PRESCHOOLERS' PLAY NEGOTIATIONS: THE DEVELOPMENT OF INTERPERSONAL UNDERSTANDING

by

JESSICA BEER

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2007

UMI Number: 3283177

ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346

This manuscript has been read and accepted for the
Graduate Faculty in Psychology in satisfaction of the
dissertation requirement for the degree of Doctor of Philosophy.

David J. Bearison

Date | Chair of Examining Committee

Joseph Glick

Date | Executive Officer

Katherine Nelson

Martin Ruck

Anna Stetsenko

Gary Winkel

Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

Abstract

PRESCHOOLERS' PLAY NEGOTIATIONS: THE DEVELOPMENT OF INTERPERSONAL UNDERSTANDING

by

Jessica Beer

Adviser: Professor David Bearison

The overall aim of this study is to understand how changes in intersubjectivity, children's use of internal state words and justifications, and familiarity between play partners contribute to the success and complexity of social pretend play negotiations between three and five years of age. The findings of this study have implications not only for the development of interpersonal understanding but, more broadly, for the study of social cognition.

Fifty children (age 3, 6 to 5, 11) paired into same age dyads were recruited from two preschools in New York and Indiana to participate in a 15-minute unstructured play session with a classmate. Children's turn by turn negotiations during pretend play were transcribed and coded from video and audio tapes. Results indicated that between the ages of three and five there is a shift from the use of less to more socially engaging discourse, from less to more internal state referencing during negotiations, and from lower to higher levels of intersubjectivity achieved during pretend play negotiations. Younger children had more unresolved pretend play negotiations than older children, and older children had more successful negotiations than younger children. More familiar

dyads engaged in more social pretend play, used more elaborations and justifications in their dialogue, had more expansive types of negotiations, and were overall more successful negotiators.

The results of this study extend our current understanding of the socio-cognitive processes involved in the co-construction of knowledge that occurs between children during pretend play – the basis of social cognition (Rogoff, 1990). The findings reveal the unique contribution of the pretend play context to collaborative cognition. In particular, the representational nature of pretend play requires that at a minimum children share the meaning of that which is unknown (e.g., their roles, play rules, use of toys) and at a more advanced level, maintain a mutual understanding regarding a play scenario through perspective taking and coordination.

Acknowledgments

I am grateful for the support of my husband, Michael Griffith, who in five years never waivered in his belief in me, and in his support of my dissertation research and the sacrifices it required. Over this time I have been blessed with two beautiful and healthy children, Georgia and Wyatt, who have richly informed my understanding of socio-cognitive development and given me the confidence to put forth my own original ideas. I am indebted to my long time friend Julie Shafer for her assistance in coding and fine-tuning the coding manual that was used for the 3000 plus lines of data for this study. Julie was also an indispensable source of intellectual support that I relied upon for the co-construction of my ideas and conclusions. I also thank Dr. Gary Winkel for his assistance and patience with the statistical analysis.

Table of Contents

Lists of Tables

List of Figures

Introduction

This dissertation examines social pretend play negotiations of three to five year old children and their contribution to the development of interpersonal understanding and collaborative cognition. Changes in interpersonal understanding can be observed by examining various aspects of pretend play negotiations that reflect varying degrees of co-construction on the part of same-age dyads in a free-play context. Pretend play dialogues may include but are not limited to negotiations about the planning and procedures of playing, play proposals and responses, and enactments which are in an "as if" mode as indicated by children's actions, tone of voice, use of gestures, and/or content of speech. In her study of pretend play negotiations of 3-year-olds, Bonica (1993) clarified that with each conversational turn children negotiate about two things, (a) the content of the current play, and (b) their interpersonal relationship. For the present study, it is of particular interest to hypothesize about changes in socio-cognitive processes related to interpersonal understanding as observed in the increasingly complex social pretend play negotiations of three to five year olds.

Why consider negotiations? Productive negotiation requires a process of reciprocal communication which involves an integration of one's own and another's desires, thus requiring the combination of knowledge from several sources. Between the ages of three and five years, changes occur in children's ability to use language effectively in social circumstances. Children's communicative competence can be observed in their dialogues with others. In this study, intersubjectivity level and children's use of internal state words and justifications during social pretend play

negotiations are measures of communicative competence hypothesized to be related to productive negotiation.

Intersubjectivity is a shared understanding among individuals engaged in an activity. Piaget (1962) and Vygotsky (1978) agree that intersubjectivity does not develop in pretend play with peers until about age three. The achievement of intersubjectivity occurs through processes of perspective coordination where the intentions of one partner are coordinated with the other. Dunn (1983) suggests that reciprocal exchanges characteristic of play discourse may facilitate perspective taking. In addition, Sawyer (1997) argues that improvisational exchanges (i.e., play proposals and responses) are the building blocks of intersubjectivity because they are used to collectively create a shared play frame. A measure of intersubjectivity for each negotiation was collected and its relationship to child characteristics, negotiation complexity, and other socio-cognitive processes was analyzed.

A related development hypothesized to impact the complexity of children's negotiation is their use of internal state language. The ability to coordinate perspectives and create a shared play frame for successful negotiating are most likely related to children's use of their own and other's internal states during play dialogues. It is not assumed or believed that children's' use of internal state language indicates an ability to *understand* the mind of their friend (i.e., theory of mind), however, differences in the kinds and uses of internal state words is hypothesized to be related to children's ability to negotiate successfully. How children use internal state words and what internal state words they use indicates their interpretation of what their partner is thinking or feeling.

Analyses were conducted relating the use of internal state words to child characteristics, negotiation complexity, and related socio-cognitive processes.

Justification of one's own perspective is a means for providing support for one's own play proposals and ideas, thus strengthening the likelihood of their consideration and acceptance by a play partner. Children's use of justifications reflects their attempts to direct the play scenario in a particular direction by communicating and sharing the reason for their perspective with their play partner, thus facilitating the negotiation process. Children may also offer justifications of their play partner's perspective (e.g., "You be the mommy because you are bigger.") that serve to coordinate perspectives. Relationships between using justifications, dyad characteristics, and the complexity and success of children's play negotiations were analyzed.

Finally, I considered a variable that reflects the nature of the relationship between the children in the dyad and that is their familiarity with one another. The preschool years are when children often develop their first friendships which are likely to provide a frequent source for pretend play. Around preschool age, children are turning increasingly more often to peers rather than their parents as the source for pretend play interactions. In order to analyze the impact of friendship on social pretend play negotiations, data on the familiarity of the play partners were collected by measuring the frequency of their play interactions. As one aspect of the larger construct of friendship, the decision to assess the familiarity between play partners was chosen because it embodies particular socio-emotional factors that may affect play negotiations. Specifically, familiar children share a history of play experiences and emotions which may facilitate their desire and motivation to engage in pretend play and make active contributions to negotiating during play.

Familiarity is hypothesized to be related to intersubjectivity, the use of internal state words and justifications, and the complexity of social pretend play negotiations.

Observations and video-recordings were made of three to five year old dyads playing together during a 15-minute free play episode. Children's verbalizations and relevant actions were transcribed. Only social pretend play negotiations in the form of verbal and non-verbal behavior were analyzed.

The two levels of analysis from which data were coded were the conversational turn level and the negotiation level. A coding system modified from that used by Bearison and Dorval (2001) to define and quantify aspects of negotiation was created from pilot data. The two variables that reflected characteristics of the dyad were age and familiarity. Language ability was used as a covariate. What I have termed discourse variables included (a) intersubjectivity level, (b) use of internal state words, (c) use of justified conversational turns, and (d) length of a negotiation. The two primary outcomes of interest were the success and complexity of social pretend play negotiations. Hypotheses and research questions were generated regarding relationships between the dyad and discourse variables and the two primary outcomes. Research questions regarding relationships among the discourse variables were posed.

Literature Review

Collaborative Cognition

Many developmentalists believe that cognitive development is a process best investigated and understood as social in nature occurring during socially meaningful interactions with others (Bearison, 1991, Rogoff, 1998, Stetsenko, 2001). For a socio-cognitive approach, the objective is not to identify the effects of social factors on individual cognitive functioning, as that requires a unidirectional, transmission-like perspective, but rather to recognize that cognition is social and cognitive development occurs during social interactions. The objective is to identify and understand how social processes that occur during collaboration with others contribute to cognitive change. The use of shared activities among people as the unit of inquiry privileges interaction rather than individual activity. Because interactions are processual we have the advantage of asking and answering questions about how cognitive change happens during collaboration.

In order to grasp how interpersonal understanding develops during collaborative activities it is useful to revisit Vygotsky's general genetic law which explains that all mental functions first exist on the social level until they are restructured and internalized for individual internal operations. "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological)" (1978, p.57). Mental operations initially used with others are turned inward and used for oneself, mixing with already existing mental operations, thus being individualized in nature. In turn, the transformed mental operations allow one to engage in more complex social

interactions. (Doise & Mugny, 1984; Lawrence & Valsiner, 1993). This view of development is often conceptualized as spiral in nature because each time the mental operation is transformed through the process of internalization, it does so at an advanced level. Consequently, our interactions with others are continually shaping and re-shaping our individual cognitive development.

Vygotsky's (1978) concept of the zone of proximal development offers a means for conceptualizing how mental development is shaped during interactions with others. During cooperation with another person, a child is able to problem solve at a higher level than when he is problem solving on his own. Once internalized, a child is able to use the jointly discovered solution in his own problem solving. The zone of proximal development defines the space between independent capability and cooperative capability. It is inside the zone of proximal development that learning takes place.

Language and Negotiation

The focus of this dissertation is on the process of negotiation, specifically, preschooler's collaborative negotiations during pretend play. The analysis of negotiations appreciates language not only as a communicative tool but also as a representational tool necessary for sharing and gaining knowledge. Nelson (1996) argues that the communicative aspect of language and the representational nature of language cannot be separated. She suggests that language itself is a representational system used by the child both internally for cognitive functioning and externally to communicate with others. Most importantly, Nelson believes that the acquisition and mastery of language changes cognition during the preschool years and that, at age four, there is a representational advance attributed to the child's mastery of language that sets the stage for learning using

other culturally established knowledge systems such as writing and reading that is commensurate with school age learning.

Relevant to preschool pretend play negotiations, the use of language as a representational system allows children to begin to refer to objects not physically present and to share concepts, to plan what to play, to enact narratives during pretend play, and to share feelings and perspectives with a play partner. The use of negotiations as the unit of analysis prioritizes the role of language and the collaborative process for understanding changes in interpersonal development. Microanalysis of the discourse that occurs during collaboration in meaningful activities offers one method for understanding factors that contribute to successful co-construction of knowledge and, in this case, successful negotiation during pretend play.

Conceptualizations of Play

Pretend Play as the Beginning of Symbolic Thought

Beginning in the 1970's, research interest about play was stimulated by and primarily based in a Piagetian framework that credits increasing stages of cognitive maturity for the developmental sequence of play from sensorimotor practice to symbolic activity. For example, practice play common during infancy reflects the cognitive abilities of the sensorimotor stage whereas games with rules reflect the intellectual abilities of the concrete operational child (Rubin, Fein, & Vandenberg, 1983). From Piaget's perspective, the function of play is to assimilate reality to the ego (Piaget, 1962). He argued that play provides the child with a space for assimilating reality to the self without the constraints of logical thought (as opposed to accommodation of reality) (Piaget & Inhelder, 1969).

According to Piaget (1962), during the second year of life, symbolic play is made possible by the development of the semiotic function whereby children begin to understand that one object (signifier) may stand in for another (signified). The semiotic function allows the child to separate his perceptual experiences of an object or event from the meaning that is being signified so that, for example, a block can signify a car. It is during pretend play that children practice relating signifiers to the objects or activities which they signify (Rubin et. al., 1983). The ability of children to use symbols in both actions and in play with objects reflects the development of representational thought (Fein, 1981).

Piaget described two stages of play. Throughout the first stage through the age of 18 months, pretend play is conceptualized as a solitary activity involving primarily sensorimotor activities. Piaget acknowledged six stages within this type of play which begin in infancy with "games" involving circular reactions. By stage six, these games have become less constrained as is characteristic of circular reactions and more representational. At stage six, the child begins to use schemas that were once used only with the "usual" objects, to objects unrelated to the familiar schema. For example, the schema for going to sleep that was once evoked by using the child's own pillow (which is neither symbolic nor representational) is now evoked by using a washcloth or even no object at all. This transition from enacting schemas using the usual objects to using objects unfamiliar to the schema (as a substitute for an absent object) marks the beginning of symbolization. The "unfamiliar" objects are substitutes for the "usual" objects. According to Piaget, this behavior does not result in the extension of the schema, thus involving accommodative processes and indicating an act of intelligence, but is

simply a miming of the schema. In addition, this experimentation with schemas is done purely for pleasure. These two characteristics, applying a schema to a substitute (i.e., unfamiliar or inadequate) object and doing it for the fun of it, mark the beginning of pretense (Piaget, 1962).

The second stage of play, conceptualized as collective in nature, begins by the age of three, when collective symbolization becomes possible. At first, children may just imitate one another or borrow actions from one another; however, the symbolization does not change as a result of the collective play. It is not until about age four that collective symbolization becomes more complex by being signified by role assignment and role play. At this time, the child shifts from an egocentric perspective to one of reciprocity in which the child must coordinate his or her interactions with others (Piaget, 1962). Piaget focused most of his attention of stage 1 play; therefore, we know very little of his thoughts regarding more sociodramatic play; the object of the present study.

Pretense as Rule-Based

Vygotsky, unlike Piaget, argued that pretend play begins as a social phenomena through "affective-social" factors (Rubin et.al., 1983). He argued that at about age three, children realize that not all of their desires can be met; it is for this reason that children enter the imaginary world. The child uses imagination and play to realize his unrealized desires. It is for this reason that, for Vygotsky (1978), all play is imaginary. According to his theory, play is an imaginary world with rules. He argued that all imaginary situations contain rules for behavior; however, these rules are not ready-made and brought to the play activity but come from the play activity. For example, when a child pretends she is a

sister, she acts according to the rules of what she believes it means to be a sister even though she may not be explicitly aware of these rules in her own life.

Vygotsky (1978) also argued that imaginary play was not possible before the age of three because children of this age are not yet able to separate objects from their meaning. For example, when a young child sees a block, she is unable to put aside the current perceptual knowledge about the object and pretend that the block is a car. Not until age three do children begin to separate meaning from objects and become free from perceptual constraints thus allowing meaning to dominate action. In her studies of dual representation, DeLoache (2000) posits an argument similar to Vygotsky, that around age three, children are able to realize that a symbolic object is two things at once; it is the real object and, at the same time, it stands for something else. This freedom allows the child to place several meanings onto one object; the same block can be a car in one play episode and hammer in another.

There is a difference between Piaget and Vygotsky regarding the beginning of symbolization. Piaget argues that the ability to symbolize begins during the second year with the emergence of the semiotic function whereas for Vygotsky symbolization does not occur until age three. For Vygotsky, play is conceptualized as a forum in which children come to understand social and cultural rules and that the developmental progression is from play with covert rules, characteristic of the imaginary play of young preschoolers, to play with overt rules which is characteristic of the games of older children.

Pretense as an Extension of Reality

Harris (2000) attempts to shed light on traditional theories of children's pretend play that he argues have taken a negative or deficit view of children's pretend abilities. Over a series of studies, Harris provides evidence of the capacity of 2 year olds to understand the basic functions of pretense upon which they will build a more sophisticated understanding. Harris argues, in opposition to Vygotsky, that 2 year olds do understand the rules of the pretend play episode. Children understand that, in pretend play, stipulations are made about pretend play activities which are then adhered to for a limited period of time. For example, Harris and Kavanaugh (1993) observed that, when given the pretend stipulation that a yellow brick was banana and a red brick was cake, 2 year olds not only acted in accordance with this pretend stipulation, they extended the stipulation to include other similar objects as bananas and cakes. In addition, the children did not become confused when a brick that was once used as a sandwich was then used as a bar of soap in a different context.

Harris suggests that children as young as 2 understand pretend stipulations as rules of play that are to be followed and extended upon, and that their thinking is flexible enough for them to understand that the stipulations may change across objects and play episodes. Harris explains children's performance is based on their ability to "flag" pretend stipulations by play episode (e.g., for this particular play episode, I know that the yellow brick is a banana and the red brick is cake).

Harris also argues that children understand that, in pretense as in real life, actions have causal powers, even actions which are based on pretend stipulations. In the same article (Harris & Kavanaugh, 1993), 2 year old children watched an experimenter pretend to pour powder all over a toy monkey. The children were then asked to identify what the

monkey would look like as a result by choosing from three different pictures of a toy monkey. The children most frequently chose the picture of the monkey who looked as if it had powder dumped on it. Even though in reality the toy monkey had not changed its appearance, 2 year old children were able to imagine this causal effect and use it to identify the consequences of a pretend transformation. This finding is in direct opposition to Vygotsky who argued that children of this age are not able to put aside the immediate sensory appearance of an object in place of an alternative pretend meaning (Vygotsky, 1978).

A third and related feature of pretense Harris observed in young children is their ability to suspend "objective truth" (i.e., sensory appearance). Even though children could look at the toy monkey and see that no powder had been poured on it, they suspended this truth and identified the pretend consequence – that the monkey now looks like it has powder all over it. These findings indicate that very young children have the ability to remain in the make-believe world and temporarily set aside obvious references to the real world.

Finally, young children also were able to understand causal chains. For example, children who watched two successive actions using objects (e.g., pretend that a brick is ice cream, pretend that a toy animal is dumped on top of the ice cream) were able to explain the outcome of the causal link between the two actions (e.g., the toy now has "ice-creamy" feet).

According to Harris, research on pretend play needs to focus more on finding out what children understand about pretend play. Through the above series of experiments (described in detail in Harris & Kavanaugh, 1993), Harris was not only able to call into

question Vygotsky's argument regarding the age that children can separate objects from their meaning (the beginning of symbolization) but he also questioned some basic assumptions made by Piaget and others: (a) early pretense is not a distortion of reality due to assimilation of reality to the ego, and (b) even children as young as 2 years old are able to correctly distinguish fiction from reality. Piaget and Inhelder (1969) argued that because play is the dominance of assimilation over accommodation, it is not a product of rational thought but a distortion of reality to fit the needs of the self. Harris prefers to conceptualize pretend play not as a representation of the real world but an opportunity to explore other possible worlds through using one's real life experiences, including emotions, as the materials for play.

Social Play as Improvisational

Sawyer (1997) provides an account of social play that also departs from more structuralist theories and privileges the moment-to-moment emergent nature of pretend play. His perspective of social play is more concerned with the flow of play rather than the content. He draws comparisons among the nature of improvisational theater, musical improvisation, and the social play characteristic of preschool aged children in that none follow a script, all are collective performances so that no one person may determine the flow of dialogue and activity, and all are loosely structured to some degree. His improvisational model allows room for the novelty and creativity common to pretend play of five and six year olds. He believes that from age three to six, children practice and eventually master interactional skills (e.g., dialogic competence, metapragmatic strategies) by entering temporary play realities with peers. The role of the child as an

active creator in her own development is a consequence of the improvisational nature of social pretend play is recognized.

In sum, Piaget, Vygotsky, and Harris agree that the emergence of pretend play coincides with the development of representational thought (symbolism) although they may disagree about when this happens. What remains in dispute is why all typically developing preschool age children step into a pretend world so often, particularly when they are with another child. Perhaps it is a distortion of reality for the purpose of cognitive competence, or a place to experiment with rules in order to fulfill unrealized desires, or a temporary world used to improvise interactions as suggested by the above theorists. It is possible that a pretend environment affords opportunities for the child that fit particularly well with her emerging abilities. If, as Nelson posits, the child is making a shift from experiential-based language use to representational-based language use, a pretend environment offers unique opportunities for using representational language. Moreover, if children are forming their first reciprocal friendships, pretend play is an activity that will allow them to establish and explore interpersonal relationships. Imagine you are a child and have just discovered that you can use language in a way that allows you to do anything you want. Even better, since you already know how to use language to communicate, you can do these things with your friends. You would want to do it all the time which is what preschoolers do. Through pretend play activities and conversations children learn a new way to experience and navigate their world, one that uses cultural and social based knowledge systems.

With regard to a guiding theoretical perspective, this dissertation research privileges the position of Vygotsky over the other previously discussed theorists.

Specifically, Vygotsky's belief in the sociogenesis of psychological functions, the idea of a zone of proximal development created during pretend play, the use of shared activities as the unit of analysis, and his view that all psychological processes are socially mediated, are the backdrop for this study's rationale, methods, and conclusions.

Social Pretend Play Discourse

What is it about play discourse that is of interest in furthering our knowledge about the development of children's social understanding? Is there anything unique about the communication of play partners that contributes to their emerging understanding of interpersonal relationships? Garvey and her colleagues have dedicated a great deal of their research efforts toward understanding the nature of communication during pretend play (Garvey & Hogan, 1973; Garvey, 1974; Garvey, 1975). She argues that because pretend play relies on verbal communication and both pretend play and language are developing during the preschool years, one should investigate language in the context of pretend play as well as linguistic differences between pretend and non-pretend play conversations. Garvey and Kramer (1989) provide an analysis of the language of 2 to five year olds during pretend play. They found that older dyads used more complex sentences, more past tense verbs, and used the phrase "Pretend that…" more often than younger dyads. Regarding linguistic differences between pretend and non-pretend frames, non-present tense verbs, modal, and quasi-modal (e.g., "may", and "have to") verb forms, and temporal expressions were used more in pretend frames than in non-pretend frames. Their results support the hypothesis that the language of pretend play is different than that of non-pretend play and that differences exist with regard to the pretend play communication of older versus younger preschool aged dyads. These findings in

combination with others provide support for using the play environment paired with linguistic analysis when investigating the development of interpersonal understanding.

The following section will provide information about metacommunication and the use of internal state language in pretend discourse. Changes in the child's ability to metacommunicate reflect changes in interpersonal understanding, and have consequences for the child's coordination of her own and others mental states. First however, I will examine a related concept, communicative competence, which provides a framework for understanding how children use both metacommunication and internal state language in their play discourse.

Communicative Competence

As a sociologist, Corsaro (1979) is interested in the context of play for purposes of investigating how children learn to involve themselves in interactive situations when an adult is not around and how this information informs us about processes of socialization. Corsaro's research focuses on the development of communicative competence which he defines as "…general knowledge of how language use is affected by persons, places, situations, and events. This includes knowledge of patterns of sequencing in conversations, forms of address, and standard verbal routines" (pp. 79). He argues that children must learn *a system of language use* so that the development of linguistic and communicative skills proceeds without problems.

Specifically, Corsaro has investigated children's semantic elaborations during play and their use of access rituals to gain entry into ongoing play. A semantic elaboration is similar to repetition; however, the child not only repeats another child's utterance but also extends it semantically For example, Child A: "We can see a boat – a

boat." Child B: "A boat. This is our treasure!" (p. 85). Semantic elaboration provides a structuring function that refines and expands conversational turns. The repetitive aspect of semantic elaboration encourages discursive turn-taking and encourages agreement among play partners regarding the emerging play episode.

Garvey (1975, 1977) has also looked at the development of communicative competence during preschool play in her research of children's use of the "contingent query" and children's requests for action in play discourse. The contingent query is a three sequence speech act constructed in the following manner: (a) an utterance (e.g., "That plate is hot."), (b) a contingent query (e.g., "Which plate?"), and (c) a reply to the utterance (e.g., "The blue one."). The contingent query has a different function depending on whether it is solicited or unsolicited. In unsolicited queries, the initial utterance can be of any type. However, in solicited queries, the initial utterance is intentionally evoked in order to elicit the contingent query desired. The following is an example of a solicited query: Child A: "Guess what?" Child B: "What?" Child A: "I want to fly this plane to the moon". Presumably, Child A said the first part of the three part sequence in order to set himself up to say part three of the sequence. Garvey argues that the solicited type of contingent query serves to assure the attention of one's play partner whereas unsolicited contingent queries are used in situations where failure to comprehend necessitates clarification of some sort.

Garvey (1975) also investigates children's requests for action during play as an indicator of their communicative competence. She argues that requests for action are particularly relevant for studying the development of social understanding in children. Specifically, a request for action signifies the child's attempt to get something satisfied

through another person. The request may be in conflict or agreement with the desires of the other person. This type of exchange requires an understanding of the need to match one's own desires to those of another perhaps through justifying one's request while at the same time knowing that the success of the justification may depend on one's recognition and use of another's perspective.

Communicative competence as a concept is important to the present study because it requires one to look under the surface of the words children use, to what these utterances tell us about children's understanding of language as used in social contexts. In addition, the forms of speech studied by Corsaro and Garvey emphasize the social nature of play discourse in that the utterances of the two members of a dyad are dependent upon one another as well as upon the context in which they occur. The embedded and dependent nature of these utterances encourage some level of mutual understanding between the play partners, as well as some degree of intersubjectivity, both of which are necessary skills for the continued development of social understanding.

Metacommunication

According to Sawyer (1997) social play contributes to development of interactional and conversational skills by providing a context for practicing how to collectively manage ongoing social interaction through the use of developing metapragmatic ability. Bateson (1971) and Garvey (1975) use the term metacommunication to characterize the regulation and maintenance of ongoing play activity through linguistic means. Sawyer (1997) prefers to use the term metapragmatics because the referents of social pretend play speech are not single utterances but are pragmatic aspects of the play interaction such as the relationships between the speakers,

the type of interaction taking place, the roles of each child, their relationships to one another, and the type of play activity.

As described previously, Sawyer (1997) proposes an improvisational model of social play based on his analysis of children's use of metapragmatic strategies to manage, negotiate, and enact play interactions with others during naturalistic classroom play conversations. In his model, social play is an emergent phenomenon structured by the accumulation of all prior collective interaction regarding a specific play episode (i.e., indexical presuppositions). Within the play episode, this would include the ongoing assumptions held by the children about the topic of play, the toys being used, the roles children play, and so on. Outside of any one play episode, children also hold assumptions that are the result of the history of playing particular play scenarios in a familiar room with familiar toys and familiar friends (e.g. most or all the time, a plastic cone is used as the spaceship in a particular scenario and the use of rubber ball may not be acceptable). On the other hand, children's conversational turns during a play episode are constrained by the emerging play episode. Whatever play proposals and responses children make should be coherent with the "emergent" play episode in order to be included for consideration by the play group. If a child proposes something that does not match with the "emergent", his or her input is not likely to be successfully accepted by the group.

Sawyer (1997) analyzed the metapragmatic strategies, which he refers to as indexical entailments, used by three to five year old children to gain entry into play episodes, to make play proposals, and to respond to play proposals. To be successful, the proposal must influence subsequent dialogue to some extent but, at the same time, the proposal must not disturb the coherence of past indexical presuppositions (i.e., the prior

collective interactions that constitute the play episode). Coherence is maintained only if all children involved in the play episode still share an understanding of the play frame (intersubjectivity).

Sawyer's (1997) overall findings regarding children's play discourse suggest that, rather than a developmental trajectory of becoming more explicit or more implicit in their use of metapragmatic strategies, what children seem to be learning is that some strategies are more effective than others depending on the play context. In particular, friendship level of the play partners affected the type of metapragmatic strategies children used during play. The development of children's differential use of metapragmatic strategies during pretend play are exactly the types of skills that Corsaro (1979, 1981) and Garvey (1975, 1977) believe reflect communicative competence and must be acquired by children in order for linguistic and communicative skills to develop without problems. The fact that these skills develop during the ages when pretend play is at its peak suggests that pretend play episodes may be unique settings that encourage or lend themselves to the use of and development of these types of skills.

Sawyer's improvisational model is a useful paradigm for the present study because it appreciates the complexity of navigating a pretend environment that has a history and is characterized by constant change in activity and partners. When children make play proposals, they must learn how to stay in a play frame which has a history and is being shared by other children. Sawyer indicates that children particularly avoid mentioning the fact that they are playing when making a play proposal and that more interactionally competent children stay in the play frame when dialoguing. However, children must first be able to identify the play frame, which requires some level of

intersubjectivity in pretend play usually achieved at about age three (Göncü, 1993). It is through social pretend play conversations that children have the opportunity to master and refine the interactional skills that are necessary for the co-construction of knowledge in the play environment.

Internal State Language

Mentalistic understanding and pretense. A theory of mind refers to a child's awareness and knowledge of his own and others' mental states and his knowledge that mental states underlie all behavior and language (Lillard & Flavell, 1992; Mayes & Cohen, 1996; Wellman, 1990). Specifically, a theory of mind refers to a child's understanding that others have thoughts, beliefs, intentions, and desires that drive them to act in a particular manner, as well as a child's ability to attribute thoughts, beliefs, etc. onto others that are different from his own (Mayes & Cohen, 1992).

Pretense is often thought of as facilitating the development of a theory of mind because of the parallels that exist between the two. Lillard (1998) argues for the following five parallels: 1) Both require the ability to think about one situation in two different ways at once. In pretense a block may, at one moment, be both a block and a car. In understanding minds, a child may have a belief which is clearly different from the belief of another person about the same circumstance. 2) Both involve the concept of mental representation. For example, in pretense, some object or action represents some other object or action and with regard to understanding minds, one's thoughts of an object or activity is a mental representation of an actual object or activity. 3) Both pretense (specifically role playing) and understanding others' minds involve social metarepresentation. This requires that one places oneself in the position of another in

order to take on their perspective. 4) The content of pretense may be related to the development of an understanding of others' minds because pretense often involves negotiations about emotions and emotion talk has been found to correlate with later theory of mind performance. 5) Negotiations about planning, roles, and themes that occur during pretense encourage one to be aware of the perspectives of others and to coordinate one's perspective with one's play partner in order for pretense to flow. Understanding others' minds may stem from these pretend negotiations of perspectives.

Pretense and mental representations. Considering the above parallels between pretending and one's understanding of the mind, one may be tempted to draw the conclusion that because children engage in pretense and are so successful at it, they must understand their pretense mental representations as mental representations. This would suggest that even children as young as 2, because they are skillful at pretending (see Harris 2000), understand their pretense as being a mental representation. Leslie (1987) posits that the emergence of a decoupler mechanism at around 2 years of age lays the foundation for the development of a theory of mind. The decoupler mechanism provides the representational structure that will allow children to have the capacity for metarepresentational reasoning that involves first, a "decoupling" of the pretend world from the real world and, second, the ability to hold dual representations regarding the pretend world and the literal world without having one distort the other. This mechanism explains the emergence of pretend and the beginning of children's ability to manipulate and use mental states to make inferences about the behavior of others.

The problem is that children under the age of four do not appear to understand the diversity of mental representations across people and across time as evidenced by their

failing performance at false belief tasks. The false belief task (See Wimmer & Perner, 1983 for a description and rationale of this task) tests children's ability to understand that people can have false beliefs. This task is related to Leslie's theory about mental representation and pretense because it requires metarepresentational reasoning; children must decouple what *they believe* from what they think *a doll believes* (two different beliefs), then use this knowledge to answer questions (to reason). Children under the age of four are not successful at this task, indicating that they are unable to understand false beliefs and therefore do not understand mental representations until after age four despite the fact that they are engaging in pretense before age four. Then the question is, how is it possible, if Leslie (1987) is correct, that children under four years of age understand the dynamics of mental representation in pretend but do not understand mental representation when it comes to beliefs?

Although pretense does involve mental representations (e.g., in one's own mind and perhaps in one's play partners' mind, a block is representative of a car in this play episode), it does not mean that children understand the representational nature of pretense and its connection to mental states. Several theorists provide arguments that children do not understand pretense as involving mental representations or the mind at all (See Harris, Lillard, & Perner, 1994 for a review of these arguments). However, it is possible that pretense does *facilitate* the development of one's understanding of the mind and of mental representations. As previously discussed, the ability to successfully navigate a pretend environment with another person requires some level of intersubjectivity and metacommunication both of which are facilitated partly by a child's skill at coordinating his own and his play partners changing mental states. Again, the nature of the social

pretend play environment as one that requires negotiation of representational activities and desires provides affordances that fit well with a child's emerging use of their knowledge of mental states.

Having acknowledged the debate regarding children's understanding of mental representation and its relationship to pretend play, this study does not assume that the ability to engage in pretense indicates an understanding of mental states. Alternatively, I agree with others who argue that pretend play is a capacity that allows children to gain entry into the mind of another and/or to experiment with mental states as not real and therefore, not threatening (Fonagy & Target, 1996; Mayes & Cohen, 1992). This in itself, may lead to social understanding or may be its result. Instead of assuming a child's knowledge of mental states as indicative of her understanding of mental states, I chose as an alternative to look at the relationship between the use of internal state words and the success of pretend play negotiations and the level of intersubjectivity achieved during negotiation both of which reflect the child's ability to use their knowledge of other's mental states. I also chose to look at the use of internal state words and how it relates to dyadic characteristics such as the age and familiarity of the play partners.

Sharing Perspectives During Social Pretend Play

Intersubjectivity

Intersubjectivity is a shared understanding among the participants involved in an activity (Göncü, 1993). With regard to pretend play, intersubjectivity refers to a state of shared understanding of roles, rules, themes, and specific activities to take place, all of which are negotiated. Part of the process of social pretend play is for play partners to

create and maintain a shared understanding about what will be played and how it will be played.

The establishment of a shared understanding involves an added twist when observed during social pretend play since what is being shared is a representational activity. Because pretend play activities are representational in nature, negotiation between partners for a joint focus of attention is necessary for the play activity to be meaningful to both partners. Most evidence regarding intersubjectivity in social pretend play indicates that, not until the age of three, are children able to adopt a shared pretend focus (i.e., acknowledge that the interaction is pretend play) and jointly construct pretend play representations regarding the roles, rules, themes and so on, of the play interaction (Piaget, 1962; Rubin et.al., 1983) However, according to Göncü (1993) children as young as 18 months are able to metacommunicate about pretend play nonverbally through gestures and changes in vocal intonation which he argues is suggestive of a shared pretend focus. He concludes that what may develop at age three is not intersubjectivity per se but a different method of constructing intersubjectivity that is through primarily verbal means.

Göncü (1993) attempts to provide a mechanism for the construction of intersubjectivity during social pretend play which he refers to as the ability to symbolically share experiences with other children. He argues that through the process of prolepsis, children are able to construct a shared world. Prolepsis involves two presuppositions by the proposer (speaker) and recipient (listener) in a dyad. First, it must be supposed by both that the dialogue they are engaging in is sincere; that there is a shared level of trust where each member will attempt to understand the input of the other.

The second assumption is that, during the dialogue, the person who makes the play proposal presupposes that the recipient of the proposal has information about the topic at hand that has not yet been introduced in the current dialogue but will be in order for the dialogue to continue. As a result, the proposer leaves some information about the proposal implicit. The recipient of the proposal must then fill in the gaps for the proposer, contributing information useful in planning the ensuing play proposal. For example, if a child proposes to his play partner "Let's pretend we are dinosaurs looking for food", the proposer presumes the recipient has information about what he means by his proposal and therefore leaves particulars of the play proposal implicit. At the same time, the recipient must fill in the gaps for the proposer based on her own assumptions of what this proposal means. In addition, the role of proposer and recipient do not remain constant during the negotiation. Both participants will be proposer and recipient and will negotiate in an effort create a joint focus of attention. This back and forth negotiation of information surrounding the initial play proposal contributes to the co-construction of shared knowledge about the play activity. If intersubjectivity is achieved, the proposer and recipient come to an agreement regarding the implications of the play proposal.

Perspective Coordination

Perspective coordination refers to "the child's capacity to differentiate and integrate the self's and other's points of view through an understanding of the relation between the thoughts, feelings, and wishes of each person" (Selman, 1990, pp. 6). Whereas perspective-taking refers more to understanding a situation from another's viewpoint, perspective-coordination as conceptualized by Mead (1934) and Selman (1980) involves understanding the relations among different perspectives which include

one's own and another's. Whereas perspective coordination is a process, intersubjectivity is a state or product.

Much of the research on perspective taking stems from Piaget's (1967) theory that the thinking of the child begins as egocentric; that is, the child does not know that he has thoughts, feelings, and beliefs that define his perspective (he is unaware of the existence of such mental entities) nor does he know that other's have their own beliefs, thoughts, and feelings. In addition, egocentric children are not aware that their perspective may differ from another person's perspective. According to Piaget, children become less egocentric with age and more knowledgeable about perspectives and perspective taking through social experiences (Flavell, 1992).

Flavell (1974) identified four skills that he believed were necessary components for children's understanding of social perspective taking during verbal communication. First, children need to understand that there are such things as mental states (e.g., thoughts, feelings, beliefs, desires) and that they do *exist* within themselves and others. Second, children must be aware that especially during social interaction, there is often a *need* to obtain knowledge of others' mental states. Third, children must have the ability to identify others' mental states, usually gained by means of *inference*, in order to obtain knowledge about their perspective. Last, children must to be able to apply the knowledge they have acquired about anothers' perspective for use in their own verbal communication with that person. It may be possible to identify the existence of these component skills by analyzing children's use of internal state words during negotiation, thus identifying any relationship between perspective taking and use of internal state words. Although Flavell's research focused more on visual and spatial perspective-taking

(i.e., that which another person perceives visually which may be different from one's own perception) than the perspective taking involved during social interaction, he has suggested a link between the ability to perspective take and children's use of mental state language. Although for this study I am not investigating perspective taking per se, I believe it is an ability that will be reflected in children's social pretend negotiations through their use of internal state words, justifications, and patterns of discourse.

Selman (1980) has extensively pursued, both empirically and theoretically, the development of perspective coordination from preschool age to adolescence through his research on children's reasoning about moral dilemmas. According to Selman, what is going on as changes in perspective coordination occur is the development of social cognition. He proposed five developmental levels of interpersonal understanding and perspective coordination that differ with regard to changes in how individuals understand "the core psychological and social qualities of persons and relationships" (p. 7). These levels provide a frame for understanding how individuals make sense of their experiences with and observations of interactions with other people. According to Selman, children age 3 to 6 (Level 0), are unable to clearly differentiate self from other with regard to subjective perspectives. Although children of this age may have the ability to relate perspectives with regard to perceptual (e.g., spatial) phenomena, they are unable to understand that two people may interpret the same situation differently and, as a consequence, they have difficulty coordinating social perspectives. However, as discussed previously, 4 year olds do pass false belief tasks which require a child understand that another person can hold a false belief.

Familiarity

Theoretically, peer relationships are argued to influence children's cognitive development whether through conflict (Piaget, 1934) or cooperation (Vygotsky, 1978). Rubin, Bukowski, and Parker (1998) provide four characteristics of what constitutes a friendship as it has been conceptualized in the literature on children's peer relationships. First, a friendship is defined by some level of reciprocity between the members in that both partners recognize and acknowledge the friend relationship. Second, there is reciprocity of affect in that the reciprocal relationship stems from socio-emotional motives. Third, friendships are voluntary. And last, friendships should be understood within a larger network of other relationships such as those with parents and relatives since friendships are likely to be affected by the nature (quality) of these more primary relationships.

I expect that the friendship between the two play partners will play a significant role in the nature of the social pretend play negotiations. Because negotiation implies some level of perspective coordination between two members of the dyad regarding some topic, communication between children who are friends may be facilitated due to their history or shared experiences and knowledge about one another. Sawyer (1997) found that as the strength of children's friendship increased, so did the success of their play proposals.

Reflecting one quality of a friendship is the familiarity between play partners that is hypothesized to affect the level of children's pretend play negotiations. Given that a child has more than one friend, there is likely to be variation with regard to the familiarity between oneself and different friends. Familiarity may be based on the length of friendship, the frequency that children see one another, their physical proximity, and/or

something more personal such as shared experiences, preferences, or physical and cultural characteristics. It is likely that familiarity changes across time with regard to the same two individuals since the above characteristics also change over time.

Several researchers have argued for the importance of investigating the familiarity of the play partners when analyzing the play behavior of young children (Doyle, Connolly, & Rivest, 1980; Rubin et. al., 1983; Rubinstein & Howes, 1976). If particular aspects of friendship, such as the degree of familiarity between friends, are taken into consideration, it may be possible to discover how characteristics of the play dyad contribute to the complexity of play negotiations. For example, Hartup (1983) reports that when friends and non-friends are compared, children who are friends have more positive exchanges and more mutuality than non-friends. Increased mutuality among play partners is likely to be related to perspective coordination and intersubjectivity. It is likely that familiarity is related in some manner to the outcomes of interest in this study (i.e., success and complexity of negotiation) as well as to other dependent variables of interest (i.e., internal state language).

Emerging Developments from 3 to 5 Years of Age

During the preschool years significant change occurs in children's socio-cognitive development that lays the groundwork for more complex and abstract thought and reasoning characteristic of school age children. As discussed previously in this literature review, the achievement of intersubjectivity, the ability to use language in a representational mode, the ability to dually represent, the ability to pass false belief tasks, the formation of first true friendships, and the occurrence of social pretend play all emerge during the preschool years in typically developing children. It is useful and

necessary to consider the interplay among these emerging abilities, how they build upon one another, and ultimately how children become increasingly competent users of socio-cultural tools during the preschool years.

Methods of Studying Social Pretend Play

Studies of social pretend play vary methodologically with respect to (a) the location of observation, (b) the relationships among play partners, (c) the size of the group being observed, and (d) the play task. How one chooses a method often varies according to the research approach and research questions of the author. For example, Sawyer's (1997) objective was to document the improvisational nature of play. He accomplished this by making audiotapes and detailed fieldnotes of naturally occurring free play in a classroom setting. It was methodologically necessary that Sawyer observe naturally occurring (ecologically valid) play of children (whether that be in pairs or large groups) of approximately same age. A classroom setting was therefore an ideal location.

With regard to location, studies of social pretend play most frequently take place in the child's home (Dunn, Bretherton, & Munn, 1987), in a daycare or school setting (Göncü & Kessel, 1988), or in a child laboratory (Garvey, 1975; Nielson & Dissanayake, 2000). These settings allow for the observation of play interactions with friends and parents and siblings. It is important that children participate in an environment with which they are familiar and which encourages children to play comfortably and naturally.

The relationships among play partners and the size of the group being observed are often related and, again, dependent upon the research question. Because of the difficulty of analyzing group data (i.e., play groups consisting of more than two partners), many studies rely on observations of dyads (Hughes & Dunn, 1997) and triads (Black,

1992; Garvey & Hogan, 1973), most frequently those of siblings,(Howe, Petrakos, & Rinaldi, 1998; Howe & Ross, 1990) peers (Doyle, Doehring, Tessier, de Lorimier, & Shapiro, 1992), and mother or parent-child interactions (Brown, Donelan-McCall, & Dunn, 1996; Farver & Howes, 1993; Slade, 1987). With regard to social development, there is evidence of the differential contribution of different types of play partners. For example, Brown et al. (1996) found that preschool aged children referred to mental states during pretend play more with their friends and siblings than they did in conversations with their mothers.

The play task may also vary considerably depending on the objectives of the research. For example, most studies that investigate negotiation among children during social pretend play rely upon a relatively unstructured play setting so that the dialogues of the play partners may happen as naturally as possible (Black, 1992; Doyle & Connolly, 1989; Howe et al., 1998); however, this is not always the case (Bonica, 1993). In studies on the role of play and the development of social cognition, experimenters may set up more task-oriented play situations that require a certain degree of collaboration for a solution or maintenance (Bearison & Dorval, 2001; Mugny & Doise, 1978).

For the present study, I chose to use a dyadic unit of anlaysis in order to study the reciprocal nature of pretend play negotiations. In addition, I chose and ecologically valid behavior to observe, that being undirected free play between familiar children.

Pretend Play Negotiations and Interpersonal Understanding

Bearison and Dorval (2001) studied negotiations of 6 to 10 year olds while they co-constructed a board game. Their methodology and analysis took seriously what is required if one is to analyze cognition as a social-cultural process. The children were

given a game board and game materials and asked to make up a game together. Dyads were given no preset instructions; the rules and procedures of the game were to be defined by the children. The negotiations between the two children as they constructed the game were analyzed. The patterns of negotiation revealed varying degrees of mutual responsiveness between the children. Through the analysis of sequential patterns of the children's conversation, Bearison and Dorval were able to operationalize the process of how specific patterns of conversational sequences led to developmentally advanced ways of thinking. By using a collaborative activity with game materials that are familiar to children as their unit of analysis and by analyzing the discourse sequentially, the authors were able to demonstrate how advances in ways of knowing emerge through active co-construction.

Corsaro (1979) looked at the acquisition of communicative competence to assess interpersonal understanding in preschool aged children. As mentioned previously, Corsaro looked at the development of children's communicative competence by studying successful and non-successful play entry strategies in nursery school. The five most common strategies were the following: (a) entering into a play episode with no verbalization, (b) encircling the area where the play episode is underway, (c) producing behavior which is similar to that going on in the play episode, (d) producing behavior which is disruptive to the play episode, and (e) verbally making claim on an area or object of use in the play episode. Although these strategies were used most frequently, they were strategies that did not often lead to positive responses by the peer group. Corsaro found that the use of just one access strategy was most often unsuccessful (i.e., did not lead to acceptance into the play episode). However, the combination of two or

more strategies into a sequence was most likely to lead to successful play entry. The most successful sequence was non-verbal entry followed by producing a variant of the play episode. This sequence reflects a more complex understanding of the social intricacies involved in successful play entry because after rejection using the non verbal entry, the child usually monitors the play episode to collect useful information which can then be used in the next strategy of producing a variant of the on-going activity.

Garvey and Hogan (1973) use the term "mutual responsiveness" to investigate the degree to which a child's speech is adapted to the behavior and verbalizations of his or her play partner. The authors found that during play, 3 ½ to 5 year old children spent a considerable amount of time in mutual engagement and that this engagement was created and maintained through their use of social speech. Children of this age are aware of their play partners' speech and behavior and adapt their own speech accordingly in order to secure the engagement of their partner in the play activity. If play partners are responsive to one another through dialogue, it is likely to create and secure a state of mutual engagement between the two. The authors found high levels of mutual responsiveness among the utterances of play partners and believe this to be indicative of interpersonal understanding in preschoolers.

In a later study, Garvey (1974) investigated preschoolers "requests for action" during social pretend play. According to Garvey, requests for action and their responses contain revealing instances of children's interpersonal understanding in that requesting action requires that one child's wants and desires be satisfied through interaction with another child with perhaps different desires. Through analysis of children's requests for action and responses, Garvey identified that children must share an awareness of a set of

interpersonal meanings necessary for the request – response negotiation sequence to occur. For example, the speaker of the request often use what Garvey terms as "adjuncts" which most often offer a reason for the request (e.g. "Stop it. You hurt my head." pp. 52). Addressees frequently use "acknowledgements" to accompany their compliant response (e.g. "I will. I'll call a doctor." pp. 53). Both adjuncts and acknowledgements indicate an awareness of shared meaning between the two children. The use of an adjunct relates to the beliefs of both the speaker and the addressee by suggesting a reasonable motivation behind the request. By acknowledging the request, the addressee confirms the speaker's assumption that the addressee was willing to comply. If this shared awareness that (a) "this is a reasonable request" and (b) "I assume you are willing to comply" did not exist between the participants, then the use of adjuncts and acknowledgements in which these shared meanings are embedded would not appear in the exchanges between the two partners. In other words, the dialogue of these children indicate their awareness of the interpersonal meanings embedded in requests for action.

Howe et al. (1998) investigated the negotiation strategies used by kindergarten aged children and their siblings during pretend play. The authors created a continuum of high to low level negotiation strategies engaged in by the children; higher level negotiation strategies reflected a greater degree of social understanding. Lower level strategies included arrangement of toys and props and other activities that were preparatory to the play activity such as rule establishment. The higher level strategies included proposals for play entry and modification of existing play activities and objects, narrative story-telling and discussion of roles, and acceptances and refusals of play proposals. These authors found a positive association between level of negotiation and

frequency of pretend play between the siblings. Siblings who engaged in pretend play more frequently used higher level negotiation strategies

Black (1992) investigated the negotiation strategies used by preschool age children during entry into social pretend play. Negotiation was defined as "conversation used to negotiate themes and roles for pretend play" (p. 219). Directive speech included demands and suggestions for the adoption of themes and roles, and clarification of themes and roles. Non-directive speech included explanations to peers of ongoing play themes and roles, self-references that describe one's own play activity, extending statements that refer to the play ideas of peers, and rejections of play ideas offered by peers. Children who were liked less (as indicated by scores on a measure of sociometric status) were less likely to extend their peers' play ideas, to explain ongoing themes and roles, and to attempt to clarify themes and roles, than liked children. Disliked children were more likely to reject their peers' play ideas and used more self-references than liked children. The findings indicate that, for a negotiation strategy to be successful, a shared knowledge base among play partners may be required. The strategies of disliked children lacked a certain level of social understanding as evidenced by a high amount of self-referencing and lack of extending the ideas of play partners.

In the present study, I am interested in interactions among preschool aged dyads during social pretend play. Specifically, I am using preschooler's negotiations during pretend play as a forum for analyzing the development of interpersonal understanding. Negotiations were chosen as the unit of analysis because it is within this activity that patterns of children's responsiveness toward one another (mutual reciprocity) may be analyzed.

Children's Use of Internal State Language During Social Pretend Play

Play researchers have investigated the connection between children's use of internal state language during play and the development of social understanding. Several studies have indicated that differences in one's knowledge and use of internal states may be related to developmental differences in social understanding (Harris, 2000; Harris & Kavanaugh, 1993; Howe et al., 1998; Hughes & Dunn, 1997). Howe et al. investigated internal state discourse between sibling dyads during different play contexts. They identified three different types of internal state words used by sibling dyads: (a) those relating to emotion, (b) physiological states, and (c) cognitive states. The authors found that children who played together more frequently made more references to emotion and physiological internal state words than children who played together less frequently. In addition, preschool aged children used more internal state language in the context of negotiation and planning with siblings than in the enactment of pretend and non-pretend play. Children's use of internal state language during the negotiation phase of play indicates their awareness of the advantages of creating a shared understanding between the play partners necessary in such a collaborative activity.

Howe et al. (1998) also found that siblings identified as frequent pretend play dyads were more likely to use internal state language during high level negotiation (e.g., proposals for play entry and modification of existing play activities and objects, narrative story-telling and discussion of roles, and acceptances and refusals of play proposals) than infrequent play dyads. This finding indicates a relationship between the frequency of interactions between play dyads, their use of internal state language, and the level of negotiation. Frequent play partners (as opposed to infrequent) use more internal state

language and only during high level negotiation (a measure of interpersonal understanding). There may be something about the frequency of play between two children that facilitates internal state use therefore allowing higher level negotiations. This study will further investigate the relationship between these variables.

Hughes and Dunn (1997) were interested in whether differences in mental state talk occurred as a result of the play context. The authors investigated mental state language of preschool aged dyads during both pretend and non-pretend play. They found that mental state talk occurred more frequently during pretense than non-pretend play. One explanation given by Hughes and Dunn is the necessity to share the unknown about the characters and activities in a pretend play scenario. In the pretend world, things are not as they seem, and therefore need to be explained. Furthermore, an explanation of the unknown must be shared by the play partners and this need to share knowledge about the pretend characters and activities of pretense may facilitate mental state talk. An alternative explanation is that the relationship between mental state talk and pretend is reverse of that espoused by Hughes and Dunn. It is possible that mental state talk facilitates pretend play. Brown et al. (1996) found that during free play, preschool aged children made references to mental states in order to direct the play interaction (e.g., Let's pretend you are a tiger).

Nielsen & Dissanayake (2000) investigated mental state language to find out if the child's ability to meta-represent was necessary for the development of a mental state lexicon. They measured the frequency of mental state terms used by the child during parent-child pretend play interactions. The authors found that the use of mental state terms were dependent on the type of pretend play the dyad was engaged in. Specifically,

children used more mental state terms during pretend play activities which involved object substitution (e.g., the child designates or uses an object as another object), imaginary play (e.g., the child creates objects or people with no objective basis in the immediate environment), and role assignment (e.g., the child assigns a role to self or other), and used less mental state terms when engaged in pantomimes where they used they body parts as objects (e.g., using one's finger as a toothbrush).

The use of mental state terms has also been investigated with regard to whom the child is speaking during play. Brown et al. (1996) analyzed children's separate conversations with another child (a friend), their sibling, and their mother for frequency and functional meaning of mental state references. The proportion of children's mental state talk was higher during conversations with other children and siblings than during conversations with mothers and much of the mental state talk occurred during pretend play. Mental states functioned both to modulate the speaker's assertion by either strengthening or weakening it and to direct an activity significantly more during child-child than mother-child conversations. In addition, child-child conversations were more likely to contain references to joint or shared mental states than conversations between mothers and children. Also, mental state talk was positively correlated with more cooperative interactions between play dyads as indicated by frequent attempts to cooperate, prompt responses to play proposals, suggestions for cooperative play, and so on. These findings argue for differences between children's use of mental state terms depending on whether their conversation partner is a friend or a parent. This also suggests that there is something unique about the conversations between friends which contributes

to the development of social understanding through increased use of mental state terms and more cooperative play.

Familiarity of Play Partners

As mentioned previously, another factor found to be related to the nature of children's pretend play dialogues is the relationship between the play partners. The degree to which two play partners are familiar with one another is likely to affect their pretend play dialogues. Howes, Unger, & Matheson (1992) believe that a primary function of play is to share affective concerns and that children who are well-acquainted with one another are likely to have similar affective needs. Because of the link between friendship and similarity of affective needs, it is possible that children who are more familiar with one another may be more likely to have pretend dialogues that are more successful with regard to negotiation.

Brown et al. (1996) found that length of friendship and frequency of play episodes, both measures of familiarity between play partners, were positively associated with the use of shared references to mental states between child-friend dyads. In other words, for play dyads who were close friends, the speaker often referred to their shared mental states (e.g., "We're pretending we're sisters!" p. 840) thus indicating his or her awareness and use of a shared perspective with the partner.

Doyle et al. (1980) compared familiar and unfamiliar preschool aged dyads and found that the proportion of children's play that involved social interaction (e.g., parallel and cooperative play) was greater for the familiar peers than the unfamiliar peers. In addition, the authors found that, during social play, there was greater complexity in toy play (e.g., creative and dramatic play) among familiar peers than unfamiliar peers. These

results indicate the relationship between familiarity of play partners and both social and cognitive ability as evidenced through social play.

Howe et al, (1998) grouped siblings according to the frequency of their pretend play interactions. The play of frequent pretend play siblings was characterized by shared play themes, coordinated role play, and parallel play with some shared actions while the play of infrequent players involved very little to no pretend play. The authors found that siblings who played frequently also used more internal state language. Specifically, frequent play siblings used emotion words such as happy, love, mad, and fear more than psychological and cognitive internal states. These findings regarding the frequency of emotion words support others (Brown et al. 1996) who believe that (a) sharing affect is a primary motivator for the use of mental state terms and (b) that children who are friends use more mental state language due to similarity in affective need.

In his detailed analysis of play conversations in preschool classrooms, Sawyer (1997) identified friendship as related to the success of children's entry to play and to the success of their play proposals. Sawyer created a friendship index based on the total amount of time children played together that characterized the level of friendship of a pair or group of children. Sawyer considered a group of children to be friends if their friendship index was 20 or higher indicating that the children spent 20% of their total play time playing with one another. Results indicated that, as the friendship index increased (i.e., the more often they played together), the success of play entry also increased significantly. Sawyer went on to identify the metapragmatics of play entries and responses. He found that as friendship indices increased, children's acceptances to

play entry requests were more likely to be implicit or in-character, that is, without referring to the play frame.

Sawyer also investigated the metapragmatics of play proposals and responses among friends. He found that the stronger the friendship, the more successful the play proposal and the more implicit the proposal. In other words, children who are better friends are more likely to have their proposals accepted into the ongoing play activity and the proposals do not require that one directly mention the fact that the children are engaging in pretend play.

Sawyer believes that the reason behind the successful play entry and proposals of friends is their ability to maintain the coherence of the indexical presuppositions defined by "the emergent". Recall that Sawyer believes that the emergent is the moment-to-moment flow of play which is structured by each child's turn and the indexical presuppositions (i.e., the children's shared expectations of what to expect the play to be, considering the present location, toys, and play partners) that have accumulated through all prior interaction. It is possible that skillfulness at maintaining the coherence of "the emergent" requires knowledge about the current play situation, about the children involved, the toys present, a shared history of play interactions with these children and these toys, and so on. Children who are friends (or more frequent play partners) are more likely to possess this knowledge than children who are not friends (or play together less frequently). This knowledge can be used by children during play entry and play proposals to increase the likelihood that they will be successful. For example, a child who shares a history of playing rocket-pilots with a group of children who are currently playing rocket-pilots could use her past knowledge about this play to attempt to gain entry to the play. It

is likely that because she is a friend and therefore has past knowledge regarding the play scenario, she will be better able to maintain the coherence of "the emergent" than a child who is not friends with the play group and may not possess this knowledge.

The overall aim of this dissertation is to examine the co-constructive processes involved in the development of interpersonal understanding of preschool aged children as they occur during social pretend play negotiations. The premise that guides this research is that interpersonal and cognitive development occur in collaboration with others (Vygotsky, 1978). Based on this premise, the success and complexity of childrens' pretend play negotiations are defined by the amount of co-construction that occurs between them. In addition, factors that reflect interpersonal engagement on the part of each child in a dyad (e.g., intersubjectivity level, use of justifications and internal state words, and the familiarity between the children) are measured.

Conceptualization of Variables and Hypotheses

The age and familiarity level of a dyad are referred to as dyad variables because they refer to characteristics inherent to the dyad. Language ability of the dyad was only used as a covariate to determine the proportion of the variance in the outcome that could be accounted for by language separate from the variables of interest for a particular analysis. If language ability was not significant in the analysis, it was taken out of the equation as a covariate and the analysis was run without it. There were no hypotheses regarding the relationship between language ability and the outcomes of interest. Age, familiarity level, and language ability were continuous variables.

What I refer to as discourse variables were generated from either the conversational turn level or the negotiation level. These variables were called discourse

variables because they characterize the dialogue between the two play partners. Five discourse variables were measured at the level of the conversational turn: (a) type of play (social pretend play or non-social pretend play), (b) function of a conversational turn, (c) justification of a conversational turn, (d) internal state word type, and (e) internal state word orientation. Two discourse variables were defined and quantified at the level of the negotiation: (a) intersubjectivity level, and (b) length of the negotiation. Two primary outcome variables were taken from the negotiation level and refer to the complexity of the negotiation: (a) success or failure of the negotiation, and (b) complexity of the negotiation.

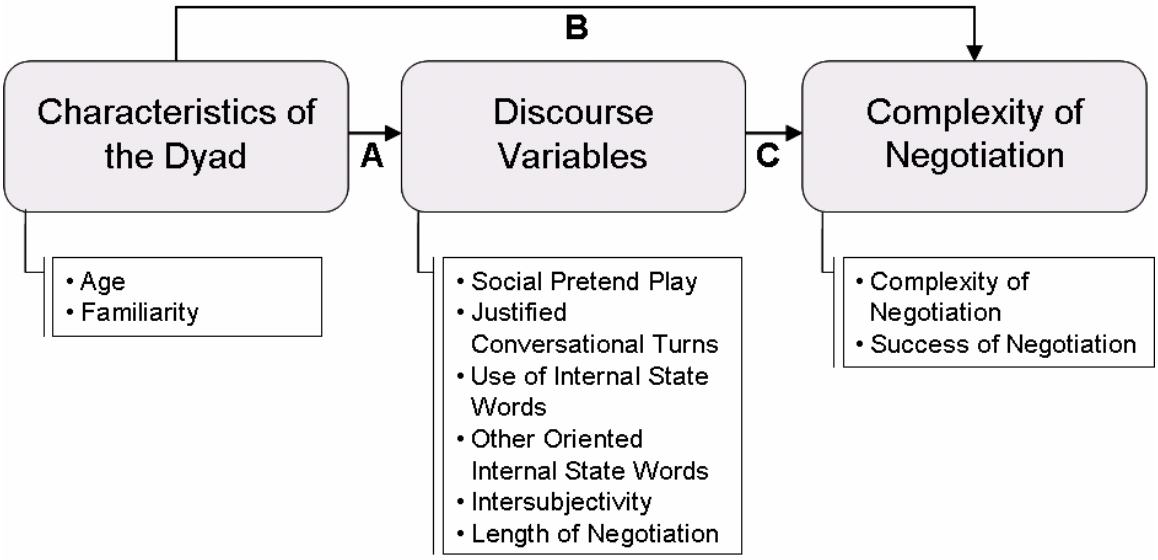
The hypotheses and research questions for this study can be conceptualized as a series of relationships among the dyad variables, discourse variables, and primary outcome variables. The direction of the effect was predicted for all hypotheses. Research questions were more exploratory in nature and no direction was predicted.

Hypotheses

Dyad variables were hypothesized to be related to both discourse variables and primary outcome variables. Hypotheses generated regarding these relationships were the following (See Figure 1 for a visual representation of the hypothesized relationships between variables):

1. It is hypothesized that older and more familiar dyads will (a) engage in a higher proportion of social pretend play, (b) have more justified conversational turns, (c) use more internal state words during conversational turns, (d) use more other, self/other, and character oriented internal state language, (e) engage in higher

Figure 1. Variables and their Hypothesized Relationships



Hypothesized Relationships

A: Relationship between Characteristics of the Dyad and Discourse Variables
B: Relationship between Characteristics of the Dyad and Complexity of Negotiation
C: Relationship between Discourse Variables and Complexity of Negotiation

levels of intersubjectivity, and (f) engage in longer negotiations than younger and less familiar dyads.

2. It is hypothesized that older and more familiar dyads will (a) engage in more complex negotiations than younger and less familiar dyads, and (b) will engage in more successful negotiations than younger and less familiar dyads.

Discourse variables were hypothesized to be related to the primary outcomes of interest which led to the following hypothesis:

3. It is hypothesized that longer negotiations, the use of justified conversational turns, the use of internal state words, the use of self/other, and character oriented internal state language, and higher levels of intersubjectivity will be positively related to the success and complexity of pretend play negotiations.

Research Questions

Research questions regarding relationships among particular discourse variables as well as relationships between the variables mentioned above and other characteristics of the dyadic dialogue were posed. Again, no predictions were made regarding these relationships. Results from these research questions were used to further describe the nature of social pretend play negotiations and inform more directed hypotheses for follow-up research.

1. Is there a relationship between the age or familiarity level of the dyad and (a) the number of conversational turns per dyad, (b) the number of negotiations per dyad, or (c) the function of a conversational turn?

2. Is there a relationship between the function of a conversational turn and (a) whether or not it is justified, and (b) whether or not it contains an internal state word?
3. Is there a relationship between the level of intersubjectivity of a negotiation and (a) the length of the negotiation, (b) the presence of internal state words in the negotiation, and (c) the presence of justified conversational turns in the negotiation?
4. What are the patterns of conversational turn use within different types of negotiations?

Method

Participants

Fifty children age 3 years, 6 months to 5 years, 11 months participated in this study (*M* = 4 years, 9 months; *SD* = 9 months). Children were paired into 25 dyads with a mean dyadic age ranging from 3 years, 8 months to 5 years, 11 months (*M* dyadic age = 4 years, 11 months; *SD* dyadic age = 8 months). Six dyads were recruited from the Child Development and Learning Center at the City University of New York (CUNY) Graduate School, 17 dyads were recruited from a private school in Indianapolis, and 2 dyads were composed of children known personally to the author. Twenty dyads were same-gender pairings and 5 dyads were mixed-gender pairings totaling 26 girls and 24 boys. There was one set of same-gender twins. The 12 children from New York attended a preschool serving working to middle class graduate students and their families and were of mixed decent (Hispanic, Asian, and European American). At least one of the parents of each of the New York children was actively pursuing a doctoral degree. The 38 children from Indiana attended a private school serving middle to upper middle class families and were primarily European American.

There were a total of 70 signed consent forms. Seven children could not participate because they were 6 years old and one child could not participate because she was not yet 3 years old. Five children were not included in the study because their parents did not give consent to have their child videotaped. Three children did not participate because their assigned play partner was absent on the days when videotaping was possible. Four children were not included in the study because their play discourse was infrequent and/or difficult to interpret. Parental consent was obtained as well as the assent

of each participant. Treatment of children was in accordance with the ethical standards of APA (See Appendix A for copies of consent forms and recruitment letters for each preschool).

Procedure

Permission to conduct the study was received by the center director of the child center and the headmaster of the preschool. The teachers of the participating classrooms sent a description of the study and a consent form home with each child. Each child age 3 to 5 who brought back a signed consent form was paired with another child from his or her class. Dyads were paired by age then if possible by the same gender. Children closest in age and of the same gender were selected first for pairing. In 6 cases, it was impossible to pair same-gender children who differed in age by 5 months or less. Therefore there are 6 mixed-gender dyads.

In New York, the play activity was conducted at the CUNY Child Development Laboratory. The child lab is a large, child friendly room with small tables, chairs, toys, and a child restroom. It is designed specifically for the purposes of conducting research with young children. The child lab was arranged with toys that encourage pretend play interaction prior to the arrival of the children. Play items included the following: (a) grocery store items – cash register, baskets, food, scale; (b) kitchen items – plates, cookware, silverware, table and chairs, microwave, refrigerator; (c) dolls, characters, animals and vehicles; and (d) wooden building blocks.

In Indianapolis, the play activity was conducted in the aftercare room at the school. It was a room familiar to the children where they played after school until their parents picked them up. The room was sectioned off into a small play area that could be

captured by the video camera that was placed in the corner of the room on a tripod. The play items were similar to those available to the children in New York. The play activity for the two dyads who were known to the author was conducted in the home of one of the children. Again, the video camera was placed in the corner of the room. An audiotape recorder was placed in close proximity of all children for use in reconciling any inaudible or ambiguous verbalizations.

The procedure for all children was identical except that, in New York, the video camera was hidden and I observed through a two-way mirror whereas in Indianapolis, the video camera was in view and I sat outside the door to the room. Parents of the New York children were given the opportunity to observe their child during the play session through the two-way mirror.

I introduced the children to the room, the toys, and the restroom. I showed them the video camera and obtained their assent for taping. The children played for approximately three minutes while I was in the room. I told them I had to leave the room for a few minutes to do some work but that I would be right outside the door if they needed me. Most children were comfortable with this and continued to play. If the children showed hesitation, I stayed until they had no objection to me leaving. Children played on their own for 15 minutes. It was this 15-minute play session that was used as data for this study. After 15 minutes, I came back in the room, gave them a treat bag for helping me, and returned them to their classroom.

Children were administered the CELF-Preschool, a language test, on a separate occasion that took approximately 20 minutes per child. The test was administered in an

available room at the child care center in New York and in the hall outside the children's classroom at the preschool in Indianapolis.

Transcribing

A transcript of the 25 dialogues was made using the videotapes and audiotapes of each 15-minute play session (See Appendix B for a sample transcript). If a verbalization was inaudible or ambiguous on the videotape, it was reconciled by checking it against the audiotape. When a child had to use the restroom or needed assistance from me during the taped play session, the video camera was paused. Recording resumed when the children resumed playing.

Because social pretend play involves both verbal and nonverbal activity, all non-verbal activity which served to initiate or respond to an initial proposal for play was transcribed by providing a detailed behavioral description of the activity. A non-verbal response to an initial proposal was transcribed as such:

Child A: "Give me the milk."

Child B: (child hands milk carton to play partner).

Parsing

Only verbal and non-verbal play interactions that were pretend and social were used as data for the study. Each transcript was first parsed into pretend and non-pretend play activity. In order to determine if a verbalization or action was pretend, Fein's (1981) conceptualization of pretend play was used as a guide: "Pretense is a theoretical construct defined as behavior in a simulative, non-literal, or 'as if' mode." (p. 1096). According to Fein, pretend play includes the following types of behavior: (a) activities performed in absence of necessary materials or customary social context, (b) activities not carried to

their usual outcome, (c) inanimate objects treated as animate, (d) an object or gesture substituted for another, and (e) performance of an activity usually done by something or someone else (p. 1096).

Once the transcript was parsed into pretend play activity, it was further parsed into social and non-social pretend play. The definition of social pretend play offered by Doyle and Connelly (1989) was slightly modified for the purposes of this. For this study, social pretend play existed if one child elicited a response from another through "gesture, deliberate contact, verbal directive or request, imitation, or active directed smiling or laughing." (p. 292-293). The 25 transcripts of social pretend play dialogue and activity were used for all analyses. Dialogue that was not social and pretend was omitted from all analyses.

Characteristics of the Dyad

Familiarity

The teacher of each dyad provided a report of the dyad's familiarity with one another as play partners by responding to the following question: "Out of all the children in the class, what percent of the time do you believe these two children play together?" For the two dyads who were friends of mine, the familiarity question was asked of the mothers and modified: "Out of all the children that your daughters play with what percent of the time do you believe these two children play together?" Responses ranged from 5% to 100% familiarity (M = 52%, SD = 31%).

Age

Once two children were recruited and paired together, their dyadic mean age was computed by summing their individual ages and dividing by two. The mean dyadic age

for the sample was 4 years, 11 months, and ranged from 3 years, 8 months to 5 years, 11 months. The age difference between the two children in each of the 25 dyads ranged from 0 to 5 months (*M* = 1 month 22 days, *SD* = 1 month 22 days). Nine of the dyads were the same age, 5 dyads had a 1 month difference in age, 2 dyads had a 2 month difference, 3 dyads had a 3 month difference, 5 dyads had a 4 month difference, and 1 dyad had a 5 month difference in age.

Language

Each child was administered the Clinical Evaluation of Language Fundamentals-Preschool (CELF-Preschool) (Wiig, Secord, & Simel, 1992). The CELF-Preschool is a test that assesses receptive and expressive language ability of school bound children age 3 to 6. The test has a mean of 100 and a standard deviation of 15. Individual scores on the CELF-Preschool ranged from 85 to 141 (*M* = 108.56, *SD* = 9.2). A mean score on the CELF-Preschool was calculated for each dyad. The mean dyadic language score was 108.15 (*SD* = 6.17) and ranged from 100 to 128. One child was not administered the CELF-Preschool due to absenteeism so the mean dyadic language score for that dyad was entered as missing in the dataset. Differences between the two language scores obtained for the children in each dyad ranged from a 2 point difference to a 29 point difference (*M* = 9.54, *SD* = 7.43). Language ability was used as a covariate only and children were not paired into dyads nor were hypotheses made based on language ability.

Coding Interactions

In order to operationally define and analyze the dialogue of each dyad, the transcripts were organized into negotiations that consisted of alternating conversational turns between the two children in the dyad. Codes can be conceptualized as coming from

one of two levels: (a) the conversational turn level or, (b) the negotiation level. At the conversational turn level, each conversational turn was coded for (a) function, (b) justification, and (c) type and orientation of internal state word. Negotiations consisted of two or more conversational turns. At the negotiation level, each negotiation was coded for (a) type, (b) success, and (c) level of intersubjectivity. The coding system for conversational turn functions and negotiation strategies created by Bearison and Dorval (2001) to analyze 6 to 10 year old's negotiations during game construction was modified and tested in a pilot study for use with preschooler's pretend play negotiations. An outline of the interaction codes are presented in the coding manual in Appendix B and are described as follows:

Conversational Turns

Functions. A conversational turn began when one child began talking and ended when he or she stopped talking. Interruptions by the play partner were excluded unless the child speaking explicitly addressed the interruption by the partner. If the majority of a conversational turn was ambiguous or inaudible, it was not assigned a code. Some conversational turns were non-verbal and involved the use of interactions with objects and/or body movements. In these cases, a detailed description of the non-verbal event was written in parentheses. A complete set of operational definitions along with examples of the codes are in the Coding Manual in Appendix B. Conversational turns were coded as one of eleven mutually exclusive and exhaustive functions listed below:

1. Initial Proposal - a statement, question, or non-verbal action made by the speaker that: (a) proposes one or more new rules, goals, or uses of play materials OR proposes a *change* in existing rules, goals, or uses of play materials; and (b) requires a response from

the partner. An example is: "I am going to make dinner for you" (child puts plates on the table).

2. Ignore - one or more verbal or non-verbal statements or actions by one partner that are non-responsive to the *topic* of the other partner's proposal. A non-verbal example is:

Child A: "Here is your Rescue Hero."

Child B: (child walks away from play area.)

In the above and following examples, when two or more conversational turns are presented, the last turn exemplifies the function of the conversational turn.

3. Ignore + Initial Proposal - a child ignores the previous conversational turn and provides an initial proposal thus ending the negotiation. This code reflects the difference between the provision of an initial proposal at the logical end of an negotiation (coded simply as an initial proposal) versus ending the negotiation prematurely by ignoring the flow of the negotiation and initiating a new negotiation. An example is:

Child A: "Look what's in the refrigerator, lots of things."

Child B: "Oh how about we can play mommy?"

4. Repetition - a repetition, although not necessarily literal, of *one's own* previously expressed conversational turn. An example is:

Child A: "Would you mind if I poured some tea for you?"

Child B: "Well no."

Child A: "I'll pour some tea for you".

5. Sustain - a response to the previous conversational turn that simply continues the flow of the negotiation without explicitly agreeing, disagreeing, eliciting, counter-proposing or elaborating. An example is:

Child A: "A buffalo is coming!"

Child B: "Ah, a buffalo!"

6. Reply - a response that answers an elicitation from the previous conversational turn. This code is used only with responses to questions and reflects a child's ability to answer a question posed by the play partner, thus continuing the ongoing negotiation. An example is:

Child A: "Who wants a chocolate donut and a pink donut?"

Child B: "Me".

7. Agreement - a verbal or non-verbal agreement with (a) a previously expressed proposal, or (b) a statement or enactment in the immediately previous conversational turn. An example is:

Child A: "I am the shopkeeper so give me the money."

Child B: (hands child A the money)

8. Disagreement - a disagreement with a previously expressed proposal, statement, or enactment in the immediately previous turn. An example is:

Child A: "I have to put this pie in the refrigerator because it's hot."

Child B: "No it's not."

9. Elicitation - a request for further information about a proposal, usually in the form of a question. An example is:

Child A: "I'm the shop keeper so give me the money."

Child B: "What money?"

10. Counter proposal – a disagreement with a preceding proposal together with a substitute proposal. An example is:

Child A: "I'm going to be the cook."

Child B: "No, I will be cook this time."

11. Elaboration – one partner augments the other's proposal about the conditions of the play scenario (i.e., its theme, roles, or rules). An example is:

Child A: "Here's the grocery. Would you like to buy donuts?"

Child B: "Yeah, and I need to buy more stuff because I'm having a huge party."

Justification. Conversational turns were also coded for whether or not they were justified in terms of one's own or another's perspective. The use of a justification indicates a child's attempt to share his perspective with his play partner. Conversational turns that were justified were expected to be more complex with regard to negotiation and discourse than unjustified conversational turns. Examples are the following:

"I'm the shopkeeper so give me the money." (justified initial proposal)

"I want to be the music teacher." (unjustified initial proposal)

Internal State Language. If a conversational turn contained a word that referred to an internal state, it was coded for its type and its orientation. References to not knowing including the phrases "I don't know" without a predicate complement and "I think" were coded as cognitive internal state words. The inclusion of these idiomatic expressions as evidence of preschoolers emerging ability to understand mental states is supported by

Brown et al. (1996), Howe et al. (1998), and Hughes and Dunn (1997). (See Shatz, Wellman, & Silber's 1983 position in support of the exclusion of such expressions as true references to mental states.)

1. Type - the internal state word state was coded as either cognitive (e.g., think, know, believe, pretend), emotional (e.g., like, happy, sad, mad), or physiological (e.g., hungry, tired, sick, hurt).

2. Orientation – the internal state word was coded as referring to either one's own internal state (e.g., "I believe it's true."), or another's internal state (e.g., "Your baby looks tired."). The internal state word may refer to that of the play partner, a character in pretend play as in the last example, or both.

Negotiations

Types. The definition of a negotiation and the types of negotiations used in this study were taken from Bearison and Dorval's (2001) research on collaborative cognition. A negotiation consisted of two or more conversational turns. The negotiation began with the initiation of a proposal by either play partner. The negotiation ended with acceptance of the proposal, the provision of an alternative proposal, the rejection of the proposal, or when the proposal was ignored. Unresolved negotiations were the least complex with regard to co-construction followed by acquiescence, acceptance, and expansive negotiations which were the most complex. A complete set of operational definitions along with examples of the codes are in the Coding Manual in Appendix B. There were four different types of mutually exclusive and exhaustive negotiations that varied with regard to their degree of co-construction and cognitive complexity.

1. Unresolved – one partner changed the topic of discourse without addressing one or more of the proposals offered by the other partner. This kind of negotiation included negotiations that were ignored. This type of negotiation required no co-construction between the play partners. An example is:

Child A: "Now it's my turn to be the teacher." (initial proposal)

Child B: "No, I still want to be the teacher." (counter proposal)

Child A: "I'm going to go to lunch." (ignore)

2. Acquiescence – one partner passively accepted the other's proposal (without elaboration) by responding with a "Yes" or "Okay", or enacted the proposal on the next turn. This type of negotiation reflected the co-constructive efforts of only one child in the dyad. An example is:

Child A: "Now it's my turn to be teacher." (initial proposal)

Child B: "Okay." (acquiescence)

3. Acceptance – one partner accepted the other's proposal after having considered it either in the form of an unacceptable proposal, a counter proposal, a repetition, or a disagreement. An example with a disagreement is:

Child A: "Now it's my turn to be teacher." (initial proposal)

Child B: "No it's not yet." (disagreement)

Child A: "But you had a very long time." (disagreement)

Child B: "Okay you can have a turn." (agreement)

4. Expansive – one partner accepted the other's proposal but only after having added new conditions to it or having offered a counter proposal that was unconditionally accepted by the other. This type of negotiation required the active consideration and transformative efforts of both play partners. Expansive negotiations reflected the most advanced co-constructive efforts from play partners in this study. An example is:

> Child A: "I still want to be the teacher." (initial proposal)
>
> Child B: "Yeah, you're the teacher and I am the music teacher who works at your desk." (elaboration)
>
> Child A: "Yeah." (agreement)

Success or failure. Successful negotiations were negotiations where the initial proposal was resolved in that it was advanced or continued to a logical stopping point (e.g., acquiescence, acceptance, and expansive types). Failed negotiations were negotiations where the initial proposal remained unresolved (e.g., unresolved negotiations).

Intersubjectivity. It was expected that the intersubjectivity level of a negotiation would be related to the complexity of the negotiations and other discourse variables indicative of interpersonal understanding. Each of the 10 types of conversational turns received an intersubjectivity score of 0, 1, 2, or 3. Initial proposals received an intersubjectivity score of zero. The remaining conversational turns were coded as follows: (a) ignores and repetitions received an intersubjectivity score of 1; (b) agreements, disagreements, sustains, and replies received an intersubjectivity score of 2;

and (c) elicitations, counter proposals, and elaborations received an intersubjectivity score of 3.

A mean intersubjectivity score was calculated for each negotiation by summing the intersubjectivity scores given to each conversational turn then dividing by the number of conversational turns in each negotiation.

Inter-rater Reliability

A random 20% of the transcripts were coded by me and an independent rater to empirically test the accuracy of (a) parsing the transcripts into social pretend play, (b) conversational turn codes, and (c) negotiation codes. For training, the independent rater and I coded four transcripts of data that were not going to be used in the study. After each practice tape we resolved discrepancies in our interpretation of the coding manual. Operational definitions of the codes and procedures for coding were refined in order to obtain the most precise definitions and rules as possible. Inter-rater reliability was computed by dividing the total number of agreements by the total number of agreements plus disagreements for each of the interaction codes. Coding began once a threshold of no less than 80% reliability was established for the conversational turn codes and negotiation codes in the practice transcripts. Every fifth transcript was independently coded by me and the rater to insure continuity of reliability. If agreement regarding any of the parsing or interaction codes fell below 80% in the on-going reliability check, discrepancies were resolved through mutual consensus between me and the rater. Ongoing inter-rater reliabilities for the codes are reported in Table 1.

Table 1

On-going Inter-rater Reliability for Interaction Codes

	Reliability					
Codes	IT[a]	1	2	3	4	5
Pretend vs. Not pretend	.98	.94	.96	.88	.99	.84
Social vs. Not social	.89	.93	.97	.85	.97	.83
Conversation turn function	.68[b]	.66[b]	.82	.62[b]	.83	.60[b]
Conversation turn justification	.89	.90	.94	.79[b]	.96	.83
Internal state type	.89	.80	.89	.81	.96	.82
Internal state orientation	.96	.83	.95	.95	.97	.90
Negotiation function	.84	.85	.90	.90	.93	.89

[a]Initial Threshold Reliability. [b]Discrepancies were resolved to 100% agreement.

Results

The primary statistical procedures used in this study were (a) general linear models, and (b) mixed linear models repeated measures ANOVA. When analyses were computed regarding the relationship between dyad variables (age and familiarity) and the discourse or primary outcome variables, repeated measures ANCOVAs were calculated using language as a covariate. Analyses with binary outcomes yielded a Wald chi-square, and analyses with continuous outcomes yielded an *F* statistic. Due to the limited sample size ($N = 25$) analyses at the dyad level were not possible. As an alternative, analyses were conducted at the negotiation level.

The mean age of the children in the dyad and their familiarity with one another were used as independent variables for several of the analyses in this dissertation. Children were also administered the CELF-Preschool, a language test, and a dyadic mean language score was calculated for each dyad. In order to increase the likelihood that significant findings could be attributable only to the effects of age and familiarity level of the partners, the language ability of each dyad was used as a covariate. If language ability was significant when included in an equation with age and familiarity, it was used as a covariate in the analysis. Language ability itself was not used as an independent variable in any hypotheses. Correlations among age, familiarity, and language were significant at $p < .01$, but weak (See Table 2 for direction of correlations).

The statistical model for analyses that used age and familiarity as independent variables and language as a possible covariate was the following:

Table 2

Correlations Between Age, Familiarity Level, and Language Ability of Dyads

	Age	Familiarity	Language
Age	—	.29*	-.07*
Familiarity		—	.26*
Language			—

Note. The measure of language (CELF-Preschool) is adjusted for age; therefore the unusual negative correlation between age and language should not have an effect on the interpretation of results.

*Correlation is significant at $p < .01$ (2-tailed)

1. Determining the covariate – to determine whether to use language as a covariate, the main effect of language on the outcome of interest was computed. If language was significant it was entered into subsequent equations as a covariate that tested the main effects for both age and familiarity. If language was a significant covariate, I have indicated it as such in the results section for that particular outcome.
2. Computing the main effect of age – age was entered by itself into the equation.
3. Computing the main effect of familiarity – familiarity was entered by itself into the equation.
4. Computing the independent and unique contributions of age and familiarity– both age and familiarity (and language if it was a significant covariate) were entered together into the same equation. Possible results of doing this step are that the effects of age, familiarity, or both get stronger or weaker when compared to their main effects thus indicating the consequence of the correlation between the two on the outcome. If the correlation between age and familiarity causes a change in significance of either age or familiarity on a particular outcome, it was presented. Unfortunately, this step does not allow one to conclude which variable (age or familiarity) accounts for most of the variance with regard to its effect on the outcome on interest; however this information is useful for future hypothesis testing using regression analysis.

Results are presented according to the hypothesized relationships between the variables (refer to Figure 1). The separate effects of both age and familiarity on the discourse variables are presented first (Hypothesis A), followed by their effects on the

two measures of negotiation complexity (Hypothesis B). Relationships between the discourse variables and the two measures of negotiation complexity are presented next (Hypothesis C). Finally, results corresponding to the exploratory research questions are presented. Marginally significant results (i.e., p = .05-.07) are discussed as "significant trends" between the predictor and the outcome.

Social Pretend Play

Age

The data for this study were the back and forth dialogue of 25 pairs of children organized into alternating conversational turns. There were a total of 3,388 conversational turns among the 25 dyads. I was interested only in those conversational turns that were both pretend and social; therefore, the sample was first parsed into pretend and non-pretend conversational turns. Ninety percent (n = 3,042) of the sample were pretend conversational turns. This sample of pretend conversational turns was then further parsed into social and non-social conversational turns. Ninety-eight percent (n = 2,977) of the pretend conversational turns were also social. There was no significant relationship between the age of the children and the amount of social pretend play dialogue.

Familiarity

There was a weak and positive correlation between the familiarity level of the play partners and the amount of social pretend play dialogue. Across age, as familiarity between the play partners increased, so did the amount of social pretend play (n = 3388, r = .07, p < .01).

Justification of Conversational Turns

Age

Each conversational turn was coded as justified or not justified by either the child's own or another's perspective. Only 5.3% of all conversational turns were justified. The conversation turn code "ignore" was never justified during play negotiations so it was removed from the analysis. There was a trend for older play partners to be more likely to offer justifications of their positions than younger play partners, $X^2 = 3.36$, $p = .07$.

Familiarity

As predicted, there was a significant relationship between the familiarity level of the play partners and their use of justifications during pretend play negotiations. Across all ages, more familiar play partners were more likely to offer a justification for their position during pretend play negotiations than less familiar children, $X^2 = 8.65$, $p < .01$. When the age of the play partners and their familiarity level were entered into the equation together, the effect of age on offering justifications became non-significant indicating that the effects age and familiarity on offering justifications are highly correlated.

In order to better describe the use of justifications by children of different ages and levels of familiarity, the continuous variables age and familiarity were categorized. See Table 3 for simple frequencies of justifications for 3, 4, and 5 year olds with high and low familiarity. Keep in mind that the categorization of age and familiarity is for descriptive purposes only and that all statistical analyses were conducted on age and familiarity level as continuous variables.

Use of Internal State Words

Table 3

Frequencies of Justified and Unjustified Conversational Turns by Age and Low or High Familiarity

Conversational Turn	3 Year Olds[a]			4 Year Olds[b]			5 Year Olds[c]		
	Low	High[d]	Total	Low	High	Total	Low	High	Total
Justified	10	—	10	21	46	67	33	46	79
Unjustified	167	—	167	717	652	1369	753	525	1278
Total	177	—	177	738	698	1436	786	571	1357

[a]$n = 3$. [b]$n = 12$. [c]$n = 10$. [d]There were no 3 year old high familiarity dyads.

Age

Data on children's use of internal state language during play negotiations was collected and 17.7% of all conversational turns contained an internal state word. Internal state words that reflected cognitive, emotional, and physiological states were of interest. There were not enough occurrences of physiological types of internal states to retain it as an independent code; therefore, it was combined with the conceptually related emotional state word code. Due to the limited number of occurrences of internal state words, further hypothesis testing with regard to the orientation of the internal state (self or other) was not possible.

As hypothesized, there was a significant relationship between age of the play partners and the use of internal state words during negotiations. Older children were more likely to use any type of internal state word during pretend play negotiations than younger children, $X^2 = 7.53$, $p < .01$. For cognitive types of internal state words, language was a significant covariate in that more skilled language users were less likely to use cognitive internal state words during pretend play negotiations than less skilled language users, $X^2 = 6.50$, $p < .05$. Using language as a covariate, older play partners were more likely to use cognitive internal state words during their dialogue than younger play partners, $X^2 = 18.89$, $p < .001$.

Regarding the use of emotional kinds of internal state words, younger play partners were more likely to use these words during play negotiations than older children, $X^2 = 3.98$, $p < .05$. Language was not a significant covariate for emotional internal state words.

There were no significant relationships between the familiarity of the play partners and their use of cognitive or emotional internal state words.

In order to better describe the use of internal state words by children of different ages and levels of familiarity, the continuous variables age and familiarity were categorized. See Table 4 for simple frequencies of the types of internal state words used by 3, 4, and 5 year olds with high and low familiarity. Again, keep in mind that the categorization of age and familiarity is for descriptive purposes only and that all statistical analyses were conducted on age and familiarity level as continuous variables.

Intersubjectivity

Age

Each conversational turn received a score for intersubjectivity ranging from zero to three; a score of zero reflected the absence of intersubjectivity and scores one through three reflected low, medium, and high intersubjectivity. In order to capture the level at which two play partners had a shared understanding of their pretend play, a mean intersubjectivity score was calculated for each negotiation. Mean intersubjectivity was calculated by summing the scores for each conversational turn in a negotiation and dividing that sum by the number of conversational turns in that negotiation.

As predicted there was a significant relationship between the age of the play partners and their level of intersubjectivity. Older play partners had higher intersubjectivity during play negotiations than younger partners, $F\ (1, 372) = 6.36$, $p < .05$.

There were no significant relationships between intersubjectivity and familiarity of the play partners.

Table 4

Frequencies of Types of Internal State Words by Age and Low or High Familiarity

Internal State Word	3 Year Olds[a]			4 Year Olds[b]			5 Year Olds[c]		
	Low	High[d]	Total	Low	High	Total	Low	High	Total
None	155	—	155	606	596	1202	642	444	1086
Cognitive	21	—	21	88	63	151	114	118	232
Emotional/ Physiological	1	—	1	44	39	83	30	9	39
Total	177	—	177	738	698	1436	786	571	1357

[a]$n = 3$. [b]$n = 12$. [c]$n = 10$. [d]There were no 3 year old high familiarity dyads.

Length of Negotiation

Age

There was a mean of 8.92 conversational turns per negotiation (*SD* = 5.99, range = 2-78). There was a marginally significant trend between the age of the dyad and the number of conversational turns within a negotiation. Older children tended to have more conversational turns within a pretend play negotiation than younger children, F (1, 359) = 3.78, p = .05.

Familiarity

There was a significant negative relationship between the familiarity of the dyad and the number of conversational turns within a pretend play negotiation. Across all ages, less familiar play partners had a greater number of conversational turns per negotiation than more familiar partners, F (1, 359) = 72.89, p <.001. Recall from the previous paragraph that the relationship between age and number of conversational turns in a negotiation was only marginally significant. However, when both age and familiarity were considered together in the same equation their effects became even more significant indicating that the two variables are highly correlated with regard to the number of conversational turns in a negotiation.

In sum, the frequency of social pretend play during the 15-mintute play sessions was high with 88% of all conversational turns defined as both social and pretend. Age was significantly related to two of the measures of pretend discourse. Older children used more internal state words and engaged in higher levels of intersubjectivity than younger children. Across all ages, more familiar children engaged in more social pretend play and used more justifications than less familiar children. The relationship between familiarity

and the length of pretend play negotiations was opposite than expected in that less familiar children engaged in longer negotiations than more familiar children regardless of their age.

Dyad Characteristics and Negotiation Complexity

Complexity of Negotiations

The four types of negotiations used in this research in order of increasing interpersonal complexity were (a) unresolved, (b) acquiescence, (c) acceptance, and (d) expansive negotiations. Differences among the mean proportions of types of negotiations were computed using a general linear model repeated measures ANOVA. The Huynh-Feldt correction for heterogeneity of variance was used which adjusts the degrees of freedom for samples in which the variances are not the same. There were significant differences among the proportions of types of negotiations, F (2.15, 6373) = 30.04, $p <$ .001. Across all ages, children used a significantly greater proportion of acquiescence and unresolved types of negotiations than acceptance and expansive negotiations (M's = 1.1, .9 vs. .3, & .2, respectively).

For unresolved types of negotiations, the least complex type, there was a significant effect of age. Older play partners used less unresolved negotiations than younger play partners during pretend play, $X^2 = 6.57$, $p < .01$.

For expansive types of negotiations, the most complex type, the more familiar the play partners were, the more likely they were to use expansive negotiations, $X^2 = 4.58$, $p < .05$. The main effect of age was not significant with regard to children's use of expansive negotiations. However when both age and familiarity were entered into the

equation together, age became significant in a surprisingly negative direction with younger children having more expansive negotiations than older children.

Neither age nor familiarity of the play partners were significantly related to children's use of acquiescence and acceptance types of negotiations.

In order to better describe the use of the four different types of negotiations by children of different ages and level of familiarity, the continuous variables age and familiarity were again categorized. See Table 5 for simple frequencies of the types of negotiations used by 3, 4, and 5 year olds with high and low familiarity. Keep in mind that the categorization of age and familiarity is for descriptive purposes only and that all statistical analyses were conducted on age and familiarity level as continuous variables.

Negotiation Success

Acquiescence, acceptance, and expansive negotiations were considered successful because the initial proposal was resolved whereas unresolved negotiations were considered unsuccessful because the initial proposal was never resolved. Both the age of the children and their familiarity with one another were significantly related to the success of their pretend play negotiations. Older children had significantly more successful negotiations than younger children, $X^2 = 7.0$, $p < .01$ and more familiar children had significantly more successful negotiations than less familiar partners, $X^2 = 7.05$, $p < .01$.

Again, in order to better describe the use of successful and unsuccessful negotiations by children of different ages and level of familiarity, the continuous variables age and familiarity were categorized. See Table 6 for simple frequencies of

Table 5

Frequencies of Types of Negotiation by Age and Low or High Familiarity

Type of Negotiation	3 Year Olds[a]			4 Year Olds[b]			5 Year Olds[c]		
	Low	High[d]	Total	Low	High	Total	Low	High	Total
Unresolved	5	—	5	28	28	56	27	7	34
Acquiescence	11	—	11	33	28	61	39	26	65
Acceptance	2	—	2	17	21	38	17	9	26
Expansive	2	—	2	17	20	37	13	21	34
Total	20	—	20	95	97	192	96	63	159

[a]$n = 3$. [b]$n = 12$. [c]$n = 10$. [d]There were no 3 year old high familiarity dyads.

Table 6

Frequencies of Successful and Unsuccessful Negotiations by Age and Low or High Familiarity

	3 Year Olds[a]			4 Year Olds[b]			5 Year Olds[c]		
Negotiation	Low	High[d]	Total	Low	High	Total	Low	High	Total
Successful	15	—	15	67	69	136	69	56	125
Unsuccessful	5	—	5	28	28	56	27	7	34
Total	20	—	20	95	97	192	96	63	159

[a]$n = 3$. [b]$n = 12$. [c]$n = 10$. [d]There were no 3 year old high familiarity dyads.

successful and unsuccessful negotiations for 3, 4, and 5 year olds with high and low familiarity. Again, keep in mind that the categorization of age and familiarity is for descriptive purposes only and that all statistical analyses were conducted on age and familiarity level as continuous variables.

In sum, of the four types of negotiations analyzed in this study, across age children used significantly more unresolved and acquiescence types of negotiations which fall on the lower end of the complexity continuum than acceptance and expansive types which are of higher complexity. Age was related to both the complexity and success of pretend play negotiations with older children using less unresolved types of negotiations and more successful negotiations. As hypothesized, the more familiar the children, the more likely they were to engage in expansive negotiations which are the most interpersonally complex. More familiar children also engaged in significantly more successful negotiations than less familiar children no matter what their age.

Discourse Variables and Negotiation Complexity

Complexity

Intersubjectivity. There was a significant relationship between the level of intersubjectivity of a negotiation and the complexity of that negotiation. Across age and familiarity, more complex negotiations were associated with higher intersubjectivity between the play partners than less complex negotiations, $F(3, 365) = 7.89$, $p < .001$. With regard to post-hoc comparisons made between the four types of negotiations and corresponding intersubjectivity levels, intersubjectivity was significantly less for unresolved types of negotiations than acquiescence, acceptance and expansive

negotiations (M's = 1.75 vs. 1.98, 2.03, & 2.06, respectively). Post hoc comparisons were made using the Tukey-Kramer procedure and were significant at $p < .001$.

Length of negotiation. Each of the four types of negotiations differed significantly from one another with regard to the number of conversational turns in the negotiation, $F(3,367) = 40.70$, $p < .001$. Across age, as the complexity of the negotiation increased, so did the number of conversational turns in the negotiation. Post-hoc comparisons between the four types of negotiations and the number of conversational turns in the negotiation indicated significant differences for all comparisons with the exception that there was no significant difference in the number of conversational turns between unresolved and acquiescence negotiations (See Table 7 for comparisons).

There was a significant interaction between the age of the play partners and the number of conversational turns for unresolved types of negotiations, $X^2 = 5.49$, $p < .05$. For longer negotiations (i.e., one standard deviation above the mean) older children engaged in significantly more unresolved negotiations than younger children, $X^2 = 4.29$, $p < .05$. However, when the negotiation was shorter (i.e., one standard deviation below the mean) older children had significantly less unresolved negotiations than younger children, $X^2 = 9.16$, $p < .01$. There were no significant relationships between the type of negotiation, the number of conversational turns in a negotiation, and the familiarity of the play partners.

Use of internal state words. There was a significant relationship between the use of internal state words and unresolved types of negotiations. The absence of internal state words was significantly related to the use of unresolved types of negotiations $X^2 = 8.6$, $p < .01$. There was a significant interaction with age. When internal states were used, older

Table 7

Mean Differences between Type of Negotiation and Number of Conversational Turns in a Negotiation

	Negotiation Type			
Negotiation Type	Unresolved	Acquiescence	Acceptance	Expansive
Unresolved	—	.65	4.97*	10.52*
Acquiescence		—	4.32*	9.86*
Acceptance			—	5.54*
Expansive				—

*means differ significantly from one another at $p < .001$ using Tukey-Kramer procedure for post-hoc comparisons

children were less likely to engage in unresolved types of negotiations than younger children $X^2 = 4.5$, $p < .05$.

It was predicted that childrens' use of justified conversational turns would increase as negotiation complexity increased, however, there were no significant differences in the frequency of justifications provided by children across the four types of negotiations.

Success of Negotiations

Of the four types of negotiations used in this research, acquiescence, acceptance, and expansive types were successful because the initial proposal was resolved in some manner. Unresolved types of negotiations were failed negotiations because the initial proposal was never resolved. There was no relationship between the frequency of justified conversational turns and the success of pretend play negotiations. Nor were there any significant findings regarding childrens' use of internal state words and the success of their negotiations.

Intersubjectivity. There was a significant relationship between the intersubjectivity level of the play partners and the success of their negotiations. Successful negotiations were significantly more likely to have higher intersubjectivity between the play partners than unsuccessful negotiations, $F (1, 365) = 19.33$, $p < .001$.

Length of negotiation. The distribution of the number of conversational turns in a negotiation had positive kurtosis because one negotiation had an unusually high number of conversational turns which caused an extreme (but infrequent) deviation from the normal distribution. A transformation was computed on the distribution to decrease the kurtosis by taking the square root of the mean number of conversational turns per

negotiation. Based on this transformation, there was a significant relationship between number of conversational turns in a negotiation and the success of the negotiation, F (369) = 39.36, $p < .001$. Successful negotiations had more conversational turns (M = 4.51) than unsuccessful negotiations (M = 2.61).

In sum, of the four discourse variables (use of justifications, use of internal state words, intersubjectivity, and length of negotiations) intersubjectivity level and the length of the negotiation, and use of internal state words were found to be significantly related to measures of negotiation complexity. More complex and successful pretend play negotiations were significantly related to higher levels of intersubjectivity and longer negotiations. When internal states were used, older children were less likely to engage in unresolved negotiations.

Research Questions

Age and Familiarity

Conversational turns per dyad. Due to the limited number of dyads in the present study (N = 25) analyses were not computed at the dyad level. However, the following information provides some broad descriptions of what the data looked like at the dyadic level. There was a mean of 74.53 conversational turns per dyad (SD = 44.83; range = 32-189). Using a general linear model ANCOVA there was a significant and positive relationship between the age of the children in the dyad and the number of conversational turns in the play session, F (1, 21) = 5.92, p < .05. Older dyads engaged in more conversational turn exchanges during the 15-minute play session than younger children. There was no significant relationship between the familiarity of the dyad and the number of conversational turns in the play session.

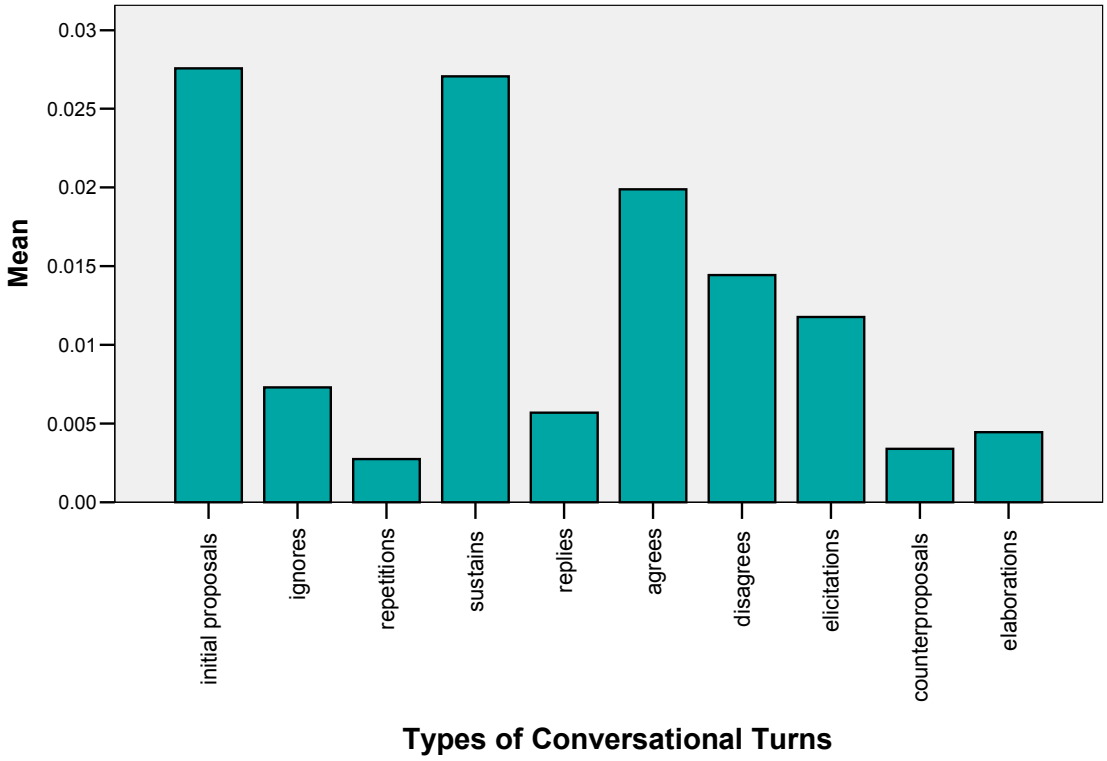
Negotiations per dyad. There was a mean of 14.96 negotiations per dyad (*SD* = 6.14; range = 5-34). There was no significant relationship between the age or familiarity level of the dyad and the number of negotiations per 15-minute play session.

Types of conversational turns. The mean proportions for each of the conversational turns were computed. The frequency of the conversational turn code "ignore + initial proposal" was not sufficient to maintain it as an independent code so it was combined with the conceptually related "initial proposal" code. This resulted in a revised set of 10 conversational turn codes. Differences among the mean proportions of conversational turns were computed using a general linear model repeated measures ANOVA with the Huynh-Feldt correction which adjusts the degrees of freedom for heterogeneity of variance. There were significant differences among the proportions of conversational turns, $F (5.24, 15568.15) = 106.89$, $p < .001$ (See Figure 2 for distribution).

The relationship between the mean age of the children in the dyad and their familiarity with one another to the types of conversational turns they used in play negotiations was analyzed using a repeated measures ANCOVA yielding a Wald chi-square statistic. The distributions for the proportions of each type of conversational turn had positive kurtosis meaning that an extreme observation affected the shape of the distributions making them not normal. The following analyses were calculated using frequencies of each type of conversational turn rather than proportions.

Of the 10 conversational turn types, five were found to be significantly related to the age of the play partners. Older children were less likely to ignore their play partners and repeat themselves during pretend play negotiations than younger children, $X^2 = 9.31$,

Figure 2. Mean Proportions of Types of Conversational Turns



$p < .01$, and $X^2 = 3.93$, $p < .05$ respectively. However, the effect of age on repetitions became non-significant when the familiarity level of the dyad was entered into the equation with age indicating that the effects age and familiarity on repetitions were highly correlated.

Older children were more likely to offer counter proposals to their play partners than younger children, $X^2 = 9.31$, $p < .01$. Language ability was significantly positively related to agreements between play partners so it was used as a covariate. Using language as a covariate, older children were more likely to agree with their play partners than younger children, $X^2 = 7.63$, $p < .01$. There was a marginally significant relationship between age and replying to questions in that older children were less likely to reply to questions during play negotiations than younger children, $X^2 = 3.68$, $p = .06$. The age of the children in the dyad did not significantly effect initiation of proposals for play, sustaining play, asking questions, disagreeing, or elaborating during pretend play.

The effects of familiarity were tested for all of the ten conversational turn codes and five were found to be significant. Across age, more familiar children were significantly less likely to ignore their play partner during pretend play negotiations than less familiar children, $X^2 = 13.07$, $p < .001$. More familiar children were also less likely to repeat themselves than less familiar children, $X^2 = 9.52$, $p < .01$. In addition, more familiar children were more likely to elaborate with their play partner than less familiar children, $X^2 = 6.39$, $p < .05$. More familiar children were less likely to sustain their play negotiations than less familiar children, $X^2 = 5.82$, $p < .05$. Again, language ability was significantly positively related to agreements during negotiations, so using language as a

covariate, more familiar children were more likely to agree with their play partners than less familiar children across age, $X^2 = 10.94$, $p < .001$.

There were no significant results for disagreements using the frequency distribution for disagreements, so a log transformation was taken to normalize the positive kurtosis of the distribution of the proportion of disagreements. Using the transformed distribution, there was a marginally significant relationship between familiarity and disagreeing in that more familiar children were more likely to disagree with their play partner than less familiar children, t (372) = 1.91, $p = .06$. Familiarity between play partners did not significantly affect initiation of proposals for play, asking questions, replying to questions, or offering counterproposals during pretend play negotiations.

In order to better describe the use of different types of conversational turns by children of different ages and level of familiarity, the continuous variables age and familiarity were categorized. See Table 8 for simple frequencies of types of conversational turns for 3, 4, and 5 year olds with high and low familiarity. Keep in mind that the categorization of age and familiarity is for descriptive purposes only and that all statistical analyses were conducted on age and familiarity level as continuous variables.

Types of Conversational Turns

Use of justifications. Some types of conversational turns were significantly more likely to be justified than others, $X^2 = 37.02$, $p < .001$. Across age, disagreements and counter proposals were the most likely type of conversational turn to be justified, $X^2 = 73.11$, $p < .001$, and $X^2 = 54.73$, $p < .001$ respectively. Elicitations were the least likely to

Table 8

Frequencies of Types of Conversational Turns by Age and Low or High Familiarity

Conversational Turn Type	3 Year Olds[a]			4 Year Olds[b]			5 Year Olds[c]		
	Low	High[d]	Total	Low	High	Total	Low	High	Total
Initial Proposal	22	—	22	104	109	213	106	65	171
Ignore	16	—	16	49	24	73	37	27	64
Repetition	12	—	12	25	18	43	27	11	38
Sustain	43	—	43	194	150	344	201	127	328
Reply	6	—	6	53	49	102	35	15	50
Agreement	28	—	28	96	119	215	124	115	239
Disagreement	24	—	24	68	99	167	93	83	176
Elicitation	23	—	23	83	73	156	100	64	164
Counter Proposal	0	—	0	28	21	49	36	27	63
Elaboration	3	—	3	38	36	74	27	37	64
Total	177	—	177	738	698	1436	786	571	1357

[a]$n = 3$. [b]$n = 12$. [c]$n = 10$. [d]There were no 3 year old high familiarity dyads.

be justified, $X^2 = 79.21$, $p < .001$. See Table 9 for the percentages for each type of conversational turn that was justified.

Use of internal state words. Some types of conversational turns were significantly more likely to contain internal state words than others, $X^2 = 87.97$, $p < .001$. Across age, children were most likely to use internal state words when elaborating and least likely to use internal state words when agreeing with their play partner, $X^2 = 16.35$, $p < .001$, and $X^2 = 174.78$, $p < .001$ respectively. Again, see Table 9 for the percentages for each type of conversational turn that contained an internal state word.

Intersubjectivity

Length of negotiation. There was a significant relationship between intersubjectivity level between play partners and the length of their negotiations. Longer negotiations were characterized by more intersubjectivity between the play partners than shorter negotiations, F (1, 2595) = 97.22, p <.001.

Internal State Words. The intersubjectivity level between the play partners was related to their use of internal state words during negotiations. When children engaged in negotiations without using internal state words they were significantly more likely to have higher intersubjectivity than when they did use internal state words, F (1, 222) = 4.20, p < .05.

There was a significant interaction between using internal state words during negotiations and the age of the play partners with regard to intersubjectivity, F (1, 2593) = 15.91, $p < .001$. For older play partners, intersubjectivity between the children was higher when they did not use internal state words than when they did use internal state

Table 9

Percent of Each Type of Conversational Turn that was Justified and Percent that Contained an Internal State Word

Type of conversational turn	Percent justified	Percent with an internal state word
Initial Proposal	32%	3%
Ignore	7%	—
Repetition	14%	3%
Sustain	13%	3%
Reply	11%	7%
Agreement	8%	3%
Disagreement	17%	19%
Elicitation	20%	1%
Counter Proposal	40%	12%
Elaboration	34%	5%

words, F (1, 222) = 20.7 p <.001. There was no significant interaction between intersubjectivity and the use of internal state words for younger children.

Dialogic Patterns of Conversational Turn Use and Negotiations

Percent of conversational turns within a particular negotiation. A pretend play negotiation consisted of alternating types of conversational turns between two play partners. There were ten types of conversational turns. Each negotiation began with an initial proposal for play by one of the play partners in the dyad and ended with either the resolution or non-resolution of that initial proposal. In order to describe patterns of discourse for each of the four types of negotiations, percentages of the conversational turns that occurred within each of the four types of negotiations were calculated. These percentages are for descriptive purposes only and were not used in any analyses. See Table 10 for percentages of each type of conversational turn within negotiation type.

Reading the columns from Table 10 we see that for negotiations that remained unresolved, disagreements had the highest percentage of occurrences (21%). For acquiescence, acceptance and expansive negotiations, the conversational turn with the highest percentage of occurrence was sustain (29%, 23%, and 24% respectively). Conversational turns coded as sustain allowed children to continue the flow of the current negotiation without explicitly agreeing, disagreeing eliciting, counter-proposing, or elaborating.

For unresolved and acceptance types of negotiations, elaborations by children were the conversational turn with the lowest percentage of occurrence (2% and 1% respectively). For acquiescence negotiations, children's counterproposals and elaborations had the lowest percentage of occurrence (0% and 1% respectively). For

Table 10

Percent of Each Type of Conversational Turn within a Particular Negotiation

	Type of Negotiation			
Type of Conversational Turn	Unresolved	Acquiescence	Acceptance	Expansive
Initial Proposal	24%	20%	11%	7%
Ignore	12%	6%	4%	3%
Repetition	6%	2%	4%	2%
Sustain	16%	29%	23%	24%
Reply	2%	6%	6%	5%
Agreement	4%	19%	16%	19%
Disagreement	21%	4%	18%	11%
Elicitation	7%	13%	13%	12%
Counterproposal	6%	0%	4%	5%
Elaboration	2%	1%	1%	10%
Total	100%	100%	100%	100%

expansive negotiations, repetitions and ignoring by children were the types of conversational turns with the lowest percentage of occurrence (2% and 3% respectively). Recall that these percentages are for descriptive purposes only and were not analyzed using inferential statistics

Percent of type of conversational turns across negotiations. Another way to describe patterns in the dialogue of children's play negotiations was to compare the occurrence of different types of conversational turns across negotiations. Percentages of the occurrence each type of conversational turn across negotiations were calculated. Again, these percentages are for descriptive purposes only and were not used in any statistical analysis (See Table 11 for percentages).

When comparing the rows from Table 11 we find that the highest percentage of children's ignoring occurred in negotiations that were unresolved (33%). The highest percentage of children's sustaining play, replying to questions, agreeing, eliciting information from their partner, and elaborating occurred during expansive negotiations (38%, 38%, 45%, 39%, and 83% respectively). These same conversational turns occurred with the *lowest* percentage during unresolved negotiations (10%, 6%, 4%, 9%, and 5% respectively). The highest percentage of disagreeing and counter proposals occurred during expansive negotiations (35% and 51% respectively). Again, these percentages are for descriptive purposes only and were not analyzed using inferential statistics.

To summarize, significant relationships were found with regard to a few of the research questions. Older children ignored and repeated themselves less often than younger children, and offered counter proposals and agreed with their play partner more often than younger children. A similar pattern was found regarding the relationship

Table 11

Percent of Type of Conversational Turns across Negotiations

Type of Conversational Turn	Type of Negotiation				
	Unresolved	Acquiescence	Acceptance	Expansive	Total
Initial Proposal	26%	37%	17%	20%	100%
Ignore	33%	28%	15%	24%	100%
Repetition	28%	19%	28%	25%	100%
Sustain	10%	31%	21%	38%	100%
Reply	6%	30%	25%	38%	100%
Agreement	4%	29%	22%	45%	100%
Disagreement	26%	7%	32%	35%	100%
Elicitation	9%	27%	25%	39%	100%
Counterproposal	24%	1%	24%	51%	100%
Elaboration	5%	6%	6%	83%	100%

between familiarity and conversational turn use. Across age, more familiar children ignored and repeated themselves less often than less familiar children and they agreed and elaborated more often than less familiar children. In addition, for all ages, disagreements and counter proposals were the most likely type of conversational turn to be accompanied by a justification and elaborations were the most likely type of conversational turn to include an internal state word. Finally, longer negotiations were related to higher levels of intersubjectivity.

Discussion

The present findings have a significant impact on our current understanding of collaborative cognition during the preschools years. There is a shift in interpersonal understanding that occurs between 3 and 5 years of age as evidenced by changes in communicative competence and the complexity and success of pretend play negotiations among peers. In addition, the nature of the relationship between children engaged in social pretend play encourages patterns of interaction and discourse that can either facilitate or deter successful collaboration. Finally, the representational and non-consequential nature of the pretend play context itself affords unique opportunities for collaborative interactions that are not available to children in non-pretend settings.

Age and Familiarity

Many of the observed differences in the way children negotiate during play are related to age with older children engaging in generally more socially complex ways of interacting than younger children. From the third to fifth year of life children become increasingly more competent negotiators during play as is evidenced by changes in particular patterns of collaborative discourse. The present study found that between the ages of 3 and 5 children make a shift from using less to more justifications during pretend play, from using less to more internal state words, from engaging in lower to higher levels of intersubjectivity, from engaging in shorter to longer negotiations, and from engaging in unsuccessful to more successful pretend play negotiations. In addition, as children approach their sixth year they engage in discourse that facilitates joint interaction such as counter proposals and agreements.

Between the ages of 3 to 5 years children begin to form friendships that are reciprocal and socio-emotionally motivated (Howes, 1992). Preschool age children begin to understand what a friendship is in the broader context of relationships. As a measure of friendship, the familiarity between two children may affect play negotiation because familiar children have a history of shared play routines, have personal knowledge about one another, and are likely to share similar affective needs. These resources may not be as readily available for less familiar children to draw upon during pretend play. Howe et al. (1998) found that more frequent pretend dyads engaged in more "high-level negotiation strategies" that included transformations of objects or roles, and the discussion of roles (p. 185). For the present study, the familiarity between the two children in the dyad was hypothesized to have a facilitative effect on various measures of their pretend play discourse, and serve as a predictor of the complexity of their play negotiations. Indeed, findings revealed that as familiarity between the play partners increased so did the success and complexity of their negotiations. This was evidenced by increases in the use of justifications, agreements and elaborations of more familiar play partners.

Social Pretend Play

Classmates had 15 minutes of undirected free time to play in a room with toys that encourage social pretend play. Across all ages, children spent 90% of the 15 minute play session engaged in pretend play and 97% of that time children chose to play with their partner rather than alone. This is an extremely high incidence of occurrence that not only underscores the utility and richness of the social pretend play context for socio-

cognitive research in preschoolers, but highlights its significance as a practical activity of young childhood that is central to the lives of preschool age children.

More familiar play partners tended to engage in social pretend play more often during the play session than less familiar play partners. This finding supports the suggestion made by Doyle et al. (1980) that familiarity be measured due to its significant effect on social and cognitive skills during social play and its significance as a social context (Sawyer, 1997). The age of the play partners in the present study was not related to the amount of observed social pretend play implying that at any age, familiarity is an important determinant in children's decision to engage in pretend play. These findings are in line with Sawyer (1997) who suggests that pretend play offers children an environment where they can engage in activities and discourse that help them master interactional skills

Complexity and Success of Play Negotiations

The two major outcomes in the present study are the complexity and success of pretend play negotiations. The complexity of children's pretend play negotiations was determined by their use of the four types of negotiations each of which reflect a progressively more co-constructive level of interpersonal engagement. Unresolved negotiations are the least complex because one child's initial proposal for play is ignored or disagreed with without explanation which requires no co-construction between the play partners. Acquiescence negotiations are more advanced than unresolved types but reflect the co-constructive efforts of only one child in the dyad. Acceptance negotiations are more complex as they require one child's acknowledgement and active consideration of a play proposal in the form of a counter proposal, repetition, or disagreement.

Expansive negotiations are the most complex type of negotiation in which the initial proposal for play reflects the active consideration and transformative contribution of both play partners. An unresolved negotiation is considered failed as far as the initial proposal is concerned, and acquiescence, acceptance, and expansive negotiations are considered successful.

Older and more familiar play partners engaged in more successful negotiations than younger and less familiar play partners. In addition, only expansive types of negotiations, the most sophisticated type of negotiation, were positively associated to the familiarity of the play partners. Familiarity may have a facilitative effect on children's ability to share and coordinate perspectives while at the same time maintaining the general agenda of the current play proposal throughout the negotiation all of which are necessary for the high level of co-construction required of expansive types of negotiations (Howe et al. 1998).

Use of Conversational Turns

The mean number of conversational turns children exchange during a play session and during a negotiation (i.e., length of a negotiation) are measures of complexity with longer negotiations being associated with more complex and successful negotiations. There were more back and forth exchanges between older play partners than between younger play partners during the 15-minute play session. In addition, the individual negotiations of older children were longer than those of younger children. However, the negotiations of less familiar rather than more familiar children were longer, no matter what their age. This finding is in opposition to what was hypothesized; that more familiar children will have longer negotiations due to their shared play history that motivates them

to stay in a current play frame longer. It is possible that this finding is a consequence of the need for less familiar children to use more conversational turns to resolve an initial proposal due to a lack of shared play experiences than more familiar play partners.

Differences between the types of conversational turns used by older and younger play partners suggest a change in children's ability to engage in productive negotiation throughout the preschool years. Older children use conversational turns that facilitate productive collaboration such as agreements and counter proposals whereas younger children repeat themselves more often and ignore their play partner more often than older children. A pattern of repetition and ignoring can discourage productive collaboration. However, this is not to say that younger children are unskilled negotiators. Repetitions of one's own proposal or suggestion for play can also be used by a child as a further attempt to stay in the current negotiation.

Children who are more familiar play partners use conversational turns that facilitate collaboration. More familiar children elaborate and agree with one another more often whereas less familiar children ignore and repeat themselves more often than more familiar children. The differences in the types of conversational turns used by familiar and unfamiliar children are striking with regard to their implications for co-construction of knowledge during play. The use of elaboration requires a child not only acknowledge his partners play idea but extend upon it while staying in the present proposal for play. It requires awareness and use of another's perspective in coordination with one's own. The other end of the "perspective taking" continuum is represented by discourse of unfamiliar play partners; that being ignoring and repeating oneself. These results indicate that familiarity between children may enable them to engage in more complex ways of

negotiating by facilitating their use of perspective coordination. It also suggests that play with familiar rather than unfamiliar peers may be a social context that has more to offer in providing opportunities for children to engage one another in ways that advance socio-cognitive development.

Communicative Competence

Another way to understand change in collaborative play dialogues between ages three and five is to examine differences in communicative competence during negotiation. Indicators of communicative competence in this study are measures that reflect children's understanding of language use during social pretend play. Findings related to children's use of justifications during negotiation, their use of internal state words, and the level of intersubjectivity achieved during negotiations, are indicative of their attempts to use language to establish or maintain some type of shared perspective with their play partner regarding the current play proposal.

Use of justifications. When a child justifies his statement during play, he offers a reason that provides support for his idea and increases the likelihood that the idea will be acted upon by the play partner. I found that only 5% of all pretend play conversational turns were justified. The infrequency of justifications suggests that their use by preschool age children is perhaps an emerging development. I did find that more familiar children used justifications more often than less familiar children, suggesting that the shared bond between familiar children encourages the use of more advanced types of communication more than the age of the children.

Although children's use of justifications during pretend play negotiations was infrequent, they were used purposefully as is evidenced by types of conversational turns

in which they occurred. Across age, children offered justifications most often when disagreeing with and offering counter- proposals to their play partners. Both disagreements and counter proposals are conversational turns that function as potential turning points in a negotiation. A disagreement can often result in an unresolved proposal and a counter proposal can shift the rules of play in the proposer's direction while remaining in the current negotiation. Both are more effective when accompanied by a justification, concluding that although justifications are used infrequently, children understand their usefulness for purposes of making an argument for one's position.

Use of internal state words. Children's use of internal state words such as think, know, believe, happy, and feel during pretend play negotiations are another indicator of their communicative competence. How children use these words reflects an awareness of their own and other's mental states. The recognition that others may have different mental states than one's own about a particular topic and the need for reconciling these differences is an emerging development between the ages of 3 and 5 and is related to the development of children's social understanding.

During pretend play negotiations, internal state words were used in 17% of social pretend play conversational turns. The internal state words for this study were divided into cognitive (e.g., think, know, believe) and emotional (i.e., happy, hungry, tired) types. I found that older play partners used more internal state words overall than younger partners regardless of their language ability which was a significant covariate. With regard to particular types of internal state words, older children used more cognitive words than younger children, and younger children used more emotional words than older children. It is possible that emotional internal states are more familiar and concrete

to young children than are cognitive internal states which tend to be more ephemeral in nature and are therefore used more often by younger children during pretend play. The use of emotional internal states during pretend play may be a precursor to the use of more complex cognitive internal states but further study on the differential use of types of internal states and corresponding effects on negotiation complexity would be useful.

Across age, children used internal state words most often when elaborating. Elaborations are the most socially complex type of conversational turn in this study because they require a child to coordinate what her partner wants with what she wants while simultaneously sustaining the current play negotiation. This finding is in line with Howe et al. (1998) who found that internal state language was most likely to be used during high level negotiation. I propose that children's knowledge of the cognitive and emotional states of their play partner may facilitate their ability to coordinate perspectives making elaboration possible. Further support for this proposal is the finding that, when older children use internal state words, their negotiations are less likely to be unresolved suggesting that the use of internal state words during pretend play has a facilitative effect on sustaining play negotiations.

The significance of these findings to children's "theory of mind" literature are best understood if one takes an experiential approach to how children develop self and other understanding as espoused by Nelson and her colleagues (Nelson, Plesa, & Henseler, 1998; Nelson et al. 2002). An experiential approach shifts the focus away from the child's acquisition of a theory of mind and towards how a child *enters into a community of minds* available to her during everyday social interactions and made increasingly accessible through her emerging ability to use language representationally.

Social pretend play is by definition a representational activity and its maintenance requires play partners share their goals and intentions. Successful pretend play requires understanding and coordinating one's own and another's mental states, thus knowing at the same time one's own desires and the desires of one's play partner. The findings of this study indicate that preschool age children do take into account what is going on in the minds of others and use this information to facilitate pretend play negotiations. I believe that, due to its representational nature, pretend play is a context that affords children familiar and comfortable opportunities to begin to understand why it is useful to know what another person is thinking or feeling and to discover that the use of this knowledge enriches social interactions.

Intersubjectivity. Intersubjectivity refers to a state of shared understanding about the play scenario as measured in each negotiation. I found that older play partners had a higher mean level of intersubjectivity during negotiations than younger play partners. In addition, across age, intersubjectivity between the two play partners was higher for negotiations in which the play proposal was successfully resolved than for unsuccessful negotiations suggesting that, at any age, children's ability to share the focus of a negotiation facilitates successful play negotiations.

The findings related to both the age and familiarity level of play partners are reflective of a system of simultaneous changes in language, social, and cognitive development during the preschool years. Of particular importance to preschooler's effective collaboration during pretend play are changes in their representational use of language, socio-emotional desires that encourage reciprocal friendships, and understanding and coordination of their own and other's mental states.

Patterns of Conversational Turn Use and Type of Negotiation

Disagreements

Children's use of disagreements is of particular interest to the way children negotiate during pretend play. Historically, the direct expression of disagreements has been used as a measure of conflict and in peer interactions the generation and resolution socio-cognitive conflict as indicated by disagreements between partners has been thought to advance cognition (Bearison, Magzamen, & Filardo, 1986; Piaget, 1934). However, increasing interest in the role that cooperative modes of discourse and interactions play in advancing ways of thinking as well as findings that suggest an inverse relationship between disagreements and cognitive gains has encouraged some researchers to re-evaluate whether or not explicit disagreements are the best measures of socio-cognitive conflict in collaborative contexts (Dorval & Gundy, 1990, Berkowitz & Gibbs, 1983). Bearison and Dorval (2001) argue that explicit disagreements during emergent co-constructive activities may have the effect of disengaging partners resulting in unresolved negotiations and that it is the felt need to resolve disagreements through sharing perspectives that is more indicative of the advances in cognition generated by socio-cognitive conflict. So it may not be disagreements per se that are indicative of the cognitive gains attributed to socio-cognitive conflict but rather the more complex discursive patterns of counter proposals, elaborations, elicitations, and agreements that allow play partners to work out the felt need to resolve conflict through perspective coordination.

By looking at the percentage of occurrence of all 10 types of conversational turns within unresolved types of negotiations, I found that, across age, initial proposals and

disagreements occurred with the highest percentage (24% and 21%) respectively. A high percentage of initial proposals within unresolved negotiations suggest that children are engaging in short negotiations which are indicative of less co-constructive discourse. In addition, the high percentage of disagreements within negotiations that are left unresolved supports the findings of Bearison and Dorval (2001) who suggest that disagreements may lead partners to disengage.

Expansive Negotiations

I found that, across age, sustains, agreements, and elicitations (asking questions) accounted for 55% of all conversational turns in expansive negotiations. Conversational turns coded as sustain are those that allow children to sustain the current negotiation without them explicitly agreeing, disagreeing, eliciting, elaborating or offering a counter proposal. Sustain types of conversational turns are indicative of cooperative discourse because they allow for the continued flow of the current negotiation. Agreements between play partners are indicative of a shared focus between partners regarding the play proposal and are frequently associated with increases in collaborative play. In addition, asking questions of one's partner is an attempt to find out his or her perspective, a stepping stone to obtaining a shared focus regarding play and ultimately the achievement of intersubjectivity. These findings support the conceptualization of social pretense as an intersubjective activity where "children use actions and language as *communicative* devices to jointly construct the playful representation of experience" (Göncü, 1993, p. 194).

Co-constructive Patterns of Conversational Turn Use

Unresolved negotiations are the least socially co-constructive in nature and are considered to be failed attempts at collaborative play whereas expansive negotiations are the most complex and require play partners to share and coordinate their perspectives regarding an evolving play proposal. An interesting pattern emerged regarding children's use of particular types of conversational turns during both unresolved and expansive negotiations. Like a mirror image, sustaining, agreeing, eliciting, replying, and elaborating have the lowest percentage of occurrence during unresolved negotiations and have the highest percentage of occurrence during expansive negotiations. Thus, when play partners engage in a particular pattern of conversational turn use, that is, they elaborate on one another's ideas, they agree, they ask and answer questions, and they sustain play proposals, they do so within negotiations defined by the highest degree of social co-construction. Alternatively, when play partners use this pattern of conversational turns the least, they do so within negotiations defined by a lack of collaboration.

In order to truly understand cognition as a social and developmental process, the methodology behind the research must capture socio-cognitive processes between individuals as they emerge in socially meaningful activity (Bearison & Dorval, 2001; Stetsenko, 2001; Wertsch, 1991). The methodology of this study does just that. I examined the naturally occurring dialogue of pairs of preschool age classmates engaged in pretend play at their school to better understand the processes of interpersonal communication inherent in collaborative cognition. The analysis of real time back and forth dialogues of preschoolers requires that cognition be studied as a process occurring over time rather than as a static end state. This methodology preferences process over end

state, social over individual, and emergent over predicted all of which are necessary stances if one takes seriously the collaborative nature of cognitive development.

Social pretend play negotiations as a unit of analysis captures an age-appropriate, culturally mediated, emergent activity for studying the collaborative nature of cognition. The emergence of representational thought, children's more skilled use of language with others, their use of references to mental states, their ability to perspective take, increases in the frequency of pretend play, and an interest in engaging others as play partners are all seem to converge during the preschool years and have a profound relationship to more complex social understanding. This study is in line with others who use social pretend play as a context for studying the development of social understanding in three to five year old children (Doyle & Connolly, 1989; Garvey & Kramer, 1989; Göncü, 1987; Howes et al. 1992; and Sawyer, 1997). The methods and findings of this dissertation point to the benefits of looking at "how children cognitively participate in social and cultural activities" (Stetsenko 2001, p. 129). In particular, looking at how all of these abilities and interests relate to one another and build upon one another informs us of the developmental patterns unique to the preschool years that may provide the foundation upon which a more sophisticated social understanding develops that is typical of school age children.

Social pretend play is an ideal interpersonal activity to observe socio-cognitive processes because for play to be pretend and social, children must communicate with one another about their desires for planning play, engaging in play, and changing play using culturally mediated means such as toys, language, and gestures. It is an activity that is emergent in nature and requires ever-changing negotiation because there is no

predetermined direction towards a correct end product. If children are going to engage in pretend play together, they will need to coordinate their perspectives and actions through negotiation. The use of collaborative negotiation as a unit of analysis offers a method for observing cognitive change regarding perspective coordination, understanding of mental states, and representational language use.

The findings of this dissertation have significant implications for the field of social cognition in general, and for the use of social pretend play as a rich context for analyzing the emerging socio-cognitive abilities of preschool age children. At the heart of social cognition is that joint interaction pushes individual cognition forward and that all cognition is socially mediated. I found that between the ages of 3 and 5 a significant shift occurs in children's ability to share and coordinate perspectives, and establish mutual reciprocity. This is evidenced by changes in their uses of justifications and internal state words, increases in intersubjectivity during negotiations, and increases in the complexity of their pretend negotiations. In their extensive research, Dunn (1988), and Howe et al. (1998), have suggested that preschooler's pretend play negotiations with familiar peers seems to facilitate social understanding. My findings suggest that indeed, the use of internal states, justifications of perspective, and elaborative types of conversational turns are associated with more socially sophisticated negotiating that requires one to keep in mind her own, as well as her play partners desires, and manipulate both as a means for successfully resolving play proposals. In addition, not only were these ways of communicating associated with more complex negotiating, their frequency increased as children approached age six.

Part and parcel of these findings is the unique context of social pretend play from which observations were made. In this study, children spent 87% of their total time together engaged in social pretend play with a peer. Because social pretend play is a representational activity, it requires that children continually negotiate about the meanings of the roles, rules, and objects involved in a play scenario. In order for pretend play to exist and be successful, children must use their knowledge of what they think are the goals and intentions of their play partner and coordinate that with their own goals and intentions. In addition, pretend play is non-threatening and non-consequential context where children may explore activities and ideas not possible, or not desirable, in non-pretend play. These characteristics of social pretend play and the amount of time children choose to engage in social pretend play point to its significance as a context rich in opportunities for scaffolding between children with different socio-cognitive skills that is at the heart of theories that champion the co-construction of knowledge (Rogoff 1998; Vygotsky 1978). The findings of this dissertation point to the usefulness of pairing inquiries into collaborative process of social cognition with the social pretend play environment of preschool age children.

Conclusion

This study highlights particular changes in children's pretend play negotiations that occur between age three to five. There is a shift from the use of less to more socially engaging types of conversational turns, from less to more intersubjectivity, and from less to more internal state referencing during negotiations. Younger children have more unresolved pretend play negotiations than older children and overall, older children have more successful negotiations than younger children.

Significant advances in language and communicative competence occur between the ages of 3 and 5 and the familiarity between children seems to facilitate their effect on pretend play negotiations. More familiar children, and not necessarily older children, engage in more social pretend play, use more elaborations and justifications in their dialogue, have more expansive types of negotiations, and are overall more successful negotiators. The degree of familiarity between play partners cannot be overlooked in research on children's collaborative activities particularly with regard to spontaneously occurring activities such as pretend play where children determine the course of interaction (as opposed to an activity assigned by a teacher or parent). I propose that familiarity contributes to more complex negotiation because children have had more opportunities to share play scenarios and most likely re-play variations of the same scenarios. For example, when playing house, one child in a familiar play dyad may always be the baby and the other child is always the big sister. In this case, both partners are familiar with their roles and familiar with *how* to engage this particular friend in this role, thus facilitating the establishment of a shared perspective. In addition to shared play scenarios, familiar children are likely to be more motivated to engage one another in play

than unfamiliar children because they like one another. Their play negotiations are sustained and guided by socio-affective desires and needs that unfamiliar play partners may not share. More familiar children did engage in more social pretend play than less familiar children and they were more successful negotiators than less familiar children. Findings indicate that for more complex negotiations that involve actively transforming already proposed play ideas, familiarity between children rather than age plays a facilitative role in their co-constructive efforts. These findings contribute to our understanding of the mechanisms of social cognition. Concepts such as guided participation and the zone of proximal development rely on the edict that joint interaction pushes individual cognition forward. The present study suggests that the nature of the relationship between two people, in particular their familiarity, plays a part in the facilitative effects of collaboration on cognition. These results reiterate the necessity of studying child development in a social context.

The findings of this dissertation emphasize the value of using a collaborative context when posing developmental questions. The conclusions that can be drawn from studying socially co-constructive processes inform us as to the *how* of interpersonal development. In addition, the findings of this study point to the importance of looking at characteristics defined by the social relationship between children on their interpersonal development. Specifically, the level of familiarity between the play partners had significant effects on children's discourse and the complexity of their negotiations that were unrelated to their age.

One limitation of the present study is the lack of an analysis that can calculate hypothesis testing on patterns of conversational turn use by the partners in a dyad.

Sequential analysis of the back and forth exchanges between play partners reveals particular patterns of conversational turn use that typically lead to different ways of negotiating. This type of analysis is particularly useful in research that is looking at different processes of co-construction and their relationship to varying levels of cognitive reasoning. In their study of children's collaborative game construction, Bearison and Dorval (2001) used sequential analysis to determine which two and three sequence conversational turn patterns would result in the most complex types of negotiations between children during game construction. In addition, a measure of the synchrony between two play partners through comparisons of each child's contribution of specific types of conversational turns within a negotiation would have been useful. Due to the small sample size of the present study, analyses that require comparisons at the level of the dyad (e.g., synchrony measure) were not possible.

The present sample of children is skewed towards the middle class. In addition, there is an under representation of ethnic/minority participants, particularly with regard to the Indiana participants. For these reasons, the generalizability of the present findings is somewhat limited. It would be useful to replicate this study using children from a lower socio-economic status.

In addition, due to the significant findings of familiarity on several aspects of children's negotiations, the use of a more in depth measure of familiarity that looks not only at frequency of interactions between children but also socio-emotional factors that define familiarity would be useful in extending the present findings. Such a measure would better answer questions regarding the particular contributions of familiarity between children to acts of social cognition during pretend play.

Finally, it was not the direct intent of this dissertation to evaluate the place of social pretend play in the lives of preschool age children. However, the value of pretense to preschooler's developing language, cognitive, and social systems as evidenced by the high frequency of pretend play observed in this study and the general findings cannot be ignored. As discussed previously, social pretend play environments afford unique opportunities for learning and development that match well with the desires and emerging abilities of preschool age children and these opportunities are not as easily accessible in non-pretense settings. As parents and educators in an increasingly achievement based culture and educational system, we have an obligation to provide children opportunities for social pretend play at home and in preschool environments.

Appendix A

Recruitment Letters and Consent Forms for Each School

Letter of Recruitments for Child Development and Learning Center, New York

Young children spend much of their time playing. A large portion of early childhood is spent developing imaginative ways of thinking through play with friends and toys. It would be useful to know just what contribution everyday play makes to children's social development, language development, and cognitive development. In cooperation with The Child Development and Learning Center, a study about children's interactive play is beginning at the Graduate Center in the Department of Developmental Psychology.

If you consent to your child's participation, he or she will be paired up with another child of the same age from the Learning Center. The pairs will be introduced to some typical preschool toys and asked to play together for 15 minutes. The play of the children will not be directed in any way; children will be free to play as they normally would. The free play of the children will be videotaped and the videotapes will be used to analyze the children's language and actions during free play. All information about your child will be kept strictly confidential. Children will be monitored the entire time through a one-way mirror. Their total participation should take no longer than 30 minutes. This study will take play in the Child Development Lab in room 6304.32 of the Graduate Center in the Developmental Psychology department (a separate playroom at the Learning Center at Hunter). The Child Lab is designed specifically for purposes of conducting research with young children. Parents are welcome to come to the Child Lab (playroom at Hunter) to watch their child playing on the day he or she participates.

If you would be interested in having your child participate in this study please contact us using the information below. You may also call if you have any questions about the study or if you want to find out more details about participating. You are welcome to come visit the Child Lab on the 6th floor of he Graduate Center any time by calling Jessica. Your child's participation will contribute to doctoral dissertation research. Thank you for your time and interest.

Sincerely,

Jessica Beer
Developmental Psychology
City University of New York Graduate School
e-mail: jbeer@indy.rr.com
voice mail: (212) 817-8743

Parental Informed Consent for Child Development and Learning Center, New York

My name is Jessica Beer and I am a student in the Developmental Psychology Program at the Graduate Center of the City University of New York (CUNY), and Principal Investigator of this project, entitled Preschoolers' Play Negotiations: The Development Of Interpersonal Understanding. This is a research study designed to find out the contribution of play to early childhood development. The study is expected to help us understand the ways that children's conversations to one another during play help their social development. I would like permission to observe your child playing with another child from the Children's Learning Center.

With your permission, I will walk your child on the day of participation from his or her classroom at the Children's Learning Center to the Child Development Lab in room 6304.32 of the Graduate Center where he or she will play with a classmate for 15 minutes. The toys in the playroom will include grocery store items such as a cash register and food, a table and chairs, and plates and dinnerware. I will observe your child from the next room through a one-way mirror, and if you choose, you may also come to observe your child during the play session. With your permission, I would like to videotape this play session so I may record the details accurately. The tapes will only be seen by my advisors and myself. If you request, you may review the videotape of your child's play session before the videotape is used for research purposes. Your child will receive a small toy for his or her participation and be returned to the classroom immediately after the play session. Your child's participation should be no longer than 30 minutes from start to finish.

All information gathered will be kept strictly confidential, and will be stored in a locked file cabinet at the Graduate Center, to which only my advisor and I will have access. Your child will be identified only by a pseudonym and number. At any time you may withdraw your consent for participation, or your child may refuse to participate in the study without explanation or consequence. If at any point during the study your child does not want to continue with the study the request will be honored. I may publish results of the study, but names of people, or any identifying characteristics, will not be used in any of the publications. If you would like a copy of the study, please provide me with your address and I will send you a copy in the future.

There are no known risks to your child for participating. If at any time during participation your child seems in need of an adult, I will return to the room to provide assistance. There are no direct benefits to your child for participating, but the information obtained will be helpful for continued research on understanding the contribution of play to development. There will be approximately 60 other children from Learning Center's at Hunter and the Graduate Center who will take part in this study.

If you have any questions about this research, you can call (212) 817-8743 or email me jbeer@indy.rr.com, or my advisor Dr. David Bearison (212) 817-8716 dbearison@gc.cuny.edu. If you have any questions about your child's rights as a

participant in this study you may contact Hilry Fisher, Sponsored Research, The Graduate Center/City University of New York (212) 817-7523 hfisher@gc.cuny.edu.

Thank you for your child's participation in the study. I will give you a copy of this form to take with you. If you agree for your child to participate, please sign below.

I agree that my child may participate in the research described above. Yes ____ No _____

I agree that my child may be videotaped. Yes _____ No _____

Child's Name

Parent's Signature Date

Primary Investigator's Signature Date

Letter of Recruitment for Children at St. Richards School, Indianapolis

Dear Parents,

My name is Jessica Beer and I am a doctoral student in Developmental Psychology at the City University of New York Graduate Center. I am currently working on my dissertation that looks at preschoolers' language during play. Specifically, I am studying how children negotiate with one another about what to play, how to play, and what roles each will assume. I have met with Mr. Harrison and all of the teachers in the Early Childhood Division and they have agreed that I may request the participation of children at St. Richard's in this study. Twenty children from a preschool in New York City have participated in this study as well.

Children with signed permission slips will be paired up with a friend of the same age from their class. The pair will be introduced to some typical preschool toys and asked to play together for 15 minutes. The play of the children will not be directed in any way; children will be free to play as they normally would. The play will be videotaped and these tapes will be used to document the dialogue and actions of the pair. I will be studying the tapes to find out how negotiations become more complex as children get older. All information about your child will be kept strictly confidential and you are free to view the videotape of your child any time.

Your child's participation will benefit our general understanding about the contribution of play to children's social development, language development, and cognitive development.

If you would be willing to have your child participate in this study please read and sign the attached permission slip. You may call me anytime if you have questions about the study or if you want to find out more details about participating. Thank you for your time.

Sincerely,

Jessica Beer
Developmental Psychology
City University of New York, Graduate School
e-mail: jbeer@indy.rr.com
phone: (317) 705-0738

Parental informed consent for St. Richard's School, Indianapolis

My name is Jessica Beer and I am a student in the Developmental Psychology Program at the Graduate Center of the City University of New York (CUNY), and Principal Investigator of this project, entitled "Preschoolers' Play Negotiations: The Development Of Interpersonal Understanding". This is a research study designed to find out the contribution of play to early childhood development. The study is expected to help us understand the ways that children's conversations to one another during play help their social development. I would like permission to observe your child playing with another child from the St. Richards.

With your permission, I will walk your child on the day of participation from his or her classroom to a room in St. Richards where the observations will take place. There he or she will play with a classmate for 15 minutes. The toys in the playroom will include grocery store items such as a cash register and food, a table and chairs, and plates and dinnerware. After becoming familiar with the room and the toys, I will step into the hallway allowing the children to play independently. With your permission, I would like to videotape this play session so I may record the details accurately. The tapes will only be seen by my advisors and myself. If you request, you may review the videotape of your child's play session before the videotape is used for research purposes. In addition, I will administer a brief language evaluation for use in the statistical analysis. Your child will receive a small toy for his or her participation and will be walked back to the classroom immediately after the play session. Your child's participation should be no longer than 30 minutes from start to finish.

All information gathered will be kept strictly confidential, and will be stored in a locked file cabinet at my home, to which only I will have access. Your child will be identified only by a pseudonym and number. At any time you may withdraw your consent for participation, or your child may refuse to participate in the study without explanation or consequence. If at any point during the study your child does not want to continue with the study the request will be honored. I may publish results of the study, but names of people, or any identifying characteristics, will not be used in any of the publications. If you would like a copy of the study, please provide me with your address and I will send you a copy in the future.

There are no known risks to your child for participating. If at any time during participation your child seems in need of an adult, I will return to the room to provide assistance. There are no direct benefits to your child for participating, but the information obtained will be helpful for continued research on understanding the contribution of play to development. There will be approximately 60 other children from St. Richards and a Learning Center in New York who will take part in this study.

If you have any questions about this research you may call (317) 750-0735 or email me jbeer@indy.rr.com, or my advisor Dr. David Bearison (212) 817-8716 dbearison@gc.cuny.edu. If you have any questions about your child's rights as a

participant in this study you may contact Hilry Fisher, Sponsored Research, The Graduate Center/City University of New York (212) 817-7523 hfisher@gc.cuny.edu. In addition, you may contact Carolyn Lausch, Academic Dean, at 926-0425 ext. 117 with questions about St. Richards' participation in this study.

Thank you for your child's participation in the study. I will give you a copy of this form to take with you. If you agree for your child to participate, please sign below.

I agree that my child may participate in the research described above.Yes ____ No _____
I agree that my child may be videotaped. Yes _____ No _____

Child's Name

Parent's Signature Date

Investigator's Signature Date

Childs date of birth _____

Parents' contact phone number _____

Appendix B

The Coding Manual

General Note
A transcript may be anywhere in length from 3 to 10 pages. Only verbalizations and actions that are social pretend play will be coded and used as data for this study. Data will be coded at two levels, 1.) Conversational Turn Level, and 2.) Negotiation Level.
**No meanings behind a child's dialogue or actions should be implied or assumed on the part of the coder. If the information is not in the transcript then it cannot be considered when selecting the codes.

Non-Verbal Activity
Because social pretend play involves both verbal and nonverbal activity, all non-verbal activity that serves to initiate or respond to a conversational turn will be coded using the same definitions and codes as verbal activity.

Conversational Turns
The beginning of a Conversational Turn occurs when one child begins talking and ends when the same child stops talking. This excludes interruptions by the play partner unless the interrupted child explicitly addresses the interruption by the partner. A Conversational Turn may be non-verbal and involve interactions with objects and/or body movements.

Parsing the Data
Pretend vs. Non-Pretend Play
V*ariable name is <Pretend>*
All Conversational Turns (CT) will first be coded as either Pretend Play or Non-Pretend Play using the definition of pretense offered by Fein (1981). CT's coded as Pretend Play must fit in to this definition.

"Pretense (is)…behavior in a simulative, non-literal, or 'as if' mode" (pg. 1096)
Simulative: a simulation of an activity
Non-literal:

1. "Familiar activities may be performed in the absence of necessary materials or customary social context"
2. "The activities may not be carried to their usual outcome"
3. "Inanimate objects may be treated as animate" (e.g., describing a toy that is a character such as a Rescue Hero, this does not include descriptions of non-character toys such as a car)
4. "One object (or a gesture) may be substituted for another"
5. "The child may perform an activity usually done by someone or something else"

Example: Pretend Play
Child A: When I drop the food on the floor you say "honey go to your room"
Child B: Okay.
Child A: I dropped all the food on the floor. (drops food on floor)
Child B: Go to your room.

Example: Non-Pretend Play - Children are being social but not pretending.

Child A: Are you going to tell Jessica what I did?
Child B: What?
Child A: That I threw an egg at you?
Child B: I'm going to tell. (walks out of room)

Social vs. Non-Social Pretend Play

Variable name is <Social>

The remaining CT's will be coded as either Social or Non-Social in nature using the definition of social pretend play offered by Doyle and Connelly (1989).
A conversational turn is social if one child elicits a response from another through "gesture, deliberate contact, a verbal directive or request, imitation, or active directed smiling or laughing" (p. 292-293).

Example: Social Pretend Play

Child A: Who wants a chocolate donut and a pink donut?
Child B: Me.
Child A: Which one? (holds out two donuts)
Child B: (points to one donut and pretends to eat it)
Child A: (pretends to eat the other donut)

Example: Non-Social Pretend Play – Children are pretending but not with one another

Child A: (cooking food at microwave area)
Child B: (ringing up food at cash register area) Donuts.
Child A: (walks to phone standing next to Child B) Hello. (talks to self on phone) Goodbye.
Child B: (walks to food area and begins to set table)
Child A: (hangs up phone then walks to food area)

Coding Conversational Turns

Conversational Turn Functions

Variable name is <CTfunc>

Conversational Turns will be coded as one of eleven mutually exclusive and exhaustive functions. If two or more CT functions occur in one CT, the higher of the two functions should be coded. For example, if one CT contains both an Agreement (07) and an Elicitation (09) the CT should be coded as an Elicitation (09). An exception is if one of the two CT functions is an Initial Proposal (IP), the CT is ALWAYS coded as an Initial Proposal.

Initial Proposal (IP)

A statement, question, or non-verbal action made by the speaker that (a) proposes one or more new rules, goals, or uses of play materials OR proposes a change in existing rules, goals, or uses of play materials, and (b) requires a response from the partner. An Initial Proposal may be in the form of a question. It is coded as an Initial Proposal not as an Elicitation.

Example 1:
Child A: "I am going to make dinner for you." (child puts plates on the table) (IP)
Child B: "Okay" (sits at table) (AG)

Example 2:
"How about we can play mommy?" (IP)

Ignore (IG)
One or more verbal or non-verbal statements or actions by one partner that were non-responsive to the *topic* of the other partner's proposal. If a CT function is coded as Ignore, it is still coded as Social Pretend Play because it is in the context of an attempted social exchange.

Example 1:
Child A: "These are your eggs for breakfast."
Child B: "You're a good doggy." (talking to a character) (IG)
Child A: "These are your eggs and these are my eggs."

Example 2:
Child A: "Here is your Rescue Hero."
Child B: (walks away from play area) (IG)

Ignore + Initial Proposal (II)
A child Ignores the previous CT and provides an Initial Proposal, thus ending the negotiation. This code was added to reflect the difference between the provision of an Initial Proposal at the logical end of an negotiation (coded simply as an Initial Proposal) versus ending the negotiation prematurely by ignoring the flow of the negotiation and initiating a new negotiation.

Example:
Child A: "Look what's in the refrigerator, lots of things." (IP)
Child B: "Oh how about we can play mommy?" (IG + IP)
Child A: "Okay"

Repetition (RT)
A repetition, although not necessarily literal, of *one's own* previously expressed conversational turn. If a child is asking a question and it is a repetition, then code it as a Repetition not an Elicitation.

Example:
Child A: "Would you mind if I poured some tea for you?" (EL)
Child B: "Well no." (DS)
Child A: "I'll pour some tea for you" (RT)

Example with a Repetition
Child A: "How much are these? (IP)
Child B: "Salt and pepper ?" (EL)
Child A: "How much?" (RT)

Child B: ”Salt and pepper are ten dollars.” (RP)

Sustain (SU)
A response to the previous conversational turn that simply continues the flow of the negotiation *without explicitly agreeing, disagreeing, eliciting, counter-proposing or elaborating*. This includes repetitions of part or all of the immediately previous conversational turn, and responses of “thanks” or “oh”.

Example 1:
Child A: “I’m going on the volcano” (IP)
Child B: “Here’s some trees to help you get away from that guy.” (EB)
Child A: “It’s a tiger, it’s a tiger!” (SU)

Example 2 – with a repetition:
Child A: “A buffalo is coming!” (IP)
Child B: “Ah, a buffalo!” (SU)

Example 3:
Child A: “Here is your dog.” (IP)
Child B: “Thanks.” (SU)

Reply (RP)
A response that answers an Elicitation from the previous conversational turn. This code is used only with responses to questions. This code was added to reflect a child’s ability to answer a question posed by the play partner, thus continuing the current level of negotiation.

Example:
Child A: “Who wants a chocolate donut and a pink donut?” (EL)
Child B: “Me.”(RP)

Agreement (AG)
A verbal or non-verbal agreement with (1) a previously expressed proposal, or (2) a statement or enactment in the immediately previous conversational turn. If a child asks a question (Elicitation) and the partner answers it with an “okay” then the CT should be coded as an Agreement, not as a Reply.

Example 1: Non-verbal example using body movement:
Child A: “Let’s play cashier.” (IP)
Child B: (Child B moves away from the cash register allowing Child A to be the cashier) (AG)

Example 2: Non-verbal example using interactions with objects:
Child A: “I am the shopkeeper so give me the money.” (IP)
Child B: (child B hands child A the money) (AG)

Example 3: Verbal example:
Child A: “Excuse me, I want to be the cashier.” (IP)
Child B: “Okay.” (AG)

Example 4: Elicitation with Agreement
Child A: “Do you want to go to the store?” (IP)
Child B: ”Yes” (AG)

Disagreement (DS)
A verbal or non-verbal disagreement with (1) a previously expressed proposal, or (2) with a statement *or enactment* in the immediately previous conversational turn. If a child asks a question (Elicitation) and the partner answers it with a “no” then the CT should be coded as a Disagreement, not as a Reply.

Example 1 – with a proposal:
Child A: “Let’s play family” (IP)
Child B: “No, I don’t want to.” (DS)

Example 2 – with a statement:
Child A: “I’ll put the baby in here” (SU)
Child B: “No, she’s just a little thing.’ (DS)

Example 3 – with an enactment:
Child A: (stacking dinnerware up on table and it falls everywhere) (SU)
Child B: No son, don’t do that!” (DS)

Example 4 – with a justification
Child A: “Put this pizza in the microwave.” (IP)
Child B: “The microwave is broken.” (justified DS)
Child A: “I just fixed it.” (CP)
Child B: “No you didn’t.” (DS)

Example 5 – Elicitation with a Disagreement
Child A: “Do you want to go to the store?” (IP)
Child B: “No.” (DS)

Elicitation (EL)
A request for further information (1) regarding a proposal, or (2) to ask a question.

Example 1 – regarding a proposal
Child A: “I’m the shop keeper. So give me the money.” (IP)
Child B: “What money?” (EL)

Example 2 – to ask a question
Child A: “Who wants to have some M&M’s?” (EL)
Child B: “I do.” (RP)

Counter Proposal (CP)
A disagreement with a preceding proposal together with a substitute proposal to direct the play in another direction while remaining in the current negotiation.

Example 1:

Child A: "Off we go mister cause I'm tired, Jack Hammer's tired." (IP)
Child B: "Well I'm not tired, I got to rescue someone." (CP)
Child A: "Let's play with something else." (DS)

Elaboration (EB)
A partner (1) augments the other child's proposal about the conditions of the play scenario (theme, roles, rules), or (2) finishes the thoughts of the other child by adding/completing a compatible scenario.

Example 1 – augmenting a proposal
Child A: "Here's the grocery. Let's buy some donuts" (IP)
Child B: "Yeah, and I need to buy more sweets because I'm having a party." (EB)

Example 2 – completing a compatible scenario
Child A: "This Barbie is going to a birthday party" (IP)
Child B: "Yeah, and she gets her a puppy on the way there." (EB)

Example 3:
Child A: "An avalanche is coming!" (IP)
Child B: "I'll get the Rescue Hero to save all the animals." (EB)

Additional Coding Rules

- If the CT contains two or more CT functions the higher of the two will be coded
- If a CT contains both verbal and non-verbal conversation, but the verbal is incomprehensible, the CT may be coded by referring only to the non-verbal behavior (and vice versa)
- If part of a CT is meaningfully comprehensible and part of it is not, the meaningful part of the CT may be coded.
- Keep a tally of the number of CT's that were not coded because they were incomprehensible as indicated by (?????). This does not include CT's that were partially comprehensible. Do not allocate a line of data for CT's that are incomprehensible, but DO indicate with an arrow in the left margin on the coding sheet where the left out CT was located.
- A line of data should not be allocated to one child's interruption of another if the interruption is ignored.

Coding Justifications
Variable name is <CTjust>
Justified Conversational Turn
A conversational turn in which a child explicitly justifies *his or her own position* (1) by making reference to his or her own perspective and/or the partner's perspective (e.g., thoughts, feelings, intentions, and/or behavior), or (2) by referencing the methods of the play scenario.

Example 1: "I want the pink one *because pink is my favorite color*."

Example 2: "*I'm the shopkeeper* so give me the money."

Example 3 - unjustified disagreement
Child A: (starts microwave then opens it when it beeps)
Child B: "No, I'm going to open it (pushes Child A's hand away and opens microwave door)

Example 4 - justified disagreement
Child A: "Hey I need that apple."
Child B: "It's an onion."
Child A: "It's not an onion, it's an apple. I call it whatever I want. Because it looks like an apple then it is an apple."

Unjustified Conversational Turn
A conversational turn without any justification.

Example:
Child A: "And this brown haired girl can be the mommy."
Child B: "No, this one will be the mommy (child holds up her own doll)."

Coding Internal State Words
Variable name is <IntnlWord>
All Conversational Turns will be coded as to (1) whether or not they include a cognitive, emotional, or physiological mental state term, and (2) for the orientation of the mental state term. If two or more Internal State Words occur in the same CT, only the Internal State Word that occurs first is coded

Cognitive Mental State Terms
A child refers to his or her own (or another's) thought, beliefs, memories, knowledge, imaginings (adapted from Howe et al. 1998, and Nielsen & Dissanayake, 2000). Idiomatic expressions without a predicate complement such as "I don't know" and "I think" were coded as references to internal states.
Examples:

Know	remember	bet/reckon	wish
Think	guess	hope	figure
Mean	pretend	trick	believe
Forget	dream	wonder	understand
Want	idea	need	

Emotional Internal State Terms
A child refers to his or her own emotions or feelings (adapted from Howe et. al., 1998)
Examples:

Happy	love	like	hate	scared
Sad	mad	fear	disgust	sorry
Good	bad	hurt (feelings)		

Physiological Internal State Terms (adapted from Howe et al., 1998)
Examples:

Hungry	thirsty	tired	sick

pain alive hurt dead

Coding Orientation of the Internal State Words

Variable name is <IntnlOrien>

Internal states will be coded as referring to either (1) ones own mental state, or (2) another's (i.e., play partner), both, or a character's mental state.

Example 1: "*You pretend* to be the mommy and I'm your son."
Example 2: "*I think* I'm going to the jungle now."
Example 3: "*She wants* to go in the car with her friend" (referring to Barbie)
Example 4: "The *mommy and the baby are tired*."

Coding Negotiations

A negotiation begins when one partner proposes one or more rules, goals, or uses of materials OR proposes a change in existing rules, goals or materials. The initial turn of the negotiation will always be an initial proposal. The negotiation continues through successive conversational turns until the initial proposal and its derivatives are no longer a topic of discourse. The end of a negotiation is marked by acceptance of the proposal, the provision of an alternative proposal, the rejection of the proposal, or when the proposal is ignored. A negotiation consists of two or more conversational turns.

- If within a negotiation, there are incomprehensible CT's, this does not mean that the negotiation ends. Follow along to the next CT to see if the topic of the negotiation is still the same.
- If there are two or more consecutive Initial Proposal's or Ignore + Initial Proposal's, conversational turns in a row, the Negotiation Function for the first CT should be coded as not applicable (coded as 9).

  Example
  Child A: "Arf, arf, arf (joins Child B at table pretending to be a Rescue Dog) (IP not applicable for negotiation function)
  Child B: "Look a donut." (Ignore + IP)
  Child A: (throws donut on the floor) (DS) (negotiation unresolved)

Negotiation Functions

Variable name is <NegFunc>

Negotiations will be coded by determining in general what becomes of the Initial Proposal throughout the conversational turns that make up the negotiation. The end of a negotiation occurs when the main topic of the negotiation changes (usually indicated by a new Initial Proposal). The change signals the end of the current negotiation and the beginning of the next. Negotiations will be coded as one of four mutually exclusive and exhaustive functions.

Unresolved

One partner changes the topic of discourse without addressing one or more of the proposals offered by the other partner. This kind of negotiation includes negotiations which are (1) ignored, or (2) those where one partner disagrees without acquiescing,

accepting or elaborating the proposal. Ignored proposals are those where one partner changes the topic of discourse without responding to or recognizing one or more proposals offered by the other partner

Example - with a disagreement:
Child A: "Don't touch my cutie girl." (IP)
Child B: "I'll put the cutie girl in here (microwave)." (CP)
Child A: "No she's a little thing." (DS)
Child B: "This is my cash register!" (IP and new negotiation)

Example – using ignore:
Child A: "Let's play Rescue Hero's now." (IP)
Child B: (continues to play with jungle animals) (IG)
Child A: "Here's a Rescue Hero for you." (RT)
Child B: "This giraffe is climbing the volcano." (II)

Acquiescence

One partner passively accepts the other's proposal (without elaboration) by responding with a "Yes" or "Okay", or enacting the proposal on the next turn.

Example:
Child A: "Who wants a chocolate donut and a pink donut?" (IP)
Child B: "Me." (RP)
Child A: "Here, which one?" (EL)
Child B: (points to one donut and pretends to eat it) (RP)

Acceptance

One partner accepts the other's proposal after having considered it either in the form of a counter proposal, a repetition, or a disagreement. An example with a disagreement is:

Example
Child A: "It is dinner time now." (IP)
Child B: "No." (DS)
Child A: (begins to set the table) (DS)
Child B: "But I will set the table." (CP)
Child A: "Here are the plates." (AG)
Child B: (sets the table) (AG)

Expansive

One partner accepts the other's proposal but only after having added new conditions to it by way of an *elaboration*.

Example:
Child A: "I want to be the teacher." (IP)
Child B: "Yeah, you're the teacher and I am the music teacher who works at your desk?" (EB)
Child A: "Yeah." (AG)

Coding Intersubjectivity

Each type of conversational turn will be given a score of 0, 1, 2, or 3 that reflects intersubjectivity. An mean intersubjectivity score will be calculated for each negotiation by summing the intersubjectivity codes for each conversational turn then dividing by the number of conversational turns in each negotiation. The codes for intersubjectivity are as follows:

0 = initial proposals, ignore + initial proposals
1 = ignore, repetitions
2 = agreements, disagreements, sustains, replies
3 = elicitations, counter proposals, elaborations

Coding Success or Failure of Negotiations
A successful negotiation is one coded as acceptance, acquiescence, or expansive
A failed negotiation is coded as unresolved

Outline of Coding Levels

Parsing Codes

Pretend vs. Non-Pretend Play <Pretend>

0 = Non-Pretend Play
1 = Pretend Play

Social vs. Non-Social Pretend Play <Social>

0 = Non-Social Pretend Play
1 = Social Pretend Play

Conversational Turn Codes

Functions <CTfunc>

01= Initial proposal & Ignore + Initial Proposal
02 = Ignore
04 = Repetition
05 = Sustain
06 = Reply
07 = Agreement
08 = Disagreement
09 = Elicitation
10 = Counter proposal
11 = Elaboration

Justification <CTjust>

0 = Unjustified
1 = Justified

Internal State Words <IntnlWord>

1 = None
2 = Cognitive
3 = Emotional & Physiological

Internal State Word Orientation <IntnlOrien>

0 = Other, Both or Character
1 = Self

Negotiation Codes

Functions <NegFunc>

1 = Unresolved
2 = Acquiescence
3 = Acceptance
4 = Expansive

Intersubjectivity <intersub>

0 = No intersubjectivity: Initial proposal, Ignore + Initial proposal
1 = Low intersubjectivity: Ignore, Repetition
2 = Medium intersubjectivity: Agreement, Disagreement, Sustain, Reply
3 = High intersubjectivity: Elicitation, Counter proposal, Elaboration

Success <Negsucs>
0 = Failure: Unresolved negotiation
1 = Success: Acquiescence, acceptance and expansive negotiations

99 = Not applicable

Sample Transcript

Dyad ID: 0304
I (03) age: 3,5,17
A (04) age: 3,10,17
Tape: 11
Date: 2/25/04

I hitting microwave at round table. A sitting down at square table playing cash register

Begin Coding -17.44

A: Too many money…too many money…too many money…no too many…ahh ahh see help me close it…close it ahh (trying to close the cash register)
I: (closes register for A) (walks to shelf of food, holding ice cream) ice cream, ice cream
A: (walks behind food area) yeah ice cream, ice cream
I: (walks to cash register) I closed this for you (cash register drawer)…hey I closed it…closed it….I closed this A
A: (A playing with telephone at same table) No, don't open it. (cash register)
I: Close it?
A: Yeah.
I: (closes register and pushes it toward A) Close it?
A: (picks up phone) Hello, how've you been? Okay.
I: (walks to microwave) Hey "A" how do you do this? (trying to get card out of microwave)
A: (playing with phone)
I: "A"… (repeats other child's name)
A: (Tries to take card out of microwave)
I: stuck (opening microwave)
A: quit (I tries to open microwave and A pulls I arm away two times). Not ready, it's not ready, it's not ready, it's not ready, not ready (moves microwave away from I and plays)
I: You want to play pizza maker? (I walks to food area) Hey I found some more pizza's (I walks back to microwave)
A: No its not ready
I: (hands pizza to A)
A: (puts pizza in microwave)…not ready…not ready…it's not ready…it's not ready
I: Okay! (walks to cash register) That's not "A" right? (????? Not sure of the meaning of that phrase) (walks back to microwave) Is it ready?
A: No…I have to put this in (A puts food in microwave) Nope see it's not ready
I: (looks in microwave).
A: I'm going to put it over here (A turns microwave away from I then turns microwave back toward I)
I: (trying to put recipe card in microwave)

A: It's not fitting…it just won't. (A turns microwave away from I again)
I: (I walks back to food area) Hey I found a pizza cutter (walks back to A). Want this (holds out the pizza cutter)
A: (no response)
I: Here you want this?
A: (no response)
I: Here you want this?
A: Yeah (takes cutter)
I: Okay.
A: (cutting pizza)
I How about this? (reaches for a piece of pizza from microwave)
A: (moves I hand away and takes the piece of pizza from microwave. Cuts it. Hands piece of it to I)
I: I'm not baby I'm daddy. I want daddy one (points to a different piece)
A: This one?
I: Yeah.
A: (Cuts the piece I pointed to) This one?
I: Yeah.
A: (Hands piece to I)
I: Thank you (walks to food area, pretending to eat pizza) Thank you I'm done. I'm done thank you (hands pizza to A and walks back to food area)
A: (takes piece of pizza from I and puts in microwave)
I: Two eggs! Two eggs (brings them to table with A). (Walks to food area and brings back plates). Hey want eggs? Want this? Want eggs? (offers plate to A)
A: (Takes plate from I)
I: Want eggs?
A: Yeah (takes plate)
I: Okay. Hey put it in here (opens microwave)
A: (puts plate and egg in microwave)
I: No just egg, like this…this…this…this…this (trying to put egg and plate in microwave) okay? (shuts microwave) This is not ready
A: (takes food out of microwave)
I: It's not ready (takes microwave away from A) mine is not ready (takes food out)
A: (Tries to take I's plate)
I: No (pulls plate back from A). Let me (takes knife from A). Let's cut this pizza. I cut this yellow pizza
A: (playing with his food)
I: Can I have some?
A: (Hands piece of food to I)
I: Big one? (trades a different piece of food with A)
A: I want just one of these (gives back a piece of food to I)
I: Then I'll have two.
A: Yeah
I: (Walks to food area)
A: First then you have to cook for me.
I: You want some sausage?

A: (walks to food area) Here's some ????? (gets a teapot)
I: Want some sausage? (walks to A with sausage)
A: (No response)
I: Want some sausage?
A: No
I: Just do the sausage here (puts sausage in teapot that A is holding) here's more sausage. And then you put this in here, huh? (takes one sausage out of teapot and puts it in microwave)
A: Yeah. (pours a sausage out of his teapot) Oops. (puts it back in teapot)
I: Hey how about this? (puts a piece of food in teapot)
A: (allows I to put in the piece of food then closes teapot)
Both walk to food area
I: Take this and this (picking up food)
A: A spatula
I: A spatula (puts food onto the spatula while A holds it) spatula. Here (tries to put more food on the spatula)
A: No that's enough (walking back to table)
I: A spatula spatula spatula la la la spatula. (both walk to food area) Can I have another spatula?
A: For you (hands spatula to I).
I: Thank you
A: Spatula for you. Spatula for you. Excuse me, excuse me (scooting past I to sit in chair) I have to sit in this seat
I: (opens microwave) Uh oh, sausage in here. Sausage. (Closes microwave). Done (takes food out) Want this? (shows food on spatula to A)
A: No (puts his own food in microwave)
I: Were do I put this? (showing A the food on spatula)
A: (no response)
I: Where do I put this?
A: (no response)
I: Where do I put this huh?
A: (no response)
I: Where do I put this?
A: (no response)
I: "A" Where do I put this?
A: Right here (opens microwave)
I: (puts it in but it falls out)
A: I'll take it in (puts in dropped food and closes microwave) Wheres Evie ("A's" sister)
I: Evie?
A: Yeah.
I: Hey lets get (tries to pick up food with spatula)
A: (tries to get I's spatula)
I: No, I want…I want… (pulls away spatula)
A: Where should I put this (the food on the spatula)
I: Put that here (opens microwave) put that there

A: (puts food in microwave)
I: It's ready
A: I'll take it out
I: I know…I know (takes out food)
A: I'll take that one out.
I: (takes out more food and puts it on A's plate)
A: I'll take this one out.
I: Okay. I'll take this one out (each take own food out at same time and I spills his and laughs)
A: (laughs)
I: I'll take this one out.
A: I don't want this (hands piece of food to I) you have it
I: (takes piece of food) You want this? (food)
A: No, I have eggs
I: I think you can eat two (hands another piece of food to A)
A: I want to have that (tries to take I's spatula)
I: no…no (walks away to cash register)
A: Where should I put this? (piece of food)
I: That? (walks back to microwave) In here (microwave)
A: (puts food in microwave)
I: Where should I put this (food)
A: In here
I : Puts food in (food keeps falling out) Whoah!
A: Here I'll take it in. Whoah!
I: Whoah! (Food falling out)
A: Whoah! (Laughing) I'm going to get a fork (gets up)
Stop Coding Here
I: Fork? (gets up laughs and looks at spoon) How about this? Hey how about this?
A: Oh a knife (takes knife from I)
I: You need a knife
A: Yeah, I need this to scoop it

Sample Coding Sheet

ID# _____ ID# _____

Date _____ Date _____

Page# _____ Page#_____

CT #	Pr	Sp	CTf	CTj	ISt	ISo	Nf	Nc		CT #	Pr	Sp	CTf	CTj	ISt	ISo	Nf	Nc
1										1								
2										2								
3										3								
4										4								
5										5								
6										6								
7										7								
8										8								
9										9								
10										10								
11										11								
12										12								
13										13								
14										14								
15										15								
16										16								
17										17								
18										18								
19										19								
20										20								
21										21								
22										22								
R										R								

of ????? CT _____ # of ????? CT _____

Bibliography

Bateson, G. (1971). The message "This is play." In R.E. Herron & B. Sutton-Smith (Eds.), *Child's Play* (pp. 261-266). Malabar, FL: Robert E. Krieger Publishing Company.

Bearison, D.J. (1991). Interactional contexts of cognitive development: Piagetian approaches to sociogenesis. In L.T. Landsmann (Ed.), *Culture, cognition and schooling* (pp. 56-70). Norwood, JN: Ablex.

Bearison, D.J., & Dorval, B. (with G. LeBlanc, A. Sadow, & D. Plesa and Commentary by A. Stetsenko). (2001). *Collaborative Cognition: Children Negotiating Ways of Knowing.* Westport, CN: Ablex.

Bearison, D.J., Magzamen, S., & Filardo, E. (1986). Socio-cognitive conflict and cognitive growth in young children. *Merrill-Palmer Quarterly, 32*, 51-72.

Berkowitz, M. W., & Gibbs, J. C. (1983). Measuring the development of features of moral discussion. *Merrill-Palmer, Quarterly, 29*, 399-410.

Black, B. (1992). Negotiating social pretend play: Communication differences related to social status and sex. *Merrill-Palmer Quarterly, 38(2*), 212-232.

Bonica, L. (1993). Negotiations among children and pretend play. In M. Stambak and H. Sinclair (Eds.), *Pretend play among 3-year-olds* (pp. 55-77). Hillsdale, NJ: Lawrence Erlbaum Associates.

Brown, J.R., Donelan-McCall, N., Dunn, J. (1996). Why talk about mental states? The significance of children's conversations with friends, siblings, and mothers. *Child Development, 67,* 836-849.

Corsaro, W.A. (1979). 'We're friends, right?': Children's use of access rituals in nursery school. *Language in Society, 8,* 315-336.

Corsaro, W.A. (1981). The development of social cognition in preschool children: Implications for language learning. *Topics in Language Disorders, 2(1),* 77-95.

DeLoache, J. S. (2000). Dual representation and young children's use of scale models. *Child Development, 71,* 329-338.

Doise, W. & Mugny, G. (1984). The Social Development of the Intellect. Oxford, NY: Pergamon Press.

Dorval, B., & Gundy, F. (1990). The development of arguing in discussions among peers. *Merrill-Palmer Quarterly, 36,* 389-409.

Doyle, A., & Connolly, J. (1989). Negotiation and enactment in social pretend play: Relations to social acceptance and social cognition. *Early Childhood Research Quarterly, 4*, 289-302.

Doyle, A.B., Connolly, J., & Rivest, L.P. (1980). The effect of playmate familiarity on the social interactions of young children. *Child Development, 51*, 217-223.

Doyle, A.B., Doehring, P., Tessier, O., de Lorimier, S. & Shapiro, S. (1992). Transitions in Children's Play: A sequential analysis of states preceding and following social pretense. *Developmental Psychology, 28(1)*, 137-144.

Dunn, J. (1983). Sibling relations in early childhood. *Child Development, 54*, 787-811.

Dunn, J., Bretherton, I., & Munn, P. (1987). Conversations about feeling states between mothers and their young children. *Developmental Psychology, 27,* 448-455.

Farver, J.M., & Howes, C. (1993). Cultural differences in American and Mexican mother-child pretend play. *Merrill-Palmer Quarterly, 39,* 344-358.

Fein, G. (1981). Pretend play in childhood: An integrative review. *Child Development, 52,* 1095-1118.

Flavell, J.H. (1974). The development of inferences about others. In T. Mischel (Ed.), *Understanding other persons.* Oxford, England: Blackwell.

Flavell, J.H. (1992). Perspectives on perspective taking. In Beilin, H & Pufall, P. (Eds.), *Piaget's theory: Prospects and possibilities.* Hillsdale NJ: Lawrence Erlbaum.

Fonagy, P. & Target, M. (1996). Playing with reality: I. Theory of mind and the normal development of psychic reality. *International Journal of Psycho-analysis, 77,* 217-233.

Garvey, C. & Hogan, R. (1973). Social speech and social interaction: Egocentrism revisited. *Child Development, 44*, 562-568.

Garvey, C. (1974). Some properties of social play. *Merrill-Palmer Quarterly, 20*, 163-180.

Garvey, C. (1975). Requests and responses in children's speech. *Journal of Child Language, 2*, 41-63.

Garvey, C. (1977). *Play*. Cambridge MA: Harvard University Press.

Garvey, C. & Kramer, T.L. (1989). The language of social pretend play. *Developmental Review, 9,* 364-382.

Göncü, A. (1993). Development of intersubjectivity in social pretend play. *Human Development, 36*, 185-198.

Göncü, A. & Kessel, F.S. (1988). Preschoolers' collaborative construction in planning and maintaining imaginative play. *International Journal of Behavioral Development, 11*, 327-244.

Harris, P.L. (2000*). The Work of the Imagination*. Malden, M.A.: Blackwell.

Harris, P.L. & Kavanaugh, R.D. (1993). Young children's understanding of pretense. *Monographs of the Society for Research in Child Development, 58,* (1, Serial No. 231).

Harris, P.L., Lillard, A.S., & Perner, J. (1994). Triangulating pretence and belief: Commentary. In C. Lewis & P. Mitchell (Eds.), *Children's Early Understanding of mind*. (pp. 287-293). London: Lawrence Erlbaum.

Hartup W. W. (1983). Peer relations. In P.H. Mussen (Series Ed.) & E. M. Hetherington (Vol. Ed.) *Handbook of Child Psychology: Vol 4: Socialization, personality and social development* (pp. 103-196). New York: Riley.

Howe, N. & Ross, H.S. (1990). Socialization, perspective-taking, and the sibling relationship. *Developmental Psychology, 26(1)*, 160-165.

Howe, N., Petrakos, H., & Rinaldi, C.M. (1998). "All the sheeps are dead. He murdered them": Sibling pretense, negotiation, internal state language, and relationship quality. *Child Development, 69(1),* 182-191.

Howes, C, (with Unger, O., & Matheson, C.). (1992). *The collaborative construction of pretend: Social pretend play functions.* Albany: State University of New York Press.

Hughes, C. & Dunn, J. (1997). "Pretend you didn't know": Preschoolers' talk about mental states in pretend play. *Cognitive Development, 12*, 477-499.

Lawrence, J.A., & Valsiner, J. (1993). Conceptual roots of internalization: From transmission to transformation. *Human Development, 36,* 150-167.

Leslie, A. (1987). Pretense and representation: The origins of "theory of mind". *Psychological Review, 94*, 412-426.

Lillard, A.S. (1998). Playing with a theory of mind. In O.N. Saracho & B. Spodek (Eds.), *Multiple Perspectives on Play in Early Childhood Education.* New York: State University of New York Press.

Lillard, A.S. & Flavell, J.H. (1992). Young children's understanding of different mental

states. *Developmental Psychology, 28*, 626-634.

Mayes, L. & Cohen, D.J. (1996). Children's developing theory of mind. *The Journal of \the American Psychoanalytic Association, 44(1),* 117-142.

Mayes, L. & Cohen, D.J. (1992). The development of a capacity for imagination in early childhood. *Psychoanalytic Study of the Child, 47*, 23-47.

Mead, G.H. (1934). *Mind, Self and Society*. Chicago: University of Chicago Press.

Mugny, G., & Doise, W. (1978). Socio-cognitive conflict and structuration of individual and collective performances. *European Journal of Social Psychology, 8,* 181-192.

Nelson, K. (1996). *Language in cognitive development: The emergence of the mediated mind.* New York: Cambridge University Press.

Nelson, K., Plesa, D., & Henseler, S. (1998). Children's theory of mind: An experiential interpretation. *Human Development, 41*, 7-29.

Nelson, K., Skwerer, D., Goldman, S., Henseler, S., Presler, N., & Walkenfeld, F. (2002). Entering a community of minds: An experiential approach to 'Theory of Mind'. *Human Development, 191*, 1-23.

Nielson, M. & Dissanayake, C. (2000). An investigation of pretend play, mental state terms and false belief understanding: In search of a metarepresentational link. *British Journal of Developmental Psychology, 18,* 609-624.

Piaget, J. (1934). *The Moral Judgement of the child.* London: Routledge & Kegan Paul.

Piaget, J. (1967). *The Language and Thought of the Child*. London: Routledge & Kegan Paul.

Piaget, J. (1962). *Play, Dreams and Imitation in Childhood*. New York: Norton.

Piaget, J & Inhelder, B. (1969). *The Psychology of the Child*. USA: Basic Books.

Rogoff, B. (1990). *Apprenticeship in Thinking: Cognitive Development in Social Context*. Oxford, England: Oxford University Press.

Rogoff, B. (1998). Cognition as a collaborative process. In D. Kuhn & R.S. Siegler (Eds.), *Cognition, perception and language, Vol. 2.* In W Damon (General Ed.), *Handbook of child psychology* (pp. 679-744). New York: Wiley.

Rubin, K.H., Fein, G., & Vandenberg, B. (1983). Play. In P.H. Mussen (Series Ed.) & E. M. Hetherington (Vol. Ed.), *Handbook of Child Psychology: Vol 4: Socialization, personality and social development* (pp. 693-774). New York: Riley.

Rubin, K.H., Bukowski, W., & Parker, J.G. (1998). Peer interactions, relationships, and groups. In W. Damon (Series Ed.) & N Eisenberg (Vol. Ed.) *Handbook of Child Psychology: Vol. 5: Social, Emotional, and Personality Development* (pp. 619-700). New York: Riley.

Rubinstein, J. & Howes, C. (1976). The effect of peers on toddlers interaction with mother and toys. *Child Development, 32,* 16-24.

Sawyer, R.K. (1997). *Pretend Play as Improvisation: Conversation in the Preschool Classroom.* Mahwah, N.J.: L. Erlbaum Associates.

Selman, R.L. (1980). *The Growth of Interpersonal Understanding: Developmental and Clinical Analyses*. New York: Academic Press.

Selman, R.L. (1990). *Making a Friend in Youth*. Chicago: University of Chicago Press.

Shatz, M., Wellman, H.M., & Silber, S. (1983). The acquisition of mental verbs: A systematic investigation of the first reference to mental state. *Cognition, 14,* 301-321.

Slade, A. (1987). A longitudinal study of maternal involvement and symbolic play during the toddler period. *Child Development, 58*, 367-375.

Stetsenko, A. (2001). Sociocultural activity as a unit of analysis: How Vygotsky and Piaget converge in empirical research on collaborative cognition. In D. Bearison and B. Dorval (commentary chapter), *Collaborative cognition: Children negotiating ways of knowing* (pp. 122-135). Westport, CT: Ablex.

Vygotsky, L.S. (1978). In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.), *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Wellman, H.M. (1990). *The child's theory of mind*. Cambridge, MA: Bradford Books/MIT Press.

Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action.* Cambridge, MA: Harvard University Press.

Wiig, E.H., Secord, W., & Semel, E. (1992). Clinical Evaluation of Language Fundamentals – Preschool. The Psychological Corporation.

Wimmer, H. & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition, 13,* 103-128.