Attachment and Social Functioning: A Longitudinal Study from Infancy to Middle Childhood
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Abstract
A longitudinal sample of 96 children was followed from 15 months of age to 8–9 years. Attachment relationships were studied in infancy with the Strange Situation and at school age with the Separation Anxiety Test. Social functioning was studied at school age through mother and teacher ratings, observations at school, and in children's self-reports. Predictive results showed that infants who had been secure as infants were more socially active, positive and popular at school age, and tended to report less social anxiety than children who had been insecure. Outcomes did not differentiate between children who had been anxious-avoidant and anxious-ambivalent. In spite of nonsignificant continuity between attachment security at infancy and school age, the associations to social functioning were similar.

Keywords: Attachment; Social functioning; Separation Anxiety Test

One of the most important childhood tasks is to establish successful peer relations. Realization of the importance of peer relations in social development has generated an extensive interest in the construct of social competence and in the developmental course of successful social functioning. Attachment theory has provided a theoretical framework for understanding such development in terms of the parent-child relationship. Elicker, Englund and Sroufe (1992) specified three reasons as to why a secure attachment relationship should promote later peer competence. First, the history of availability and responsivity on the part of the caregiver should lead to positive social expectations in the child. Secondly, through taking part in a relationship with an empathic and responsive caregiver, the child also learns about reciprocity and the nature of empathic relating. Finally, the history of responsive care will generate a sense of self-worth in the child.

The view of peer competence conveyed by Elicker and coworkers concurs with the notion that competence aspects of peer interaction should encompass positive aspects of social interaction such as prosocial behaviors, positive affect, and social initiative and thus be distinguished from behavioral problems (cf. Tremblay, Vitaro, Gagnon, Piche, & Royer, 1992; Waters, Noyes, Vaughn, & Ricks, 1985). Taking this view as a

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point of departure in reviewing the empirical literature on attachment and social competence, the picture obtained is somewhat scattered.

Early studies, mainly from the Minnesota group, demonstrated associations between attachment security in infancy and various peer behaviors, representing social well-functioning in the preschool period, in school age (grade 1–3) and also for a follow-up at 11 years (see review by Elicker, Englund, & Sroufe, 1992). However, replication efforts of these impressive findings have not been equally convincing.

Suess, Grossmann, and Sroufe (1992) reported data from a German sample, where the Minnesota preschool findings were to some extent corroborated, although the positive results held primarily for girls and conclusions had to be limited to insecurity of the avoidant type because of too few ambivalent infants in the sample. Therefore, the study could not add to the understanding of the interesting phenomenon reported by Sroufe (1983), that irrespective of the type of insecurity in infancy, avoidant or ambivalent, the low social competence in preschool was displayed in very similar ways. Similarly, partly supportive findings, pertaining primarily to girls, were reported by Barglow, Contreras, Kavesh, and Vaughn (1998) who found that early attachment predicted free-play social competence at early school-age. Pierrshumbert, Iannotti, Cummings, and Zahn-Waxler (1989) studied social responsiveness at 2 and 5 years as a function of attachment security, but because he did not separate responsiveness to the mother and to an unfamiliar peer in the analyses the conclusion about more responsiveness for secure children cannot be unequivocally interpreted in terms of peer social competence. Van den Boom (1995) studied children aged 3½ years old with regard both to direct effects of early attachment (studied at both 12 and 18 months) and effects of intervention aimed at improving maternal sensitivity; the complex findings were ambiguous with regard to the effect of attachment security on the focal child’s social competence, but support indices were found in an attachment-mediated effect of intervention on cooperation and more positive dyadic interaction for children who had been securely attached at 18 months.

Clear failures to show the expected predictive association between attachment security and social competence have also been reported. Booth, Rose-Krasnor, and Rubin (1991) reported that attachment security assessed at 20 months did not predict successful social outcomes in interaction with an unfamiliar same-sex peer, although it was indeed predictive of hostile and aggressive social interchanges at 4 years. Similarly, Youngblade and Belsky (1992) found that attachment to mother in infancy predicted negative dyadic behavior with a familiar peer at age 5, but not positive dyadic interchange. Another failure to replicate the association between early attachment and 4-year social competence was reported in a study by Howes, Matheson, and Hamilton (1994), in which 4-year social competence was assessed through observations of behaviors indicative of competence as well as of aggressiveness, and also through teacher ratings and sociometrics.

The question of secure attachment as linked to social competence has also been approached in analyses of concurrent data, again yielding a scattered picture. Cohn (1990) used the Main and Cassidy (1988) procedure to assess attachment in 6-year-olds and found attachment security to be of importance for peer acceptance and for teacher rated social competence, but only for boys. Subgroup comparisons led to the conclusion that low social competence was particularly characteristic of ambivalent boys. Wartner, Grossmann, Fremmer-Bombik, and Suess (1994) also used the Main and Cassidy procedure at 6 years of age and related these findings to observational data obtained at 5 years. They found that children who were secure at age 6 had one
year earlier been observed to be superior to avoidant and disorganized children with regard to both play quality and conflict resolution. Sex differences were not reported for these data.

A number of studies have used the Cassidy and Marvin method (Cassidy & Marvin, 1992) for children about 4 years of age. Turner (1991) found that attachment security was more important for boys' social behavior. Booth and coworkers (Booth, Rose-Krasnor, Rubin, Booth, & Coplan, 1996), with a continuous measure derived from the Cassidy and Marvin method, found concurrent relations to one of several social competence variables, and in a follow-up the same attachment data were found to be predictive of 8-year social engagement/acceptance (Booth, Rose-Krasnor, McKinnon, & Rubin, 1994). Howes and co-workers (Howes et al., 1994), using the same method to assess 4-year attachment, however, found no relation to concurrently assessed social competence. Granot and Mayseless (1996) assessed attachment in older children, aged 9–12 years with an adaptation of the 'Doll Story Completion Task' (Bretherton, Ridgeway, & Cassidy, 1990) and found that insecure children, primarily the avoidant and disorganized categories, more often were placed in the rejected sociometric status group than were secure children.

To summarize the current state of knowledge, it appears that a number of issues have to be settled before a clear picture can be given concerning the role of attachment security in the development of social competence. Findings from the longitudinal studies of the Minnesota group have been striking, while other studies, although in many cases supportive, have shown more confined effects (for one sex or for a certain type of insecurity) or even replication failures. As suggested by Cohn (1990) and Howes and colleagues (1994), one reason for the greater strength of the findings in the Minnesota studies as compared to many other studies may be their use of risk samples. Howes and colleagues (1994) also discussed the importance of peer experience due to early day-care entry as a factor overshadowing attachment effects. The review of extant studies also conveys that an array of operationalizations of the social competence construct has been used, a fact that may lie behind some of the inconsistencies in findings. Concerning the issue of effects of early versus late attachment, it is striking that concurrent effects have not been analyzed with early attachment taken into account. Therefore little is known about the possibility of an independent contribution of early attachment.

The aim of the present study was to test the hypothesis that secure attachment promotes later social competence. Data from a normal longitudinal sample in which the majority of children had experience of non-parental care and that was large enough to assess generalizability across sex and category of insecure attachment, were used. The issue of effects as due to the early versus the concurrent relationship was approached by assessing attachment quality, not only during infancy but also at school age, through the child's own view of separations (Klagsburn & Bowlby, 1976; Slough & Greenberg, 1990). In operationalizing the social competence construct, we took as a point of departure the three aspects that according to Elicker and coworkers (Elicker et al., 1992) should be promoted by secure attachment. Positive social expectations were taken to be reflected in active social participation and social initiative as observed and rated by parents and teachers. Empathic relating should be shown in positive and prosocial behaviors (observed and rated), and a sense of self-worth and efficacy would be captured by self-reported social self-esteem and social anxiety. In accordance with Cavell's (1990) analysis of the social competence construct, where competence in terms of behaviors and abilities was distinguished from outcomes, we also included a separate rating measure of popularity among peers as such an outcome.
Method

Participants

The data set comprised 96 children (48 girls, 48 boys) from a longitudinal sample studied from the age of 6 weeks to 9 years. At the start of the project, 123 families were enrolled through random selection from the municipality birth register (62% of the contacted families agreed to participate). Reasons for attrition over the years have been illness/death in the family, moving out of the county, travels abroad, objections to interview/questionnaire content, and time shortage. The attrition group was not significantly different from the group that remained in the study with regard to sex composition, parity, number of siblings, and parental education at the start of the project, nor was the distribution of secure versus insecure/unclassifiable children at 15 months (see below) significantly different for the attrition group, χ²(1, N = 96) = 0.21, ns.

The sample is best described as a middle class sample with comparatively high parental education; at the time of enrollment (maternal age: M = 30 years 4 months, SD = 4 years, 6 months), 56% of the fathers and 60% of the mothers had a college education or a university degree. Most children had siblings; at the time of enrollment, 65% had at least one sibling and at 9 years, only 4% remained only children. The majority of children experienced non-parental care during their first four years. During the first 15 months, 40% of the children had attended non-parental care, comprising at least 10 hours a week for at least one month, and at 4 years of age, 84% of the children had experienced regular non-parental care for more than a year.

Measures

Infant attachment. At 15 months, the infants were observed in the Strange Situation together with their mothers. Classification in terms of avoidant (A), ambivalent (C), and secure (B) patterns was made by the first author, who was trained by Dr. L. Alan Sroufe and proved to be reliable with the Minnesota reliability test. Nine children were judged unclassifiable, 16 were classified as avoidant, 18 as ambivalent and 53 as secure.

Attachment/internal working model at 8½ years. When the children were between 8 and 9 years old (M = 8 years 7 months, SD = 3 months), 91 of them visited the department laboratory. As part of the procedure, they responded to the Seattle version of the Separation Anxiety Test (SAT; Slough, Goyette, & Greenberg, 1988; Slough & Greenberg, 1990). The Seattle version is a modification of the test originally presented by Hansburg (1972) and adapted by Klagsburn and Bowlby (1976). It consists of six pictures (photos) depicting separations, three of which are considered severe (e.g., parents going away for a two-week vacation) and the rest considered mild (e.g., the child being told to go and play in the park, because the parents need to talk to each other). The child is presented with the picture and a vignette explaining the situation, and the experimenter then asks what the depicted child may feel, why he/she may feel that way, and what the child might do. In the Seattle version, the child is first asked about the feelings etc. of the child in the picture and thereafter, how he/she would feel in such a situation. In the present study only answers referring to the child in the picture are reported. (Analyses of answers to questions about the child’s own feelings did not change any conclusions). Verbal answers were transcribed and scored by a person who