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The Parent-Child Relationship:

Developmental Differences in Parent-Child Dyadic Interaction during Early Childhood

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March, 2000

A dissertation submitted to the Faculty of Graduate Studies and Research in partial fulfilment of requirements for the degree of Doctor of Philosophy in Educational Psychology, Major in School/Applied Child Psychology

Abstract

The purpose of this study was to examine differences in parent-child interactions when children were 3 and again at 4 years of age, the time period when gender identity is developing. Thirty-three children (17 boys and 16 girls) with their fathers and mothers were observed during these two time periods across two play contexts: a story-enactment pretend play session and a rough-and-tumble play session. The parent-child dyads were observed for frequency of dyadic parent-child physical and verbal exchange to capture overt parent-child exchanges of closeness (i.e., physical touch and verbal engagement). Results revealed that at age 3, mother-son dyads engaged in more dyadic physical and verbal exchange interaction than father-son dyads. By 4 years of age, father-son dyads engaged in more dyadic physical exchange than mother-son dyads. The reverse was observed for girls. At 3 years of age, father-daughter dyads engaged in more dyadic physical exchange than mother-daughter dyads, but by 4 years of age, mother-daughter dyads engaged in more dyadic physical exchange than father-daughter dyads. The findings are consistent with a psychoanalytic model of gender identity development.

Résumé

Le but de cette présente étude est d'examiner les changements encourus par les parents lors de leurs interactions avec leurs enfants de 3 et 4 ans, pendant la période de la découverte de leur identité. Trente-trois enfants (17 garçons et 16 filles) ainsi que leurs pères et mères furent observés pendant deux activités: une était une histoire de jeu de comportement ou de faire-semblant, et l'autre, un jeu de tohu-bohu. Les résultats ont révélés qu'à l'âge de 3 ans, les garçons et leurs mères s'impliquent plus dans des échanges physiques et verbaux que les garçons avec leurs pères. Dès l'âge de 4 ans, les garcons et leurs pères s'engagent plus que les garçons avec leurs mères. À l'âge de 3 ans, les filles avec leurs pères s'impliquent plus au niveau physique que les filles avec leurs mères, et vers 4 ans, les filles et leurs mères s'engagent plus que les filles avec leurs pères. Ces conclusions supportent le modèle psychoanalitique du développement de l'identité de sexe de la personne.

Acknowledgements

I have been very lucky to be surrounded by people who have encouraged me and supported me to get through the course of my studies. First, I thank my sons, Andreas and Costas for their warm smiles, wonderful dispositions and constant reminders about life's special pleasures. My husband, Roussos Koliakoudakis I thank him for his friendship, love and accepting nature and for keeping me focussed and grounded through the course of my studies. I thank my parents Maria and Costas Petrakos, for their continuing love and support. I extend my warmest thanks to my sister Despina Petrakos and her family, for their interest in my work and their encouragement. I also thank my in-laws, Penelopi and Andreas Koliakoudakis and brother-in-law Jimmy for taking me into their family and for supporting me over the years.

I am deeply indebted to the children and families who participated in my research. Without their gracious consent this study would not have been possible!

There are so many people who contributed to the completion of this research. First, my supervisor Dr. Joyce Benenson who was my closest collaborator through all stages of this thesis; her high standards for research and her enthusiasm for this project are greatly appreciated. I thank Dr. Jefferey Derevensky for his guidance and helfpul feedback. I also thank my other committee members Dr. Richard Koestner and Dr. Ellen Moss for their constructive feedback.

The collaboration and commitment of some very special and competent people also contributed to the completion of this project. I am grateful to all my research assistants. Melita Noel, and Sandra Bouabjian were key players in data collection. I am immensely grateful to all the people involved in data organization, data entry, observational coding, reliability: Poonam Bharwani, Lori Ann Ciolek, Gerri Delli Quadri, Thalia Elias, Nadine Gariépy, Anne Marie

Gervais, Maria Gordon, Janet Hung, Meaghan Hunter, Karima Kanani, Nancy Leclerc, Sandra Legagneur, Sherley Milville, Charlene, Ivona Nawrot, Jennifer Pastor, Marie-Claude Palassio Olena Piaseckyj, Thyra Roth, Elisabeth Sbaglia, Nina Seigel, Collins Tse, Christine Zaklama, and Catherine Zygmuntowicz. I thank Dr. Henry Markovits for his help with intercoder reliability and Ms. Diane Bernier for her help over the years and for the French translation of the abstract.

I was fortunate to make good friends along the way and to them I extend my sincere gratitude. I thank Rosanne Roy and Christina Rinaldi for their moral support. I also thank Daisy Grinberg, Tamara Morgenstein, Andrea Brown, Cindy Finn, Angela Waite for providing a supportive network. My internship experiences contributed greatly to my growth and understanding of clinical and educational issues; I thank Dr. Phyllis Zelkowitz for her guidance and the Day Hospital Team in the Department of Psychiatry at the Jewish General Hospital for a wonderful learning experience. This year, my colleagues, Rita McDonough, Scott Waugh, Dr. Rousseau have been great team members and have kept me sane through a very challenging time. Finally, but very importantly I thank Dr. Nina Howe, who first inspired my interest in research and has been a great mentor over the years.

This research was funded by Fonds de la Formation de Chercheurs et l'Aide à la Recherche, the McGill Fellowship and the Social Sciences Research Grants Sub-Committee of McGill University.

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Chapter I

Introduction

> Cross-cultural and social-psychological evidence suggest that an argument drawn solely from the universality of biological sex differences is unconvincing. At the same time, explanations based on patterns of deliberate socialization are in themselves insufficient to account for the extent to which psychological and value commitments to sex differences are so emotionally laden and tenaciously maintained, for the way gender identity and expectations about sex roles and gender consistency are so deeply central to a person's consistent sense of self (Chodorow, 1989, p. 45).

> The freeing of an individual, as he grows up, from the authority of his parents is one of the most necessary though one of the most painful results brought about by the course of his development . . . For a small child, his parents are at first the only authority and the source of all belief. The child's intense and most momentous wish during these early years is to be like his parent (that is, the parents of his own sex) and to be big like his father and mother (Freud, 1908c, p. 41).

The development of gender identity from a psychodynamic perspective has received limited empirical consideration, despite the fact that the study of the underlying processes of gender and personality development have been accepted by clinicians and psychoanalytic theorists. More specifically, psychoanalytic theorists suggest that girls are more relationally oriented because they identify more closely with their mothers who are children's primary love objects, whereas boys differentiate from their mothers to develop separate masculine identities

(e.g., Chodorow, 1974; Freud, 1925). This assumption however, has not received much empirical consideration, despite its theoretical and clinical implications. Therefore, the purpose of this study was to systematically observe the changes in the parent-child relationship during the early childhood years, the time period when gender identity develops. In addition, the parent-child relationship was examined using a psychodynamic perspective.

Theorists have attempted to describe "what" are the differences between the sexes and "how" gender develops from infancy to adolescence (for a review, see Golombok & Fivush, 1994). In this chapter, the three different conceptual explanations about "how" gender develops are outlined. First, from a cognitive developmental perspective, the acquisition of gender identity and gender role develops between ages 3 and 5, when children recognize themselves as male or female and show a direct preference for gender-typed behavior including gender-typed toys and same-sex playmates (Bem, 1981; Block, 1973; Kohlberg, 1966; Maccoby & Jacklin, 1974; Maccoby, 1998). Second, from a social learning perspective, gender role acquisition involves the learning of feminine and masculine behaviors through operant conditioning and observational learning processes including parents' differential reinforcement of sex-appropriate behavior and punishment of sex-inappropriate behavior (Mischel 1970). Finally, the psychoanalytic explanation emphasizes the importance of the emotional relationships that boys and girls between ages 3 and 5 form with their mothers and fathers (Freud, 1925; Chodorow, 1974, 1989). Within each theoretical framework, the empirical literature will be critically reviewed to describe consistent findings, outline the gaps in the literature and emphasize the study of parent-child interaction from a perspective focused on the dyadic parent-child relationship.

Review of Literature

The mother-child relationship has been described as the first, closest, and most enduring

relationship in a person's life (Bowlby, 1969; Freud, 1925). Universally, barring exceptional circumstances, both males and females begin their lives attached to female adults who are largely responsible for providing for their physical, social and emotional needs (Chodorow, 1978). Most researchers have focussed on mother-child attachment and its importance for the emotional development of children in the first few years of life (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969; Elicker, Englund & Sroufe, 1992). Limited attention has been paid to whether males and females form different relationships with their mothers and fathers (for exceptions, see Brody, 1999; Chodorow, 1978; Lewis, 1983). An increasing interest in the father-child relationship has revealed that both mothers and fathers are important to the developing child in infancy and to older children in the socialization process (e.g., Lamb, 1997; MacDonald & Parke, 1986; Parke, 1996).

Developmentally, it has been well documented that boys and girls aged 3 to 5 years acquire the cognitive ability to recognize themselves as male or female; it is unclear however, how the environment influences the development of gender identity. Social influences with respect to parents' differential child-rearing practices for boys and girls have reported inconsistent findings (Lytton & Romney, 1991; Maccoby & Jacklin, 1974). Biological influences have been found in the study of hormonal effects on observed behavioural sex differences in humans and other mammalian species (Berenbaum & Hines, 1994; Hines & Kauffman, 1994; Maccoby & Jacklin, 1974; Money & Erhardt, 1972). Currently, it is generally assumed that both biology and environment play an important role in the development of gender-typed behavior (Golombok & Fivush, 1994; Maccoby, 1998).

The impact of parents' direct socialization of gender appropriate behavior and children's imitation of same-sex models has been studied both theoretically and empirically with limited attention being given to the potentially differential dyadic processes involved in children's relationships with parents. The empirical literature on parents' direct socialization practices and the research on children's imitation of same-sex models have reported limited consistent support for the development of gender-typed behavior (Barkley, Ullman, Otto & Brecht, 1977; Lytton, & Romney 1991; Macobby & Jacklin 1974). Therefore, it may be worthwhile to reconsider the research on the effects of the environment and to examine dyadic emotional processes that may result from the interactions between the parent-child dyad. Psychoanalytic explanations have theorized that gender development is the result of the dyadic emotional relationships males and females form with their mothers and fathers.

The Emergence of Gender Identity

Gender identity as a significant aspect of the self has been observed to emerge in early childhood between ages 3 to 5 years when children recognize themselves as male or female (for reviews, see Huston, 1993; Maccoby, 1990, 1998; Maccoby & Jacklin, 1974). Although these early years are considered important for the early emergence of gender as a significant aspect of the personality, gender identity continues to develop in the later years and issues are revisited in adolescence when identity is particularly important. It has been well documented that boys and girls aged 3 to 5 years acquire the cognitive ability to label themselves as male or female and further, begin to exhibit same-sex playmate preferences and sex-typed activities (e.g., Emmerich, Goldman, Kirsch & Sharabany, 1977; Jacklin & Maccoby, 1978; Kohlberg, 1966; LaFreniere,

Strayer & Gauthier, 1984; Maccoby, 1988; 1998; Marcus & Overton, 1978; Pitcher & Schultz, 1983; Whiting & Edwards, 1988). For example, a large scale study conducted by LaFreniere et al. (1984) in a Canadian daycare center with children 1 to 6 years of age, observed as they interacted with peers during freeplay, and that the first same-sex playmate preferences are shown by children between ages 3 and 5 years. The findings revealed that both boys and girls initiated affiliative behavior to same-sex peers between ages 3 and 5 years and these preferences increased with age. Similar findings were reported by Pitcher and Schultz (1983), who observed that by age 3, girls initiated positive social behavior toward other girls with boys showing stronger positive initiations toward other boys by age 4. This powerful tendency for boys and girls to self-segregate by gender suggests that they recognize themselves as male and female by this age (Maccoby, 1998).

The literature on parental influences on sex-role development has focused on the preschool period, with an estimated 80% of the research on parental influences focusing on this period of development (Lytton & Romney, 1991). These data suggest that ages 3 to 5 years old are critical years for the study of the processes involved in the emergence of gender identity.

Many explanations about the development of gender differentiation have been proposed with the majority of research examining children's understanding of gender as a cognitive process (e.g., Kohlberg, 1966), children's imitation and identification with same sex models (e.g., Bandura, 1977) and children's direct learning experiences based on parental reinforcement contingencies (e.g., Mischel, 1979). These social learning and cognitive models of gender development have received much empirical investigation. By contrast, limited research has examined the psychoanalytic assumption that gender identity results from the emotional

relationship with the same-sex parent, with the exception of clinical or case study reports supporting this claim (e.g., Olesker, 1998). The psychoanalytic papers are theoretical accounts supported by clinical case studies (e.g., Dahl, 1993; Fast, 1993; Freud, 1925; Imbessi, 1996; Schrut, 1994; Stutman, 1995). Consequently, there is limited research based on systematic controlled studies examining the observed changes in the dyadic parent-child interaction during the early childhood years, the time period when gender identity develops.

Cognitive Development and Sex Typing

One model that has contributed to our knowledge of how gender role concepts are acquired is the cognitive developmental model. Based on Kohlberg's (1966) theoretical account of gender identity-role development, children pass through three cognitive stages in the development of gender and this occurs gradually between ages 2 to 7. The first stage is characterized by recognizing differences between the two genders based on physical traits and has been shown as early as 2 ½ to 3 years of age when children demonstrate that they can label their own gender and that of others accurately, but may not realize that their gender is a stable characteristic. The second developmental stage of gender stability is characterized by a preference for one's own gender. The third stage, approximately around 6 years of age, is characterized by children's acquisition of concepts of conservation and conceptualization that people's gender remains the same despite changes in hairstyles, dress or activities (Emmerich et al., 1977; Kohlberg, 1966; Marcus & Overton, 1978). Even though gender constancy is usually achieved by ages 6 or 7, children continue to develop into the later years, when gender identity issues are often revisited in adolescence when opposite-sex relationships are of great importance.

Kohlberg (1966) considered the importance of "self-socialization" in the development of

sex-typed behavior, and emphasized that a child must have a clear conception of sex-identity so that one can choose which behavior one will imitate. Bandura's cognitive social-observational learning formulations elaborated on this view of gender role acquisition (Bandura & Walters, 1963). According to the observational learning model, boys learn gender-appropriate behavior by observing and imitating the masculine behaviors of their fathers or other males; by contrast, girls learn gender appropriate behavior by observing and imitating the feminine behaviors of their mothers and other females.

However, studies have not found consistent empirical support for the observational learning model emphasizing children's imitation of same-sex models. Studies examining this viewpoint, have observed children between ages 3 and 8 years of age and a review of more than 20 imitation studies by Macobby and Jacklin (1974) and 80 studies by Barkley, Ullman, Otto and Brecht (1977) failed to find a significant interaction of sex of observer and sex of model on children's imitation. Maccoby and Jacklin's (1974) review concluded that there is inconsistency in the literature with respect to imitation of own-sex models.

It is important however to consider that children begin to recognize and define themselves as male and female quite early, as early as age 2 to 3, by labeling themselves as male or female, and subsequently by engaging in play activities with same-sex peers. In addition, the research on same-sex imitation has not provided conclusive support with regards to children's imitation of parents as models in early childhood.

Social Conditioning and Gender Role Acquisition

The majority of the research on the acquisition of gender typed behaviors has focussed on children's direct learning experiences with parents (for reviews see, Leaper, Anderson, &

Sanders, 1998; Lytton & Romney, 1991; Maccoby, 1998; Stern & Karraker, 1989). Learning theorists believe that gender role acquisition involves the reinforcement (e.g., rewarding, praising) of gender appropriate behavior and the punishment (e.g., ignoring, criticizing) of gender inappropriate behavior. Therefore, the social conditioning perspective derives most of its support for this model by studying the differential treatment of boys and girls with respect to gender typed behavior.

A review of the research on parent differential treatment of boys and girls in early childhood, has revealed few differences with respect to how parents treat their sons and daughters (Lytton & Romney 1991; Maccoby, 1998; Maccoby & Jacklin, 1974). Further, although some research have studied mothers and fathers separately, many studies have collapsed mother and father effects or have only investigated mother effects alone. The research that tested direct "shaping" of behavior by parents, considered the parents' perceptions of the child and their initiations and reactions directed to the child based on sex. Overall, limited support has been found for differences in total amount of parent-child interaction as defined by parent social stimulation of the child. In addition, the study of specific measures of parental verbal initiation, parental warmth, nurturance and acceptance of the child, encouragement of dependency, parental praise and reward, achievement pressure, restrictiveness and physical punishment towards boys and girls has revealed limited significant support for differential treatment of boys and girls (Lytton & Romney 1991; Maccoby, 1998; Maccoby & Jacklin, 1974). The most consistent findings have been that parents encouraged sex-typed toys and activities. Further, when parents are compared, fathers more than mothers were found to encourage sex-typed toy and activity preferences (for reviews see Huston, 1983; Leaper, Anderson, & Sanders, 1991; Lytton and

Romney, 1991; Maccoby 1998; Maccoby & Jacklin, 1974; Stern & Karraker, 1989). In 1974, Maccoby and Jacklin reviewed the existing literature (hundreds of studies) and found that parents treated boys and girls similarly. A decade later, Huston's (1983) review of literature also concluded that there were inconsistent findings with respect to the socialization of sex-role and social behavior although consistent differences were found with respect to sex-typed activities, particularly with fathers.

Maccoby and Jacklin (1974) reviewed the early childhood studies examining parents' social stimulation of the children during caretaking (infants) or play activities, including rough-and tumble play or a semi-structured play activity. Most studies examined the frequency of mother social stimulation toward infants including parental touching, holding, kissing, feeding, proximity and amount of time spent with the child. Researchers studying preschoolers (ages 3 years and up) defined their measures, as the amount of time the parent spends in specific activities or quite globally, as mother involvement, attentiveness, and intrusions. In addition, total amount of stimulation of gross motor behavior was examined in infants (starting at 3 months of age) and preschool age children (over 3 years of age). Maccoby and Jacklin's review included hundreds of studies however overall findings and selected representative studies of preschool age children will be reviewed here. The majority of the findings on total amount of parental social stimulation report no differences in the way parents treated boys and girls. For example, Radin (1973) report no differences in the total amount of mother social stimulation of their children during a structured interview; this was consistent with Hatfield, Ferguson & Alpert's (1967) findings that during a semi-structured activity, mothers did not show any differences in involvement or attention based on their child's sex. There was however, a

consistent trend for parents to encourage gross motor behavior for boys more than for girls. For example, both parents were observed to respond to boys' more than girls' gross-motor movements and to handle boys more roughly than girls (e.g., Lewis, 1972; Yarrow, Waxler, & Scott, 1971). Additionally, there were several studies indicating that fathers more than mothers engaged in rough-and tumble play with sons than with daughters (e.g., Minton, Kagan, & Levin, 1971; Pederson & Robson, 1969; Tasch, 1952).

Maccoby and Jacklin (1974) also found inconsistent findings in the amount of verbal stimulation that boys and girls receive from their parents. The majority of the studies involved observations of the parents' vocalizations to their children (aged 2 days to 12 years) during a caretaking activity (feeding) a play activity or through child and parent report. Parents'(mostly mothers) vocalizations were defined as frequency of talking, and in some studies specific verbalizations were coded including responding, extending conversation, questioning, making suggestions, giving information, and reasoning. Results from these studies indicated no consistent differences in the frequency of parent vocalizations to boys and girls. Specifically, studies examining children aged 3 to 5 years of age, showed no differences in frequency of parents' vocalizations to their sons versus their daughters.

Many studies examined differences in parental warmth toward sons versus daughters, and overall findings indicate no differences in the amount of parental warmth girls and boys receive (Maccoby & Jacklin, 1974). These studies included observations during parent-child caretaking activities, play activities and reports from parents (mostly mothers) and children. Parental warmth was defined observationally as the parent responding to the children by engaging in the following behaviors: touching, affectionate touching, smiling, rocking the infant, holding the

child, and overt affection such as hugging or kissing the child. In addition, parent and child report of warmth-rejection were also used to assess parental treatment of boys and girls. Observational accounts indicated no differential treatment of boys and girls by their parents (the majority being mothers). When differences were found in preschool aged children, 4-year old girls were found to receive more affection from their mothers, although other studies indicated no differences in parental warmth to boys versus girls (Allaman, Joyce, & Crandal,1972; Baumrind,1971; Hatfield et al., 1967)

Parental restrictiveness or low encouragement of independence has been studied by observing parents and their children in semi-structured play situations, in home observations, as well as by interviewing parents. Measures included observations or parental reports and defined parental restrictiveness in many different ways including parental expectations with regards to the rules set for the children, values of conformity, prohibitions or concerns about physical danger, pressure for obedience, concern for neatness, orderliness, anxious intrusion, protectiveness, restrictiveness and permisiveness. Overall findings were inconsistent and there was no clear evidence that boys and girls were treated differently with respect to parental restrictiveness or encouragement of independence. However during the preschool years, there was a trend toward greater restriction of boys and more independence granting to girls. Specifically, three studies using both observational and self-report measures found that mothers were more restrictive and used firmer enforcement, with boys than with girls (Baumrind, 1971; Hatfield et al., 1967).

Parental reactions to dependency have also been studied by observing parental responsiveness to social signals including, comfort seeking, requests for help, and proximity

seeking. Home observations during caretaking times, semi-structured play session were used, as well as parental interview about parenting practices. Overall findings indicate no significant differences in the differential treatment of boys and girls with respect to encouragement of dependency; nevertheless, when a difference emerged, the sex of the parent and the type of dependency behavior was important. For example, in a study of girls aged 4 to 6 years of age, fathers more than mothers were reported to respond more positively to daughters' increased dependency (Osofsky & Oldfield, 1971) and in another study with children 3 to 4 years of age, mothers reacted more positively to dependency in sons than daughters (Rothbart & Maccoby, 1966).

Parental reactions to aggression have also been studied employing home observations or using semi-structured experimental situations. Parental reactions to child aggressive behavior have included frequency of discipline-oriented physical interventions by parent (usually mother), permissiveness of aggression toward mother, punishment of aggression, intervention in children's quarrels, reprimands for children's disruptive acts, and parental reactions to arguments. Parental reports with regard to parental reactions to children's aggression were also used to measure parental perceptions of child aggressive acts, encouragement of aggression toward peers, and parental acceptance of insolence. Overall findings indicated inconsistencies in parental differential treatment of boys and girls with respect to permissiveness of aggression. When differences were found, a cross-sex effect emerged, with fathers punishing aggression in boys and accepting insolence in girls (Lambert, Yackley, & Hein, 1971) and mothers accepting angry behavior in boys and not in girls (Rothbart & Maccoby, 1966). Although in parent interviews, fathers reported that they were concerned when their son (and not their daughter) was

unaggressive and unwilling to defend himself (Tasch, 1952). There are no recent research that challenge these earlier findings.

Another area that has received attention has been parents' reactions to childrens' sexuality (Maccoby & Jacklin, 1974). Parents' permissiveness toward boys' and girls' masturbation behavior, sex play among peers, allowing the child to be seen in the nude and giving information about parental responses to children's sexuality has been studied by interviewing parents about their perceptions. Overall findings suggest that parents report that they do not treat boys and girls differently with respect to childhood sexuality (Newson & Newson, 1968; Sears, Maccoby, & Levin, 1957).

Parental treatment of boys and girls with respect to academic pressure was also reviewed and no differences were found in differential treatment of boys and girls. The participants studied involved children of preschool to adolescent years; the methods employed included observations of parents' demands on the child during a problem-solving task, praise or criticism for intellectual performance, direct help during a task, anxious intrusions during a task, as well as parent interviews or questionnaires about expectations with respect to future achievement (going to college) and concerns about intellectual achievements. Observational studies did not reveal any consistent significant differences in parental treatment of boys and girls with respect to achievement demands (e.g., Hilton, 1967; Rothbart, 1971).

Parents' discipline practices with boys and girls were also reviewed and results revealed that boys received more physical punishment than girls (Maccoby & Jacklin, 1974). Interviews and questionnaires were used to collect information on parent and child perceptions of parental physical discipline. In addition, observations, interviews and questionnaires on parent

nonphysical discipline practices were collected during caretaking (e.g., toilet-training), parent-child play and semi-structured problem-solving activities. Parent and child reports of physical punishment included spanking, power assertive techniques such as physically picking up a child and moving the child. Nonphysical punishment included simple prohibitions, deprivation of privileges, disapproval, negative reinforcement, feedback, severity of toilet-training, withdrawal of love, frightening the child, expressing anger or displeasure to the child and criticizing the child. Most studies included children aged 3 to 5 years of age, and a significant effect for sex of the child was found, with boys receiving more physical and nonphysical discipline than girls (Maccoby & Jacklin, 1974). Importantly, Maccoby and Jacklin (1974) speculated that some child characteristics such as compliance may contribute to girls being disciplined less than boys. For example, Minton, Kagan, and Levin's (1971) study revealed that girls obey more frequently after the first directive and boys simply need more repetition of commands.

In addition to boys receiving physical and nonphysical punishment, some studies report that boys more than girls receive frequent praise, reward and other positive feedback, however these findings have not been found consistently (Maccoby & Jacklin, 1974). Parental praise and reward was studied through observations during peer play, and parent-child play, as well as through parent interviews. Praise and reward were defined as giving tangible rewards, praising, giving positive feedback, encouraging the child to assume self-direction, challenging the child. Most studies included mothers and when fathers were included the findings were mixed, with one study reporting that fathers encouraged 4-year-old girls to assume self-direction and another showing that fathers used tangible rewards more frequently with boys than with girls (Baumrind & Black, 1967). The inconsistency in the findings may be due to such a wide range of

observational measures used, making a comparison across studies particularly challenging.

A clear and consistent finding has been that girls are encouraged to play with sex-typed toys such as dolls more than boys, and boys are encouraged to play with sex-typed toys such as trucks and trains more than girls (Maccoby & Jacklin, 1974). Further, a comparison of mothers' versus fathers' differential treatment of their sons and daughters has revealed stronger effects for father's reinforcement of sex-appropriate activities and particularly for boys (Huston, 1983; Maccoby & Jacklin, 1974). A typical study involved the observation of parents' reactions to their children's preferences to play with sex-typed toys. For example, a study conducted by Langlois and Downs (1980) compared the rewards and punishments that mother and fathers administered to 3 to 5 year olds on the basis of their gender-appropriate and gender-inappropriate play behavior. The child was presented with "girl" toys and "boys" toys and asked to play with these toys as the mother and father were escorted into the room and observed for their responses to the child. In this study, boys received ridicule and interference from father when playing with girl toys but were rewarded by mothers. Girls received approval by both mothers and fathers for gender-appropriate play but disapproval for gender-inappropriate play. Fathers seem to exert more pressure on boys toward gender-appropriate play. The trends that emerge in differential treatment of boys and girls by mothers versus fathers alerts us to the importance of studying parents' initiations and particularly the same-sex and cross-sex dyadic interactions that occur between mothers, fathers and their sons and daughters.

Another line of research that was reviewed by Stern and Karraker (1989) on parental influences on gender-typing, has been on parental perceptions of boys and girls and their behavioral responses to them based on gender label. The perceptions and behavioral responses of

parents and other adults have been studied by manipulating the adults' belief about the gender of a child. Stern and Karraker (1989) reviewed 23 gender labelling studies in which infants who were clothed neutrally were labeled male in some conditions and female in other conditions. Researchers using the gender labelling paradigm concluded that when parents and other adults were asked to rate characteristics of videotaped labelled infants, their ratings were affected by the gender label only 7% of the time whereas when asked to interact with the infant an effect of gender label was found 18% of the time (Stern & Karraker, 1989). With respect to adult-infant interaction, there were no differences found in the adults' amount of verbal and nonverbal initiations with the infant and the adults' warmth and responsivenesss toward the infant based on the gender label. Gender label effects on toy choice revealed that, girls were offered dolls more often than boys and boys were offered masculine toys such as a football more often than girls in many cases; however, this was not a consistent finding and was only significant 50% of the time.

In 1991, Lytton and Romney (1991) conducted a meta-analysis of 172 studies and concluded that there were few differences in how parents treat boys and girls. This meta-analysis was designed to analyse whether boys and girls were treated differently by their mothers and fathers, and to compare differences in mothers' and fathers' differential treatment of their boys and girls. Approximately one third of the studies included mothers only, 11 studies involved fathers only and the majority of the studies (101 studies) included both mothers and fathers, although some studies reported on parent findings combined (undifferentiated by sex). The socialization variables analysed were generally defined as "parental treatment of and attitudes toward boys and girls"(Lytton & Romney, p. 269). Based upon existing studies, eight socialization categories were selected for the analyses: amount of interaction (e.g., frequency of

talking, physical affection, touching) warmth and nurturance (i.e., display of affection, holding, touching), encouragement of achievement (e.g., parent report of expectations, anxious intrusions, direct help on task) encouragement of dependency (e.g., response to comfort seeking, response to proximity seeking), restrictiveness (e.g., parent report of values of conformity, obedience, order), disciplinary strictness (e.g, physical punishment, withdrawal of love), encouragement of sex-typed activities (e.g., parent offering sex-typed toy to child), and clarity of communication (e.g., reasoning, explaining). With the exception of one socialization area, i.e., amount of interaction, the behavioral observational measures were unidirectional, that is the parent's behavior or response to the child was analysed; the complex bidirectional, dyadic interactions that occur between parents and children were not studied. This is consistent with previous literature reviews of parent differential socialization practices with boys and girls (for reviews, Maccoby & Jacklin, 1974; Huston, 1983). Each study included one of the following data collection methods: home or laboratory observations of structured play sessions or home observations, interview questionnaires of parent's child-rearing views or perceptions of their child, report by child with regard to parent socialization, and reactions to videotapes segments or stories about parental treatment of children. The results were grouped by age, and although many studies fell in the birth to 5 years group, many of these studies were with infants, and a limited number of studies focused on the 3 to 5 year age span. Studies were not longitudinal in nature and did not examine developmental changes in the parent-child relationship.

Overall findings of Lytton and Romney's (1991) review indicated no significant differences in the way boys and girls were treated by their mothers or fathers on the following variables: total amount of parental verbal and nonverbal stimulation including amount of talking,

warmth, nurturance, restrictiveness. As with previous research, one of the only consistent findings across North American studies was, that both mothers and fathers encouraged sex-typed toys; in other Western countries a significant effect for physical punishment directed to boys more than girls was found. When fathers and mothers were compared, there was a main effect for parent indicating that fathers make larger differences with boys with respect to encouragement of sex-typed toys and punishment of boys.

The majority of the studies summarized in Lytton and Romney's review (1991) examined parental influences on the child, with the exception of a few studies that also considered the bidirectional, dyadic parent-child interactions. More specifically, when the behavior observed involved dyadic interaction, (e.g., joint play, defined as frequency of parent and child interaction during play), there was a slight same-sex parent effect (although not significant) showing that there was a tendency for fathers and boys to interact more and mothers and girls to interact more (Lytton & Romney, 1991). When studies involving joint and dyadic interaction were carefully examined it was evident that most of these studies focussed on the infant and toddler age group, with the exception of two studies that examined the parent and child dyadic interactions when children were between 3 and 5 years of age (Bright & Stockdale, 1984; Noller, 1978). Both of these studies not only focused on the parental treatment of the child, but also on the bidirectional interactions between parent and child, including child effects on the parent. These two studies make a unique contribution in that they analysed both parent and child effects during this important time of gender identity and came closer to studying the complicated processes involved in dyadic parent-child interaction (Bright & Stockdale, 1984; Noller, 1978).

In the first study, Noller (1978) videotaped the departure routine at daycare of 87 parents

and their children who were aged 2 to 5 years, the time period when gender identity develops. This study examined the effects of the sex of the parent and the sex of the child on the dyadic exchanges of affection between parent and child during departure. Each parent-child pair was videotaped from the time they arrived at the door of the daycare until the parent left. The three groups of parent-child dyads represented: 20 pairs of father-child dyads from two-parent homes, 47 pairs of mother-child dyads from two-parent homes and 20 pairs of mother-child dyads from single-parent homes. The dyadic interactions were coded for total number of instances of discrete verbal and nonverbal interactive behavior including holding hands, touching, kissing, patting on the head, patting the bottom, waving, cuddling, hugging, calling goodbye, and talking. In addition, the number of seconds the dyad spent in such interactions was recorded, as well as the number of instances of interactive affectionate behavior was counted (e.g., kissing, cuddling). Findings indicated that parent-daughter dyads showed greater overall interaction than parent-son dyads. With respect to affectionate interaction, parent-daughter interaction was highest and father-son affectionate interaction was lowest. This study was unique in that it considered both parent and child influences on the dyadic relationship. However, while the children ranged in age between 2 and 5 years, no developmental comparisons were made. As such, no developmental differences contributing to parent-child differences were examined. The consideration given to the dyadic nature of the parent-child interaction emphasized the importance of relationships developing in the context of dyadic interaction. In addition, comparing parent-child interactions across different ages would allow for the identification of important developmental differences in the dyadic relationship during this period of gender identity development.

In another study, Bright and Stockdale (1984) studied 29 mother-child and father-child

pairs (16 boys and 13 girls, aged 3 to 6 years) who were asked to engage in a 10-minute semi-structured play session. The parents and children were videotaped in a university laboratory room equipped with tables, chairs and three toys (selected from two toys sets, i.e., Toy Set A [lotto game, telephone, ball]; Toy Set B [parquet blocks, puppets and balance beam]). The toys were chosen by 5 judges who selected them as representative of three areas of development: intellectual, physical, and social. Observational coding of 23 behaviors were conducted using the Interpersonal Behavior Constructs within dimensions of status, affect and involvement. Frequency of every occurrence of the 23 behaviors (e.g., watches, comments, quiet, smiles, ignores) were recorded for each mother-child and father-child dyad and the duration in seconds spent in physical, intellectual and social play was measured. No differences in the amount of time mother-child and father-child dyads played together with specific toys (intellectual, social, physical) or in the frequency of interaction that mothers and fathers spent with sons versus daughters with specific toys (intellectual, social, physical) were found. The analyses included both parents effects on children and children effects on parents. When parent effects were examined, consistent with previous research, no differences were found in the way parents treated their boys and girls, with respect to their interest in the child, involvement with their child and nurturance towards their child. When gender of parents were compared, significant differences were found for types of behaviors initiated by parents: fathers were found to direct and control their children more than mothers and mothers were found to be more quiet than fathers and particularly during their play with boys. When child by gender effects were examined, boys were found to direct and control their fathers more than their mothers; and boys more than girls were found to display more physical warmth with their mothers and to praise

their fathers more than did girls. This study is a unique example of the few studies that analysed both parent and child influences in the context of parent-child interaction. The inclusion of both parent and child effects gives consideration to the dyadic interactions that occur in the context of parent-child play; however a systematic examination of these dyadic interactions developmentally was not the focus of this study. In addition, the authors pointed to the experimental, laboratory context of this study creating certain limitations with respect to the generalizability of the results to everyday situations of parent-child interaction.

More recently, Leaper et al. (1998) conducted a meta-analysis of studies examining parents' verbal interactions with their children. The studies selected in the meta-analysis included children of different age categories: infancy, toddlerhood, preschool age, middle childhood and adolescence. The studies were analyzed for the following parent variables: amount of talking, supportive speech, directive speech, giving information and asking questions. Results revealed differences in the content of speech of mothers and fathers. Overall findings indicated that mothers more than fathers used frequent verbal communication and in particular more talk related to socioemotional concerns (i.e., more supportive and more negative speech). Fathers more than mothers used instrumental speech including directives, questions and informing speech. However, the only child gender effect found with respect to parents' verbal interactions with sons versus daughters, was that mothers talked more and used more supportive speech with daughters than with sons. When age of child was considered, mother-father differences in socioemotional speech (negative and supportive talk) were larger with younger aged children than with older school aged children; mothers also used more verbal communication with daughters than sons at earlier ages (toddlerhood and preschool age). With older school age

children, mothers differed in the type of verbal interaction they initiated with boys versus girls, such that mothers were found to be more directive with their daughters than with their sons. The authors suggested that children learn different lessons from mothers and fathers and especially during the early years when gender stereotypes are being formed. This meta-analysis was unique in that it compared mothers and fathers verbal initiations with their boys and girls. Due to the limited number of studies examining child initiations, the dyadic nature of the parent-child relationship was not the focus and questions remain as to any changes in parent-child dyadic interaction which may reflect developmental changes at the time gender identity is emerging (Leaper et al., 1998).

As can be seen, studies so far have not examined longitudinally any developmental differences in parent-child interaction that may occur between ages 3 and 5, the age range when gender identity develops and have not made systematic comparisons between mothers' and fathers' dyadic interactions with sons and daughter during this important developmental period. In addition, observational measures have focused on parents' treatment of children and not dyadic parent-child interaction. Many inconsistencies have been reported with limited support that boys and girls are treated differently by their parents. The significant findings of parents' reinforcement of sex-typed play behavior, may represent both parental effects and children's pre-existing play preferences (Lytton & Romney, 1991). With respect to parents' verbal exchange with their children, stylistic differences between fathers and mothers were evident, where mothers were found to use more supportive, more negative, less directive and more informing speech with their children and fathers were found to use more directive speech than mothers (Leaper et al., 1998). When child gender effects were examined, the findings indicate that

mothers used more supportive speech with daughters than with sons (Leaper et al.,1998)

Despite the large number of studies examining parent's differential treatment of boys and girls, the results are not convincing that mothers and fathers treat their daughters and sons differently. The only consistent finding has been that mothers and fathers encourage play with sex-typed toys. Most of the research so far, has been cross-sectional, with no longitudinal data systematically examining the processes involved in parent-child interaction during this important developmental period. Furthermore, the dyadic relationships formed by mothers and fathers with their daughters and sons have received limited attention and there is no empirical documentation of the changes in mothers' and fathers' exchanges with their boys and girls over the developmental period (3 to 6 years) when gender identity develops. Importantly, cognitive developmental researchers have documented the cognitive changes children undergo as they label themselves as male or female (Emmerich et al., 1977; Kohlberg, 1966; Marcus & Overton, 1978). Moreover, researchers studying parent socialization have thoroughly examined the unidirectional socialization practices of parents to boys and girls and have found limited consistent support that parents treat boys and girls differently (Leaper et al., 1998; Lytton & Romney, 1991; Maccoby & Jacklin, 1974; Stern & Karraker, 1989). However, the relationship formed by parents and children during this period of gender development has not been the focus of previous work. Researchers studying relationships define "relationship" as one existing between two individuals and each partner constructs a programme of dyadic interaction that is shared with the other (e.g., Bretherton, 1980; Bowlby, 1969; Hinde, 1979). More particularly, the parent-child relationship has been described as a complementary one (Bowlby, 1969) where the behavior of the child is the complement of that of the parent. Therefore, it is proposed that to

study developmental changes in the context of the parent-child relationship, changes in dyadic parent-child interaction during this important developmental period (ages 3 to 6) need to be examined.

The Parent-Child Emotional Relationship

The dyadic interactions shared by parents and children have been the focus of attachment theorists. The attachment theoretical framework has emphasized the importance of the primary attachment figure (usually the mother) as providing safety from encountered threats, a secure base for exploration and cognitive growth (Bowlby, 1969). This framework has strong roots in Freudian assumptions about the importance of early close relationships, with a focus on the attachment behavioral interactions that occur between infants and caregivers. According to the Bowlby-Ainsworth attachment model, the developing infants use their primary caregiver as a secure base by seeking proximity, physical contact, and by protesting in order to alleviate fear or distress produced by separation from the caregiver. Early research on attachment (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Main, Kaplan, & Cassidy, 1985; Main & Weston, 1981) reported no sex differences in the reunion behaviors of boys and girls with their caregiver at 12 and 18 months of age. In this early period of life, mothers and their boys and girls seem similar in their attachment profile using the Ainsworth Strange Situation paradigm.

Children's relationship with their mothers and fathers need also be considered and particularly in the years that follow infancy when gender identity development takes place. In the preschool years, when fathers are more involved, important differences in children's relationship to mothers and fathers have been observed (Lamb, 1997). It is therefore assumed that children's relationships to both mothers and fathers in their own way are significant for social and

personality development. Lamb (1997) has suggested that the mother-child relationship develops as a result of mother's intense daily involvement with the child and that the father-child relationship develops in the context of less frequent but physically more stimulating interactions; for example, the highly stimulating bouts of interactions that occur during rough play may facilitate the development of the father-child relationship (Lamb, 1977, 1997; Lindsey, Mize, & Pettit, 1997; MacDonald & Parke, 1984; Power & Parke, 1982). Fathers have been found to engage in more vigorous, arousing, unpredictable, and physical play interaction with children and mothers' interaction has been described as smooth, less arousing, more verbal, didactic, and toy-mediated (Lamb, 1977, 1997; Lindsey et al., 1997; MacDonald & Parke, 1984; Power & Parke, 1982). Since there seems to be clear qualitative differences between mother-child and father-child interactions it is imperative that research examining parent-child relationships include both mothers and fathers and different contexts to capture the different interaction styles.

More recent attempts to study children's verbal relational interactions with parents are seen in the work of Fivush and her colleagues (Adams, Keubli, Boyle, & Fivush, 1995; Fivush, 1991; Fivush & Fromhoff, 1988; Haden & Fivush, 1996). Fivush and colleagues examined parents' use of emotion language in conversations of parents with their preschool children (aged 3 ½ to 6 years) and children's use of emotion language with parents. Verbal transcriptions were coded for emotion words related to states (e.g., happy, sad, angry), to behaviors (e.g., laugh or cry) and to affectively-charged evaluations (e.g., favourite, liked). Results indicated that regardless of age, mothers and fathers both used a greater number and variety of emotion words with their daughters than with their sons. The children's initiations to parents were also examined; the results indicated that girls' and boys' response to their parents was similar with

respect to number and variety of emotion words at 3 ½ years of age. By 6 years old however, while both boys and girls did not differ in the frequency of verbal interaction, girls were found to use a greater variety of emotion terms than boys. This study tested socialization effects of parents, but also took into account child effects. Similar findings were reported by Brody, Monuteaux and Wise (1997) who also reported that by age 6, girls expressed a wider range of emotions in stories depicting various emotion-evoking situations than boys and that boys minimized the expression of both positive and negative verbal emotion. The context of these studies was verbal storytelling and when differences were found, older girls were found to use a wider variety of emotion words. The work of others (e.g., Lamb, 1977, 1997; Lindsey et al., 1997; MacDonald & Parke, 1984; Power & Parke, 1982) suggests that the context may facilitate different parent-child interactions. Therefore, in studying both mother-child and father-child interaction careful planning of the observational context is critical.

The parent-child play context and particularly the physical play context as another context of parent-child interaction has been studied by Parke and colleagues (MacDonald & Parke, 1984; Parke, Cassidy, Burks, Carson, & Boyum,1993; Power & Parke, 1982). This type of play is often referred to as roughhousing, rough and tumble play and is characterized by affectively charged, boisterous, motor activity (e.g., Panksepp, 1993). A review of the research of parent-child physical play indicated that this type of play interaction between parents and children begins in early infancy, peaks in the preschool years (when gender identity develops) and sharply declines after 10 years of age. In addition, fathers have been found to engage in this type of play with their children more than mothers. When mothers engage in physical play it takes the form of playing "peek-a-boo," "pat-a-cake" and bouncing the child on the knee;

moreover, both parents seem to engage in more physical play with boys than with girls (Jacklin, DiPietro, & Maccoby, 1984; MacDonald & Parke, 1984; Power & Parke, 1982). A typical study of parent-child interaction during physical play involved the observation of mothers'and fathers' play with their children at 3- to 5- years of age and an assessment of children's peer popularity by teachers. The procedure, usually in a laboratory setting included a warm up session of playing with some blocks, followed by a 10-minute physical play session when both parents and children were instructed to play together in a physical manner (e.g, games like tickle, tumble, wrestle or horsey). In earlier studies (e.g., MacDonald & Parke, 1984) of physical play, a time-sampling technique was used where the session was divided into 10-second intervals and each interval was coded for frequency of physical play occurrences, ratings of positive affect, frequency of parent directives, number of intervals of parent active engagement, and the frequency of parent verbal interchanges. In subsequent work (Burks, Carson, & Parke, 1987) however, the duration of sustained play between parent and child was counted in "bouts", defined as physical activity that had a common theme and structure (e.g.,"chasing" "tumbling"), collapsing across both parent and child behavior; additionally, a second-by-second analysis of the dyads' play initiations and responses were conducted. Overall findings of parent-child physical play interaction revealed that physical play and especially, physical play by fathers significantly correlated with peer popularity for both boys and girls. Popular boys had mothers and fathers who were engaging and elicited positive affect during play, mothers who were verbally stimulating and fathers who were rated low in directiveness but physically playful. For girls, popularity was highly correlated with physical play, affection and nondirectiveness in fathers, and directiveness in mothers. The authors concluded that parent-child physical play is one important context for assessing qualities

of parent-child interaction that may allow us to observe important socio-emotional and cognitive skills (Parke et al., 1993).

In summary, despite excellent work on attachment, the majority of work has been on infants and sex differences in attachment classification have not been found (e.g., Ainsworth et al. 1978; Main et al., 1985; Main & Weston, 1981) . Studies with preschool children reveal that contexts are important in studying parent-child interaction. Father-child and mother-child physical play interaction has been found to be an important context for assessing qualities of parent-child interaction (Lindsey et al., 1997; MacDonald & Parke, 1984; Parke, et al., 1993; Power & Parke, 1982). In addition, verbal interactions between parents and children have revealed that as boys and girls develop, girls use a greater variety of emotion words than boys in parent-child interaction (e.g., Fivush,1991) in stories depicting various emotion-evoking situations (Brody et al., 1997). However, the systematic examination of dyadic parent-child interaction using both verbal and physical interaction contexts during this period of gender development has not been studied longitudinally. Therefore, an examination of the early parent-child dyadic interactions of boys and girls with their mothers and fathers over this early childhood period may reveal important differences.

The Parent-Child Relationship and Psychodynamic Theory

> The child takes both of its parents, and more particularly one of them, as the object of its erotic wishes. In so doing, it usually follows some indication from its parents . . . As a rule a father prefers his daughter and a mother her son; the child reacts to this by wishing, if he is a son, to take his father's place, and, if she is a daughter, her mother's (Freud, 1910a, S.E. 11, p. 47).

The psychodynamic perspective has focused on the early emotional relationship of boys and girls with their mothers and fathers. Specifically, the resolution of the Oedipal conflict at ages 3 to 5 years has been considered crucial for future development (Chodorow, 1978, 1989; Freud, 1925). Although this perspective has received attention by clinicians and theorists, little empirical work has been conducted (Chodorow, 1978,1989; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). The traditional psychoanalytic perspective emphasizes the Oedipal period (ages 3 to 4), when boys perceive their fathers as competitors for their mothers' affections, and as a result fear castration. To resolve this conflict they renounce their sexual attraction to their mothers and identify with their fathers (at about ages 5 to 6). The traditional psychodynamic view also maintains that girls compete with mother for father's affection and want to be like father, however they do not fear retaliation from their mother. In their desire for the father, girls perceive their mother as a rival and they resolve their desire for a penis to symbolically wishing for a child from their father; girls never fully identify with their mother because they blame her for lacking a penis (Freud, 1925).

Psychoanalytic claims of gender identity development have been criticized for lack of empirical support for the Oedipal conflict. Although, clinicians generally accept the resolution of Oedipal conflict of boys (e.g., Dahl, 1993; Fast, 1984; Imbessi, 1996; Schrut, 1994) girl's Electra complex has been questioned (Chodorow, 1978, 1989). The feminist neo-psychodynamic theoretical account differs from Freud's theory in that it emphasizes the importance of pre-Oedipal relationships with mothers (before age 3). Although it is believed that both boys and girls begin their life closely connected to their mothers, it is suggested that mothers' relationships with their daughters are closer than that with their sons and are ongoing and continuing

throughout the life span (Chodorow, 1978, 1989). According to both Freud and Chodorow, for both boys and girls, the first few years are preoccupied with issues of separation and individuation, that is, breaking or attenuating primary identification with the mother and beginning to develop an individuated sense of self. Unlike Freud's formulations however, Chodorow (1978, 1989) believes that the pre-Oedipal years differ for boys and girls, such that a mother's identification with her daughter is closely bound with her relationship to her own mother and thus, a mother is more likely to identify with a daughter than with a son, and to experience her daughter as herself. A boy, however, is believed to be treated differently by his mother, usually emphasizing his masculinity in opposition to herself and pushing him to assume a male role. Between 3 and 6 years of age, a boy must renounce his tie to his first caregiver, his mother and to all other females in order to identify with his father and other males. Since the father is usually not the primary caregiver, the boy has a harder time identifying with the father and identifies with a fantasized masculine role. In addition, the boy's denial of close connection to his mother may transform him from a relational person to an autonomous one. It is also believed that a girl's first relationship with her mother remains close in order to develop a more relational feminine identity (Chodorow, 1978,1989; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991).

Empirical Research on Parent-Child Dynamics

Despite the theoretical contributions of both traditional and neo-psychodynamic theories to applied psychoanalytic work, there is limited empirical evidence (other than case studies) supporting or refuting these theoretical claims. Importantly, these theories consider the emotional relationships of children and their parents and emphasize gender identity as a critical

developmental process in the formation of personality. Psychoanalytic explanations of gender identity have been popular in the clinical communities; however a gap exists between clinical theory and empirical research, with a limited empirical basis for these psychoanalytic claims.

Watson and Getz (1990) state that many psychologists reject Freud's developmental account of the Oedipal complex, because of lack of empirical support and difficulty in testing psychoanalytic concepts (e.g., Covitz, 1997; Sears, 1942). However, Watson and Getz (1990) also maintain that anecdotal accounts of children's exclusive attention to opposite-sex parent and antagonistic behavior toward same-sex parent suggest that the Freudian Oedipal concept may exist. In 1990, Watson and Getz set out to investigate the occurrence of Oedipal behaviors of children between ages 3 and 6, to examine whether these behaviors can be identified through parent reports of parent-child interaction and through children's responses to hypothetical stories concerning parental preferences and conflicts. Participants included forty middle class children and their parents, 10 in each of the following age groups: 3, 4, 5, and 6 years of age. Over a period of 7 consecutive days (on a daily basis) parents (mothers and fathers independently) were asked to record and describe incidences that occurred between parent and child that were considered affectionate or aggressive. Oedipal behavior was operationally defined as an incident that the opposite sex parent said was affectionate or an incident that the same-sex parent said was aggressive. In addition, a play narrative task was used in which children were asked to respond to 5 hypothetical stories (e.g., choosing a parent to go to the movies with; parent demanding that the child would clean up one's own room) concerning parental preference and parental conflicts. The five hypothetical stories included five different issues that may represent five key Oedipal concepts: (a) parental preference, (b) the desire to marry the opposite sex parent, (c) competition

with same-sex parent in favor of opposite sex parent, (d) anger expressed toward opposite sex parent, (e) obeying opposite-sex parent out of fear of punishment. Results of the parent report of daily aggressive and, or affectionate incidences, indicated that mothers rated their sons and fathers rated their daughters higher in affection and lower in aggression at age 4; these differences were not evident in children aged 3 years old and tended to diminish when children were 6 years of age. With respect to children's responses to hypothetical stories, 4-year-old children responded with a preference for the opposite sex parent on 3 out of the 5 narrative stories and by age 5 to 6 years, only one child showed Oedipal preferences on 2 out of the 5 narrative stories. Overall, the results of this study indicated that around 4 years of age, children reported in their stories to prefer parents of opposite sex and reported more conflict with same sex parents. These results are consistent with the Freudian model of the existence of Oedipal-like phenomena. Nevertheless, the evidence presented in this study were based on self-report measures of parents and children and the authors recommend that further research may clarify whether the Oedipal behaviors reported are actually based on parent perceptions or the actual behaviors. Observing for changes in parent-child interactions over this period of gender development would certainly allow for a more direct examination of dyadic exchanges of boys and girls with their mothers and fathers.

Another study compared the emotional closeness between mothers and daughters and mothers and sons (Benenson, Morash, & Petrakos, 1998). Four- and five-year-olds (mean age = 61 months) and their mothers were videotaped during a 15 minute semi-structured play situation, in which the child was asked to choose among 3 boxes of toys consisting of transportation vehicles, dolls, furniture and medium-sized blocks. The emotional closeness of the child to the parent was measured by coding for physical proximity (i.e., measuring the distance between

parent and child), eye contact (i.e., presence or absence of mutual eye contact), enjoyment of child (i.e., global rating by 5 coders), enjoyment of parent (i.e., global rating by 5 coders) and enjoyment of dyad (i.e., global rating by 7 coders). Since there were no significant differences between the two age groups with respect to the dependent variables, the results were collapsed across both ages. Results revealed that compared to boys, girls were physically closer to their mothers and were rated higher on global enjoyment. In addition, the two dyadic codes, mutual eye contact and global enjoyment of the dyad were significantly higher for mothers and girls than mothers and boys. Interestingly, when mother's enjoyment of the child was coded as a unidirectional code, the results for mother's enjoyment of sons vs. daughters did not approach significance. The authors suggested that the results were consistent with psychoanalytic assumptions, predicting closer emotional involvement between girls and mothers than boys and mothers. Unfortunately, this study did not include father-child interactions, therefore one cannot determine whether these findings apply to both mothers and fathers. More specifically, this study cannot address whether girls are closer to mother than boys or whether girls are closer to all adults of both genders.

In another study, Turnbull and Brody (1999) questioned the existence of the Oedipus complex and conducted a study to determine parental preferences of preschool age children using parental reports and children's responses on a projective task. One hundred twenty-seven 3- , 4- and 5-year old children (68 girls and 59 boys) predominantly Causcasian and of high socioeconomic status were recruited from preschools, daycare and after-school programs. A parental self-report questionnaire was developed to gather information about the parents' perceptions of parental preference in different contexts (e.g., when the child is sick, when the

child is hurt, at bath time, at bedtime, on special outings) and parents' perceptions of child's positive intensity (e.g., intensity and frequency of positive behaviors such as hugging, saying "I love you") and negative emotional intensity (e.g., intensity and frequency of negative behaviors such as expressions of anger and competition). Measures were also given to assess percentage of time parents spent in child care, child rearing practices, and quality of the marital relationship. In addition, the projective story-enactment task using dolls was developed to assess children's parental preference in various story contexts (e.g., preference regarding whose lap the child will sit on when at the movies), as well as their positive emotional intensity toward each parent and their anger or disappointment toward each parent in various scenarios depicting real-life situations. The authors concluded that the results of this study did not provide strong support for the Oedipus complex based on parental self-report measures and the child story-enactment task. Overall, mothers were the preferred parent and received more positive emotional intensity than fathers regardless of age and sex of the child. On the child story-enactment task, boys of all ages were more likely to show greater preference for their mothers than their fathers and greater negativity for their fathers. This pattern was not evident for girls. In addition, family variables associated with girls displaying Oedipal behaviors, included having a mother with relaxed boundaries, father's lack of marital satisfaction, having a younger sibling and time spent by father participating in child care. Additionally, family variables associated with boys displaying Oedipal behaviors included time spent by mother and father participating in child care, as well as having a sibling. The authors believe that girls do not appear Oedipal because they spend more time with their mother than their father and that the boy's Oedipal preferences can be explained as showing affection for the parent who tends to their care for a greater period of time. The

authors propose a feminist psychoanalytic explanation, and claim that the classical psychoanalytic theory does not take into account the female developmental course emphasizing that girls have a pre-Oedipal attachment to their mother which is maintained throughout their life span (Chodorow, 1978,1989; Turnbull & Brody, 1999). As with the Watson and Getz (1990) study, the results were based on a cross sectional sample rather than a longitudinal comparison and the measures used were self-report parent questionnaires and the child's perceptions based on a projective task. The parent-child dyadic interactions were not observed thus limiting the findings to perceptions and not actual behavioral parent-child interaction.

Chapter II

Rationale, Original Contribution, Research Questions

Rationale

There has been limited empirical work on parent-child dyadic interaction at the time when gender identity develops. The Freudian perspective maintains that girls and boys experience Oedipal or Electra conflicts around age 3, peaking at around age 4. Resolution of this conflict involves, boys separating from their mother and identifying with their fathers (by ages 5 or 6). Girls resolve their conflicts by identifying with their mother and aspiring to become a mother through a birth of a child. Other psychoanalytic models (Chodorow, 1978,1989) emphasize the girls' pre-Oedipal relationships with their mothers; although they theorize that boys separate from their mother to identify with their fathers, they believe that girls maintain a close and ongoing relationship with their mothers, refuting the existence of the Oedipal phenomena (e.g., Jordan, Kaplan, Miller, Stiver, & Surrey, 1991). Despite the theoretical clinical accounts of the transformation in the emotional relationships of boys and girls with their mothers and fathers, there are no empirical studies systematically observing dyadic exchanges in children's interactions with parents of each sex during this important period of time.

Limited research has examined dyadic parent-child interaction over this period of gender identity development. Careful consideration of the interactional context is also needed in a study of parent-child interaction. Examining boys' and girls' interactions with mothers and fathers in contexts eliciting both verbal and physical interactional styles allows for the examination of observed changes that take into account both mothers' and fathers' interactional styles with their boys and girls. For example, the father-child relationship has been described as developing in the

context of less frequent but physically more stimulating interactions, whereas the mother-child relationships have been described as less arousing, more verbal and didactic (e.g., Adams et al., 1995; Lamb, 1977; Parke et al., 1993).

Original Contribution

The original contribution of this study lies in the observation of dyadic parent-child interaction over a one year period during ages 3 to 4, a time period when gender identity continues to develop. More specifically, boys' dyadic interaction with mothers vs. fathers were compared over a one year period (ages 3 to 4). Similarly, girls' dyadic interaction with fathers vs. mothers were compared over a one year period (ages 3 to 4). These ages were chosen to allow for a one year follow up observation of the same children and families.

The Present Study

The purpose of this study was to examine longitudinally the parent-child relationship when children were between 3 and 4 years of age, a time when gender identity develops. Direct observation of the dyadic parent-child interaction during this time period allowed for the examination of differences in the dyadic parent-child interaction over two time periods (ages 3 and 4). Although it is well recognized that developmental changes are gradual and continue much later than age 4, for the purpose of this study the two ages were compared for changes in parent-child interaction. Thirty-three middle-class families, seventeen boys and sixteen girls, were observed with their mothers and fathers at two time periods: when children were 3 years of age and when children are 4 years of age. The parent-child dyads were observed for frequency of dyadic parent-child physical and verbal exchange to capture overt parent-child exchanges of closeness including affection, preference (i.e., physical touch and verbal engagement). The

dyadic verbal and physical exchanges of boys and girls with their fathers versus their mothers were systematically analyzed in two types of contexts (i.e., story-enactment pretend play and rough-and-tumble play) that are both familiar and enjoyable to parents and children (Bretherton et al., 1990; Lindsey et al., 1997; Miller & Garvey, 1984; Parke et al., 1993). The observation of story enactment and fantasy play has been used in clinical psychoanalytic work (e.g., Barnett & Strom, 1981; Dahl, 1993; Guerney, 1984) and attachment research (e.g, Bretherton et al., 1990; Watson & Getz, 1990) has demonstrated that stories may elicit in children different emotions in a relatively non-threatening manner allowing them to express their representations of self and other. In addition, the physical play paradigm has been used as a context providing opportunities for physical exchange between parents and children (Lindsey et al., 1997; Parke et al., 1993).

Research Questions

Based upon traditional psychoanalytic theory (Freud, 1925) the following questions were examined:

1. Do boys' dyadic interactions with their mother versus their fathers differ at age 3 when compared to age 4?

2. Do girls' dyadic interactions with their mothers versus their fathers differ at age 3 when compared to age 4?

Generally, the psychodynamic model would predict developmental changes in parent-child dynamics over the early years (ages 3 to 6). Ages 3 and 4 are considered important for shifts from opposite-sex to same-sex preferences; research examining parental preference at these ages, have found a preference for same sex parent to peak at age 4 (Watson & Getz, 1990). In order to compare observations across the two ages involved in this study and adhering to the

original psychodynamic model, the following hypotheses were tested to detect subtle changes in observed parent-child exchanges:

1. It was hypothesized that at age 3, boys and mothers would be engaged in greater dyadic exchanges than boys and fathers. At age 4, it was expected that boys and fathers would be engaged in greater dyadic exchanges than boys and mothers.

2. It was hypothesized that at age 3, girls and fathers would engaged in greater dyadic exchanges than girls and mothers. At age 4, it was that expected that girls and mothers would be engaged in greater dyadic exchanges than girls and fathers.

Chapter III

Method

Participants

Thirty-three middle-class English-speaking Canadian families of diverse ethnic background (70% European, 24% English-Canadian, 4% Asian, and 2 % Carribean) participated in this study. The participating children included seventeen boys (M = 37 months, range = 33 to 42 months) and sixteen girls (M = 36 months, range = 33 to 40) were recruited from daycare centers and nursery schools. In the original sample, 36 families had been recruited; however, three families discontinued their participation the second year (due to illness, relocation and scheduling difficulties), and these families were omitted. The participating families were intact and comprised of at least two children; one family had adopted the participant girl when she was 18 months of age. All children attended some type of preschool program (daycare, nursery) 3 to 5 days a week. All fathers worked full-time, 42% had professional jobs, 55% worked in skilled, clerical or sales jobs, 3% worked in unskilled jobs. Twenty-seven mothers worked 25 to 40 hours per week, 36% had professional jobs, 46% worked in skilled, clerical or sales jobs, and 18% did not work outside the home.

Procedure

Daycares and nursery schools situated in Montreal and listed in the government publication guide entitled "Office des Services de Garde à l'Enfance" were contacted by telephone, and letters were sent explaining the nature of the study. On-site visits were made to answer specific questions and to distribute letters of consent to teachers and parents. The cooperation of directors, educators and consent of parents and children were obtained (see

appendix A). Demographic information regarding the age of the children, their ethnic origin, family composition, and parent occupation was also collected. Those parents who signed written consent confirming their participation in the study, were contacted by phone and informed about the study in greater detail. They were told that the purpose of the study was to examine the relationship of parents and children over a one year period, at which point specific questions were answered. Two observation sessions were scheduled in year one and two in year two. Observation sessions were scheduled with each family at the convenience of the families; a second phone call was made the day before the appointment to confirm the visit. At the parents' requests, appointments were rescheduled (i.e., due to an illness in the family or another commitment), and every attempt was made to ensure that the families and children were not inconvenienced and that the families were in typical and comfortable states for the home visits. The time between observations averaged 13.8 months for girls and 14.8 months for boys. At the end of the study, the families were thanked for their participation and given a copy of their own videotaped sessions.

Home Visits. Home visits were made at two time periods and each family participated in two sessions (one with father, one with mother) in each year. Three females collected the data. In the first year, data collection consisted of 72 home visits (36 homes) and were repeated again in the second year.

The same script was used for all the home visits; an extensive training period was spent to ensure that data collection was carried out in consistent manner. The parent-child observations were videotaped at two time periods: (a) Time 1, when children were approximately 3 years of age, and (b) Time 2, when children were 4 years of age. Two observations (one of father-child

dyad and of mother-child dyad) were conducted in year one and two observations were repeated in year 2. Mothers and fathers were videotaped on separate days with their child. On each day of observation there were two play sessions for each parent-child dyad (story-enactment pretend play and rough and tumble play). The order of the observations of fathers and mothers with their children and the order of the two play procedures were counterbalanced. To accommodate participants' scheduling needs, the sessions with each parent varied between 2 to 5 weeks apart. At the end of each observational session, parents were asked to express how comfortable and typical the sessions had been for their families and to complete the EAS Temperament Survey for Children (Buss & Plomin, 1975) and the Bem Sex-Role Inventory (BSRI; Bem, 1978). A description of the observational sessions follows.

Warm up period. A warm up session was included at both time periods. During the warm up session, the observer interacted with the child and parent in a casual manner to ensure that both the parent and child felt comfortable and to explain the procedure; the observer explained that although these sessions were semi-structured and were introduced with specific instructions, the families were encouraged to play together as naturally as possible. The warm up period lasted about 10 minutes and included casual conversation between the experimenter and the family, setting up of the camera at a corner of the room and bringing out the play props (i.e., bears or pillows).

The play sessions. The parent-child play sessions were chosen to allow the opportunity for observation of dyadic parent-child interaction in two contexts: (a) story-enactment (pretend) play and (b) rough and tumble play. The choice of these two play sessions is consistent with the literature on parent-child interaction in early childhood as described below.

First, the rough and tumble play was considered an appropriate play context based on previous research linking parent-child play to child social competence with peers (Lindsey et al., 1997; MacDonald & Parke, 1984; Parke et al.,1993; Power & Parke, 1982). More importantly, research on parent-child physical play has shown that this type of play interaction between parents and children begins in early infancy and peaks in the preschool years, when gender identity develops; when mothers and fathers are compared, physical play by fathers significantly correlated with peer popularity for both boys and girls (MacDonald & Parke, 1984; Parke et al., 1993; Power & Parke, 1982). In addition, since rough and tumble play arouses emotional-affective behavior it was considered appropriate for capturing parent-child changes in verbal and physical exchange.

The second session involved parent-child interaction in the context of story-enactment pretend play. Past research on family relationships including attachment relations has included stories about attachment issues such as reaction to a hurt knee, fear of a monster, and separation anxiety during parent departure (e.g., Bretherton et al., 1990; Klagsburn & Bowlby, 1969). In addition, hypothetical story-completion tasks have been used in research to assess parental preferences and conflicts (Mueller & Tingley, 1990; Watson & Getz, 1990) and play involving vulnerability situations have been found in children's doll play activities (Benenson, 1996; Miller & Garvey, 1984). Finally, story enactment and fantasy play is an accepted clinical psychoanalytic procedure (e.g., Barnett & Strom, 1981; Dahl, 1993; Guerney, 1984) used to elicit in children's emotion in a relatively non-threatening manner, thus allowing them to express their representations of self and other through stories.

In this study, the two contexts were structured to be enjoyed by both parents and children.

The actual content of the play was not the focus, but rather the dyadic parent-child verbal and physical exchanges during the play were studied. Each parent-child dyad was instructed to engage in a rough and tumble play session and a hypothetical story enactment (pretend) play session. The play sessions were introduced by the experimenter in the following manner:

> Parents and children play different games together. One game that I've seen parents and children play together is a pretend game/ rough and tumble game (depending on which session was being introduced).

Rough and Tumble (Physical) Play Session. For the rough and tumble play session each parent-child dyad were given two pillows to play with and were asked to play together in a physical manner for 10 minutes. The instructions given were adapted from play paradigm designed by Parke and colleagues (MacDonald & Parke, 1984; Parke et al.,1993; Power & Parke, 1982). Parents and children were instructed:

> I want you to play with each other and the pillows for 10 minutes. You may play games like tickle, rough and tumble, wrestle on the floor together, or you may play horsey games. I want you to play together only with these two pillows (as observer hands one pillow to the child and one to the parent) and with each other for about 10 minutes. Have fun!

The experimenter remained in the room, reading a book and keeping a watch on the time and on the camera. She did not interact with the participants during their play sessions.

Story Enactment (Pretend) Play Session. For the story enactment (pretend) play session each parent-child dyad was asked to play together for 10 minutes and enact the a story about two bears who were lost in the woods. Parents and children were instructed:

I will tell you a story about two bears and then I will ask you to pretend play together. A revised version of the following passage from the storybook entitled: Let's Go Home, Little Bear by Martin Waddell (1991) was read by the experimenter:

> Once there were two bears, Big Bear and Little Bear. Big Bear is the big bear and Little Bear is the little bear. They went for a walk in the woods. They walked and they walked and they walked until Big Bear said "Let's go home, Little Bear" so they started back home on the path through the woods. So they continued to walk and walk and walk and before they knew it they were lost. They were lo...st in the woods!

The experimenter prompted the parent-child dyad with the following instructions:

> I want you to show and tell what happens next. I want you to play together and pretend you are bears. Mommy/daddy can be Big Bear and you can be Little Bear; you are in the woods and you are lost . . . (observer hands over a big bear stuffed animal to the parent and smaller bear stuffed animal to the child). I want you to play together for 10 minutes and pretend that you are bears and you are lost in the woods. I want you to play only with the bears and each other. Have fun!

The experimenter remained in the room, reading a book and keeping a watch on the time and on the camera. She did not interact with the participants during their play sessions.

At the end of both play sessions, the parents were asked to report how comfortable and typical the sessions had been for their families and to complete the EAS Temperament Survey for Children (Buss & Plomin, 1975, 1984) and the BSRI (Bem, 1978). The second visit with the other parent was scheduled at approximately two weeks later (at the convenience of the family) and the families were reminded that they would be called the day before the appointment to

confirm.

Measures

Observational coding. To capture basic differences in closeness (i.e., physical touch and verbal engagement), the play sessions were coded for frequency of dyadic verbal exchange and dyadic physical exchange. These observational measures were chosen based on previous work on parent-child interaction (for reviews see, Lytton & Romney, 1991; Maccoby & Jacklin, 1974) and based on psychodynamic assumptions that shifts in the parent-child relationship occur in early childhood that involve affection toward and preference for the opposite sex parent and competition with the same-sex parent; with development of gender identity it is predicted that closer identification (i.e., affection, preference) with the same-sex parent is achieved. To measure closeness in relationship, all the sessions were coded for frequency of dyadic verbal exchange and dyadic physical exchange by female undergraduate psychology and education research assistants who were blind to the hypotheses and were trained to code the tapes on a second by second basis (see appendix B). None of these research assistants had collected the data at the families' homes. Independent coders were trained for each code and training reliability for both 3- and 4-year-old data were done together. The training involved 4 one-hour sessions using pilot tapes of parents and children who were not participants in the study. When the assistant coders achieved 80% reliability they were assigned tapes on a weekly basis. Two research assistants were assigned to code each behavior independently. They overlapped in at least 25% of the observations which were used to calculate Cohen's Kappa (Bakeman & Gottman, 1986; Cohen, 1960). Each research assistant coded one behavior (dyadic physical exchange or dyadic verbal exchange) and independent coders were used for the 3- and 4-year-old data. The first 2 minutes

and last 2 minutes of the tape were not coded to avoid coding the periods of warm up (first 2 minutes) and periods of when children were most distractible and, or bored (last 2 minutes). The behavior codes were observed on a second by second basis and presence or absence of verbal and physical exchange were recorded.

Dyadic verbal exchange. Verbal exchange was coded when the parent and child were generally communicating with one another verbally. Any voluntary sound that the parent or child made was coded as verbal exchange. For example, giggling, screaming and action noises (boom, shhhh, boink) and all other noises were coded as verbal communication. Involuntary bodily noises such as burping, coughing or sneezing were not coded as verbal exchange. The child's verbal initiations were checked on a separate column than the mother's and father's; the tabulate a dyadic count, the frequency of the child exchange was added to the parent exchange. As much as possible, mother-child dyads and father-child dyads were coded on different days.

Intercoder reliability for dyadic verbal exchange was determined by having two naive coders (different coders for each year) independently code 25% of the observations. Cohen's kappa (Bakeman & Gottman, 1986; Cohen, 1960) revealed the following levels of agreement for the 3-year-old and 4-year-old data respectively, kappas = .83 and kappa = .78. According to Fleiss (1981) kappas of .60 to .75 are characterized as good and kappas over .75 are considered excellent.

Dyadic physical exchange. Physical exchange was coded when a child and parent touched each other. More specifically, physical exchange was coded under two conditions: (a) when there was body to body contact, two body parts touching in any way; (b) when an object held by one person touched a body part of the other person, for example when an object was being used by

one person to touch the other person (e.g., using a pillow to touch the other person or a body part); however when two pillows touched, physical exchange was not coded. Examples of the types of behaviors coded as physical exchange include: the child giving objects to the parent, wrestling, tickling, the parent holding and swinging the child in the air, the child sitting on the parent's lap, and the participants holding hands.

Intercoder reliability for dyadic physical exchange was determined by having two naive coders (different coders for each year) independently code 25% of the observations. Cohen's kappa (Bakeman & Gottman, 1986; Cohen, 1960) for dyadic physical exchange was computed and the following levels of agreement for the 3 -year-old and 4-year-old data respectively, kappa = .83 and kappa = .68. According to Fleiss (1981) kappas of .60 to .75 are characterized as good and kappas over .75 are considered excellent.

Affect. The child's affect was coded on a 5-point rating scale for every 30-seconds of parent-child interactions in the story-enactment play and rough-and-tumble sessions during the first year observations. The ratings ranged from 1 (negative affect for more than half the time or >15 seconds) to 5 (positive affect for more than half the time or more than 15 seconds). Positive affect was based on behaviors such as smiling, laughing, giggling and negative affect included behaviors such as whining, crying, pouting, frowning, looking disgusted, angry). Neutral affect was rated a 3 when most of the interaction (> 15 seconds) included neither positive nor negative affect. During the first year of the study, two coders observed all the tapes independently but only 30% agreement (Bakeman & Gottman, 1986) was achieved. Since the interrater reliability was so low, this measure was deleted from the final analysis.

Parents' ratings of child's temperament. To further explore differences in parental

perceptions of boys' and girls' temperament, each parent (mother and father) independently was asked to complete the EAS Temperament Survey for Children (Buss & Plomin, 1984). Each parent (mother and father) independently was asked to complete the survey (Buss & Plomin 1984), rating the child's emotionality, shyness, sociability, and activity levels, both when the child was 3 and 4 years of age. This survey is a 20-item questionnaire with five items for each temperament: emotionality, activity, sociability and shyness (see Appendix C).

The internal consistency of this scale averaged .83. Test-retest reliabilities for children with an average of 3.6 years, with an interval of one week were .72 for emotionality, .80 for activity and .58 for sociability-shyness. Although test-retest reliabilities for emotionality and activity are adequate, the sociability-shyness were not as stable. In addition the scales are intercorrelated with the exception of the 2 scales, activity and sociability-shyness which were not closely related (Buss & Plomin, 1984).

Parents' ratings on warmth-hostility in the parent-child relationship. Previous studies measured parents' self-ratings of warmth (e.g., Maccoby & Jacklin, 1974). To explore whether parents' self-ratings of warmth toward their children was related to dyadic physical and verbal exchanges, parents were asked to complete the "Warmth-Hostility subscale of the McGill Parental Attitude Toward Child-Rearing Questionnaire--Revised English Form (MPATCR; Cohen, 1991). Each parent (mother and father independently) was asked to complete the questionnaire. This subscale consists of 10 statements, asking the parent to rate the response that accurately reflects their own attitudes. The parents were asked to assign a numerical value ranging from 1 to 5 for each of the 10 items to reflect the following: 1--strongly agree, 2--agree, 3--neutral, 4--disagree, 5--strongly disagree (see appendix E). High scores on this test may

indicate that the parents perceive themselves as capable of expressing love and compassion toward their child, promoting the child's emotional well-being and express pleasure in their child's accomplishments. Low scores on this subscale may reflect an expression of dissatisfaction with their child, and perceive themselves as critical of child's abilities or personality traits. They report that they do not enjoy their child's presence and are unable to accept childhood limitations or failures.

According to Cohen (1991) the internal consistency of the subtests of this subscale averaged .72 and test-retest reliabilties after an eight week interval were .76. The Warmth-Hostility scale is most highly correlated with two other subtests of the scale, sensitivity and play.

Parents' self-ratings of masculinity and femininity. To explore any associations between parents's self-ratings of masculinity and feminity and dyadic parent-child interaction, the Bem Sex Role Inventory (BSRI; Bem, 1978) was completed by both mothers and fathers independently. According to Bem (1981) this inventory was constructed to measure the extent to which participants sort information about themselves into two distinct dimensions: masculine and feminine. The BSRI is a 60-item questionnaire, that contains a Masculinity scale and Femininity scale (20 items each) and a neutral scale (20 items). Each item represents a personality characteristic and respondents are asked to indicate how well each item describes themselves on scale ranging from 1 ("never or almost never true") to 7 ("always or almost always true"). A Masculinity score is computed by averaging on the 20 Masculinity ratings and a Femininity score is averaged across the 20 Femininity items.

According to Bem (1974), the internal consistency of these scales averaged .86 for Masculinity, and .80 for Femininity. Test-retest reliability over a 4-week interval averaged .90 for

Masculinity, and .90 for Femininity. It has also been demonstrated that Masculinity and Femininity are independent and not highly correlated (males $\underline{r}$ = -.14; females $\underline{r}$ = -.02).

Chapter IV

Results

The results will be presented in the following order. First, preliminary analyses were conducted to examine mean differences between boys and girls with respect to age, birth order, number of siblings, and on parental self-ratings on the BSRI and on parents' ratings of children's EAS Temperament Survey. Second, analyses were computed to test whether were developmental differences in boys'dyadic physical and verbal exchanges with their mothers versus their fathers, over the two year period (ages 3 and 4). Similarly, mean difference scores were computed for girls' dyadic exchanges with mothers versus fathers, over the two year period (ages 3 and 4). Third, correlational data describing the stability of dyadic parent-child interaction across play sessions and time periods were conducted. In addition, the relation between parent-child interaction across the different play contexts and parent's temperament ratings of children on the EAS measure were explored. Data were further explored for associations between parent-child interaction and parents' self-rating on the BSRI, and parents' self-ratings on a measure of warmth.

Preliminary Analyses

To determine whether boys and girls differed significantly, t-tests were conducted at time one, for age, birth order and number of siblings. No significant differences were found between the two groups, (see Table 1). Second, fathers' and mothers' ratings of their own masculinity and femininity on the BEM and of their child's temperament on the EAS were compared for boys and girls. No significant differences were found on any of the two measures with two exceptions (see Table 2). First, when children were 3 years of age, mothers rated their daughters as more active

than mothers rated their sons F (1, 31) = 4.73, $p < .05$. Second, when children were 4 years of age, fathers rated their sons as more shy than they rated their daughters F (1, 31) = 5.16, $p < .05$.

Age and Gender Differences in Dyadic Parent-Child Interaction during Rough and Tumble Play and during Story-Enactment (Pretend) Play

To test whether there were differences in boys' and girls' interactions with their parents across the two years (age 3 and 4), repeated measures analyses of variance (ANOVA) were computed with age (3 and 4) and parent (mother and father) as the repeated factors and gender as the independent variable. The analyses were run first for the rough and tumble play sessions and then for the story-enactment play sessions. For both measures, dyadic physical and dyadic verbal exchange served as the dependent variables in separate anovas. Means and standard deviations for all variables for the rough and tumble sessions are displayed in Table 3 and for the story-enactment play sessions are displayed in Table 4.

To investigate the hypothesis that there were developmental differences in boys' dyadic interactions with mothers vs. fathers at age 3 vs. 4, and in girls' interactions with mothers vs. fathers at age 3 vs. 4, a repeated measures ANOVAs were computed with age (3 vs. 4 year olds) and parent (mother vs. father) as the repeated measures and gender as the independent variable were computed for the rough and tumble sessions. The dependent measures: dyadic physical exchange and dyadic verbal exchange were analyzed separately. There was some evidence based on frequency of dyadic physical exchange in the rough and tumble play session, that boys and girls differed in their interaction with each parent across time. Table 5 presents the mean change scores between time 4 and time 3 (time 4 minus time 3). Results revealed that there were no main effects of parent, F (1, 31) = 0.02, ns, of age, F (1, 31) = 0.18, ns, or of gender, F (1, 31) = 0.45,

ns, for dyadic physical exchange. There was a significant interaction between age, parent and gender, $F(1, 31) = 8.35$, $p < .01$. Next, planned comparisons (paired-difference t tests) were run separately for girls and boys; one-tailed t-tests comparing the mean change scores (age 4 minus age 3) for boys with mothers versus fathers were found to be significant, $t(15) = 2.01$, $p < .04$. As hypothesized, boys were found to engage in more frequent physical exchange interactions with mothers than fathers at age 3; at age 4, boys engaged in more frequent dyadic physical exchange with fathers than mothers. The reverse was found to be significant for girls $t(14) = 2.08$, $p < .03$, one-tailed. As hypothesized, girls were found to engage in more frequent dyadic physical exchange interactions with fathers than mothers at age 3; at age 4, girls engaged in more frequent dyadic physical exchange with mothers than fathers.

A repeated measures ANOVA with age and gender as the repeated measures and gender as the independent variable was again computed for the dyadic verbal exchange measure in the rough and tumble session. Results revealed no main effects of age, $F(1, 31) = 0.65$, ns. There was a significant main effect of parents $F(1, 31) = 4.11$, $p = .05$, with more frequent dyadic verbal exchanges between mothers and children than fathers and children. A significant main effect was found for gender, $F(1, 31) = 12.20$, $p < .002$ with more frequent dyadic verbal exchanges for boys and parents than for girls. There was also a significant interaction between age, parent and gender, $F(1.31) = 3.88$, $p = .05$. Next, planned comparisons (paired-difference t tests) were run separately for girls and boys; one-tailed t-tests comparing the mean change scores (age 4 minus age 3) for boys with mothers versus fathers were found to be significant, $t(15) = -2.27$, $p < .02$. As hypothesized, boys were found to engage in more frequent verbal exchange interactions with mothers than fathers at age 3; at age 4, boys were found to engage in more

frequent dyadic physical exchange with fathers than mothers. No significant differences were revealed on t-tests for girls, t (13) = 0.61, ns.

The analyses were next repeated for the story-enactment (pretend) play sessions. Table 6 presents the mean change scores for the two time periods (time 4 minus time 3). Again, two dependent variable were analysed: dyadic physical exchange and dyadic verbal exchange. For the dyadic physical exchange measure, there were no main effects of parent, F (1, 31) = 0.14, ns, of age. F (1, 31) = 0.07, ns, or of gender, F (1, 31) = 0.98, ns. The 3-way interaction was not significant, F (1, 31) = 0.13, ns. The hypothesis predicting developmental differences in parent-child dyadic physical interaction was not confirmed for the story-enactment play session

For the dyadic verbal exchange measure in the story-enactment session, there were no main effects of parent, F (1, 31) = 1.36, ns, or of age, F (1, 31) = 0.29, ns. There was a significant main effect of gender, F (1, 31) = 7.87, $p < .05$, with boys engaging in more dyadic verbal exchange with parents than girls. Finally, there was a marginally significant interaction between age, parent and gender, F (1, 31) = 3.20, $p = 0.08$. Planned comparisons (paired-difference t tests were run separately for girls and boys; one-tailed t-tests comparing the change scores (age 4 minus age 3) for girls with mothers versus fathers were found to be significant, t (13) = –2.13, $p < .03$. As hypothesized, girls were found to engage in more frequent verbal exchange interactions with fathers than mothers at age 3; at age 4, girls engaged in more frequent dyadic verbal exchange with mothers than fathers at age 4; t-tests revealed no significant differences for boys, t (13) = -0.69, ns.

Stability Across Play Sessions and Time

Correlational analyses were also employed to explore stability across sessions and time

for the dyadic physical exchange and dyadic verbal exchange measures (see Tables 9 to 12). Correlations were computed for boys and girls separately. For the dyadic verbal exchange measure, there was stability across sessions (rough and tumble and story-enactment) for 3-year-old boys and mothers, r (17) = .56, $p < .05$, 3-year-old boys and fathers, r (17) = .71, $p < .05$, 4-year-old boys and mothers r (17) = .46, $p < .05$, and 4-year-old boys and fathers, r (17) = .54, $p<.05$ (see Table 9). For the physical exchange measure, only 3-year-old boys' dyadic exchanges with fathers were highly correlated across both play sessions (rough and tumble and story-enactment), r (17) = .57, $p < .05$ (see Table 7). With respect to relationships across time, only 3-year-old boys' physical exchanges with mothers in the story-enactment sessions were highly correlated r (17) = .48, $p < .05$ (see Table 7).

Correlations across sessions and time were computed for girls (see Tables 8 and 10). For the verbal exchange measures, some significant correlations across sessions (rough-and-tumble and story-enactment play) were evident; specifically, 3-year-old girls' exchanges with father were highly correlated, r (16) = .48, $p < .05$, 4-year-old girls' exchanges with mother were associated r (16) = .46, $p < .05$ and 4-year-old girls' exchanges with father were also highly correlated, r (16) = .55, $p < .05$ (see Table 10). For the physical exchange measure, two interesting correlations across sessions were found; 3-year-old girls' exchanges with mothers were highly correlated, r (16) = .48, $p < .05$, and 3-year-old girls' exchanges with fathers positively associated, r (16) = .52, $p < .05$ (see Table 10).

Relation between Dyadic Physical Exchange and Dyadic Verbal Exchange

The data was explored further for associations between dyadic physical exchange and dyadic verbal exchange. Results revealed a positive association between 3-year-old girls' dyadic

physical and verbal exchanges with their mother in the rough-and-tumble sessions, r (15) = .60, p<.05 (see Table 13). A positive correlations was found between 3-year old boys' dyadic physical and verbal exchanges with their father in the rough-and-tumble sessions, r (16) = .48, p <.05 (see Table 22).

Parent Self-Ratings' of Masculinity and Femininity and Dyadic Physical and Verbal Exchanges

Correlational data also revealed associations between mothers' and fathers' self-ratings of masculinity and femininity and their dyadic verbal and physical exchanges with their boys and girls. Because none of these relations were predicted, they must be interpreted with caution. Nevertheless, several interesting findings emerged. More specifically, a positive association between mothers' self-rating of masculinity and the dyadic verbal exchanges with their 3-year-old boys was found for the rough-and-tumble session, r (17) = .46, p <.05 (see Table 14); additionally, a negative relationship was found between the mothers's self-rating of femininity and the dyadic physical exchanges with 4-year-old boys in the pretend play sessions, r (16) = -.62 (see Table 16). For fathers, a positive association was found between the father's self-rating of masculinity and the dyadic verbal exchanges with 4-year-old girls in the story-enactment play sessions, r (15) = .52, p < .05 (see Table 23). Finally, there was a negative association between father's self-rating of femininity and dyadic physical exchanges with 4-year-old boys in story-enactment play sessions, r (12) = -.55, p < .05 (see Table 24).

Relation between EAS Temperament Ratings and Dyadic Physical and Verbal Exchanges

Correlational analyses were also computed to explore any relationships between mothers' ratings of the child's temperament (EAS) and the dyadic parent-child interactions. Again, these correlations were exploratory and should be interpreted with caution. There was a negative

correlation between mother's ratings of boys' emotionality and 3-year-old boys' dyadic verbal exchanges with their mothers in the story-enactment play sessions, r (12) = -.51, $p < .05$, (see Table 12). In addition, there was a negative association between mother's ratings of 4-year-old girls' emotionality and their dyadic physical exchanges with their mothers in story-enactment play, r (16) = -.47, $p < .05$, (see Table 15). There was also a positive relationship between mother's ratings of 4-year-old girls' activity level and the dyadic physical exchanges with their mothers in story-enactment play, r (6) = .53, $p < .05$ (see Table 15), as well as their dyadic verbal exchanges with their mothers in rough and tumble play, r (16) = .66, $p < .05$, (see Table 17). Finally, there were positive associations between mothers' ratings of 4-year-old girls' sociability and their verbal exchanges with their mothers in the rough and tumble sessions, r (16) = .66, $p <$. 05 (see Table 17); four-year -old boys' sociability and their physical exchanges with their mothers in the rough-and-tumble sessions, r (16) =.58, $p < .05$ were also positively associated (see Table 18).

Associations between the the fathers' ratings on the EAS Temperament Survey for Children (EAS) and the dyadic physical and verbal exchanges were also computed. Results revealed a positive relationship between the father's ratings' of 3-year-old the boys' emotionality and their dyadic verbal exchange in the story-enactment play session, r (17) =.67, $p < .05$, as well as between the fathers' ratings of the 3-year-old boys' shyness and the dyadic verbal exchanges in the story-enactment play session, r (17) =.54, $p < .05$, (see Table 20). Fathers' ratings of 4-year-old boys' activity level was also associated with the dyadic verbal exchanges with their father in the story-enactment play session, r (16) = .56, $p < .05$ (see Table 24). Finally, there was a negative relationship between the father's ratings of 4-year-old boys' emotionality

and the dyadic physical exchanges with their father in the rough and tumble sessions, $r(16) = -.49$, $p < .05$, (see Table 26).

Parent Ratings of Warmth and Dyadic Physical and Verbal Exchanges

Correlational analyses were computed for parents' self-ratings of warmth and the dyadic physical and verbal exchanges with their children. For girls, mothers' and fathers' ratings of warmth were highly correlated across both ages, $r = .60$, $p < .05$; however, there were no associations found between parent self-ratings of warmth and dyadic physical and verbal exchange for girls (see Tables 27 to 30). There was a negative association found between fathers' self-rating of warmth and the dyadic physical exchange measure of boys with mother in the rough-and-tumble session $r = -.71$, $p < .05$ (see Table 27); this negative correlation was replicated again for boys at age 4, $r = -.78$, $p < 0.5$ (see Table 29). In addition, there was a positive relationship between mothers' report of warmth and the dyadic verbal exchange of 3-year-old boys with mother in the story-enactment play session, $r(10) = .67$, $p < .05$ (see Table 28). Because none of these relations were predicted, they must be interpreted as simply providing interesting data for future study.

Table1

Sex Differences in Children's Age, Birth Order and Number of Siblings

	Girls		Boys			
	M	SD	M	SD	F	p
age at 3 years (months)	35.87	2.53	37.18	2.86	1.91	ns
age at 4 years (months)	50.63	4.26	52.00	3.59	1.01	ns
birth order	1.56	0.63	1.53	0.63	0.02	ns
siblings	1.00	0.89	1.12	0.60	0.20	ns

$p < .05$

Table 2

Means and Standard Deviations of BEM and EAS Scores by Sex.

		Girls		Boys			
		M	SD	M	SD	F	p
Father	BEM-femininity	4.65	0.41	4.50	.62	2.98	0.10
	BEM-masculinity	5.04	0.77	5.38	.80	0.11	0.74
Three-year-olds							
	EAS-activity	3.97	0.53	3.95	.57	0.55	0.46
	EAS-emotionality	3.06	0.59	2.62	.68	0.27	0.61
	EAS-shyness	2.55	0.75	2.68	.93	1.90	0.18
	EAS-sociability	3.84	0.61	3.72	.68	0.12	0.73
Four-year-olds							
	EAS-activity	3.90	.57	4.11	.71	.54	0.47
	EAS-emotionality	2.93	.73	2.43	.71	.00	0.97
	EAS-shyness	2.60	.62	2.73	.89	5.16*	0.03*
	EAS-sociability	3.89	.41	3.81	.55	1.14	0.29

(table continues)

		Girls		Boys			
		M	SD	M	SD	F	p
Mother	BEM-femininity	5.08	0.44	5.26	0.52	0.08	0.78
	BEM-masculinity	4.22	0.60	4.94	0.66	0.03	0.88
Three-year-olds							
	EAS-activity	4.05	0.43	3.68	0.98	4.73*	0.04*
	EAS-emotionality	3.03	0.97	2.60	0.78	1.42	0.25
	EAS-shyness	2.63	0.88	2.68	1.09	1.83	0.19
	EAS-sociability	3.86	0.88	3.66	0.79	0.19	0.67
Four-year-olds							
	EAS-activity	3.83	0.58	4.06	0.63	0.69	0.41
	EAS-emotionality	2.68	0.99	2.60	0.94	0.09	0.77
	EAS-shyness	2.65	0.93	2.56	1.16	0.78	0.38
	EAS-sociability	4.06	0.58	3.78	0.65	0.11	0.74

*$p < .05$

Table 3

Means and Standard Deviations of Observational Data in Rough-and-Tumble sessions.

	Three-Year-Olds				Four-Year-Olds			
	Mothers		Fathers		Mothers		Fathers	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Dyadic Physical Exchange								
M	160.0	132.47	138.68	151.44	132.91	151.25	164.32	115.41
SD	(65.66)	(70.35)	(71.1)	(70.55)	(60.71)	(73.58)	(84.99)	(69.74)
Dyadic Verbal Exchange								
M	494.29	413.73	433.41	401.00	461.06	421.69	453.44	385.38
SD	(76.88)	(70.32)	(77.24)	(72.93)	(98.00)	(75.28)	(57.93)	(53.07)

Table 4

Means and Standard Deviations of Observational Data in Story-Enactment Play Sessions.

	Three-Year-Olds				Four-Year-Olds			
	Mothers		Fathers		Mothers		Fathers	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Dyadic Physical Exchange								
M	90.53	55.13	100.32	82.66	88.94	74.84	79.74	67.91
SD	(78.71)	(77.42)	(92.94)	(104.73)	(93.68)	(111.30)	(73.30)	(71.80)
Dyadic Verbal Exchange								
M	418.82	355.87	392.77	398.67	432.18	380.63	427.56	389.75
SD	(48.09)	(47.96)	(59.85)	(54.12)	(39.91)	(80.30)	(83.05)	(58.04)

Table 5

Mean Difference Scores (Age 4 minus Age 3)and Standard Deviations for Rough and Tumble Play Sessions by Parent and Gender.

	Rough and Tumble Play					
	Mothers		Fathers			
	Boys	Girls	Boys	Girls	F	p
Dyadic Physical Exchange						
M	-27.18	18.78	25.65	-36.03	8.35	.01
SD	(68.75)	(77.84)	(103.26)	(79.66)		
N	17	16	17	16		
Dyadic Verbal Exchange						
M	-41.56	1.20	12.25	-15.07	3.88	.05
SD	(102.94)	(81.90)	(84.67)	(85.24)		
N	16	15	16	15		

Table 6

Mean Difference Scores (Age 4 minus Age 3) and Standard Deviations for Story-Enactment Pretend Play Sessions by Parent and Gender.

Sessions		Story-Enactment Pretend Play					
		Mothers		Fathers			
		Boys	Girls	Boys	Girls	F	p
Dyadic Physical Exchange							
	M	-1.59	19.72	-20.59	-14.75	.13	.71
	SD	(89.22)	(95.88)	(115.06)	(133.95)		
	N	17	16	17	16		
Dyadic Verbal Exchange							
	M	15.44	23.47	32.06	-13.60	3.20	.08
	SD	(64.11)	(82.95)	(87.11)	(84.57)		
	N	16	15	16	15		

Table 7

Stability Across Sessions and Time of Boys' Dyadic Physical Exchange

Play Sessions	1	2	3	4	5	6	7	8
1. Age 3 Mother Pretend	1.00	0.26	0.20	0.47	0.48	-0.14	-0.18	0.06
2. Age 3 Mother R & T		1.00	0.63	0.19	0.29	0.41	0.15	0.02
3. Age 3 Father Pretend			1.00	0.57	0.11	0.39	0.06	0.29
4. Age 3 Father R & T				1.00	0.23	0.23	0.00	0.13

(table continues)

Play Sessions	1	2	3	4	5	6	7	8
5. Age 4 Mother Pretend					1.00	0.07	0.18	0.12
6. Age 4 Mother R & T						1.00	0.48	0.39
7. Age 4 Father Pretend							1.00	0.31
8. Age 4 Father R & T								1.00

Note: $r(17) = .46$, $p<.05$.

Table 8

Stability Across Sessions and Time of Girls' Dyadic Physical Exchange

Play Sessions	1	2	3	4	5	6	7	8
1. Age 3 Mother Pretend	1.00	0.48	0.55	0.22	0.53	0.24	0.00	0.15
2. Age 3 Mother R & T		1.00	0.24	0.22	0.16	0.42	0.16	0.29
3. Age 3 Father Pretend			1.00	0.52	0.17	0.23	-0.12	0.10
4. Age 3 Father R & T				1.00	-0.14	0.34	0.09	0.36

(table continues)

Play Sessions	1	2	3	4	5	6	7	8
5. Age 4 Mother Pretend					1.00	0.35	0.53	0.35
6. Age4 Mother R & T						1.00	0.36	0.53
7. Age 4 Father Pretend							1.00	0.29
8. Age 4 Father R & T								1.00

Note: $r(16) = .47$, $p < .05$

Table 9

Stability Across Sessions and Time of Boys' Dyadic Verbal Exchange

Play sessions	1	2	3	4	5	6	7	8
1. Age 3 Mother Pretend	1.00	0.56	0.29	0.48	-0.01	0.20	0.13	-0.11
2. Age 3 Mother R & T		1.00	0.40	0.45	0.16	0.29	0.00	-0.24
3. Age 3 Father Pretend			1.00	0.71	0.11	0.28	0.30	0.14
4. Age 3 Father R & T				1.00	0.00	0.05	-0.03	0.17

(table continues)

Play sessions	1	2	3	4	5	6	7	8
5. Age 4 Mother Pretend					1.00	0.46	0.30	0.00
6. Age4 Mother R & T						1.00	0.64	0.36
7. Age 4 Father Pretend							1.00	0.54
8. Age 4 Father R & T								1.00

Note: For age 3, $r(17) = .46$, $p < .05$; for age 4, $r(16) = .47$, $p < .05$.

Table 10

Stability Across Sessions and Time of Girls' Dyadic Verbal Exchange

Play sessions	1	2	3	4	5	6	7	8
1. Age 3 Mother Pretend	1.00	0.34	0.55	0.27	0.29	0.39	0.55	0.21
2. Age 3 Mother R & T		1.00	0.31	0.28	-0.10	0.35	0.20	0.48
3. Age 3 Father Pretend			1.00	0.48	-0.40	-0.09	-0.15	-0.25
4. Age 3 Father R & T				1.00	-0.39	-0.21	-0.38	0.13

(table continues)

Play sessions	1	2	3	4	5	6	7	8
5. Age 4 Mother Pretend					1.00	0.46	0.59	0.47
6. Age4 Mother R & T						1.00	0.42	0.23
7. Age 4 Father Pretend							1.00	0.55
8. Age 4 Father R & T								1.00

Note: For age 3, r(15) = .48, p <. 05; for age 4, r(16) = .47, p < .05.

Table 11

Correlations Between Variables for 3-Year-Old Girls Story-Enactment PretendPlay Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	-0.10	0.29	-0.20	-0.31	-0.34	0.09	-0.31
2. Dyadic Verbal Exchange		1.00	0.08	0.08	0.08	-0.03	-0.33	-0.17

Note. Measures: 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shynness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For EAS values, $r(9) = .60$, $p < .05$; for all other values, $r(15) = .48$, $p < .05$.

Table 12

Correlations Between Variables for 3-Year-Old Boys' Story-Enactment PretendPlay Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	-0.15	0.37	0.44	-0.15	-0.04	-0.33	-0.07
2. Dyadic Verbal Exchange		1.00	0.01	-0.51	-0.42	0.24	0.02	0.44

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For EAS values, $r(12) = .53$, $p < .05$; all other values $r(17) = .46$, $p < .05$.

Table 13

Correlations Between Variables for 3-Year-Old Girls' Rough and Tumble Play Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.60	0.05	0.09	-0.05	0.03	-0.05	-0.13
2. Dyadic Verbal Exchange		1.00	0.08	-0.08	-0.24	0.31	0.10	-0.15

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For EAS values, $r(9) = .60$, $p < .05$; all other values, $r(15) = .48$, $p < .05$.

Table 14

Correlations Between Variables for 3-Year-Old Boys' Rough and Tumble Play Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.01	0.21	-0.16	-0.28	0.40	0.08	-0.16
2. Dyadic Verbal Exchange		1.00	0.28	-0.33	-0.22	0.30	0.46	0.06

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For EAS values, $r(12) = .53$, $p < .05$; for all other values, $r(17) = .46$, $p < .05$

Table 15

Correlations Between Variables for 4-Year-Old Girls' Story-Enactment PretendPlay Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	-0.03	0.53	-0.47	0.18	0.06	0.28	-0.10
2. Dyadic Verbal Exchange		1.00	-0.17	0.30	-0.18	0.21	-0.12	-0.28

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(15) = .48$, $p < .05$; all other measures $r(16) = .47$, $p < .05$.

Table 16

Correlations Between Variables for 4-Year-Old Boys' Story-Enactment Pretend Play Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.36	0.36	0.25	0.10	-0.09	0.28	-0.62
2. Dyadic Verbal Exchange		1.00	0.36	-0.09	0.05	0.29	0.14	-0.19

Note. Measure 3 = EAS (Activity);4 = EAS (Emotionality);5 = EAS (Shyness); 6 = EAS (Sociability); 7 = BEM(Masculinity); 8 = BEM (Femininity). For BEM scores, $r(12) = .53$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 17

Correlations Between Variables for 4-Year-Old Girls' Rough and Tumble Play Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.26	0.28	-0.10	0.00	-0.30	-0.20	-0.30
2. Dyadic Verbal Exchange		1.00	0.66	-0.18	0.10	0.66	-0.04	0.48

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS (Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(15) = .48$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 18

Correlations Between Variables for 4-Year-Old Boys' Rough and Tumble Play Sessions with Mothers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.20	0.35	-0.29	-0.08	0.58	-0.12	0.11
2. Dyadic Verbal Exchange		1.00	0.23	-0.01	-0.20	-0.32	0.11	-0.21

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(15) = .48$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 19

Correlations Between Variables for 3-Year-Old Girls' Story-Enactment Pretend Play Sessions with Fathers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.10	-0.38	0.06	-0.08	0.32	0.17	0.32
2. Dyadic Verbal Exchange		1.00	0.22	-0.13	0.18	-0.04	0.31	-0.25

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(9) = .60$, $p < .05$, all other measures $r(15) = .48$, $p < .05$.

Table 20

Correlations Between Variables for 3-Year-Old Boys' Story-Enactment Pretend Play Sessions with Fathers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.27	-0.08	0.10	0.00	-0.11	-0.39	-0.11
2.Dyadic Verbal Exchange		1.00	-0.21	0.67	0.54	-0.40	-0.11	0.18

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(12) = .53$, $p < .05$, all other measures $r(17) = .46$, $p < .05$.

Table 21

Correlations Between Variables for 3-Year-Old Girls' Rough and Tumble Play Sessions with Fathers

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	-0.10	0.25	-0.27	-0.37	0.25	0.15	0.15
2. Dyadic Verbal Exchange		1.00	0.15	0.05	-0.21	0.07	-0.22	-0.08

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(15) = .48$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 22

Correlations Between Variables for 3-Year-Old Boys' Rough and Tumble Play Sessions with Father

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.48	0.41	0.31	-0.21	-0.02	0.08	-0.14
2.Dyadic Verbal Exchange		1.00	-0.21	0.39	0.20	-0.18	0.01	-0.16

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(12) = .532$, $p < .05$, all other measures $r(17) = .456$, $p < .05$.

Table 23

Correlations Between Variables for 4-Year-Old Girls' Story-Enactment PretendPlay Sessions with Fathers

Measures	1	2	3	4	5	6	7	8
1.Dyadic Physical Exchange	1.00	0.36	-0.13	-0.11	0.18	-0.3	0.36	-0.12
2. Dyadic Verbal Exchange		1.00	-0.42	0.12	-0.06	0.18	0.52	0.34

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(15) = .48$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 24

Correlations Between Variables for 4-Year-Old Boys' Story-Enactment Pretend Play Sessions with Father

Measures	1	2	3	4	5	6	7	8
1. Physical Exchange	1.00	0.28	-0.20	0.23	0.46	-0.15	0.34	-0.55
2. Verbal Exchange		1.00	0.56	0.11	-0.07	0.39	-0.17	0.12

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(12) = .53$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 25

Correlations Between Variables for 4-Year-Old Girls' Rough and Tumble Play Sessions with Father

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	0.03	-0.31	0.08	0.05	-0.21	0.48	0.42
2.Dyadic Verbal Exchange		1.00	-0.38	-0.24	0.01	0.32	0.21	-0.13

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(15) = .48$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 26

Correlations Between Variables for 4-Year-Old Boys' Rough and Tumble Play Sessions with Father

Measures	1	2	3	4	5	6	7	8
1. Dyadic Physical Exchange	1.00	-0.10	-0.03	-0.49	-0.12	0.38	0.32	-0.25
2.Dyadic Verbal Exchange		1.00	0.33	0.24	0.35	0.47	0.31	0.17

Note. Measure 3 = EAS(Activity);4 = EAS(Emotionality);5 = EAS(Shyness); 6 = EAS(Sociability); 7 = BEM(Masculinity); 8 = BEM(Femininity). For BEM scores, $r(12) = .53$, $p < .05$, all other measures $r(16) = .47$, $p < .05$.

Table 27

Correlations Between Parental Warmth and Dyadic Observations of 3-Year-Olds and Parents in the Rough-and -Tumble Session .

	Three-Year-Olds			
	Boys		Girls	
	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth
R&T with Mother				
Dyadic Physical Exchange	-0.10	-0.71*	-0.23	-0.05
Dyadic Verbal Exchange	-0.13	-0.47	0.11	-0.04
R& T with Father				
Dyadic Physical Exchange	-0.32	0.54	0.25	-0.12
Dyadic Verbal Exchange	-0.16	-0.06	0.20	0.30

*$p < .05$

Table 28

Correlations Between Parental Warmth and Dyadic Observations of 3-Year-Olds and Parents in the Story-Enactment Pretend Play Session

	Three-Year-Olds			
	Boys		Girls	
	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth
Pretend Play with Mother				
Dyadic Physical Exchange	-0.52	0.39	0.23	0.26
Dyadic Verbal Exchange	0.67*	0.17	0.42	0.32
Pretend Play with Father				
Dyadic Physical Exchange	-0.20	-0.14	0.06	-0.11
Dyadic Verbal Exchange	0.21	-0.05	0.36	0.14

*$p < .05$

Table 29

Correlations Between Parental Warmth and Dyadic Observations of 4-Year-Olds and Parents in the Rough-and -Tumble Play Session

	Four-Year-Olds			
	Boys		Girls	
	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth
R&T with Mother				
Dyadic Physical Exchange	-0.24	-0.78*	-0.30	0.03
Dyadic Verbal Exchange	0.08	-0.15	-0.23	-0.17
R& T with Father				
Dyadic Physical Exchange	-0.69**	-0.25	-0.07	-0.02
Dyadic Verbal Exchange	0.30	0.40	0.23	0.33

*$p < .05$

**$p < .05$.

Table 30

Correlations Between Parental Warmth and Dyadic Observations of 4-Year-Olds and Parents in the Story-Enactment Pretend Play Session.

	Four-Year-Olds			
	Boys		Girls	
	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth	Mothers' Ratings of Warmth	Fathers' Ratings of Warmth
Pretend Play with Mother				
Dyadic Physical Exchange	-0.01	0.01	0.14	0.33
Dyadic Verbal Exchange	-0.14	-0.32	-0.21	0.09
Pretend Play with Father				
Dyadic Physical Exchange	-0.30	-0.45	0.07	0.42
Dyadic Verbal Exchange	0.55	0.54	-0.07	0.07

Chapter V

Discussion

The present findings provide support for changes in dyadic parent-child interaction across time during the time of gender development, as indicated by dyadic physical and verbal observational measures of parent-child interaction when the children were 3 years and 4 years of age. More specifically, during a semi-structured rough-and-tumble play session, at age 3, boys and mothers were found to engage in more dyadic physical and verbal exchange interactions than boys and fathers, whereas by 4 years of age, boys and fathers engaged in more dyadic physical and verbal exchange than boys and mothers. In the same context, at age 3 girls and fathers were found to engage in more dyadic physical exchange interactions than girls and mothers and at age 4, girls and mothers engaged in more dyadic physical exchange than girls and fathers. In the story-enactment play session, there was a trend at age 3, for girls and fathers to engage in more dyadic verbal exchange than girls and mothers and at age 4, there was a trend for girls and mothers to engage in more dyadic verbal exchange than girls and fathers.

From a theoretical perspective, these results provide empirical support for cross-sex parent-child dyadic exchanges at age 3 and same-sex parent-child dyadic exchanges at age 4. The findings of this study are consistent with the Freudian model which posits that at around age 3, boys and girls are closer to the parent of the opposite sex and that at 4 to 5 years old boys and girls would be closer to the parent of the same sex. In the rough-and-tumble play session, both 3-year-old boys and girls engaged in greater dyadic physical exchange with the parent of the opposite sex and by age 4, boys and girls engaged in dyadic physical exchange with the parent of their own sex. Most of the empirical work on gender development has focussed on unidirectional

parent socialization of children of this age and have reported no consistent support for differential treatment of boys and girls by mothers and fathers (e.g., Lytton & Romney, 1991; Maccoby & Jacklin, 1974). This study examined dyadic parent-child interactions and found some interesting results with respect to developmental differences in dyadic parent-child interactions during this time of gender development.

The results of this study are consistent with the work of Watson and Getz (1990) who reported evidence for the existence of Oedipal behaviors (preference of same sex parent and conflict with opposite sex parent) in 4-year-old children as measured by a child story-completion task and parent's diary reports of Oedipal incidences. The present findings differ in that for both boys and girls, more frequent dyadic physical exchange with the opposite parent was evidenced in the rough and tumble play setting at age 3 and more frequent dyadic physical exchange with the same-sex parent was evidenced at age 4. Developmentally, gender development develops gradually through ages 3 to 6 and the peak of the opposite sex parental preference has been shown to peak at age 4 (Watson & Getz, 1990). In the present study, parental preference for the opposite sex parent was observed, by comparing mother-child exchanges to father-child exchanges. In addition, the same results were replicated for dyadic verbal exchange measures for boys but not for girls In Watson and Getz's (1990) study, Oedipal-like behaviors (preference for opposite sex parent) peaked at age 4 and sharply declined by age 6. The discrepancy in the findings may be explained by the different measures used; the present findings were based on longitudinal observational data that compared the dyadic parent-child interaction over a period of one year and Watson and Getz's (1990) study used a cross-sectional sample to compare parent-report measures and children's projective responses in stories. Previous studies have also

suggested that a number of family variables such as presence of siblings, time spent caring for child may be related to a child's greater preference for a parent (Turnbull & Brody, 1999).

Moreover, the majority of previous research investigations on the environmental influences on children's gender development have focussed on the parents' differential treatment of boys and girls and children's imitation and identification with same-sex models. Limited empirical support for the viewpoint that parents treat boys and girls differently and that children imitate same-sex models during this time of gender development was found (for reviews, see Huston, 1983; Leaper, Anderson, & Sanders, 1991; Lytton & Romney, 1991, Maccoby, 1998; Maccoby & Jacklin, 1974). Typically, the dyadic and reciprocal emotional relationships had not been considered. For example, Lytton and Romney's meta-analysis revealed no differences in how parents treated boys and girls with respect to their verbal initiations, warmth, responsiveness, and restrictiveness towards boys versus girls. It should be noted that, in previous studies, mothers' and fathers' behaviors towards their children were compared in a unidirectional way, and the dyadic parent-child interactions were rarely examined. When both parent and child effects were examined some interesting findings emerged. In children aged 2 to 5 years old, Noller (1978) reported greater parent-daughter affectionate interaction and the father-son interaction to be least affectionate. In another study, Bright and Stockdale (1984) observed 3 to 6 year olds' interactions with parents, differences were revealed for types of behaviors initiated by parents; fathers were found to direct and control their children more than mothers. In turn, boys were found to direct and control their fathers more than their mothers; and boys more than girls were found to display more physical warmth with their mothers and to praise their fathers more than did girls. These two studies were unique in that they analysed both parent and child

influences in the context of parent-child interaction; however, comparisons were not made with respect to age. Therefore, any developmental differences contributing to parent-child differences were not studied. The present study compared dyadic parent-child interaction across time and allowed for the observation of developmental changes in parent-child interaction during this period of gender identity.

Contributions of this study to the understanding of parent-child interaction and gender

This study provided an opportunity for the comparison of parent-child interaction across different play contexts. Methodologically, observing boys and girls, mothers and fathers in different contexts has been recommended by previous work on parent-child interaction (e.g., Lamb, 1977; MacDonald & Parke, 1984). A comparison of the rough and tumble play and story-enactment (pretend) play contexts allowed for a comparison of two styles of interaction. In the rough and tumble play sessions, the dyadic physical exchange measures which measured spontaneous direct physical interaction resulted in more consistent findings across parents and children. The significant findings of this play session may be explained by the age of the children, as past research has found that parent-child physical play peaks at this age. In addition, the lively, enjoyable content of the physical play session may have allowed participants to be more spontaneous in their interaction. The story-enactment pretend play session offered a more verbal, didactic exchange and although this type of interaction has been described as a more common play style among mothers and children, this procedure may have elicited less emotional responses than did the rough-and tumble play procedure; in fact, only the difference for 4-year-old girls' greater verbal exchanges with mothers and fathers approached significance. Past research adopting the story-completion tasks may have used clearer vulnerability situations than

this one; for example, Bretherton et. al. (1990) used attachment related stories, such the child falling and hurting one's knee, a child fearing a monster in the room, and a parent leaving for an overnight trip. Others have also used similar stories related to security of attachment (Hansburg, 1972; Klagsbrun & Bowlby, 1976). In this study, parent-child interaction was observed without an emphasis on attachment; the enactment involved two bears lost in the woods. However, since the bear was not left alone in the woods but with the Big bear, the content of the scenario was less emotional than that used in attachment research.

One important strength of this study is that different procedures were incorporated to capture important differences in interactional styles of mothers and fathers with their boys and girls. This is also consistent with previous recommendations to observe parent-child interaction in different contexts (Lamb, 1989; Lindsey et al., 1997; MacDonald & Parke, 1984) and literature showing that the verbal styles of mothers and fathers are different (for review, see Leaper et al., 1998).

Previous research has also indicated that both mothers and fathers contribute as play partners; researchers have questioned whether older boys prefer the father more as a play partner or whether the paternal style is more appealing to older boys (Ross & Taylor, 1989). A future study including both parents in the same session and comparing parent-child exchange with both parents simultaneously may clarify some of these questions. The present findings can only generalize to the play context studied (rough and tumble play), though the significant findings observed were in the same direction across both settings.

Another important contribution to the existing literature, is the examination of the changes in the parent-child relationship across time measuring developmental changes in child-

parent interaction. Studies so far, have been cross-sectional in nature and self-report measures have been used to measure parents' and children's perceptions of parental preference. The limitations associated with self-report measures include their questionable validity which depends on one's insight and ability or willingness to respond accurately (Shedler, Mayman, & Manis, 1993). One method to determine implicit processes in the day to day experience of an individual is to infer them from behavior (Epstein, 1998). The behavioral observations of dyadic parent-child interaction including physical exchange (e.g., parent and child touching, child sitting on parent's lap), and dyadic verbal exchange (e.g., parent and child talking to each other, sharing pretend noises, singing together) represent actual measures of real-life behavior. Therefore, an important contribution of the present study was the observational evidence of parent-child dyadic physical and verbal exchange (in the rough-and-tumble play session), showing important developmental differences, during this time of gender development.

Exploratory Findings: Gender Differences in Parental Ratings and Parent-Child Interaction

Although the focus of the study was not on parental self-ratings of gender attributes, some interesting findings emerged with respect to associations between parental self-ratings of masculinity and femininity and parent-child interaction with their child. In this study, mothers and fathers who rated themselves more feminine engaged in fewer dyadic physical exchanges with boys and mothers who rated themselves more masculine engaged in more dyadic physical engages with boys. One can speculate that this finding may be consistent with boys' needs and mothers' perception to encourage more autonomy in boys, thus developing their masculine identity.

Another exploratory finding of interest was revealed in parental perceptions of their

child's temperament. Three-year-old boys who were viewed as emotional by their mothers engaged in less verbal exchange with their mothers in story-enactment play and 4-year-old boys who were perceived as more emotional by their fathers engaged in fewer dyadic physical exchange with them in rough-and-tumble play. Parental ratings of the boys as "emotional" were based on a specific definition on the EAS questionnaire asking parents to report on the child's response to upsetting situations (e.g., how fussy they were; how much they cried). Based on previous work on gender and emotion, the "emotion" items in the EAS can be described as measuring a more feminine "emotional" style related to reactions of vulnerability. Previous work on gender and emotion, has suggested that females express more emotions related to affiliation, vulnerability and self-consciousness than males who are found to express more emotion of anger, pride and competition (e.g., Brody, 1993; Eagly, 1987). Interestingly, our findings revealed that boys who were perceived as more "emotional" (more vulnerable) engaged in fewer dyadic verbal exchanges with their mothers at age 3 and fewer dyadic physical exchanges with their fathers at age 4. Further work is needed to clarify how temperamental factors contribute to the development of gender identity .

Moreover, research on emotion regulation suggests that in the first few years of life, infants have some ability to self-regulate their arousal levels; however, to a large extent they depend on adults to regulate their environments, including their emotion in ways to promote well-being, and minimize stress and danger (Demos, 1986; Rothbart, 1989). In the preschool years, children's ability to self-regulate can be seen in their emotional expression during play and in their ability to have appropriate expressions (minimize and mask feelings) under certain conditions (Cole, 1986; Dunn, 1988; Fabes & Eisenberg, 1992). More research is needed to

identify the effects of social encoding and decoding in children of this age and expression of emotion. Finally, Parke and colleagues (MacDonald & Parke, 1984; Parke et al., 1993) reported that fathers' physical play exchanges may serve to complement mothers' verbal games and suggest that physical play with fathers because of its level of excitement and arousal serves to teach children to read emotional signals and to regulate their emotions.

It should be cautioned, however that rough-and-tumble play between parents and children varies from culture to culture (Roopnarine, Talukder, Jain, Joshi, & Srivastav, 1990; Hooper, Ahmeduzzaman & Pollack, 1993). For example, Malaysian mothers and fathers rarely reported engaging in physical play with their children and Aka pygmies of Central Africa showed no inclination to engage in rough play with their children (Hewlett, 1987). Research on Italian families found familial and nonfamilial women more than fathers to engage in rough play with their children (New & Benigni, 1987). These findings suggest that rough play is culture-specific and its importance in the development of the father-child play in other cultures is yet to be determined.

The Implications of this Research for Understanding Gender Development

Parent-child interaction in early childhood was studied from a psychoanalytic perspective in an attempt to bridge the gap between clinical theory and empirical research on gender development, There are implications for understanding early childhood development, including the importance of early parent-child relationships as laying the underlying structures for future life outcomes (Mitchell & Black, 1995). Past clinical research on gender development focussed on children with psychopathology including gender identity disorder, which indicated that children who have a strong desire for cross-gender identity, are at risk for psychopathology

including severely impaired peer relationships (Coates, 1990; Zucker, 1982, 1985). In light of this, this period of gender identification is critical for establishing healthy relationships with peers. The link between early parent-child relations and future peer relations has been suggested by several researchers (e.g., Lindsey et al., 1999; Pettit, Gregory, Brown, Mize, & Lindsey, 1998; MacDonald & Parke, 1984). Longitudinal studies linking early childhood parent-child interaction to future peer relationships in school age and adolescence may clarify how these links develop.

Traditional developmental theories have emphasized the contribution of both mothers and fathers to the healthy socio-emotional development of children. Therefore, rearing children in nontraditional environments, such as divorced families (e.g., Hetherington & Arasteh, 1988), and with gay and, or lesbian parents has been questioned (e.g., Cameron & Cameron, 1996). In 1992, Patterson reviewed the studies on children of gay and lesbian parents and concluded that there was no evidence to suggest that the socio-emotional development of children with gay and lesbian parents was negatively affected. In addition, the 1994-95 consortiums of psychiatric and educational organizations such as the American Psychological Association (APA) submitted amicus briefs to the U.S. Supreme Court supporting gay rights and denying any scientific basis for not awarding custody to homosexuals. Recently, these studies have been criticized for methodological problems including, small sample size and for methodological difficulties, such as comparing the effects of divorced mothers living with a partner to divorced mothers living without a partner (Cameron & Cameron, 1997; Cameron, Cameron, & Landess, 1996). A traditional psychoanalytic perspective would emphasize the dyadic relationships formed by boys and girls with parents of each gender; however, children do not only form relationships with their parents, but also with other adults of both genders (e.g., teachers, friends, coaches).

Psychoanalytic theory would predict that healthy relationships with adults of each gender are necessary. However, there is lack of research testing this assumption systematically. It is proposed that research is needed to clarify the effects of nontraditional families on children's development including gender development.

Early studies of absence of a parent model (i.e., the father) in single-parent families indicated that fathers play an important role in boys' development of masculinity, in girls' acquisition of heterosexual interaction skills and in the development of sex-typed intellectual skills for both genders. For example, Hetherington, Cox and Cox (1982) reported that boys from divorced families with absent fathers had less masculine and more feminine toy preferences, played more with female younger children and were more dependent, less physically aggressive and more verbally aggressive than boys in two-parent families. Girls however, were less affected by father's absence on measures of self-perception, toy preferences but showed problems in social interactions with males (Hetherington, Cox, & Cox, 1982). Moreover, boys were more affected by father's absence in the preschool period, than if fathers left after the preschool period. Many psychoanalysts following the Freudian model, would view death or divorce of a father during this Oedipal period particularly destructive because the preschool child may feel guilty for having caused the event and would be forever fearful of his feelings and desires. More recent literature on the effects of divorce on children, have found that many factors such as, stressors including socioeconomic circumstances, co-parenting arrangements, the quality of the relationship with father all contribute in complex ways to children's adjustment to divorce (Hetherington & Henderson, 1997). Future studies need to incorporate a more open ecological perspective, reflecting the realities of the families of today; research on noncustodial parenting,

non-biological parenting, co-parenting and foster care may serve to clarify the processes involved in one's development of sense of self, including sense of gender.

Typically, in the psychoanalytic literature, girls' and boys' emotional development is explained through the dynamic relationships they have with their parents (Freud, 1925; Mitchell & Black, 1995). Previous theoretical accounts have emphasized that females are more relationally oriented and that males are less relational due to their need to separate from mother to develop a more autonomous identity (Chodorow, 1978;1989). More recently however, research on gender differences in peers relationships, have suggested that men and women are both interested in relationships but the content of their relationships may differ. For example, female peer play interactions have been found to include issues of empathy, vulnerability in doll play (Benenson, 1996) and more intimate dyadic interaction (Maccoby, 1998) and male peer play interactions have been found to occur in the context of assertion, including rough physical play (Benenson, 1996) and more group-oriented play interaction (Maccoby, 1998). Longitudinal studies linking the content of parent-child exchange to middle childhood, adolescent and adult relations are needed to document the psychological processes involved in the development of relationships with parents of each gender.

With respect to implications for clinical work, an analysis of the dynamics of the relationship individuals form with their mothers and fathers helps facilitate the therapeutic process in psychoanalytic work (e.g., Esman, 1994); for example, the therapist in the psychoanalytic relationship takes the role of the parent or "object" and tries to offer some basic parental responsiveness that was missed early on (i.e., a holding environment, mirroring, empathic milieu, opportunities for separation-individuation) (Mitchell & Black, 1995). The

child's or adult's ability to hear and make use of the analytic interpretations to a large extent depends on the relationship the client forms with the therapist (Mitchell & Black, 1995). Therefore, the characteristics of the therapist including gender may influence the issues that will be worked on in the psychotherapy.

Other Explanations for the Existence of the Oedipal Period

Other socio-cognitive explanations for the existence of the Oepidal period have been proposed by Watson and Getz (1990), supporting this developmental transformation of the parent-child relationship. According to the socio-cognitive model, in early childhood, children's concept-formation abilities have not fully developed, and their understanding of social roles is limited; for example, it is difficult for them to attribute more than one social role to one person. Therefore, in the midst of their confusion, that a parent can be both a parent and a spouse, and their emotional need to feel secure and close to their parent so they do not lose their love object, they display a wish to "marry" the parent. For example, according to this viewpoint, the daughter's wish to marry the father, stems from her need to remain in the security of her parents and since she is a girl, this could be insured by marrying her father. This social-cognitive explanation deals with children's conceptual understanding of family roles and is consistent with what is known about children and their understanding of gender constancy (Kohlberg, 1966; Marcus & Overton, 1978).

In this study, I speculate that both emotional and socio-cognitive processes are involved in the child's development of gender. On an emotional level, the preschool child may be preoccupied with feelings of attachment and separation, driven to express his desire for his loved object and on a cognitive level, as Watson and Getz (1990) suggest the child may seek to

understand one's role in the family and experiences conflict when one looks around and sees that the two roles "husband" and "wife" are taken up. According to Watson and Getz (1990), when this confusion of gender role identification is resolved, the child is much more secure emotionally, and identifies on an emotional level with the parent of one's own gender (Kohlberg, 1966; Watson & Getz, 1990). Cognitively, one is able to understand role complementarity, as well as model the parent of one's own gender, as one conceptualizes that gender is not a changing concept (Kohlberg 1966).

Gender Identity and Psychopathology

The clinical intervention literature on gender development has focussed on children with psychopathology including gender identity disorder (GID). This literature indicates that these children are at risk for psychopathology including severely impaired peer relationships (Coates, 1990; Zucker, 1982,1990). The clinical picture presented by psychoanalysts involves a preoccupation by the child with issues of attachment and separation-differentiation. The dynamics of gender identity disorder is often attributed to the child's "symbiotic" identification with same-sex parent, or the child's inability to separate from the mother (Coates, 1990; Stoller, 1968, 1975). In addition, according to DSM-IV (APA, 1994) the majority of the children who show persistent cross-sex identification are boys and onset of cross-gender behavior is usually between ages 2 and 4 years, although it is not until school age that most children are referred (APA, 1994; Coates, 1990).

Clinical assessment involves the evaluation of cross-gender symptoms directly, as well as investigating the underlying dynamics involved in the symptoms (Zucker, 1982, 1990). Familial influences on children with gender identity disorder have been proposed, although systematic

studies concerning these influences have been sparse. For boys, psychoanalytic hypotheses regarding the mother-son relationship have been proposed as explanations of this disorder and these explanations have been derived from clinical retrospective case studies. One hypothesis is that the boy's identification with the mother at a very early age is believed to occur in families when the mother is resentful toward men, scorns masculinity and encourages the boy to be feminine; in addition, the fathers are usually less powerful and deny that the problem exists (Greenson, 1966). A second theory suggests the boy loses his maternal caretaker (e.g., she becomes pregnant, depressed or withdrawn) and he seeks to compensate by becoming like the lost person, thus retaining her (Gilpin, Raza, & Gilpin, 1979). A third psychoanalytic explanation involves the boy's defense against castration anxiety, when a boy symbolically castrates himself by taking on a female identity to cope with this anxiety; others propose that the boy also defends himself against the mother as aggressor (if mother is resentful of males) and identifies with her to protect himself (Meyer & Dupkin, 1985).

Biological Research and Gender

Biological studies of gender cannot be ignored in the study of gender development. Biology plays an important role in the determination of basic physiological differences between males and females. There is evidence suggesting that differences in hormones produce some observed behavioural sex differences (e.g., Berenbaum & Hines, 1992; Hines & Kaufman, 1994; Maccoby & Jacklin, 1974; Money & Erhardt, 1972; Zucker, 1999). In work with newborns, there was some evidence that levels of testosterone, which are generally higher in males than females, may be linked to greater physical assertion in newborn males than females, both for humans and other mammalian species (Maccoby & Jacklin, 1974; Money & Erhardt, 1972). Moreover,

Maccoby and Jacklin (1974) reported that males have been found to be more aggressive than females in all human societies for which evidence is available; this difference has been observed early in life and animal studies indicate that experimental administration of male hormones may be related to elevated levels of rough-and tumble play. Therefore, there may be a predisposition for children and particularly boys and fathers to initiate and enjoy rough play and that this may be strongly associated with warm father-child relationships (MacDonald, 1993). Perhaps there exist different critical periods for hormonal influences on different aspects of sex-typical behaviors. Another possibility may be that some aspects of sex-typical behavior are influenced by hormones, while other aspects can be influenced by social and cultural factors (Zucker, 1999). Research should continue to address the link between hormones and behavior in a developmental life-span perspective to identify possible hormonal influences on the emotional relationships males and females form and any behavior outcomes associated with these differences.

Future Directions in Research

The present study focussed on the influence of the parent-child relationship on the development of gender identity. The dyadic relationship as measured by parent-child involvement in dyadic physical and verbal exchanges allowed for a comparison of the observed interactions of boys and girls with their mothers and fathers over time. Developmentally, parent-child relationships are considered significant in the early years, whereas by school age, peers become increasingly important. Previous researchers have linked parent-child interactions to social competence with peers (e.g., Elicker, Englund, & Sroufe,1992; Lindsey et al., 1997; Macdonald & Parke, 1984; Pettit et al., 1998). Therefore, longitudinal studies documenting the parent-child relationship for boys and girls at different ages may reveal important links to

relationships with peers. The involvement of fathers in the child's life appears to increase at around 3 ½ years of age (Cowan & Cowan, 1992) and coincides with children's greater interest in peers. Further study of the complexity of the stylistic play patterns of mothers and fathers with their children may give insight to the underlying messages about gender and relationships. In addition, cultural and ecological factors should be studied to include differences in family structures, cultural backgrounds to reflect the realities of today's family relationships (e.g., Brody, 1999; Patterson, 1992). Finally, greater consistency across studies with respect to measures and multiple of measures of the same variable may reveal both conscious and unconscious processes involved in the formation of gender identity and may allow for a clearer comparison across studies (Westen, 1998).

A potential future study extending the longitudinal work of the present study may involve exploring the link between early parent-child interaction to future developmental outcomes. A follow up study, when the children are in their school aged years, a time when peer relationships become more important would be worthwhile. Home reports using the Waldrop and Halverson (1975) measures, may be used where mothers will be asked to keep a diary of their children's activities for a week regarding the following measures of peer behavior (e.g., number of friends, hours with peers). In the school setting, peer nominations of the children's friendships will be completed using the Asher and Dodge (1986) method of sociometric classification. In addition, behavioral observations of the frequency and duration of peer interactions in different contexts may be observed. The relationship between dyadic parent-child interaction measures when children were 3 and 4 years of age on peer relationship outcomes will be examined. This type of study will also allow for the prediction of the different child or parent variables (temperament,

parent self-ratings of masculinity and femininity) to different outcomes in boys' and girls' relationships with peers. In addition, the identification of the developmental profiles of children with successful and unsuccessful peer relationships may be outlined.

Limitations of the Study

The present study contributes to the literature on parent-child interaction during the time of gender identity development. A psychoanalytic theoretical framework was used to explain the findings and an attempt was made to bridge the gap between clinical and empirical work. Although the present study offers new insights into changes in dyadic parent-child interaction during the time of gender identity, the findings cannot be generalized to the population at large for a number of reasons. First, the sample size of 33 children and families was small and included only middle class, English-speaking, Canadian two-parent families. The families were comprised of an average of 2 siblings and the children attended a preschool program for part of the day. The number of hours the parents spent with their children could not be compared because of the small sample size; others have found this factor to influence children's preference of their mother versus fathers (Turnbull & Brody, 1999). The two contexts set up to examine dyadic parent-child interaction were based on previous literature of parent-child play (e.g., Lindsey et al., 1997; MacDonald & Parke, 1984; Pettit et al., 1998) and attachment methodologies using story narratives to elicit emotion (e.g., Bretherton et al., 1990). The large standard deviations also reflect high variability across families in dyadic verbal and physical exchange. However, replication of this study with different populations and different contexts would strengthen the results of this study.

The study was also limited, in that a measure of affect could not be reliably measured. A

global rating of the child's affect was attempted with the 3-year-old data (Time 1) by two female undergraduate psychology students. Global ratings were used because the emotional expression of the parents and children were mostly neutral to positive. Specifically, ratings of affect ranged from neutral to moderate positive (3 to 4.5) showing no negative affect coding. However, the low intercoder reliability made the coding of the affect variable questionable. Therefore, in the second year coding, this coding procedure was omitted. Other explanations for lack of reliability include the fact that gender research is never completely "blind" (Condry & Condry, 1976); in this case, perhaps the coders were influenced by the gender of the dyad they were coding and their perceptions of male and female emotional expressiveness was based on their own personal perceptions (Leaper et al., 1998). In addition, a play paradigm that evokes more expression of negative emotion may allow for the coding of discrete emotions (i.e., sadness, happiness, fear) and may reveal important gender differences in parent-child interaction.

The findings of parent-child exchange are interpreted based on the frequency of dyadic physical contact and verbal exchange. Others have used verbal measures capturing the qualitative differences in parent-child verbalizations, self-report measures (Brody, 1999) as well as projective measures assessing parents and children's verbal perceptions of the relationship (Bretherton et al., 1990; Klagsbrun & Bowlby, 1976). Nevertheless, this study relied on observational data coded by independent research assistants who were blind to the purpose of the study. The coding of second by second verbal and physical exchanges allowed for an objective observation of differences in parent-child interaction based on dyadic physical and verbal exchange measures. However, other measures of the relationship including parent and child perceptions of the relationship would prove useful. From a more qualitative perspective, the

verbal content of the dyadic verbal exchanges can also be analysed for emotional content and projective themes.

An important contribution of the study is the 14- month follow up observations of 33 parent-child dyads; nevertheless it is noted that may not have been an adequate amount of time to truly measure changes in relationship, especially since gender identity is believed to continue developing until age 5 or 6 and revisited in the adolescent years (Chodorow, 1989; Freud, 1925; Kohlberg, 1966). A subsequent follow up study of the families would allow for a longitudinal observation of parent-child interaction over a longer period of time. Further, according to psychoanalytic thought, issues of gender identity are revisited in adolescence and early identification of gender related issues may lead to a prediction of future outcomes for gender identity development in adolescence (Chodorow, 1978, 1989; Freud, 1925).

Conclusion

The relationships girls and boys form with their mothers and fathers are important for the development of gender identity and overall personality development. Traditionally, the psychodynamic models have been used to help explain gender differences on a post hoc basis, with limited empirical work examining whether there is evidence for the transformation of parent-child interaction during this time of gender identity development. Examining the dyadic parent-child interaction, rather than the behaviors of individuals allows for a closer look at the dyad from a psychodynamic perspective.

The findings of this study suggest that changes in parent-child interaction were observed at the time period when gender identity is developing. The observations of dyadic parent-child interaction point to more frequent mother-son interaction at age 3 and more father-son

interactions at age 4. By contrast, girls evidence more frequent father-daughter interactions at age 3 and more frequent mother-daughter interactions at age 4. Future studies should extend the investigation of gender differences in the parent-child relationship to include longitudinal data on the relationship with peers and the gender identity issues in adolescence. Developmental research across the life span may allow for a more complete developmental picture of the underlying processes involved in the development of gender identity as an integral part of personality development.

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Appendix A

Letter of Consent

To Mothers and Fathers,

We are looking for children approximately 3 years of age (who attend some kind of preschool/nursery/daycare program) and their mothers and fathers who would be willing to participate in a study at two times: when children are three years old and when children are four and a half years old. It is very important that children and parents be interested in participating at both times, so that as much as possible, we can have the same families involved at both time periods.

We believe the study is very important for understanding changes in children's play interactions with parents when the children are between three and four years of age. To our knowledge, limited research exists on this important period of life with the same families.

The study consists of asking each parent to play for 20 minutes with his or her child. The play will be videotaped by us. All families will be given a copy of the videotape of their play interactions with their child. Videotaping will be done at home at a time that is convenient for parents and children. All information will be kept confidential and anonymous in the written report of this project.

The two researchers responsible for the project, Mrs. Harriet Petrakos and Dr. Joyce Benenson, have many years of experience working in schools and with parents and children of this age. Dr. Benenson is an assistant professor at McGill University in the Department of Educational and Counselling Psychology and Mrs. Petrakos is a doctoral student in the same department.

We would be extremely grateful if you would be willing to participate in what we consider to be a very important study. Results from the study will be given to all families. If you have any questions or comments at all about the study, please call Mrs. Harriet Petrakos at 288-3691 or Dr. Joyce Benenson at 398-4240. If you would be willing to participate, please fill out the consent form on the next page and return it to us in the envelope provided.

Thank you very much for your consideration.

Sincerely,

Harriet Petrakos, M.A.
Doctoral Student

Joyce Benenson, Ph.D.
Assistant Professor

Consent Form
MCGILL UNIVERSITY
Educational and Counselling Psychology

Parent-Child Interaction

Fall/Winter 1994

_____ We would be willing to participate in the project on Parent-Child Interaction. We believe we will be able to participate at the two time periods. If, however, we wish to discontinue participation at any time, we are free to do so.

_____ We would not be willing to participate in the project on Parent-Child Interaction.

_____ _____
(signature of mother) (signature of father)

_____ _____
(child's name) (child's date of birth)

_____
(home and/or business phone number)

_____
(name of preschool)

Please return the consent form to us as soon as possible. **Thank you** very much for your participation!

Appendix B

Observational Coding Sheet

Family:_____ Session/ Parent:_____ Coder:_____

TIME							
:00				:30			
:01				:31			
:02				:32			
:03				:33			
:04				:34			
:05				:35			
:06				:36			
:07				:37			
:08				:38			
:09				:39			
:10				:40			
:11				:41			
:12				:42			
:13				:43			
:14				:44			
:15				:45			
:16				:46			
:17				:47			
:18				:48			
:19				:49			
:20				:50			
:21				:51			
:22				:52			
:23				:53			
:24				:54			
:25				:55			
:26				:56			
:27				:57			
:28				:58			
:29				:59			

Appendix C

EAS Temperament Survey for Children (Buss & Plomin, 1984)

Family No._____ _____father _____ mother

The EAS Temperament Survey for Children: Parent Ratings

Please rate each of the items for your child on a scale of **1 (not characteristic or typical of the child)** to **5 (very characteristic or typical of your child)**. If you have not had the experience of observing the child in any of the following situations, please mark "not observed".

1) Child tends to be shy.

1 2 3 4 5

---

2) When with other children, this child seems to be having a good time.

1 2 3 4 5

---

3) Child cries easily.

1 2 3 4 5

---

4) During freeplay, child is always on the go.

1 2 3 4 5

---

5) Child tends to be somewhat emotional.

1 2 3 4 5

---

6) When child moves about, s/he usually moves slowly.

1 2 3 4 5

---

7) Child makes friends easily.

1 2 3 4 5

---

8) Child is full of vigor when s/he arrives in the classroom in the morning.

1 2 3 4 5

---

9) Child likes to be with people.

1 2 3 4 5

---

10) Child often fusses or cries.

1 2 3 4 5

---

11) Child likes to chat with neighbors.

1 2 3 4 5

---

12) Child is very sociable.

1 2 3 4 5

---

13) Child is very energetic.

1 2 3 4 5

---

14) Child takes a long time to warm up to strangers.

1 2 3 4 5

---

15) Child prefers to do things alone.

1 2 3 4 5

---

16) Child gets upset easily.

1 2 3 4 5

---

17) Child prefers quiet, inactive, games to more active ones.

1 2 3 4 5

---

18) Child tends to be a loner.

1 2 3 4 5

---

19) Child reacts intensely when upset.

1 2 3 4 5

---

20) Child is very friendly with strangers.

1 2 3 4 5

Appendix D

BEM Questionnaire (Summary)

Taken from: Bem (1978)

Fathers and mothers were asked to rate, on scale from 1 to 7 (1-never or almost never true, 4-occasionally true, 7- always or almost always true), how true of them each of the following characterisitcs was.

Characteristics:

Defend my own beliefs
Conscentious
Independent
Sympathetic
Moody
Assertive
Sensitive to needs of others
Reliable
Strong personality
Understanding
Jealous
Forceful
Compassionate
Truthful
Have leadership abilities
Eager to soothe hurt feelings
Secretive
Warm
Adaptable
Dominant
Tender
Conceited
Willing to take a stand
Love children
Tactful
Aggressive
Gentle
Conventional
Self-reliant
Yielding
Helpful
Athletic
Cheerful
Unsystematic
Analytical
Shy
Inefficient
Make decisions easily
Flatterable
Theatrical
Self-sufficient
Loyal
Happy
Individualistic
Soft-spoken
Unpredictable
Masculine
Gullible
Solemn
Competitive
Childlike
Likable
Ambitious
Do not use harsh language
Sincere
Act as a leader
Feminine
Friendly

Appendix E

Warmth-Hostility subscale

McGill Parental Attitude Toward Child-Rearing Questionnaire

- Revised English Form (MPATCR; Cohen, 1991)

Taken from: Cohen, M. (1991)

Please read the following statements carefully and circle the response which most accurately reflects your own attitudes.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Having a child to care for is pleasurable.	1	2	3	4	5
Young children do many things just to make their parents mad.	1	2	3	4	5
There is a great deal of conflict between children and parents.	1	2	3	4	5
Parenthood is always worthwhile.	1	2	3	4	5
One never regrets having a child.	1	2	3	4	5
Affection should always be expressed by hugging, kissing and holding ones child.	1	2	3	4	5
Staying at home with a child is more boring than parents though it would be.	1	2	3	4	5
Many parents do not like their child's personality and temperament.	1	2	3	4	5
It is difficult to accept failure in young children.	1	2	3	4	5
Parents can not wait unitl their babies grow up.	1	2	3	4	5

Appendix F

Ethics Approval