Early Peer Interaction: A Research Agenda

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We propose and discuss several hypotheses concerning the unique developmental status of peer relations in the first three years of life. We then suggest how these developmental differences might translate into hypotheses regarding early individual differences. The integrating questions revolve around whether individual differences in toddler and early preschool peer relations mean the same thing to young children as they do to older children, and whether they carry the same weight and serve the same functions in toddler peer groups as in peer groups among older children.

Specifically, we suggest three ways that peer relations in the first three years are fundamentally different from later childhood peer relations: 1) they are likely to be more directly linked to and determined by temperament and attachment relationships; 2) limits in self and other understanding in the early years are likely to constrain both individual interaction skills and the formation of relationships with peers; 3) because emotion regulation in very young children is different from childhood emotion regulation, its role in governing peer relations will likely be different as well. Together, these proposals lead to the conclusion that individual differences in toddler peer relations must carry different meaning than in later childhood. A developmental perspective on individual differences suggests both continuities and discontinuities between toddler peer relations and childhood peer relations, and we offer several predictions.

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The papers in this special issue shed new light on several key aspects of early peer competence. Three specifically address the role of children's emotions and emotion regulation in preschool peer relations; three address parent or family contributors to interactions among preschool peers and siblings; three focus on aggressive behavior and peer conflict specifically; and several explore cognitive or social-cognitive correlates of peer competence, from representation of family emotional climate, to attention regulation, to language skill, to imitation, to emotion understanding. We learn that the basic skills recruited into very young children's earliest peer engagements are universal, and that these shape children's first encounters with one another to be very similar across dramatically different cultures. In addition to such developmental universals, we also learn that individual differences in many different dimensions of children's peer relations are well established by the preschool years, and that they relate to correlates similar to those identified in middle childhood. Together, these papers suggest that the roots of childhood individual differences in peer social competence can be traced to children's earliest interactions with one another. They also raise the possibility that there may be continuity in the forms that individual differences take, in the determinants of individual differences, and therefore in children's social competencies and peer relationships themselves, beginning with the earliest peer encounters.

These important suggestions carry far-reaching implications for both social developmental theory and early education practice. However, we wish to inject a note of caution in the reach for such conclusions. Specifically, we argue here that the study of individual differences in early peer relations must be embedded in the study of basic developmental change in peer competence. The purpose of this commentary is to use this collection of strong and interesting papers as a jumping off point to propose and briefly discuss several hypotheses concerning the unique developmental status of peer relations in the first three years of life. We then suggest how these proposed developmental differences might translate into hypotheses regarding early individual differences. In so doing, we hope to show how the study of developmental and individual differences in early peer competencies can be profitably wed.

The integrating question in this analysis is: what is the meaning of individual differences in very early peer competencies? For example, does aggression mean the same thing to its toddler initiator or to its toddler victim as to an older child? Does aggression among toddlers and young preschoolers serve the same functions and carry the same weight in the dyad and in the larger peer group as it does among older children?

There are, of course, many ways to address this question empirically, many of them well illustrated by the papers in this volume. For example, we could ask whether peer aggression relates in similar ways to emotional, self-regulatory, and social-cognitive correlates among younger and older children. We could ask whether there is longitudinal stability in the rates and forms of aggression between early and later childhood. We could ask whether parent and family influences relate in similar ways to aggression among very young and older children. We could ask, within the peer group, what elicits aggression and conflict and how conflict is resolved, how it relates to other aspects of children's social behavior, affect, or peer acceptance, and whether these features of peer group functioning
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are similar among younger and older children. The papers in this volume are excellent examples of such empirical approaches, and they lay a very solid foundation for future longitudinal and cross-sectional comparisons between emerging peer skills and later childhood peer relations.

Here, however, we take a complementary, more conceptually-driven approach to this question. Specifically, we suggest that a consideration of the unique developmental competencies, constraints, and demands within the toddler and early preschool years points to unique patterns and determinants of early individual differences in peer relations.

The premise underlying this argument is that peer relations among toddlers and young preschoolers are fundamentally different from later childhood peer relations in several critical respects. First, they are likely to be more directly linked to and determined by temperament and attachment relationships. Second, profound limits in self and other understanding in the early years are likely to constrain both individual interaction skills and the formation of relationships with peers in qualitatively different ways than among older children. Third, and related to both of the preceding points, emotion regulation in very young children is different from childhood emotion regulation, hence its role in governing peer relations will likely be different as well. Together, these proposals about the nature of early developments in the peer system lead to the conclusion that individual differences in peer relations during the toddler and early preschool years must carry different meaning than in later childhood.

Interaction Style, Skill, and Content

We will examine briefly each of the three premises noted above, and then propose some resulting hypotheses. First, we wish to distinguish among three different, but related and interacting constituents of early peer relations. We have designated these as “content,” “style,” and “skill.” We distinguish among these because they may have different developmental origins, different developmental sequelae, and may interact in unique ways to produce individual differences in early peer relations.

Content. By “content” we mean, simply, the particular themes and activities that define and govern peer play. Among the youngest children, the content of peer exchange is largely object-focused (Brownell & Brown, 1992). By age three, however, peer interaction has become quite differentiated and includes object-related exploration, manipulation, and play as well as social pretense with complex, dynamic themes (Howes, 1988). In childhood and beyond, peer encounters include a still larger variety of activities and themes (Rubin, Bukowski, & Parker, 1998). There are also, no doubt, individual (and cultural) differences in the dominant activities that define children’s peer interactions. Moreover, much of the content of interaction is likely to be dictated by the setting in which interaction takes place. For example, complementary and reciprocal motor play (e.g., chase, rough and tumble play) is more likely in large, open spaces, whereas joint manipulative play is likely in smaller enclosed spaces with objects that afford fine-motor engagement and invite construction (Brownell & Brown, 1992). However, individual, cultural, and situational differences in interaction content will themselves be modified by development.
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Style. By "style" we refer to the child's general motivation to socialize, and the affective intensity of social encounters. Thus, some children will be relatively more sociable and inclined to engage peers, whereas others will be more interested in the object world than in their peers, and still others will be relatively inhibited in the presence of peers, finding it difficult to engage either objects or social partners. Among each of these different interactive styles, some children will have more pronounced affective responses than others, whether positive or negative. For example, among sociable children some will be especially positive or especially negative in their responses to one another. Clearly, these dimensions map onto early temperament styles, whether one chooses to distinguish among inhibited vs. uninhibited children (Kagan & Snidman, 1991; Rubin, Chen & Hymel, 1993), or to distinguish among more or less temperamentally reactive children (Rothbart & Bates, 1998), or to distinguish among positive vs. negative affective styles (Emde, 1992; Goldsmith & Campos, 1990).

A key question is how developmental mechanisms interact with individual differences in style to shape peer relations. There may be greater developmental malleability in some temperamental styles, and this malleability may be greater at some ages than at others. For example, Belsky (personal communication, April, 1999) has recently speculated that children who are high in negative affectivity may be more susceptible to socialization influences from both parents and peers than are children low in negative affectivity. We would further hypothesize that malleability in peer interaction style in particular is likely to increase with age, and is relatively low in the toddler years.

Skill. By "skill" we refer to the many interactive competencies that children must acquire and use effectively to manage interactions with one another. Among very young interaction partners, these include initiation strategies such as checking the partner's availability and attention, offering something attractive or a variation on the current play theme, and imitating or complementing the peer's actions (Ross, Lollis & Elliott, 1982). They also include basic dyadic communication skills such as making eye contact, taking turns, and constructing clear messages. And they must also include emotion and behavior regulation during interaction, conflict negotiation and resolution, and so on. Such skills eventually will also entail a variety of social-cognitive competencies that will affect children's interpretation of and responses to peer behavior (Dodge, et al, 1986; Crick & Dodge, 1994; Rubin & Rose-Krasnor, 1992). Nearly all the papers in the present volume address developmental or individual differences in the component skills that make peer interactions more or less successful and more or less satisfactory to the participants.

Because development of early interaction skill is age-related (Brownell & Brown, 1992), it is both constrained by and facilitated by other developmental phenomena such as imitation (Eckerman, 1996), self-other differentiation and understanding (Asendorpf, 1992; Brownell & Carriger, 1990), empathy (Zahn-Waxler, et al, 1992) and understanding others' attention, perceptions, feelings, and desires (Wellman, 1990). Thus, individual differences in peer skill arise within successive windows of developmental change. That is, different patterns of individual differences in interactive skill will emerge at different points in development, and will affect children's peer relations differently at different ages. As the papers within this volume demonstrate, within any given developmental window, individual differences are partly a function of the affective nature of parent-child

*Style, skill, and content interact.* Acquisition and use of *social skills* are no doubt moderated by children's predominant social *styles* as well. That is, intense, reactive, sociable children will acquire a different constellation of social skills than will quiet, even-tempered, object-oriented children, even within the same developmental window. This is because the amount and quality of their interactions with other children will differ, and because their socialization experiences and responses to socialization will differ (Calkins, 1994; Kochanska, 1993). The *content* of children's peer interactions will also be a function not only of their age and the setting in which play occurs, but of children's interaction style and skill. That is, within the same setting the thematic content of peer play will likely be different among socially active, boisterous children than among quiet, socially reserved children, and among more vs. less socially skilled children.

To illustrate the complex interplay between developmental and individual differences in the growth of early peer relations, and between social style and interactive skill, consider aggression among young toddlers. As Eckerman's work has shown, toddlers' earliest interaction and communication skills are quite rudimentary. Further, their initiation strategies include many object-related moves, and their developing self-system includes a relatively unilateral concept of possession (Brownell & Brown, 1992, 1985). Because of such developmental limitations on interaction skill, we might expect to see relatively high rates of object struggles during interaction among toddlers. This pattern might be particularly evident among sociable, affectively intense toddlers, who are strongly motivated to engage their peers, because their primitive initiation, communication, and negotiation strategies leave little room for more complex and prosocial initiations. This, in turn, suggests that many such "aggressive" toddlers will become sociable and socially skilled preschoolers as these early interactive patterns differentiate developmentally into assertiveness and dominance for some children. For other children, however, early aggression will remain stable, differentiating into other forms of aggression with age. Less sociable, hence less aggressive toddlers may also become socially skilled as their well-regulated arousal, coupled with the more sophisticated play and communication skills that emerge developmentally, permit them to initiate and maintain joint play themes with peers. Some of these children, however, will also remain less engaged and effective with peers into preschool and beyond, becoming solitary or withdrawn (Fox & Calkins, 1993; Kochanska & Radke-Yarrow, 1992; Rubin, et al, 1995). It is likely that both peer experiences and socialization experiences in the family contribute to the trajectories for such early interactive patterns, hence to differential stability in early peer relations.

Thus, this relatively simply distinction among content, style, and skill in early peer interaction reveals substantial hidden complexity, and highlights a number of ways in which the explanation of individual differences in early peer relations must be conditioned by an understanding of developmental change. We can now put these distinctions to work as we return to our initial proposal, that peer relations in the first three years of life are fundamentally different from peer relations in childhood and beyond.
Development and Individual Differences

A developmental perspective on early peer relations suggests several dimensions on which individual differences may operate differently in the peer interactions of very young children than among older children's peer groups.

**Attachment and temperament.** First, across childhood the attachment and peer systems serve complementary functions and make different developmental demands on children. Attachment is conceptualized as the primary socioemotional task of infancy, whereas autonomy coupled with moving into the peer group is the major social developmental task of the preschool years (Sroufe, 1979, 1985). The toddler and early preschool period therefore represents a transition phase in socioemotional development. We might then expect that links between attachment and peer relations would be more immediate and more direct among the very young than among older children. For example, children's use of their attachment relationships as a source of emotional security to explore the social world and to engage peers might produce contemporaneous differences in positive sociability with peers (Pastor, 1981). That is, among young children for whom the attachment relationship is still developmentally primary, differences in secure-base behavior with adult caregivers will directly affect both interest in peers and the quality of peer social exchange. Among older children, in contrast, the effect of the parent-child relationship on peer interaction style is more likely to be a mediated one rather than a direct function of attachment. The older child's relationship schemas, attributional biases, regulatory strategies, and predominant affect (Saarni, Mumme, & Campos, 1998) are likely to mediate relations between parent-child interaction and peer interaction.

In a similar vein, temperament differences among very young children may be more directly translated into differences in peer interaction styles than is likely the case among older children. Among toddlers and young preschoolers, differences in reactivity and regulation, or in sociability, emotionality, and activity, may be reflected fairly immediately in their interactions with peers. Among older children, however, there are likely to be complex interactions between personality and other determinants of peer interaction in producing individual differences in peer competence. Thus, attachment and temperament may play different roles in the peer relations of very young children than in older children.

**Social-cognitive development.** A second dimension of development that may differentially affect early and later individual differences in peer relations is social-cognitive development. We argue that the cognitive underpinnings of peer relations are different in critical ways for children in the first three years as compared to older children. In particular, we suggest that children's social-cognitive competence constrains both the content of peer interaction, and the interactive and communicative skills that sustain it. The childhood peer relations literature is notable for its integration of individual differences in social understanding, social perception, and social reasoning with individual differences in peer interaction (Dodge, et al, 1986; Crick & Dodge, 1994; Rubin & Rose-Krasnor, 1992). Although the nature and determinants of very young children's understanding and reasoning are matters of some disagreement among cognitive-developmental theorists, the fact that young children's cognitive and social-cognitive competencies are different from older children's is in little dispute. The question for us is how such developmental differences in social cognition might play out in peer interaction. There are many candi-
Differentiation of self and other, and the consequent progressive understanding of others' perceptions, feelings, knowledge, and beliefs, is a major developmental achievement, with its roots in early infancy (Flavell & Miller, 1998). There appear to be several developmental shifts in such understanding during the second year of life. Toddlers begin to understand the referents of others' utterances and gazes (Baldwin & Moses, 1996), begin to represent others' actions explicitly in pretend play (Watson & Fischer, 1987; Harris & Kavanaugh, 1998), begin to represent others' intentions explicitly in imitation (Meltzoff, 1995), and begin to represent others' expectations and standards for their own behavior (Cole, 1992; Kagan, 1981; Lewis & Sullivan, 1989). Nevertheless, there also appear to be quite profound limits on toddlers' understanding of others. They do not yet represent others' beliefs, especially false beliefs (Pillow, 1993). Nor do they understand the links among perception, action, and knowledge (Pillow, 1993). Their understanding of emotion in others and their corresponding emotion language is limited (Dunn, et al, 1987).

Developments in social understanding must both facilitate and constrain peer interaction among very young children. For example, a toddler cannot consider what mental or emotional states govern a peer's social behavior, including whether a partner's interactive behavior is intentional or not. Young preschoolers cannot consider whether their own understanding of the social situation matches or complements another's understanding, thus explicit communications to their peers will be largely one-sided and self-oriented. Young children will not be able to make response decisions based on causal attributions about the motivations underlying a partner's social behavior. They will not be able to adjust their own interactive behavior or their interpretation of a peer's behavior based on understanding another's feelings about a given social situation. They will not adjust their initiation strategies or response choices based on their judgments about others' perception of them, or on possible consequences of their own behavior for others' feelings or beliefs.

As a result, as both Calkins and Eckerman (this volume) observed in quite different settings, cooperative social interaction among toddlers and young preschoolers is likely to be simple, relatively fleeting, and difficult to maintain because the requisite skills are rooted in social-cognitive competencies that very young children do not yet possess. By the same token, children's interpretation of their peers' social behavior is unlikely to be burdened by negative attributions about the other child's intentions ("he did it on purpose to hurt me") or feelings ("she doesn't like me"). This picture forces us to question whether aggression and prosocial behavior among very young children mean the same thing within the peer group as they do among older, more cognitively sophisticated children. Thus, developmental differences in social-cognitive competence are likely to be reflected in the complexity and content of peer play, in the particular social skills young children bring to their peer relations, and in the meaning of their own and their peers' behavior.

*Emotion regulation.* The third and final feature that we propose as a contributor to fundamental developmental differences in early peer relations is emotion regulation. As Calkins (1994) has pointed out elsewhere, "emotional arousal may facilitate, inhibit, or disrupt behavior." And as Eisenberg and colleagues have noted on numerous occasions
(e.g., Eisenberg, et al, 1992), "how children deal with emotional arousal in social situations affects the quality of their social interactions." There are several possible ways in which emotional arousal, and corresponding emotion and behavior regulation strategies, might differ among the very young as compared to children of late preschool age and beyond. As a result, emotion regulation may operate differently in very young children's peer relations than in peer relations among older children.

First, the social contributors to heightened arousal may differ for very young children. Some social events may be more arousing among young children than among older children, and vice versa. For example, peer aggression does not appear to produce negative emotional responses among toddlers, at least in the absence of physical harm (Calkins, this vol). On the other hand, losing a favored object does (Bronson, 1981; Hay & Ross, 1982; Kavanaugh & McCall, 1982). The interactional situations that require emotion regulation to maintain positive engagement will thus differ for the very young relative to older children.

Second, the particular response elicited by an arousing social event may differ with age. For example, if peer aggression elicits fear or distress among young children, but anger among older children, the behavioral or interactional strategies for best regulating the arousal will also differ with age.

Third, the means by which very young children regulate their arousal levels differ in important ways prior to their possession of competencies such as fully functional language, being able to identify the source and causes of one's own emotional responses, and using autonomous coping and regulation strategies. Hence, toddlers and young preschoolers depend on maternal or other adult help in regulating emotion, or on relatively primitive strategies such as withdrawal or self-comfort (Kopp, 1989; Stifter & Braungart, 1995), whereas older children have more autonomous, differentiated, and planful strategies at their disposal (Saarni, Mumme, & Campos, 1998). Together, these potential developmental differences in emotion regulation mean that the links between emotion regulation and peer relations are also likely to differ by age.

Implications for Research

A developmental perspective on individual differences suggests both continuities and discontinuities between peer relations during the first three years and later childhood. From such a perspective, we can make several fairly broad predictions: 1) young children's interpretation of and responses to individual differences in their peers' interaction style, content, and skill are probably different than later in childhood; 2) individual differences in young children's own interaction style, skill, and content are likely to relate in unique ways to one another and to other aspects of child-child relations; 3) the sources and correlates of individual differences in the first 3 years of life will be different from, albeit overlapping with, the sources of individual differences later in childhood; 4) individual differences in peer interaction in the first 3 years of life are likely to be less stable than in middle childhood. Consistent with this perspective, Howes and Phillipson (1998) recently reported that neither peer aggression nor withdrawal from peers among toddlers was predictive of aggression or withdrawal in preschool and middle childhood, even though aggression was stable from late preschool to middle childhood.
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Empirical research addressed to the interplay of developmental and individual differences in peer relations must thus address both whether and how individual differences vary with age. This requires descriptive work concerning the normative progression of interaction skills, content, and style in the earliest years, coupled with work describing how individual differences are patterned around age-related norms. Longitudinal work tracing the developmental course of early-appearing individual differences into childhood is also needed. Finally, to understand the sources of both individual differences and developmental change will require work addressed to within-age and across-age correlates in temperament, socialization, and social-cognitive development. The papers in the present volume represent several strides forward in addressing these issues.

REFERENCES


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