

Parent-Child Physical Play With Rejected, Neglected, and Popular Boys

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This study compares the parent-child interactions of rejected, neglected, and popular boys in a paradigm emphasizing physical play. Twelve boys, 3 to 5 years of age, of each sociometric category were recruited from nursery schools and observed in interactions with their parents at home. It was found that the fathers of neglected boys engaged in less affectively arousing, physical play than the fathers of popular and rejected boys. In addition, there was more overstimulation and avoidance of stimulation among the rejected boys compared with the popular boys. The results indicate the importance of the regulation of affect for social competence and illustrate strong links between the parent and peer social systems.

It has become increasingly clear in recent years that there are close linkages among the various social worlds of the child (Hartup, 1979; Lewis & Fiering, 1981). Longitudinal research on attachment has shown an association between attachment status in infancy and later measures of peer competence (Arend, Gove, & Sroufe, 1979; Easterbrooks & Lamb, 1979; Pastor, 1981). Other research has focused on concurrent relations between parent-child interactions and measures of peer competence. Putallaz (1987) found that mothers of high-sociometric-status children, relative to mothers of low-sociometric-status children, interacted with their children in a positive, agreeable manner and were more concerned with their children's feelings. MacDonald and Parke (1984) found that paternal directiveness was negatively associated with popularity in boys, whereas high levels of verbal interaction with the mother and a positive affective tone in the interaction with both parents were positively associated with popularity. In addition, MacDonald and Parke (see also Parke, MacDonald, Beitel, & Bhavnagri, in press) found a positive association between affectively arousing styles of physical play between parents and children and popularity among peers. In these studies as well as several other studies (Lamb, 1977a, 1977b; Power & Parke, 1982), fathers have been found to engage in physical, rough-and-tumble types of activities more than mothers. Moreover, the results of the MacDonald and Parke study indicated that the associations among parent-child behaviors, teacher ratings of popularity, and items on the

California *Q*-set (Baumrind, 1968) were much stronger for boys than for girls.

The research reported here is an extension of previous work on the concurrent associations of measures of parent-child physical play with social competence. Particularly important for this study is the incorporation of research indicating the usefulness of a two-dimensional conceptualization of sociometric status, including the independent dimensions of being liked by peers and being disliked by peers (Coie, Dodge, & Coppotelli, 1982). Within this framework, rejected children are considered to be highly disliked by peers and score low on being liked by peers; neglected children are low on being liked by peers but also score low on being disliked; popular children are highly liked by their peers and are not actively disliked by them. Rejected children have been found to have low social skills and to exhibit high levels of aggression, whereas neglected children have been found to have low social skills and low levels of aggression (Dodge, Coie, & Brakke, 1982). Popular children, on the other hand, show high social skills and low levels of aggression.

In addition to distinguishing two types of unpopular children, this study is concerned with providing a detailed description of individual differences in children that are related to differences in social competence. Differences are sought in parent-child interactions of children of differing sociometric status, with an emphasis on differences in behavior within the context of affectively arousing parent-child physical play. Parent-child physical play involves the regulation of affectively arousing stimulation thought by some to be central to social competence (e.g., Sroufe, Schork, Motti, Lawroski, & LaFreniere, 1985). Differences in the amount of physical play as well as differences in the regulation of stimulation within the bouts of physical play are of particular importance. Parent-child physical play requires complex and subtle ability on the part of the parent to keep the stimulation within an optimal range. Overstimulation of the child by the parent and approach-withdrawal behaviors on the part of the child are common, and both parent and child may be seen as regulating the child's affective display during these bouts.

This study thus attempted to characterize the parent-child interactions of children of differing sociometric status. Because

This research was supported by a grant from the National Institute of Mental Health (1-RO3-MH39005-1).

Ross Parke of the Department of Psychology at the University of Illinois-Champaign provided many useful suggestions on the manuscript of this article. Special thanks are due to Jean O'Connor of the Department of Human Development and Family Relations at the University of Connecticut, and to Djuna Demerstadt and Emma Parades of the Department of Psychology at California State University-Long Beach for the coding of videotapes.

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previous work (MacDonald & Parke, 1984) indicated that the associations between the parent variables and child behaviors were stronger for boys, only boys were used here. It was anticipated, on the basis of the previous research described above, that mothers would engage in less physical play than fathers and that associations between mothers' physical play and sociometric status would be weak or nonexistent in contrast with the hypothesized association between fathers' physical play and sociometric data.

Method

Determination of Subjects

In order to find 12 subjects, 3 to 5 years of age, in each of the categories of rejected, neglected, and popular children, it was necessary to use several nursery schools and to screen a large number of children. Four nursery schools and two kindergartens with a total of seven classes of children agreed to participate, with the total number of children in each class as follows (number of boys in parentheses): 21 (14); 26 (14); 24 (16); 28 (13); 27 (14); 21 (16); and 29 (18).

Photographs of all the boys were taken, and sociometric interviews were conducted privately with each child (boys and girls). Three piles, signified by a happy face, a neutral face, and a sad face, were constructed, and the meaning of the faces were explained to the children. Children were shown each photograph individually and asked to name the child in the photograph. The child was then asked to place the photograph in a pile according to whether the subject liked the depicted child *a lot* (happy-face pile), *a little bit* (neutral-face pile), or *disliked* the child (sad-face pile). The pictures in the piles were then spread out, and the children were asked to point to the three children whom they liked most. Finally, they were asked to point to the three children they liked least. The children were then asked to repeat their judgments of the children with whom they liked most to play and with whom they liked least to play. The data of 4 children (all 3-years-old) who changed their mind or made inconsistent judgments (e.g., placing a child in the happy-face pile but also nominating him as least liked) were discarded. Parents of children with the largest positive scores (after subtracting disliking scores from liking scores) were contacted to participate in the popular group. Twelve of 16 parents of children contacted to participate in the popular group did so. Parents of children with the largest negative scores in this procedure were contacted to serve in the rejected group. Twelve of 18 parents contacted to participate in the rejected group did so. Parents of children who were least often nominated were contacted to serve in the neglected group, with 12 of 15 parents agreeing to do so.

After the entire sample had been assembled, it was possible to provide *Z*-score transformations of the scores for social preference (boys liked minus boys disliked) and sociometric impact (boys liked plus boys disliked) based on the entire sample of 105 boys given the sociometric test. The group of popular children had a mean *Z* score for social preference of 1.25 and a range of 0.76 to 2.53. For sociometric impact, the mean *Z* score was 1.07, with a range from 0.56 to 2.81. The group of neglected children had a mean *Z* score for social preference of 0.11, with a range of -0.29 to 0.37. For sociometric impact, the mean *Z* score was -1.14, with a range of -0.73 to -2.14. The group of rejected children had a mean social preference score of -1.21, with a range of -0.78 to -2.76. For sociometric impact, the mean *Z* score was 1.52, and the range was from 0.81 to 3.35.

Teacher Measures of Subjects

Two measures of the subjects were made by the teachers in order to provide a more complete descriptive account of the three categories of

children. Teachers were asked to perform the California Child *Q*-set (Baumrind, 1968) for each child who participated in the study. The *q* sort consists of 72 items that are arranged on a 9-point scale according to how descriptive they are of the child. The Kruskal-Wallis Test indicated that 26 of the 72 items showed significant differences ($p < .05$) among the groups, with rejected children tending to require a high degree of supervision as well as being characterized as relatively aggressive, impetuous, disobedient, energetic, insulting, feisty, angry, and disobedient. Popular children were characterized by low scores on these categorizations and high ratings on items reflecting cognitive and personal agency. Neglected children also scored low on the items characterizing rejected children but also were characterized as being in the role of listener, as having a lack of self-direction and aggressiveness and as having concern for adult disapproval, sympathy with peers' distress, and a lack of striving for excellence.

The teachers also rated the children on the Conners Abbreviated Symptom Questionnaire (Conners, 1973). This scale consists of 10 descriptions rated on a scale from 0-3. Data from the 10-item Abbreviated Symptom Questionnaire were analyzed using the Kruskal-Wallis Test. The results indicated a highly-significant difference among the groups, with the rejected boys scoring higher (popular, $M = 5.3$; neglected, $M = 5.8$; rejected, $M = 13.7$; $H = 15.4$, with 2 *df*; $p < .001$). Analysis of individual items indicated that rejected children were rated as generally more active, distractible, and disturbing to other children and as having more intense, negative moods—descriptions that are basically consistent with the *Q*-sort results.

Procedures With Parents and Children

Each parent was videotaped playing with the child separately in a 20-min session in the home of the subject. Both sessions were conducted on the same visit by the experimenter, and the order of engaging in the sessions (mother first or father first) was determined by the subjects (16 chose mother first).¹ The nonparticipating parent was requested to leave the room where the videotaping took place. For the first 10 min the subjects were simply told that the experimenter was interested in play between parents and children. Before the second 10 min, the experimenter stated, "I am interested also in physical play between parents and children, activities like tickling, wrestling, or chasing, if that is something you normally do with your child. If not, you can continue with your present activity or switch to an activity of your choice."

Coding Videotapes

The videotapes were scored by three individuals not connected with the data-gathering aspect of the study and unfamiliar with the sociometric classification of the subjects. One person scored the incidence of physical play and rated the affective behavior of the child. Two individuals scored the categories of overstimulation and approaching and withdrawing from stimulation. Reliability checks were made by comparing their scoring with that of a fourth person (the experimenter). The videotapes were divided into 10-s epochs by printing a running-time indicator onto the film. The following categories of behavior were scored (Cohen's Kappa [Cohen, 1960] follows each category in parentheses; these categories were not mutually exclusive nor did they exhaustively account for behaviors in the session):

¹ Post hoc analyses showed no association between order of participation and status of child. In addition, when entered as a between-subjects variable in the repeated-measure analysis of variance (ANOVA), the variable of order of participation showed significant effects at or below a chance level and did not alter the results reported in the data analysis reported later in the article.

1. *Parent verbal behavior and child verbal behavior.* An instance of verbal behavior was recorded each time a subject spoke during the epoch, with the score indicating the number of epochs in which the subject spoke. Separate scores were calculated for parent and child. (0.90)

2. *Parent direct and child direct.* This category indicated the number of commands that were made by the parent or child (e.g., "Don't do that.", "Give me that.", etc.). For these categories (and for the categories of suggesting and questioning described below) each instance of the behavior was recorded so that more than one instance of the behavior could occur in each epoch. (0.87)

3. *Parent suggest and child suggest.* This recorded the number of times the parent or child made a suggestion to the other in a nonimperative manner (e.g., "How about if we play checkers now?", or "Let's wrestle for awhile, okay?", etc.). (0.87)

4. *Parent question and Child question.* This category was scored when either the parent or child asked the other to provide a suggestion as to what to do next (e.g., "What should we do now?"). Thus, this category excluded other types of questions, such as questions of information (e.g., "What color is that block?", or "Where did you put the marker?", etc.). (0.76)

5. *Physical play.* This included the number of epochs in which the parent and child engaged in physical play together. Physical play included a wide range of active play styles characterized by wrestling, tickling, swinging the child in the air, and so forth, but was not restricted to these specific activities, and included physically active parent-child interactions that did not correspond readily to any of the usual categories of physical play. (0.95)

6. *Approach stimulation.* This referred to any behavior by the child that promoted the initiation or intensification of physical play. Instances included verbal suggestions or directions in which the child sought to prolong physical play when the parent wanted to stop or slow the pace, as well as instances in which the child initiated stimulation, such as jumping on the parent. The measure is the number of epochs in which the behavior occurs. (0.85)

7. *Avoid stimulation.* This reported any behavior by the child that promoted or attempted to promote the termination of physical play or lowered its intensity. Instances included verbal suggestions or directions in which the child sought to avoid physical play when the parent wanted to continue or intensify the pace, as well as instances in which the child avoided or sought to terminate physical play. The measure is the number of epochs in which the behavior occurs. (0.79)

8. *Overstimulation.* This category was scored if the child became overaroused during physical play. Overstimulation occurred when the child screamed or showed a negative affective response to stimulation. The measure is the number of epochs in which overstimulation occurs. (0.91)

In addition, during each 10-s epoch the positive affective response of the child was rated on a 4-point scale. A rating of 1 indicated *neutral affect*; a rating of 2 indicated *low level laughter*; a rating of 3 indicated *moderate laughter*; and a rating of 4 indicated *intense laughter*. The correlation between the ratings of two observers was 0.87. The score was obtained by summing the ratings over the epochs. Because of the difficulty of scoring low levels of positive affect, such as smiling, with only one camera, smiling and other indications of low-level positive affect were included in the category of neutral affect.

Results

The results for the measures during the play sessions were analyzed with a repeated-measures analysis of variance (ANCOVA), with sociometric status as a between-subjects variable and with sex of parent and session as within-subject variables.

Table 1 presents the results for the behavioral categories. In the following sections the significant effects of sociometric status, of sex of parent, and of session will be described.

Effects of Sociometric Status

Regarding the category of parental directing, there was one significant interaction involving sociometric status as well as a second interaction that approached significance. First, there was a significant interaction between sociometric status and session, $F(2, 33) = 3.18, p < .05$. This interaction was due to parents being more directive with rejected children in the first session. One-way ANOVAS performed separately on each session indicated a trend only in the first session, $F(2, 33) = 2.58, p < .10$, with the Tukey test (Hays, 1980) applied to the first session data, suggesting that the parents of rejected children were more directive than the children of the other two sociometric statuses ($p < .10$). Secondly, there was a marginally significant Sex of Parent \times Sociometric Status interaction for this behavior, $F(2, 33) = 2.72, p < .10$. This interaction was due to mothers being more directive with rejected boys than with boys in the other two sociometric categories. Separate ANOVAS for mothers and fathers indicated no significant effects due to sociometric status among the fathers, whereas for the mothers there was a very robust effect, $F(2, 33) = 6.51, p < .01$, with the Tukey test indicating that mothers of rejected children were more directive than mothers of the other two groups.

Sociometric status also emerged as an important variable for several other verbal categories, both as a main effect and as an interactant with other variables. First, there was a trend for a significant effect of sociometric status for the variable of children's suggesting, $F(2, 33) = 2.47, p < .10$, with the post hoc Tukey test indicating that popular children ($p < .01$) as well as neglected children ($p < .05$) suggested more than did rejected children.

Secondly, sociometric status was a significant main effect for the variable of parental questions, $F(2, 33) = 4.88, p < .01$, with the Tukey test indicating that parents of neglected children asked more questions than did parents of the popular and rejected children ($p < .01$). The category of parent questions also resulted in a significant Sex of Parent \times Sociometric Status interaction effect, $F(2, 33) = 3.80, p < .05$. This interaction was due to relatively more questions by the mothers of neglected children. ANOVAS performed separately for mothers and fathers indicated no significant effects for fathers, whereas for mothers there was a significant effect of sociometric status, $F(2, 33) = 8.43, p < .01$, with the Tukey test indicating a significant difference between neglected children and children in the other two categories ($p < .01$).

Finally, there was a trend for a significant sociometric status effect for the category of child questions, $F(2, 33) = 3.06, p < .10$. These results suggested that neglected children asked more questions than either of the other two categories (Tukey test; $p < .05$).

Regarding the variables related to physical play, in general sociometric status emerged as a weak main effect and as a strong interactant with the variables of sex of parent and session. There was a trend for a main effect for physical play, $F(2, 33) =$

Table 1
Group Means and Standard Deviations for Variables by Status of Child and Session

Behavior	Popular		Neglected		Rejected	
	1st session	2nd session	1st session	2nd session	1st session	2nd session
Verbal variables						
Parent:verbal						
<i>M</i>	106.2	103.3	99.6	98.8	103.9	102.2
<i>SD</i>	15.0	22.0	16.5	14.9	12.5	11.6
Child:verbal						
<i>M</i>	95.4	85.0	89.2	89.8	92.5	86.3
<i>SD</i>	16.2	25.4	15.2	16.5	15.3	22.6
Parent:direct						
<i>M</i>	17.6	20.9	17.3	14.8	26.8	18.7
<i>SD</i>	72.0	6.7	13.5	10.9	8.7	9.2
Child:direct						
<i>M</i>	6.3	9.7	5.3	10.4	5.3	12.0
<i>SD</i>	4.7	7.7	4.7	8.1	4.7	10.2
Parent:suggest						
<i>M</i>	12.2	11.7	10.3	10.4	8.1	9.7
<i>SD</i>	11.5	6.5	5.9	5.1	9.5	6.2
Child:suggest						
<i>M</i>	8.3	9.8	5.9	7.3	1.4	6.0
<i>SD</i>	10.6	7.0	4.9	4.7	1.7	9.2
Parent:question						
<i>M</i>	5.3	5.1	9.9	10.5	3.8	5.8
<i>SD</i>	5.7	4.1	8.3	7.2	4.0	6.0
Child:question						
<i>M</i>	1.0	0.6	1.3	1.7	0.1	0.3
<i>SD</i>	1.9	1.0	1.8	2.4	0.3	0.8
Variables relating to physical play						
Physical play						
<i>M</i>	11.2	66.0	7.7	23.9	14.4	53.6
<i>SD</i>	19.3	30.2	15.6	26.3	35.3	42.8
Affect ratings						
<i>M</i>	145.8	210.1	140.4	155.4	136.7	183.0
<i>SD</i>	29.8	54.9	34.3	33.8	35.0	52.4
Approach stimulation						
<i>M</i>	0.0	9.9	0.7	2.3	0.9	6.4
<i>SD</i>	0.0	8.5	1.3	2.9	2.9	6.2
Avoid stimulation						
<i>M</i>	0.0	1.4	0.6	3.2	0.9	5.4
<i>SD</i>	0.0	1.7	1.5	3.9	2.9	4.2
Overstimulate						
<i>M</i>	0.0	1.2	1.3	2.5	0.0	6.1
<i>SD</i>	0.0	1.5	4.6	5.3	0.0	6.1

2.74, $p < .10$, with neglected children engaging in less physical play with their parents than children in the other two categories (Tukey test; $p < .01$). A significant Sociometric Status \times Session interaction, $F(2, 33) = 4.58$, $p < .05$, was due to this status effect being especially clear in the second session. Separate ANOVAs done on each session indicated no significant effects in the first session, whereas sociometric status was a significant effect in the second session, $F(2, 33) = 4.89$, $p < .05$. The Tukey test performed on the second-session data indicated that neglected children engaged in less physical play than the other two groups ($p < .05$), but also that popular children engaged in more physical play than the other two groups ($p < .05$).

There was also a trend for a significant main effect for the affect ratings, $F(2, 33) = 2.51$, $p < .10$, with popular children

higher than the other two categories (Tukey test; $p < .01$) and neglected children lower than the other two categories (Tukey test; $p < .10$). The interaction between sociometric status and session is of only marginal significance, $F(2, 33) = 2.90$, $p < .10$, and, as in the case of physical play, was due to higher scores in the second session. When separate ANOVAs were performed for each session, only the second session indicated a significant effect for status, $F(2, 33) = 3.79$, $p < .05$. The Tukey test applied to the second-session data indicated that neglected children were lower than the other two groups ($p < .05$) and popular children were higher than the other two groups ($p < .05$).

The results for approaching stimulation indicated a main effect for sociometric status, $F(2, 33) = 3.39$, $p < .05$, and that neglected children are lower in this category than the other

groups (Tukey test, $p < .01$). The significant effects were the result of generally higher scores for popular and rejected children that occurred in the second session with their fathers, as indicated by significant Sociometric Status \times Sex of Parent, $F(2, 33) = 4.84, p < .01$, Sociometric Status \times Session, $F(2, 33) = 5.01, p < .01$, and Status \times Sex of Parent \times Session, $F(2, 33) = 5.08, p < .01$, interactions. When ANOVAS were performed on the individual data for each parent and session combination, only approaching the father in the second session was significant, $F(2, 33) = 4.98, p < .05$.

The results for the category of avoiding stimulation indicated a main effect for sociometric status, $F(2, 33) = 4.19, p < .05$, and that rejected children were higher than neglected children (Tukey test; $p < .05$) and that neglected children were higher than popular children (Tukey test; $p < .05$). There was a significant Sociometric Status \times Sex of Parent interaction, $F(2, 33) = 4.17, p < .05$, and a trend for a significant Sociometric Status \times Sex of Parent \times Session interaction, $F(2, 33) = 2.47, p < .10$. These findings were due to relatively high scores occurring in the second session with fathers. When ANOVAS were performed on the individual data for each parent and session combination, only overstimulation by the father in the second session was significant, $F(2, 33) = 3.84, p < .05$.

The category of overstimulation yielded a trend for a main effect of the status variable, $F(2, 33) = 2.49, p < .10$, suggesting that rejected children are more likely to be overstimulated than popular children (Tukey test; $p < .01$) and neglected children (Tukey test; $p < .10$). These results were due almost entirely to relatively high levels of overstimulation during play with fathers in the second session that resulted in significant Sociometric Status \times Sex of Parent, $F(2, 33) = 2.80, p < .10$, Sociometric Status \times Session, $F(2, 33) = 3.20, p < .05$, and Sociometric Status \times Sex of Parent \times Session, $F(2, 33) = 3.47, p < .05$, interactions. When ANOVAS were performed on the individual data for each parent and session combination, only overstimulation by the father in the second session was significant, $F(2, 33) = 3.84, p < .05$.

Effects of Sex of Parent

Fathers were found to score higher than mothers in all the variables relating to physical play, as indicated by a highly-significant sex of parent effect for all the variables except the ratings of affect, which showed a trend in the expected direction: physical play, $F(1, 33) = 15.71, p < .001$; affect ratings, $F(1, 33) = 3.55, p < .10$; approaching stimulation, $F(1, 33) = 28.24, p < .001$; avoiding stimulation, $F(1, 33) = 15.34, p < .001$; overstimulation, $F(1, 33) = 11.81, p < .01$. The Sex of Parent \times Session interaction was also significant for the variables relating to physical play: physical play, $F(1, 33) = 5.36, p < .05$; affect ratings, $F(1, 33) = 5.29, p < .05$; approaching stimulation, $F(1, 33) = 25.5, p < .001$; avoiding stimulation, $F(1, 33) = 8.82, p < .01$; overstimulation, $F(1, 33) = 5.89, p < .05$. These findings reflect the fact that the difference between mothers and fathers was much more apparent in the second session. When ANOVAS were performed on the data within each session, the results indicated either nonsignificant differences or far less significant differences in the first session, whereas the differences were

highly significant in the second session: physical play, first session, $F(1, 33) = 5.12, p < .05$; physical play, second session, $F(1, 33) = 14.45, p < .001$; affect ratings, first session, *ns*; affect ratings, second session, $F(1, 33) = 6.15, p < .05$; approaching stimulation, first session, *ns*; approaching stimulation, second session, $F(1, 33) = 29.11, p < .001$; avoiding stimulation, first session, *ns*; avoiding stimulation, second session, $F(1, 33) = 15.14, p < .001$; overstimulation, first session, *ns*; overstimulation, second session, $F(1, 33) = 11.53, p < .01$. Besides these expected sex differences relating to physical play, there was also a trend for the children to show more verbal behavior in the presence of their mothers than in the presence of their fathers, $F(1, 33) = 3.04, p < .10$.

Effects of Session

The effect of session was highly significant for the variables relating to physical play, with physical play being much more common in the second session than in the first: physical play, $F(1, 33) = 49.27, p < .001$; affect ratings, $F(1, 33) = 24.58, p < .001$; approaching stimulation, $F(1, 33) = 27.75, p < .001$; avoiding stimulation, $F(1, 33) = 20.75, p < .001$; overstimulation, $F(1, 33) = 9.38, p < .01$. In addition, there was a strong effect of the session variable for directing and suggesting by the child, with children being more directive and suggestive in the second session: child directing, $F(1, 33) = 17.67, p < .01$; child suggesting, $F(1, 33) = 3.98, p < .05$.

Discussion

The results for physical play and the affective measures indicate that neglected children engage in less of the affectively arousing type of stimulation characteristic of physical play than do the rejected and popular children, and that neglected children are less likely to approach stimulation during the physical play sessions. The Sociometric Status \times Session interaction data for both the amount of physical play and the affect ratings indicate, in addition, that popular children engage in more physical play and have higher ratings of affect during the second session than rejected children. These findings are consistent with those of MacDonald and Parke (1984), which indicated high levels of physical play and positive affective expression among popular children. The study reported here also replicates the findings of Lamb (1977a, 1977b), Power and Parke (1982), and MacDonald and Parke (1984; 1986), which indicate a very robust sex difference between parents in the amount of physical play engaged in with children.

Despite the indication that popular children engage in more physical play and show more positive affective expressiveness than rejected children, however, the data indicate that the play sessions of rejected children are characterized by more overstimulation and avoidance of stimulation than is the case with popular children and their parents. The interactions of the rejected children were characterized by alternately approaching the source of stimulation and then withdrawing from the stimulation. Because the rejected children were characterized by higher levels of overstimulation than the other groups and because withdrawal from stimulation often coincided with ex-

pressions of overstimulation on the part of the child, it seems reasonable to suppose that the withdrawal from stimulation was motivated by the child being overstimulated. As a result of this tendency toward overstimulation, the play sessions of the rejected children were less uniformly affectively positive than were the sessions of the popular children.

The results for the category of parental directing suggest that parents tend to be more directive with rejected children. This effect was of only marginal significance, but when mothers were considered separately the effect was quite robust. These results are consistent with those of Putallaz (1987). In addition, there was a trend for rejected children to do less suggesting during the play sessions, suggesting that their interactions with their parents were more one-sided than those of the other sociometric groups. On the other hand, the results for the categories of parent and child questions showed that neglected children tended to have interactions in which both parties would request the other to provide suggestions for what to do. This finding was particularly clear in the case of parental questions. These results suggest that neglected children tend to look more to others to provide the lead in their social interactions than do other types of children, and that their parents are similarly inclined while interacting with their children. The *Q*-set results indicating that neglected children are more often in the role of listener are consistent with this interpretation, but there is no evidence here that neglected boys make fewer suggestions or direct less when interacting with their parents than do boys in the other categories. It could also be that parents of neglected children are attempting to prod their relatively passive children into action and that the children then model this behavior.

The results, in addition to the work of Stern (1977), Brazelton, Koslowski, and Main (1974), and Sroufe et al. (1985), implicate the regulation of affectively arousing stimulation as a fundamental social process. Successful physical play with children requires great sensitivity to the affective cues of the child and to the desires of most children for affectively positive arousal. Physical play can involve highly-intense stimulation, which is perceived as pleasurable to the child and which may result in viewing the source of such stimulation in positive terms generally, thus affecting the general affective tone of parent-child relationships. Many researchers and theorists have proposed that the affective tone of the parent-child relationship may be crucial in mediating the effects of parents on children (e.g., Maccoby & Martin, 1983).

The stimulation involved in physical play, however, is sometimes too intense for the child, and overstimulation and avoidance of stimulation occur. During overstimulation the child will often scream and say things to the parent that are designed to lower the level of stimulation. In this study, overstimulation and the avoidance of stimulation occurred more commonly among the rejected children than among the popular and neglected children. These results do not shed light on the direction-of-effects issue, however. The results obtained here may be due to temperamental differences among the children in their sensitivity to stimulation or to differences among the parents in their sensitivity to the affective cues of the child during physical play. Regarding the first possibility, Buss and Plomin (1984) and Kagan, Reznick, and Snidman (1986) provide evidence that the

reactivity to stimulation is a basic temperamental trait in children. (See MacDonald, 1987, for a discussion.)

Finally, the intensity of the stimulation occurring during parent-child physical play as well as the affective consequences of this stimulation suggest its possible role in socializing the child and its potential use in changing behavior (see MacDonald [1985] for a discussion).

Studies aimed at verifying these relations and determining the direction of causality are an important desideratum for future research. Particularly relevant are studies assessing deficits in affective cue detection on the part of parents of rejected children (Parke et al., in press) as well as studies assessing the reactions of children to standard levels of affectively arousing stimulation, such as that which occurs in the context of parent-child interaction.

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Received May 5, 1986

Revision received March 20, 1987

Accepted March 26, 1987 ■

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