
Linkages between parent–child interaction and conversations of friends

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Abstract

In this study we examined how mothers' and fathers' parenting behavior during parent–child interaction related to children's ability to successfully interact with peers. Children's ability to engage in coordinated interaction, and their negativity and positivity towards peers were examined. Observational data were collected on 56 families in both parent–child and peer interaction settings. Results suggested that father's emotional volatility was related to children's tendency to play at a low level of engagement with their best friends (e.g. engage in parallel play or monologue). Both mother's and father's affective communication were related to children's tendency to play at a higher level of engagement, such as through establishing common ground activities, exchanging information, and self-disclosing personal information or feelings. Parental intrusiveness, low engagement and use of derisive humor was also related to children's negativity during peer interaction. Results support the hypothesis that both fathers and mothers provide a context for children's development of the ability to engage in and maintain interpersonal interaction, and mothers' parenting may influence the amount of positive affect children express during dyadic play.

Keywords: Parental behavior; peer interaction; friendship.

In recent years evidence has emerged that the quality of parent–child interaction is related to children's popularity among peers (MacDonald & Parke, 1984; Parke & Ladd, 1992; Parke, MacDonald, Beitel & Bhavnagri, 1988; Parke, MacDonald, Burks, Carson, Bhavnagri, Barth & Beitel, 1989). In general, the results are that children of warm, involved, and moderately controlling parents are popular and are more likely to be socially competent than children with unresponsive, uninvolved, overly permissive, or overly controlling parents (Attili, 1989; MacDonald & Parke, 1984; Parke *et al.*, 1988; Parke *et al.*, 1989).

While this research is encouraging, several questions require further exploration. First, little attempt has been made to understand the different roles of mothers and fathers in children's development of peer relations. This may be partly a function of methodological limitations. Either mother–child interaction has been exclusively examined, or father–child and mother–child interaction have

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been grouped together. As a result, we know little about whether mothers and fathers differ in how their parenting behavior relates to children's peer relationships and social skills. Preliminary findings suggest that similar parenting behaviors may relate to different child play behaviors, depending on whether the behavior is that of mothers or fathers. For example, MacDonald and Parke (1984) found that children of directive mothers tended to be more popular with their peers, but children of directive fathers were rated by teachers as being less popular. Similarly, Attili (1989) reported that fathers who were more engaged appeared to have children who were more socially skilled with peers, yet this same pattern was not apparent for maternal engagement.

Second, there needs to be an examination of the relation between specific processes in parent-child interaction and specific processes in peer interaction. This requires employing an observational methodology for the study of both parent-child and peer relationships. In this study, a dyadic play paradigm was chosen for the study of children's peer relations. One advantage of this paradigm is that it enables the examination of specific dyadic peer behaviors that contribute to the success or failure of peer play. An examination of specific dyadic play behaviors can also yield specificity in making linkages between parenting behaviors and specific peer interaction skills, which in turn can result in greater precision in theory development. Furthermore, we chose to study the interaction of best friends because dyadic interaction with a best friend may be an estimate of the child's maximal level of social performance with a peer. Dyadic play with best friends provides an observational arena that maximizes positive factors of peer interaction (e.g., positive history), while minimizing negative factors commonly associated with group play and play amongst strangers (e.g., attentional distractions, competition for resources in a group, group conflicts, and lack of familiarity) (see Asher & Gottman, 1981).

We considered two categories of parent-child interaction, affect and engagement. Negative and positive parental affect have been found to relate to children's popularity among peers, prosocial behavior and successful peer interaction (Boyum, 1991; Carson, 1991; Gottman & Katz, 1989; Putallaz, 1987). Putallaz (1987) reported that mothers who were agreeable and who displayed positive affect during parent-child interaction tended to have children of high sociometric status. Similarly, Carson (1991) reported that popular children were more likely to have parents who used positive affect while giving direction. Negative parental affect has also been related to negative peer outcomes. Gottman and Katz (1989) found that children from households in which parents displayed cold, unresponsive and angry parenting styles tended to play at lower levels of play with peers (e.g. parallel play rather than connected interaction) and displayed more negative peer interaction. Finally, fathers' negative affect (i.e., anger, disgust and anxiety) has also been associated with poor sociometric status in children (Boyum, 1991).

A second parenting category we examined was the degree to which parents are engaged or withdrawn from their child during parent-child interaction. There is preliminary evidence that parental engagement or involvement is associated with children's peer relations. Popular boys (as rated by peers) have been found to have engaged parents (MacDonald & Parke, 1984) and children who are aggressive with peers tend to have uninvolved parents (Attili, 1989). The importance of parental engagement has its roots in the infancy literature, in which face-to-face parent-infant interaction has been identified as the infant's first opportunity for

social stimulation. Central to Tronick's mutual regulation model of face-to-face interaction is the notion that, within this context, infants learn critical repair mechanisms that enable dyads to resume interaction after inevitable bouts of dysynchronous interaction (Tronick, 1989). Since dysynchronies occur with great frequency during mother-infant interaction, learning repair mechanisms is essential for continued interaction. If Tronick's hypothesis is true, engagement during parent-child interaction may relate to the child's ability to establish and maintain common ground activities during dyadic peer interaction.

As a parallel to the theoretical focus on engagement and affect within the parenting system, we considered two categories of child-peer interaction: Engagement in the play, and negativity or positivity of play. Children's ability to engage in continued and connected interaction with peers was examined because of its importance in setting the stage for exploration of children's fears and fantasies, and the development of role-taking (e.g., Gottman, 1983). The amount of engagement versus solitary activity seen in peer interaction was also examined because of the recent theoretical focus on social withdrawal in children, and results suggesting links between social withdrawal and internalizing difficulties (Rubin, Chen & Hymel, 1993; Rubin, Hymel & Mills, 1989; Hymel, Rubin, Rowden & LeMare, 1990). Engagement in peer interaction can be scaled from a low to a high level of engagement indexed by the amount of positive parallel play, collective monologue or common ground activities established during play. It is very unusual for 4-to-6 year old best friends to engage in high levels of positive parallel play; far more typical in this context is a high level of engagement that involves finding a common ground activity or employing fantasy and role play. High levels of engagement with peers also brings with it the potential for conflict, which can function to disrupt the play and result in withdrawal to more solitary activities, such as collective monologue (Gottman, 1983). Measures of both low and high engagement were examined to assess competencies as well as limitations in social skills. We also hypothesized that, at this age, engagement with peers consists of basic conversational skills. Children's ability to exchange information and self-disclose thoughts and feelings were also examined as indices of peer engagement. To index negativity and positivity, we examined the amount of negative parallel play, (which is an index of side-by-side play with high levels of negative affect), out of room behavior (which was an index of noncompliance with the instructions of the home taping), crying, anger, laughter, and joy during peer play.

Consistent with previous findings, we hypothesized that negative parenting (i.e., disengagement, negative affect) would be associated with negative dyadic play. Given the paucity of research separating the possible effect of mothers' and fathers' parenting on children's play, only a few specific hypotheses regarding differential effects of mothers and fathers were proposed. Following MacDonald and Parke (1984), we hypothesized that mother's directiveness would be associated with positive peer behaviors, and father's directiveness would be associated with negative peer behaviors. Following Attili (1989), we reasoned that father's engagement would be associated with more positive dyadic play, but mother's engagement would show little relationship with children's dyadic social skills.

Method

Subjects

Fifty-six families were recruited from a central Illinois community as part of a larger study on marital and parenting factors related to children's socioemotional development (see Gottman & Katz, 1989). Twenty-four families had a male child and 32 families had a female child. Children were 4 to 6 years old ($M = 67.4$ months, range = 56–80 months).

Procedures

Overview. Procedures consisted of a laboratory parent-child interaction session in which all three family members (mother, father and child) were present, and a home visit with the child and a best friend in which peer interaction data were collected. For purposes unrelated to the present report, a full scale mock-up of the Apollo space capsule was constructed and astronaut space suits were made for the children for their laboratory visit. Parent-child interaction laboratory sessions took place with the child dressed in the space suit and seated in the space capsule.

Parent-child laboratory session. The parent-child interaction session consisted of a variation of two procedures used by Cowan and Cowan (1987). Prior to the parent-child interaction, the child listened to a story which did not follow normal story grammar and was read in a monotone voice so that the story was only mildly interesting and difficult to remember. Parents were instructed to obtain information about the story heard by the child, and then to teach the child to play a video game that the parents had previously learned. The interaction lasted 10 minutes and videotaped observational data was obtained on all three family members.

Peer interaction home visit. An assessment of children's peer interaction with his/her best friend (as identified by the mother) was obtained by audiotaping a 30-minute dyadic peer play session at the home of the target child. Best friends were of particular interest because a range of social processes tends to occur with best friends that are less likely to occur with an unacquainted peer (Gottman, 1983). This procedure provides an estimate of maximum social competence. No adults were present during the taped play session.

Measures

Parent-child interaction. Parenting styles were coded using the Kahen Engagement Coding System (KECS) and the Kahen Affect Coding Systems (KACS). KECS consists of 7 parental engagement codes (2 positive, 4 negative, neutral) and the KACS consists of 7 parental affect codes (3 positive, 3 negative, neutral). For purposes of data reduction, and to minimize issues of capitalizing on chance, only 2 positive and 2 negative engagement and affect codes were examined. The two negative engagement codes were: (1) *Intrusiveness*, which involved physical interference with the child's actions (e.g., grabbing the joy stick), and (2) *Command*, in which parents issued a command. These two codes were selected based on previous literature indicating that parental intrusiveness is commonly associated with children's negativity and disruptive peer relationships (Booth *et al.*, 1991), and

evidence that parental directiveness is also linked with peer popularity (MacDonald & Parke, 1984). The two positive engagement codes were: (1) *Engaged*, which consisted of parental attention toward the child, and (2) *Responds to Child's Needs*, in which parents responded to a child's question or complaint. These codes were selected because of their face validity as indices of engagement as well as the abundance of literature stressing the importance of parental responsiveness to children's needs. The two negative affect codes were: (1) *Criticism*, which involved direct disparaging comments or put-downs of the child's behavior or performance, and (2) *Derisive Humor*, in which parents used humor at the child's expense (e.g. through sarcasm or by making fun of the child). These codes were selected based on data indicating that criticism and contempt during marital interaction has a corrosive effect on the stability of the marital relationship. We reasoned that criticism and contempt towards the child would be associated with poor child outcomes which may be expressed within the peer domain. The two positive affect codes were: (1) *Affection*, which consisted of praise and physical affection, and (2) *Enthusiasm*, which was coded as cheering and excitement at the child's performance.

Parent-child interaction was coded continuously in real-time with coding synchronized to the original parent-child interaction. The number of seconds that each variable occurred in the 10 minute parent-child interaction session was recorded and totals (across time) were calculated for each of the 14 parent-child interaction variables. This index is therefore an estimate of the frequency of the parenting behavior within a 10-minute period. Mothers and fathers were coded by independent observers. Engagement and affect dimensions were also coded by independent observers. Reliability was calculated across coders using a correlation coefficient. Since total number of seconds within each parent code was the variable computed and used in all data analyses, the appropriate reliability statistic is a correlation coefficient rather than Cohen's kappa or percent agreement. For the KECS, the mean correlation was .96, with a range of .86 to .99, and for the KACS the mean correlation was .93, with a range of .84 to .97.

Peer interaction. The Rapid Macro (R-MACRO) peer interaction coding system (Gottman, 1983) was used to code best friend peer play. The R-MACRO consists of 43 specific behaviors (21 positive and 22 negative) that index children's coordination of play. In this report, we selected five variables as indices of engagement. Variables that indexed both low and high levels of engagement were selected to assess children's capabilities as well as their weaknesses. Engagement codes included: Positive parallel play,¹ monologue (both indicative of a low level of engagement), common ground success, information exchange success and self-disclosure success (indicative of higher levels of engagement; see Table 1 for a description of codes). We selected four variables as indices of negativity: Negative

Table 1. Description of Peer Variables

Positive Parallel Play

Positive parallel play involves side-by-side play in which the children are not engaged in the same activity together. They may be talking together, or may be doing the same activity (e.g. coloring), but there is no sharing of ideas or materials. Affective tone is usually neutral.

Monologue

Monologue occurs when one or both children talk to themselves. If both children are talking to themselves, they do not link what they are saying to what the other child is saying even though they may be taking turns to speak (a collective monologue).

Common Ground Success

Common ground activity is defined as a level of play where there is a joint participation in the activity by both children. They are sharing play materials, doing some version of the same activity, and/or talking about what they are doing together. The activity of one child influences the play of the other.

Information Exchange

An information exchange begins when one child relates information to the other child. This exchange is successful if the second child's response contains relevant information or an acknowledgement of the first child's statement or question.

Self-Disclosure

Self-disclosure refers to a personal revelation related to the child's feelings, thoughts or opinions and also to certain personal behaviors. Self-disclosures can be a factual personal admission (e.g. "I wet my pants sometimes") or a non-factual statement of feelings, evaluations or opinions.

Negative Parallel Play

Negative parallel play is coded when the children are engaged in parallel play but at least one child is dissatisfied with this form of play. The child may be complaining or whining that the other child is supposed to play with them, and the play atmosphere is laden with complaint, negative verbal teasing, threats, conflict or unhappiness.

Out of Room Disruptions

The Out of Room code measured noncompliance with instructions for the play and required adult intervention. This is coded as the number of times a child leaves the room. The departure must be initiated by a child.

Anger/Frustration

This is a measure of anger directed from one child toward another. Anger is coded from the voice tone, and can be seen as: (1) increased volume, (2) short or sharp tone, or (3) an exasperated sigh or curse.

Crying

This is a measure of any definite instance of crying, including silent crying mentioned by the second child, quiet sobbing or loud, hysterical crying. Pretend crying that is part of joint play is not coded here.

Laughter

This is a measure of any type of laughter, including giant belly laughs, uncontrollable giggling or brief chuckles. Fake laughter is not coded.

Joy/Excitement

This code is used to indicate an increased level of excitement during play. Voices may be raised in volume and pitch, and speech is frequently rapid.

Parallel Play, Out of Room Disruptions, Crying and Anger. Because some of these variables were theoretically interesting but were low base rate events, a negativity index was computed by creating a composite score summing all four negativity variables. Similarly, two variables were selected and combined to form a summary score of positive affect during peer play: Laughter and joy.

Peer interaction was coded in a checklist format for occurrence/non-occurrence. That is, all behaviors that occurred within a 3-minute period were coded but an individual code was only coded once within each 3-minute period. This checklist procedure provides a crude and rapid index of peer play that is not intended to estimate durations or frequencies. This global index of peer play has been validated against a more microanalytic version of the MACRO coding system (Gottman & Katz, 1989; Gottman, 1983). Totals for individual codes were calculated by summing the frequency of each code's occurrence across all 3 minute periods. Reliability was calculated across coders using a correlation coefficient. The mean correlation was .72, with a range of .60 to .88.

Results

Construct Development and Data Reduction

Factor analytic techniques and structural equation modeling were used in the service of construct development. A factor analysis was conducted to examine whether variables used to index children's engagement with peers assessed the same construct. Factor analysis with varimax rotation resulted in two factors which accounted for a 60.7% of the variance. Factor 1, which accounted for 37.5% of the variance, consisted of children's common ground success, information exchange success and self-disclosure success with peers (see Table 2). Factor 2, which accounted for 23.1% of the variance, consisted of positive parallel play and monologue. These results support the notion that parallel play and monologue both tapped low levels of engagement with peers, while common ground success, information exchange success and self-disclosure success are indices of higher levels of engagement.

Table 2. Factor Structure of Children's Engagement with Peers

	Factor 1	Factor 2
Common Ground Success	.78	.17
Information Exchange Success	.88	.09
Self-Disclosure Success	.65	-.11
Positive Parallel Play	.16	.67
Monologue	-.10	.84

Although high and low engagement codes comprised separate factors, we reasoned that they may nonetheless form a Guttman-like scale ranging from low to high engagement. We tested a model using Structural Equations Modeling in which monologue play was considered as the low end of the scale and self-disclosure success was considered as the high end of the scale (see Figure 1). The model fit the data (Chi-square = 3.56; $df = 6$; $p = .74$; Bentler-Bonnet Normed Index =

.91), however it suggested that low and high engagement variables do not fall on a continuum. The model indicated that the relationship between low engagement codes approached statistical significance ($z = 1.73$), but that positive parallel play does not necessarily provide a context for children to establish common ground activities. Instead, the establishment of common ground activities appears to be a qualitatively different activity which requires skills that are not required when children are engaging in side-by-side play. However, there was evidence that high engagement can be conceptualized as a Guttman-like scale, with common ground activities forming the context for the exchange of information, which in turn allows for the possibility of self-disclosure. A separate structural equations model based on only high engagement codes was computed and fit the data (see Figure 2; Chi-square = .487; $df = 1$; $p = .49$; Bentler-Bonnet Normed Index = .998).

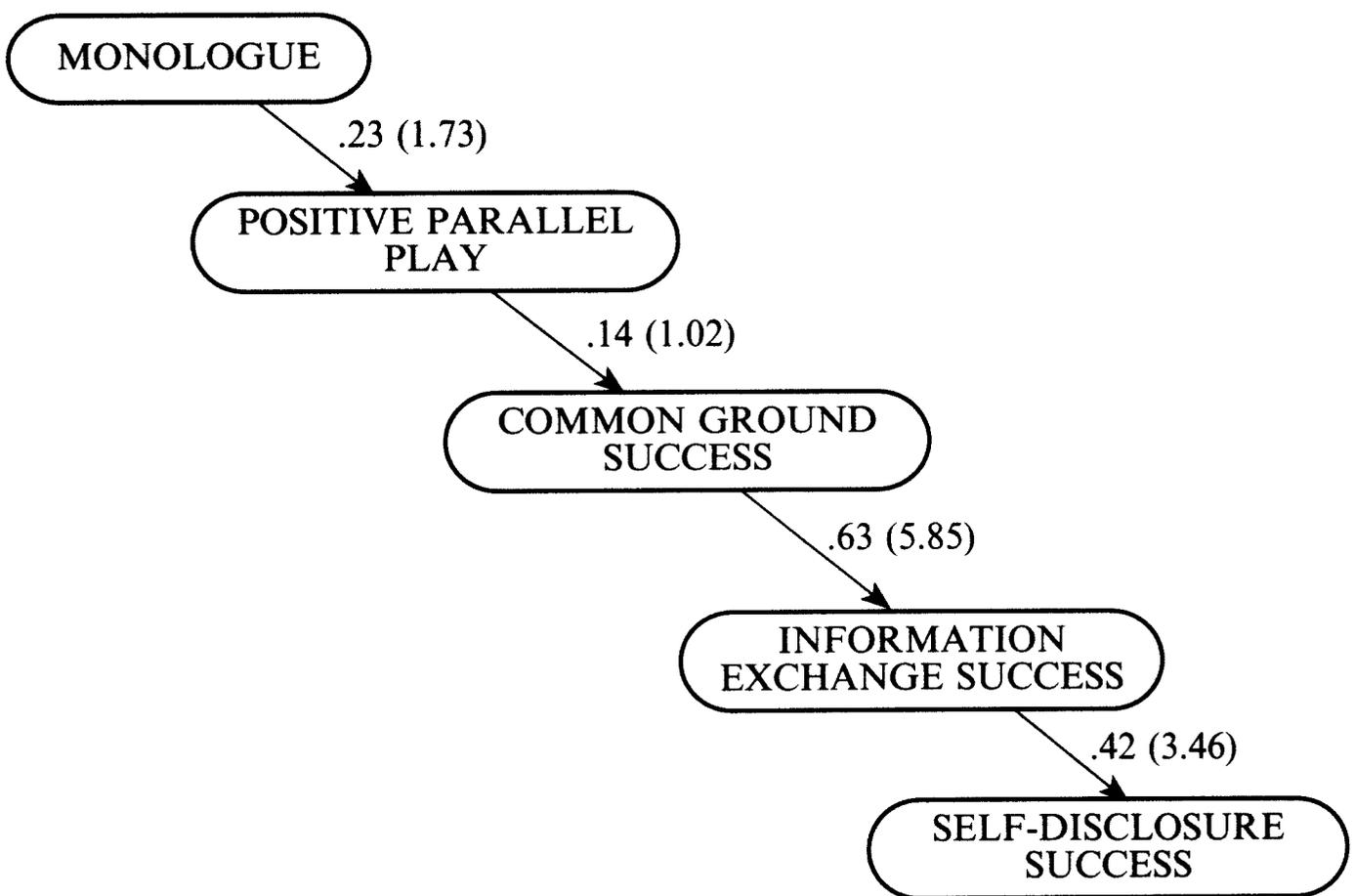


Figure 1. Test of a Guttman-like scale for Child's Engagement with Peers.

A second factor analysis was also computed to examine the interrelation among variables used to index children's negativity and positive affect with peers. Factor analysis with varimax rotation resulted in two factors which accounted for 52.7% of the variance. Factor 1, which accounted for 32.7% of the variance, consisted of negative parallel play, out of room disruptions, crying, and anger (see Table 3). Factor 2, which accounted for 20% of the variance, consisted of laughter and joy. These results support the notion that negative parallel play, out of room disruptions, crying and anger tap negativity with peers, while laughter and joy are indices of positive affect during dyadic play.

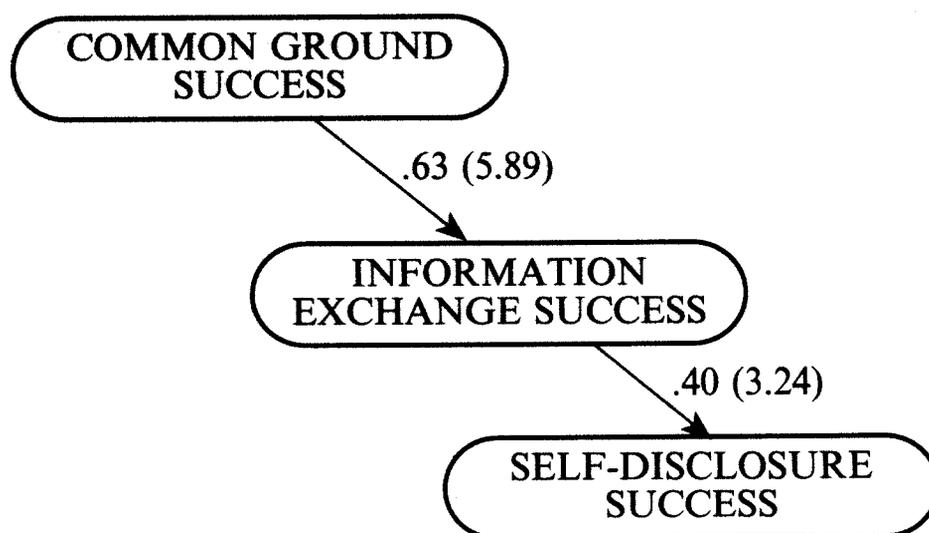


Figure 2. Relationship among High Engagement Codes.

Table 3. Factor Structure of Children's Negativity and Positive Affect with Peers

	Factor 1	Factor 2
Negative Parallel Play	.64	-.28
Out of Room Disruptions	.71	.05
Crying	.82	-.13
Anger	.32	-.01
Laughter	.05	.86
Joy	-.19	.79

Differences between Mothers' and Fathers' Parenting Style

We computed *t*-tests comparing mothers and fathers on each engagement and affect code to rule out the hypothesis that differences in parenting-peer linkages between mothers and fathers are due to differences in the level of engagement or affect displayed by men and women during parent-child interaction. Mothers were found to be significantly more engaged during parent-child interaction than fathers, $t(54) = -2.28$, $p < .05$, and fathers were found to issue significantly more commands than mothers, $t(54) = 2.50$, $p < .05$. No other significant differences were observed (see Table 4 for means and standard deviations of parenting variables).

Correlations were then computed between mothers' and fathers' parenting behavior during parent-child interaction and children's engagement, negativity and positive affect during peer play (see Table 5 for means and standard deviations of peer variables).

Children's Engagement During Peer Interaction

Table 6 shows that children who remain at a low level of engagement (monologue) with a best friend had fathers who used derisive humor more, were low in engagement and used more commands than fathers of children who were less

Table 4. Means and Standard Deviations of Parenting Variables

	Fathers		Mothers	
	M	SD	M	SD
Derisive Humor	.64	1.65	.49	1.46
Critical	15.00	1.64	4.07	4.91
Enthusiasm	8.36	15.11	11.72	22.17
Affection	14.18	13.73	17.64	15.02
Intrusive	10.84	32.69	4.60	17.57
Command	89.74	56.48	67.20	40.05
Engagement	470.32	64.89	496.02	56.94
Responsive	6.69	9.23	8.09	10.54

Note: Unit of analysis is number of seconds

Table 5. Means and Standard Deviations of Peer Variables

	M	SD
Common Ground Success	14.05	2.53
Information Exchange Success	15.00	1.64
Self-Disclosure Success	4.05	3.10
Positive Parallel Play	.21	.60
Monologue	2.00	2.38
Negativity	3.43	3.48
Positive Affect	16.43	7.06

Note: Unit of analysis is number of seconds

likely to use monologue during play. Children frequently engaged in positive parallel play had fathers who were more critical, used derisive humor more (marginal result), and were more enthusiastic and affectionate than fathers of children who were less likely to play at a low level of engagement with their best friends. To better understand why both positive and negative parental behaviors in fathers were related to children's low levels of engagement with a best friend, we looked at the relation between father's criticalness, derisive humor, enthusiasm, and affection. The data indicated that fathers who were critical were also highly affectionate ($r = .47, p < .01$), and enthusiastic ($r = .58, p < .01$). There were no significant correlations between father's derisive humor and father's criticalness, enthusiasm or affection. Given the interrelation between father's affection, enthusiasm and criticality, we hypothesized that this combination of variables may be an index of emotional volatility, and that father's emotional volatility may be related to children's low engagement with peers. To test this hypothesis, we divided families into high/low father volatility based on a median split on father criticalness and father positivity (affection + enthusiasm). Fathers who were above the median in both criticalness and positivity were considered high volatile, and fathers who were below the median on both variables were considered low volatile. Analyses of

variance using each child engagement code as the dependent measure yielded significant differences between children with high and low volatile fathers on positive parallel play ($F(1, 54) = 15.73, p < .0001$), and marginally significant differences on monologue ($F(1, 54) = 3.29, p < .07$). An examination of means indicated that children with high volatile fathers showed higher amounts of positive parallel play and monologue than children with low volatile fathers.

Children who were able to play at higher levels of engagement with peers through the establishment of common ground activities had mothers who used derisive humor less and were less critical. Children who disclosed personal information to peers had fathers who were more enthusiastic, affectionate and responsive to their needs (marginal result) and mothers who were less intrusive than children who were low in self-disclosure. Children who exchanged information successfully with peers had mothers who used derisive humor less, and were less critical and affectionate. To better understand why maternal affection was related to children's low information exchange with peers, we examined the relations between mother's affection and all other maternal parenting codes. The data indicated that mothers who were affectionate were also enthusiastic ($r = .40, p < .01$). Mother's affection was also marginally related to her criticality ($r = .23, p < .01$) and use of commands ($r = .26, p < .10$). Given the above findings relating to emotional volatility in fathers, we conducted a parallel analysis of emotional volatility in mothers. Groups of high and low volatile mothers were created based on procedures identical to those used with fathers. However, analyses of variance using each child engagement code as the dependent measure yielded no significant differences between children with high and low volatile mothers on any of the child engagement codes.

Children's Negativity and Positive Affect During Peer Interaction

Table 7 is a summary of the correlations between the parenting variables and the categories of child negativity and positive affect during peer interaction. Children who were more negative with a peer had fathers who were more intrusive and less engaged, and mothers who used derisive humor more. Children who showed more positive affect during peer play had mothers who used derisive humor less, and were less intrusive and critical (marginal result) than children low in positive affect.

Discussion

The results support the hypothesis that negative parenting is associated with children's tendency to maintain a low level of engagement with a best friend during peer play. When children engaged in verbal monologues or played in a parallel fashion, their play was largely solitary and interpersonally disconnected. This form of play is atypical among best friends at this age, who usually find a common ground activity or employ fantasy and role play for sustained periods of coordinated play. Since high levels of engagement with peers also entails the potential for conflict (Gottman, 1983), children whose parents display negative behaviors during parent-child interaction may not learn conflict management skills and, therefore, they may resort to play which involves more solitary activities.

Table 6. Correlations Between Parenting Variables and the Child's Engagement with Peers

	Monologue	Positive Parallel Play	Common Ground Success	Information Exchange Success	Self-Disclosure Success
Father					
Affect					
DEHUM	.36**	.25a	.06	-.05	-.09
CRIT	.17	.38**	.08	.15	.13
ENTHUS	.02	.50***	.16	.18	.35**
AFFEXN	.13	.37**	.19	.21	.39**
Engagement					
INTRUS	-.11	-.11	.01	-.02	-.19
COMMAND	.38**	-.03	-.04	-.03	.07
ENG	-.28*	.10	.04	.05	.01
RESPND	-.09	-.03	.18	.08	.23a
Mother					
Affect					
DEHUM	-.15	-.03	-.24a	-.39**	-.08
CRIT	.12	-.08	-.35**	-.23a	-.14
ENTHUS	.02	-.01	-.02	-.02	-.05
AFFEXN	-.06	.15	-.19	-.34*	.04
Engagement					
INTRUS	-.01	-.09	-.01	.01	-.24a
COMMAND	.13	-.03	-.07	-.04	-.15
ENG	-.04	.02	.02	.01	.07
RESPND	-.09	.04	.26	.16	.15

Note: N = 55

KEY: DEHUM = Derisive Humor
 CRIT = Criticism
 ENTHUS = Enthusiasm
 AFFEXN = Affection
 INTRUS = Intrusiveness
 ENG = Engaged
 RESPND = Responds to Child's needs
 COMMAND = Commands

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Some differentiation in the roles of mothers and fathers in children's developing peer relations was also seen. There were three important findings relating to this differentiation. First, when fathers were emotionally volatile, children's dyadic play tended to be disengaged and involved more solitary activities. Second, mother's emotional communication was related to the degree to which children displayed positive affect with peers. Third, both mother's and father's parenting related to children's ability to engage in higher levels of engagement with peers.

Within the context of our parent-child teaching task, fathers who were volatile

Table 7. Correlations Between Parenting and the Child's Negativity and Positive Affect with Peers

	Negative Peer Play	Positive Affect
Father		
Affect		
DEHUM	-.07	-.15
CRIT	.02	-.07
ENTHUS	.04	-.10
AFFEXN	.06	.08
Engagement		
INTRUS	.37**	-.14
COMMAND	.09	-.13
ENG	-.26a	-.21
RESPND	.14	.08
Mother		
Affect		
DEHUM	.27*	-.27*
CRIT	-.15	-.22a
ENTHUS	.02	-.15
AFFEXN	.04	.15
Engagement		
INTRUS	.03	-.35**
COMMAND	.02	-.06
ENG	-.13	.10
RESPND	.04	.01

Note: $N = 55$

KEY: DEHUM = Derisive Humor
 CRIT = Criticism
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 INTRUS = Intrusiveness
 ENG = Engaged
 RESPND = Responds to Child's needs
 COMMAND = Commands

^a $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

were providing a constant backdrop of strong positive and negative judgments of their child's behavior. The display of intense negativity within the context of largely positive interaction may demonstrate to children that involved interpersonal interaction entails the possibility that negative affect will be directed toward them. Given the risk of conflict during coordinated play, these children may become fearful and timid and come to prefer solitary activities rather than engage in more connected interaction. Although high levels of solitary or isolated play did not occur in our sample since children were playing with their best friends, our data may suggest a familial model for the form of isolated play that occurs with greater regularity in socially withdrawn children (Rubin *et al.*, 1993). The

data suggest the hypothesis that social withdrawal in children may be partly a function of emotional volatility in the family environment. Further investigation of this hypothesis might be fruitful.

We also found that mothers' emotional communication was related to the degree to which children displayed positive affect with peers. Mothers who were low in derisive humor, criticality and intrusiveness had children whose peer interaction tended to have higher levels of laughter and joy than mothers who were higher in these negative parenting behaviors. On the other hand, the father's parenting was unrelated to positive affect during peer play, but instead it was related to children's engagement with peers. Indeed, the degree to which fathers' parenting is limited to positive interactions with their child appears to be related to their children's movement towards intimacy versus disengagement from others. If fathers are highly positive and responsive to their children, children are able to achieve connected interaction through self-disclosure. However, if this positive affect is combined with a tendency to respond to their child critically, then their children's dyadic peer play tends to retreat toward more solitary side-by-side activities.

Previous research has found evidence for positive relations between maternal warmth and responsiveness and preschoolers' social competence. In our data, it was the absence of negative maternal behaviors (e.g. derisive humor, criticality and intrusiveness) that related to positive affect among dyads and children's ability to engage in coordinated interaction. There may be several reasons for differences between our results and this literature. First, the positive maternal behaviors that occurred within the context of our teaching task were somewhat limited in scope and frequency. Second, the child's social competence was conceptualized here in a specific way, consisting of the ability to coordinate interaction, play at high levels of positive affect and have low levels of negative interaction. This was a reasonable construct since, indeed, children exhibiting positive affect in our study typically did show high intensity displays of excitement, joy and laughter, rather than lower intensity displays of positivity or pleasant interaction (e.g., amusement). Thus, the data suggested the hypothesis that a harsh maternal style involving derision and criticality may suppress children's expression of high levels of positive affect, as well as interfere with their learning of reciprocal coordinated interaction. Children's direct modeling of maternal positivity may be less important in learning these skills.

We found evidence that both father's and mother's parenting make important contributions to understanding variation in children's ability to engage in higher levels of play with peers. When mothers abstained from using criticism or derisive humor during parent-child interaction, their children engaged in peer play in which the dyads established common ground activities and exchanged information. When fathers were affectively positive and responsive to children's needs, their children engaged in dyadic play that had higher levels of self-disclosure. Since we found that the ability to establish common ground play, exchange information and self-disclose with peers formed a continuum, it appears that children who are able to achieve the most intimate level of play (e.g. self-disclosure) are more likely to have parents who both abstain from critical comments (mother's role) and show high levels of positive affect (father's role). In this sense, mother's and father's parenting complement each other in helping children achieve the highest level of coordinated peer interaction.

The data also suggested that parents who were intrusive, low in engagement, and used derisive humor had children who were more likely to have more negative peer play with their best friends. This included the children being angry, crying, making negative comments toward each other during parallel play, or noncompliance with task instructions. Within the context of our parent-child interaction task, intrusive parents physically took over while the child was playing the video game, communicating that the child was incompetent in learning the game. Similarly, parents who were sarcastic or made fun of the child's performance (derisive humor) also communicated incompetence and a lack of respect for the child's efforts. Thus, we see a direct transfer of behavior displayed toward children in one context to children's interactions with their friends in another context. Perhaps these children have more negative peer play because they are imitating their parent's tendency to convey that others are incompetent and unworthy of respect.

Despite the use of a different method of conceptualizing social competence among peers, our results provide some support for previous findings linking parental engagement and directiveness with peer social skills (Attili, 1989; MacDonald & Parke, 1984). Like MacDonald and Parke (1984), we found that father's directiveness (use of commands) was associated with negative peer outcomes, which in our data was displayed at their tendency to engage in higher levels of monologue play. Contrary to MacDonald and Parke's data in which mother's directiveness was associated with positive peer outcomes, mother's directiveness (use of commands) in our sample showed no relation with peer play. Similar to Attili (1989), we found that low engagement in fathers was associated with children's dyadic play that was higher in negativity and more disengaged; mother's level of engagement had no relation with peer dyadic play. This comparability across studies and methods provides further support for the idea that mothers and fathers may differ in how their interactions with their children contribute to their children's newly developing social skills.

It is important to note that peer interaction is conceptualized here as an index of the dyadic relationship. As such, we should be cautious about attributing family-peer linkages found in this report to the individual peer behavior of the target child. However, we would argue that the best friend relationship can be viewed as an index of the child's maximal social competence, and thus the failure to achieve a reasonably high level of interpersonal connectedness within this context, regardless of the individual behaviors of each child in sabotaging such engagement, bodes ill for the target child's ability to engage in connected interaction with other less familiar peers.

While our data are suggestive, there are several limitations of the study that warrant cautious interpretation. Perhaps most important is the need for replication in studies using observational data in which the ratio of the number of subjects to the number of variables is low. Only with replication can we determine whether phenomena we observe are stable. Another limitation is that low engagement among best friends was an infrequent event, since best friends tend to play in a connected fashion. While it is striking that we were able to find parental correlates of low engagement given its low base rate, we cannot speak to the stability of these findings. Further studies should examine parenting correlates of low peer engagement within unacquainted dyads, where collective monologue and parallel play will occur with greater frequency.

It is also the case that a triadic parent-child interaction paradigm was the only interactive context examined. It is possible that parenting styles displayed during a triadic parent-child interaction were influenced by the presence of the other parent and that different parenting behaviors might be observed in a dyadic setting. Many previous studies linking parent-child interaction to children's peer play have used a dyadic paradigm to observe parent-child interaction (e.g., MacDonald & Parke, 1984; Putallaz, 1987), with studies of triadic parent-child interaction only beginning to emerge. Thus, an additional direction for new research would be to explore the similarities and differences of parenting behavior in a triadic vs. dyadic parent-child interaction setting.

Note

1. It is important to note that positive parallel play did not necessarily involve the expression of positive affect and in fact occurred more frequently with neutral affect. It is labelled positive parallel play here merely as a contrast to the variable here labelled negative parallel play.

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