Aircraft
370	Secretaries, legal	472	Automobile body repairmen
371	Secretaries, medical	473 (S)	Automobile mechanics
372 (O)	Secretaries, n.e.c.	474	Automobile mechanic apprentices
374	Shipping and receiving clerks	475	Data processing machine repairmen
375	Statistical clerks	480	Farm implement
376	Stenographers	481	Heavy equipment mechanics, incl. diesel
381	Stock clerks and storekeepers	482	Household appliance and accessory installers and mechanics
382	Teacher aides, exc. school monitors	483	Loom fixers
383	Telegraph messengers	484	Office machine
384	Telegraph operators	485	Radio and television
385	Telephone operators	486	Railroad and car shop
390	Ticket, station, and express agents	491	Mechanic, exc. auto, apprentices
391	Typists	492	Miscellaneous mechanics and repairmen
392	Weighters	495	Not specified mechanics and repairmen
394	Miscellaneous clerical workers	501	Millers; grain, flour, and feed
395	Not specified clerical workers	502	Millwrights
	CRAFTSMEN AND KINDRED WORKERS	503	Molders, metal
401	Automobile accessories installers	504	Molder apprentices
402	Bakers	505	Motion picture projectionists
403	Blacksmiths	506	Opticians, and lens grinders and polishers
404	Boilermakers	510	Painters, construction and maintenance
405	Bookbinders	511	Painter apprentices
410	Brickmasons and stonemasons	512	Paperhangers
411	Brickmasons and stonemasons, apprentices	514	Pattern and model makers, exc. paper
412	Bulldozer operators	515	Photoengravers and lithographers
413	Cabinetmakers	516	Piano and organ tuners and repairmen
415 (R)	Carpenters	520	Plasterers
416	Carpenter apprentices	521	Plasterer apprentices
420	Carpet installers	522	Plumbers and pipe fitters
421	Cement and concrete finishers	523	Plumber and pipe fitter apprentices
422	Compositors and typesetters	525	Power station operators
423	Printing trades apprentices, exc. pressmen	530	Pressman and plate printers, printing
424	Cranemen, derrickmen, and hoistmen	531	Pressman apprentices
425	Decorators and window dressers	533	Rollers and finishers, metal
426	Dental laboratory technicians	534	Roofers and slaters
430	Electricians	535	Sheetmetal workers and tinsmiths
431	Electrician apprentices	536	Sheetmetal apprentices
433	Electric power linemen and cablemen	540	Shipfitters
434	Electrotypers and stereotypers	542	Shoe repairmen
435	Engravers, exc. photoengravers	543	Sign painters and letterers
436	Excavating, grading, and road machine operators; exc. bulldozer	545	Stationary engineers
440	Floor layers, exc. tile setters	546	Stone cutters and stone carvers
441	Foremen, n.e.c.	550	Structural metal craftsmen
442	Forgemen and hammermen	551	Tailors
443	Furniture and wood finishers	552	Telephone installers and repairmen
444	Furriers	554	Telephone linemen and splicers
445	Glaziers	560	Tile setters
446	Heat treaters, annealers, and temperers	561	Tool and die makers
450	Inspectors, scalers, and graders; lug and lumber	562	Tool and die maker apprentices
452	Inspectors, n.e.c.	563	Upholsterers
		571	Specified craft apprentices, n.e.c.
		572	Not specified apprentices

Occupation Code	CRAFTSMEN AND KINDRED WORKERS— Continued	Occupation Code	TRANSPORT EQUIPMENT OPERATIVES
575	Craftsmen and kindred workers, n.e.c.	701	Boatmen and canalmen
580	Former members of the Armed Forces	703	Bus drivers
		704	Conductors and motormen, urban rail transit
		705	Deliverymen and routemen
		706	Fork lift and tow motor operatives
		710	Motormen; mine, factory, logging camp, etc.
		711	Parking attendants
		712	Railroad brakemen
		713	Railroad switchmen
		714	Taxicab drivers and chauffeurs
		715 (U)	Truck drivers
	OPERATIVES, EXCEPT TRANSPORT		
601	Asbestos and insulation workers		
602 (T)	Assemblers		
603	Blasters and powdermen		
604	Bottling and canning operatives		
605	Chainmen, rodmen, and axmen, surveying		
610	Checkers, examiners, and inspectors; manufacturing		
611	Clothing ironers and pressers		
612	Cutting operatives, n.e.c.		
613	Dressmakers and seamstresses, except factory		
614	Drillers, earth		
615	Dry wall installers and lathers		
620	Dyers		
621	Filers, polishers, sanders, and buffers		
622	Furnacemen, smeltermen, and pourers		
623	Garage workers and gas station attendants		
624	Graders and sorters, manufacturing		
625	Produce graders and packers, except factory and farm		
626	Heaters, metal		
630	Laundry and dry cleaning operatives, n.e.c.		
631	Meat cutters and butchers, exc. manufacturing		
633	Meat cutters and butchers, manufacturing		
634	Meat wrappers, retail trade		
635	Metal platers		
636	Milliners		
640	Mine operatives, n.e.c.		
641	Mixing operatives		
642	Oilers and greasers, exc. auto		
643	Packers and wrappers, except meat and produce		
644	Painters, manufactured articles		
645	Photographic process workers		
	Precision machine operatives		
650	Drill press operatives		
651	Grinding machine operatives		
652	Lathe and milling machine operatives		
653	Precision machine operatives, n.e.c.		
656	Punch and stamping press operatives		
660	Riveters and fasteners		
661	Sailors and deckhands		
662	Sawyers		
663	Sewers and stitchers		
664	Shoemaking machine operatives		
665	Solderers		
666	Stationary firemen		
	Textile operatives		
670	Carding, lapping, and combing operatives		
671	Knitters, loopers, and toppers		
672	Spinners, twistars, and winders		
673	Weavers		
674	Textile operatives, n.e.c.		
680	Welders and flame cutters		
681	Winding operatives, n.e.c.		
690	Machine operatives, miscellaneous specified		
692	Machine operatives, not specified		
694	Miscellaneous operatives		
695	Not specified operatives		
			LABORERS, EXCEPT FARM
		740	Animal caretakers, exc. farm
		750	Carpenters' helpers
		751 (V)	Construction laborers, exc. carpenters' helpers
		752	Fishermen and oystermen
		753	Freight and material handlers
		754	Garbage collectors
		755	Gardeners and groundskeepers, exc. farm
		760	Longshoremen and stevedores
		761	Lumbermen, raftsmen, and woodchoppers
		762	Stock handlers
		763	Teamsters
		764	Vehicle washers and equipment cleaners
		770	Warehousemen, n.e.c.
		780	Miscellaneous laborers
		785	Not specified laborers
			FARMERS AND FARM MANAGERS
		801 (W)	Farmers (owners and tenants)
		802	Farm managers
			FARM LABORERS AND FARM FOREMEN
		821	Farm foremen
		822	Farm laborers, wage workers
		823	Farm laborers, unpaid family workers
		824	Farm service laborers, self-employed
			SERVICE WORKERS, EXC. PRIVATE HOUSEHOLD
			Cleaning service workers
		901	Chambermaids and maids, except private household
		902	Cleaners and charwomen
		903 (X)	Janitors and sextons
			Food service workers
		910	Bartenders
		911	Busboys
		912	Cooks, except private household
		913	Dishwashers
		914	Food counter and fountain workers
		915 (Y)	Waiters
		916	Food service workers, n.e.c., except private household

Occupation Code	SERVICE WORKERS, EXC. PRIVATE HOUSEHOLD—Continued	Occupation Code	PRIVATE HOUSEHOLD WORKERS
	Health service workers		
921	Dental assistants	990	Child care workers, private household
922	Health aides, exc. nursing	991	Cooks, private household
923	Health trainees	992	Housekeepers, private household
924	Lay midwives	993	Laundresses, private household
925	Nursing aides, orderlies, and attendants	994 (Z)	Maid, and servants, private household
926	Practical nurses		
	Personal service workers	995	OCCUPATION NOT REPORTED¹
931	Airline stewardesses		ALLOCATION CATEGORIES²
932	Attendants, recreation and amusement	196	Professional, technical, and kindred workers—allocated
933	Attendants, personal service, n.e.c.	246	Managers and administrators, except farm—allocated
934	Baggage porters and bellhops	296	Sales workers—allocated
935	Barbers	396	Clerical and kindred workers—allocated
940	Boarding and lodging house keepers	596	Craftsmen and kindred workers—allocated
941	Bootblacks	696	Operatives, except transport—allocated
942	Child care workers, exc. private household	726	Transport equipment operatives—allocated
943	Elevator operators	796	Laborers, except farm—allocated
944	Hairdressers and cosmetologists	806	Farmers and farm managers—allocated
945	Personal service apprentices	846	Farm laborers and farm foremen—allocated
950	Housekeepers, exc. private household	976	Service workers, exc. private household—allocated
952	School monitors	996	Private household workers—allocated
953	Ushers, recreation and amusement		
954	Welfare service aides		
	Protective service workers		
960	Crossing guards and bridge tenders		
961	Firemen, fire protection		
962	Guards and watchmen		
963	Marshals and constables		
964	Policemen and detectives		
965	Sheriffs and bailiffs		

¹This code is used to identify not reported occupations in surveys where the not reported cases are not allocated.

²Those returns from the Population Census which do not have an occupation entry are allocated among the major occupation groups during computer processing. These cases are labeled with the code for the "allocation" category to which they are assigned. (See text, page VI).

A P P E N D I X E

PILOT TESTED VERSION OF THE INSTRUMENTATION

Mother's Form

Prenatal Questionnaire

1. Your name _____
2. Your spouse's name _____
3. Address _____ City _____
4. Your age _____ Phone No. _____
5. Occupation _____ Due date of birth _____
6. What school grade or college level have you completed? _____

7. How many brothers and sisters do you have and how old are they?
List each one separately and give his or her age. (Example: brother 25 yrs.)

8. How long have you been married? _____
9. Was this pregnancy planned? _____
10. Did you ever do any babysitting or caring for children in your family? _____
If so, how old were you at the time? _____
How often did you do this? (Example: Every day, once a week, once in
a while) _____
11. Have you had any recent (regular) experience with children? _____
If so, what kind of experience? _____

12. Whose idea was it to attend childbirth preparation classes? _____
13. Have you enjoyed these classes? _____
14. Have you ever taken any courses in child development or child psychology? _____
If yes, where and what courses? _____

15. Have you done any reading on your own in preparation for your new baby? _____
If yes, what have you read? _____

16. Circle the statement below that you agree with most.

When I think about the forthcoming arrival of my baby:

- a. I am pleased and not concerned about being a good parent.
- b. I am pleased but concerned about being a good parent.
- c. I am not pleased but not concerned about being a good parent.
- d. I am not pleased and concerned about being a good parent.

17. Would you prefer a boy or girl baby? _____

18. Are you going to be using the services of a babysitter, relative or other person to help care for the baby after the first few weeks after the birth? _____

If someone is going to help you care for the baby, disregard the amount of time that the babysitter or other person will be taking care of the baby when you answer Questions 19 through 21.

19. How much time every day do you think that you will spend with the baby? Circle your answer.

- a. less than 1 hour per day
- b. 1 hour per day
- c. 2 hours per day
- d. 3 hours per day
- e. 4 hours per day
- f. 5 hours per day
- g. 6 hours per day
- h. more than 6 hours per day

20. During the first three weeks after the birth, how much of the daily responsibility for baby care do you think that you will have? Exclude any care done by a babysitter, relative or nurse. Circle your answer.

- a. none of it
- b. about 10% of it
- c. about a quarter (25%) of it
- d. about half of it
- e. more than half but not all of it
- f. all of it

21. How much of the daily responsibility do you think you will have after the first three weeks? (Exclude care done by a babysitter, etc.) Circle your answer.

- a. none of it
- b. about 10% of it
- c. about a quarter (25%) of it
- d. about half of it
- e. more than half but not all of it
- f. all of it

22. During the first three weeks after the birth, how often do you think you will be doing any of the following?

Put an X in the column of your answer.

	<u>Occasionally but not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby			
b. Feeding the baby			
c. Playing with the baby			
d. Comforting the baby			
e. Bathing the baby			xxxxxxxxxxxxxxxx

23. After the first three weeks, how often do you think that you will be doing each of the following?

Put an X in the column of your answer.

	<u>Occasionally but not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby			
b. Feeding the baby			
c. Playing with the baby			
d. Comforting the baby			
e. Bathing the baby			xxxxxxxxxxxxxxxx

24. After the first three weeks, how often do you think that you will be doing any of the following?

Put an X in the column of your answer.

	<u>Never</u>	<u>Occasionally</u>	<u>Regularly</u>
a. Getting up during the night to attend to the baby.			
b. Taking the baby to doctor's visits.			
c. Putting the baby to sleep.			

25. Suppose that a husband and wife take an equal role in caring for their infant. What do you think about this arrangement? Do you think that it is good for the baby?

26. Suppose that you met a man who told you he had quit his job to stay home and take care of his infant while his wife went to work. What do you think of this arrangement?

Household Tasks

Who usually does the following tasks in your house?
Put the letter of your answer on the line next to the question.

For example:

1. Grocery shopping A

Answers:

- A. Husband always
- B. Husband more than wife
- C. Husband and wife exactly the same
- D. Wife more than husband
- E. Wife always

1. Grocery shopping
2. Preparation of meals
3. Dishes and cleanup from meals
4. Laundry
5. Keeping track of money and bills
6. Repairing things around the house
7. Getting the car fixed
8. House cleaning
9. Salaried employment
10. Doing yard work

Father's Form
Prenatal Questionnaire

1. Your name _____
2. Your spouse's name _____
3. Address _____ City _____
4. Your age _____ Phone No. _____
5. Occupation _____ Due date of birth _____
6. What school grade or college level have you completed? _____

7. How many brothers and sisters do you have and how old are they?
List each one separately and give his or her age. (Example: brother 25 yrs.)

8. How long have you been married? _____
9. Was this pregnancy planned? _____
10. Did you ever do any babysitting or caring for children in your family? _____
If so, how old were you at the time? _____
How often did you do this? (Example: Every day, once a week, once in
a while) _____
11. Have you had any recent (regular) experience with children? _____
If so, what kind of experience? _____

12. Whose idea was it to attend childbirth preparation classes? _____
13. Have you enjoyed these classes? _____
14. Have you ever taken any courses in child development or child psychology? _____
If yes, where and what courses? _____

15. Have you done any reading on your own in preparation for your new baby? _____
If yes, what have you read? _____

16. Circle the statement below that you agree with most.

When I think about the forthcoming arrival of my baby:

- a. I am pleased and not concerned about being a good parent.
- b. I am pleased but concerned about being a good parent.
- c. I am not pleased but not concerned about being a good parent.
- d. I am not pleased and concerned about being a good parent.

17. Would you prefer a boy or girl baby? _____

18. Are you going to be using the services of a babysitter, relative or other person to help care for the baby after the first few weeks after the birth? _____

If someone is going to help you care for the baby, disregard the amount of time that the babysitter or other person will be taking care of the baby when you answer Questions 19 through 21.

19. How much time every day do you think that you will spend with the baby? Circle your answer.

- a. less than 1 hour per day
- b. 1 hour per day
- c. 2 hours per day
- d. 3 hours per day
- e. 4 hours per day
- f. 5 hours per day
- g. 6 hours per day
- h. more than 6 hours per day

20. During the first three weeks after the birth, how much of the daily responsibility for baby care do you think that you will have? Exclude any care done by a babysitter, relative or nurse. Circle your answer.

- a. none of it
- b. about 10% of it
- c. about a quarter (25%) of it
- d. about half of it
- e. more than half but not all of it
- f. all of it

21. How much of the daily responsibility do you think you will have after the first three weeks? (Exclude care done by a babysitter, etc.) Circle your answer.

- a. none of it
- b. about 10% of it
- c. about a quarter (25%) of it
- d. about half of it
- e. more than half but not all of it
- f. all of it

22. During the first three weeks after the birth, how often do you think you will be doing any of the following?

Put an X in the column of your answer.

	<u>Occasionally but not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby			
b. Feeding the baby			
c. Playing with the baby			
d. Comforting the baby			
e. Bathing the baby			XXXXXXXXXXXX

23. After the first three weeks, how often do you think that you will be doing each of the following?

Put an X in the column of your answer.

	<u>Occasionally but not regularly</u>	<u>Once or twice a day</u>	<u>Several times a day</u>
a. Diapering the baby			
b. Feeding the baby			
c. Playing with the baby			
d. Comforting the baby			
e. Bathing the baby			XXXXXXXXXXXX

24. After the first three weeks, how often do you think that you will be doing any of the following?

Put an X in the column of your answer.

	<u>Never</u>	<u>Occasionally</u>	<u>Regularly</u>
a. Getting up during the night to attend to the baby.			
b. Taking the baby to doctor's visits.			
c. Putting the baby to sleep.			

25. Suppose that a husband and wife take an equal role in caring for their infant. What do you think about this arrangement? Do you think that it is good for the baby?

26. Suppose that you met a man who told you he had quit his job to stay home and take care of his infant while his wife went to work. What do you think of this arrangement?

29. Suppose that your wife had to leave home for a week or two (such as to return to the hospital or visit a sick relative) when your baby is 6 weeks old.

Assuming that your wife does not take the baby with her and that the baby is cared for during your working hours, how comfortable would you be taking care of the baby:

30. Household Tasks
Who usually does the following tasks in your house.
Put the letter of your answer on the line next to the question.

For example:

1. Grocery shopping A

Answers:

- A. Husband always
- B. Husband more than wife
- C. Husband and wife exactly the same
- D. Wife more than husband
- E. Wife always

- 1. Grocery shopping
- 2. Preparation of meals
- 3. Dishes and cleanup from meals
- 4. Laundry
- 5. Keeping track of money and bills
- 6. Repairing things around the house
- 7. Getting the car fixed
- 8. House cleaning
- 9. Salaried employment
- 10. Doing yard work

Mother Postnatal Questionnaire
Age 3 weeks

1. Your name _____ Today's date _____
2. Address _____ Phone _____
3. Baby's name _____ Date of birth _____
Weight at birth _____
4. How long were you in labor? _____
5. Was the delivery normal ? _____
6. Did you receive any kind of medication during labor or delivery? _____
If so, what kind _____ How many times _____
7. Did the baby come home with you from the hospital? _____
If not, when did the baby come home? _____
If not, why didn't the baby come home with you? _____
8. Does the baby have any medical problems ? _____
If so, what problems? _____

9. How would you describe your baby's temperament? _____
10. Are you breastfeeding? _____
If so, do you give any supplemental bottles? _____
11. Have you returned to work? _____
If yes, how many hours per week are you now working? _____
12. Do you have anyone helping to care for the baby, such as a babysitter
or relative? _____
If yes, how many hours per day does this person care for the baby
during the week? _____
Does anyone help care for the baby on weekends? _____
If yes, about how many hours on Saturday? _____
on Sunday? _____
13. About how many hours per night does your baby usually sleep? _____
14. What time does your baby usually get up in the morning? _____

15. During the last week or two, who has been doing each of the following?

For those items dealing with the baby, do not include services and care performed by a babysitter, nurse or other person other than you and your husband. Only consider things done by you and your husband.

Put your answer on the line next to each item.

Answers:

- A-- husband always
- B-- husband more than wife
- C-- husband and wife exactly the same
- D-- wife more than husband
- E-- wife always

1. Grocery shopping _____
2. Preparation of meals _____
3. Dishes and cleanup from meals _____
4. Laundry _____
5. House cleaning _____
6. Keeping track of money and bills _____
7. Salaried employment _____
8. Feeding the baby breakfast _____
9. Diapering the baby _____
10. Feeding the baby dinner _____
11. Bathing the baby _____
12. Taking the baby to the doctor _____
13. Putting the baby to sleep _____
14. Getting up when the baby needs attention during the night.

16. Circle the statement below that you agree with most.

In caring for the baby, I think that my husband :

- a. Helps me too much and interferes with my routine with the baby.
- b. Helps me too much but doesn't interfere with my routine with the baby.
- c. Helps me just enough but interferes with my routine.
- d. Helps me just enough but doesn't interfere with my routine.
- e. Doesn't help me enough.

17. Circle the statement below that you agree with most.

In caring for the household since the baby was born, I think that:

- a. My husband has been doing too much.
- b. My husband has been doing just enough.
- c. My husband should be doing more.

Father Postnatal Questionnaire
Age 3 weeks

1. Your name _____ Today's date _____
2. Address _____ Phone _____
3. Baby's name _____ Date of birth _____
4. Is your baby a boy or girl? _____
5. How would you describe your baby's temperament: _____
6. What time do you usually leave for work? _____
7. What time do you usually get home from work? _____
8. What hours were you at home yesterday? (Include any hours all day and night.)

9. What hours were you home the day before yesterday? _____
10. During the last week or two, who has been doing each of the following?

For those items dealing with the baby, do not include services and care performed by a babysitter, nurse or other person other than you and your wife. Only consider things done by you and your wife.

Put your answer on the line next to each item.

- Answers: A-- husband always
B-- husband more than wife
C-- husband and wife exactly the same
D-- wife more than husband
E-- wife always

1. Grocery shopping _____
2. Preparation of meals _____
3. Dishes and cleanup after meals _____
4. Laundry _____
5. House cleaning _____
6. Keeping track of money and bills _____
7. Salaried employment _____
8. Feeding the baby breakfast _____
9. Diapering the baby _____
10. Feeding the baby dinner _____
11. Bathing the baby _____
12. Taking the baby to the doctor _____
13. Putting the baby to sleep _____
14. Getting up when the baby needs attention during the night. _____

11. During the last week (last 7 days) how many times have you done the following?

Put the number of your answer on the line next to the question.

- a. Put your baby to bed at night _____
 b. Fed your baby a meal _____
 c. Changed a diaper _____
 d. Given your baby a bath _____
 e. Comforted your baby when crying _____
 f. Gotten up during the night to attend to the baby _____

12. Think of last weekend and pick one day (preferably a day when you were home the most).

Who did the following tasks on that day. Circle your answer to each.

- | | | |
|--------------------------------|-----------------------------|-----------------------------------|
| a. Got the baby up and dressed | You | Your wife |
| b. Fed the baby breakfast | You | Your wife |
| c. Fed the baby lunch | You | Your wife |
| d. Fed the baby dinner | You | Your wife |
| e. Bathed the baby | You | Your wife |
| f. Put the baby to bed | You | Your wife |
| g. Diapered the baby | You-- How many times? _____ | Your wife-- How many times? _____ |

13. Think back to last weekend and to a day when you were home the most.

About how much time did you spend just playing with your baby? _____

What kinds of things did you do when you played with the baby? _____

When you were playing with the baby, were you usually doing other things at the same time? _____

What other things were you doing? _____

How much time on that day did you just play with the baby without doing anything else? _____

14. Think back to yesterday or to another weekday.

Who did the following tasks? Circle your answer to each question.

- | | | | |
|--------------------------------|-----|-----------|--------------|
| a. Got the baby up and dressed | You | Your wife | Other person |
| b. Fed the baby breakfast | You | Your wife | Other person |
| c. Fed the baby lunch | You | Your wife | Other person |
| d. Fed the baby dinner | You | Your wife | Other person |
| e. Bathed the baby | You | Your wife | Other person |
| f. Put the baby to bed | You | Your wife | Other person |

15. Think back to yesterday or to another weekday.

How much time were you home when the baby was awake? _____

About how much time did you spend playing with the baby? _____

What kinds of things did you do when you played? _____

16. Please rate your enjoyment of doing each of the following baby care tasks. For each item, choose the answer that you agree with most. Put your answer on the line next to the question.

- Answers:
1. enjoy it very much
 2. enjoy it somewhat
 3. neither enjoy it nor dislike it
 4. dislike it somewhat
 5. dislike it very much

- a. Diapering the baby _____
- b. Bathing the baby _____
- c. Quieting the baby when he or she is crying _____
- d. Putting the baby to bed _____
- e. Dressing the baby or changing the baby's clothes _____
- f. Playing with the baby when he or she is quiet _____
- g. Playing with the baby when he or she is crying _____

17. For each question below, please rate your feelings. Put an X in the column of your answer.

<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
---------------------------------	--------------	-----------------	------------------------------------

- a. Having a baby is as enjoyable as I thought it would be.
- b. Having a baby is more work than I thought it would be.
- c. I find that I am bothered by losing sleep because of the baby.
- d. I wish that my wife and I had more free time to spend together now that the baby is here.
- e. I think that we should have postponed having the baby for a while.

18. In your present situation, how satisfied are you with each of the following? Put an X in the column of your answer.

<u>Highly</u> <u>Satisfied</u>	<u>Fairly</u> <u>Satisfied</u>	<u>Fairly</u> <u>Dissatisfied</u>	<u>Very</u> <u>Dissatisfied</u>
-----------------------------------	-----------------------------------	--------------------------------------	------------------------------------

- a. The way your wife and baby were treated at the hospital.
- b. The interest taken by your family in the baby.
- c. Being a father.
- d. The amount of time that you have to spend with your baby.
- e. The way that the baby reacts when you approach.

Mother Postnatal Questionnaire
Age 3 months

1. Your name _____ Today's date _____
 2. Address _____ Phone _____
 3. Baby's name _____ Date of birth _____
 4. Has the baby had any medical problems during the last month? _____
If so, what were the problems? _____
Does the problem still exist? _____
 5. How would you describe your baby's temperament during the last week or two? _____
 6. Are you breastfeeding? _____
If so, do you also give supplemental bottles? _____
 7. Have you returned to work? _____
If yes, about how many hours per week? _____
 8. Do you have anyone helping to care for the baby, such as a babysitter or relative, besides your husband? _____
If yes, how many hours per day does this person usually care for the baby during the week? _____

Does this person or any other person care for the baby on weekends? _____
If so, about how many hours on Saturday? _____
on Sunday? _____
 9. About how many hours per night does your baby usually sleep? _____
 10. What time does the baby usually get up in the morning? _____
 11. During the last week or two, who has been doing the following.
For those items dealing with the baby, do not include care provided by a babysitter or person other than you and your husband. Only consider things done by you and your husband.

Answers: A--husband always
B-- husband more than wife
C-- husband and wife exactly the same
D-- wife more than husband
E-- Wife always
1. Grocery shopping _____
 2. Preparation of meals _____
 3. Dishes and cleanup from meals _____
 4. Laundry _____
 5. House cleaning _____
 6. Keeping track of money and bills _____
 7. Salaried employment _____
 8. Feeding the baby breakfast _____
 9. Diapering the baby _____
 10. Feeding the baby dinner _____
 11. Bathing the baby _____

11. Taking the baby to the doctor _____
13. Putting the baby to sleep _____
14. Getting up during the night when the baby needs attention. _____

12. Circle the statement below that you agree with most.

In caring for the baby, I think that my husband:

- a. Helps me too much and interferes with my routine with the baby.
- b. Helps me too much but doesn't interfere with my routine.
- c. Helps me just enough but interferes with my routine with the baby.
- d. Helps me just enough and doesn't interfere with my routine.
with the baby.
- e. Does not help enough.

13. Circle the statement below that you agree with most.

In caring for the household since the baby was born, I think that:

- a. My husband has been doing too much.
- b. My husband has been doing just enough.
- c. My husband should be doing more.

Fatner Postnatal Questionnaire
Age 3 months

1. Your name _____ Today's date _____
2. Address _____ Phone _____
3. How would you describe your baby's temperament during the last week or two? _____
4. What hours were you at home yesterday when your baby was awake? Include morning and night. _____
5. What hours were you at home the day before yesterday when your baby was awake? Include morning and night. _____
6. During the last week or two who has been doing the following?

For those items dealing with the baby, do not include services and care provided by a babysitter, relative or other person other than you and your wife. Only consider things done by you and your wife.

Put your answer on the line next to each item.

- Answers: A-- husband always
B-- husband more than wife
C--husband and wife exactly the same
D--wife more than husoand
E--wife always

1. Grocery shopping _____
2. Preparation of meals _____
3. Dishes and cleanup from meals _____
4. Laundry _____
5. House cleaning _____
6. Keeping track of money and bills _____
7. Salaried employment _____
8. Feeding the baby breakfast _____
9. Diapering the baby _____
10. Feeding the baby dinner _____
11. Bathing the baby _____
12. Taking the baby to the doctor _____
13. Putting the baby to sleep _____
14. Getting up when the baby needs attention during the night. _____

7. During the last week (7 days) how many times have you done the following?

Put the number of your answer on the line next to the question.

- a. Put your baby to bed at night. _____
- b. Fed your baby a meal. _____
- c. Changed a diaper. _____
- d. Given your baby a bath _____
- e. Comforted your baby when crying _____
- f. Gotten up during the night to attend to the baby _____

8. Think of last weekend and pick one day (preferably a day when you were at home the most).

Who did the following tasks on that day? Circle your answer to each.

- | | | |
|--------------------------------|----------------------------|----------------------------------|
| a. Got the baby up and dressed | You | Your wife |
| b. Fed the baby breakfast | You | Your wife |
| c. Fed the baby lunch | You | Your wife |
| d. Fed the baby dinner | You | Your wife |
| e. Bathed the baby. | You | Your wife |
| f. Put the baby to bed | You | Your wife |
| g. Diapered the baby. | You--How many times? _____ | Your wife--How many times? _____ |

9. Think back to last weekend and to a day when you were at home the most.

About how much time did you spend just playing with your baby? _____

What kinds of things did you do when you played with the baby? _____

When you were playing with the baby, were you usually doing other things at the same time? _____

What other things were you doing? _____

How much time on that day did you just play with the baby without doing anything else? _____

10. Think back to yesterday or to another weekday.

Who did the following tasks? Circle your answer to each question.

- | | | | |
|--------------------------------|-----|-----------|--------------|
| a. Got the baby up and dressed | You | Your wife | Other person |
| b. Fed the baby breakfast | You | Your wife | Other person |
| c. Fed the baby lunch | You | Your wife | Other person |
| d. Fed the baby dinner | You | Your wife | Other person |
| e. Bathed the baby | You | Your wife | Other person |
| f. Put the baby to bed | You | Your wife | Other person |

11. Think back to yesterday or to another week day.

How much time were you home when the baby was awake? _____

About how much time did you spend playing with the baby? _____

What kinds of things did you do when you played? _____

12. Please rate your enjoyment of doing each of the following baby care tasks. For each item, choose the answer that you agree with most.

Put your answer on the line next to the item.

Answers:

1. enjoy it very much
 2. enjoy it somewhat
 3. neither enjoy it nor dislike it
 4. dislike it somewhat
 5. dislike it very much
- a. Diapering the baby _____
- b. Bathing the baby _____
- c. Quietening the baby when he or she is crying _____
- d. Putting the baby to bed _____
- e. Dressing the baby or changing the baby's clothes _____
- f. Playing with the baby when he or she is quiet _____
- g. Playing with the baby when he or she is crying _____

13. For each question below, please rate your feelings. Put an X in the column of your answer.

	<u>Strongly Agree</u>	<u>Agree</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
a. Having a baby is as enjoyable as I thought it would be.				
b. Having a baby is more work than I thought it would be.				
c. I find that I am bothered by losing sleep because of the baby.				
d. I wish that my wife and I had more free time to spend now that the baby is here.				
e. I think that we should have postponed having the baby for a while.				

14. In your present situation, how satisfied are you with each of the following? Put an X in the column of your answer

	<u>Highly Satisfied</u>	<u>Fairly Satisfied</u>	<u>Fairly Dissatisfied</u>	<u>Very Dissatisfied</u>
a. The way the doctor cares for your baby.				
b. The interest taken by your family in your baby.				
c. Being a father.				
d. The amount of time that you have to spend with your baby.				
e. The way the baby reacts when you approach him or her.				

A P P E N D I X F

TEXT OF PRESENTATION BY RESEARCHER TO
CHILDBIRTH PREPARATION CLASSES

My name is Beverly Katsh and I am a doctoral student at the University of Massachusetts.

I have come here tonight (today) to ask you to help me with a research study that I am doing on families and infants. In the last few years, a great deal of research has been conducted on infants--how they develop, how they behave, their needs and so forth. A lot of what you read in books and magazines has come from research studies like mine. Even with all that research, not very much is known about having an infant in the family for the first time.

My research is going to focus on how families, new mothers and fathers, spend their time and change their household routines when a new child arrives. I hope that what I learn from this study will help others to know more about what demands an infant makes and how mothers and fathers spend their time with their infants.

I have come to this class because I wanted to find couples from a lot of different backgrounds who are having their first child.

If you agree to help me with this study, you will be asked to fill out a questionnaire tonight (today). This will take about 10 to 15 minutes. Then, I will mail you two other questionnaires, one when your baby is about 3 weeks old and another when your baby is 3 months old. Those

questionnaires will also take about 10 to 15 minutes to complete. It is very important that I get back all three questionnaires and I will provide the postage and envelopes.

I am giving three sets of questionnaires to see if some of your ideas and experiences change from before to after your baby is born or change from when your baby is very young to when it is a little older. For example, I ask how many hours you think that you will spend every day doing baby care and how many times you think that you will be diapering, etc.

Around the due date, I will call to find out if your baby was born yet and after the baby is born I will call to find out the exact date of birth so that I can send you the questionnaires at the right time. There will be separate questionnaires for mothers and fathers because I am interested in how parents spend their time with their infant.

All of your answers will be kept completely confidential. I need your names and addresses only so that I can match up your three questionnaires and so that I can mail you the questionnaires later. I will be the only person to see your answers and your names or any other information about you will never be revealed to anyone. If you don't want to answer a particular question, you don't have to.

I think, though, that you will enjoy doing these questionnaires. I will send everyone who participates a

report of my findings when I complete the study so that you can also benefit from what I have learned. Are there any questions?

Please answer your questionnaires without consulting with your husband or wife. There are separate forms for mothers and fathers, so please make sure that you get the right one.

A P P E N D I X G

TABLES REPORTING DATA FOR ONLY THOSE SUBJECTS
RETURNING ALL DATA SETS

TABLE 48

COMPARISON OF MEAN NUMBER OF ROUTINE CARE ACTIVITIES
 REPORTED BY FATHERS OF INFANTS AGES 3 WEEKS AND
 3 MONTHS DURING PAST 7 DAYS

Activity	Age 3 Weeks		Age 3 Months	
	Non- Breastfed \bar{X} (SD) $N=70$	Non- Breastfed \bar{X} (SD) $N=50$	Non- Breastfed \bar{X} (SD) $N=57$	Non- Breastfed \bar{X} (SD) $N=63$
Put baby to sleep	5.6 (4.8)	6.2 (5.3)	3.2 (3.5)	4.1 (4.1)
Diapered baby	6.1 (7.4)	6.1 (6.3)	6.9 (8.0)	6.3 (6.3)
Bathed baby	0.3 (0.7)	0.7 (1.4)	0.6 (1.1)	0.7 (1.5)
Fed baby	1.8 (4.0)	8.0 (6.0)	2.2 (4.9)	7.0 (4.9)
Got up during night to attend to baby	2.8 (2.9)	3.3 (4.2)	1.1 (2.2)	1.3 (2.3)

TABLE 49

COMPARISON OF MOTHERS' AND FATHERS' REPORTED PERFORMANCE OF
ROUTINE CARE OF INFANTS AGES 3 WEEKS AND 3 MONTHS
DURING PRECEDING 7 DAYS

Activity	Age 3 Weeks		Age 3 Months		
	Breastfed \bar{X} (SD/%) ^a	Non-Breastfed \bar{X} (SD/%) ^a	Breastfed \bar{X} (SD/%) ^a	Non-Breastfed \bar{X} (SD/%) ^a	
Put baby to sleep	Mother	26.1 (15.7)	23.0 (15.3)	18.0 (12.7)	14.5 (11.6)
	Father	5.6 (17.7%)	6.2 (21.2%)	3.2 (15.1%)	4.1 (22.0%)
Diapered baby	Mother	54.4 (19.0)	45.2 (16.6)	50.1 (19.6)	42.8 (18.9)
	Father	6.1 (10.1%)	6.1 (11.9%)	6.9 (12.1%)	6.3 (12.8%)
Bathed baby	Mother	6.4 (1.5)	6.3 (1.7)	5.8 (1.9)	6.0 (2.0)
	Father	0.3 (4.4%)	0.7 (10%)	0.6 (9.4%)	0.7 (10.4%)
Fed baby	Mother	48.8 (12.5)	34.6 (12.9)	35.1 (13.3)	25.4 (9.1)
	Father	1.8 (3.6%)	8.0 (18.8%)	2.2 (5.9%)	7.0 (21.6%)
Got up during night	Mother	13.0 (8.3)	10.3 (9.0)	3.3 (4.5)	2.1 (3.4)
	Father	2.8 (17.7%)	3.3 (24.3%)	1.1 (25%)	1.3 (38.2%)

^a SD given for mothers. For fathers, percent of total performance provided (e.g.,
 $\frac{5.6}{24.9} = 17.7\%$ of 24.9 + 5.6).

TABLE 50

COMPARISON OF FATHERS' REPORTED INVOLVEMENT IN ROUTINE CARE
ON LAST NON-WORKDAY WHEN INFANTS AGES 3 WEEKS
AND 3 MONTHS

Activity	Group	Age 3 Weeks		Age 3 Months	
		Performed Alone	Performed with Mother	Performed Alone	Performed with Mother
<u>Feeding Tasks</u>					
Fed baby in morning	Breastfed	1.4%	2.9%	5.3%	3.5%
	Non-Breastfed	18.0%	34.0%	21.0%	22.6%
Fed baby at midday	Breastfed	2.9%	4.3%	10.5%	7.0%
	Non-Breastfed	12.0%	40.0%	14.5%	29.0%
Fed baby at dinnertime	Breastfed	0%	10.1%	10.5%	10.5%
	Non-Breastfed	16.0%	54.0%	17.7%	45.2%
<u>Non-Feeding Tasks</u>					
Got baby up and dressed	Breastfed	1.4%	29.0%	15.8%	26.3%
	Non-Breastfed	0%	34.0%	11.3%	29.0%
	All subjects	0.8%	31.1%	13.4%	27.7%
Bathed baby	Breastfed	0%	17.6%	10.5%	15.8%
	Non-Breastfed	0%	28.6%	4.9%	26.2%
	All subjects	0%	22.2%	7.6%	21.2%
Put baby to sleep	Breastfed	7.2%	56.5%	10.5%	43.9%
	Non-Breastfed	12.5%	66.7%	16.1%	50.0%
	All subjects	9.4%	60.7%	13.4%	47.1%

TABLE 51

COMPARISON OF FATHERS' REPORTED INVOLVEMENT IN ROUTINE CARE
ON LAST WORKDAY FOR INFANTS AGES 3 WEEKS AND 3 MONTHS

Activity	Group	Age 3 Weeks		Age 3 Months	
		Performed Alone	Performed with Mother	Performed Alone	Performed with Mother
<u>Feeding Tasks</u>					
Fed baby in morning	Breastfed	1.5%	1.5%	7.1%	1.8%
	Non-Breastfed	12.8%	12.8%	9.8%	11.5%
Fed baby at midday	Breastfed	3.0%	6.1%	5.4%	1.8%
	Non-Breastfed	10.5%	21.1%	6.6%	13.1%
Fed baby at dinnertime	Breastfed	4.5%	9.1%	3.6%	5.4%
	Non-Breastfed	21.1%	31.6%	13.1%	29.5%
<u>Non-Feeding Tasks</u>					
Got baby up and dressed	Breastfed	6.9%	6.9%	7.1%	7.1%
	Non-Breastfed	2.8%	13.9%	3.3%	9.8%
	All subjects	5.2%	9.4%	5.1%	8.5%
Bathed baby	Breastfed	1.5%	6.1%	0%	7.1%
	Non-Breastfed	2.1%	17.0%	1.6%	13.1%
	All subjects	1.8%	10.6%	0.9%	10.3%
Put baby to sleep	Breastfed	11.7%	48.3%	7.3%	30.9%
	Non-Breastfed	16.7%	41.7%	14.8%	41.0%
	All subjects	13.5%	45.8%	11.1%	35.9%

TABLE 52

COMPARISON OF MEAN AMOUNT OF TIME REPORTED BY
FATHERS IN PLAY ACTIVITY WITH INFANTS AGES
3 WEEKS AND 3 MONTHS

	Age 3 Weeks		Age 3 Months	
	Total Minutes \bar{X} (SD)	Baby-Only Minutes \bar{X} (SD)	Total Minutes \bar{X} (SD)	Baby-Only Minutes \bar{X} (SD)
Non- Workday	114.8(78.3) (1.9 hours)	105.4(73.6) (1.8 hours)	168.7(118.7) (2.8 hours)	148.3(119.6) (2.5 hours)
Work- day	97.3(87.9) (1.6 hours)	77.5(74.5) (1.3 hours)	108.4(96.3) (1.8 hours)	101.0(98.7) (1.7 hours)

