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Differences in the Quality and Affective Content of Pretend Play  
as a Function of Relational Status, Age  
and Socioemotional Functioning

Sylvie de Lorimier

A Thesis  
in the  
Department of  
Psychology

Presented in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy at  
Concordia University  
Montréal, Québec, Canada

May 1993

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## Abstract

### Differences in the Quality and Affective Content of Pretend Play as a Function of Relational Status, Age and Socioemotional Functioning

Sylvie de Lorimier, Ph.D.  
Concordia University, 1993

This study compared the quality of pretend and nonpretend social play involvements and examined differences in the affective content of social pretend play as a function of the relationship to the play partner, age and socioemotional maturity. Observations of the play of 12 4-year-old and 12 6-year-old girls, paired alternately with a friend, an acquaintance and a stranger, were conducted. Pretend play sequences were expected to involve more complex, responsive and emotionally invested social interaction than nonpretend play sequences, particularly when in the company of a friend. Furthermore, the expression and resolution of affective issues within pretense was expected to be enhanced in the friendship condition, to vary with age, with independent measures of social adjustment and with involvement in play. While greater social and emotional involvement occurred in the pretend as opposed to the nonpretend mode and in familiar contexts as opposed to the stranger context, there was no interaction of play mode and relational status. The only specific effect of friendship over familiarity of the play partner was to raise the proportion of shared play themes. Acquaintances devoted a greater proportion of time to interpersonally-oriented issues than strangers, and older girls

achieved more positive resolutions of negative issues with their friends than younger girls. Although positive resolution of issues correlated with ego resiliency, the relative contributions of socioemotional adjustment and pretend play involvement to the prediction of affective expression in pretense varied with the relationship to the play partner. Whereas social involvement exerted a stronger influence in the company of acquaintances, individual socioemotional capacities were more important when the play partner was a stranger. The relation between play quality and affective content was examined sequentially. Implications for defining the special character of pretense activity in terms of its potential for social development and emotional mastery are discussed.

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## Overview

Pretense is one of the most favored activities of the preschool child. It is generally defined as behavior of a simulative, nonliteral, or "as if" character (Rubin, Fein & Vandenberg, 1983). In the world of make-believe, objects are stripped of their customary meanings and given new ones, play settings are transformed, behavior is taken out of context and roles are spontaneously adopted for the purpose of bringing to life an imaginary scenario.

A theoretical assumption underlying this study is that one of the functions of pretend play is to enable children to symbolically manipulate emotional meaning or aspects of emotional experience that they have not quite assimilated (cf. Bretherton, 1989). Freud (1937), Piaget (1962) and others (Erikson, 1977; Fein, 1989; Gottman, 1986) believe that the enactment of various emotion-laden themes in fantasy permits the child to rework and control the affects aroused by personal experiences in a new, safe and pleasurable context. Bretherton (1989) specifies that what is reworked in joint pretense is not the particulars of the original emotion-arousing experience, but the idiosyncratic meanings attached to it by each of the participants. In fact, it is becoming increasingly apparent that successful social pretend play episodes are those in which the participants allow for considerable flexibility in the acceptance of a partner's agenda (Rosenberg, 1984), suggesting that the "looseness" of jointly constructed storylines permits incorporation of a variety of personal concerns and interpretations (Fein, 1989).

Based on the premise that pretend play serves a "working through" or an "emotional mastery" function (Bretherton, 1989), this investigation is aimed at examining some of the factors which may influence the expression of emotional issues within fantasy. Two basic questions constitute the impetus for this study: 1) Are there qualities of social and emotional involvement intrinsic to the nature of pretend play which account for its unique character as a vehicle for socioemotional development? and 2) How does the relationship to the play partner, age and socioemotional competence affect both the intensity of involvement and the expression of affective issues in social pretend play?

It has been proposed that the attraction of social pretend play in the early childhood years stems from its potential for providing optimal levels of stimulation, arousal and enjoyment (Parker & Gottman, 1989), all of which depend on the play partners' coordination of and mutual investment in fantasy. The veracity of this proposal was tested by comparing levels of social coordination and investment in pretend and nonpretend modes of play. This constitutes a first step in assessing the unique quality of pretend play. Subsequently, the relation between the quality and content of fantasy was investigated. An understanding of the nature of social pretend play requires closer scrutiny of the social processes mediating the expression and resolution of emotional issues. Analyses of behavior sequences were performed in an attempt to determine whether pretend play is followed more promptly by high levels of social responsiveness than nonpretend play and whether high levels of

social responsiveness during pretense are more likely to lead to the expression and/or the resolution of emotional issues. The influence of age and relational status of the partner on these sequential patterns was also examined.

Although the literature attributes greater significance to the role of social pretend play than solitary fantasy (Rubin et al., 1983), very little attention has been devoted to the nature of the relationship between partners and its impact on the quality and content of play. In line with the emotional mastery hypothesis, it is believed that children will be more likely to pretend under conditions that facilitate or set an appropriate tone for expressing the themes of their emotional experience in play. Such conditions appear to prevail when young children play with their friends (Gottman, 1986). Indeed, it seems that, drawing from a greater fund of shared knowledge and experience, young friends may encounter fewer barriers to successful interaction than nonfriends, thus enabling them to collaborate in sustaining intense and elaborate episodes of pretend play. The question of whether friendship also enhances the expressive function of pretend play, i.e., whether it leads to qualitative differences in the thematic content of pretense or to greater success in the resolution of emotional issues, has rarely been investigated systematically. By comparing the quality and content of pretend play with friends, acquaintances and strangers, the present study attempted to shed light on this matter.

Developmental changes are also thought to influence the affective content of pretend play. Growth in the capacity for covert symbolic manipulation of

emotional issues is expected to be accompanied by a diminution in the propensity to express emotional concerns in the context of fantasy at age 4 compared to age 6. On the other hand, the nature of concerns which are still expressed in older children may reflect a developmental shift from object and action-oriented themes to more interpersonal themes (Forbes & Yablick, 1984) and a greater capacity to tolerate negatively-charged material (Harter & Buddin, 1987).

As implied above, the special character of pretend play may lie not only in its denotative or representational properties, but also in the degree of social competence required for its organization in the face of high arousal. There is considerable variability in the degree to which children are willing or able to involve themselves in elaborate pretend sequences. Children's socioemotional competence, in particular, their resilience to emotional challenge, their capacity for impulse control and their role-taking skills, may account for a portion of this variability. The relation of socio-emotional competencies to the quality and affective content of pretense will be examined. Of particular interest to this investigation is whether the contribution of individual difference factors (i.e. social adjustment variables) surpasses that of factors intrinsic to the play (degree of social and emotional involvement) in predicting the expression and resolution of emotional issues within pretense.

Thus, in this study, play mode, relational, developmental and individual influences on the quality and content of social pretend play will be explored in

sequence and in combination in an attempt to provide a more differentiated picture of the interrelations among their effects.

The following sections will review the literatures relevant to the ideas outlined above, in particular, those pertaining to the emotional mastery function of pretense, the influence of the peer context on play interactions, and the potential contributions of development and social competence to changes in play behavior. In the first section, the emotional mastery hypothesis, emphasizing the affective underpinnings of an inclination to pretend, will be juxtaposed to a slightly differing view of the role of pretense, highlighting the management of social interaction with peers. The second section will relate evidence on the interactive features of friendship among young children to the view that the relational context may modulate the expression of pretend functions. The third section explores the contributions of emotional and cognitive maturation to changes in the expression and functions of social pretense. Finally, evidence regarding the role of individual differences in socioemotional functioning in affecting the quality and content of pretense is examined.

### The emotional mastery function of pretend play

When children pretend, they are engaging in a complex activity. As early as 2 years of age, they may take on the mannerisms and feelings of another person and assign new properties to objects and settings (Fein, 1981; Garvey,

1977). In the third and fourth years, when fantasy becomes more collaborative, children are juggling actor and director roles, coordinating their intentions with that of their play partners, and making swift excursions across the boundary between reality and make-believe. The activity is pervasive and nearly always takes place when preschoolers are left to their own devices (Singer, 1973). Theorists have assigned pretense a prominent role in skill and language development (Bruner, 1972; Vygotsky, 1976). It is considered a consequence-free vehicle for the practice of social roles, interactions and strategies, providing children with the opportunity to meet fantasied social challenges with cognitively-mediated as opposed to motoric-behavioral solutions (Hill & McCune-Nicholich, 1981; Klinger, 1971; Rubin & Pepler, 1980; Vygotsky, 1976). Moreover, there is a strong implication in the empirical literature that collaborative fantasy promotes advancements in social and socio-cognitive skills (Burns & Brainerd, 1979; Connolly & Doyle, 1984; Rubin & Maioni, 1975; Saltz, Dixon & Johnson, 1977).

Although the notion that fantasy play represents a medium for the expression and mastery of emotional issues is not new (Erikson, 1963; Freud, 1937; Waelder, 1933), empirical validation of this notion is scarce. Two complementary trends of thought may be identified concerning the role of social fantasy in socioemotional development. On the one hand, there is the view that pretend play not only fosters learning about the process of symbolization, but also about the symbolized information, the affective content of play, in ways that



may facilitate the integration of emotion-laden experiences to existing cognitive structures (Fein, 1979; 1984a; 1987; Gottman, 1986). On the other hand, it has been argued that pretend play offers the highest reward value for young children because of its potential for arousal and emotional involvement (Parker & Gottman, 1989). Frequent participation in the activity may thus accelerate the acquisition of self-regulatory skills.

When viewed from the "emotional mastery" perspective, pretend play may be seen as playing a role in the larger self-developmental process of classifying, objectifying and integrating various domains of experience into existing cognitive and affective self-schemata. By "experimenting" symbolically with fragments of their emotional life, such as fear of, anger at, love for, or such experiences as power and helplessness, safety and danger (Fein, 1987), children may be striving to reorganize information about the self in relation to its environment. Doing so in the context of fantasy allows a safe distance from intense affect and the freedom to reframe or "work through" experiences in accordance with current needs or levels of understanding. For instance, Milos and Reiss (1982) provided evidence that both spontaneous and semi-structured fantasy play with toys designed to elicit separation-relevant themes functioned to decrease anxiety related to entry into nursery school.

Emphasizing the connotative and personalized nature of pretend play content, Bretherton (1989) has argued that the emotional mastery function is the only one which could not equally be exercised in nonpretend contexts. This

is not to say that children engage in fantasied revivifications of salient or traumatic experiences in any widespread fashion. In fact, the correspondence between reality-based experiences and fantasied enactments is usually rather incomplete (Giffin, 1984). Departures from reality, as in the creation of fantastic characters, the use of invisible props or time and space contractions, are the hallmarks of pretense, even when it is based on scripts of everyday experiences (e.g. a visit to the doctor's). The details and particulars of the fantasied representation only matter insofar as they permit the expression of emotional meaning. According to script theory (Schank, 1982), event components are stored along many dimensions including the affective one. From then on, they can be retrieved and recombined such that the same basic emotional themes (e.g. fear of bodily harm), abstracted from a variety of experiences, can be re-integrated in an endless variety of pretend scenarios. Consistent with this view, Kramer and Schaefer-Hernan (1991) found that, in global Likert-scale ratings, the correspondence between current life concerns and fantasy themes was low. Nevertheless, children who used spontaneous fantasy episodes to express current positive issues were seen to adjust more readily to developmental problems, i.e. the birth of a sibling.

Another view of pretend play's contribution to emotional development, although not incompatible with the first, emphasizes the social processes required by joint enactment and their derivative emotional rewards. According to Parker and Gottman (1989), the primary affective task of children between

the ages of 3 and 7 is the maintenance of affective and behavioral organization in arousing situations. The primary affective motivator is the pleasurable stimulation achieved in coordinated play. By virtue of its continual shifts across the boundaries of reality and fantasy and its quick-paced transitions between roles and situations, pretend play clearly affords a myriad of opportunities for stimulation. However, the satisfaction and enjoyment of pretend partners depend to a great extent on the maintenance of high levels of social coordination and on the avoidance of conflict. That is, in order to reap the benefits of such play, children must learn to delay or inhibit expression of certain needs, desires and actions, negotiate compromises, accept influence and exercise behavioral control in the face of intense arousal. Evidence exists to the effect that children display greater complexity of social coordination in pretend than nonpretend contexts (Connolly, Doyle & Reznick, 1988). There is also evidence that the development of coordinated social pretend play lags behind parallel developments in nonpretend play contexts in very young children (Howes, 1985; Howes, Ungerer & Seidner, 1989), implying that pretense places greater demands on social skill sophistication. Thus, with the incentive afforded by the promise of pleasurable arousal, social pretend play may promote the practice of social and emotional regulatory skills required for its maintenance.

The foregoing views reflect slightly different positions regarding the special character of pretend play or, stated differently, its specific functions as

compared to nonpretend play modes. In this study, the hypothesis will be examined that such functions are reflected in part in the higher quality of affective involvement and social complexity of social pretend versus nonpretend play.

If emotional mastery and self-regulation represent salient functions of pretend activity, then, factors which enhance pretense should also enhance these functions. Thus, the next issue under consideration is the contribution of a particular social context factor, the relationship to the play partner, to the form and function of pretend play.

#### Friendship as a facilitative context for pretend play

The notion that the social and emotional context of friendship may enhance quality of pretense and increase its potential for the expression of affective content receives support from the observation of young friends in interaction.

Parker and Gottman (1989) suggest that:

through interaction with their friends, children [acquire] unique information about their own affective experiences and the probable responses of others to their overt displays of these experiences (p. 103).

It is our belief that when young friends share in fantasy activities, the opportunities for such learning --already intrinsic to fantasy-- are multiplied: children can express and evaluate the impact of emotional experiences belonging to contexts and persons which transcend the present situation and their own current affective state. Friendship provides a climate of emotional

security, intimacy and support which may promote the expression and social validation of particular emotional concerns. In addition, the shared experiences of familiar peers, their anticipation of one another's moves and intentions (Lewis, Young, Brooks & Michaelson, 1975) may facilitate joint planning of play episodes by reducing barriers to effective communication of non-literal meanings. Consistent with this notion, Doyle, Connolly and Rivest (1980) found that peer-directed behavior was more frequent, positive, competent and effective and that dramatic play was more frequent among familiar playmates than among unfamiliar playmates.

Recently, Howes, Unger and Matheson (1992) have proposed that one of the functions of pretend play in the preschool years is to further the exploration of issues of trust and intimacy. They argue that peer associations and pretend play may exert reciprocal influences, such that, on the one hand, friends more often use pretense to achieve trust and intimacy, and on the other, pretense contributes to the consolidation of friendship by providing a context for practising cohesive exchanges and the communication of personal information.

A continuing debate in the literature is whether close and relatively stable associations between preschool children fulfill what are considered some of the essential requirements of friendship. These are thought to include shared interests, commitment, reciprocity and intimacy (Hartup, 1989). Nevertheless, without necessarily being able to understand or articulate the bases of their friendships, young children do appear to recognize that close relationships offer

resources and opportunities distinct from those offered by more casual relationships and their behavior seems to reflect this differentiation. In observational studies, the interactions of preschool friends have been characterized by more positive exchanges, mutuality and sharing than the interactions of nonfriends (Furman & Masters, 1980; Garcia-Werebe & Baudonniere, 1988), more self-disclosure (Vespo, 1991), more generosity and cooperation (Galejs, 1974), as well as more positive emotionality and proximity-seeking (Baudonniere, 1987). Furthermore, the value of young children's sustained friendships as regards their long-term impact on the expression of socially skilled behavior is becoming clearer (Howes, 1988).

If peer interactions between the ages of 2 and 6 are principally geared to and motivated by a common desire to maximize the entertainment potential of coordinated play (Gottman & Mettetal, 1986; Parker & Gottman, 1989), then friendship should facilitate the complex task of organizing joint play by ensuring a cooperative atmosphere. In support of these claims, friends at these ages have been found to be more compliant following control attempts than nonfriends and older friends, more receptive to their partners' requests and more likely to avoid continued disagreements (Gottman & Parkhust, 1980). In addition, stable preschool friendship dyads were also found to engage in more reciprocal and complementary play interactions than nonfriends (Howes, 1983). Perhaps as a consequence of these interactive characteristics, friends have been observed to engage in a wider range and complexity of fantasy behavior,

in more extended fantasy enactments (Garcia-Werebe & Baudonniere, 1991; Gottman & Parkhurst, 1980; Roopnarine & Field, 1984; Vespo, 1991), and in better coordinated pretend play sequences than nonfriends (Howes, Matheson & Wu, 1992). The level of friendship also appears to be important in determining the mutuality and self-disclosure fostered in pretend play. Thus the pretense of long-term mutual friends is more cohesive and personally-relevant than that of contemporary (short-term) mutual friends (Howes, Matheson & Wu, 1992).

It is thought that fantasy play may be one of the most salient discriminators of the play of friends and nonfriends (Roopnarine & Field, 1984). The most parsimonious explanation is the climate of cooperation which exists between friends and the numerous bases for common ground (Gottman, 1986). These interactive factors may be conducive to establishing joint play of a more complex nature. One of the major skills involved in this process is conflict management.

Interpersonal conflict has been defined in the literature as an interactive state involving either one or two consecutive oppositions (Hartup, 1989), although mutual conflicts, where initial opposition is followed by further resistance or counter-opposition, may be more significant for the dyadic relationship (Shantz & Hobart, 1989). Prominent theorists consider conflict to be an important vehicle for social and self development (Piaget, 1932; Sullivan, 1953). Within ongoing relations between age-mates, conflicts may serve as

opportunities for self-definition via increased awareness of one's differences with others. Children's pursuit of opposite points of view also fosters the development of perspective-taking skills and of strategies for arriving at cooperative and mutually satisfying solutions (Shantz & Hobart, 1989). On a day-to-day basis, major and minor conflict situations confront the child with a socio-cognitive as well as an emotional challenge, the outcome of which may place continued interaction or continued friendship at risk. At least two factors, with interrelated influences, the value of the relationship and the desire to pursue the current activity, may be significant in determining whether such challenges are successfully met.

With respect to the first factor, there is accumulating evidence that the conflicts and conflict management attempts of friends and nonfriends differ both quantitatively and qualitatively. In particular, whereas the absolute amount of conflict or disagreement may not be significantly different or may indeed be higher between friends than between nonfriends (Hinde, Titmus, Easton & Tamplin, 1985; Hartup, Laursen, Stewart & Eastenson, 1988), Gottman (1983) found that the ratio of agreements to disagreements was higher for friends than strangers and that the rate of agreement was more significant than the rate of disagreement in predicting the formation and maintenance of friendships in pairs of 3- to 9-year-old children.

While friends may quarrel as frequently as nonfriends, a general climate of agreement may be maintained through the use of more effective management



tactics, i.e. tactics geared to equitable as opposed to win or lose conflict outcomes. In Gottman's (1983) study, children who were becoming friends were found to rely on more benign management techniques (e.g., offering reasons for disagreeing or making weak "face-saving" demands) than those who were not "hitting it off". Hartup et al. (1988) found that mutual friends used more disengagement tactics (turning away, distraction) and negotiation relative to standing firm tactics and were more likely to arrive at equal or relatively equal as opposed to winner/loser solutions than either unilateral friends or neutral associates. In addition, mutual friends' conflicts were less intense and they were more likely to pursue interaction following an instance of conflict than the neutral associates.

While, in general, friends may be more prone to resolve their disputes in amiable ways, conflict management in young children may also be influenced by another factor: the desire to maintain coordinated play. The control of negative affect is just as crucial to ensuring that play will proceed smoothly to higher levels of social involvement as the control of excitement. Furthermore, the value of maintaining complex social fantasy play may produce an even greater incentive to reduce or prevent conflict escalation. Gottman and Parkhurst (1980) showed that younger friends (2 to 6 years) found it more difficult to de-escalate squabbles than older friends. On the other hand, young friends were more likely than older friends to short-circuit emerging conflicts by deferring to their partner or speaking within a fantasy role and they also

engaged in more extended fantasy episodes. These findings are consistent with the notion that young children must avoid conflict escalation at all costs if they are to maintain and enjoy the rewards of coordinated fantasy activity. Consequently, children may attempt to minimize the frequency and duration of conflicts in pretend as opposed to nonpretend play.

This study proposes to examine the relation between playmate relationship, social organization of play and the expressive function of fantasy. The literature indicates that play activity among friends is characterized by greater adaptiveness in the management of conflicts, more social involvement and greater success in the coordination of pretend sequences. The question remains as to whether the climate of emotional security and mutual trust fostered by friendship leads to greater expression of emotional concerns within the fantasy play mode. Empirical evidence bearing on this question is virtually nonexistent. Although his observations were not submitted to any quantitative analysis and their representativeness is thus unknown, Gottman (1986) provides colorful descriptions of how close friends liquidate fears and rehearse adult relationships in fantasy play with close same-age friends. He contends that the importance of fantasy with friends lies in its providing a safe context to explore and create with one's emotional experience.

Another important factor influencing the expression and functions of social fantasy, the age of the child, will be discussed in the next section.

### Developmental issues

The literature on pretend play has focused almost exclusively on how development affects various structural features of play or on how it reflects growing sophistication in cognitive and social realms. Consequently, very little attention has been directed to the influence of social, cognitive and emotional advances on the thematic content of pretense or to the hypothesis that the affective functions of symbolic play may evolve with the child's changing capacities and developmental tasks. In this section, we will examine the developmental implications of an emotional mastery view of pretense from preschool to school age. In addition, we will explore the possibility that pretense involves a greater emphasis on "presentation" as opposed to "representation" as children get older (Fein, 1984b).

If one of the functions of pretense is mastery over emotionally-laden experiences, growth in the capacity to understand, cope with and integrate emotional challenge is likely to affect the manner in which emotional issues will be expressed in pretense. From a purely cognitive perspective, developmental changes in emotional understanding appear to be a function of the number of concepts that a child can cognitively control and coordinate simultaneously (Fischer, 1980). Harter and Buddin (1987) showed that while preschoolers firmly deny the possibility of experiencing two feelings simultaneously (as expressed by one child: "I would have to be two different people"), 7 year-olds become capable of recognizing that two same-valenced emotions can be

experienced at once providing they are directed to the same target. Only 10 year-olds appear to acknowledge the simultaneity of different-valenced emotions, and then only when they are directed to different targets.

These findings are of considerable interest for the study of pretend play since it appears that concrete representation of simultaneous emotions in spontaneous pretend play may precede the reconstruction of experience in a verbal task (Rubin & Pepler, 1980). As early as 3 years of age, the pretending child shows the capacity to dissociate the current, presumably pleasant, emotional state associated with playing from whatever emotions belong to the characters portrayed in the pretend frame.

Harter and Buddin (1987) also found that younger children preferred to talk about positive emotions whereas mention of negative emotions increased with age. The authors argued that the cognitive and emotional systems of young children may not be sufficiently differentiated to allow them to distance themselves from negative emotions without actually experiencing them. Older children are more likely to have evolved mechanisms for isolating affect, especially negative affect, associated with thoughts about experiences (Freud, 1946). In addition, young children may not have evolved sufficiently effective ways of coping with negative emotional states once they have been aroused. Thus it is possible that as children's capacities for the integration of emotional representations develop, not only are they more capable of pretending to experience affect which contrasts with their actual state, they may also be more

willing to experiment in a pretense mode, with situations, affects and concerns which are tied to negative personal content.

From a psychoanalytic perspective, advances in emotional understanding may be conceptualized in terms of the decline of primary process thinking, which is impulse-driven and irrational, and the rise of secondary process thinking, a more logical, abstract and reality-oriented mode of thought (West, Martindale & Sutton-Smith, 1984). In a study examining content trends in the narrative fantasy productions of 2- to 11-year-old children, West et al. (1984) found that, as they matured, story-tellers made fewer references to the overt, impulsive or physical characteristics of interpersonal relations, such as action tendencies of attacking or controlling and more references to the internal consequences of relationships, such as anger, pleasure, affection or distress. Forbes and Yablick (1984) provided evidence of a similar developmental trend in the spontaneous fantasy enactments of 5 to 7 year-olds. Measuring the frequency of content elements (character, scene, objects, purpose, action) and of relations between them, these investigators observed that children moved from a preoccupation with the concrete, external aspects of the social world, such as actions and their consequences, to a preoccupation with characters, role relationships and motivations. Thus, age-related shifts in fantasy content may well reflect more general socio-cognitive developments, in particular, those having to do with an increasing awareness of internal dispositions and motivations in the self and in others (Damon & Hart, 1982).

Beyond its consistency with socio-cognitive advancements, the content of pretend play is also thought to be expressive of current psychological concerns and age-appropriate changes in personality organization (Klinger, 1971). Expanding on Waelder's (1932) psychoanalytic theory of play, Peller (1954) states that, "play is an attempt to compensate for anxieties and deficiencies, to obtain pleasure at minimum risk of danger and/or irreversible consequences" (p.180). It implies turning from a passive, receptive role as regards current psychosocial concerns to an active one. The idea that fantasy themes may reflect stage-appropriate social-relationship issues remains largely untested. Nevertheless, Peller (1954) argues that the various stages of ego development involve focal issues, elements of which are worked through in play.

Between the ages of 3 and 5, the child is seen as contending primarily with a growing awareness of his own limitations as compared to the privileges and abilities of grown-ups. There is a fear of loss of love and appreciation connected to the perception of this inferior status. The child attempts to liquidate such anxieties by pretending at being "big", mastering tasks beyond his repertoire of abilities and having access to adult privileges. In fantasy, children delight in investing themselves with the power and invincibility that they attribute to their parents. Starting at about 6 years, there is a growing concern with the threat posed by authority and one's own developing conscience. Issues of social regulation, rule observation and (safer) competition with peers may become more salient in play. Resolution of such issues is effected through

the formation of egalitarian attachments and conformity to socially approved attitudes. The motto seems to be safety in numbers or in rule observation. Preoccupations of earlier stages (i.e. bodily helplessness vs. bodily perfection, fears of abandonment), although still present, may be expected to decline in saliency after the early preschool years.

There is little doubt that the socioemotional development of children is affected more and more by their contacts with peers during the early grade school years. In particular, peers play a greater role in self-definition and self-evaluation (Markus & Nurius, 1984). Children develop skills for self-presentation (Jones & Pittman, 1982) and for creating the desired social impressions. They become more aware of the distinction between overt and covert emotional expressions and they become cognizant of the existence of display rules governing affective expression (Saarni, 1979). These attitudinal and motivational changes of middle childhood may find expression in heightened attention to the "presentational" as opposed to the "representational" aspects of pretend play (Fein, 1984b). That is, the task of putting on a dramatic performance and lending coherence to the enacted story-line may become at least as important as the task of symbolizing emotionally-relevant experiences.

Supporting this view, Forbes and Yablick (1984) found that the pretend play scenarios of 7 year-olds evidenced greater coherence than that of 5 year-olds; that is, there was a greater concern for the "fit" of actions to characters, for the consistency of character features and for the purpose of actions. Similarly,

Sachs, Goldman and Chaille (1985) reported that older preschoolers gave more attention to the creation and elaboration of a narrative context for pretend transformations than younger preschoolers. They attributed the capacity to maintain connected dramatic action to a greater knowledge of scripted events and to the greater communicative competencies of older children.

In summary, while children's growing emotional understanding and their capacity for coping and regulation may contribute to the expression of a greater proportion of negative emotional issues in fantasy -- in particular those connected to their current stage of ego development --, parallel social developments and a growing concern for self-presentation may cause a shift in emphasis from representational fantasy to presentational fantasy. Thus, as the task of managing emotions in the context of social pretend play continues to develop, the older child may be concentrating more on abstracting display and feeling rules from their playmate's reactions (Parker & Gottman, 1989) than on the re-working of personal experiences. As a consequence, the number of emotional issues expressed in social fantasy play may decrease with age while the narrative coherence and social complexity of pretend scenarios take on more importance.

While maturation of social and cognitive functions may impact on the content of fantasy play, individual differences in the degree of social competence and emotional maturity may also play an important role in determining the child's ability to benefit from the opportunities for growth within



the context of social play. The final section reviews the literature on the practice and/or the expression of socioemotional competencies through social fantasy.

### Pretend play and socioemotional functioning

A number of studies suggest that social pretend play represents a training ground for the achievement of social competence and peer acceptance (e.g., Connolly & Doyle, 1984; Rubin & Maioni, 1975; Singer & Singer, 1981). It is thought that the main ingredients responsible for gains in the social and socio-cognitive realms are the child's use of decentration skills and the occurrence of peer conflict (Rubin & Pepler, 1980). Decentration skills practised in sociodramatic role taking are presumed to liberate the child from the here and now, permitting greater objectification and understanding of social roles, expectations and institutions (Singer, 1973). Likewise, confrontation with the divergent role expectations of a play partner, such as a disagreement concerning whether the "mommy" character should go to work, forces the child to move beyond his/her own egocentric perspective of the social world. The cognitive disequilibrium occasioned by discrepancies in viewpoint may promote social competence, role-taking skills and the search for compromise solutions (Rubin, 1980).

Evidence suggestive of a relation between spontaneously occurring social pretense and social and/or socio-cognitive competence is accumulating. Thus, children who were rated as having a high predisposition to engage in pretense

were more cooperative and verbally active with peers (Singer & Singer, 1981). Connolly and Doyle (1984) found that children who engaged in more social pretend play received higher teacher ratings of social competence, benefited from greater peer acceptance and engaged in more extensive, socially complex and successful verbal social interactions. A significant positive correlation has also been found between the frequency of dramatic play and role-taking scores, whereas a negative relationship existed between these scores and functional or practice play (Rubin & Maioni, 1975). More recently, Connolly, Doyle and Reznick (1988) used a within-subjects design to compare indices of social competence in pretend and nonpretend play, while controlling for individual differences in the rate of social interaction. Results confirmed that when preschoolers were observed in social pretend play as opposed to nonpretend activities, their interactions were more socially mature and successful. Specifically, they were characterized by more frequent influence attempts, greater compliance with other children's directives and greater reciprocity of social exchange. These findings were independent of children's IQ scores.

Unfortunately, the correlational nature of the above findings leaves open the question of whether a propensity to engage in make-believe play is the outcome or the cause of social competencies. If maintenance of successful play requires skills in clear communication, conflict management and perspective-taking (Gottman, 1986; Parker & Gottman, 1989), it could be that sociodramatic enactment provides greater opportunities for the competent child to exhibit

social and cognitive skills that have been practised or developed in other contexts.

Investigations of the effects of fantasy play training address the question of causal directionality more directly. For instance, Saltz, Dixon and Johnson (1977) trained preschoolers of low socioeconomic status in one of three types of fantasy activity over a year. Results showed that fantasy-theme (i.e. fairy tales) enactment and sociodramatic enactment of real-life experiences resulted in significant improvement in perspective-taking and other socio-cognitive and intellectual skills. In contrast, training in fantasy discussion had no more effect than a control condition involving cutting and pasting activities. Corroborating Singer and Singer's (1976) observation that imaginative skills increase the child's tolerance for waiting situations and delay of gratification, Saltz et al. found that the enactment groups were better able to employ internal resources in controlling impulsive behavior. Rosen (1974) found that training in sociodramatic play increased cooperative and role-taking skills significantly more than music-training and non-fantasy comparison groups. Similarly, Burns and Brainerd (1979) showed that training in dramatic play was significantly more effective in increasing a variety of perspective-taking skills than training in constructive play.

Two major shortcomings of these studies concern the low level of perspective-taking skill assessed by the outcome measures and the effects of adult tuition. As pointed out by Rubin and Pepler (1980), only the most basic

level of role-taking abilities -- the awareness that the perspective and feelings of others can differ from one's own -- was assessed, with no test of sequential or reciprocal role-taking skills. Furthermore, although the studies suggest that structured adult-led training in fantasy play enactment leads to more competent social behavior, Smith and Sydall (1978) contend that the effects of adult tuition per se may be more crucial to positive outcomes than the fantasy play component. That sociodramatic training most likely involves different kinds of tuition than training in non-fantasy activities also substantially limits the conclusiveness of these training studies (Smith, 1977).

In the final analysis, naturalistic observations of fantasy play independent of adult intervention may provide the most ecologically valid means of study. Although it is more difficult to separate the effects of play from the effects of individual competencies in this context, a clearer picture begins to emerge when one compares the complexity of children's interactions in pretend and nonpretend play forms, particularly if a link between such interactions and standard measures of socioemotional competence can be established. Specifically, if the relation between socioemotional competencies and measures of the quality of social involvement is stronger within fantasy than within non-fantasy play for the same individual, a case for the notion that social fantasy promotes the practice of socioemotional skills is made more compelling.

Beyond the promotion of skills for the management of social interaction and impulse control, it is believed that the task of coming to terms with the

emotional meaning embedded in symbolic enactments is the most distinctive contribution of pretense to emotional development (Fein, 1989). Few studies have examined the connections between emotional meaning reflected in the thematic content of fantasy play and individual differences in socioemotional competence or adjustment. Therefore, many questions concerning variations in emotional expression have yet to be answered. Of major interest is whether the nature and valence of affective themes or the ability to develop resolutions for problematic themes varies as a function of adjustment. It may be that not all children can benefit from the emotional mastery functions of pretense (Bretherton, 1989). For disturbed children, pretense content may reflect the saliency of emotional problems in daily living rather than their liquidation.

Consistent with this notion, Moustakas (1955) compared affective content in the play of well-adjusted and maladjusted children in a play therapy situation. Disturbed children displayed a greater number of negative attitudes (cleanliness and orderliness anxieties, hostility, regression), and greater intensity of negative affect. Unfortunately, the study did not examine group differences in positive content or in the ability to work through negative content. Implications for the emotional mastery hypothesis are thus ambiguous.

In a more comprehensive study, Rosenberg (1984) examined the quality and the content of dyadic pretend play in relation to concurrent and early measures of socioemotional adjustment. Her sample consisted of 39 lower socioeconomic-status 4 year-olds whose security of attachment to their mother

had been assessed at 18 months of age. Teacher ratings of social competence, behavior problems and ego resiliency constituted the measures of current adjustment.

As introduced by Block and Block (1980b), the notion of ego-resiliency refers to the ability to adjust one's level of impulse control in response to changing situational requirements. That is, depending on what is called for in a given situation, the individual may be highly organized and systematic or spontaneous and instinctive, thus tightening and loosening the control of impulses flexibly and adaptively. This construct is assumed to bear a relation to the adaptive skills practiced in the context of pretend play where demands for both social organization and flexibility are high, and where a balance between impulse expression and emotional control must to some extent be achieved if the play is to be successful.

As assessed by Rosenberg (1984), measures of the quality of pretense included clarity and coherence of theme elaboration, social flexibility and emotional investment in the pretense activity. Content was coded for the presence of various positive themes (nurturance, affiliation, positive events), negative themes (aggression and interpersonal conflict) and the affects displayed by pretend characters. The proportion of themes resulting in benign resolutions as opposed to failed or non-constructive attempts were also coded. Results supported the notion that the adaptive mechanisms of pretense vary as a function of socioemotional functioning. The quality of fantasy measures

correlated significantly with ego-resilience. In particular, greater resilience was associated with greater theme integration and emotional investment. In addition, high quality pretense was more characteristic of children with good concurrent and early social adjustment. As regards content, securely attached children and children high in social adjustment displayed a balance of positive themes and negative themes. In contrast, insecurely attached and acting-out groups enacted more negative and aggressive themes, whereas withdrawn children showed a low overall frequency of themes. Of significance for the emotional mastery hypothesis, acting-out children were less able to design resolutions to fantasied problems than their more behaviorally competent peers.

These findings suggest that children's social and personality adjustment is reflected both in their ability to organize their play for maximum enjoyment and benefit and in their willingness to confront any negative and conflictual material embedded in the thematic content. Thus it may be that socially mature, elaborate fantasy behavior which deals with intense affect-laden themes is primarily accessible to well-adjusted children. However, since these conclusions apply to a population of at-risk children, it was of interest to determine whether they could be extended to the present sample, where variations in socioemotional adjustment were in the normal range. Moreover, it remains to be explored whether certain skills expressed in the pretend play context itself (e.g. degree of social and emotional organization) bear a relation to emotional mastery which is independent of the more long-standing adjustment

characteristics such as ego-resiliency and impulse control. This question was examined in the present study.

### Statement of purpose

This project constitutes an investigation of the quality and content of pretend play as they relate to the relational status of play partners, age and socioemotional functioning. In contrast to the bulk of the literature which focuses on the structural aspects of fantasy and the expression of socially skilled behavior within play, the present study is an attempt to provide more information on the interconnections between social organization and emotional meaning in fantasy play. Social and emotional aspects of fantasy and non-fantasy play are assumed to vary in the manner described by the following hypotheses:

1. Social pretend play is expected to differ from social nonpretend play in that it will involve a higher degree of social coordination, more sharing of play themes, greater emotional investment, and fewer and shorter social conflicts. In addition, because pretense is thought to stimulate more complex social involvement, higher-level social coordination will follow the onset of pretend play with a shorter latency than nonpretend play.
2. The above differences in the quality of play interactions are expected to be accentuated when one's play partner is a friend as opposed to an acquaintance



or a stranger. Moreover, playing with a friend is expected to elicit an increase in the amount and duration of social pretending.

3. When compared to playing with a familiar peer or a stranger, pretending with a friend is expected to lead to greater expression of psychosocial issues in general, to greater ease in expressing negatively-valenced issues, and to a greater number of attempts at resolving pretend dilemmas.

4. Overall, the expression of psychosocial issues will decrease with age. However, older children will express more intrapsychic and interpersonal concerns (concerns for affiliation, psychological empowerment, social regulation), more negatively-valenced issues, and they will use more positive strategies to resolve negative issues incorporated into their pretend scenarios than younger children. The latter will evidence more action- and object-oriented concerns (mastery, respect for property, physical well-being).

5. There will be significant positive correlations between the quality of social fantasy play and individual differences in socioemotional adjustment and understanding. These correlations will be higher than those obtained with nonpretend play. The expression and resolution of psychosocial issues will be positively correlated with socioemotional competence.

6. Social coordination and investment in pretense will add to the prediction of the expression and resolution of psychosocial issues afforded by measures of socioemotional competence. That is, factors inherent to engagement in social

fantasy will enhance the prediction of emotional mastery over and above that contributed by preexisting competence factors.

7. Sequential contingencies between quality of play and emotional expression are such that the latency to the expression of psychosocial issues will be shorter following high social involvement in pretense than low social involvement in pretense. It is also probable that these sequential processes will be more likely to occur among friends than among acquaintances or strangers.

## Method

### Subjects

The sample consisted of 24 target girls, 12 4 year-olds ( $M = 52.4$  mos.,  $SD = 2.6$ ) and 12 6 year-olds ( $M = 73.2$  mos.,  $SD = 3.1$ ). Each target child was paired with 3 different same-age, same-sex play partners for the three play sessions: a friend, a familiar peer and child with whom they were unacquainted, for a total of 72 dyads, or 72 sessions of play observation. Age discrepancies between targets and their partners averaged 3.5 months for friends, 4.5 months for acquaintances and 2.7 months for strangers. There were no significant differences in the size of discrepancies across conditions.

The 4-year-old children were recruited from 17 Montreal daycare centers whereas the 6 year-olds were recruited from kindergarten and grade 1 classes in elementary schools located in the same central areas of the city. Both the daycares and the schools service the French-speaking community. While all children spoke French during the play sessions, 3 4-year-old targets, 3 of their friends and 1 acquaintance did not speak French at home. However, variation in the number of children who spoke French at home as a function of age or partner group did not exceed chance levels,  $\chi^2(3) = .35$ , ns. A French version of the Peabody Picture Vocabulary test, the EVIP (Dunn, Dunn & Whalen, 1993), was administered to all subjects to rule out large discrepancies in French receptive verbal skills within dyads of acquaintances and strangers.

Approximate IQ (based on PPVT-R norms) did not vary significantly with age,  $t(22) = 1.45$ , ns, or partner group  $F(3,88) = .38$ , ns.

Socioeconomic status (Hollingshead Four-Factor Index of Social Position, 1975) of targets and their partners ranged from low to middle SES ( $M = 46.12$ ,  $SD = 13.08$  for the 4 year-olds;  $M = 40.02$ ,  $SD = 12.85$  for the 6 year-olds). The scores did not vary systematically as a function of the age group of the target child,  $t(22) = .87$ , ns, or of play partner groups (i.e. targets, friends, acquaintances and strangers),  $F(3,88) = .36$ , ns.

### Pairings

A free-choice picture sociometric interview (Asher, Singleton, Tinsley & Hymel, 1979; McCandless & Marshall, 1957) was used to identify dyads of friends. Reported through this method, the friendship nominations of preschool and kindergarten children have been found to be of acceptable reliability (Boivin, Tessier & Strayer, 1985; Hymel, 1983) (Sociometric interview instructions are presented in Appendix A).

In a given daycare or kindergarten group, each child for whom parental consent was obtained was shown photographs of all her classmates and was asked to select three friends and three children whom she did not like. (Children drew from the entire pool of classmates and were not restricted to a subset of children whose parents had given consent.) As a check on this procedure, the child was then asked to place the photographs of her peers into one of three

boxes: one with a smiling face for the children she liked a lot, one with a neutral face for those she liked a little and one with a sad face for those she did not like. The sociometric interview and preference classification was repeated at the end of a three-week interval to ensure stability of choices. Friend pairings were based on the mutuality of choices (each member of the dyad must have chosen the other as a friend) and on classification of the friend in the "like a lot" category. Familiar partners were selected among peers with whom the child associated on a daily basis, but who were neither friends nor nonpreferred associates of the target child. Unacquainted partners were selected from daycares and schools other than that of the target child. Sociometric interviews were conducted at the school or daycare.

#### Measures of socioemotional functioning

Emotional perspective-taking. Instructions and scoring criteria are presented in Appendix B. Three perspective-taking tasks were combined to ensure that the level of difficulty was appropriate across age groups. The first four items of the task constitute an exercise in simple decentration (Lefebvre-Pinard & Strayer, 1980). The child was told a brief story accompanied by a drawing in which the main character's features are left blank. Following the story, the child was asked to attribute the appropriate facial expression to the same-sex story character by choosing among three cardboard face drawings representing happy, sad or neutral emotions. Two items pertained to a positive situation and

two to a negative situation. For example, "This little girl is in the hospital. She'd very much like to go to her friend's birthday party but the doctor says she's too sick. What face would you put on her?"

The next two items were developed by Urberg and Docherty (1976) and require that inferences about two different story characters be made sequentially (sequential decentration). For instance, the child was shown a picture of two children fighting over a ball and was told: "This is a story about you. Both you and your friend want to play with that ball. Then the teacher comes over and gives you the ball. How do you feel? How does your friend feel?" The child was to choose between happy, sad, angry or afraid facial expressions.

The last two items were based on Urberg's and Docherty's (1976) adaptation of a measure developed by Flavell, Botkin, Fry, Wright, and Jarvis (1968), requiring simultaneous consideration of conflicting perspectives toward a similar situation. In each story, the main character's affective state changes drastically. A second character is introduced following this change. The child must identify both the changed affective state of the main character and the affective state of the second character who has not witnessed the event producing the change. For example "This is a story about you. You are outside and you see a pretty dog. You reach down to pet it but it growls at you. How do you feel? You run home and you close the door behind you.

Later, another child comes down the street and sees the dog. How does she feel?"

The children were asked to provide justifications for their answers on each of the items. Two points were allocated for each correctly identified affective state. An appropriate justification for the affect received an additional two points, for a maximum total score of 48. (See Appendix B for additional scoring criteria.) Testing of perspective-taking took place in the laboratory setting following the first play session.

Ego resiliency and Ego control. The California Child Q-Set (CCQ; Block & Block, 1980a) was used to derive measures of ego resiliency and ego control. Block and Block's (1980b) notion of ego resiliency implies flexibility in the utilization of resources for adapting to and coping with environmental demands. Such flexibility allows for planful and organized behavior or spontaneous and impulsive engagement depending on the requirements of a particular situation. The authors define ego control as the capacity to contain and modulate the expression of impulses, feelings and desires in the service of higher-order goals. Mid-range functioning on the continuum of ego control is considered adaptive, whereas the end-points (undercontrol and overcontrol) can be associated with unchecked/indiscriminate or inhibited/constrained expression of needs.

Parents were asked to sort 100 behavior descriptors printed on separate cards into nine piles (administration procedure is described in Appendix 'C'). Placement determines the extent to which the descriptor characterizes the child (from extremely typical to extremely atypical). The Q-sort method minimizes set and social desirability biases by requiring a fixed number of items to be placed in the nine categories. Ego resiliency and ego control scores were obtained by correlating the parents' sorts with "expert" or criterion sorts of the prototypically ego-resilient and ego-undercontrolling child. The correlation coefficients thus reflect the degree of congruence between the parents' perception and the criterion definitions. High positive scores (Pearson coefficients) indicate adaptability and low impulse control, whereas high negative scores indicates inflexibility and high impulse control. Correlation between the two constructs is usually low and nonsignificant.

Construct, convergent and predictive validity of the ego resiliency and ego control measures were examined by correlating scores derived from the CCQ at age 3 with scores from a battery of conceptually-related laboratory tasks, both contemporaneously and at three later time points (Block & Block, 1980b). Eleven of the 12 correlations between ego resiliency measures and 7 of the 9 correlations between the ego control measures were significant. Gove and Arend (1979) provide further evidence of construct validity and generalizability of the ego resiliency and ego control measures to a different sample. In addition, securely-attached toddlers were found to score higher on experimental and Q-



sort indices of ego resiliency at ages 4 and 5 than insecurely-attached toddlers (Block & Block, 1980b).

In our sample, a measure of inter-rater reliability was obtained by comparing the perceptions of mothers and fathers, when both were available ( $n = 9$ ). Correlation coefficients ranged from .31 to .69,  $p < .001$ , with a mean of .54. Moreover, follow-up data confirmed the stability of the two measures of adjustment over a 3 year period ( $r(20) = .53$ ,  $p < .01$  for ego resiliency;  $r(20) = .75$ ,  $p < .001$  for ego control) (O. Tessier, personal communication, February 1993). (Sample attrition accounts for lowered degrees of freedom.)

### General procedure

The target child participated in three free play sessions on three separate occasions occurring at one to three week intervals, each time with a different partner (friend, familiar, stranger). Sequencing of the partnerships was counterbalanced using a latin square design. The sessions took place in the laboratory playroom of the Center for Research in Human Development of Concordia University. The playroom is equipped with videocameras and microphones controlled from an observation booth located behind a one-way mirror. The children were escorted to the playroom by a familiar experimenter who had conducted testing with them in the school or daycare. The experimenter informed them that they could play with any of the toys in any way they liked while "we do a bit of work with your parents". The experimenter also

informed them that the videocameras would be "watching them" to make sure they were alright, that she would not be far and that they could call her should they need anything. The play sessions were videorecorded continuously for a total duration of 40 minutes each.

The playroom was also equipped with toys designed to maximally stimulate pretend play and, to a lesser extent, games-with-rules (Connolly, Doyle & Reznick, 1988) (See Appendix D for the list of toys). They included a doctor's kit, dress-up materials, musical instruments, telephones, picnic accessories, velcro darts etc. Since the target children participated in three play sessions, three equivalent sets of toys were constituted to prevent a waning of interest over time. The assignment of toy sets was also counterbalanced across the dyadic partnerships and the sequence of play sessions.

During the play session, the children's parents were asked to complete the California Child Q-Sort in a separate room. Following the session, each child was administered the measure of emotional perspective-taking.

#### Observational procedure

The first 10 minutes of each session were considered a period of familiarization with the toys and the playroom. Therefore, only the last 30 minutes of each play session were used for observational coding, yielding a total of 90 minutes of observational data for each target child across the three sessions.

Verbatim transcripts of the children's verbalizations, including descriptions of their non-verbal behavior, were used in conjunction with the videotaped play sessions to facilitate coding. Behavior was broken down into turns -- i.e., unbroken utterances/nonverbal responses by a member of the dyad with no significant pauses. Each turn received a code or series of codes corresponding to the observational measure(s) of interest. The transcripts were also divided into 30-second intervals, thus permitting dependent measures to be operationalized in terms of duration.

Observers were trained to achieve a minimum agreement of 80% and a Kappa coefficient of .70 with a second independent coder on each of the coding categories. Inter-coder reliability was calculated in terms of percent agreement and coefficient Kappa for 20% of the data. Weekly meetings were held to discuss disagreements and prevent "observer drift" from the original meaning of code definitions. Observers were blind to the composition of the dyads as regards relational status, and all but the author remained blind to the hypotheses of the study. Potential coding biases in favor of the hypotheses were minimized by adherence to strict operational definitions of the coding categories and, for most codes, by the necessity of obtaining inter-observer agreement on relatively small samples of behavior, i.e. turn units, which preclude global judgements. Moreover, since activity mode, level of social coordination and psychosocial issues were each coded in separate passes

through the data and involved agreement between different coders, biases of interdependence among coding categories were also unlikely.

### Observational measures (See Appendix E)

In a first pass through the data, observers noted the occurrence of pretend or nonpretend play and whether or not these activities were shared by the play partners. Pretend play was defined as non-literal treatment of objects, setting and/or identity, as conveyed primarily by the child's verbalizations. Thus, in the child's imagination, a belt could take on the properties of a whip, the playroom could become a circus ring, or the child him/herself, a lion tamer. This category includes enactment, the actual carrying out of pretend actions and verbalizations, and framing, announcement or negotiation of future and ongoing pretense activity. Nonpretend play refers to the manipulation of materials in accordance with their customary uses, such as building or playing a game, without introducing pretend elements or transformations. It also includes chasing, play fighting or just "acting silly". Shared play was distinguished from nonshared play by the children's focusing on a single common game or pretend scenario, by involvement in common play goals.

Investment in play was also coded in the first pass. Investment refers to the degree of absorption and enthusiasm displayed during play episodes and is assumed to tap the capacity or inclination to sustain play activity (Rosenberg, 1984; Singer, 1973). Each uninterrupted pretend and nonpretend play

sequence was coded as reflecting either high, medium or low investment. A seven-point investment scale in the Rosenberg (1984) study yielded a .85 correlational inter-rater agreement rating. In addition this measure was correlated with ego resiliency and discriminated between three groups of varying social competence in the expected manner.

The level of social coordination (adapted from a scale elaborated by Gottman (1983)) and the occurrence of social conflict were coded in the second pass. There were six levels of social coordination (see Appendix E), escalations to a higher level being characterized by an increase in the demands for social responsiveness or participation as compared to the previous level (Gottman, 1983). For instance, in the shift from 'Asymmetrical exchange' to 'Symmetrical exchange' (levels 5 and 6), the play partners go from joint activity, where influence attempts originate from only one child, to mutual influence attempts, where each child becomes active in organizing the activity. High-level social coordination refers to the combination of levels 5 and 6, described above, and represents a mutually-directed, highly collaborative form of play. Social play (pretend or nonpretend) was defined as play at social coordination levels 3 and above, i.e. play which, at a minimum, is somewhat connected and involves social bids. The occurrence of social conflict was defined as a sequence of two or more oppositions or disagreements with the aims or desires of the play partner (Garvey, 1987; Shantz & Hobart, 1989).

The nature, valence and resolution of psychosocial issues were identified in pass 3. Psychosocial issues refer to the underlying affective themes of pretend play. Derived from the theoretical conceptions of Peller (1954) and Erikson (1963), and from the work of Fein (1989), six basic issues were recorded as well as their valence (positive or negative): a) Affiliation or the portrayal of close interpersonal relationships and attachments versus conflicts, separations and rejection; b) Physical well-being or the portrayal of situations affecting bodily well-being, i.e., health versus illness, fulfilment or deprivation of needs for food, sleep or shelter; c) Empowerment or representations of power, competence and prowess versus vulnerability, helplessness and defeat; d) Social regulation, referring to portrayals of compliance with social expectations, obligations and authority versus defiance, transgressions and rule violation; e) Respect for property, involving concerns over the intactness of or damage to material objects; and finally, f) Mastery, reflecting concerns for the emulation of adult roles and competencies, strivings for autonomy, i.e. doing things on one's own, being older and more skilled versus needing help, "being a baby" or failing to perform a task adequately.

Adapted from Sutton-Smith's (1984) stages of conflict resolution in children's spontaneous narrative productions, the resolution of negative-valence issues reflected in pretend play was rated along a four-point scale corresponding to increasing levels of maturity in confronting challenge. Level 1 was coded when no resolution attempt was made; level 2 corresponds to a failure to resolve the

problem, i.e. the negative situation prevails; level 3 resolutions are positive but passive attempts: escape, avoidance, intercedence of magic or luck; level 4 resolutions are positive and active: the damage is repaired, the threat or obstacle is actively dealt with and overcome. Sutton-Smith's is the only developmental scheme of classification for fantasied conflict resolutions. In studying the structural characteristics of children's stories, the author found that older children tended to tell stories with higher-level resolutions, whereas younger children either stated the conflict situation but left it unresolved or related resolution attempts that were not successful in nullifying the conflict. Our culture's belief in achieving an active stance toward one's fate is thought to underlie this developmental trend. It was suggested that symbolic play and narrative fantasy, although they emerge at different stages, rely on similar mechanisms for the construction and communication of dramatic storylines. A reasonable supposition is that levels of conflict resolution in dramatic play should emerge in a similar developmental sequence than occurs in children's spontaneous stories.

## Results

### Stability of friendships

Since the selection of target children was based in part on the stability of at least one friendship choice, all target girls had one or more stable friends among their sociometric choices. The dyadic friendships were considered stable inasmuch as they remained among the three sociometric nominations or were given the highest preference ranking after a three week interval. Data pertaining to the stability of the target children's friendships, in general (i.e., not just with their play partner for the observational sessions), were obtained through a comparison of responses to the first and second sociometric interviews. For 5 of the 4 year-olds (42%) and 6 of the 6 year-olds (50%), the best friend selection of the first interview was among the three choices at the second interview, i.e. the friendship choice was retained over the 3-week interval separating the interviews. A frequent configuration of the stability of choices among both age groups (33% of cases) was for two friendship choices to reappear at the second interview, but in a different order of preference. However, among 6 year-olds, another 33% of children had one stable choice in the same order of preference. Only three 4 year-olds (25%) and two 6 year-olds (17%) made the same three choices twice. Differences between age groups in the stability of friendships were nonsignificant.



### Observer reliability

Inter-rater reliabilities were computed on 20% of the observation trials in terms of percentage agreement and Cohen's (1960) Kappa ( $K$ ). Reliability estimates pertain to related groups of codes belonging to behavior categories, thus implying agreement in the discrimination among codes in a particular category. However, raters were trained to obtain agreement on particular codes. A summary of reliability estimates is provided in Table 1. All  $K$  coefficients obtained are considered fair to excellent (Fleiss, 1981), although overall percentage agreement for the levels of social coordination fell below 80% due to the stringency of the turn-by-turn observation procedure followed for this code.

### Quality of pretend versus non-pretend play

The quality of social pretend and nonpretend play was measured in terms of the proportion of seconds of social play involving high-level social coordination (defined as asymmetrical and symmetrical exchange, combined; see Appendix E), the proportion of seconds of social play during which the focus of play was shared, the mean level of investment in social play episodes, and the number and duration of social conflicts. In addition to play quality, the time elapsed between the onset of social pretend/nonpretend play and the onset of high social coordination was used as a measure of the propensity for complex social interaction to ensue from engagement in social pretend or nonpretend play.

Table 1

Inter-observer reliability for code categories

Code category	% Agreement	Kappa
Activity mode (pretend/nonpretend/other)	80	.70
Sharing / Not sharing	88	.69
Investment in play (low/medium/high)	80	.61
Social coordination (levels 1 to 6)	75	.65
Conflict / No conflict	98	.69
Psychosocial issues	82	.67
Valence of issues (positive/negative)	95	.90
Issue resolution (levels 1 to 4)	89	.84

Since interest was in each of these variables separately, separate univariate analyses of variance of the measures were conducted (Huberty & Morris, 1989). Intercorrelations among play quality variables are shown in Table 2.

Variation in the quality of play measures and in the latency to high involvement as a function of the age group, the relationship to the play partner (friend, acquaintance or stranger) and the mode of play (pretend vs. nonpretend) was analyzed using 2 (age) x 2 (play mode) x 3 (partner) ANOVAs, with mode of play and partner as repeated factors<sup>1</sup>. Where significant effects of partner were found, matched-pair T-tests, with a Bonferonni correction, were used to evaluate the differences. Since IQ was correlated with sharing and with investment (see Table 2), variance attributable to IQ was controlled by covariance in analyses of these two dependent measures.

Preliminary analyses were performed to investigate any influence of the order of partner pairings on play quality measures. ANOVAs as a function of order (6), partner (3) and play mode (2) revealed no significant effects or interactions involving order.

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<sup>1</sup>Note: Because the time spent in each play mode was unequal, the above analyses were repeated, excluding play mode as a factor, to ensure that F-tests for effects of age group, partner and their interactions were accurate when collapsed across play mode. Reported F values and significance levels for age effects, partner effects and their interactions are those obtained in this manner.

Table 2

Intercorrelations among quality of play variables and IQ (n = 24)

	1	2	3	4	5	IQ
Hi coord. (1)	—	.00	-.32	.27	.25	-.12
Sharing (2)		—	.52**	.21	-.42*	.58**
Investment(3)			—	.22	.21	.57**
Nb. Conflicts (4)				—	-.19	.14
Dur. Conflicts (5)					—	-.02

\* $p < .05$  \*\* $p < .01$

For each ANOVA, assumptions of normality, and homogeneity of variance were evaluated, with satisfactory results. Moreover, no violations of the homogeneity of covariance (or regression) assumption were detected in the cases where ANCOVAs were performed. In the event that the sphericity assumption for repeated measures ANOVA or ANCOVA was violated, the Geisser-Greenhouse conservative  $F$ -test was used. No univariate outliers were found.

The proportion of high-level social coordination was greater in pretend than in nonpretend social play,  $F(1,21) = 17.71$ ,  $p < .001$  (Analysis of variance summary tables are presented in Appendix F). Moreover, girls engaged in more highly coordinated play with a friend or an acquaintance than with a

stranger,  $F(2,44) = 3.92, p < .05$ . However, friend and acquaintance partner conditions did not differ from one another with respect to the proportion of highly coordinated play. Means and standard deviations for these effects are presented in Table 3. A marginally significant interaction of partner and age,  $F(2,44) = 2.74, p < .08$ , suggested that differences between familiar peers and strangers tended to be more pronounced among the 4 year-olds. (Means for this marginal interaction effect can be found in Appendix G.)

Analyses of play sharing and investment used IQ as a covariate. Sharing differed significantly as a function of age,  $F(1,21) = 4.14, p = .05$ , with older children spending a greater proportion of time sharing the goal or focus of play than younger children. In addition, a greater proportion of time was spent sharing play goals when engaged in social pretend as compared to social nonpretend play  $F(1,21) = 19.50, p < .001$ . Finally, social play among friends involved the greatest proportion of sharing, and a greater proportion was found among acquaintances than strangers,  $F(1.2,26.2) = 9.47, p < .01$ . Means and standard deviations for effects on sharing are displayed in Table 4.

The average level of emotional investment during episodes of play was greater in the pretend mode than in the nonpretend mode,  $F(1,21) = 13.38, p = .01$ . In addition, partner conditions had a differential impact on investment,  $F(2,44) = 7.43, p < .01$ , such that children were more invested in their play when playing with either a friend or an acquaintance than when playing with a stranger. Moreover, with the effects of IQ controlled, level of investment did not

Table 3

Mean proportion of seconds of social play involving high-level social coordination

Mode of play			
	Pretend	Nonpretend	
<u>M</u>	.33	.23	
(SD)	(.16)	(.12)	
Relationship to partner			
	Friend	Acquaintance	Stranger
<u>M</u>	.30 <sup>a</sup>	.32 <sup>a</sup>	.23 <sup>b</sup>
(SD)	(.11)	(.10)	(.13)

Note. Means with different superscripts differ significantly at  $p < .05$ .

Table 4

Mean proportion of seconds of social play involving a shared focus

Age group			
	4 year-olds	6 year-olds	
adjusted <u>M</u>	.64	.72	
( <u>SD</u> )	(.25)	(.14)	
Play mode			
	Pretend	Nonpretend	
<u>M</u>	.75	.58	
( <u>SD</u> )	(.23)	(.23)	
Relationship to partner			
	Friend	Acquaintance	Stranger
<u>M</u>	.74 <sup>a</sup>	.67 <sup>b</sup>	.58 <sup>c</sup>
( <u>SD</u> )	(.19)	(.22)	(.30)

Note. Means with different superscripts differ significantly at  $p < .05$ .

differ significantly as a function of age group,  $F(1,21) = 0.43$ , ns. Table 5 presents means for these effects.

Differences in the number of conflicts as a function of age, partner and play mode were assessed using an analysis of covariance, with variability in the time spent in pretend and nonpretend play as covariates. No significant effects were found. However, there was a trend for an effect of play mode,  $F(1,21) = 4.04$ ,  $p < .06$ , according to which conflicts were more frequent in social nonpretend ( $M = 2.19$ ,  $SD = 1.84$ ) than in social pretend play ( $M = 2.00$ ,  $SD = 2.27$ ).

In the analysis of the average duration of conflicts, a high number of case deletions due to divisions by zero occurred when partner and play mode factors were analyzed together, because several children did not engage in conflicts when pretending with a stranger. Therefore, separate age x partner and age x play mode ANOVAs of the duration of conflicts were performed, which also failed to reveal significant effects.

An ANOVA of the latency to high social coordination revealed a significant interaction between the play mode and the relationship to the partner,  $F(2,36) = 3.34$ ,  $p < .05$ . Matched T-tests showed that the latency to high social involvement was shorter in pretend than in nonpretend play when the partner was a friend or an acquaintance,  $p < .05$  (See Table 5 for significant mean differences). Mean differences between partner conditions within play modes were only marginally significant ( $p < .10$ ). Compared to the play of familiar peers, playing with a stranger tended to result in longer delays to the onset of



Table 5

Mean level of investment in play

		Mode of play		
		Pretend	Nonpretend	
<u>M</u>		1.94	1.67	
<u>(SD)</u>		(.57)	(.45)	
		Relationship to partner		
		Friend	Acquaintance	Stranger
<u>M</u>		2.02 <sup>a</sup>	1.92 <sup>a</sup>	1.63 <sup>b</sup>
<u>(SD)</u>		(.38)	(.32)	(.52)

Note. Means with different superscripts differ significantly at  $p < .05$ .

Table 6

Mean latency (seconds) to high social coordination as a function of play mode and relationship

Play mode	Relationship to partner		
	Friend	Acquaintance	Stranger
Pretend			
<u>M</u>	7.76 <sup>a</sup>	6.10 <sup>a</sup>	9.20 <sup>a,b</sup>
<u>(SD)</u>	(5.02)	(4.63)	(2.94)
Nonpretend			
<u>M</u>	9.77 <sup>b</sup>	8.43 <sup>b</sup>	6.83 <sup>a,b</sup>
<u>(SD)</u>	(3.72)	(2.44)	(5.19)

Note. Means with different superscripts differ significantly at  $p < .05$ .

high social coordination in pretend,  $p < .10$ , and shorter delays in nonpretend play,  $p < .10$ . The rapidity of onset of high-level coordination in pretense did not vary with the age of the child.

### Social pretend play

Although interactions of play mode and partner in the overall analyses of social play quality were not significant, a more specific test of hypothesized partner effects on quantitative measures of pretend play was conducted via ANOVAs of the time in social pretense and of the average duration of shared pretend play episodes as a function of age group and partner. While age groups did not differ with respect to time in social pretense, the effect of partnership was significant,  $F(2,44) = 6.03$ ,  $p < .01$ , indicating that children engaged in more social pretend play with a friend or an acquaintance than with a stranger. Means and standard deviations are presented in Table 7. The mean percentage of time devoted to social pretend play was 39% with both friends and acquaintances and 22% with strangers (33% of the total time in all three partner conditions was devoted to social pretense, compared to 29% devoted to social nonpretend play).

Analysis of the duration of shared pretend episodes (subjected to a square root transformation due to positive skewness) revealed a significant age group effect,  $F(1,20) = 15.44$ ,  $p < .001$ , with 6 year-olds engaging in longer episodes of shared pretense than 4 year-olds, and a significant partner effect,  $F(2,40) =$

Table 7

Mean number of seconds of social pretend play in each partner condition

	Relationship to partner		
	Friend	Acquaintance	Stranger
<u>M</u>	708.00 <sup>a</sup>	698.00 <sup>a</sup>	398.71 <sup>b</sup>
<u>(SD)</u>	(385.05)	(273.07)	(401.29)

Note. Means with different superscripts differ significantly at  $p < .05$ .

11.14,  $p < .001$ , such that longer episodes occurred when children played with either a friend or an acquaintance than with a stranger. Table 8 contains (untransformed) means for the duration of shared pretend episodes.

Affective issues in the content of pretend play

Since few of the categories of psychosocial issues and levels of issue resolution occurred frequently enough in all combination of age group and relational context to be analyzed individually, they were combined into larger categories. On theoretical grounds, Physical well-being, Respect for property and Mastery were grouped together as less developmentally advanced (low-level issues) whereas Affiliation, Social regulation and Empowerment were grouped as more developmentally advanced (high-level issues). Likewise, the four levels of resolution of negatively-valenced issues (see Appendix E) were

Table 8

Mean duration of shared pretend episodes (seconds)

Age group			
	4 year-olds	6 year-olds	
<u>M</u>	89.97	177.64	
<u>(SD)</u>	(95.14)	(185.74)	
Relationship to partner			
	Friend	Acquaintance	Stranger
<u>M</u>	207.73 <sup>a</sup>	144.77 <sup>a</sup>	60.86 <sup>b</sup>
<u>(SD)</u>	(221.74)	(104.91)	(66.60)

Note. Means with different superscripts differ significantly at  $p < .05$ .

combined to form two new categories: negative resolution (combining No response and Failed resolution) and positive resolution (combining Passive and Active resolutions). (See Table 9 for means and standard deviations of issue and resolution variables, for each partner condition.)

Because some of these measures were conceptually or statistically redundant (e.g. total issues vs. negative issues:  $r(22) = .83, p < .01$ ), only three were retained for analyses. Two ANOVAs ( $2 \times 3$ ) were performed to investigate any effects of age group and relationship to the partner on the first two variables, each expressed as a proportion of the time devoted to social pretend play: total issues (summed across valence and level of issues) and high-level issues (summed across issue valences). Another ANOVA examined age and partnership differences in the proportion of negatively-valenced issues resolved positively. Intercorrelations among issue and issue resolution variables subjected to ANOVAs are presented in Table 10.

Age and partner influences on the proportion of time devoted to total issues were not significant. Age group differences in high-level issues were likewise nonsignificant. However, the proportion of social pretense time devoted to high-level issues varied significantly as a function of the relationship to the partner,  $F(1.5,30.5) = 3.97, p < .05$ , such that it was greater with acquaintances than strangers,  $p < .05$ . No other partner differences were significant (See Table 9 for means and standard deviations).

Table 9

Means and standard deviations for affective issues and resolution

		Friend	Acquaintance	Stranger
Total issues	<u>M</u>	.38	.38	.31
	( <u>SD</u> )	(.16)	(.17)	(.26)
Negative issues	<u>M</u>	.28	.24	.22
	( <u>SD</u> )	(.17)	(.19)	(.26)
High issues	<u>M</u>	.13	.19	.11
	( <u>SD</u> )	(.11)	(.15)	(.11)
Low issues	<u>M</u>	.24	.19	.19
	( <u>SD</u> )	(.14)	(.14)	(.20)
Positive resolution	<u>M</u>	.14	.20	.15
	( <u>SD</u> )	(.17)	(.27)	(.21)

Note. Issue variables are expressed as proportions of the number of seconds of social pretense whereas positive resolution is expressed as a proportion of the number of negatively-valenced issues.

Table 10

Intercorrelations among issue and issue resolution variables (n = 24)

	1	2	3
Total issues (1)	—	.44*	.31
High issues (2)		—	.36
Positive resolution (3)			—

\*p &lt; .05

As regards the positive resolution of negatively-valenced issues (subjected to a square-root transformation due to heterogeneity of variance), a significant interaction between age and partner emerged,  $F(2,28) = 3.88$ ,  $p < .05$ , showing that in 6 year-olds, a greater proportion of negative issues resulted in positive resolution when the play partner was a friend compared to an acquaintance,  $p < .05$ , whereas in 4 year-olds, the proportion of positive resolution was greater when playing with an acquaintance as compared to a friend,  $p < .05$ . Table 11 presents (untransformed) means and standard deviations pertaining to this effect.



Table 11

Mean proportion of negatively-valenced issues resolved positively

Age group	Relationship to partner		
	Friend	Acquaintance	Stranger
4 year-olds			
<u>M</u>	.05 <sup>a</sup>	.23 <sup>b</sup>	.17 <sup>a,b</sup>
<u>(SD)</u>	(.08)	(.34)	(.22)
6 year-olds			
<u>M</u>	.22 <sup>b</sup>	.13 <sup>a</sup>	.14 <sup>a,b</sup>
<u>(SD)</u>	(.21)	(.18)	(.21)

Note. Means with different superscripts differ significantly at  $p < .05$ .

Correlations of play quality and play content with Q-sort and perspective-taking measures

Tables 12 and 13 present Pearson correlations between measures of pretend and nonpretend play quality (high-level social coordination, investment in play, number of conflicts, duration of conflicts in Table 12 and sharing of play in Table 13) summed across partner conditions, measures of socioemotional adjustment (ego resiliency and ego control) and emotional perspective-taking. For correlations involving sharing of play and perspective-taking, age differences warranted separate examination of associations within age groups. (Age differences in perspective-taking:  $t(22) = 4.29$ ,  $p < .001$ ;  $M_s$ : 4's: 30.9, 6's: 42.4.) All other correlations involved data combined over age groups.

Note that due to the number of correlations between observational and competence measures examined, a more stringent threshold of significance would have been appropriate. However, in view of the small sample size and the exploratory nature of the investigation, results are presented without alpha-level correction.

Ego resiliency was significantly and positively correlated with three of the quality measures: investment in social pretense, investment in social nonpretend play, and the proportion of social nonpretend that was shared in 4 year-olds. Contrary to expectations, both sharing in 4 year-olds and investment bore a stronger relation to ego resiliency in the nonpretend than in the pretend play mode. No significant associations between ego control and play quality were

Table 12

Correlations between play quality and competence measures

	Ego	Ego	Perspective	
	Resiliency	Control	-taking	
	(n = 24)	(n = 24)	4 year-olds	6 year-olds
Play quality			(n = 12)	(n = 12)
Hi soc inv /pretend	-.15	-.23	.32	.03
Hi soc inv /nonpretend	.12	.05	-.06	.08
Investment /pretend	.42*	-.25	.37	.06
Investment /nonpretend	.58**	-.29	.42	.16
# conflicts /pretend	.12	.18	.07	.08
# conflicts /nonpretend	-.25	-.06	.07	-.14
Dur conflict /pretend	.29	.05	.11	.16
Dur conflict/nonpretend	-.15	.07	-.17	.38

\*p &lt; .05 \*\*p &lt; .01

Table 13

Correlations between sharing and competence by age group

	Ego Resiliency	Ego Control	Perspect.-Taking
4 year-olds (n = 12)			
Sharing/pretend	-.01	-.11	.07
Sharing/nonpretend	.57*	-.41	-.22
6 year-olds (n = 12)			
Sharing/pretend	-.06	-.42	.30
Sharing/nonpretend	.17	-.24	-.11

found. The emotional perspective-taking measure likewise did not correlate significantly with play quality measures in either age group.

Correlations of measures of pretend play content (total issues, positively-valenced issues, high-level issues and positive resolution) with ego resiliency, ego control and perspective-taking are presented in Table 14. Significant correlations were found between ego resiliency and the proportion of negative issues ending in positive resolution, as well as between emotional perspective-taking and both total issues and high-level issues in 6 year-olds. The correlation between ego resiliency and positively-valenced issues was marginally significant.

#### Relation of socioemotional competence and play quality to the affective content of play

Hierarchical regression analyses were performed to investigate the relative importance of socioemotional competence (ego resiliency and ego control) and play quality (high-level social coordination and investment in play) in predicting the expression and resolution of psychosocial issues within social pretend play. In view of the small sample size, it was decided to restrict the variable set to those measures that did not show variation with age and to collapse data over age groups. Therefore contributions of play sharing and perspective-taking were not examined. On the other hand, since differences in prediction were expected depending on the relationship to the play partner, regressions were

Table 14

Correlations between pretend play content measures and competencemeasures

	Ego	Ego	Perspective	
	Resiliency	Control	-taking	
	(n = 24)	(n = 24)	4 year-olds	6 year-olds
Pretense content			(n = 12)	(n = 12)
Total issues	.20	.00	.21	.75**
Positive issues	.36+	-.27	.17	.2?
High-level issues	.12	.27	-.06	.75**
Positive resolution	.43*	.20	.17	-.22

+p < .10 \*p < .05 \*\*p < .01

performed within partner conditions. Based on the low correlations of IQ and SES with criterion measures (see Table 15), these variables were not included as predictors.

Table 15

Correlations between Age, IQ, SES and predicted issue variables

	Age	IQ	SES
Total issues	.12	.31	-.09
High-level issues	.15	.30	.29
Positive resolution	.01	.15	.22

Regression analyses were conducted separately for each condition, on the following three criterion measures: 1) the proportion of time in social pretense involving the expression of psychosocial issues (total issues); 2) the proportion of time involving high-level issues; and 3) the proportion of negatively-valenced issues which were positively resolved. For each analysis, ego resiliency and ego control ("competence" variables:  $r(22) = -.16$ , ns) were entered first as a block, while the time in high-level social involvement and the average level of investment in play ("quality of play" variables) were entered as a second block to assess how much variance in expressed issues could be explained by play quality above and beyond that explained by socioemotional competence.

Examination of residual scatterplots revealed no major violations of the assumptions of normality, linearity and homocedasticity. No univariate or multivariate outliers were found and tolerance levels suggested a high degree of independence among predictors.

In the friend condition, all three regression equations predicting the expression and resolution of psychosocial issues yielded nonsignificant results.

With acquaintances, high-level issues were found not to be significantly related to socioemotional competence in the first step of the hierarchical regression,  $R^2 = .12$ ,  $F(2,21) = 1.41$ , ns. , while the addition of quality of play variables caused a significant 28% increase in explained variance,  $R^2 = .40$ ,  $F(4,19) = 3.21$ ,  $p < .05$  ( $R^2$  change = .28,  $p < .05$ ). In the final equation, the unique contributions of ego resiliency and ego control to the prediction of high-level issues with acquaintances were marginally significant ( $sr^2 = .11$  and  $.09$ , respectively,  $p < .08$ ). High social coordination made a significant unique contribution to the final equation ( $sr^2 = .14$ ,  $p = .05$ ), whereas investment's contribution was marginally significant ( $sr^2 = .11$ ,  $p < .08$ ) (see Table 16).

Total amount of psychosocial issues and positive issue resolution were not significantly related to competence or play quality variables in the acquaintance condition.

With strangers, the prediction of the total amount of psychosocial issues from the competence variables alone was significant,  $R^2 = .44$ ,  $F(2,20) = 7.99$ ,  $p < .01$ . The addition of play quality measures at step 2 did not result in a significant



Table 16

Hierarchical regression predicting high-level issues in the acquaintance condition from socioemotional competence and play quality

Variable	Beta	$s^2$	$R^2$	Adj $R^2$	$R^2$ Chge
<u>Step 1</u>					
Ego Control	.31+	.09+			
Ego Resiliency	.36+	.11+	.12	.03	
<u>Step 2</u>					
Hi Soc Inv	.41*	.14*			
Investment	.34+	.11+	.40*	.28*	.28*

+ p < .10 \*p < .05

increment in the proportion of explained variance, although the prediction equation remained significant overall,  $R^2 = .53$ ,  $F(4,18) = 5.14$ ,  $p < .01$  ( $R^2$  change = .09, ns). At the final step, ego resiliency made a significant unique contribution to predicting total issues ( $sr^2 = .19$ ,  $p < .01$ ) (see Table 17).

The variance in high-level issues explained by socioemotional competence variables alone in the stranger condition was only marginally significant,  $R^2 = .20$ ,  $F(2,20) = 2.58$ ,  $p = .10$ . However, for this criterion, quality of play variables accounted for a significant 39% increase in the proportion of shared variance,  $R^2 = .60$ ,  $F(4,18) = 6.73$ ,  $p < .01$  ( $R^2$  change = .39,  $p < .01$ ). At the final step, both ego control and investment in play contributed significantly on their own ( $sr^2 = .19$ ,  $p < .01$  and  $sr^2 = .40$ ,  $p < .001$ , respectively) (see Table 18).

The prediction of positive issue resolution from competence measures in the stranger condition was not significant,  $R^2 = .21$ ,  $F(2,13) = 1.75$ , ns. The 27% increase in explained variance afforded by play quality measures was only marginally significant,  $p < .10$ . Likewise, the total amount of shared variance between the predictors and positive resolution was marginally significant,  $R^2 = .49$ ,  $F(4,11) = 2.61$ ,  $p < .10$ . Investment in play made a significant unique contribution to the prediction of positive resolution at the final step ( $sr^2 = .27$ ,  $p < .05$ ) (see Table 19).

Table 17

Hierarchical regression predicting psychosocial issues expression in the stranger condition from socioemotional competence and play quality

Variable	<u>Beta</u>	<u>sr<sup>2</sup></u>	<u>R<sup>2</sup></u>	<u>Adj R<sup>2</sup></u>	<u>R<sup>2</sup> Chge</u>
<u>Step 1</u>					
Ego Control	.16	.02			
Ego Resiliency	.50**	.19**	.44**	.39**	
<u>Step 2</u>					
Hi Soc Inv	.13	.04			
Investment	.15	.01	.53**	.43**	.09

\*\*p < .01

Table 18

Hierarchical regression predicting high-level issues in the stranger condition from socioemotional competence and play quality

Variable	<u>Beta</u>	<u>sr<sup>2</sup></u>	<u>R<sup>2</sup></u>	Adj <u>R<sup>2</sup></u>	<u>R<sup>2</sup> Chge</u>
<u>Step 1</u>					
Ego Control	.46**	.19**			
Ego Resiliency	.24	.04	.20+	.13+	
<u>Step 2</u>					
Hi Soc Inv	-.29	.06			
Investment	.74***	.40***	.60**	.51**	.39**

+p < .10

\*\*p < .01

\*\*\*p < .001

Table 19

Hierarchical regression predicting positive issue resolution in the stranger condition from socioemotional competence and play quality

Variable	Beta	$s_r^2$	$R^2$	Adj $R^2$	$R^2$ Chge
<u>Step 1</u>					
Ego Control	.38	.14			
Ego Resiliency	-.01	.00	.21	.09	
<u>Step 2</u>					
Hi Soc Inv	-.17	.02			
Investment	.58*	.27*	.49+	.30+	.27+

+p < .10

\*p < .05

Sequential relationship between high-level social coordination in pretend play and the expression of psychosocial issues

The expectation that the social stimulation afforded by highly-coordinated pretense is more likely to give rise to the expression of issues than social involvement of a less intense nature was tested using a 2 (age group) x 2 (high vs. low level of coordination) x 2 (partner) ANOVA of the latency between the onset of high/low social coordination in pretense and the occurrence of a psychosocial issue. (Note that due to the low frequency of issues in the stranger condition (resulting in case deletions), only friend and acquaintance data were analyzed in this and the following ANOVA.) In addition, to assess the sequential contingencies, a 2 (age group) x 2 (presence vs. absence of issue) x 2 (partner) ANOVA of the latency to high social coordination, given the occurrence or nonoccurrence of an issue, was performed. In combination, these two ANOVAs were designed to investigate the direction of the sequential relation between high pretend coordination and issue expression, i.e. whether the expression of an issue was more likely to follow from high social involvement than vice versa.

The first of these two ANOVAs yielded a significant effect of level of social coordination,  $F(1,19) = 16.39, p < .001$ , which showed that issues occurred more rapidly following the onset of high coordination than they did following low coordination. No other factors were significant in affecting the latency to the expression of issues. No significant effects emerged from the second ANOVA,

suggesting that variation in the latency to high social involvement as a function of the presence of issues did not exceed chance levels. This finding, coupled with the results of the previous ANOVA, lend support to the hypothesis that high social coordination is a precondition of the expression of issues in social pretense, and not the converse. Means relating to these ANOVAs are found in Table 20.

Table 20

Mean latencies (seconds) to issues given high/low coordination and mean latencies to high coordination given an issue/no issue

Level of coordination		
	High	Low
<u>M</u>	3.98	8.06
<u>(SD)</u>	(3.96)	(4.89)
Issue occurrence		
	Yes	No
<u>M</u>	6.57	5.89
<u>(SD)</u>	(7.00)	(3.51)



## Discussion

This study was designed to explore differences in the social and emotional quality of pretend versus nonpretend play as well as the influence of development, adjustment and peer-relational context on the quality and affective content of pretense. The results may be summarized in five main points.

First, the unique value of pretense as a context favoring social and emotional development is affirmed in that young girls exhibit more socially complex behaviors and greater ability to maintain organization despite intense affect during their social pretend play than during social play of a literal nature. Secondly, playing with a familiar partner leads to quicker organization and coordination of social play in a pretend mode and to a higher degree of social and emotional involvement in both pretend and literal social activities.

Surprisingly, both at age 4 and at age 6, the advantage of friendship over familiarity in terms of play quality seems limited to facilitating shared play.

Thirdly, contrary to expectation, adjustment (in the parent's perception) bears a greater relation to investment and sharing in social nonpretend play than in social pretend play. Fourth, in line with the emotional mastery hypothesis, greater socioemotional competence is associated with a greater proportion of positively-resolved emotional issues in pretense and, for 6 year-olds, a greater incidence of themes expressing a concern for affiliation, social roles and power relationships (high-level issues). Facilitative effects of friendship on affective expression may be specific to 6 year-olds, in that positive resolution of pretend

themes was more frequent when 6 year-olds played with a friend than with an acquaintance. However, the expression of issues in a pretend mode does not seem to be potentiated by a closer relationship to the playmate, nor does the nature of issues appear to vary systematically between the ages of 4 and 6. Finally, when the child is playing with a stranger, preexisting socioemotional competence is more predictive of the expression of affective issues in pretense than play quality. In the presence of a familiar peer, high-level issue expression is enhanced by pretense quality, particularly social coordination of the play, whereas individual competence no longer plays a significant role. The direction of causality implied in this statement is substantiated by analysis of sequential processes occurring within social pretend play. Each of these points will be elaborated below.

#### Social pretense quality and the practice of social and emotional skills

This study's comparisons of pretend and nonpretend modes of social play substantiate the claim that social pretend play is a medium for the practice and consolidation of socially mature behavior (Connolly & Doyle, 1984; Connolly et al., 1988). In the context of pretend play, social processes are characterized by modulated affective intensity and by the achievement of a sophisticated interdependence, which is conducive to the joint management of imaginary sequences. Specifically, episodes of social pretense were shown to involve a higher degree of concentration and enthusiasm, more highly coordinated

influence attempts and more sharing of play goals than episodes of nonpretend social play.

The within-subjects design and the use of proportions allows us to conclude that the effects of play mode on behavior complexity are independent of individual differences in competence or preference for one play mode over the other. As regards the social skills reflected in the achievement of coordinated social pretense, accumulating evidence points to the importance of social reciprocity, flexibility, leadership and cooperation. Moreover, it is reasonable to infer that greater sharing of play goals, particularly in pretense, promotes social flexibility, tolerance for the partner's imaginative productions and the workings of her inner world (Göncü, 1991).

Thus, it appears that Parker and Gottman's (1989) contention that the affective task of 3 to 7 year-old children --maintaining behavioral organization in spite of the high arousal state evoked in play situations-- is achieved more prominently through engagement in social pretense. Moreover, while in this sample one of the only specific advantages conferred by friendship was to increase sharing, well coordinated play with a familiar peer was achieved more rapidly within pretend play than within nonpretend play. Therefore, it appears that, aided by the security of a familiar relationship, children are stimulated by the special character of pretense activity to achieve a more rapid escalation of social involvement, thus multiplying opportunities for mature, cooperative and flexible interaction.

The frequency and duration of social conflicts did not play a role in defining the unique character of social pretense. There was a slight and nonsignificant tendency for conflicts to be more frequent in nonpretend play which lends only tentative support to the notion that pretense fosters greater cooperation than nonpretend play. The lack of compelling differences with regard to conflict may be attributable to characteristics of the observational situation (unfamiliar setting, "surprise" pairings, video monitoring), which, by contributing to a degree of emotional insecurity, may have suppressed the sustained negative social displays usually associated with conflict, thus artificially lowering their expression in both pretend and nonpretend contexts.

Gottman and Parkhurst's (1980) findings concerning the management of conflict in play situations suggest that, in some cases, conflict avoidance is essential to the perpetuation of coordinated play. The negative correlation found between play sharing and conflict duration lends credence to this argument. On the other hand, while negotiation of conflicting desires was not frequently expressed overtly, it is difficult to imagine how children could share in imaginary scenarios as well as achieve the more complex forms of social organization within pretense without exerting control over egocentric impulses. Disagreements and skirmishes are but one form of activity permitting children to learn the art of social accommodation or the integration of new points of view. In this setting, the maintenance of a climate of agreement through suppression

of conflict may have been perceived as a basic requirement for sustaining joint play activity.

Consistent with the notion that social competence as expressed in the behavior of pretending peers tends to level off in the late preschool years (Howes, 1988), the quality of pretend and nonpretend play did not vary between age groups in the present study. By age 4, children are already proficient in the art of communicating and coordinating pretend meanings with their peers. On the other hand, corroborating the findings of Doyle, Ceschin, Tessier and Doehring (1991), the 6-year-old girls engaged in longer episodes of shared pretense than the 4-year-old girls, and they also engaged in more shared play, indicating their greater capacity for sustained, mature and interconnected social activity. Greater social maturity may express itself in the older preschooler's increased ability to sustain the coordination of nonliteral meanings and share more consistently in the goals of the play partner.

#### Pretense quality and social competence

In the past, the relation between the display of high-quality play behavior and independent socioemotional competence measures has often been examined exclusively with respect to the pretend mode (e.g., Singer & Singer, 1981; Rosenberg, 1984). Thus, researchers have asserted that higher rates or complexity of pretending were associated with more socially, emotionally or even cognitively competent behavior, without assessing the relative advantages

of pretend play as compared to other play forms. In the present study, the relation was measured in both pretend and nonpretend play contexts to provide a basis for comparison.

That very few correlations between play quality and competence emerged as significant may in part be attributable to low statistical power. With a small sample size, the chances of detecting existing relationships are lower. In the cases where significant correlations were obtained, one would have expected them to show that social pretense required and reflected more adaptive skills than nonpretend play. Instead, they indicated that while parent-perceived adaptiveness was associated with investment in pretense, its relation to investment in nonpretend play was stronger. Moreover, in 4 year-olds, ego resiliency correlated with the propensity to engage in shared nonpretend play, but not in shared pretend play. It appears that the child's capacity for resiliency in response to her environment is more accurately indexed by the quality of her involvement in nonpretend social activity --a finding which is obscured in studies which measure only pretend behavior. For instance, Rosenberg (1984) found that ego resiliency bore a significant relation to pretend play quality, particularly investment ( $r = .42$ ), but it is not known whether the relation to measures of nonpretend play quality would have been stronger, since these were not coded.

A possible explanation for this finding in favor of nonpretend play is that emotional flexibility or resilience may be reflected to a greater extent in children's ability to share and invest in play which is not as rewarding in terms

of the emotional and social stimulation it affords. For the younger children, whose social skills are less well developed, sustaining shared goals in literal play may be more indicative of flexibility or resourcefulness than sharing the focus of pretend play episodes. The sharing of literal play goals may require greater skills for accommodating to the partner because, unlike pretend play, it does not allow for a flexible interweaving of individual agendas (Fein, 1989), and thus may require more explicit coordination of plans.

Alternately, just as the complexity of pretend transformations were found no longer to express growth in children's cognitive capabilities beyond the age of 4 (Watson & Fisher, 1980), the children in this sample may have reached an age at which the social quality of pretense does not bear a substantial relation to emotional maturity. Thus, affective role-taking, the only competence measure which showed a developmental trend, did not bear any relation to play quality, either at age 4 or at age 6. As discussed below, a positive relation between role-taking and pretense content did exist at age 6, suggesting that social competence markers reflected in pretense behavior may shift from quality to content variables when children reach school age.

The lack of significant correlations with ego control may be attributed to the fact that neither undercontrol nor overcontrol of impulses covaries with quality social play. Although it was expected that increasing control of impulses would be associated with better organized, more collaborative play, perhaps it is more

likely that a middle ground between impulsiveness and overcontrol affords a measure of spontaneity essential to coordinated play.

#### The relational context of play

While it was confirmed that pretend play provides a context for more socially and emotionally involved play, it was also expected that when the play partner was a friend, pretense activity would reach higher levels of emotional intensity and become more socially coordinated as compared to the same activity with a partner who was not a friend. Instead, only the proportion of shared play in general, irrespective of play mode, was greater among friends than in the other two relationship conditions. The remainder of findings assessing the influence of the dyadic relationship on play were consistent with those of other studies documenting higher quality exchanges between friends than strangers (e.g., Foot, Smith & Chapman, 1979), or between familiar peers than strangers (Doyle et al., 1980; Rubenstein & Howes, 1976), but failed to highlight the specific role of friendship as opposed to acquaintanceship. That is, although the time spent in social pretend play and the duration of shared pretend episodes were higher in the presence of a friend than with a stranger, playing with a friend was not more conducive to greater time in pretense activity or to a higher degree of social coordination than playing with an acquaintance.

Three related points of explanation can be brought to bear on these findings. First, in order for a specific effect of the friendship relation to emerge,



the social processes observed must bear a stronger relation to dyadic-relationship phenomena than to individual phenomena (Kramer, Bukowski & Garvey, 1989). That is, the effects of friendship on the quality of social play must be so marked as to override the influence of individual factors, such as play style, motivation or competencies, which, in a within-subjects design, would tend to contribute to the consistency of behavior across play sessions with different partners.

Secondly, the context of the laboratory playroom may have served to obscure any differences between friends and familiar peers which would exist in the natural environment of the home or playground. That is, in the contrived and perhaps somewhat worrisome context of the play session, the acquaintance may rapidly acquire the attributes of a dearly valued friend, albeit for the duration of the play session. Stated differently, the advantages of the shared repertoire of friendship may have been overshadowed by a situationally-determined need for emotional security in the acquaintance condition. This interpretation appears to be particularly relevant to the younger group, with its greater tendency toward high social involvement and greater positive issue resolutions in the company of an acquaintance. For these children, the goal of achieving coordinated play may represent more of a challenge in a laboratory context.

Last, but not to be neglected, there is the possibility that the picture-sociometric and preference measures of friendship used in this study were not

sensitive enough to identify the friendships which are most likely to display sharp differences in play quality compared to acquaintances. Corroboration of friendship nominations through free-play observation of associational patterns in the classroom setting, teacher-based validation, or discrimination as to the quality or stability of friendships could have provided a stronger basis for evaluating relational status. After all, a qualitative estimation of friendship stability based on the sociometric nominations showed that only 50% of best friend selections were retained as friendship choices over a three-week period. This appears to represent an underestimate of the stability of young friendships, when compared to Howes' (1988) finding that 65 to 70% of preschoolers remain friends over a one year period. Alternately, it may be an indication that the chosen friends were contemporary short-term friends rather than stable long-term friends, thus attenuating the relation between friendship and the display of social competency within play (Howes, Matheson & Wu, 1992).

These explanations underscore the potential weakness of the friendship variable, as measured, and its inability to override the influence of a variety of uncontrolled factors. Determination of whether this weakness corresponds to the reality of friendship effects on pretend versus nonpretend play in the nursery school and kindergarten years must await observations which control for potential heterogeneity in the quality of friendship associations. Beyond the few reports of differences in certain quantitative aspects of fantasy play between friends and acquaintances in the extant literature (Garcia-Werebe &

Baudonniere, 1991; Roopnarine & Field, 1984; Vespo, 1991), the qualitative dimensions of pretense with friends, i.e., the extent to which friendship may affect emotional and social quality of pretense involvements, have yet to receive adequate empirical documentation. Although Howes, Matheson and Wu (1992) distinguished between different groups of friends and reported an increase in the cohesiveness and coordination of pretend play in stable mutual-friend pairs as compared to non-mutual friends, they did not assess relative superiority of pretend play interactions to nonpretend interactions.

Despite the lack of friendship effects, the play quality differences between familiar peers and strangers should not be dismissed as too obvious. When viewed from the point of view of Berlyne's (1967) theory of arousal, the presence of an unfamiliar peer may have a similar impact to being in an unfamiliar context --that of creating a nonoptimal state of arousal, thus undermining creative interaction and play. Thus, reported increments in social complexity, effective communication and enjoyment with greater peer familiarity (Doyle et al., 1980; Gottman & Parkhurst, 1980; Roopnarine & Field, 1984; Schwarz, 1982) are an indication of this variable's importance in determining the child's emotional state, and the likelihood that s/he will display socially skilled exchanges. Furthermore, since it has been observed that young children spend more time playing with acquaintances than with friends in child care settings (Howes, 1983), and since most of the children in our sample benefitted from either full-time or after-school child care, familiar peers may have had ample

opportunity to develop a shared repertoire of experiences and communicative strategies (Lewis et al., 1975), rendering the quality and sophistication of play behaviors very similar to that of friends. Thus, preschoolers with a high degree of experience with familiar peers may treat them in a skillful and friendly manner. On the other hand, it appears that sharing of the thematic focus of play represents a higher level of intersubjectivity (Göncü, 1991), more readily achieved among friends.

#### The expression of psychosocial themes in social pretense

If friends were not more inclined than acquaintances to increase the levels of social and emotional involvement within pretense, it is perhaps not surprising that girls did not show a greater propensity for expressing various types of affective issues while pretending with a friend. In all probability, the emotional climate of friendship which may have been achieved in more familiar contexts, such as in the children's homes (Gottman, 1986), could not be recreated in this context.

The lack of difference in the expression of psychosocial issues between conditions involving familiar peers (friends and acquaintances) and strangers is more puzzling, particularly in light of the clinical assumption that conditions which enhance the safety of pretense as a medium of expression should enhance the propensity for "working on" unresolved issues (Erikson, 1963). Based on this sampling of data, relational context does not appear to be a

major factor in determining the overall expression of affective themes or issues in pretend play. On the other hand, the presence of a familiar peer appears to be particularly conducive to the expression of issues having to do with affiliation, social roles and power relationships, although no advantage was conferred by friendship in this respect. Although no hypotheses were proposed regarding the nature of issues elicited by the different relational contexts, one may speculate that relationship-oriented issues would be particularly salient in a context where children seek to establish affectively-relevant pretense with a mere acquaintance.

Of course, the explanations proposed above for the lack of friendship effects on play quality also apply to the expression and resolution of affective content in pretense. However, an additional factor seems to be at play in the case of overall issue expression. It appears that, playing with a stranger elicits greater individual variability in overall expression than the other two relational contexts (see Table 10). Thus, it is possible that individual competence factors take on greater importance as regards the expression of affective themes in the stranger condition, thus obscuring differences between conditions due to the influence of the interpersonal factors.

When dyadic factors did find expression, the influence of friendship was to increase the incidence of positive issue resolution, but only in older girls. In an unfamiliar play situation, the facilitative properties of friendship and its advantage over acquaintanceship as regards emotional mastery may only manifest

themselves in older children. For their part, 4 year-olds showed a higher proportion of positive resolutions when playing with an acquaintance. Thus, younger children may be prone to increasing the resolution of their negative themes with acquaintances in the interest of maintaining positively-toned play interactions with a nonfriend associate.

That no age-related changes were observed in the expression of various types of psychosocial issues is not entirely surprising. Although the grouping of issues into two developmental categories (loosely: bodily/autonomy concerns versus relationship/socialization concerns) was in some ways logical, other combinations of the issue categories would also be justifiable based on one's interpretation of the underlying developmental issues. For instance, affiliation themes, particularly those of negative valence, could be judged as belonging to an earlier rather than a later developmental stage in light of theorized early fears of abandonment and loss of love (Peller, 1954). It could also be argued that the expression of certain positively-valenced themes reflects the resolution of their developmentally earlier negative counterparts. That is, once children have gained a certain mastery over, say, a fear of separation, they may play out a mastery attempt in the form of reunion scenes, rather than engage in repetitive enactments of the negative theme in an effort to assimilate it and make it more familiar.

A methodological difficulty in the detection of age differences was that themes which reflect differing stages of psychosocial development may

conceivably be expressed by the same manifest pretend scenario (e.g., mommy driving away from home may involve issues of mastery as well as negative affiliation, i.e. separation). Thus, the latter may sometimes have been coded as an early issue, sometimes as a later one. Clearly, speculation as to the developmental evolution of affective themes in pretend play and the forms that these may take can proceed along many different lines. More satisfying answers could have been provided had each of the themes or issues occurred with high enough frequency to allow for examination of their separate developmental trends. However, at this stage of conceptualization, the grouping of issues into higher and lower developmental levels, although justifiable pragmatically, was likely premature. It is difficult to express with any certainty the form which more advanced or developmentally mature fantasy content may take. In fact, based on the developmental tendency toward more rational dealings with the world, maturity may be reflected not in the content of fantasy enactments themselves, but in the form or degree of elaboration of content. In other words, the underlying issues of fantasy may continue to be made up of irrational fears and wishes, regardless of age. They may remain within the domain of primary process, whereas the child may become more sophisticated in his/her portrayal or representation of these issues.

In any case, greater exploration of the potential developmental sequencing of fantasy content is needed before specific categories of developmental themes can be identified. Rather than impose superordinate issue categories

on the data that were derived from the theoretical literature, in the future, it may be more profitable to develop a taxonomy of pretend play themes based on direct observation of various age groups, to classify them and assess the validity of this classification through further investigation.

Caution should be exercised in generalizing from the results of correlations between socioemotional competence measures and variables pertaining to the expressive function of pretense since they may represent only trends. In addition, considerations of low power reduce the confidence with which we can exclude the possibility that other significant relations exist. Nevertheless, relations found to be significant, between positive resolution and ego resiliency and between overall issues, high-level issues and perspective-taking in 6 year-olds, lend support to the view that emotional expressiveness in social pretense and the imagining of solutions to pretend dilemmas reflects greater flexibility of emotional response and greater understanding of emotional states.

That a relation between overall issue expression and perspective-taking was found only in 6 year-olds indicates that the propensity to use dramatic play as a "stage" for experimenting with affective experiences becomes more closely linked to cognitive capacities as children get older. The propensity for devoting more time to this type of expressive play may depend on the capacity to take distance from emotional experience and to understand the safety and reversibility of the pretend situation. Such capacities probably increase with age. In addition, proficiency in role-taking may mediate the ease with which



personal themes, which are often negatively-toned, can be introduced and woven into social play without frightening or otherwise upsetting the play partner. The association between relationship-oriented issues and perspective-taking skill in older girls is consistent with evidence that, with greater maturity, children are more comfortable with the expression of person-oriented fantasy content (Forbes & Yablick, 1984; Harter & Buddin, 1987). That is, with their greater recognition of internal dispositions (Damon & Hart, 1982), older children who are adept at role-taking may be more interested in portraying motivational and interpersonal issues in their social pretend play.

Whereas emotional role-taking tended to be correlated with the expression of issues in general and the expression of perhaps more developmentally advanced issues, resiliency in challenging situations tended to bear a closer relation to positive themes and showed a significant relation to positive resolution of psychosocial themes. Rosenberg (1984) found that, while a preponderance of negative themes did not appear to distinguish less socially competent or resilient children from others, positive and relationship themes were more frequent in well-adjusted children regardless of the measure of adjustment. Furthermore, our results indicate that ego resiliency is correlated with the ability to take advantage of the safety of pretense in order to reverse the troublesome implications of a storyline and give it positive closure. This finding supports the strong version of the emotional mastery hypothesis, whereby children not only repeat the themes of ungratifying emotional

experiences to substitute an active role to a sense of passivity, but gain further mastery by transforming the negative outcome into a positive one (Freud, 1937). However, since the proportion of negative issues ending in positive resolution was low (.17), it appears that the capacity to produce "happy endings" is not a widespread achievement and that simply expressing issues and practising the integration of emotional experience, frustrating and otherwise, is also reflective of positive adjustment.

While preexisting resources for adaptability appear to bear some relationship to the expression and resolution of issues, a more probing question concerns whether the skills involved in achieving highly coordinated and intense pretend episodes make an additional contribution to the expressive function of pretense. The results of the regression analyses suggest three general conclusions. First, when the child is playing with a familiar peer, the relationship between the quality of emotional and social involvement and the amount of affective themes expressed in pretense is not merely a reflection of the child's social competence. Above and beyond preexisting competencies, processes or skills which are specific to engagement in pretend play are related to children's inclination to "experiment" in a make-believe frame with affective themes.

There are two equally plausible explanations for this finding: either a high degree of social involvement and enthusiasm for pretense facilitates the expression of issues, or the injection of one's personal agenda into the fabric of joint pretend scenarios makes the play more emotionally charged, thus

promoting greater investment and social involvement. Results concerning the sequential relation of social coordination and issue expression support the first of these explanations. That is, the expression of psychosocial issues follows shortly after the attainment of high levels of social responsiveness whereas the expression of affective issues does not appear to give rise more rapidly to high social involvement than play without issues.

A second conclusion derived from the comparison of the regression analyses across relational contexts is that the advantages conferred by the achievement of highly coordinated play as regards issue expression were considerably diminished when children were in the presence of a stranger. Individual competencies appear to take on special importance in the stranger partnership, as seen in their stronger association with the overall expression of issues, outweighing the predictability afforded by features inherent to the social context of play. Thus, ego resiliency, or the flexible and spontaneous use of resources, may be particularly valuable when it comes to the expression of any and all kinds of issues in social pretense with a stranger. Alternately, the expression of high-level or more interpersonally-oriented issues within the context of social play with an unfamiliar play partner may require a high degree of extraversion and assertiveness --behaviors which have been associated with ego-undercontrol in nursery school environments (Block & Block, 1980b).

When play quality did predict the expressive function with strangers, as it did for high-level issues and positive resolution, this contribution had more to do

with the individual child's capacity for affective regulation (investment in play) than with the social qualities of the play context (i.e. social coordination). Although the prediction of positive resolution was marginally significant and should be interpreted cautiously, the contribution of investment was independent of competence, suggesting that the child's absorption and enthusiasm for the play may be more important than other variables, be they related to individual competence or social abilities, in predicting emotional mastery with a stranger.

A recent study confirms that prior social adjustment, i.e. degree of uninhibited behavior with strangers in toddlerhood, is important in determining the social behavior and the expression of pretend affects with an unfamiliar peer at age 5 (Kochanska & Radke-Yarrow, 1992). Our results suggest, in addition, that the expression of personal themes in play with a stranger is more reflective of children's preexisting socioemotional competencies and of their capacity for emotional investment than is expressive play in the presence of a familiar peer. Alternately, it may be that with a familiar peer, the relationship to the playmate serves the functions of adaptive personality resources in terms of allowing the child to achieve a level of comfort and stimulation conducive to freedom of expression in play.

Nonetheless, it appears that the stranger condition elicited greater variance in the proportion of social pretense involving issue expression, and such variation mirrored individual differences in socioemotional competence. A more

restricted range of pretense behavior may have been responsible for the lack of predictability observed in the friendship condition.

### General conclusions

Although there was limited evidence that friendship is facilitative of pretense over literal play, the special character of social fantasy activity is substantiated and its expressive function receives some confirmation. In this unique context, subjective worlds are shared, enjoyment and absorption are maximized and familiar children rise quickly to smoothly coordinated interchanges. In addition, the relationship established between the expression of affective themes and emotional role-taking points to a common underlying feature of these two activities: a capacity for immersion in and elaboration of affective experience of a fictional or "as if" nature, by borrowing from one's personal domain of experience. In that sense, social pretense may foster the development of empathy.

The special nature of pretense can also be gleaned from an examination of sequential relations between measures of quality and content. As the child enters the pretend mode with a familiar peer, escalations to high levels of social coordination are rapid. Once high levels of coordination are achieved, children are more inclined to weave themes of emotional significance into their play, regardless of whom they are playing with. Although the relational context only had a direct impact on the expression of high-level issues, this sequence of

events suggests that partner familiarity is an important factor in the setting of a climate of collaboration which will eventually be conducive to the dramatic elaboration of affective concerns in pretense. The regression analyses confirm that, in the presence of a familiar partner, the social context of play makes an important contribution to the expressive function.

Our testing of the validity of the emotional mastery hypothesis was indirect in nature, i.e. relied mainly on the investigation of the impact of familiarity status, age and socioemotional competence on the rate of expression of affective content in pretense. Based on such an investigation, it would appear that support for the notion that emotional integration of experience is a salient function of pretense is weak. However, two points bearing on methodological and conceptual considerations must qualify this conclusion. First, assessment of the adjustment correlates of emotional expression in the present study may have used measures which were too far removed from the behavioral context of play (i.e., parental perceptions and a socio-cognitive task). With the relatively restricted range of adjustment in our sample, more direct behavioral measures of social adjustment (e.g. ease of group entry) may have established clearer connections.

Secondly and perhaps more importantly, the conceptualization of how attempts to achieve emotional mastery are manifested in fantasy is crucial to the operationalization of this process. As mentioned above, the construct validity of our measures of affective content, i.e. whether they reflect the perceived themes

of emotional development, is unknown. Thus, due to the exploratory nature of our observations, conclusions concerning the lack of substantial variation in emotional mastery attempts as a function of familiarity, age and competency must be drawn cautiously.

On the other hand, findings that such affective themes were detected reliably and independently by a pair of observers, that children were observed to devote a sizable proportion of their time in pretense (.37) to the enactment and negotiation of such themes, that resolution of negative themes was often attempted (if not always successful) and that positive resolution was associated with ego resiliency, together, indicate that the emotional mastery function merits further consideration. Although for most well-adjusted children, the functions of fantasy play may be varied and enacted representations have, on the surface, little bearing on current developmental issues (Kramer & Schaefer-Hernan, 1991), the means by which children "digest" emotional experience in the context of pretend play enactments is an area in need of much clarification.

It remains to be established with more precision what socioemotional skills are implicated in the potentiation of both social involvement and affective expression in pretense. Yet, important clues are provided by observing issue expression in the more "stressful" relational context, the stranger condition, where demands for the modulation of impulse expression and emotional flexibility appear to rise. As suggested by the low frequency of high-level issues and social conflicts among pretending strangers (11 out of 24 did not engage in

conflict during social pretense), this may be a situation where fewer risks are warranted and greater emotional control is required. Nonetheless, it appears that, overall, the enthralling nature of the play activity itself places the expressive possibilities within the reach of most "normal-range" children, regardless of emotional competence.

Any developmental advances occurring between the ages of 4 and 6 do not appear to have a major impact on the quality or content of social pretend play besides producing an increase in average duration of episodes and in the propensity to share play themes. The relative paucity of age trends is in line with evidence according to which cognitive maturation is no longer expressed in the complexity of pretend play behavior beyond the age of 4 (Doyle et al., 1988; Doyle et al., 1991). Presumably, while children's capacities to engage in more socially complex and affectively invested play increases with age, motivational factors, such as a lesser need for the wish-fulfilling function of fantasy play, affect the expression of these capacities.

### Methodological issues

While the most salient methodological issues -- the heterogeneous nature of friendships, the effects of the laboratory setting, multiple levels of inference in the measurement of affective themes -- have already been discussed, other factors affecting the generalizability of findings need to be addressed briefly.



First and foremost, the small sample size, while reducing the likelihood of significant results, also limits the stability and generalizability of findings. Particularly in view of the low frequency of some of the measures and the exploratory nature of hypotheses, replication in other samples would establish findings more firmly. In addition, low statistical power may have been responsible for the inability to perceive significant differences between friend and acquaintance conditions, as in the case of investment in play and duration of shared pretend episodes.

Although little is known about sex differences in the expressive function of pretense, Rosenberg (1984) found that girls express more positive relational themes, whereas boys express more aggressive themes. Kramer and Schaefer-Hernan (1991) reported that girls were rated as more likely to use fantasy to work out issues related to current family concerns, whereas boys were seen as using it to release unacceptable impulses. Other authors have documented the propensity for girls to enact gender-typed roles (i.e. familial, domestic) (Sanders & Harper, 1976; McLoyd, 1983) and for boys to prefer fantastic characters, remote from everyday experience (Ceschin, 1982; McLoyd, Warren & Thomas, 1984). While the relation between these general content categories and the affective meaning of fantasy remains to be investigated, these and other sex differences preclude any generalization from this sample of young girls to the total population.

Finally, since the design of this study made it impossible to control the differential expression of social competence within the various relational contexts, true measurement of the impact of partner relationships was undermined. Studies have shown that the impact of relational status on play quality can be mediated by prior history of social functioning (e.g., Park & Waters, 1989). Sample size permitting, future investigations would benefit from a more direct assessment of the relative impact of competence and relational factors through the selection of social competence groups.

#### Future directions

Being better suited to a predictive outlook, longitudinal data would shed more light on the causality of relations that were established between contemporaneous measures of adjustment and proficiency in the art of pretending collaboratively. For instance, questions essential to the bolstering of the emotional mastery hypothesis, such as the social adjustment consequences of a propensity toward low pretense involvement, negative resolution or suppressed emotional expression have yet to be answered. Furthermore, identification of developmental trends in pretend content will ultimately require the cataloguing of themes and of resolution attempts in a longitudinally followed sample.

In addition, it may be valuable to include both well-adjusted and disturbed groups of children in such a sample, since there are indications that the task of

emotional mastery within pretense takes on different forms, from simple self-disclosure to desensitization to active problem-solving, depending on the socioemotional capacities of the child (Rosenberg, 1984). An investigation of the potential benefits of pairing less competent with more competent peers for promoting higher forms of expressiveness would also be of interest.

The analysis of fantasy content is open to many avenues of investigation. Although the special character of pretense, with its power of connotation and its flavor of personally-relevant drama is intuitively compelling, few attempts have been made to operationalize and quantify the structure and affective meaning of these events through empirical examination. As regards the translation of real-life experiences into pretend metaphors, it is our belief that this transmutation is in no way direct or simple. However, the actual relations between pretend enactments and life events or history of emotional functioning require investigation. Expanding on Fein's (1989) proposal, a valuable next step in the decoding and quantifying of fantasy content would be the identification of the structural components upon which children depend for the construction of affectively-relevant dramatic sequences (i.e. the issue, evocative situation and action response), their evolution with age and their relations to salient, normative life-stage experiences.

### Summary and conclusions

Few investigations of pretend play behavior have focused on aspects of social and emotional involvement and on their relation to the affective meaning of fantasy representations. Fewer still have examined the impact of the relationship to the play partner on such variables. The present study represented an attempt to delineate some of the unique features of pretense; in particular, the quality and psychosocial content of the child's emotional investment in the activity. In addition, since the inclination to pretend appears to serve both personal and social development needs, another objective was to study the manner in which personal investment is related to the demanding task of sustaining joint play of a rewarding nature with a peer.

Comparisons of pretend and nonpretend play modes suggest that researchers, parents and educators should be encouraged to consider social pretend play as a privileged medium for the practice and consolidation of social competencies, regardless of the peer context in which play occurs. Perhaps the greater excitement and stimulation afforded by social pretense are responsible for its uniqueness in fostering sharing, cooperation and leadership skills. In addition, proficiency in the achievement of socially organized fantasy contributes to the ease with which children can use it in its function as a vehicle of emotional mastery.

A major finding regarding the influence of the social context is that the relative importance of social-relationship skills and individual resources in

contributing to the ease of emotional expression in fantasy varies as a function of the peer context. Individual resources appear to carry more weight in determining emotional expression in the presence of an unfamiliar peer, while the quality of the social involvement with the playmate takes precedence with a familiar peer. Relationship and personality factors appear to trade functions in the two relational contexts. On the other hand, even in the presence of a stranger, the child's wholehearted, undistracted investment may increase her ability to use social pretense in the service of emotional mastery. The significance of the child's investment in fantasy attests to the influence of the fantasy play context, as well as competencies exercised during social fantasy play, in fostering emotional development.

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APPENDIX A

Sociometric nominations:  
Interview protocol

## **ENTREVUES SOCIOMETRIQUES**

Cette entrevue vise à dégager les choix d'amis des enfants. Deux procédures sont retenues. La première est une technique de désignation sociométrique par choix ouverts (McCandless et Marshall, 1957). La deuxième est une échelle de préférence sociale (Asher, Singleton, Tinsley, Hymel, 1979) dont le but est de valider les choix effectués au moyen de la technique de désignation. Ces deux entrevues sont effectuées en utilisant les photographies individuelles des enfants de chaque groupe. Lors de l'entrevue reposant sur des choix ouverts, il s'agira de demander à l'enfant de justifier ses choix. Des questions spécifiques sont prévues à cette fin (Hayes, Gersham et Bollin, 1980). Ces entrevues seront effectuées à nouveau, trois semaines après la première évaluation pour s'assurer de la stabilité des choix d'amis. Les questions relatives à la justification des choix sociométriques positifs seront présentées à l'enfant seulement lors de la deuxième évaluation et ces justifications porteront seulement sur les choix positifs.

### CONSIGNE POUR LA TECHNIQUE DE DESIGNATION

A l'aide de toutes les photographies du groupe de l'enfant, l'évaluateur questionne l'enfant à propos de ses amis. L'évaluateur débute ainsi:

"On va faire un jeu avec les photographies des enfants de ton groupe. Tu te souviens que je t'ai photographié l'autre jour?"

Mette toutes les photographies devant l'enfant et dire:  
"Maintenant, j'aimerais que tu me dises le nom de chacun des enfants en pointant avec un doigt les photographies une à une."

L'évaluateur demande à l'enfant de mettre sa propre photographie en retrait. Par la suite il débute en demandant à l'enfant de choisir ses amis parmi les garçons et les filles du groupe, noter les choix. Si l'enfant choisi des enfants de sexe différent du sien, lui demander de choisir parmi les enfants du même sexe que lui qui sont ses amis, noter les choix. Le questionner de la façon suivante:

#### **Choix positifs**

Premier choix: Qui est ton meilleur ami?

Pourquoi XXX est-il ton ami?

Comment XXX est-il devenu ton ami?

Qu'est-ce que tu fais avec XXX qui est ton ami?

Deuxième choix: As-tu un autre ami?  
 Pourquoi XXX est-il ton ami?  
 Comment XXX est-il devenu ton ami?  
 Qu'est-ce que tu fais avec XXX qui est ton ami?

Troisième choix: As-tu un autre ami?  
 Pourquoi XXX est-il ton ami?  
 Comment XXX est-il devenu ton ami?  
 Qu'est-ce que tu fais avec XXX qui est ton ami?

### **Choix négatifs**

Premier Choix: Est-ce qu'il y a un enfant que tu n'aimes pas?  
 Deuxième choix: Est-ce qu'il y a un autre enfant que tu n'aimes pas?  
 Troisième choix: Est-ce qu'il y a un autre enfant que tu n'aimes pas?

Si l'enfant ne répond pas lors du premier choix négatif, lui demander "Est-ce qu'il y a un enfant que tu aimes moins?" à deux reprises. S'il ne répond pas, ne pas insister pour obtenir une réponse et passer à l'étape suivante.

### CONSIGNES POUR L'ECHELLE DE PREFERENCE

L'évaluateur place, devant l'enfant, les boîtes avec les figures illustrant les trois visages et lui dit:

"Maintenant nous allons faire un autre jeu avec les photographies. Ici, il y a trois boîtes. Sur celle-là, il y a un visage qui sourit, sur celle-ci, il y a un visage qui dort, et sur la dernière boîte, il y a un visage triste. Le jeu, c'est de mettre les photographies dans les trois boîtes. Je vais te donner les photographies une par une, si tu aimes beaucoup l'enfant qui est sur la photographie, tu mets sa photographie dans la boîte avec un sourire. Si tu aimes juste un peu l'enfant qui est sur la photographie, tu mets la photographie dans la boîte avec un visage qui dort. Si tu n'aimes pas l'enfant qui est sur la photographie, tu mets sa photographie dans la boîte avec le visage triste. Maintenant, on va le faire pour chaque photographie."

L'évaluateur présente les photographies une à une à l'enfant et lui dit:  
 "Dans quelle boîte vas-tu mettre la photographie de cet enfant?"

Lorsque l'enfant a fait son choix, l'évaluateur lui donne une autre photographie et lui demande à nouveau dans quelle boîte il va mettre la photographie. Cette consigne est répétée jusqu'à ce que l'enfant ait classifié toutes les photographies. Si l'enfant a de la difficulté à sélectionner la boîte respective pour chaque photographie, lui rappeler l'objectif de la tâche et le sens des visages qui apparaissent sur les boîtes.

APPENDIX B

Emotional perspective-taking:  
Administration protocol  
and scoring instructions

## PROTOCOLE D'ENTREVUE

### HABILETE A PRENDRE LA PERSPECTIVE D'AUTRUI

Cette entrevue vise à évaluer l'habileté de l'enfant à prendre la perspective d'autrui. Trois tâches sont retenues, elles focalisent sur la dimension affective de l'habileté de l'enfant à identifier le point de vue d'autrui. La première tâche, le choix d'un visage, a été élaborée par Lefebvre-Pinard et Strayer (1980). Elle permet d'évaluer un niveau de décentration simple chez l'enfant. Nous retenons seulement quatre des huit histoires qui composent cette tâche, deux se rapportant à une situation agréable et deux illustrant un contexte négatif. La deuxième tâche élaborée par Urberg et Docherty (1976) comprend deux histoires qui illustrent une situation dans laquelle deux enfants sont impliqués. Cette tâche mesure l'habileté à identifier la réaction affective de deux personnes en relation avec la situation décrite. La troisième tâche, une adaptation de Urberg et Docherty (1976) d'un instrument conçu par Flavell, Botkin Fry Wright et Jarvis (1968), comprend deux histoires dans lesquelles l'état affectif d'un premier personnage change dramatiquement. Un deuxième personnage est introduit après ce changement dans l'état affectif. Cette tâche mesure l'habileté à identifier un changement dans l'état affectif d'une personne à la suite d'un évènement spécifique et l'état affectif d'une personne qui n'a pas été témoin de l'évènement.

### CONSIGNE POUR LA TACHE CHOIX D'UN VISAGE

Au début de l'entrevue, on montre successivement à l'enfant trois cartes qui simulent des expressions faciales (un visage qui sourit, un visage neutre, un visage qui pleure), et on lui demande d'identifier les sentiments qu'elles expriment de la façon suivante:

"Tu vois le/la petit/e garçon/fille sur cette image? Qu'est-ce qu'il/elle fait?"

Répéter la consigne pour chaque carte et s'assurer que le sujet les distingue bien.

Raconter par la suite, à l'aide des deux images, une histoire qui demande à l'enfant de choisir un visage qui représente le sentiment éprouvé par le personnage.

Pour chaque histoire, déposer devant l'enfant l'image et les trois cartes de visages.



### Enchaînement des épreuves

#### **La soupe (positif)**

Tu vois ici le/la petit/e/ garçon/fille dit à sa maman qu'il/elle a très faim en revenant de l'école/garderie. Sa maman lui répond: "Ca tombe bien, j'ai préparé ta soupe préférée." On n'a pas mis de visage à l'enfant. Quel visage lui mettrais-tu? Pourquoi?

#### **L'hôpital (négatif)**

Ici le/la petit/e garçon/fille est à l'hôpital, il/elle demande au docteur s'il/elle peut sortir pour aller à la fête de son ami/e. Le docteur lui dit: "Oh non, tu es encore trop malade et tu dois rester à l'hôpital." Quel visage lui mettrais-tu? Pourquoi?

#### **La soupe (négatif)**

Le/la petit/e garçon/fille demande à sa maman s'il/elle peut aller jouer dehors et sa maman lui répond: "Oh non, tu dois manger ta soupe maintenant et après, il sera trop tard." Quel visage lui mettrais-tu? Pourquoi?

#### **L'hôpital (positif)**

Le/la petit/e garçon/fille demande au docteur s'il/elle peut sortir de l'hôpital pour aller à la fête de son ami/e. Le docteur lui dit: Bien sûr que tu peux, tu n'es plus malade. On va enlever ton pansement et tu vas pouvoir aller chez ton ami/e." Quel visage lui mettrais-tu? Pourquoi?

### CONSIGNE POUR LES TACHES DE URBERG ET DOCHERTY

Avant de raconter les histoires, l'évaluateur présente à l'enfant les quatre cartes illustrant des états affectifs différents (un visage content, un visage triste, un visage en colère et un visage qui a peur) et demande à l'enfant d'identifier l'état affectif de chaque visage. L'évaluateur demande à l'enfant:

"Comment se sent-il ce/cette garçon/fille?"

Si l'enfant est incapable d'identifier les émotions respectives à chaque visage, l'évaluateur lui indique la nature des émotions illustrées sur les visages.

#### **HISTOIRE 1: le sac de bonbons**

L'évaluateur présente à l'enfant la première image et lui dit:  
"On va dire que c'est toi, tu as dans ta main un sac contenant tes bonbons préférés"

La seconde image est présentée et l'évaluateur dit:  
 "Oh regarde, il y a un autre enfant qui a trouvé ton sac de bonbons et il/elle les mange tous. Comment te sens-tu? Est-ce que tu es content/e, triste, en colère ou as-tu peur?"

L'évaluateur attend la réponse de l'enfant et lui demande par la suite:  
 "Pourquoi te sens-tu comme ça?"

Ensuite, l'évaluateur montre l'autre enfant sur l'image (celui qui mange les bonbons) et dit:  
 "Comment ce garçon/cette fille se sent-il/elle?" Content/e, triste, en colère, ou a-t-il/elle peur?"  
 "Pourquoi se sent-il/elle comme ça?"

### **HISTOIRE 2: le ballon**

L'évaluateur présente à l'enfant la première image et lui dit:  
 "Ici c'est toi et là c'est ton ami/e, vous voulez avoir le même ballon pour jouer mais il y en a juste un."

La deuxième image est présentée et l'évaluateur dit:  
 "Tu vois, la monitrice te donne le ballon. Comment te sens-tu? Est-ce que tu te sens content/e, triste, en colère ou as-tu peur?"

Lorsque l'enfant a répondu lui demander:  
 "Pourquoi te sens-tu comme ça?"

Ensuite, l'évaluateur montre l'autre enfant sur l'image (celui qui n'a pas le ballon) et dit:  
 "Comment ce garçon/cette fille se sent-il/elle?" Content/e, triste, en colère, ou a-t-il/elle peur?"  
 "Pourquoi se sent-il/elle comme ça?"

### **HISTOIRE 3: le chien**

L'évaluateur présente à l'enfant la première image et dit:  
 "Supposons que c'est toi ici, tu es dehors et tu vois un beau chien.

L'évaluateur montre la deuxième image et dit:  
 "Tu t'approches pour le flatter mais celui-ci commence à grogner. Comment te sens-tu? Content/e, triste, en colère ou as-tu peur?"

Attendre la réponse de l'enfant et poursuivre ainsi:  
 "Tu t'en vas à la course, tu entres dans ta maison et tu fermes la porte."

L'évaluateur montre la troisième image à l'enfant et dit:  
 "Un peu plus tard, il y a un/e autre garçon/fille qui marche dans la rue. Il/elle voit le beau chien. Comment se sent-il/elle? Content/e, triste, en colère ou a-t-il/elle peur? Pourquoi?"

#### **HISTOIRE 4: LE VINGT-CINQ SOUS**

L'évaluateur montre à l'enfant la première image et dit:  
 "Supposons que c'est encore toi. Ta maman t'a donné vingt-cinq sous et tu es très content/e parce que tu peux aller au magasin et t'acheter quelque chose. Tu t'en vas au magasin en lançant ton vingt-cinq sous au-dessus de ta tête."

L'évaluateur montre la deuxième image à l'enfant et dit:  
 "Pendant que tu marches, tu échappes ton vingt-cinq sous par terre, il roule et regarde, il tombe dans le trou. Tu es incapable d'aller le chercher. Comment te sens-tu? Content/e, triste, en colère ou as-tu peur?"

Montrer à l'enfant la troisième image et dire:  
 "C'est ton ami/e qui s'en vient, il/elle aimerait jouer avec toi. Comment ton ami/e pense-t-il/elle que tu te sens?"

N.B. Si l'enfant répond "parce que" et "je ne sais pas" aux questions reliées à la justification, l'évaluateur doit au départ s'assurer que l'enfant n'est pas trop intimidé par le contexte d'évaluation. Le cas échéant, il est approprié de prendre un peu de temps pour parler avec l'enfant afin qu'il soit plus à l'aise. Par la suite, l'évaluateur questionne à nouveau l'enfant. Si l'enfant semble confortable, il serait approprié d'utiliser des questions exploratoires afin de susciter une réponse chez l'enfant. Par exemple, l'évaluateur peut ajouter au "parce que" de l'enfant "parce que quoi?" au moins à deux reprises. Lorsque la réponse de l'enfant est "Je ne sais pas", l'évaluateur peut dire à l'enfant "Il y a sûrement une raison pour laquelle il/elle se sent comme ça. Pense fort, je suis convaincu que tu vas trouver une raison."

BAREME DE CORRECTION

## Tâche de Lefebvre-Pinard et Strayer

- |  |       |
|--|-------|
| 1) Réponse correcte et bonne justification   | 4 pts |
| 2) Réponse correcte et justification reliée à l'affect sans nécessairement se rattacher à l'histoire | 3 pts |
| 3) Mauvaise réponse mais justification reliée à l'affect choisi                                      | 2 pts |
| 4) Réponse correcte mais justification incongrue ou absente  | 1 pt  |
| 5) Mauvaise réponse et justification incongrue   | 0 pt  |

Nombre de problèmes: 4

Pointage maximum: 16 pts

## Tâche de Urberg &amp; Docherty

- |   |       |
|---|-------|
| 1) Réponse correcte et bonne justification<br>La réponse est jugée adéquate si l'enfant peut justifier la réponse et expliquer logiquement deux états affectifs différents tel que requis pour chaque histoire. | 8 pts |
| 2) Si l'enfant identifie correctement les deux états affectifs mais qu'il donne seulement une bonne justification.  | 6 pts |
| 3) Si l'enfant identifie correctement un des deux états affectifs et que la justification est bonne.  | 4 pts |
| 4) Réponse correcte pour les deux états affectifs mais justification incongrue pour les deux états affectifs.   | 4 pts |

- 5) Pour chacune des sous questions, si la réponse est incorrecte et accompagnée d'une justification appropriée pour l'affect choisi donner 1 point. Par exemple, "tristesse pour l'histoire du ballon" est inadéquate mais un 1 est donné si la justification prend la forme suivante: " je suis triste parce que mon ami/e ne peut pas avoir une balle aussi." "Il pense qu'il est en colère parce qu'il a perdu son vingt cinq sous". Ce cas peut se présenter en combinaison avec la cotation décrite en 3. Si la justification démontre que l'enfant ne s'est pas décentré, donner 0. Par exemple, l'histoire du vingt-cinq sous deuxième question: Triste parce que j'ai perdu mon vingt-cinq sous dans le trou.

1pt

- 6) Si l'enfant ne peut pas identifier les états affectifs appropriés et les justifier adéquatement pour chaque histoire.

0 pt

Nombre de problèmes: 4

Pointage maximum: 32 pts

Total: 48 pts

APPENDIX C

California Child Q-Set  
Measures of Ego Resiliency and Ego Control:  
Administration protocol

## PROTOCOLE D'ENTREVUE

### CALIFORNIA CHILD Q-SET

Adapté de: California Child Q-Sort  
Jeanne Block and Jack Block  
University of California, Berkely, 1980.

#### Consignes générales à donner aux parents:

Le California Child Q-set (CCQ) a été conçu pour décrire la personnalité des enfants. Il comprend 100 items, montés sur carton, qui décrivent une caractéristique de l'enfant et 9 enveloppes, qui sont utilisées pour regrouper les items selon le degré de correspondance avec le comportement de l'enfant: de la catégorie "Extrêmement typique" à la catégorie "Extrêmement atypique". La méthode du Q-sort vise à identifier les items qui décrivent le mieux ou qui sont les plus représentatifs de la personnalité d'un enfant. La plupart des items font référence à des comportements précis; mais avec certains d'entre eux, il vous faudra faire appel à une idée générale de l'enfant pour en déduire une caractéristique spécifique. En faisant la lecture des items, n'essayez pas de discerner la signification cachée du comportement de votre enfant, fiez vous plutôt à un jugement qui découle d'observations concrètes.

Il vous faudra sélectionner un nombre précis d'items à placer dans chacune des 9 catégories. Soyez conscient(e) de ce que les catégories extrêmes --1,2,8 et 9-- reflèteront des descriptions très fortes du comportement de votre enfant. C'est le placement de l'item dans une catégorie donnée qui décide de sa correspondance avec votre enfant. Par exemple, si l'item: "Est incapable de différer la gratification; ne supporte pas d'attendre une satisfaction" est placé dans la catégorie "Extrêmement typique", cela veut dire que votre enfant est complètement incapable de différer la gratification, que les satisfactions ne doivent jamais se faire attendre. Si le même item est placé dans la catégorie "Extrêmement atypique", votre enfant est alors décrit comme quelqu'un qui est fort capable d'attendre les satisfactions, comme quelqu'un qui n'a aucune difficulté à différer les plaisirs. Donc, lorsqu'un item est placé plus bas (dans les catégories atypiques), il prend une signification opposée à celle qui est indiquée sur le carton.

Les catégories moyennes --4,5 et 6-- servent à regrouper les items qui 1) contribuent peu ou seulement de façon modérée à faire le portrait de votre enfant. Par exemple, si l'item "Semble avoir une grande capacité intellectuelle" est placé dans une catégorie moyenne, cela indique que la capacité intellectuelle ne joue pas un rôle déterminant en ce qui a trait aux comportements et aux réactions de l'enfant (ce qui veut souvent dire que

l'enfant se situe dans la moyenne en ce qui a trait au comportement en question). 2) Les catégories moyennes sont également utilisées dans le cas d'items qui décrivent des comportements peu fréquents ou irréguliers ou 3) si vous jugez ne pas avoir suffisamment d'informations pour évaluer l'importance d'un item face à votre enfant. Notez que les items des catégories atypiques ont plus de poids dans la description de votre enfant que les items des catégories moyennes.

### Consignes spécifiques

1. Avant de remettre le matériel aux parents, Ne PAS OUBLIER d'inscrire le nom de l'enfant évalué sur la feuille de notation qui se trouve à l'intérieur de la chemise cartonnée.
2. Si le père et la mère sont présents, c'est la mère qui complète le Q-Sort.
3. La personne responsable de l'évaluation des parents explique la procédure simultanément aux parents des deux enfants.
4. Poser la chemise contenant les 9 enveloppes de catégories de placement et l'arbre de répartition des items devant le parent.
5. Mélanger les items.
6. Demander au parent de subdiviser les items en trois groupes: ceux qui au total reflètent des caractéristiques typiques de l'enfant; ceux qui somme toute décrivent mal l'enfant (sont atypiques); et ceux qui n'appartiennent ni à l'un ni à l'autre de ces deux groupes (sont neutres). Faites en sorte qu'il y ait 33 items dans les groupes "Typique" et "Atypique" et 34 items dans le groupe "Neutre".
7. A partir du groupe d'items typiques, le parent doit ensuite sélectionner 11 cartons qui correspondent à une description "Extrêmement typique" du comportement de leur enfant. Ceux-ci seront posés sur l'enveloppe appropriée et pourront être vérifiés plus tard. Le parent choisit ensuite les 11 items de la catégorie "Très typique", suivis des 11 items de la catégorie "Un peu typique".
8. En partant des cartons qui ont été classés atypiques, le parent fait maintenant la sélection des 11 items "Extrêmement atypiques" et les pose sur la dernière enveloppe. 11 items sont choisis pour la catégorie "Très atypique" et 11 autres pour la catégorie "Assez atypique".
9. Il reste les 34 items du groupe "Neutre". Ceux-ci doivent être divisés en groupes de 11 selon qu'ils sont "Un peu typiques", ni typiques ni atypiques (catégorie "Ne s'applique pas"), ou "Un peu atypiques par rapport au



comportement de l'enfant. Le carton qui reste sera placé dans la catégorie "Ne s'applique pas".

10. Une fois les consignes données, la personne responsable de l'évaluation emmène un des parents dans une autre salle d'entrevue afin que les parents ne puissent pas discuter ou s'influencer dans la façon d'évaluer leur enfant.

11. Compter les cartons pour s'assurer que chacune des 9 catégories en contient 11 (sauf la catégorie "Ne s'applique pas" qui en contiendra 12).

APPENDIX D

List of toys

LISTE DES JOUETS POUR LES SEANCES D'OBSERVATION

## CAMPING:

SET 1, 2 &amp; 3

2 couvertures  
 2 coussins  
 panier à picnic  
 2 gourdes  
 nappe blanche  
 ustensiles  
 assiettes  
 tasses  
 petit pot à lait  
 "petite poêle"  
 "napkins"  
 verres  
 boîte à biscuits (métal)  
 contenants aluminium  
 2 petites boîtes raisins vides  
 contenant margarine

## DOCTOR'S KIT:

SET 1, 2 &amp; 3

lab coat  
 "haut" infirmière  
 paire gants caoutchouc  
 trousse de médecin  
 stéthoscope  
 thermomètre  
 aiguille  
 matériel tension  
 carton pour examen de la vue  
 plâtre  
 boîte avec "band-aids"  
 bâtons pour examen de la gorge  
 instrument pour voir réflexe du genou  
 pansements  
 "pads" pour yeux  
 "couvre-yeux" (pour dormir en avion)  
 boîtes vides de médicaments  
 boules coton  
 masques  
 tablier plastique

	mouchoir blanc "chapeau" infirmière
PLAYMOBIL:	SET 1, 2 & 3
	set terrain de jeu set ski set espace
2 TELEPHONES:	SET 1, 2 & 3
ABEILLE:	SET 1, 2 & 3
"DRESS-UP":	SET 1, 2 & 3
	robe de chambre 2 perruques 1 noeud papillon
"DRESS-UP":	SET 1
	2 masques 2 cravates 2 foulards 2 chapeaux paille 1 sac cuir 1 pochette 2 paires lunettes soleil 1 pull gris argent 1 chemise rayée rouge, bleue, blanche 1 veste jeans (sans manches) 1 veste soie 1 cape bariolée 2 paires gants cuir noir 2 ceintures tissu colliers, bracelets
"DRESS-UP":	SET 2
	2 ceintures cuir 2 paires gants travailleur 2 masques 2 foulards 2 cravates

1 chapeau cuir  
 1 chapeau feutre  
 2 paires lunettes plongée  
 1 poncho  
 1 écharpe noire  
 1 cape (jupe Odile)  
 1 pull bariolé brun, orange, violet  
 1 sac tissu  
 2 pochettes chéquiers  
 1 T-shirt bleu pâle  
 colliers, bracelets

"DRESS-UP":

SET 3

2 masques  
 2 foulards  
 2 cravates  
 2 ceintures  
 2 paires gants  
 1 veste jeans (avec manches)  
 1 pull rouge, bleu, blanc  
 1 chapeau tissu  
 1 chapeau  
 1 sac doré  
 1 pochette  
 1 porte-monnaie  
 1 châle orange  
 1 robe été  
 1 cape (rideau)  
 1 chemise beige  
 colliers, bracelets

TOUTOUS:

SET 1

Wrinkles  
 dinosaure vert

TOUTOUS:

SET 2

pingouin  
 dinosaure mauve

TOUTOUS: SET 3  
personnage "Sesame street"  
éléphant-dinosaure bleu

MUSIQUE: SET 1, 2 & 3  
guitare

MUSIQUE: SET 1  
saxophone

MUSIQUE: SET 2  
harmonica

MUSIQUE: SET 3  
trompette

ADRESSE: SET 1  
jeu de fléchettes

ADRESSE: SET 2  
jeu de quilles (playroom)

ADRESSE: SET 3  
jeu de poches

APPENDIX E

Observation Manual

## PASS 1: NATURE, INITIATION AND QUALITY OF PLAY ACTIVITY

This pass pertains to observations of the toys played with, of the nature of ongoing activity, of the nature of strategies for the initiation of pretend play and of the degree of the investment in play activities. These codes have been grouped together because except for toys, which are coded each time a new one is used, they require judgements to be recorded at the beginning, or at the end of activity sequences rather than for every conversational turn. (A turn is defined as an unbroken utterance or series of utterances by one speaker, with no significant pauses (i.e. 10 seconds or more). Non-verbal responses to the partner's utterances or actions (e.g., a shrug, a laugh, a nod, etc.) are also considered turns. Turns are indexed by separate speaker entries on the transcripts.) The order of observational codes corresponds to the order in which they are presented in this manual (i.e., 00X/1XX/7XX/2XX).

### 1.1 TOYS USED

The nature of the toy being manipulated or played with at any time is indexed by an OX code. Only code the toy category when it changes. If more than one toy is being used, code the predominant one. Toys which are held in hand take precedence over toys that are merely talked about or looked at. These are the different toy categories used in this study:

- 000 -- No toy
- 001 -- Camping or picnic (blankets, cushions, tablecloth, picnic basket and contents, tin box)
- 002 -- Doctor's kit (including lab coat, rubber gloves, cotton balls, nurse's cap and all medical instruments)
- 003 -- Dress-up (including masks, wigs, sunglasses, eye shades, capes, scarves, scuba diving glasses, handbags, checkbook holders)
- 004 -- Stuffed animals
- 005 -- Musical instruments, microphone
- 006 -- Playmobil
- 007 -- Games (Velcro darts, bowling, tossing game)
- 008 -- telephone
- 009 -- furniture or other features of the playroom

### 1.2 NATURE OF THE ACTIVITY

The nature of each child's activity (1XX) is to be coded at the beginning (first turn) of each segment of activity. However, observations should be conducted on a turn by turn basis, i.e. clear but brief shifts in activity (e.g. for one or two turns) should be recorded. Definitions include exclusionary criteria



and therefore contain information also provided by the definitions for other modes of activity.

Things of note:

i/ In general, if two activities occur in the same turn (for example, if a child converses and pretends in the same turn), code the activity which predominates. Only code "Other Activities" if it does not occur in the same turn as another activity. Otherwise code the alternate activity.

ii/ If no activity code can be assigned, then assign "Other Activities". "Other activities" is also to be coded for uncodable turns.

iii/ Although observation on a turn-by-turn basis could permit us to capture brief, albeit subtle, shifts in the orientation of the children's activities, observers should focus their efforts on quickly and accurately identifying major transitions into new activities. In other words, observers should avoid obsessing over how to code what seems to be a brief and ambiguous shift into another activity. In particular, if a turn involves two equally predominant activities, do not change the activity code for that turn; wait for a turn in which the new activity is clearly predominant.

iv/ As a corollary to note iii/: In the absence of clear evidence that children have shifted to a new activity, assume that the previous activity is continuing through the turn now being coded. In other words, always assume that the child is continuing the current activity if a new activity code cannot be confidently assigned. For example, in the absence of clear evidence that non-pretend play has been temporarily suspended while exploration occurs, non-pretend play will be assumed to continue. However, if the ambiguity continues for more than 2 turns for a given child (or 15 seconds, whichever comes first) without clear verbal or nonverbal indication that the behavior qualifies as play, code exploration at the third turn for that child. Such ambiguities are also likely to occur when children announce a pretend transformation (e.g. a role or make-believe situation; coded as Pretend play) and then proceed to manipulate objects in a manner that may or may not be considered preparation for pretend play. If verbal or nonverbal behavior is not explicitly in keeping with the announced transformation after 2 turns, code exploration or non-pretend play, depending on the purposefulness of the activity.

**Non-Pretend Play (11X)** Non-pretend play includes manipulating objects to build something, dressing-up, drawing, playing a game with a partner, or just horsing around and being silly. Note that meta-behavior communication can occur without necessarily disrupting engagement in non-pretend play. When

children are clearly preparing to play (as opposed to drifting from object to object trying to find something to play with), code them as engaging in play.

- It includes the framing of non-pretend play: when children have suspended or interrupted their non-pretend play to talk in some way about it (describe, direct, plan or propose play activities), either prior to or after having become engaged in it. Children may temporarily stop manipulating the objects that they have been playing with to describe what they have done or will do. Framing may also occur in the absence of play activities proper. Such turns will also be coded 11X.

- It is distinguished from pretend play by the treatment of objects, people, and setting in a literal manner - that is, according to common and appropriate use.

- It can often be distinguished from non-play activities and from conversations by the use and manipulation of objects. It does not, however, necessarily require the use of materials - e.g. tag, word games, teasing and framing of non-pretend play are coded as non-pretend play even though objects are not necessarily involved.

- It can be distinguished from exploration by the treatment of objects as if posing the question, "What can I do with this?", as opposed to "What is this?" or "What am I supposed to do with this?" Children's behavior during play often appears more purposeful than during exploration, especially when the exploration involves drifting from object to object.

- It includes acknowledgement of non-pretend play: when one child acknowledges the other child's non-pretend activities without engaging in non-pretend play him or herself. Non-pretend acknowledgement may be indicated by the child's smiling or laughing at the other's activity, or by any comment indicating an awareness of play without explicitly describing or directing it (such explicit describing or directing would be coded non-pretend play). Unlike simple onlooker behavior (which is coded under "Other Activities"), the child participates, albeit to a limited degree, in the other's play through their active acknowledgement of it.

**Pretend Play (12X)** Pretend play refers to any activity which involves the transformation of identity, setting, object, action plan or of the child's actual situation. Such activities can occur with or without meta-pretend communication. Objects used in the play may be assigned qualities which they do not actually possess - for example, a toy telephone may "ring", a car may be made to go "vroom", etc. Children's role enactment may be signalled by a change in the pitch of their voice, exaggerated physical gestures (i.e. strutting around the room with chest puffed out), by the content of their speech ("Doctor, come here and help me with this patient"), or by an exaggerated attitude (i.e.

feigned anger). To confidently identify when a child is no longer just being themselves but has taken on a role, observers can try comparing the child's tone of voice, gestures, and posture during what is clearly non-pretend play to that which occurs during what appears to be pretend play. Note that the use of miniature objects without any further elaboration in the form of pretend gestures or vocalizations is not scored as pretend but as non-pretend play.

- It includes framing of pretend play: when children have suspended or interrupted their pretend play to talk in some way about it, either prior to being or after having become engaged in it. Children may temporarily stop manipulating the objects that they have been transforming to describe what they have done or will do. Similarly, they may speak without the intonation or gestures associated with a previously adopted role. They may explicitly propose a role or object transformation to a partner before actually performing it. Statements which frame pretend play are often stated in the past, future, or conditional tense (see Garvey, 1987) - for example "Let's say you were...". In all cases, the suspension of pretense activities may last for only one turn or may continue for several minutes and must clearly involve the suspension of engagement.

- It includes acknowledgement of pretend play: when the target child acknowledges the other child's pretend activities without engaging in pretend him or herself. Pretend acknowledgement may be indicated by the child's smiling or laughing at a transformation, or by any comment indicating an awareness of pretend. Unlike simple onlooker behavior (which is coded under "Other Activities"), the child participates, albeit to a limited degree, in the other's pretending through their active acknowledgement of it.

- It is distinguished from all other categories by the treatment of people, objects, or the setting in a non- literal manner.

**Conversations (130)** These include any discussions that occur about events independent of engagement in pretend or non- n- pretend play - that is, the children are not talking about what they will play next, or about how to use a certain object. Conversations about events independent of the play context (classroom incidents, what each child did over the weekend, etc.) would be coded here. If an attempt to initiate conversation is ignored by the partner, maintain the previous activity code. Only code conversation when it is responded to by the partner.

**Exploration (14X)** Exploration occurs when the child asks the question, "What is this?", "What am I supposed to do with this?", or "How am I supposed to use this?" either overtly or through actions such as simple touching or looking. During exploration, the child's actions are governed by the nature of the object.

A child simply turning an object over in their hands and examining it carefully is almost always engaged in exploration. A child who drifts from one object to another, trying to decide what to play with is coded as engaging in exploration, as is a child who is primarily concerned with trying to figure out how to make something work properly. As soon as the child begins to behave more purposefully, as if asking the question "What can I do with this?" either explicitly or implicitly (i.e. arranging things, playing with them repetitively, etc), then they are playing. In contrast to exploration, behavior during play seems to be guided by some goal or intent in the child's mind other than discovering the properties of objects. If children are acknowledging a partner's exploratory behaviors in any way, then both children are coded as engaging in exploration.

**Other Activities (152)** These include: (a) interaction with an adult, (b) unoccupied or onlooker behavior, (c) total interruptions of play activities, conversations, or exploration and (d) otherwise uncodable turns. Acknowledgement of pretend or non-pretend play is unlike simple onlooker behavior (which is coded under "Other Activities") in that the child participates, albeit to a limited degree, in the other's play through their active acknowledgement of it. Total interruptions may occur when an adult comes into the playroom to take a child to the washroom, when a child walks out of the playroom, or when the child is preoccupied or interacts with the cameras etc. Uncodable turns may occur when nonverbal activity is ambiguous and verbalizations are inaudible. If "Other Activities" occurs in the same turn as play, conversations, or exploration, code the latter. The exception is when a total interruption of play, conversations, or exploration occurs for greater than 5 seconds - in this case, code "Other Activities" even if play, conversation, or exploration occurs during the same turn.

### 1.3 SHARING OF ACTIVITIES

All activities, with the exception of "Other Activities" (152), will be coded as shared (1X0) or non-shared (1X1). This category overlaps somewhat with the level of social involvement in Pass 2, with levels "Asymmetrical Exchange" and above often (but not always) indicating shared activity, and "No communication" always indicating non-shared activities. However, shared activities imply more than the occurrence of social interaction (i.e. social bids); the children must exhibit mutual involvement in and simultaneous focus on the same activity. More specifically:

Shared activities (1X0) are those activities which children do together. In all cases, children must be engaged in the same mode of activity as their partner for adjacent turns --that is, both children must be engaged in non-pretend play activities, pretend play activities, conversation (which is always shared), or

exploration. In the present study, one child engaged in pretend play is considered to share the activity with a partner who is framing or acknowledging their pretense (the same goes for non-pretend play) as long as the partners demonstrate that they are actively adjusting to one another's behavior. Thus, shared pretend involves at minimum a mutual awareness of the themes and subject matter of pretense.

However, involvement in the same activity is not necessarily equivalent to sharing the activity. Sharing involves joint participation: working on a common goal, plan or "theme", acknowledging the partner's actions, adjusting one's own actions to them, and/or explicitly describing or discussing ongoing or upcoming play. In principle, the two children could share an activity code without sharing the theme or goal of their activity. For instance, they may both be pretending (and interacting socially) while planning and/or enacting different pretend scenarios. This would be coded as nonshared activity. Thus, at minimum, "Shared activities" requires that the children be directing social bids to their partner which revolve around a common activity. Once such joint participation is evident, children need to show a continuing awareness of and adjustment to their partner's behavior for a shared activity to be coded. In terms of the level of social involvement, at least "Minimally connected dialogue" is required. When it is ambiguous whether activities continue to be shared, wait 2 turns (for each child) before coding non-shared activities.

Non-shared activities (1X1), on the other hand, are most evident when the children are in different modes of activity but is also sometimes evident when children are in the same activity mode. In the latter case, children do not acknowledge their partner's actions or adjust their own behavior to their partner's. They may be clearly ignoring their partner's social bids to focus on what they themselves are doing, or, they may respond to these social bids while evidently pursuing a different plan or goal in their activities. This occurs most often when children are engaged in conversation which does not pertain to ongoing actions.

#### 1.4 STRATEGIES FOR INITIATING SHARED PRETEND PLAY

Children's tactics for initiating a social interaction involving pretend play (enactment or framing) were adapted from coding categories devised by Dodge et al. (1983), Howes (1985) and Howes and Unger (SRCD, 1987). Such tactics are used to promote a transition to shared pretend activities. Social pretense entry strategies will be recorded on a turn-by-turn basis, as they occur, prior to an instance of pretend play (shared or nonshared). Thus, observers should either watch for the initial stages of an episode of shared pretend play or pay attention to instances where only one child is pretending to see whether there is

any attempt on the part of either child to encourage joint participation. Note that several successive entry strategies may be attempted by one or both children. In such cases, code each strategy as they occur, recording the predominant strategy at each turn.

Seven types of pretense entry strategies will be scored:

**701. Wait and hover:** One child approaches his/her partner physically and observes the pretense activity for at least 2 turns but does not speak to the first child. There is no verbalization on the part of the pretending child.

**702. Set stage:** A child moves and organizes a set of toys to facilitate the partner's joining in on pretense involving a combination of toys. This entry tactic need not involve pretend framing or enactment on the part of either child.

**703. Nonverbal recruitment:** A child performs a fantasy action and directs the fantasy action to the partner by eye gaze, smiling, nonverbal gesture, or offering objects.

**704. Verbal recruitment:** A child performs, plans or frames a fantasy action and directs a framing statement to the partner or uses any other verbal means of getting their partner's attention and interrupting their current activity (e.g., requesting/ demanding participation or help, asking questions related to pretense activity, calling attention to some aspect of their transformation, etc.)

**705. Join:** A nonpretending child (or one involved in a nonshared pretend activity) attempts to become involved in the pretend play of the partner by engaging in 'verbal recruitment' (see above), after their partner has engaged in pretend action. That is, child A performs a fantasy action and does not direct this action to the partner --B-- but B responds with a fantasy action and either directs the action to the partner or frames the action for him/her. B only engages in pretend after A is already engaged.

**706. Imitation:** A nonpretending child (or one involved in a nonshared pretend activity) attempts to become involved in the pretend play of the partner by imitating his/her pretend action. That is, child A performs the pretend action but does not direct it to child B. Child B only imitates it without directing it verbally or nonverbally to child A. B only engages in pretend after A is already engaged.

**707. Disruption:** A child engages in verbal or nonverbal behavior that is aversive to their partner and interrupts or disrupts their activity. e.g., pushing a toy off the table.

## 1.5 INVESTMENT IN PLAY

Investment in play activities (Rosenberg, 1984; Singer, 1973) refers to the motivational/affective aspects of the children's play whether shared or non-shared, social or nonsocial. For the purposes of this study, its application has been extended to non-pretend as well as pretend play episodes. Level of investment denotes the degree of enthusiasm, enjoyment, persistence and freedom from distractibility displayed by each child while engaged in pretend or non-pretend play. It is coded at the last turn prior to a shift from play to non-play activity and from nonshared to shared play activity or vice versa. There are three levels of Investment in play:

201. **High.** The child displays a high level of enthusiasm, enjoyment and persistence in play activity. Concentration and absorption in the activity is intense. The child is not easily distracted from play by irrelevant stimuli (e.g. cameras, interactions with adults). Brief interruptions of play (i.e., one-turn shifts in activity that are too fleeting to be coded) are followed by a quick resumption of activities and a similar degree of absorption. High motivation to pursue play activities is evidenced by the ability to resume them quickly after disruptions or disagreements with the partner.

202. **Medium.** The child displays moderate interest in toys and activities. Distractions, albeit brief, are more frequent and a return to the play activity following disruption is characterized by lesser enthusiasm. Affective involvement (enjoyment, enthusiasm) may be high whereas persistence (absorption, concentration) is low, or vice versa. The child may also take longer to "warm up" to a given play activity.

203. **Low.** The child devotes little energy toward developing play activity. Wandering and expression of boredom may be seen or the child is easily distracted and typically shifts her focus of interest repeatedly. There is a very low frequency of returning to fantasy or other play activity when interrupted. Suggestions and plans are not followed through on. Play is of a fleeting nature and seems only a temporary departure from other activities (exploration, conversations, onlooking behavior).

Note 1: If play episodes involve only one or two turns (per child), code 200.

Note 2: It may be helpful to evaluate investment along two dimensions: 1) affective involvement and 2) persistence (referring to the degree of absorption and freedom from distractibility). If the child is high on both dimensions, code 201. If the child is high on one and low on the other, code 202. If s/he is low on both, code 203.

Note 3: Do not confuse persistence and duration of the play sequences. A play sequence may only last a few turns, yet carry with it a high degree of absorption and enjoyment. On the other hand, very short play episodes which are not carried out with a high degree of conviction or enthusiasm will almost always belong to the 'low investment' category.

## PASS 2: MANAGEMENT OF SOCIAL INTERACTION

### Social involvement, Conflict, and Conflict termination

#### 2.1 LEVEL OF SOCIAL INVOLVEMENT

The level of social involvement codes are an adaptation of Gottman's (1986) common ground activity codes and are intended to capture the amount of social coordination between two individuals.

Level of involvement will be coded by looking at two-turn sequences in an interlaced pattern (i.e., turns 1 & 2, turns 2 & 3, turns 3 & 4, and so on). Each two-turn sequence will be examined for evidence that the responsivity demands of the interaction are increasing (escalation) or decreasing (de-escalation). Escalation or de-escalation will result in a shift up or down the hierarchy of social involvement codes presented below. Coders may need to watch the first minute or so of tape to get a clear idea of the children's initial level of involvement. The coder would thus review the first minute, then return to the first two-turn sequence, assign the appropriate code and then code each subsequent turn pair. The codes will be entered at the end of the second turn in the pair.

The hierarchy of levels of social involvement can be thought of as a continuum that ranges from no awareness of the partner at one extreme to full attention and adjustment to the partner at the other extreme. Codes higher on the hierarchy contain and subsume elements from lower levels. When coding, observers must watch for two types of change: addition of behaviors, resulting in a move up the hierarchy (escalation); and cessation of behaviors, resulting in a move down the hierarchy. Moves up and down the hierarchy may or may not be one level at a time.

Level of involvement code categories are as follows:

**800** Interaction with observers or otherwise uncodable turns (e.g., a child walks out of the room to go see his/her parents). Do not use this category if child-



child interaction is occurring simultaneously with the interruption (e.g., children continue talking while the observer leads a child out of the room). That is, score 800 if, and only if, no other category can be scored.

**\* Note that the first turn in each session is coded 800. Similarly, when children have stepped out of the room and re-entered, the first turn after re-entry is coded 800.**

**801 No communication between children.** Children are engaging in solitary activities, essentially ignoring each other. They are often (but not always) using different sets of toys and are not likely to be in close proximity. There is no eye contact between the children and no indication of mutual awareness. Any sign of awareness of the play partner is brief and unreciprocated. Verbalization only occurs in the form of self-talk, where the child is describing his/her own activity.

**802 Collective monologue.** Awareness of the partner may be evidenced by looking or other nonverbal adjustments (e.g., moving aside as the partner reaches for a toy) on the part of both children within the two-turn sequence. Verbal or non-verbal imitation almost always indicates mutual awareness of the partners and should be coded 802 unless higher levels of social involvement are evident. However, no nonverbal social behaviors (e.g., handing toy to play partner) occur. Verbal behavior serves only to narrate the speaker's activities (as in 801) and is nonsocial in nature.

- 802 differs from 801 in that: it contains concrete nonverbal indications of mutual awareness on the part of each partner.

- 802 differs from 803 in that: 1) there are no social bids; and 2) the content of the children's speech is completely unrelated and self-directed.

**803 Minimally connected interchange.** Verbal behavior is connected in that the content of the dyad's talk is somewhat related, although the connections are minimal. Nonverbal social behaviors such as smiling, or touching may occur but are unreciprocated. If verbal attempts at social interaction occur (e.g., simple questions: "What's this?" or directed comments: "Look") they are also unreciprocated or ignored.

e.g. Ch. 1 /I'm going to try this jean.../ (starts putting on  
jean vest)

Ch. 2 (strumming guitar, looks at Ch. 1) /I have this at  
home/ (meaning vest)

- 803 differs from 802 in that: 1) social bids (verbal and nonverbal attempts at interaction) occur; 2) the children's communications are somewhat, although minimally, connected.

- 803 differs from 804 in that: 1) social bids are not responded to directly; and 2) connections between the children's speech are less extensive.

**804 Connected exchange without influence attempts.** This level of social interaction is characterized by greater connectedness and relevance in the dialogue. However, the interaction does not involve reciprocated demands or proposals to engage in joint activity. That is, if attempts to influence the other child's activity occur, they are not acknowledged. The children are usually, but not necessarily, proximal to each other and engaged in similar activities. Verbal and nonverbal social bids (e.g., smiling, touching, questions, directed comments) are always responded to or acted upon.

- 804 differs from 803 in that 1) social bids are responded to; and 2) the connections between the children's speech are more obvious.

- 804 is coded rather than 805 when 1) the interaction does not include attempts to influence the other child's activity or to enlist the partner's participation in one's own activity, or when 2) an influence attempt in the first turn of the two-turn unit has been ignored in the second turn, or when 3) the second turn constitutes the first influence attempt following an 804-level interaction (see note 4. below).

**Note:**

1. **Social bids** are defined as verbal and nonverbal attempts at interaction which are not attempts to influence the partner's activities or enlist his/her participation. They include:

social routines such as:

"Hi";

smiling;

touching;

simple questions (e.g., "What is this?"); and

directed comments (e.g., "Look");

attention getting (e.g., "Hey!");

conversational statements (e.g., "Your sister was wearing the same shorts as you.").

In contrast, **influence attempts** are attempts to involve the other child in a joint activity or to modify the partner's activity in some way. They include demands or directives, requests or proposals. For example:

"Put that down"

"Give me that, please"

"Do you wanna play doctor?"

"You're gonna say no-no-no"

"This is our cake for the party" (where the cake is imaginary and the proposal consists in a joint transformation of reality)

Child 1 pushes child 2 towards the table.

2. Influence attempts should be distinguished from descriptions. Descriptions are focused on ongoing events and activities (e.g., "Here's the hat for that man") and are not aimed at getting the partner **to do anything**. Demands and proposals, on the other hand, are usually about upcoming events and involve the partner's participation (e.g., "Now, we'll set out dishes for our picnic") Although descriptions may at times be used to direct behavior, we will rely on explicit demands and proposals to code 805.

3. When children are engaged in an ongoing pretend conversation (e.g. on the phone), only the turns which include explicit attempts to change the direction of the pretend scenario (e.g., putting an end to the conversation or introducing a "twist" in the joint action plan: "I thought we might go for a picnic...") will be considered to involve influence attempts.

4. When the second turn in the two-turn sequence includes an influence attempt, coding of the sequence depends on the current level of social involvement. That is, if the current two-turn sequence involves reciprocated social bids, it will be coded 804 (the influence attempt has not (yet) been responded to). If the sequence involves 803 level interaction or lower, the sequence receives a code of 803 since it involves a social bid (the influence attempt). The following two-turn unit will be coded 805 only if the influence attempt has been acknowledged or acted upon.

#### **805 Asymmetrical exchange, one child influences the other's activities.**

Characterizing this level of involvement is the presence of one child's influence attempts that have an effect on the other child's actions but are not reciprocated (see above definition of influence attempts). That is, the child being influenced does not make influence attempts him/herself in the next turn. Note that influence attempts may or may not be successful, i.e. may or may not succeed in influencing the other child's activity. However, there should always be some sign of acknowledgement or response from the partner.

e.g. Ch. 1 /Come on, give me your arm/ (wants to play doctor)  
 Ch. 2 (lets V.E. take her arm; continues to play with  
 Playmobil) /There you go/

(the turn pair would be assigned the 805 code)

805 is maintained as long as the influencer continues to influence the partner verbally or nonverbally (note that the children may take turns at being the influencer) AND as long as the partner continues to acknowledge or respond to influence attempts while not making influence attempts him/herself.

**Note:** If the first turn in the sequence is an acknowledgement of an influence attempt, coded 805, a new influence attempt in the second turn will of course remain at the 805 level.

- 805 differs from 804 in that social bids include influence attempts on the part of one child which are responded to or acknowledged by the partner. (Ignored influence attempts result in a de-escalation to level 804.)

- 805 differs from 806 in that: 1) influence attempts are unidirectional, not reciprocal; and 2) there is not the sense of mutual involvement in an activity that is apparent in level 806.

**806 Symmetric exchange, children influence each other.** Gottman (1986) identified the onset of this level of involvement by noting the presence of suggestions for joint actions or activities on the part of both children. That is, both children have made influence attempts in consecutive turns and thus the turn pair consists of two influence attempts. At this level of involvement, the children are most often sharing an activity (or on the point of doing so) and each child is adjusting their behavior to that of their partner.

e.g. Ch. 1 (puts wig on) /It's a hat/ Try that on/  
 Ch. 2 (picks up a wig and puts it on) /It's a bit big/ Now you try this one on, and I'll try that one/ You look so funny/ (laughs)

(the turn pair would be assigned the 806 code)

- 806 differs from 805 in that: it is characterized by reciprocal influence attempts.

#### **To maintain 806:**

After the first turn that is scored 806, count 6 turns. Within that 6-turn block, each child must make at least one new influence attempt (which does not have to be responded to with a second influence attempt, but must be

acknowledged). If this occurs, score all turns within that 6-turn block as 806, and start a new 6-turn block, in which you will again look for at least one influence attempt from each child to maintain 806.

Note that:

If a 6-turn block does not contain at least one influence attempt from each child, return to the beginning of the 6-turn block and code the entire block according to the rules for the other levels of social involvement, using the last turn scored 806 and the first turn of the new block as the first turn-pair.

## 2.2 CONFLICT (900)

To code the occurrence of social conflict, Garvey's (1988) definition will be adopted. Conflict is "a state of overt and mutual opposition, that is, it begins with two opposing social moves, and continues until that state of overt and mutual opposition ceases by the introduction of nondisagreement-relevant moves or until the interaction is terminated or suspended" (p. 23). Garvey further explains that opposition can be built on 1) inherently disagreeable social moves (e.g. insult, blame, threat, complain); or 2) dispreferred alternative response moves (e.g., refusal, counterclaim). When the latter type of opposition occurs in the context of pretend play, it is often more subtle than within the context of literal interaction, i.e. it is not always detectable in individual speech acts (as in arguments about transformations) but can also be expressed by shifts in the pretend scenario which denote one child's unwillingness to go along with his/her partner's plan. In this case, the expressed opposition would make use of alternative transformations which are consonant with the pretend scenario.

e.g. Ch. 1 Ding a ling a ling a ling a ling (makes telephone ringing noise with phone to ear)  
 Ch. 2 Pretend it's the wrong answer. [first opposition]  
 Ch. 1 Yeah, sometime I'll try every number. (speaking directly to ch.2) Hi!  
 Pretend you answered now.  
 [opposition countered - conflict]  
 Ch. 2 Pretend I'm sick. [conflict continues]  
 Ch. 1 No. (protesting, but hangs up the phone and changes the topic)  
 [conflict is now expressed literally]  
 (from Garvey, 1988; p.20. Comments in square brackets added)

More obvious expressions of conflict are manifested in exchanges which seem designed to enhance or escalate disagreement. These include reciprocal threat ("I'm gonna tell" - "Well, I won't be your friend"); mocking achieved by

repeating (often marked by voice alteration); and contrastive stress ("You cheated" - "You cheated").

To code conflict, the observer must witness at least two disagreement-relevant moves (two consecutive turns involving actual or inferred opposition). That is, a first opposition must meet with a counter-opposition move from the partner. Thus, simple disagreements (one opposing move) are not regarded as conflict. Turns following the second opposition continue to be coded as conflict as long as the chain of disagreement-relevant moves continues.

**Note:** Ignoring a partner's request or influence attempt can be considered an opposing move once the conflict is under way (and assuming it is followed by another opposition). However, it cannot initiate a conflict. That is, conflict can only be scored in the third turn of the following sequence: Child A: opposition - Child B: ignore - Child A: reiterate opposition.

### 2.3 CONFLICT TERMINATION STRATEGIES

Strategies for conflict termination will be coded at the end of each conflictual interaction (a turn or series of turns coded 900). Conflict is considered to have ended when each child has ceased making opposing moves (i.e. a two-turn sequence occurs that is free of opposing behaviors). (N.B.: Conflict scoring is continued for inaudible turns as long as a clear sequence of non-opposing moves has not occurred.) The termination strategy code will be assigned either to the last opposing turn or to the first non-opposing turn. The various strategies have been adapted from Anderson (1989), Gottman (1983) and Hartup, Laursen, Stewart and Eastenson (1988). Six broad categories of conflict termination strategies can be identified:

**910 attempts at coercion or standing firm:** Usually involves insistence on the original plan (either verbally or physically), strong demands for compliance, threats or manipulative ploys (e.g. asking for help with a view to tricking the partner into following one's plan of action). These tactics are often undertaken with the objective of forcing the partner to submit to one's point of view, creating a winner/loser situation. References to arbitrary rule ("I'm bigger, so I have it first") are included in this category.

**920 bargaining, negotiation:** Includes the presentation of compromise solutions, modification of one's own position with a view to accommodating the partner or suggestion of alternatives. The child's main objective is to prevent the escalation of conflict and to achieve a spirit of cooperation. This is often accomplished by offering an equitable (as opposed to a winner/loser) solution.

Children may refer to rules defining equitable behavior (e.g. taking turns or sharing) or negotiate a middle-ground position.

**930 deference:** Deference to the partner is mainly expressed in qualified disagreements --i.e. disagreements accompanied by justifications or reasons for the opposition (the reason does not have to make sense)--, weak demands (e.g. polite requests and suggestions), or exploration of feelings (e.g. inquiring about why the other is upset). Keep in mind that there is an element of "face saving" involved in this type of deference to the partner. Children are not submitting; they are "holding their own" but trying to achieve a cooperative solution. Look for politeness markers ("Could we do this?") or hedges ("well...not now"), which indicate that the feelings or desires of the partner are being taken into account in spite of the disagreement.

**940 short-circuiting of the conflict:** This strategy implies an intention to drop the conflict by giving in to the partner's point of view. The instigator of the conflict may suddenly cease provocation, either by dropping the topic, changing it or by agreeing with the partner's position. Alternately, the partner may decide to acquiesce to the instigator's demands or suddenly give up an opposing stance (includes surrendering of objects). The important feature for this code is that one or both children has given up the battle, either through compliance (submission) or cessation of the opposing stance. Humor may also be used as a way of short-circuiting conflict. This usually a silly and "forced" type of humor (e.g. sudden bursts of bathroom humor) which is specifically designed to reduce conflict. Self-deprecating comments, apologies or "confessions" may also be used. In contrast to disengagement, a child short-circuits the conflict in an effort to maintain interaction or joint activity.

**950 passive disengagement:** Involves avoidance or physical withdrawal from the conflict situation. Specifically, children may turn away from the partner, drop a shared activity or ignore opposition from the partner. In this case, maintenance of joint activity or interaction may have to be sacrificed in the process of terminating conflict.

**960 other**

**Note:**

1. If the termination strategy occurs in the same turn as the initiation of conflict, code the strategy at the current turn and conflict at the preceding turn.
2. Here is a set of decision rules for choosing the termination strategy in the case where two strategies occur in succession at the end of the conflict (one at the last opposing turn, the other at the first non-opposing turn):

Choose the second strategy in all cases except when:

a) 910 is followed by 940: choose 910 if, by standing firm, the child achieves compliance or obtains what she wanted from the other child. Otherwise, choose 940 (e.g., if the child "short-circuits" the conflict by changing the subject or by making an irrelevant joke).

b) 920 is followed by 940: choose 920 if the "bargain" is accepted and 940 otherwise.

c) 930 is followed by 940: choose 930 if, in the second turn, the child complies with the request/point of view expressed in the first turn (if the child emitting the 940 strategy has given in to the other child). Otherwise, choose 940 (e.g., if the child "short-circuits" the conflict by changing the subject, uses humor as a distraction, etc.).

### **General Notes:**

1. When two consecutive turns are assigned to the same child, they are treated as one turn with respect to the coding of Conflict and Social involvement. That is, both turns are assigned the same level of social involvement (unless the occurrence of a social bid or influence attempt causes an escalation in the second turn). Conflict will be sustained for both turns if at least one contains an opposition. If one turn contains a conflict termination strategy, code it following the second turn; the first will receive a 900 score.

2. For inaudible turns in which nonverbal behavior is too ambiguous to justify a change in the social involvement code, maintain the same level of social involvement as for the previous two-turn sequence.

### PASS 3: CONTEXT, CONTENT AND ELABORATENESS OF PRETEND PLAY

In Pass 3, the context (theme) of each episode of pretend play, its continuity, the nature and valence of psychosocial issues, the resolution of pretend challenges and the elaborateness of the make-believe storyline are scored. The coding is done whenever at least one child is enacting, framing, or explicitly acknowledging his/her partner's pretend play (that is, whenever 12X code has been coded in Pass 1 for pretend play). The coding is applicable to



every conversational turn in the pretend mode, with the exception of 'elaborateness' of pretend, which is coded at the end of the pretend sequence.

However, observers need not always enter Pass 3 codes at every turn:

- a) Context and continuity codes need only be recorded when these codes begin, end, or change - the computer will insert relevant codes for those turns occurring in between.
- b) Psychosocial issues/valence should only be coded when they begin and when they end. Pretend resolution should be coded at the turn preceding the end of a negative issue.
- c) Level of elaborateness should be entered at the last turn before the end of a context code or at the turn preceding a change in context.

When entering codes into the computer, observers should always enter pass 3 codes in the following sequence: 4/5XXX, 6XXX. When a trial does not begin immediately with a pretend context code, observers should enter 4000 at the first turn for each child. Similarly, observers should insert a 6000 after 4/5XXX at the beginning of pretend-related sequences which do not begin immediately with a psychosocial issue.

Codes for the continuity, context, and psychosocial issues of social pretend play are adapted from Fein (1989) and Rosenberg (1984). The first digit refers to the continuity of the theme (4/5XXX), or the presence of a psychosocial issue (6XXX). The second and third digits in a 4/5XXX code indicates the context, and the fourth digit reflects the elaborateness of pretend enactment. The second digit in a 6XXX code indicates a particular psychosocial issue, the third digit, its valence, and the fourth digit indicates the level of resolution for a negative valence issue. While social pretend framing or enactment can occur unaccompanied by a psychosocial issue (as indicated by an 6000), continuity and context must always be scored whenever social pretend framing or enactment is observed (as indicated by a 12X code from Pass 1).

#### CONTINUITY - (4/5XX)

Observers should code a pretend theme that is new to the session as soon as they see it occur, by entering 4XXX. Enter 5XXX (a) for the second turn in a new theme, whether it is clear or ambiguous, (b) if a story is resumed following a break in the pretend, or (c) following an intervening (and clearly distinct) story-line. Since all subsequent utterances will be coded as 5XXX,

observers need only enter codes signalling the end of context (5000), a new storyline (4XX0), and the first code signalling its continuation (5XX0)- the computer will classify all utterances within a given theme as involving a continuation.

Observers must be careful not to automatically code a change in context area based on an apparent superficial change in storyline or on variations and additions to a continuing storyline. For example, in one case a child began pretending to be a prince, and then began talking about astronauts. By watching the tape a little longer, it became clear that the child was talking about a prince who was an astronaut. Your choice of a context code must not be determined primarily by the toys children are playing with, but rather by the story theme that they are constructing. In the above example, since prince and astronaut are part of the same story, you must identify and code the predominant theme or context (e.g., space or fictional scenarios (see definition below). This means that a continuing story can receive only one context code no matter how many times the story is resumed. Code the context which is most representative of the distinct nature of events which unfold.

It is important to note that different stories may be enacted within the same general context area - for example, children may enact two different stories based on a doctor theme. If this occurs, observers should assume that the current story is a continuation of the previous one unless there are clear indications that this is not so (in which case each distinct story would receive a code of 4030, as opposed to 4030 for the first and 5030 for the second).

### 3.2 CONTEXT

The nature of the context is indicated by the second and third digit of the 4XXX/5XXX code. Context refers to the topic or theme of the pretend sequence, i.e.:

- 01- family activities
- 02- outdoor activity (sports, playground, picnic)
- 03- doctor, dentist, & nurse
- 04- good guys/bad guys (cops & robbers etc.)
- 05- generalized character (old man, coquette, cowboy) or emotions (angry lady) in the absence of other contexts
- 07- entertainment (performer(s), audience, MC, etc.)
- 08- space
- 09- fictional scenarios (scenarios involving fantastic characters or fictional settings which may or may not be inspired by television or comic strips)
- 10- other

Note:

- 4/5010 or 'family activities' is coded whenever family members are mentioned, if no other context predominates. This category may also refer to domestic-type activities (bed time or dinner time scenarios) when it is clear that such activities are occurring within the context of family life.

- 4/5040 takes precedence over 4/5030 when the fictional scenario involves the portrayal of good guys/bad guys.

Several aspects of context coding are important to consider (**c, d and e only apply if Pass 1 is not already coded. Otherwise, rely on previously recorded codes to distinguish between pretend and non-pretend activity**):

a) In some cases, it is possible that children will be engaged in shared social pretend that has multiple context codes, or be focusing on different aspects of multiple contexts - for example, they may be using the skiers in a space episode, or may be a family going to the doctor. In these cases, score the predominant context.

b) If the children are not sharing the same theme of pretend (i.e. pretending in a manner akin to a "collective monologue"), give each child a different context code.

c) If one child is engaged in the preparation or the enactment of pretense and the other is doing neither but is interacting socially with the first, assign a context code to the first child only.

d) The exception to (c) occurs when the second child unambiguously acknowledges, through verbal or non-verbal behavior, the first child's overt proposals to pretend. For example, child 1 may say, "I'm going to make a ski trip", whereupon child 2 may respond "I'll start getting things ready" or begins assembling the Playmobil ski figures.

e) It is important to distinguish between prolonged and directed preparation, and initial preparation that gradually becomes indistinguishable from simple non-pretend exploration of the objects or setting. While a content code continues throughout in the former case, it must be eventually be ended for the latter case. Most of the time, such extensive "preparation" should be considered to have ended as soon as it is no longer clearly and specifically related to explicit intentions or agreement to pretend. Often what happens at this point is that the children seem to drift vaguely or without clear purpose from object to object.

Assign the end of context code (5000):

(a) immediately when the children are clearly not engaged actively in either the enactment/framing of pretend, or preparation directly relevant to previously announced intentions to pretend, or (b) after two exchanges (e.g. A-B-A) when the children are ambiguously engaged in preparations to pretend **If Pass 1 is coded, code 5000 simultaneously to a shift into non-pretend activity (codes 11X, 130, 14X or 152).**

### 3.3 PSYCHOSOCIAL ISSUES AND VALENCE

A psychosocial issue refers to the emotional challenge to be dealt with within a pretend sequence. If more than one psychosocial issue is observed at any given turn, the predominant or most salient one - that is, the one which seems most important - should be scored. Children may not be dealing with the same emotional issues despite their joint participation in a pretend sequence and, thus, may receive a different code. Codes for psychosocial issues will continue through subsequent turns as long as these turns or accompanying non-verbal behaviors are relevant to the psychosocial issue. Record the end-of-issue (6000) code at the first turn which involves verbal or nonverbal behavior which can no longer be considered to have any relevance to the issue.

To be coded initially, psychosocial issues must be explicitly present in the child's behavior in a pretend role and/or in the elements of the storyline. That is, they should not be inferred from the context of pretend (for example, it should not be inferred that children pretending to be doctors are necessarily concerned with physical well-being). On the other hand, if one says "this patient must be cured", then the theme of physical well-being can be said to be present in the play, at least for the child making the statement (see the specific codes for examples of an explicit concern). If the other child agrees or cooperates with the action implied in the statement of the issue, s/he too will receive the issue code.

Once explicit mention of an issue has been made, observers need only look for behavior consistent with that issue to allow it to continue. In some cases the concern will be quite obvious. Sometimes the child's continuing concern is explicitly demonstrated through verbal statements (for example, a concern for physical well-being is clearly evident when a child says, "This shot will make you better"). Other times a continuing concern is more implicit in their verbal statements or non-verbal behaviors - for example, having once demonstrated a clear concern for a partner's "health", a child may continue to treat the "patient" by applying bandages, checking their temperature, etc.

Note: If explicit portrayal of an issue precedes the initiation of pretend codes (12X), the issue may be coded at the first turn of the pretend sequence if the child's behavior is still relevant to the issue.

Psychosocial issues should be ended by coding a 6000 when the focus of the play changes in such a way as to suggest that the psychosocial issue is no longer relevant. This can occur (a) through an explicit termination of the context, (b) through an explicit termination of the social interaction, or (c) through a shift in the pretend storyline that cannot readily accommodate the previous issue. Note that a change in issue from one turn to the other automatically denotes termination of the first issue. It is not necessary to use the 6000 termination code in this case.

#### Valence - (6XXX)

Psychosocial issues always have a positive or negative valence. **It is important to note that valence refers to the positive or negative emphasis of the issue, not to the emotions expressed by the children while playing, e.g. killing with glee is negative.** Valence (6XXX) is coded as 1 (6X1X) if positive, or 2 (6X2X) if negative. Code (6000) only if there is no clear psychosocial issue of concern to the child and, therefore no valence.

Observers must be careful to code the valence of issues as characterize the current state of the child's pretend scenario and not as they characterize what the child intends to do in the upcoming sequence. For example, a child acting out a doctor sequence with a partner may say, "I'll have to do something to fix that broken leg". That child will be coded as demonstrating a concern for physical well-being with a negative valence until he/she actually does or says something that indicates that the leg is "fixed", at which point the valence is changed to positive.

The definitions of the six psychosocial issues and their valences are as follows:

Affiliation (61XX). A score of 61XX is given for themes involving affectional ties to significant others or explicit portrayals of close interpersonal relations. Positive aspects of connectedness (611X) are themes of affection, reunion, nurturance, caretaking and friendship. A code of Affiliation with a positive valence may be assigned whenever friends or friendship is mentioned or whenever colleagues or spouses are referred to in an affectionate manner or treated with kindness. Visiting a friend's house or going to a party would likely be scored here. Negative aspects (612X) are separation (e.g., a child leaving the family to go to school; a mother leaving a child with a babysitter), isolation

(e.g., being an only child), rejection, being alone, on the one hand, or hostility and anger (as enacted emotions) directed at a significant party, on the other.

Physical well-being (62XX). A score of 62XX is assigned for explicit portrayals of states or conditions affecting the bodily well-being of self or others. Examples are themes of health, recovery, safety from bodily injury, the fulfillment of needs for food, sleep or shelter (positive valence) vs. illness, injury, disability, deprivation of food or sleep (negative valence). (Note that the mere mention of food products is not sufficient for scoring 62XX, the children must refer to a lack of food, the state of hunger, to the action of eating, etc.) Storms, disasters or accidents would likely be scored here. Control over bodily functions (toileting, burping, passing gas, etc. in the context of pretense) is also included in this category, with self-control coded as positive and lack thereof as negative. While pretense involving the enactment of doctor/patient roles often involves themes of physical well-being, explicit mention of a state of illness (e.g. mention of an injury or its consequences) or a restoration to health ("This will make you better") is needed for an explicit concern to be coded. Once a concern for physical well-being has been made explicit, probably any doctor-type behavior is sufficient for a concern to continue to be coded. Note that any accidents which explicitly involve humans or other living creatures (e.g. someone flying a spaceship and saying "It's going to crash") are assumed to demonstrate a concern for physical well-being.

Also note that, if an injury is intentionally caused by another person, then code both children as being concerned with psychological empowerment, with a negative valence.

Psychological empowerment (63XX). Psychological empowerment refers to explicit portrayals of competence and power on the positive side and aggressiveness, vulnerability or bondage on the negative. The themes often involve interpersonal relations. Examples are themes of heroic feats (saving the princess or killing the thief), control or prowess vs. failure and helplessness (being attacked by a monster, being kept prisoner or thrown in jail). Themes of loss of protection --e.g., a child getting lost --, being aggressive or aggressed against would likely be scored as negative. Note that when the helplessness or failure of the character has consequences for their health (i.e. "Help me - I've crashed my spaceship and I'm hurt!") that are explicitly identified, Physical well-being may be scored. Also note that when the power exerted by one individual over another is due to the social roles that each is enacting (e.g. doctor-nurse, teacher-student), Social regulation should be scored. Injuries that are intentionally caused by another person (animal, monster, etc.) denote a concern for psychological empowerment (negative valence for both the victim and the aggressor). Finally, killing an enemy for one's own protection is scored as positive.

Social regulation (64XX). Social regulation refers to explicit portrayals of social expectations, affirmation of social proprieties (not entering the men's room if you're a girl), rules, and obligations, as well as dominance by and submission to authority figures (including, parents, teachers and such). Examples are compliance, approval, conformity to social expectations (positive valence), vs. transgressions, defiance or rule violation (negative valence). One character ordering another around, e.g. to clean the house, or deliver a package, would be scored here. If the individual receiving the orders complies, this is coded 641X and if s/he disobeys, it is coded 642X. The appropriateness of the attempt to socially regulate must be noted in order to code the valence of the attempt or the response to it. For example, if the attempt is reasonable, in the best interests of the child, or done in a nice way, then code a positive valence for the child who regulates or who complies, and a negative valence for the child who disobeys. If the attempt to socially regulate is unreasonable, disagreeable, or not in the best interest of the recipient, then code a negative valence for the child who regulates or who complies, and a positive valence for the child who disobeys.

Respect for property (65XX). Respect for property refers to explicitly portrayed concern over the intactness of material objects. Themes include protection, construction and repair (positive) vs. destruction, threat, "It's going to crash" (negative). Positive examples are firemen putting out fires, plumbers fixing leaky pipes, car repair, etc. Fires, hurricanes, train wrecks and plane crashes in which the emphasis is not on physical injury are scored 652X. Note that any accidents which explicitly involve humans are assumed to demonstrate a concern for physical well-being. Also note that if the loss or destruction of personal property is clearly due to the action of another person (thus indicating the occurrence of threat and vulnerability), then code it as reflecting a concern for psychological empowerment.

Mastery and concern for autonomy (66XX). Mastery refers to concerns for emulating adult roles or strivings for the competence, skill and autonomy of older figures. Such concerns may be expressed through the underscoring of actions ("I can drive", "I will babysit") which are clearly not in the realm of the child's capabilities, or in framing statements such as "let's pretend to...like my daddy/teacher/older sister". Use of phrases such as "that's not how to do it/this is how...", "doing it well/poorly" or "doing it on one's own" is also scored in this category if it can be clearly distinguished from simple negotiation or literal qualification of a partner's transformation. Note that the portrayal of adult roles or characters is not sufficient for a score of 66XX, explicit mention of "grown-up" activities is necessary.

When such concerns accompany concerns with social regulation, the latter should be scored. For example, in a doctor-nurse sequence, if the doctor says to the nurse "No, you should hold the needle this way", social regulation should be scored. In general, concerns for mastery are distinguished from Social regulation issues in that the pressure to perform is not imposed by anyone in authority or by the character portrayed by one's partner. Rather, the activity is self-motivated, e.g. attempting to perform a concert "properly". When an act of prowess is performed, Mastery is coded in cases where the emphasis is on a required skill, whereas Empowerment is coded when the emphasis is on the dangers, threats or obstacles to be overcome. Mastery assumes a positive valence when someone has "done it well", and negative when they have "done it poorly".

Note: Some issues, albeit explicitly portrayed, are not as obvious as others. There is a tendency, over time, to code only a restricted set of behaviors as representing an issue (e.g., "being hurt" is more obvious than "being tired" or "looking for a motel" as an instance of Physical well-being). Reread the definitions regularly and, without attempting to read the children's minds, be alert to the more subtle shades of meaning embedded in a theme.

### 3.4 RESOLUTION OF PRETENSE

This scale is an adaptation of Sutton-Smith's (1984) description of the levels of psychological conflict resolution exhibited in children's narrative productions. Resolution will only be scored following a negative valence issue, that is when a fantasied challenge (obstacle, threat or lack to be overcome; damage to be repaired or loss to be recovered) is portrayed, planned or mentioned. Thus, in the event of a positive-valence issue or before the negative issue is resolved, code 0 as the last digit of the 6XXX code (6XX0). For negative issues, record the resolution level at the turn preceding the end of the issue (6000). Resolution is coded for each child separately in the event that each is resolving a different issue. However, both children can be involved in the same resolution attempt and receive the same code. There are four levels of pretense resolution, recorded as the last digit of the 6XXX code:

1. No response to challenge. This score indicates that no attempt has been made to resolve the fantasied problem. Either the problem was ignored, the theme has shifted or the pretend episode was desisted before a resolution was attained.

2. Failure to resolve the problem. The fantasied negative situation has prevailed. That is, the obstacle, threat or lack remains despite efforts to overcome it. As in level 1, the outcome of the pretend story is negative.



3. Passive resolution. This and the following level pertain to positive outcomes of resolution attempts. A passive resolution occurs when the challenge is overcome through successful escape or avoidance, when luck or magic intercedes, when the protagonist is rescued from a threatening situation, or when the threat is rendered harmless without the active participation of the protagonist. Level 3 is also coded when it is the play partner who is responsible for resolving a pretend situation involving both children.

4. Active resolution (or nullification of the problem). This score is given when the protagonist actively renders the threat powerless, when obstacles are overcome and problems managed through some active gesture. It may be the case that the story protagonists have not only solved the problem, but that they have also transformed it in such a way that it is not likely to resurface. Examples are an enemy made into a friend or a lonely character getting married. This level is characterized by an explicit and active attempt to transform a bad situation into a good one. Also considered Level 4. resolution are measures taken to prevent bad events from occurring. For instance, children going on a picnic and fearing the cold might say "Let's bring a blanket, just in case" or, in preparation for a space shuttle trip, "he can't hurt himself 'cause he's got a helmet now".

### 3.5 ELABORATENESS OF PRETEND PLAY

The coding of the elaborateness of children's pretend play has been adapted from Botvin and Sutton-Smith's (1977) work on the development of structural complexity in children's fantasy narratives. More specifically, the present system borrows the concepts of primary and secondary plot units. **Primary plot units** are elements which represent either the impetus (motivation) for an action or action plan (e.g. something lacking, a threat to well-being) or a reaction to the impetus (i.e. a response to the plan or incomplete state of affairs evoked by the impetus). Thus, plot P proceeds from state A to state B, where both A and B represent primary plot units. **Secondary plot units** are elements which represent an "action or potential action that is preparatory, intermediate, or consequential to the establishment of the boundaries of the narrative" (p. 378). They are transition elements which mediate the action between the impetus and reaction. In the present study, we will more formally distinguish between:

(a) simple elements, or pretend actions, events, or verbalizations that occur outside of any plot;

(b) impetus, or the introduction of some initial premise or starting point for a story. The impetus is the "set up" or plan of action. It includes the

introduction of characters (indexed by voice change, or verbal/nonverbal behaviors that clearly indicate that the children have assumed identities other than their own), clear motivation (reasons) for pretend actions/transformations and a goal or set of goals to be attained (implicit or explicit).

(c) **reaction**, or the attainment of some state of relative closure or equilibrium in the plot structure, e.g. attainment of goals or completion of tasks set up by the impetus. (Note that in contrast to the resolution of psychosocial issues, this type of reaction refers to the structure rather than the content of pretense. Therefore, it is not necessary that problems be resolved or challenges overcome, only that the story involve an action or series of actions which follow logically from the impetus of the storyline.)

(d) **episodes**, or action sequences containing impetus and reaction; and

(e) **secondary plot units**, or actions that intervene between the impetus and outcome of the primary plot;

(f) **subplots**, or episodes which are embedded in and subordinated to a higher-order episode. Subplots intervene between the impetus and reaction of the primary episode.

The elaborateness of pretend enactment is coded for all continuous segments of pretend play (i.e. whenever there has been role enactment, an object transformation or framing of pretend activity or rely on Pass 1 12X codes). Thus, if children cease to pretend several times but always return to the same story theme, level of elaborateness should nonetheless be entered at the last turn prior to a shift from pretend play to other activities (or prior to a shift in context). In addition, the elaborateness code assigned to a given segment of a story represents the elaborateness of the story up to and thus includes elements present in previous segments.

If a new story is begun, elaborateness coding is begun again separately for that story. A story may be defined as a collection of related make-believe actions or events that center on a single theme or context area and that may or may not unfold over time.

Observers will code elaborateness as the last digit of the 4/5XXX code as follows:

0. No elaborateness - coded in cases where one child has merely acknowledged the other child's pretend actions or when no pretend transformations can be detected despite the presence of a 12X pass 1 code.

1. Simple elements - pretend enactment or framing that involves a single action or event or several independent, unlinked actions or events, with no stated purpose or motivation for the activity. Any object or identity transformation(s) or announcement(s) of an ensuing transformation which is(are) not embedded in any identifiable plot structure (i.e. that do not involve clear goals or motivations for action) is(are) coded at level 1. For example, someone makes a playmobile figure "ski". Later another figure is made to join the first.

2. Impetus but no reaction - Elements of the plot (e.g. characters, goals, motivations for action --all three must be present) are introduced but not carried through to a logical conclusion. For example, a child may say "It's time to race", make a playmobile figure ski, and then stops without any indication that the "race" has taken place. Or, a statement such as "pretend you're in the hospital because you're sick" which is not followed up on with a treatment scenario.

3. Episode - (A -> B; where A represents the impetus and B the reaction) a story involving an impetus and a reaction to the impetus. To be scored at this level, the fantasy should involve readily identifiable characters whose actions have a meaning or a purpose relevant to the general storyline. For example, in the context of the ski race, the child states that s/ne is the champion, animates the Playmobile figure, and when the race is over, waves his arm in a gesture of victory, or says "I won!". The reaction is the set of pretend actions that is explicitly or implicitly evoked by the action plan or impetus (e.g., treatment for an injury, eating after announcing plans for a picnic). No formal "ending" of the pretend story is necessary as long as the reaction to the impetus has been enacted.

4. Episode with secondary plot units - (A -> c -> B; where c represents the secondary plot unit(s)) at this level. the episode can be characterized as in 3, but it is embellished by one or more secondary story elements which intervene between impetus and reaction. For instance, the events in the previous example occur except that while racing, the skier is made to avoid a tree. Or, in a doctor-patient sequence: the doctor phones the patient's mother or engages in several different "treatments" prior to curing the illness.

5. Chained episodes - (A1 -> (c1) -> B1 -> A2 -> (c2) -> B2, etc.; where (c) represents the optional secondary plot unit(s)) In episodes, several simple plot structures (impetus/reaction dyads) are played out or planned in succession. Individual episodes may or may not contain intervening plot elements mediating between impetus and reaction. For example, the events in 3 occur and then the child says "I'm too cold to ski anymore, I need some hot coco" and proceeds to animate the Playmobil figure accordingly. A clear shift in the

content of the storyline should be detected to be coded at level 5. Mere repetitions or embellishments on previous episodes are scored at levels 3. or 4.

6. Subplots - (A -> (c), a -> b, (c) -> B; where a -> b represents the subplot(s)) At this level, the fantasy is fleshed out enough to have a narrative quality to it; i.e. coordination of actions and characters "tell" a story with beginning, middle and ending. It often contains many intervening or secondary plot elements. Rather than a succession episodes, the entire pretend sequence consists of one elaborate "plot" in which one or several subplots are embedded. In other words, the main action of the story is interrupted by one or more subsidiary plots, each involving its own impetus and reaction. For example, the child may say, "I'm going to ski in this race", makes two playmobile figures ski, and then says "I have to get rid of this other skier to win", makes one crash into the other and knock it off the course, and then has the remaining skier "win".

APPENDIX F

Univariate analysis of variance and  
covariance summary tables

Table F-1

Univariate analysis of variance summary table: Effects of age group, play mode (PM) and partner on the proportion of time in social play devoted to high-level social coordination<sup>1</sup>

Effect	MS	df	F	p
Between				
Age	0.02240	1	1.53	.229
Error	0.01465	22		
Within				
PM	0.34218	1	17.71	.000
PM X age	0.02978	1	1.54	.228
Error	0.01932	21		
Partner	0.04519	2	3.92	.027
Partner x age	0.03153	2	2.74	.076
Error	0.01152	44		
PM x partner	0.02177	2	1.50	.234
PM x partner x age	0.00045	2	0.03	.969
Error	0.01449	42		

<sup>1</sup>Note. For all summary tables of analyses involving play mode effects, summary statistics for the effects of age, partner and their interaction were derived from ANOVAs or ANCOVAs excluding play mode as a factor.

Table F-2

Univariate analysis of covariance summary table: Effects of age group, play mode (PM) and partner on the proportion of time in social play devoted to sharing of play themes, with IQ as a covariate

Effect	MS	df	F	p
Between				
Age	0.10773	1	4.14	.054
Covariate	0.09373	1	3.60	.071
Error	0.02601	21		
Within				
PM	1.01582	1	19.50	.000
PM X age	0.00646	1	0.12	.728
Error	0.05210	21		
Partner	0.30755	2	9.47	.003
Partner x age	0.05555	2	1.71	.193
Error	0.03249	44		
PM x partner	0.05480	2	1.30	.283
PM x partner x age	0.02244	2	0.53	.591
Error	0.04213	42		

Table F-3

Univariate analysis of covariance summary table: Effects of age group, play mode (PM) and partner on the average level of investment in play, with IQ as a covariate

Effect	MS	df	F	p
<b>Between</b>				
Age	0.09266	1	0.43	.521
Covariate	1.28289	1	5.91	.024
Error	0.21706	21		
<b>Within</b>				
PM	2.45055	1	13.38	.001
PM X age	0.20777	1	1.13	.299
Error	0.18308	21		
Partner	0.95151	2	7.43	.002
Partner x age	0.04694	2	0.37	.695
Error	0.12813	44		
PM x partner	0.07936	2	0.55	.581
PM x partner x age	0.26985	2	1.87	.167
Error	0.14442	42		



Table F-4

Univariate analysis of covariance summary table: Effects of age group, play mode (PM) and partner on the average number of conflicts in social play, with time in social pretend/nonpretend play as covariates

Effect	MS	df	F	p
Between				
Age	0.73728	1	0.07	.791
Covariate	46.33356	1	4.51	.046
Error	10.26454	21		
Within				
PM	7.76774	1	4.04	.057
PM X age	0.16198	1	0.03	.774
Covariate	47.92699	1	24.94	.000
Error	1.92147	21		
Partner	2.34442	2	0.38	.682
Partner x age	7.67947	2	1.26	.294
Covariate	24.42639	1	4.01	.052
Error	6.09344	43		
PM x partner	1.90146	2	0.86	.428
PM x partner x age	2.12973	2	0.97	.389
Covariate	95.14955	1	43.26	.000
Error	2.19936	43		

Table F-5

Univariate analysis of variance summary table: Effects of age group and play mode (PM) on the average duration of conflicts in social play

Effect	MS	df	F	p
Between				
Age	35.43193	1	0.99	.334
Error	35.85993	17		
Within				
PM	57.79412	1	2.46	.131
PM X age	3.86482	1	0.16	.689
Error	23.46801	21		

Note. Summary figures for the age effect were obtained from the Age x partner ANOVA.

Table F-6

Univariate analysis of variance summary table: Effects of age group and partner on the average duration of conflict in social play

Effect	MS	df	F	p
Between				
Age	35.43193	1	0.99	.334
Error	35.85993	17		
Within				
Partner	11.66243	2	0.24	.787
Partner x age	52.30979	2	1.08	.351
Error	48.48219	34		

Table F-7

Univariate analysis of variance summary table: Effects of age group, play mode (PM) and partner on the average latency to high social coordination in social play

Effect	MS	df	F	p
<b>Between</b>				
Age	1.37913	1	0.12	.737
Error	11.86232	18		
<b>Within</b>				
PM	12.87996	1	0.93	.348
PM X age	0.00556	1	0.00	.984
Error	13.87417	18		
Partner	11.73851	2	1.71	.196
Partner x age	3.77111	2	0.55	.583
Error	6.88013	36		
PM x partner	68.01107	2	3.34	.047
PM x partner x age	8.27779	2	0.41	.669
Error	20.37224	36		

Table F-8

Univariate analysis of variance summary table: Effects of age group and partner on the time spent in social pretense

Effect	MS	df	F	p
Between				
Age	20167.01	1	0.13	.719
Error	151454.57	22		
Within				
Partner	742119.68	2	6.03	.005
Partner x age	32278.43	2	0.26	.770
Error	123004.04	44		

Table F-9

Univariate analysis of variance summary table: Effects of age group and partner on the average duration of shared pretend play episodes

Effect	MS	df	F	p
Between				
Age	248.30270	1	15.44	.000
Error	16.08398	20		
Within				
Partner	283.87972	2	11.14	.000
Partner x age	23.78118	2	0.93	.402
Error	25.48779	40		

Table F-10

Univariate analysis of variance summary table: Effects of age group and partner on the proportion of time in social pretense devoted to psychosocial issues

Effect	MS	df	F	p
Between				
Age	8.85551	1	0.01	.929
Error	0.00044	21		
Within				
Partner	0.04744	2	1.23	.303
Partner x age	0.00472	2	0.12	.885
Error	0.03865	42		

Table F-11

Univariate analysis of variance summary table: Effects of age group and partner on the proportion of time in social pretense devoted to high-level issues

Effect	MS	df	F	p
Between				
Age	0.00527	1	0.23	.639
Error	0.02320	20		
Within				
Partner	0.06096	2	3.97	.027
Partner x age	0.00686	2	0.45	.643
Error	0.01535	40		



Table F-12

Univariate analysis of variance summary table: Effects of age group and partner on the proportion of negatively-valenced issues with positive resolutions

Effect	MS	df	F	p
<b>Between</b>				
Age	0.05554	1	0.66	.429
Error	0.08369	14		
<b>Within</b>				
Partner	0.02470	2	0.30	.743
Partner x age	0.31965	2	3.88	.033
Error	0.08245	28		

Table F-13

Univariate analysis of variance summary table: Effects of age group, level of social coordination (LSC) and partner on the latency to psychosocial issues given high/low social coordination

Effect	MS	df	F	p
Between				
Age	21.62725	1	1.55	.229
Error	13.98489	19		
Within				
LSC	234.19785	1	16.39	.001
LSC X age	0.76273	1	0.05	.820
Error	14.28966	19		
Partner	0.09669	1	0.00	.945
Partner x age	0.80958	1	0.04	.844
Error	20.48605	19		
LSC x partner	31.38452	1	1.98	.175
LSC x partner x age	0.99927	1	0.06	.804
Error	15.81759	19		

Note. Due to the low frequency of issues expressed by 4-year-old strangers, only friend and acquaintance conditions were compared.

Table F-14

Univariate analysis of variance summary table: Effects of age group, psychosocial issue expression (PIE) and partner on the latency to high-level social coordination given expression/no expression of issues

Effect	MS	df	F	p
Between				
Age	29.67293	1	1.05	.317
Error	28.25003	21		
Within				
PIE	0.14853	1	0.01	.931
PIE x age	32.50770	1	1.70	.206
Error	19.11621	21		
Partner	17.52970	1	0.80	.382
Partner x age	33.14405	1	1.51	.233
Error	22.01248	21		
PIE x partner	2.55682	1	0.14	.713
PIE x partner x age	4.76960	1	0.26	.616
Error	18.36756	21		

Note. Due to the low frequency of issues expressed by 4-year-old strangers, only friend and acquaintance conditions were compared.

## APPENDIX G

Marginally significant differences in the  
mean proportion of social play involving high-level social coordination (seconds)  
as a function of age and relationship to the play partner

Table G-1

Mean proportion of time in social play involving high-level social coordination (seconds) as a function of age and relationship to the play partner

		Relationship to partner		
		Friend	Acquaintance	Stranger
4 year-olds				
	<u>M</u>	.31 <sup>a</sup>	.37 <sup>a</sup>	.22 <sup>b</sup>
	( <u>SD</u> )	(.09)	(.09)	(.17)
6 year-olds				
	<u>M</u>	.29 <sup>a</sup>	.26 <sup>a,b</sup>	.25 <sup>a,b</sup>
	( <u>SD</u> )	(.13)	(.08)	(.09)

Note. Means with different superscripts differ at  $p < .10$ .