

**PEER TALK:
CHILDREN WITH SPECIFIC LANGUAGE IMPAIRMENT
IN DYADIC AND GROUP INTERACTIONS**

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ABSTRACT

The research for this dissertation focused on how children with Specific Language Impairment (SLI) use language in their interactions with peers. The study had three broad objectives: (1) to ascertain patterns of language use by the children with SLI in different contexts, (2) to evaluate the relationship of those patterns to difficulties in peer interaction reported in the literature, and (3) to explore the ramifications of groups composed uniquely of children with SLI for peer talk and peer interaction.

The participants were several children (mean age 4 years, 10 months) enrolled in a preschool language program designed specifically for children with SLI. These children were observed in a number of contexts over a period of several weeks.

The children with SLI were first observed in dyadic play with different conversational partners. Initiating and responding, communicative acts, and communication breakdowns were examined. Dyads composed of two children with SLI were more successful in some aspects of conversation, while mixed dyads, composed of one child with SLI and one with TLD, were more successful in others. The conversational behaviours of the children with SLI were, however, generally quite similar to their peers with TLD.

The same children with SLI were observed during recess and during free play in their classroom. There were no significant differences in interactional patterns across the two group play contexts. In both contexts, the children with SLI spent significantly more time in interactive activity than in solitary activity, and most of that interaction was verbal. They tended, even during recess when other interlocutors were available, to talk and interact among themselves, and there was evidence of stable friendships within the SLI group.

Snack, circle time, and pretend play sequences were also observed. A schema for the analysis of children's discourse was piloted. The analysis showed that the children with SLI used language for a variety of instrumental and interactional purposes, and did so in ways that were consistent with those reported in the literature for children with TLD.

The combined results indicated pragmatic strengths and successful peer interaction in this group of children with SLI. These results can be explained by characteristics of the children and of the program in which they were enrolled.

RÉSUMÉ

Cette étude examine l'usage du langage chez les enfants atteints de trouble spécifique du langage (TSL) lors de leurs interactions avec des pairs d'âge. L'étude avait trois objectifs reliés : (1) évaluer l'usage du langage par les enfants atteints de TSL (2) voir si leur usage du langage pourrait en partie expliquer les difficultés qu'ils ont à interagir avec les autres, telles qu'elles sont rapportées dans d'autres études et (3) explorer les conséquences de regrouper uniquement des enfants atteints de TSL.

Des enfants d'âge moyen de 4 ans, 10 mois, inscrits à un programme préscolaire pour les enfants atteints de TSL, ont participé à cette recherche. Ils ont été observés dans plusieurs contextes sur une période de sept semaines.

Les enfants atteints de TSL ont premièrement été observés en jeu dyadique avec différents interlocuteurs. Les initiations, les réponses, les actes de communication, ainsi que les bris de communication sont les aspects de conversation examinés. Les dyades composées de deux enfants atteints de TSL réussissaient mieux dans certains de ces aspects, tandis que les dyades mixtes (composées d'un enfant atteint de TSL et d'un enfant avec un développement du langage typique) réussissaient mieux dans d'autres. Les enfants atteints de TSL et leurs pairs d'âge ont néanmoins des points communs en ce qui concerne les comportements conversationnels.

Les mêmes enfants ont été observés lors de récréations et de périodes de jeu libre à l'intérieur de la salle de classe. Les enfants atteints de TSL s'engageaient dans des activités interactives et verbales dans chacun des ces contextes. Ils avaient tendance à interagir entre eux, même lorsque d'autres interlocuteurs étaient à leur disposition durant la récréation.

La période de collation, la période du cercle et le jeu dramatique ont également été étudiés. Il en ressort que les enfants atteints de TSL utilisaient le langage en vue d'atteindre divers objectifs instrumentaux et sociaux et ce, tel que décrit ailleurs pour leurs pairs d'âge. L'ensemble des données démontre des forces pragmatiques et des interactions réussies au sein du groupe d'enfants atteints de TSL. Ces résultats peuvent être expliqués par les caractéristiques des enfants et du programme éducatif dans lequel ils étaient inscrits.

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Chapter 1

INTRODUCTION

Introduction to Specific Language Impairment and to Topic of Study

This study involves children who are developing normally in other areas but who are acquiring their first language at slower rates and/or in atypical ways when compared to their peers. The terminology used to describe this phenomenon is usually *specific language impairment* (hereafter, *SLI*). The terms *developmental language disorder* and *language-learning disability* are also sometimes used, particularly in psychology.

The diagnostic criteria for SLI currently include performance on standardized language tests significantly below age norms. Delayed onset of language and protracted oral language development are recommended criteria (Tager-Flusberg & Cooper, 1999), but these are not yet applied consistently in either research or clinical practice. The difficulties that must be ruled out for a language impairment to be deemed "specific" are generally agreed on. Referred to as exclusionary criteria for SLI, these include hearing loss, intellectual impairment as measured by non-verbal IQ tests, neurological conditions such as seizure disorders, and symptoms characteristic of autism or *pervasive developmental disorders not otherwise specified (PDDNOS)* (Leonard, 1998).

SLI is also commonly described in terms of affected domain, i.e. production and comprehension. Researchers are currently engaged in concerted efforts to define SLI more precisely (Schaeffer, 2003). These efforts include identification of the language systems that must be affected for a diagnosis to be made, e.g. the lexicon, the grammar, and pragmatics.

In this study, the system of interest is pragmatics, as discussed at length in Chapter 2.

A number of pragmatic features are examined in the interactions of preschoolers with SLI with their peers. Given that verbal interactions are of primary concern, the term *peer talk* captures the topic of this study well. Blum-Kulka and Snow (2004) describe studies of peer talk as being about how children develop language through conversations with peers and how they use language to co-construct their "social and cultural worlds" (p. 293). This study encompasses these topics and highlights children's use of language across peer contexts.

Why Study Peer Talk?

A great deal of research on young children with SLI has involved the study of their interactions with caregivers, clinicians, or educators in everyday activities or experimental situations. These data have been analyzed in terms of language structure and language use. Talk among children has been studied far less often. Yet, peers are important interlocutors even for preschoolers. Many North American children currently attend daycare or preschool. We can assume that those who do not also spend time with peers, including siblings. Language scholars and developmental psychologists have discussed the dual or multiple functions of peer talk. Cromdal (2001) describes it as a *resource* for and *object* of language learning. Brown and Conroy (2002) note that successful peer interaction serves as a *context* and *mechanism* for linguistic, social, and cognitive development. Others have invoked the image of a *double opportunity space*, where peer talk is simultaneously an opportunity for children to develop discourse abilities and an expression of childhood culture (Blum-Kulka, Huck-Taglicht, & Avni, 2004; Hamo, Blum-Kulka, & Hachohen, 2004). Peer talk is developmentally significant for all children and thus worthy of investigation. There are additional reasons for investigating the peer talk of children with SLI.

Why Study the Peer Talk of Children with Specific Language Impairment?

As the literature review in Chapter 2 reveals, parents and teachers have rated children with SLI lower on certain social skills relative to children with typical language development (hereafter, TLD) (McCabe & Meller, 2004; Redmond & Rice, 1998). In one study, children with TLD rarely selected children with SLI when researchers asked them to identify preferred playmates (Gertner, Rice, & Hadley, 1994), and observations in other studies have shown that they frequently ignore children with SLI during play (Craig & Gallagher, 1986; Hadley & Rice, 1991).

These findings imply that children with SLI are at risk for difficulties in peer interaction. The studies do not, however, adequately address how language impairment interferes with peer interaction. One possibility is that children with SLI, who, by definition, have problems with language structure^{*}, also have problems in using language effectively for instrumental and interactional purposes in peer contexts. A second possibility is that difficulties with language structure and/or language use lead to communication breakdowns that undermine interaction. A combination of fine-grained and more global analyses of peer talk in this study allows assessment of these two possibilities.

The study investigates peer talk in mixed dyads, that is, pairs composed of one child with SLI and one with TLD, as well as in pairs of children with SLI. Peer talk in mixed groups and groups composed uniquely of children with SLI is also examined. Although inclusion is the dominant educational choice in North America today, it is not uncommon to

^{*} Some researchers have identified cases where linguistic form is intact but language use is affected and proposed that these be considered a form of SLI, hence references in the literature to *pragmatic SLI*. Others have argued that such cases belong on a continuum with autism spectrum disorders. The latter position is the one taken here.

group children with SLI together in educational and therapeutic settings. In fact, this study is of just such a group: several children with SLI participating in a full-time language program.

Research Questions and Objectives

The broad goal of the study was to determine how a small group of children with SLI used language with one another as well as with children with TLD who attended the same school. This goal was accomplished through the analysis of three data sets, each analyzed for different dimensions of peer talk. The research questions and objectives associated with the data sets are outlined below and specified in subsequent chapters of the thesis. The literature cited in this section is discussed at greater length in Chapter 2.

Data Set 1: Dyadic Play

In the first data set, five children with SLI, referred to throughout the thesis as *focal children*, were paired with four different peers for play. Two of the peers were other children with SLI, one of them assigned by the researcher and one of them selected by the focal child. The other two peers were children with TLD reverse-integrated to the school; again, one partner was assigned and one was selected by the child. The play of the dyads was videotaped, transcribed, and analyzed with respect to two principal questions:

- (1) Does conversational partner, defined here in terms of language status and selection method, affect the language use of the focal children with SLI?
- (2) Do the children with SLI differ in their language use relative to their TLD partners?

These questions were asked for several features of language use: patterns of initiating and responding, communicative acts, and sources and repair of communication breakdowns. The responses to the questions were used to determine which dyads were most successful in

their conversations. Success was defined as (1) sustained conversation, (2) fairly equal number of turns by members of the dyad, (3) high levels of responses to initiations, (4) successful repair of communication breakdowns, and (5) production of a variety of communicative acts.

Children with TLD have been shown to ignore children with SLI often (Craig & Gallagher, 1986; Hadley & Rice, 1991). It is also possible that they will dominate the conversations they do engage in with children with SLI. If patterns like these occur in this study, the SLI+TLD dyads may be deemed less successful than the SLI+SLI dyads for the first three variables.

While similar linguistic levels of the children with SLI may have positive and equalizing effects in some areas, the literature suggests it may not in others. Although findings are mixed, some studies indicate that children with SLI are more like younger children with TLD than like same-age peers in their use of speech acts (Leonard, 1998). Dyads composed of two children with SLI have also been reported to have more difficulty repairing communication breakdowns than dyads of children with TLD (Brinton & Fujiki, 1982). Pairing children with SLI may produce a synergistic effect, leading to worse performance for the SLI+SLI dyads relative to the SLI+TLD dyads on criteria (4) and (5).

A final potential outcome is a lack of effects: children with SLI using language similarly in the SLI+SLI and SLI+TLD dyads and additionally resembling their peers with TLD in the SLI+TLD dyads. The first finding would indicate that conversational partner does not significantly influence the pragmatic features examined in this study. The second finding would demonstrate that the children with SLI in this study have strengths in pragmatics.

The predictions for the impact of partner selection - assigned or child-selected - are restricted to the behaviour of the focal children with SLI given that selection was unilateral. That is, the focal child selected a playmate who may or may not have been equally interested in interacting. The focal children with SLI are expected to talk more to a partner they select than to one assigned by the researcher, to be relatively more responsive, and to be more likely to seek clarification in the case of communication breakdowns. Selection is not anticipated to influence the particular communicative acts used by the focal child.

Data Set 2: Group Play in Class and at Recess

The second data set involved the same focal children with SLI as in Data Set 1. The researcher observed and videotaped the children during times designated as *free play* by educators. The videotapes were later viewed and coded for peer interaction. Free play, part of the children's regular program, took place in the classroom and at indoor morning recess. Class free play involved only children with SLI. Recess free play involved these same children with SLI as well as peers with TLD and with physical disabilities (hereafter, PD). The research questions were as follows:

- (1) Do the focal children with SLI engage mostly in wandering and observing, solitary, parallel, or interactive activity when in the company of peers?
- (2) Do the children tend to engage in nonverbal interactions or do they talk to each other as they participate in activities?
- (3) When activity is parallel or interactive, it is typically shared in by a single peer (dyadic) or more than one other peer (group)?
- (4) Who are the most frequent interlocutors of the children with SLI?
- (5) Are there differences in the patterns observed for questions 1-4 when recess and class free play are compared?

Children with SLI have been rated by teachers as wandering, observing, and playing alone more often than classmates with TLD (Hart, Fujiki, Brinton, & Hart, 2004). Fujiki, Brinton, Isaacson, and Summers (2001) observed the playground behaviour of eight children with SLI, most of whom were 6-8 years old. The participants interacted with other children at lower rates than age-matched peers did and displayed more reticent behaviour, but still spent more than half their time in interaction. In this study, wandering, observing, and solitary play were thus expected to be present but to characterize only some of the children's activities (question 1).

With respect to question 2, no predictions were made regarding the frequency of verbal interaction, although children with SLI might plausibly seek out activities with low verbal demands. Dyadic interaction was anticipated to occur more often than group interaction. This outcome is suggested by findings that even older children with SLI have trouble accessing group play (Craig & Washington, 1993) and by the gradual development of preschoolers' ability to meet the heightened demands of multi-party conversation (Jacquet & Keppeler, 2002).

Question 3 relates to children's selection of playmates. Findings of low peer acceptance of children with SLI and high acceptance of children with TLD (Gertner et al., 1994) led to the expectation that the children with SLI would initiate to TLD peers at recess, but would only be successful in engaging them in play some of the time. Children with SLI were thus anticipated to interact with children with TLD to some degree but to also spend time with peers with SLI and physical disabilities. Other than potentially different interlocutors across the class and recess play sessions, there were two other predicted differences.

First, more interaction with adults was expected during class free play than during recess. Both children with TLD and SLI have been found to solicit adults frequently in other studies of free play (Hadley & Rice, 1991; Weiss & Nakamura, 1992). It seemed likely that the classroom teacher, by virtue of her familiarity to the children and her proximity, would be solicited more often than the assistants who supervised recess in a larger and different classroom (see Chapter 6 for details). The possibility of more adult involvement led to a second prediction of more interactive activity in the class group play. The teacher had been observed facilitating children's joint play in other contexts and her presence and/or explicit guidance was expected to have a positive effect on levels of interactive activity.

Data Set 3: Discourse at Snack, Play, and Circle Time

In the last data set, discourse by children with SLI was investigated. The focus was on dyads or on the entire group rather than on individuals. The primary sources of data were observations of snack and circle time made over a period of several weeks, some of which were videotaped, and sessions involving pretend play from Data Sets 1 and 2. The analyses were qualitative and drew on methods of analyzing discourse described in the literature for children of this age. The questions guiding analysis were:

- (1) How does this group of children with SLI use language to negotiate relationships and their own sense of belonging?
- (2) How do they use language in collaborative pretend play?
- (3) How do they use language to amuse and entertain themselves and one another?
- (4) What themes and discourse genres are present in their talk?

These questions were designed to explore features and contexts of peer talk that have never or rarely been examined for children with SLI. It was anticipated that the children

would use language for a variety of functions, including the ones suggested in questions 1-3, but specific predictions about how they would realize those functions were not made. Most of the talk was expected to be conversational and focused on people, actions, routines, and objects in the immediate environment, as is typical for children of this age (Marvin, 1994; O'Neill, Ziernski, & Shultis, 2003; Schober-Peterson & Johnson, 1989). It was less clear whether or how much talk about past and future experiences could be expected. While narrative and other genres of extended discourse normally develop in the preschool years, information regarding genre development in preschoolers with SLI is scarce. Furthermore, findings concerning the likelihood of unelicited narratives in preschool contexts are mixed (Marvin, 1994; Stone, 1992).

Thesis Organization

Functional theories of language and associated models of pragmatics guided interpretation of the findings from each of the data sets. These approaches are explained at the beginning of Chapter 2 and are followed by a literature review of studies of peer talk involving children with SLI and with TLD. In Chapter 3, the setting for the present research is described. This chapter includes a description of the program and school that the children attend as well as a discussion of provincial policies guiding intervention for children with SLI. In Chapter 4, the methods shared by the data sets are presented. In order to facilitate reading, each data set has a chapter devoted to its particular method and results; these are Chapters 5, 6, and 7. Findings from the three data sets are interpreted and synthesized in Chapter 8, along with the implications of the research and recommended future directions.

Chapter 2

PRAGMATICS AND FUNCTIONALISM

This study of peer talk by and to children with SLI could alternatively be described as a study of pragmatics in children's interactions. Pragmatics has been conceptualized in a number of different ways. One way has been to define pragmatics broadly as being synonymous with 'language use in context'. Pragmatics has also been further defined relative to language structure: a system analogous to phonology, syntax, morphology, and semantics, with its own set of rules and principles (Horn & Ward, 2004); a set of rules dedicated to linking form and function (Craig, 1995; van Balkom & Verhoeven, 2004); a separate system developmentally prior and superordinate to language structure (Ninio & Snow, 1999); or a system parallel with language structure (McTear & Conti-Ramsden, 1992, p. 8).

Some functionalist approaches to the study of language are concerned with 'language as practice'. The emphasis is on the instrumental, expressive, and interactional dimensions of language rather than the structural ones. Functionalists also adopt a constructionist view of communication in which interlocutors actively and jointly create meaning. This perspective contrasts with a conduit or transactional model of communication in which language serves simply as a means of transmitting ideas or content from one person to another (LeBaron, Mandelbaum, & Glenn, 2003; Linell, 1998).

An understanding of language as embedded in practice and in social life has implications for the study of children's development. Some functionalists are interested in how linguistic input and the social interactions framing that input shape the development of linguistic forms (Tomasello, 2003). Others focus their research on pragmatic development. Ninio and Snow (1999) summarized the "major achievements of language learners" (p. 352)

in the pragmatic domain: the expression of communicative intent; control over conversational rules, including turn-taking, topic selection and maintenance; linguistic strategies of politeness; the production of connected discourse through cohesion, genre knowledge, and the expression of information unshared by the listener.

Generally, the developmental outcome of primary concern in functionalist theories is *communicative competence*, rather than *linguistic competence* as in structuralist accounts. *Communicative competence* has been used across a number of disciplines and has been nuanced within them. It can be broadly defined as the ability to use language appropriately and effectively for a range of purposes in a variety of situations and with a variety of interlocutors (Bryant, 2001; Dyson & Genishi, 1993). The definition can be qualified with the acknowledgment that appropriateness varies across cultures and speech communities and fluctuates within them depending upon social status, distance of interlocutors, and other factors. McTear and Conti-Ramsden (1992) have pointed out that judgments of appropriateness are not categorical and have suggested that the 'inappropriate' use of language, for example, "rudeness", may even be used intentionally as a means of achieving a particular goal.

Functionalists studying child language have also discussed the importance of language in the emergence and expression of individual and group identity. Bamberg (1999) stressed language and communicative practice as a primary means by which children establish a self that is both differentiated from and integrated with the 'other'. This self is the *telos* of development. Drawing on the work of social philosopher Mead, Duchan (2000) has likewise suggested that the development of children's notions of themselves as social beings is primary. Notions of a social self emerge from several sources: early reciprocal exchanges

and the intersubjectivity they afford; the child's experience of an inner "I" and an outer "me", reflected in solitary play as a dialogue between the child's own wants and the expectations of others; and understanding of the roles of self and others in group activities. According to Duchan, the movement towards a social self requires and also unifies communication, social interaction, and social participation.

The developmental outcomes of communicative competence and of a social self are of interest in this study although development per se is not investigated, since the data are not longitudinal and no attempt has been made to document change over time. The study does, however, deal with young children with SLI at a particular stage in their development and the ways they use language in and for peer interaction. The assumption is that peer talk is relevant to children's development as communicators as well as to their sense of belonging and growing awareness of themselves as individuals.

SITUATED PRAGMATICS AND LANGUAGE IMPAIRMENT

Turn-taking, speech acts, and repair are some of the features of language use investigated in this study. These are drawn from a set of phenomena typically considered to be in the purview of pragmatics (Fujiki & Brinton, 2004; Gerber, 1991; Yule, 1996). Duchan, Hewitt, and Sonnenmeier (1994) have legitimately pointed out the limitations of an abstracted view of pragmatics where features like these are analyzed without respect to the context in which they occur. Duchan (1995) has argued for the importance of the contexts that "surround, influence, and constitute communication" (p. 28) and identifies social, emotional, functional, physical, and event contexts as being of relevance to the study of child language and language disorders. In this study, a few of the many potential contextual influences on peer talk are considered, including conversational partner, group composition,

and events and activities.

In a *situated pragmatics* approach, the prioritization of context is directly linked to an alternative view of language disorders, their assessment, and their 'treatment'. The language disorder is no longer defined as something intrinsic to the child that needs fixing. Instead, the language and communicative abilities of children are interpreted in light of the social relationship of the interlocutors, the events, and the demands or expectations of children incurred by situations or by others (Lund, 2000). The goal of assessment is to identify children's competencies in everyday communicative exchanges and activities and to understand their existing means of realizing their intentions. Although Lund's article is about assessment, she does mention the removal of barriers to communication. It is implied that intervention entails not only the teaching and learning of language for communicative purposes but modifications of the environment.

Competence-based models have also been elaborated elsewhere (Duchan, Maxwell, & Kovarsky, 1999; Saenz, Black, & Pellegrini, 1999). These models are relatively new developments in the field of communication disorders. Their predecessors are functional approaches to assessment and intervention. In these, language impairment is still seen as being "in" the child but the disability or handicap associated with the impairment is seen as emanating from the "outside". Intervention is thus ideally directed at changing not only children with language impairments but, as implied by Lund, features of the environment. Intervention targets might thus include events and participant structure, the communicative patterns of interlocutors, attitudes towards children with language impairments, elements of educational programs in which children are placed, and policies that determine those placements. Recent promotions of functional approaches to clinical practice include the

adoption of the International Classification of Functioning, Disability and Health (*ICF*) (World Health Organization, 2000) by the American professional association of speech-language pathologists (ASHA) (Eadie, 2001).

As elaborated in the final discussion, the findings of this study have implications for both functional and competence-based approaches to assessment and intervention.

"SOCIAL BEHAVIOUR" AND LANGUAGE IMPAIRMENT

Contrary to the tenets of a competence-based approach, a great deal of research on children with language impairments is focussed on what they do not do, or what they do differently than children their same age, both cognitively and socially. One area of investigation is *social behaviour*. The term includes a wide range of behaviours, including, for example, extent and frequency of participation in peer groups (Hart et al., 2004). Redmond and Rice (1998), among others, have collapsed measures of social behaviours and emotional competence, and thus use the term *socioemotional behaviour*. An in-depth review of the literature on social behaviour and emotional competence is not attempted here. A number of researchers have, however, related language impairment to difficulties in both areas. Their models and some related empirical findings are summarized briefly below.

According to Redmond and Rice (1998), children with SLI have the same "psychosocial attributes" as their peers. The socioemotional difficulties they exhibit are adaptations to a combination of their own verbal limitations, the communicative demands placed on them, negative evaluations by adults based on their verbal proficiency, and rejection by peers. These adaptations, while perhaps immediately functional, limit the quantity and quality of subsequent interactions. Redmond and Rice tested the model in their study of 6-7 year-olds. They found that although the children with SLI scored lower than

peers with TLD on parent and teacher reports of socioemotional behaviour, their scores were still within normal limits. The authors interpreted these results, along with several others, as support for their "social adaptation model" in contrast with a "social deviance" one.

Craig (1995) proposed an argument that is different but still consistent with an adaptation model. She suggested that some children with language impairment use the linguistic forms in their repertoire in unusual or overly restricted ways, reflecting a problem in mapping form to function. This difficulty, a pragmatic one in Craig's view, has ramifications for social interactions with others. Some of the evidence related to Craig's claim is reviewed in the next section of this chapter.

In a quite different model, language impairment is thought to affect peer interaction by disrupting emotional, behavioural, and social development (Gallagher, 1999). Evidence cited by Gallagher in support of this model includes a higher incidence of emotional-behavioural disorders in children with language impairment than would be expected by chance. Fujiki, Spackman, Brinton, and Hall (2004) have also proposed that SLI is not truly specific, but rather accompanied by difficulties in other areas, including emotional development. In their study, children with SLI scored lower than children with TLD on teacher ratings of emotion regulation, particularly on items related to the expression of empathy, display of emotion, and children's awareness of their own emotions. Furthermore, emotion regulation and language ability independently predicted *reticence*, defined as wary, listless, and apprehensive behaviour when in the company of peers.

Other models emphasize the role of cognition in social interaction. Coggins and Olswang (2002) do not specifically discuss SLI, but elaborate the role of poor executive and planning functions in "social communication deficits". Donahue (2002) demonstrated how

an information-processing model could be applied to the interactions of children with language-learning disabilities. Farmer (2000) tested the hypothesis that delayed social cognition in children with SLI is responsible for difficulties in social interaction. She found that children with severe SLI enrolled in a special school performed worse than same-age controls on experimental tasks of social cognition, but children with SLI integrated to the regular school system did not.

The role of severity of language impairment in social profile has also been considered in a recent study of 41 children with SLI, an unusually large number of participants (Hart et al., 2004). Teachers rated school-age children with SLI as being more reticent and withdrawn than their peers with typical language development. Reticence was defined as children staring at peers but not interacting, wandering and not engaging in available activities, and hesitating to approach peers. The higher rates of withdrawal were attributable to "solitary passive" withdrawal, where children seemed to wish to play alone; they were not actively excluded by peers. Severity of receptive and/or expressive difficulties as measured by test scores had some influence on the results. Girls with severe receptive problems were rated higher on solitary-passive withdrawal than girls with moderate receptive problems, and boys and girls with more severe receptive and/or expressive problems had lower rates of "pro-social" behaviour, like sharing, helping, and sympathising.

The emphases in the above studies provide insight into the many ways that language contributes to the development of the self and to participation in social life. In the next section, many of the studies reviewed involve observational data rather than rating scales or performance on experimental tasks. These kinds of data are equally crucial for understanding the relationship between language impairment and peer interactions.

PEER TALK

Three groups of studies are reviewed. Each group deals with peer talk among preschoolers. The first group demonstrates the aspects of peer talk that have been investigated for SLI and indicate that little research in this area has been published over the last two decades. The second group of studies addresses the link between peer talk and peer relationship. Nearly all involve children with TLD. The studies in the third group also examine peer talk and peer relationship and again involve mostly children with TLD. However, these investigations involve a different understanding of peer relationship than those in the second group and typically involve analysis of language use beyond the level of the utterance. This body of literature suggests alternative paths for exploring the impact of SLI on children's interactions with others.

Preschool Children with Language Impairment in Interactions with Peers

The literature on peer talk involving children with SLI has been largely confined to rates of talk or interaction, preferred addressees, initiation types, rate and quality of responses, speech acts, and repair. Several studies have included multiple dependent variables. In these cases, findings for each variable are reviewed separately below in the appropriate section so that the reader might readily compare results across studies. This organization results in multiple citing of sources, as appropriate to the topic of each section. Note also that the terminology used in the studies to describe groups is retained in the tables but the terms SLI or LI and TLD are used in the text for the sake of uniformity.

The studies share certain characteristics. They all involve small numbers of participants, ranging from 1 to 6 children with SLI between the ages of 3 and 7 years old.

Most use a group design, including one or more comparison groups whose composition varies across studies: children with speech or phonological impairments, children learning English as a second language, age-matched children with TLD, older children with TLD, and, more rarely, MLU-matched or younger children with TLD. Two of the studies used a repeated measures design, where children were observed on the same variables with different conversational partners. Nearly all of the studies involve observations of children engaged in various types of play. While methodological differences often do not allow direct comparisons of findings, together the studies permit a sketch of how and how much children with SLI talk with their peers and provide some insight into the factors influencing that talk.

Initiations and Responses

Rate and Addressee of Initiations

Rate of interaction or talk has typically been measured by the number of initiations or conversational turns in a fixed time period (e.g. 1 minute). The results in Table 2-1 show that when children with SLI were observed in dyads without adults present, they initiated interaction at the same rates as children with TLD (Fey & Leonard, 1984). In a study of preschoolers, children described as "language-impaired" (with normal cognition according to the report) also resembled their peers in terms of favoured addressees; they initiated more to children with TLD than they did to others with LI or speech impairments, or children learning English as a second language (Hadley & Rice, 1991). The children with LI also initiated interactions as frequently as their peers did, but had a greater tendency to address adults. However, both children with TLD and with LI interacted less than half the time with peers when adults were present.

Table 2-1

Studies investigating rates of interaction of preschool-age children with SLI.

Note: Groups have been named in accord with the terminology of the studies. All subjects were monolingual English speakers unless otherwise noted.

Source	Comparison groups	# participants b(boys)/g(irls)	Age (yrs;mos)	Context-setting of interaction	Dependent variable(s)	Findings
Fey & Leonard, 1984	LI SAP (same-age peer with normal language dev.) (also studied adults & younger speakers - not reported here)	6 (4 b, 2 g) 6 (4 b, 2 g)	mean 5;4 mean 5;1	Play in dyads Lab setting	avg. # socially- directed initiations per minute	LI vs. SAP (ND) no significant differences between groups
Rice, Sell, & Hadley, 1991	SLI SI (speech-impaired) ESL (English 2 nd language) ND	6 (5 b, 1 g) 3 (3 g) 8 (sex unavailable) 9 (sex unavailable)	range 3;3 - 5;7	Play in integrated groups Pre-school setting	(a) mean frequency of interactions / 5 minutes (b) avg. length in turns/5 min (c) # of initiations & addressee	(a) no significant differences between groups (b) no significant differences (c) ND & SLI similar, & > than ESL; ND initiate more to peers than do children in other groups; ND preferred addressees for all groups

Table 2-1 continued						
Hadley & Rice, 1991	SLI MI (marginally-impaired) SI (speech-impaired) ND (normally-developing)	4 (4 b) 4 (2 b, 2 g) 4 (2 b, 2 g) 6 (3 b, 3 g)	range 3;6 - 5;6	Play in integrated groups Pre-school setting	# interactions # turns	SLI participate in significantly fewer interactions with peers than other groups
Hansson, Nettelbladt, & Nilholm, 2000	SLI PI (phonologically-impaired) monolingual Swedish	5 (4 b, 1 g) 5 (3 b, 2 g)	5;1 - 5;11 4;0 - 4;11	Dyadic conversation with books, photos, toys Clinic or home Dyad types: child-child (same age peer or sibling ≤ 2 yrs older); parent-child; clinician-child	# utterances in fixed length sample	SLI & PI produced fewer total utterances and fewer complete and intelligible utterances in child-child dyads than in adult-child dyads
DeKroon, Kyte, & Johnson, 2002	LI (language-impaired) LN (language-normal)	3 b 4 b	range 4;3 - 6;2	Play in dyads Clinic playroom Dyad types: LI - LI; LI - LN; LN - LN	range of # of turns per 20 second	LI-LI dyads 2.30 – 3.07 LI-LN dyads 2.31 – 4.58 LN-LN dyads 3.49 – 4.97

It seems that available interlocutors have an effect on the degree to which children with SLI and, to a lesser extent, children with TLD, initiate interaction with peers. The presence of adults suppresses initiations to peers and the presence of children with TLD suppresses initiations to children in other language groups. These results can be interpreted as a sign of sensitivity of children with SLI to the language ability of their interlocutors and a preference for those with stronger language skills.

Rate of Response

Once children with SLI initiate to or are addressed by their peers, what happens? Some of the studies mentioned above also address this question. Relevant details are once again shown in Table 2-2, with the studies reviewed in the text. In the study by Hadley and Rice (1991), an interesting but infrequently cited finding relates to "successful turns". These were defined as responses prompting an interlocutor response, acknowledgments, and turns "embedded within an ongoing interaction" (p. 1313). Over 80% of the turns by children with SLI were successful. This result was similar to the proportion of successful turns found for the group with TLD and a "marginally-impaired" (MI) group comprised of children who were initially diagnosed as impaired but whose test scores climbed while in the program. Only children with speech impairments had significantly fewer successful turns than the other three groups. It is not clear if the groups were similar in proportion of successful verbal turns since nonverbal and verbal turns were collapsed in the initial coding. Finally, although both the LI and TLD groups preferred adult addressees, as previously discussed, neither group experienced significantly more successful turns with adults than with peers. The LI finding did, however, approach statistical significance with fewer successful turns in the peer context.

Table 2-2.

Studies investigating initiations and responses by preschool-age children with SLI and by their peers.

Note: Groups have been named in accord with original studies. All subjects were monolingual English speakers unless otherwise noted.

Source	Comparison groups	# participants b(oys)/g(irls)	Age (yrs;mos)	Context-setting of interaction	Dependent variable(s)	Findings
Craig & Gallagher, 1986	SLI-expressive ND-same-age ND-younger	1 b 2 b 2 b	4;3 4 yrs. 2;6	Dyadic play Lab playroom	related responses	-SLI responses to peers variable, better in play than in transitions, better when SLI child is initiator of exchange -ND same-age ignore SLI more often than they do ND (younger ND do not)
Hadley & Rice, 1991	SLI MI (marginally- impaired) SI (speech- impaired) ND (normally- developing)	4 (4 b) 4 (2 b, 2 g) 4 (2 b, 2 g) 6 (3 b, 3 g)	range 3;6-5;6	Play in integrated groups Pre-school setting	a) # responses b) response type: <i>prompt,</i> <i>acknowledgment,</i> <i>no response,</i> <i>ignore</i>	a) Peer partners ignored 2x as many initiations of SI and SLI than ND and MI SLI and SI less responsive to peers; SLI also less responsive to adults than ND & MI b) When successful turns calculated as rates of acknowledging and prompting responses, SLI were similar to ND & MI (SI less successful)

Rice et al., 1991	SLI SI (speech impaired) ESL (English 2 nd language) ND	6 (5 b, 1 g) 3 (3 g) 8 9	range 3;3-5;7	Play in integrated groups Pre-school setting	a) length of response b) type response (verbal, nonverbal)	a) ND use sig. more multiword responses than SLI (SLI>ND) b) word and nonverbal responses; ND and SLI > ESL and SI
Hansson et al., 2000	SLI PI (phonological impairment) monolingual Swedish	5 (4 b, 1 g) 5 (3 b, 2 g)	5;1-5;11 4;0-4;11	Dyadic conversation with books, photos, toys Clinic or home Dyad types: child-child (same age peer or sibling ≤ 2 yrs older); parent-child; clinician-child	indices of: a) <i>dynamics</i> (how solicitive or expansive initiations & responses are); b) <i>linking</i> (back to preceding turn) c) <i>balance</i> (contributions of = strength by each partner)	Relative to SLI-adult pairs, SLI-ND dialogues are: a) more dynamic and include more requests for action than questions b) more oblique (that is, linked back to own rather than partner turn) c) more balanced
DeKroon, 1996; DeKroon et al., 2002	SLI LN (language-normal)	3 b 4 b	4;3-6;2	Play in dyads Clinic playroom Dyad types: LI - LI; LI - LN; LN - LN	relatedness of verbal responses to prior utterance	unrelated verbal responses LI-LI dyads range .38-.43 LI-LN dyads range .06-.28 LN-LN dyads range .05-.10

Hadley and Rice also showed that peers ignored initiations by children with LI twice as often as they did initiations by children in the TLD or MI (borderline) groups. The data also suggest that children with TLD and MI were the main "ignorers". Children with LI ignored peers at lower rates than did these groups of children. However, they neglected to respond to initiations they had attended to at higher rates than children with TLD. That is, they showed some visual or auditory sign of attention but they still did not respond. The children with LI and those with TLD thus seem to be using different no-response strategies: the TLD children ignoring, and the LI children attending but neglecting to give a response. Such a pattern could be explained in a number of ways. The authors suggest that children with LI might be ignored more often because they neglect to assure the attention of their listener prior to initiating. They also suggest poor comprehension, difficulty formulating an immediate response, avoidance of a potential communication difficulty, and lack of motivation as possible influences on responsiveness. There are yet other possibilities. Children with LI might be wary to respond because of a history of having been rebuffed in the past by peers. However, reports of lower responsiveness to adults reported in the same study and elsewhere (Bishop, Chan, Adams, Hartley, & Weir, 2000; Rosinski-McClendon & Newhoff, 1987) weaken this explanation. Another possibility is that children with TLD pretend not to hear when they wish to avoid an interaction because they consider 'attend-but-don't respond' as too overt an avoidance strategy and potentially more socially sanctioned. Finally, perhaps children with SLI are differentially responsive depending upon the particular conversational functions being expressed by their interlocutors. They might, for example, answer questions but be less likely to generate a response when interlocutors are simply commenting. This last possibility is assessed for the children in this study.

Quality of Response

The quality of children's responses has been investigated less often. Rice, Sell, and Hadley (1991) studied type of response and found that children with SLI used significantly more single-word and nonverbal responses than their TLD peers. This result is not a particularly surprising one for children whose expressive language is affected. Findings regarding contingency of response are more informative.

Craig and Gallagher (1986) studied a 4-year-old boy with expressive SLI. They looked closely at the semantic relatedness of his responses to toddlers and same-age partners with TLD. The study focuses on how the child with SLI varied in his rate and manner of responding depending on discourse contexts and activities, but inspection of the data show some stable patterns which were not emphasized by the authors. The authors noted that the child with SLI responded contingently to his same-age TLD partners more than they did to him, but did not underscore the magnitude of the difference. In fact, the child with SLI responded in a related way over 80% of the time, while children with TLD provided related responses to him only 28% of the time. Furthermore, the child with SLI responded contingently more than the TLD children did when they played with each other. He was very similar to the TLD children in his rate of related responses to the toddler partners. Finally, the two children with TLD neglected to respond to the child with SLI more than two-thirds of the time. Although the authors did not distinguish between "no response" and "ignore", this finding echoes the one by Hadley where children with SLI were frequently ignored by peers. In summary, the child with SLI in this study was responsive to his peers, even more so than they were to him or even to each other. The report does not allow us to speculate on why the child with SLI might have been ignored so often nor explain how expressive difficulties were

implicated. However, a previous study suggests that this same child used a single utterance repeatedly to accomplish a variety of communicative goals (Gallagher & Craig, 1984); perhaps interlocutors were sensitive to these stereotypical forms or could not adequately interpret the child's intentions from them.

DeKroon (1996) also studied the quality of responses of two children with language impairments as they interacted with different partners. The children were described as LI given that cognition was not tested for one child and that a second child's cognitive functioning was later evaluated as in the "borderline range" (DeKroon, Kyte, & Johnson, 2002, p. 255). When dyads were composed of two children with LI, the children responded at about the same rate as the TLD dyads but produced more *unrelated* responses (DeKroon, 1996, p. 34). The unrelated responses for the different dyads can be ranked as follows: LI-LI dyads > LI-TLD dyads > TLD-TLD dyads. Data from LI-TLD dyads have also been provided by Hansson, as described in the next section.

Quality of Initiations and Responses relative to Child-Adult Dialogues

Hansson, Nettelbladt, and Nilholm (2000) studied Swedish-speaking children with SLI as they conversed with three different partners: a parent, a clinician, and a same-age friend or a sibling no more than 2 years older than the focal child. Several aspects of the conversations were studied though only some are reviewed here. The authors analyzed discourse properties using Initiative-Response analysis developed by Linell and colleagues (see Linell, 1998 as well as Hansson et al., 2000). Relative to adult-child dialogues, the LI-TLD child dyads contained a higher proportion of initiations characterized as "local", "focal", and "non-soliciting". That is, the initiations tended to be temporally and topically linked to preceding turns and comprised of comments rather than requests.

One conclusion by Hansson and colleagues is difficult to assess given the report. This conclusion is about "high obliqueness" scores in the child-child dyads. These high scores apparently stemmed from a high percentage of children's turns that linked to their own preceding utterance(s) ("self-linking") rather than to an utterance by their partner. The authors state that "high obliqueness implies a dialogue where the partners do not take into account the partner's contributions or where they are talking at cross-purposes" (p. 38). Yet, the high scores for obliqueness are later discussed as an attribute: evidence that children are more likely to maintain their point of view in the child-child dyads (p. 42). It seems possible that the children were, as in the DeKroon (1996) study, giving responses that were unrelated to the partner's preceding utterance.

Regardless of the lack of clarity about contingency, the overall results indicate that the 5-year-olds with SLI in the Hansson study were capable of taking an active role in conversations with their peers with TLD. The children apparently contributed about equally to the conversations and with similar contributions. There was also less of a question-answer quality to the child-child dialogues relative to the adult-child ones. It is interesting to note these positive findings in a study which examined the interactions of children with SLI with familiar and sometimes older peers; recall that the authors describe the child partners as a same-age "friend" or sibling up to 2 years older than the child with SLI. Familiarity and its potential influence on peer talk is an issue that will arise again relative to the research in this dissertation.

Summary

Children with SLI have been reported to respond less often to their peers than do children with TLD or to respond about as often but with shorter verbal turns. Reports of less

contingent responses rely on data from very few children and some are contestable. In addition, they are drawn from children with different profiles of language impairments. One might suspect that receptive language level would partially predict responsiveness and contingency; curiously, it did not in one of the few studies designed to assess this possibility for 7-10 year-olds with expressive-only or expressive/receptive SLI (Craig & Evans, 1993). The relationship of receptive vocabulary to peer acceptance has, however, been noted elsewhere (Gertner et al., 1994) and is discussed in a subsequent section of this chapter.

One also finds influences of conversational partner in the patterns of initiations and responses by children with SLI. The dyads composed of a child with SLI and a familiar partner (Hansson et al., 2000) seemed to engage in more symmetric, balanced conversations than the familiar LI-LI dyads in DeKroon (1996) or the SLI-TLD preschool groups in the studies by Hadley and Rice. Unfortunately, methodological differences prevent direct comparison of results. The LI-TLD dyads were also more 'successful' in terms of contingent responding in DeKroon than the LI-LI dyads were. At the same time, proximity of LI and TLD children clearly does not guarantee that they will talk together. The study by Craig and Gallagher showed that a child with SLI is at risk of being ignored by children with TLD in dyadic conversations and the one by Hadley and Rice documented that same tendency in groups. Several possible explanations for this pattern were put forth but data are lacking to support any single explanation. One might expect children to ignore or fail to respond more often to children whom they do not consider friends. The children in the Craig and Gallagher study were unacquainted and one might imagine that the preschoolers in the study by Hadley and Rice had varying degrees of familiarity with one another as the group was fairly large. The issue of responsiveness of both children with SLI and with TLD is one considered in this

thesis, along with the analysis of communicative acts.

Speech Acts and Communicative Acts

The analysis of *speech acts* is one way to capture what speakers do with words, how they use language to serve communicative goals or functions. Speech act theory is well-situated in a functionalist domain. Austin originally proposed that a speech act has three levels that refer to what is communicated and to the effect of what is communicated on listeners. The three levels are summarized succinctly by Bach (1998): "... the act *of* saying something, what one *does* in saying it, and what one does *by* saying it". These are, respectively, the locutionary, illocutionary, and perlocutionary dimensions of speech acts.

While the notion of *speech act* is used in the child language disorders literature, much of the research does not directly address either the original theory by Austin or theories inspired by his work (e.g. Searle). Rather, researchers have attended to the expression of communicative intent in a more general sense, sometimes adopting and modifying categories from speech act taxonomies. The terms *communicative act* or *communicative function* have thus also been used, sometimes as synonyms for *speech act*, and sometimes as a broader category including nonverbal acts as well as verbal ones.

Child-Child Dialogues (SLI + TLD)

Studies of speech acts by preschool-age children with SLI in peer contexts exist but are rare and limited in scope. Fey and Leonard (1984) studied the dyadic play of children 4½-6 years old and found no significant differences between children with LI and their TLD partners for acknowledgments, requests for clarification, questions, or imperatives. Henton (1998) studied 5-7 year-olds with "speech and language difficulties" in a special language class during free play and mealtime. She reported that the children mostly commented to one

another, expressed their needs, directed others, greeted others, asked questions, and recounted events. They used no or very few instances of instructing, imagining, predicting events or outcomes, or planning future events. Unfortunately, the report is thin in its description of the language class, the participants, and the identification of speech acts, and does not address the possibility that the unobserved conversational functions might be present in other contexts. Henton nevertheless makes a significant contribution by noting the gap between the communicative acts she observed and those dictated by the British educational curriculum.

These data regarding communicative acts in peer contexts are too limited to provide more than a superficial grasp of speech act use by children with SLI. Data from child-adult dialogues permit a more nuanced understanding.

Child-Adult Dialogues (SLI + Adult)

According to a review by Leonard (1998, p. 79), some studies employing group designs have shown that children with SLI resemble language-matched younger children in terms of speech acts. Leonard attributes these findings to the difficulty children with SLI have in meeting the morpho-syntactic demands inherent in certain speech acts. The resemblance of children with language impairments to younger language-matched children is also supported by Lapadat (1991). She conducted a meta-analysis of pragmatics research involving children with language and/or learning disabilities aged 3-12 years old. Speech acts were the most strongly affected variable among those she studied, with effect sizes indicating performance about .50 standard deviations below the mean. However, when children with disabilities were compared to younger language matches, the effect size reduced dramatically to .08, suggesting similarities between the two groups.

Rollins, Pan, Conti-Ramsden, and Snow (1994) took an innovative approach to determining whether children with SLI are really like younger children in their use of speech acts and ultimately contest reports of similarity. They analyzed a wide range of conversational functions expressed by children aged 4 to 6 during conversations with their mothers. They also matched the children with SLI to siblings based on MLU and used the sibling-mother conversations as a comparison. The *Inventory of Communicative Acts*, the coding system used in the study, is highly detailed, even in the abridged version, and has been well documented elsewhere (Ninio & Wheeler, 1984). What is important here is that the system involves three levels of coding: conversational moves (e.g. initiations, responses), communicative acts, and an overarching category of social interchanges. Communicative acts include *directives*, *questions*, *statements*, etc., each further broken down by subcategory. Examples of interchanges are *Negotiate Immediate Activity* and *Discuss Recent Event*. The authors studied initiations at both the communicative act and interchange levels. They found that the initiations by children with SLI and those by their siblings were similar. However, there were more frequent references to fantasy and to the non-present in the SLI group. The children with SLI were also different from their younger siblings in that they used their speech act repertoire for a wider variety of interactional goals, as measured by the diversity of speech acts within the interchange categories. Based on this finding, the authors conclude that the children with SLI showed greater "pragmatic flexibility" than younger MLU-matched children.

Summary

The findings here are mixed. Some studies indicate that children with SLI are similar to same-age peers in their use of speech/communicative acts. Others indicate that they are

similar to younger language-matched children. The reason for the discrepancy in results is unclear. It is possible that particular speech acts investigated and systems of coding might be influencing the results. For example, if a coding system relies heavily on the presence of particular lexical items or syntactic forms to infer intent, children with SLI and younger language-matched children might appear quite similar. However, as Rollins and colleagues demonstrated, similarities apparent at the utterance level may no longer hold when discourse-level functions are taken into account.

What importance might an analysis of speech or communicative acts have for understanding children's interactions with their peers? The possibility that children with SLI are attracted to children with stronger language skills as conversational partners was raised earlier in the chapter. We do not know, however, what accounts for that preference. It is possible that children are sensitive to the linguistic forms that their peers are using; linguistic sophistication may be in and of itself an attractor. It is also possible that children with stronger language are using their linguistic resources in ways that children with SLI do not or do more rarely. An analysis of communicative acts allows one to assess this possibility.

Communication Breakdowns and Repair

Requests for clarification are one kind of communicative act that have received attention in the child language literature. These requests are of particular interest in this study for two reasons. One of these relates back to the finding (discussed previously) that children with SLI responded to their interlocutors at lower rates than children with TLD. Poor comprehension was raised as a possible explanation for reduced responsiveness. A related question is whether or not young children with SLI signal non-comprehension when talking with their peers. Requests for clarification would be one indicator that they do. The

second reason why requests for clarification are of interest in this study is because they are a way of identifying breakdowns in communication. Once identified, one can examine how children with SLI and their peers manage such breakdowns.

In the pragmatics literature, requests for clarification, the utterance leading to the request, and the clarifying response are generally referred to as *contingent query sequences* or *repair sequences*, the preferred term here. The requests and responses involved in repair are typically analyzed with respect to their precision and their object. For example, requests might be general (e.g. *Huh? What?*), or might hone in on part of an utterance. Likewise, responses can be broad, as in repetition of the entire utterance, or may provide specific information. These or similar distinctions characterize the research on repair reviewed immediately below. As studies of children with SLI in peer interactions are exceptional, the discussion centers on children with SLI talking with adults and on children with TLD talking with peers. The review is intended to be representative of research in each area but not exhaustive.

Child-Adult Dialogues (SLI + Adult)

Prather, Cromwell, and Kenney (1989) studied five boys with SLI ranging from 4;4–5;4 years old. They compared them to two groups: one matched on performance IQ, the other on verbal IQ. The examiner engaged in an art project, storytelling, and games with each boy until fifteen opportunities arose to request clarification in each activity. The three groups repaired with similar frequency and each group tended to revise as their principal repair strategy. What is particularly interesting here is that each control group performed better than the children with SLI on measures of morphology and syntax collected prior to the repair experiment. Similar performance for the SLI and control groups suggest that repair

may be independent of grammatical ability, at least in the preschool years.

Brinton, Fujiki, Winkler, and Loeb (1986) studied children with SLI in different age groups. One of those groups was 4-5 years old, comparable in age to the children studied by Prather. The examiner asked children to describe pictures that the examiner could not see and inserted into the descriptions a series of requests for clarification (*Huh?*, *What?*, and *I didn't understand that*). Children with SLI in the 4-5 year-old group tended to repeat their utterance in response to the first request, as did the control group of "linguistically normal" children. However, children with SLI were less effective than the control group at providing other kinds of repair such as revising and adding information. Furthermore, they provided more inappropriate responses to the second and third requests for clarification. The authors concluded that the children understood a response was needed but lacked either the flexibility to provide a different repair or the persistence to repeat a repair already attempted. An interesting contrast between the Prather study and this one was that the requests in Prather were integrated to play. Examiners requested clarification when appropriate opportunities arose. In contrast, the Brinton et al. study might have been more reminiscent of a testing situation for children with SLI and the stacking of requests might have incurred more feelings of failure. Furthermore, the children may simply have been confused by additional requests once they had provided a repair.

Child-Child Dialogues (TLD + TLD)

Studies of child-child dialogues provide an opportunity to examine how children respond to authentic and spontaneous requests for clarification as well as how they make requests. Typically-developing children apparently request clarification and respond to such requests at a young age. For example, a recent descriptive study investigated repair

sequences in the bedtime conversations of 9 Israeli children, ranging from 2;8-3;6 years old (Aviezer, 2003). The children requested both confirmation and repetition of peers' talk. Over 80% of requests received a response and the vast majority of those responses were compatible with the request. The authors speculate that the children's familiarity with one another may have facilitated their success. The children resided on a kibbutz and had, according to the authors, extensive shared experience that might support successful repair. The children were also quite persistent when initial requests for clarification failed and engaged in "looped" sequences, leading the authors to identify motivation as an important contributor to repair.

Garvey (1984) also found that children younger than 3 years old requested clarification of their mothers and, to an even greater extent, their peers, primarily through the use of "*Huh?*". Requests by children became more specific between the ages of three and four, as seen in the following exchange by 3 ½-year-olds (p. 46):

Child1: *I have to drive this car.*
Child2: *What car? This car?*
Child1: *Yes.*
Child2: *You can't. I'm the dad.*

Garvey notes developmental effects in the kinds of messages that children with TLD signal as inadequate. Both requests and repair go through a prolonged period of development and are still "inconsistent" and dependent upon the goals of talk and the task during the preschool years. Abbeduto, Short-Meyerson, Benson, and Dolish (1997) are yet more specific in their review of the developmental literature. Children indicate that they have not understood utterances with no available referents as early as age 3, but utterances with more than one possible referent, and are thus ambiguous, do not prompt requests for clarification

until age 4 or later.

Child-Child Dialogues (SLI + SLI)

There is one study that examined repair in dyads comprised of two "language-disordered children" (profiles consistent with SLI) as well as dyads of children with TLD (Brinton & Fujiki, 1982). The children were 5;6-6;0 years old. The TLD dyads produced over three times as many requests for clarification as the language-disordered dyads: 32 vs. 10. The language-disordered dyads additionally ignored requests more often and produced more inappropriate responses to requests, failing to provide clarification.

Sources of Breakdown in Child-Adult Dialogues

Yont and colleagues (Yont, 1999; Yont, Hewitt, & Miccio, 2000; Yont, Hewitt, & Miccio, 2002) have made an important contribution to the research on repair. They analyzed the spontaneous conversations of children 3;6-5;3 with their caregivers, coding adult requests for clarification as well as the child utterances that prompted them: the source of the breakdown. Results derived through the use of the *Breakdown Coding System (BCS)* showed that children with SLI had three times as many breakdowns relative to a TLD age-matched control group. Of particular interest are pragmatic errors, defined by Yont as underspecified pronouns, unmarked topic changes, and/or ambiguous utterances. Although Yont (1999) emphasized some of the differences between the SLI and TLD groups, calculations from the raw data (p. 50) showed that children in the TLD and SLI groups had quite similar proportions of breakdowns resulting from pragmatic errors: respectively 27% and 32%. It is interesting to note that morphological or syntactic errors, often considered a "hallmark" of SLI, were not found to be a source of communication breakdown in the development of the *Breakdown Coding System* and were eliminated from subsequent study (Yont et al., 2000).

Summary

The literature on repair suggests early emergence of requests for clarification and responses to such requests in children with TLD and continued development in the preschool years. Two studies of children with SLI in conversation with adults showed mixed results. In one, revision was a predominant and successful strategy in an SLI and control group. In the other study, children with SLI were less successful than peers with TLD in providing clarification, and tended to use repetition, not revision. A third investigation showed that pairs of 5-6 year-olds with SLI requested clarification of each other less often than children in TLD dyads and did not repair as often or as adequately.

This study aims to elucidate the mixed findings on repair. In addition, results of an analysis of the utterances leading to the request are reported. This type of analysis has thus far only been used to explore repair sequences in adult-child dyads.

PEER TALK AND PEER RELATIONSHIPS

In this section, the effect of language use on peer relationships is discussed. The studies reviewed are of three types: those that test the association between measures of language use and measures of peer acceptance, those that examine the immediate impact of particular uses of language on peer interaction, and those that examine peer talk as it relates to the social life of young children more generally.

Peer Talk and Peer Acceptance

The review here focuses on studies of children with TLD since studies relating peer talk and peer acceptance in SLI are rare. The studies discussed were designed to establish associations or causal links between measures of peer talk and measures of peer acceptance. The measures of peer talk correspond with those discussed above in relation to SLI: e.g. rate

and type of initiations and responses. A typical measure of peer acceptance is a nomination procedure, where participants are provided with photographs or names of classmates and asked to identify those whom they prefer in general or for particular activities. From these, classifications of children are derived: liked (or popular); disliked (or rejected); mixed (or controversial); low impact (or neglected). Although widely used in psychology, the procedures have drawbacks. They may elicit nominations of children who are desirable to respondents but do not necessarily capture actual peer networks (Cairns, Xie, & Leung, 1998). They are also controversial. Some claim they have no detrimental effects on children (as reported in Fujiki, Brinton, Hart, & Fitzgerald, 1999). Others believe they may reinforce the idea that some children are more desirable than others and may engage children in exclusionary behaviours and therefore consider them unethical (Maguire, 2005a, 2005b). Finally, the results may reflect task/experimenter demands rather than children's actual thinking. Notwithstanding the legitimacy of these ethical and methodological concerns, what have these procedures shown with regard to preschoolers with TLD?

A group of collaborators have conducted a series of studies on dyadic and triadic play of preschoolers. These are summarized in Table 2-3. As indicated in the table, both Hazen and Black (1989) and Black and Logan (1995) found that children who fell into a disliked category had higher rates of initiations not preceded by a verbal or nonverbal signal to the interlocutor. In addition to these "non-directed" initiations, disliked children responded "non-contingently" more often than children who were liked. Black and Logan also reported that disliked children used different play entry strategies than liked children. Disliked children used fewer explanations and suggestions and more demands when attempting to join dyads already engaged in play. Hazen and Black (1989) made a similar observation but only

Table 2-3.

Studies relating language (structure or use) to peer acceptance

Source	Comparison groups	# participants b(boys)/g(irls)	Age (yrs;mos)	Context-setting of interaction	Dependent variable(s)	Findings
Relationship of language ability to peer acceptance in SLI						
Gertner et al., 1994	S/LI (speech &/or language impairment ND (normally-developing) ESL (English 2 nd language)	12 SLI 9 ND 10 ESL total <i>n</i> = 19 b, 12 g	3;7-5;10	interaction not observed; children attending same preschool language acquisition program	peer nominations	SLI receive sig. fewer positive nominations than ND and ESL groups (ND>ESL>SLI); When grouped based on nomination data, ND predominate in Liked group, while most SLI/ESL fall into Disliked or Low Impact groups.
Relationship of language use to peer acceptance in TLD						
Hazen & Black, 1989	Liked Disliked Low-Impact <i>groups based on nominations</i>	54 ND total <i>n</i> = 24 b, 30 g	3;7-5;6 <i>x</i> = 4;5	triadic play, where focal children act as 1 of 2 hosts and also as "joiner" to existing dyads (host vs. entry condition)	Directedness of initiations (socially-directed? and if so, to whom?)	Liked group uses: lower proportion of non-directed initiations than Disliked and Low-Impact groups
					Initiations of different types	Informative statements and suggestions to enter play rather than expressives, as used by Low-Impact group

					Responses (relevancy, minimal vs. elaborated, accepting vs. rejecting of partner's initiation)	Liked and Low-Impact groups use proportionally fewer non-contingent responses and more acceptances than Disliked groups
Black & Hazen, 1990	Liked Disliked Low-Impact groups based on nominations Gender	66 ND	3;3-5;4	host vs. entry condition as in Hazen & Black; also an acquainted vs. unacquainted condition	Direction of initiation	Disliked more likely to direct initiations in <u>unacquainted</u> condition (converse true for Liked children)
					Non-contingent response	Disliked > other groups
					Irrelevancy of turn (relevancy seems to include initiations as well as responses)	Disliked > other groups in both acquainted & unacquainted conditions. Liked also take irrelevant turns in the unacquainted condition; Boys more likely to take irrelevant turns
					Coherent episodes (3 or more alternations of turns with partner)	Girls > # coherent episodes than boys; Disliked children engage in more coherent episodes in host than entry role Acquainted children more likely to split their attention evenly in triads

Table 2-3. continued

Studies relating language (structure or use) to peer acceptance

Source	Comparison groups	# participants b(oys)/g(irls)	Age (yrs;mos)	Context-setting of interaction	Dependent variable(s)	Findings
Kemple, Speranza, & Hazen, 1992	Liked Disliked <i>groups based on nominations</i>	25 ND 13 b, 12 g	3;6-4;6 4;6-6;6	host vs. entry condition as in Hazen & Black	relationships between social status & communication measures from yr 1 to yr 2	Social status stable yr1 yr2 for Liked children; less stable for Disliked Social status at Yr 1 predicted use of non-directed initiations and non-contingent responding at Yr 2
Black & Logan, 1995	Popular, Rejected, Neglected, Controversial <i>groups based on nominations</i>	43 ND	2;0-5;0	host vs. entry condition as in Hazen & Black; (also examined parent-CHI condition interaction, not reported here)	Directedness of initiations (socially- directed? if so, to whom)	Rejected children most likely to use non-directed initiations; Popular children least likely.
					Initiations of different types	Rejected children least likely to provide explanations in play
					Contingency of responses	Popular, controversial, and neglected group take fewer irrelevant turns and respond non-contingently less than Rejected group.

for children in a low-impact group; the disliked group was similar to the liked.

Findings from two other studies in the series suggest that undirected initiations and non-contingent responses might be the result of rejection rather than its cause. First, Black and Hazen (1990) found that disliked children used these behaviours more with children they were acquainted with than with unfamiliar peers. Kemple, Speranza, and Hazen (1992) then conducted a longitudinal study and found that membership in the disliked group at age 3-4 years predicted non-directed initiations and non-contingent responding at age 4-5 years. The authors propose that children might fail to address others directly and contingently as a self-protective strategy to avoid overt rejection, but they do not account for why children might be disliked to begin with. Rice (1993) similarly suggests that children with SLI may experience a "negative interactive spiral" where initial failures in communication lead to decreased responsiveness of children with SLI and their peers, thereby depriving the children with SLI of the very interactions that they need practice with. Finally, Donahue (2002) also concludes that interactional styles among older children with language-learning disabilities might be "adaptive and strategic responses to their history of communicative difficulties" (p. 242). As tenable as these suggestions are, they unfortunately do not resolve the question of which elements of language use (if any) or language structure are initially problematic in peer interactions.

The same question emerges from the study involving children with SLI (Gertner et al., 1994). Note that although the title of the study refers to the "influence of communicative competence on peer preferences", language use is not studied directly. Rather, language test performance and developmental history determined membership in the three comparison groups in the study: a TLD group, a speech and/or language impairment group (S/LI), and an

English-second-language group (ESL). Children in the TLD group received more liked nominations than the other two groups. Those in the S/LI and ESL group fell primarily into the low impact or disliked categories. Regression analysis showed that language test scores accounted for over 30% of the variance in positive nominations, with receptive vocabulary scores (PPVT) playing a particularly important role. The significance of receptive language is further supported by the fact that the single child with SLI in the 'liked' category had normal-range scores on language tests but was admitted to the study on the basis of low MLU, weak expressive morphology, and some articulation problems.

The Gertner study successfully demonstrates that difficulties with tested linguistic abilities are implicated in the social status of children with SLI, but we still know little about how those difficulties translate to rejection in everyday activities. Also, the study involved children's nominations for dramatic play. Unfortunately, there were no comparison nominations for a different type of activity. Such a comparison could be telling. If, for instance, children with SLI were nominated less often for relatively language-intensive activities but not others, the case for a connection between language use and rejection might be strengthened.

Finally, the findings for peer acceptance measured through nomination procedures do not mean that children with SLI do not have friends. Studies indicate that they do. Parent and teacher reports showed that the majority of 29 children with speech-language delay in community-based daycare had mutual friendships, meaning they were characterized by reciprocity (Buysse, 1993). McCabe and Meller (2004) found that children with SLI of a mean age of 4;10 had as many mutual friends as peers with TLD, and they also received comparable likability ratings. These results were based on children's nominations of children

they liked to play with and the children they identified as friends. What is particularly interesting about this finding is that the children in the SLI group were attending school-based early intervention programs attended uniquely by children with SLI. Finally, when compared to the parents of children with TLD, parents of 6-7 year-olds with SLI reported that their children have as many friends and spend as much time weekly playing with them (Redmond & Rice, 1998).

It does seem, however, that at least some children with SLI grow more vulnerable with time when it comes to peer relationships. One study showed that school-age children with SLI may be accepted but still be more rarely chosen as a best friend than peers (Fujiki et al., 1999). Fujiki et al. (2001) observed the playground behaviour of eight children with SLI, most of whom were 6-8 years old. The participants interacted with other children at lower rates than age-matched peers and showed more reticent behaviour. Descriptive individual data showed that at least one child who interacted frequently with peers adopted or was relegated a subordinate role in pretend play, that of "baby". When standardized questionnaires have been administered to school-age children with SLI, they have also evaluated themselves as having fewer friends and feeling lonelier than do TLD comparison groups (Asher, Parker, & Walker, 1998; Fujiki, Brinton, & Todd, 1996). These findings have parallels in the literature on language-learning disabilities and learning disabilities, groups in which children with SLI are often included (Kavale & Forness, 1996; Wiener & Sunohara, 1998).

There are always exceptions to these general tendencies. The source of some children's resilience has been sorely neglected in the literature. One lead can be found in descriptive data provided in Fujiki et al. (2001). These show that the child with the strongest

friendships and best social skills had the mildest receptive and expressive language problems as measured by standardized tests. In Hart et al. (2004) and Farmer (2000), severity of language impairment also emerged as a possible influence on children's relationships with their peers, though the findings were not conclusive.

Peer Talk and Peer Interaction

A second type of study relates language use to the flow and duration of peer interaction rather than to the broader and more removed construct of peer acceptance. In one study, the interactions of children were coded on-line and the behaviours that led to reciprocal and sustained interactions with peers were identified. Three to five year-olds (total $n = 61$) identified by teachers as having high rates of positive social interaction were observed. Initiations by these children were then coded over several days during free play (Tremblay, Strain, Hendrickson, & Shores, 1981). The first interesting result relates to the ways children were using language. The overwhelming majority of the children's initiations were statements, followed in prevalence by commands. However, these commonly occurring behaviours were not the ones that were most likely to generate a response. In fact, statements had a low response rate of 37%, as did commands (54%) and questions (51%). The only verbal behaviour with a response rate well above 50% was play suggestions (67%). Sharing and offering assistance could be verbal or nonverbal and also had high response rates: respectively, 79% and 63%. Low responding to certain kinds of communicative acts is not uncommon in preschool age children. Children were most responsive to peer invitations to play, play suggestions, and help with materials or assistance.

Findings like these have been integrated to intervention programs aimed at increasing interactions between peer buddies or "confederates" and children with developmental

disabilities such as autism. Such interventions have met with mixed results (Hendrickson, Strain, Tremblay, & Shores, 1982; Kohler & Fowler, 1985; Kohler, Strain, & Shearer, 1992; Kohler & Strain, 1997). Young children demonstrate variable ability and/or willingness to fulfill a confederate role as assigned by adults. However, the intervention studies generally confirmed that the communicative acts noted by Tremblay and colleagues had positive effects on interaction when they were used. Invitations, play ideas, and helping, then, are some ways that children sustain interactions with peers. What are some others? This question is addressed in the next section.

Peer Talk and Social Life

In the set of studies reviewed in this section, researchers focus on peer talk as it figures in the social life of children. They show how children use language to establish and negotiate their relationship to one another as well as to manage play and other activities. There is no attempt to establish causal links between language use and peer acceptance. Rather, the studies are concerned with the broader purposes of and contexts for the "conversational moves" and "communicative acts" that were discussed previously.

Participants in the research are children with TLD. Although some studies share a theme, the methodological approaches vary. Some involve the *thick descriptions* characteristic of ethnography. The term, originally coined by philosopher Gilbert Ryle and later elaborated by anthropologist Geertz, refers to interpretations of human behaviour that emphasize the experience and meaning of events from participants' point of view (Geertz, 1973). That point of view is also referred to by ethnographers as an *insider* or *emic* perspective. The routes toward thick description are many but may include details about a setting, the emotional tone of events, individuals' histories, participant interpretations, and

excerpts of talk or writing that give those interpretations voice (Denzin & Lincoln, 1998). Other studies reported in the next section involve relatively less "thick" description but still include portrayals of interlocutors and detailed accounts of their talk achieved through conversational analysis alone or through a combination of conversational analysis, coding, and analysis of coding frequencies.

Peer talk can be considered along several dimensions. Blum-Kulka and her colleagues (2004) have recently suggested genre, key, theme, and activity as relevant features of *discursive events*. Their model will be discussed in detail in Chapter 7 specifically in relation to this study. The discussion below is organized more generally according to themes in the literature and with reference to terms suggested by the studies' authors.

Establishing Common Ground

Drawing on the work of Halliday, Katz (2000) defined *relational talk* as talk which serves to establish and maintain interpersonal connectedness. To investigate relational talk, Katz combined discourse analysis with coding frequencies. The coding system was based on her own observations as well as on those of Gottman (1983), Göncü's investigations of shared meaning in children's play, and the Inventory of Communicative Acts, a system for coding speech acts and interchanges described earlier in this chapter (Ninio & Wheeler, 1984). The principal categories of Katz's system relate to the content of talk, references to person, such as "self", "other", or "we", degree of engagement indexed in a variety of ways, and extra-verbal indices of shared experience and affect, for example, laughing.

Katz (2004) recorded multiple sessions of the dyadic play of two pairs of girls who were not quite three years old. The children attended the same university-affiliated daycare and were described by their teacher as friends. The dyads were overlapping in that they had

one child in common; Elizabeth and Elena constituted one dyad and Elizabeth and Nina the other. Katz was particularly interested in the distinctive interactive styles of the pairs. She found that one pair favoured laughing, yelling, and joking (e.g. about "*feedas*" and "*geedas*" and "*Juju looking for jujus*") as a primary way of sharing experience. The other pair spent most of their time narrating ongoing, past, and fictive/pretend events such as "getting married" or "making juice". Repetition was important in both dyads and, according to Katz, served multiple social functions: to negotiate co-presence, joint attention, and shared knowledge; to escalate the intensity of interaction; to demonstrate unity against third parties; and to sustain topics.

Katz has argued and demonstrated that conversational styles are not an individual trait but a joint realization where interlocutors accommodate each other. Still, transcripts indicate that each girl was responsive to her partner and expressed her own intentions clearly and through a variety of morphological and syntactic forms, as illustrated in the utterance "*When it's the summer time we will take our hoods off*" produced by one of the girls. One might reasonably infer that joint relational talk rests to some degree on individual children's ability to communicate effectively. Findings related to the impact of *information exchange* in one study support this inference. Gottman (1986) defined *information exchange* as successful bids for attention, information statements, and responses to questions, and contrasted this category with demands, offers, and questions or statements aimed specifically at self-disclosure. He found that 3-6 year-olds used information exchange to begin dyadic play with both "best friends" and "strangers" over 90% of the time. Analysis of interactional sequences showed that when information exchange was unsuccessful, the dyads were less likely to progress to *common ground activity*, defined by Gottman as children doing something

together or verbally exploring their similarities and differences. Children with fundamental difficulties in initiating, in responding contingently, or who make demands of their partner at the outset seem to be at high risk for getting 'stalled' early on in their interactions. These findings are consistent with others reviewed earlier in this chapter.

Expressing Amity

Gottman also used parental report and other measures to assess whether unacquainted children "hit it off". For children who did, common ground activity was the basis for what Gottman called *amity*. *Amity* included validation requests, approval, sympathy, support, affection, wit, and hilarity or glee (Gottman, 1986, p. 97). Using a similar definition, Dunn and Cutting (1999) found that amity was present over a fifth of the total time 4-year-old friends spent playing together.

Amity can result from joint activity, but it can also constitute that activity, as was illustrated above in the language play of the young pair of jokesters in Katz's study. Language play as activity is also demonstrated in a study by Varga (2000). She described 4- and 5-year-olds' claims at snack-time as a playful, amusing duel of hyperbole as shown in the short excerpt below extracted from a much longer one:

Elisha:	<i>I could eat a whole apartment.</i>
Pete:	<i>I can eat whole building.</i>
Elisha:	<i>I could eat a whole doctor's office. Even the people.</i>
Pete:	<i>I can even eat their stomachs.</i>
Pete:	<i>I can even eat their butts.</i>

Available data do not indicate just how common language play is, particularly as a primary activity, but there are some indicators that it is far from rare. Ely and McCabe (1994) found that nearly a quarter of the utterances of kindergarteners involved language play, including word play, sound play, and verbal humour. In a study of twenty 4-5 year-old

"peer models" in integrated Head Start programs, "merriment" was the 8th most frequent behaviour among fifty others. It included joking and humorous or "silly talk" as well as singing and reciting (Pershey & Visoky, 1999; Pershey & Visoky, 2002). Pershey and Visoky also found that "imaginative language", defined as "discussion of something ... unreal or fantasy", was frequently occurring. The top four categories in the study referred to solitary or adult-child interactions. In children's interactions with one another, merriment and imaginative language were exceeded only by comments and imperatives related to the immediate activity or what Pershey and Visoky called "chat: here and now".

Expressing Individuality and Group Membership

Children's talk during play is often directed at managing the activity at hand: the "here and now" talk just mentioned. However, other kinds of talk are embedded in that play and even "here and now" talk may simultaneously serve both instrumental and interactional functions. In fact, nearly half of the talk of 4-5 year-olds with TLD was described in one study as "small talk": comments, confirmations, negations and other utterances whose main intent was the maintenance of social contact (Ball, Marvin, Beukelman, Lasker, & Rupp, 1999).

The interpersonal function of peer talk is perhaps more evident in conversations when children are not playing, as in conversations during meals and in cars. In a field study of a preschool attended by 3-5 year-olds, Stone (1992) found that children were most likely to share narratives of personal past experience at lunchtime. Narratives were often preceded by bids for attention or narrative introducers directed towards the teacher, but nearly a quarter of the narratives were directly addressed to peers. The transcripts provided by Stone also suggest that while bids to the teacher may have served to secure the speaking floor, children

were addressing their peers as well. Certainly, children listened to one another, as illustrated by topic similarity in nearly 40% of their narratives. Kuntay and Şenay (2002) also found shared themes across children's narratives in their qualitative study of two Turkish preschool classes. They, however, concluded that the teacher was the children's perceived mutual audience and interpreted the "rounds" of narratives as somewhat competitive attempts by children to cast themselves in a certain light in the teacher's eyes.

Talk about personal experience also arises in contexts where adults are less central. O'Neill et al. (2003) found that most of the initiations of 3-5 year-olds during snack-time were comments, directives, or, more rarely, questions related to themselves or their listener. Initiations by 5 year-olds were listener-related even more often than they were self-related. Collapsing across "person-related" and "non-person related" talk, most initiations were about actions/events in the present, but over a fifth (22%) were about the past and future.

Preece (1992) collected data from 5-year-olds riding in her car pool for a period of 18 months. The trio studied often told personal anecdotes to each other. They were engaged speakers and active listeners, adding to the narratives of their peers by providing missing information, agreeing with opinions, refuting or corroborating content, and pointing out linguistic errors.

These studies show that children in the preschool years spontaneously talk about personal experiences in each other's company. In doing so, they not only recount events but differentiate themselves as they hold the floor, express similarity as they follow topical leads, establish identity by giving their own "spin" on topics, and act as coaches and critics when adults are absent. It is not known whether children with SLI also tell anecdotes of past experience in peer contexts during the preschool years. Only elicited narratives have been

examined, usually in school-age children and with mixed results. Some researchers claim that children with SLI have more difficulty with the global structure of narratives than their peers do, while others have found that problems with global structure are non-existent or directly attributable to local errors (for a review, see Norbury & Bishop, 2003).

Creating and Sharing an Imagined World

Narrative 'lines', plots, or scripts have a role in pretend play. Such play has been researched extensively with attention to a wide range of issues, only a few of which will be addressed here. Pretend play can refer to *functional pretend play* in which children play with realistic objects in conventional ways as well as *representational* or *symbolic play* where children substitute objects for others, invoke imaginary objects or fantastic contexts, and attribute roles and imaginary qualities to settings, things, and people (Lewis, Boucher, Lupton, & Watson, 2000). Although finer distinctions of play types exist, this basic one is adequate to make the point that shared symbolic play relies on language for its enactment as well as for planning and managing the "script" and roles (see Musatti, Veneziano, & Mayer, 1998 and Sachs, Goldman, & Chaillé, 1985 for comprehensive discussions and examples). This reliance on language is a plausible explanation for why children with SLI have been found to engage in less sustained and/or less coherent pretend play than same-age peers with TLD, even though symbolic play appears intact, as Casby (1997) has demonstrated.

Scripts have been suggested as a means of facilitating the pretend play of children with SLI (Culatta, 1994). Robertson and Ellis Weismer (1997) examined the effect of peer modelling on script knowledge. Although they did not examine interactions directly, they did elicit children's scripts for playing house. The script reports of children with SLI were more elaborate in vocabulary and thematic elements after participation in dyadic play with

assigned, unfamiliar peers with TLD. In a follow-up treatment study, four children with SLI were paired with either an SLI or TLD partner. The children with SLI in the SLI-TLD dyads made more gains and gains of greater magnitude than did the children in the SLI-SLI dyads. The teaching of scripts has also led to positive results for children with other developmental disorders. For example, an intervention study involving preschoolers with autism and typically-developing peers showed that direct teaching of scripts led to increases in the autistic children's verbal contributions to the theme as well as in their nonverbal theme-related behaviour (Goldstein & Cisar, 1992).

How does participation in pretend play relate to peer relationships? As discussed earlier in this chapter, children rarely chose peers with SLI when they were asked to select those they preferred for dramatic play (Gertner et al., 1994). A study of children with TLD showed that peer nominations were influenced by children's ability to participate in collaborative pretend play (Howes, 1998b). However, participation in pretend activity can also help children gain acceptance, as Paley showed (1994). She described how participation in story enactment, a preferred activity of the kindergarteners in her class, allowed for the acceptance of three "outsiders", one of whom had delayed language. Story enactment involved children narrating their stories to the teacher and subsequently acting them out with peers.

Nicolopoulou (2002) has pointed out that pretend activities can help children make sense of their experience and the world around them and to express emotional preoccupations. Others contend that joint pretending plays a role in the development of trust and intimacy among young children, but suggest that this role is fulfilled only once "expertise" in such play is achieved (Howes, 1998a). Finally, pretend play is an arena for

collaboration as plans and roles get negotiated. That collaboration is, of course, not always conflict-free, but young friends have been shown to have fewer disagreements than non-friends and to resolve their disagreements about content, form, and scripts more successfully when they arise (Howes, Droege, & Matheson, 1994).

Summary

Both quantitative and qualitative research has affirmed the importance of language in peer relationships. Such studies demonstrate that initial exchanges are particularly important. They set the stage for common ground activity in dyadic situations and influence the success of entry to group play. The content of initiations appears to be a relevant factor in peer acceptance, with demands and self-focus possibly contributing to rejection and suggestions for play and pro-social acts contributing to acceptance. Once children are engaged in conversation, they must help sustain it. Preschool children with SLI appear to be successful at doing so to some degree, as apparent in the "successful turn" data and the data on contingent responses. When linguistic and meta-communicative demands increase, however, as in pretend play, children with SLI exhibit difficulties although they appear to willingly engage in such play and to have the symbolic capacity for it.

One study suggests that interactions with children with TLD help children develop the scripts that facilitate pretend play. In addition to possibly benefitting from peer talk with children with TLD, children with SLI seem to desire those interactions. Unfortunately, some of the findings reviewed here imply that this desire is not reciprocal. Children with TLD are reported to ignore children with SLI and to choose them less on nomination tasks. A distinction, however, must be made between being unpopular and being friendless. Young children with SLI do have friends according to one study based on parental reports, although

it was not clear who those friends are. In another study, children with SLI in an SLI-only preschool program formed mutual friendships with their classmates at the same rates as children with TLD in other settings. These findings for peer interaction and friendship are reconsidered in the Discussion chapter, along with the results from the research in this dissertation.

Chapter 3

EDUCATIONAL CONTEXT

This thesis focuses on children with SLI and on their conversations with peers. The context of that talk is considered, but context is defined in an immediate and local sense. There are, however, more temporally removed and less proximal contexts that shape children's experience.

Maguire (1994) has suggested the concept of nested contexts to represent the complex environments in which children learn and use language. In her analysis of bilingual children's narratives, she situates the narrators and their stories in contexts which extend beyond the physical and situational. Less visible contexts, in particular sociolinguistic and sociopolitical ones, are considered in terms of their influence on children's approaches to and perception of "storying" and learning in two languages.

Members of the Canadian Policy Research Network have used the metaphor of a nest somewhat differently in their analysis of policy related to the education of children with disabilities. They locate the child within the family and the family within different kinds of communities. The nest extends from communities to public institutions, then to government, and finally to society as a whole (Valentine, 2001). Odom and Diamond (1998) analyze inclusion practices using Bronfenbrenner's ecological systems model, one also consistent with a metaphor of nesting.

The various contexts alluded to above are relevant to the children in this study, though a discussion of all but a couple lies outside the scope of the thesis. The discussion that follows is restricted to the language class and school attended by the study participants. The information is intended to permit speculation about how the findings reported here and

in other studies relate not only to characteristics intrinsic to children with SLI but to practices and policies surrounding them: that is, their nest.

Services for Children with SLI in Quebec

This study took place in a school located in an urban center of Quebec, Canada. English was the language of instruction. French, one of the two official languages of Canada, is the majority language in the province. English is also spoken widely as a first and second language. The language of schooling is determined by provincial policies aimed at promoting French language acquisition. According to the 1977 Charter of the French Language, Bill 101, all children must be educated in French until the end of secondary school. However, the Charter makes some exceptions. Among those eligible for English schooling are children whose parents were educated in English in Canada and English-speaking children with severe learning disabilities, including language impairments (Ministry of Education of Quebec, 2005).

In Quebec, speech and language services for children prior to entry to the school system are provided by children's hospitals, rehabilitation centers, and the *Centres locaux de services communautaires* (CLSC's). The services are free, but waiting lists for even initial assessments can take months or even years. Intervention is often subsequently limited to a prescribed number of individual therapy sessions. These circumstances prompt many families to seek private speech-language services. A minority of families receive reimbursement for these through group insurance, but insurance typically covers only a small percentage of fees and annual caps on reimbursable fees are generally low.

The provincial Ministry of Education becomes responsible for speech-language services once children enter the school system. In order to receive certain special education

services, the ministry requires that children be 'coded'. The particular code associated with language impairment (34) is assigned by a speech-language pathologist and a psychologist based on formal evaluation and then submitted to the Ministry. The Ministry may refuse to validate the code if the submitted information is deemed inadequate or if the criteria for the coding have not been adequately met. There has historically been a ceiling on the number of applications for codes the Ministry will accept in a given year. That ceiling has been challenged by the provincial Order of Speech-Language Pathologists on the grounds that it does not reflect prevalence rates of language impairment and is based on institutional financial resources rather than children's needs (Ordre des Orthophonistes et Audiologistes du Quebec, 2002). Speech-language services are, in any case, limited, with a single consultant often serving several schools.

The Development and Site of the Language Class Attended by Children in the Study

In response to the status of services described above, a local school and rehabilitation center proposed language classes for young children with language impairments in the late 1990's. The children in this study were attending such a class. The school and rehabilitation center are separate entities with different administrations and ministerial jurisdictions, but are closely linked historically. The two institutions are referred to here as The Center. The rehabilitation unit now offers or has previously offered a wide range of services intended to facilitate children's language and communication and to assist families in doing the same. These include individual speech-language therapy, playgroups for Deaf children and their caregivers learning American Sign Language, groups for children using alternative and augmentative communication systems, and workshops for parents of children with language delays.

The school has a mandate and long history of providing "special education", particularly for children with physical disabilities and for the deaf. In addition to serving these children, children without disabilities are reverse-integrated to the school. Details about reverse-integration at the pre-kindergarten level are provided in Chapter 4.

The classes proposed by the Center were accepted by the Ministry of Education and inaugurated in 1999 under the auspices of the school in collaboration with the rehabilitation unit. Speech-language pathologists were directly involved in the development of the classes and remain involved in their delivery. They provide individual therapy and classroom-based intervention and collaborate closely with teachers in planning and implementing the curriculum.

At the time of the Center proposal, three language classes already existed for children at other schools within the same school board. These were for children in grade 1 and beyond. Not all school boards in Quebec offer such classes. Some boards uniformly place children with language impairments in 'ordinary' classes, a practice reflecting a philosophical commitment to inclusion. As previously discussed, however, support to children with language impairments in inclusive settings does not necessarily match their needs.

Features of the Language Class

The children in this study attended a pre-kindergarten language class. There was also a kindergarten and grade 1 language class in the school. The description of the classes that follows was gleaned from three sources. Two of these were observations and informal discussions with school staff during the data collection period of this study. A third source was a working document on the function and organization of the language classes that I drafted three years prior to initiation of the study reported on in this thesis. The task of

preparing the document was contracted to an 'outsider' because of time limitations of Center personnel. In preparing the paper, I conducted informal interviews of language class teachers, the principal, speech-language pathologists, the integration liason, and other school staff. Lesson plans, anonymous Individual Education Plans, and other internal documents were also consulted. In-class observations were conducted but were minimal, lasting only a couple of days.

Interviews of parents of children in the language classes were not conducted in the drafting of the working document. In retrospect, they could have been. In fact, families have close contact with the school. Formal contacts include an orientation session, workshops, parent-teacher meetings, and participation in development and review of the Individual Education Plan and Individual Intervention Plan. The teacher and parents of the children in this study were also in regular communication via notes in a booklet that children carried to and from school daily. Materials were also sent home with children for at-home practice and play.

Three parental interviews were conducted during this study. These are too few to draw conclusions about parental perspectives overall, but some of the data are of interest here. Each of the three mothers indicated the following: difficulty obtaining services for their child prior to admission to the language class, high level of satisfaction with the class and its staff, and a belief that their child had improved significantly in their language skills and had benefitted in terms of social interaction. All three nevertheless expressed the desire that their child ultimately attend a "regular" school.

Admissions Criteria

In order to be accepted in the language class, children had to meet ministerial criteria

for severe problems in expressive and receptive language as measured by test scores. They also had to meet Center criteria. These included language difficulties persisting for a year or more even with intervention; and equal or parallel difficulties in any other languages spoken than English. The latter was assessed formally as possible, but more often relied on parental report. In addition, a multi-disciplinary team had to determine that the placement in a language class was more appropriate for the child than placement elsewhere.

Model and Curriculum

The model for the language classes is consistent with what Rice (1995) has called a *concentrated normative model*. Such a model "emphasizes the commonalities across children and the strong potential of young children's developmental momentum" (p. 28). Children with language impairments are assumed to have much in common with children without impairment and intervention is consistent with normal language acquisition in terms of the order and kinds of goals that are set for children and the means of achieving them. In the concentrated normative model, language is viewed as strongly associated with other capacities (e.g., social and cognitive). However, it is also seen as a distinct area that can be concentrated on through a language-focussed curriculum, techniques that help children focus on specific linguistic forms, and 'planned redundancy' where children encounter forms and vocabulary repeatedly but in new and interesting circumstances. The curriculum for the language class attended by the children in this study was language-focused and additionally theme-based. Monthly themes and weekly sub-themes were reflected in songs, books, art activities, literacy and "readiness" activities, and dramatic play.

Language classes were equipped with sound field FM equipment. These systems, which amplify speech relative to background noise, have been shown to have positive effects

on language learning (Eriks-Brophy & Ayukawa, 1999). In addition, split tennis balls were placed on the feet of chairs in order to eliminate noise created by the sliding and moving of chairs. Visual aids were also commonly used in the language classes. These included pictures and/or symbols which served as reminders and prompts for the steps or components of new or routine activities. For example, pictograms represented the daily tasks that children selected at Circle Time, as discussed in Chapter 7.

Class Size

As is obligatory for special education classes, the language classes were attended by a maximum of eight children. The class size and ratio of children to adults was thus far smaller than one would find in the mainstream school system, where classes can be double to triple the size.

Multi-Disciplinary Team Approach

The language class teacher spent the most time with the children in the study. However, other professionals also provided services throughout the school year. These included a teaching assistant, speech-language pathologist, music therapist, play therapist, occupational therapist, psychologist, computer teacher, gym teacher, and social worker. A program coordinator and an integration liaison were also involved when children transitioned from the school to new educational settings.

Focus on Social Interaction

Social interaction was an important part of the language classes and was supported by classroom teachers as well as other professionals. In the pre-kindergarten class, children participated in a variety of interactive groups: whole-class, small-group and pairs. Direct strategies for orienting children to their peers included prompting, reinforcing, modelling,

and redirecting children towards each other when they approached the teacher to act as intermediary. Children were also given tasks like distributing materials to peers, with materials set up in such a way that children had to provide information and ask questions rather than accomplish the tasks non-verbally. For example, scissors with handles of different colours obliged children to ask for or specify the scissor they wanted.

Activities like music were organized to allow children opportunities for and practice at peer interaction: greeting, inviting each other to play, listening to each other, taking turns with instruments, making requests, sharing. A social skills group was also facilitated by the school psychologist on a weekly basis; the children and psychologist, however, met less often during the data collection period in this study because the psychologist was conducting annual evaluations and hence less available. Social skills themes covered prior to data collection included play entry and conflict resolution. The social skills group came together three times during data collection, and was devoted to "appropriate" physical contact, interrupting conversation, and recognition of emotions. Skills were demonstrated and practiced through games, circle activities, pictures, stories, demonstrations, and role-plays.

Contact of the children in the language class with other children in the school also occurred on the bus, during a gym period also attended by the kindergarten language class, during weekly singing involving all preschool and kindergarten children in the school, and during preschool recess as described in Chapter 6.

Summary

Children in this study, and more generally those with SLI, can certainly be expected to be affected by the contexts previously discussed. First, their very presence in a language class was determined by familial and institutional decisions made in a context of limited

services for children with language impairments. Second, policy and allocation of resources is such that the class has a small number of children. We know little about the effects of group size on peer talk and peer relationships for children with SLI, but one might expect more opportunities for talk and friendship building in a small group. On the other hand, the class is composed only of children with language impairments, a practice that might strain children's linguistic abilities and consequently their peer interactions. Third, the language class is a kind of ongoing intervention, with a curriculum and an environment designed specifically for children with language impairments, 'engineered' opportunities for peer interaction, and interventions aimed specifically at social skills. The impact of these practices is not directly evaluated in this study, but one must assume, or at least hope, that the children in the study are being positively affected by them.

Chapter 4

METHODS

This chapter describes the three data sets collected for this thesis. General information, participant data, and procedures applicable to more than one data set are summarized. Methods of data collection and analysis exclusive to each data set, such as their coding systems, are presented in Chapters 5, 6, and 7 along with the associated results.

Ethical Approval

Ethical approval for the present study was obtained through two agencies: the Institutional Review Board (IRB) of McGill University Faculty of Medicine and the school board responsible for the school in which the study was conducted. The ethics certificate from the IRB is attached in Appendix 4-1. School board permission is attached in Appendix 4-2, with information that would permit identification of the study site removed.

Enrollment

The researcher attended parent-teacher night in fall 2002 in order to meet parents, to explain the study, to provide a written information sheet previously approved through ethical committees, and to seek parental consent. All interested parents chose to give consent the same evening. Of the eight children in the language class, six parents consented to their child's participation as a "focal child". Two sets of parents did not wish that individual data be collected for their child. Given that recess was also being recorded, consent was additionally sought from the parents of the children who could potentially be observed in interaction with the focal children in the study. A letter, information sheet, and consent form was distributed at parent-teacher night or sent home to parents and returned to me via the

child's teacher. Finally, the teacher of the language class also provided consent to be interviewed and assented to my presence in the classroom. Assent to the study was also given by the school principal.

Case and Participant Selection

The main participants for the study were children in a single preschool language class. The class was selected precisely because it was attended uniquely by several children with SLI. The selection of the class was thus not random but purposeful (Creswell, 1998). Five children in the class participated as "focal children". That selection was based on parental consent. None of the children objected to participating in the study. One child did not wish to wear the wireless microphone but said he did not mind having it near him during play; his wishes were respected. One child whose parent gave permission was not selected as a focal child because the resident speech-language pathologist believed he had been misdiagnosed as SLI and inappropriately admitted to the class. The child's mother also reported to me that her son had developmental delays associated with extremely premature birth. The children with TLD were not selected. They were six of the seven children reverse-integrated at the preschool level whose parent(s) consented to their participation.

Focal Children with SLI

As shown in Table 4-1, the focal children ranged in age from 4;8 - 5;4 (years; months) with a mean age of 4;10.11 at the first taping of dyadic play. Three of the children were boys and two were girls. The children were from a variety of ethnic backgrounds, as their language exposure suggests. Four of the five had at least one sibling. Review of the

Table 4-1.

Characteristics of focal children with SLI

Participant	Nora	Earl	Jason	Lilah	Brian
	Test scores: z score (%ile)				
Expressive Test					
<i>PLS-3 expressive</i>	54 (1 st ile)	52 (1 st ile)	--	73 (4 th ile)	--
<i>CELF-Pre expressive</i>	--	--	75 (5 th ile)	--	77 (6 th ile)
<i>EVT</i>	86 (18 th ile)	87 (19 th ile)	92 (30 th ile)	93 (32 th ile)	100 (50 th ile)
Receptive Test					
<i>PLS-3 receptive</i>	63 (1 st ile)	50 (1 st ile)	--	82 (12 th ile)	--
<i>CELF-Pre receptive</i>	--	--	--	--	91 (28 th ile)
<i>PPVT-3</i>	68 (2 nd ile)	76 (5 th ile)	79 (8 th ile)	78 (7 th ile)	92 (30 th ile)
Basic Concepts Test					
<i>Bracken Basic Concept Scale</i>	73 (4 th ile)	65 (1 st ile)	77 (6 th ile)	92 (30 th ile)	101 (53 th ile)
Psychological Test					
<i>Griffith Mental Development Scales (performance scale)</i>	within normal range	within normal range	within normal range	within normal range	--
<i>WPPSI-R (non-verbal scale)</i>	--	--	23 rd ile	--	97 th ile
Language production and exposure	English since birth at home and daycare; also exposure to Tagalog & Arabic	English since birth at home; also exposure to Twi	English since birth	Arabic until age 2 at home; mostly English since; continued exposure to Arabic	English since birth
Age at 1st dyadic taping (yrs;mos.days)	05;04.07	04;09.01	04;09.16	04;08.23	04;08.12
MLU average and range across dyadic play sessions	4.29 (4.07-4.54)	4.35 (4.03-4.80)	3.72 (3.50-4.27)	4.43 (4.05-4.66)	4.45 (4.02-5.12)

Note: **PLS-3** Preschool Language Scale-3rd Ed., **CELF-Pre** Clinical Evaluation of Language Fundamentals-Preschool, **PPVT-3** Peabody Picture Vocabulary Test 3rd Ed.; **EVT** Expressive Vocabulary Test; **WPPSI-R** Weschler Preschool & Primary Scale of Intelligence-Revised . See 4

focal children's records included speech-language pathology reports and *Individual Education Plans*. The test scores in Table 4-1 were those reported in speech-language assessments conducted fall 2002 . Information regarding language exposure was obtained from records and clarified by parents as necessary.

All children had a history of severe expressive and receptive language delay that originally permitted their admission to the program. However, as Table 4-1 shows, tests scores for one child revealed receptive language in normal range with difficulties on expressive tests only; this child was tested one year after this study was complete and continued to show expressive grammatical difficulties. Diagnoses also changed for two of the children by or after the time of study completion. One child's diagnosis as SLI was questioned in the year following study completion because of motor problems with a possibly neurological etiology, and end-of-year clinical impression for one child was of mild rather than severe impairment.

Interestingly, all of the children received scores within the normal range on the *Early Vocabulary Test*. This may be due to the test's psychometric properties, or, alternatively, expressive vocabulary may have been a particular strength for these children.

Mean length of utterance (MLU) was calculated from transcripts of the dyadic play sessions recorded for this study; their preparation is described in Chapter 5. Some utterances in the transcripts were excluded from MLU calculation based on the criteria provided in Appendix 4-3. Exclusions were consistent with those recommended when MLU is intended as a broad indicator of grammatical development. In addition, utterances that were composed entirely of single word affirmations or negations or single-word constituents in response to -wh questions were excluded to eliminate deflationary effects of ellipsis on MLU

(Johnston, 2001). MLU's were calculated from the MOR program, part of the *Computerized Language Analysis (CLAN)* programs (MacWhinney, 1995). The children's MLU's ranged from 3.7 to 4.5, longer than those generally found for SLI cohorts of the same age in other studies. This discrepancy can be attributed to real differences in children's morphosyntax as well as to differences in MLU calculations across studies.

English was the first language produced by the focal children and the only language in which they had any fluency at the time of this study, but it was not necessarily the only language children had been exposed to. Three of the five focal children lived in bilingual or multilingual homes (English-Twi; English-Tagalog-Arabic; English-Arabic-French), and all lived in Quebec, a province where French is the most widely spoken language. Four children were exposed to English since birth, and one child since the age of two years. Exposure to other languages consisted of speech directed to the children or overheard speech in the home, for example between parents. The diagnosis of language impairment took into account parental report of language development in the other language(s) used in the home. The tests used for diagnosis of language impairment in English, however, were standardized on monolingual children. The validity of applying those norms to bilingual or multilingual children has not been established (Genesee, Paradis, & Crago, 2004).

Children with TLD

Six children with typical language development participated in the dyadic play sequences. These were children participating in "reverse integration" at the school and reported by teachers to be developing as expected for their age and to be native English speakers. These children were not tested for the purposes of this study nor were they formally screened for admission to the reverse-integration program. According to the school

principal, children in the reverse-integration program typically spent two days visiting a classroom in the spring prior to fall admission and were observed by teachers and other school staff during that time. One of the informal criteria for admissions is good "social skills", defined by the principal as an ability to interact well with other children and with the teacher. Other criteria are that children be free of serious behavioural problems, attention difficulties, or other significant "special needs".

There were six children with TLD: 4 girls and 2 boys. The mean age of the children with TLD was 4;10.12, precisely as in the SLI group (4;10.11). The range was also identical: 4;8 - 5;4. Four of the children were taped twice with two different focal children and two were taped once. The TLD partners were selected by the focal children on one occasion and randomly assigned on another.

Researcher

I collected all data. I was helped by a research assistant on a single occasion during the very first dyadic play session to ensure that equipment was working properly. My role was primarily as observer, but I did interact with children at times and they all knew me by name. For example, I sometimes helped children get their coats on and off, recorded children's journal entries or played games on a couple of occasions, participated in weekly singing with all the preschool and kindergarten children in the school, and accompanied the class to a visit to a local farm. The children in the study all interacted with many unfamiliar adults over the course of the year, including student teachers, volunteers, computer teacher, French teacher, gym teacher, and teaching assistants. They were frequently observed by professionals other than the classroom teacher. My role as a filmer and note-taker was thus less of an oddity than it might have been in some contexts.

I was acquainted with the classroom teacher, the speech-language pathologist serving the language class, the school principal, and other staff in the school prior to the outset of the study described here. Those acquaintances were made when I was contracted by the school three years prior to data collection to draft an internal working document regarding the organization and purpose of the language classes, as explained in Chapter 3.

Teacher

The teacher, Annie, had been teaching the preschool language class for 4 years. She had a varied academic and professional background: sociology undergraduate degree, commercial art background, previous employment in a library. Annie had shifted into the profession of teaching 5 years prior. Like all teachers in the school, she had a degree in special education; in her case it was at the master's level. Prior experience included teaching young children in a special school for the blind. Annie had also taught several sessions of a university-affiliated summer educational program for preschool-age children.

Parents

In two-parent families, both parents were invited to be interviewed about their children's history and about their peer interactions outside of school. Three mothers accepted. The information provided in the interviews is alluded to in Chapter 6 and occasionally elsewhere. For example, mothers provided information about language use at home that has been incorporated to description of the focal children.

Data Collection

Dates

Observations of the language class as well as a kindergarten and grade 1 language class were conducted for a 5-day period in November 2002. The goal of the observations

was to familiarize myself with the school and classroom and to develop data collection methods that would be comfortable for the children and fit with their routines. Data were collected four days per week from April 14 - June 4, 2003.

Observational Notes

Observational notes were handwritten on forms designed for this purpose, as shown in Appendix 4-4. A filled form related to Data Set 3 is provided in Appendix 7-1. Notes were taken while I was seated in the classroom in a variety of locations; a scaled diagram of the classroom appears in Appendix 4-5.

Taping Equipment

For videotaping, a Panasonic AG-DVC15p digital camera was used. It was hand-held rather than set on a tripod so that I could follow children's movements easily. The camera model permits audiorecording on two channels. When noise levels were low or children were reluctant to wear a microphone, the camera microphone was used alone. Otherwise, the camera microphone was used on one channel and a Nady brand wireless microphone on the other. The microphone transmitter was housed in a small neoprene pouch designed for MP3 players and attached to an adjustable belt worn by the children. A Sony TCD-D100 digital audio recorder and external Radio Shack PZM microphone were used for parental interviews and an analogue tape recorder was used for the single teacher interview.

Data Collection and Analysis by Set

Each data set involved specific and different methods of data collection and analysis. Chapter 5 begins with a brief summary of objectives for Data Set 1 and then proceeds to design, data collection methods, data analysis methods, and results. The same strategy is adopted for Data Sets 2 and 3 in Chapters 6 and 7.

Chapter 5

ZOOMING IN: DYADIC PLAY

Objective

The focal children with SLI described in the previous chapter were paired with four different same-age peers for dyadic play: two with TLD and two with SLI. The goals were to assess the influence of conversational partner on language use by the focal child and to determine whether children with SLI differed in their language use relative to their TLD partners.

Design

The matrix in Figure 5-1 illustrates the single group two-within factor crossed repeated measure design, where language status of the conversational partner, "SLI" and "TLD", is crossed with selection of partner, "CS", child-selected and "ASN", assigned by researcher.

Each of the five focal children with SLI was videotaped as he/she engaged in play with four different conversational partners drawn from the participant groups described in Chapter 4. These partners varied in language status: two were other focal children with SLI and two were children with TLD. One of the two partners with SLI was selected by the child and one was assigned. The same was true of the TLD partners. The children with SLI routinely engaged in dyadic play with self-selected and assigned partners in their classroom. The selection procedure was thus consistent with classroom practices and further based on an interest in the role that motivation, assumed to be higher in the child-selected condition, might play in children's conversations with one another.

The order of partners was not counterbalanced. Play with child-selected partners was taped first, followed by taping of play with assigned partners. This order was used because the goal was to tape the children with two different partners; had they been assigned partners first, they might have selected the same partner when they were asked to do so on another day. In addition to the comparisons displayed in Figure 5-1, the focal children with SLI were compared directly to their TLD partners for some measures.

Language group	Assignment		
	Child-selected (CS)	Assigned (ASN)	
SLI	Partner 1	Partner 2	SLI+SLI dyads
			vs
TLD	Partner 3	Partner 4	SLI+TLD dyads
	SLI+CS dyads	vs	SLI+ASN dyads

Figure 5-1. Matrix illustrating conditions and comparisons in crossed repeated measure design.

Methods

Data Collection

Presentation of Research to Participants and Researcher Role

The children in the study knew the "movie" was about children playing together. The researcher did not express a particular interest in conversation to the children and they were not specifically asked to talk together. They were, however, prompted to find common activities when solitary play ensued beyond a couple of minutes. This strategy was adopted to encourage interaction without specifying type, i.e., verbal or nonverbal.

Taping Schedule

Each focal child was videotaped a maximum of once per week over a four week period. The dyadic play sessions were taped in the second half of the children's lunch hour ordinarily devoted to indoor gymnasium play. The lunch hour was selected to minimize children's loss of instructional time and because it was the only time slot for which the same space could be guaranteed for all of the taping of dyadic play.

Location

The taping was done in the focal child's home classroom. The organization of the classroom is displayed in Appendix 4-5. Some furniture relocations took place during data collection but the basic organization remained. This choice of location allowed children to be in a familiar environment with a range of available activities.

Duration

The play sessions ranged from 22 to 34 minutes.

Play Activities

A dramatic play scene and props were always available and already set up in the classroom by the teacher as part of the thematic curriculum. Over the weeks of data collection, the drama area was set up for train, airplane, veterinarian, and pet shop. Children could also select play items or activities on their own from the classroom, including cars, dolls, playhouse, tools, play-dough, dress-up clothes, etc. In addition, two different toys or games for each session were provided from among the list provided in Appendix 5-1. These were selected to generate conversation, to pique the children's curiosity, and to introduce activities that would be novel for both members of the dyad. The novel items turned out to be the preferred activities of many of the dyads. Instructions for games were provided as

necessary. For example, when one dyad chose the colour-coded train track, they asked for help and were shown a diagram on the box of a track shape they could make, but told to make the track the way they liked. When another dyad chose *Tactil*, a guessing game, they were shown how the game is usually played but another possibility was suggested, i.e. making a story with the pieces in that game. Finally, if one child in a dyad was familiar with a game or an activity and the other was not, that child was encouraged to explain or show the activity to his/her partner.

Gender of Dyad Members

The dyads were composed of boy/girl pairs in two-thirds of the cases and same-sex pairs in the remaining cases: 3 pairs of boys, 3 pairs of girls. In the child-selected condition, each focal child chose a boy on one occasion, and a girl on the other.

Transcription

Preparation

Digital videotapes and audiotapes were captured as computer files using Adobe Premiere 6.5 and played back using that software or another media player. This system allowed transcribers to view videos on the computer screen while transcribing and to enlarge the images, halt playback, and slow playback speed as necessary.

Transcribers

A trained graduate student in speech-language pathology transcribed the majority of the dyadic play segments. The researcher transcribed a portion independently to confirm reliability and additionally reviewed all transcription while coding. Discrepancies were resolved by consensus with the first transcriber.

Transcription System

Transcriptions were prepared using *Codes For Human Analysis of Transcripts* (CHAT) (MacWhinney, 1995). Grammatical and prosodic features were used to determine utterance boundaries as per guidelines in Owens (1995, p. 143). Tag questions and attention-getters were transcribed as attached to a main clause whenever they were tightly linked to it prosodically and temporally.

Length of Transcribed Segments

The dyadic play sessions were transcribed in their entirety. All of the data were used for calculation of MLU as reported in Chapter 4 to maximize accuracy. Twenty-minute segments were used for all other analyses to ensure consistency across children and sessions.

Transcription Reliability for Words and Utterance Boundaries

Transcription reliability was established for words and for utterance boundaries. Reliability for utterance boundary was deemed important for accurate calculation of MLU and for accurate frequencies regarding communicative acts.

Reliability was established for a randomly selected portion (15%) of every transcript. The agreement for words between researcher and assistant was 87.49%. Agreement was calculated with the following formula:

$$[\# \text{ agreed upon words} / \# \text{ of disagreements } (\# \text{ discrepant words} + \# \text{ omissions from both transcribers 1 and 2}) / \text{total } \# \text{ words}] \times 100$$

Utterance boundary agreement was 93.80% and was calculated as follows:

$$[\text{agreed-upon boundaries} / \text{all possible boundaries (agreed upon boundaries} + \text{number of times transcribers placed boundary in different place)}] \times 100$$

Coding

Once transcription and reliability was complete, coding was conducted as described below.

Coders

All of the dyadic play sequences were coded by the researcher. The same assistant who was involved in transcribing the data was trained by the researcher to use the coding system in order to establish intercoder reliability.

Length of Coded Segments

A uniform length of twenty minutes was selected from sessions ranging in length from 22-34 minutes to facilitate analyses. Coding began after one minute had elapsed and ended at 21 minutes.

Coding of Conversational Moves and Communicative Acts

A coding system of conversational moves and communicative acts was developed by the researcher based on existing protocols and the research literature. Taxonomies consulted for the coding of communicative act included: Brown, Odom, Holcombe, and Youngquist (1994), Halliday (1977), Keshavarz (2001), Pershey and Visoky (1999), Pershey and Visoky (2002). The coding system is provided in Appendix 5-2 and immediately followed by excerpts from two coded transcripts in Appendix 5-3. The appended coding system provides definitions and examples for each code. In summary, each utterance was coded at 3 levels:

- (a) conversational moves: *initiate, maintain, respond*
- (b) principal communicative act: *play entry, regulate, comment, assert, ask info/inform, assist, kid/tease, other*
- (c) subcategory of communicative act: e.g. for comment, subcategories included *describes ongoing activity or events; discusses non-present; uses communicative marker; counts/recites*

Each utterance was assigned three codes on a single tier. This approach allowed joint analysis of the three levels as well as separate analyses using CLAN programs.

Code Entry

Codes were entered using the Coder function, again part of the CLAN programs. The program allows the coder to select the appropriate code from a display. This procedure aids in entering codes consistently and thus reduces human error. The use of the program also permits comparisons of two independently coded copies of the same file when used in conjunction with the RELY program as was done here.

Coding Reliability

Reliability of coding was established for the three levels of analysis for a randomly selected 4-minute segment (20%) of every transcript. Cohen's kappa was also calculated to correct for agreement expected by chance alone. Kappa values of .61-.80 are typically considered "good" to "substantial" agreement, and .81 to .99 "very good" to "almost perfect".

The results were as follows:

(a)	<i>Conversational moves:</i>	% agreement 85.83	$K = .78$
(b)	<i>Communicative acts:</i>	% agreement 84.91	$K = .76$
(c)	<i>Subcategory of communicative act:</i>		
	<i>Comment category:</i>	% agreement 89.33	$K = .81$
	<i>Regulate category:</i>	% agreement 90.95	$K = .87$
	<i>Ask info/inform category:</i>	% agreement 95.45	$K = .93$
	<i>Other categories:</i>	% agreement 100.0	too few observations ($< 17/\text{category}$) for K

Coding of Initiations that Lacked a Response

Given the results of the communicative act analysis, two additional analyses were conducted. The first was analysis of no-responses to initiations. A coding system developed

for the purpose of this analysis is provided in Appendix 5-4. The principal categories were:

nonverbal responses: gaze, action, joint attention to referent, vocalizations

counter-initiations: utterances that were not responses as such but were semantically related to the initiation by partner (e.g. a question following a question)

no response: cases where partner did not respond while within hearing range

Coder and Coding Reliability. Analysis was conducted by the researcher. Reliability was established with a trained research assistant for 20% of the total data drawn from videotapes of each focal child. Intercode reliability was calculated using the formula $[number\ of\ agreements / the\ number\ agreements + disagreements] \times 100$, yielding an agreement rate of 87.80%.

Coding of Communication Breakdowns

The second additional analysis was of particular communicative acts: those related to asking and giving clarification. These utterances were coded further using the *Breakdown Coding System* referred to in Chapter 2 and reproduced in Appendix 5-5. The system includes codes for type of clarification request and for features of the utterance preceding the request. Additionally, responses to requests for clarification were examined using three codes defined by the researcher. These have also been included in Appendix 5-5 and cover successful repair, failed repair, and no attempt at repair.

Coder and Coding Reliability. Coding was conducted by the researcher. Intercode reliability was not established given the few available tokens for a training phase, but intercode reliability for the *Breakdown Coding System* has been shown to be high (Yont et al., 2000).

Analysis of Coded Data using CLAN Programs

The coded data were analyzed using a number of CLAN programs. The primary programs used were those that permitted data filtering (KWAL), frequency counts (FREQ), segmentation of transcript (GEM), contingency analyses (as in the number of initiations followed by responses) (KEYMAP), and sequences of interactional codes (CHAINS) (MacWhinney, 1995).

Statistical Analysis

The Wilcoxon Signed-Rank Test was used to analyze the data whenever appropriate. The test is a nonparametric analogue to a t-test for dependent samples. Unlike the paired t-test, the Wilcoxon does not require that the assumptions of normal distribution and equal variance be met (Madrigal, 1998; McClave & Sincich, 2003). With small samples, these assumptions cannot be adequately tested. The Wilcoxon test is suitable for analyzing repeated measure data as well as for comparing data from individuals and matched partners. It was used here for comparisons of language use by the focal children with SLI across different dyadic contexts and for comparisons of the focal children to the TLD partners.

Two notes about the Wilcoxon are of relevance to this study. First, with only five participants, the minimum sample size for using the test, critical values are available at only at a .0312 alpha level for one-tailed tests and at .0624 for two-tailed tests (Siegel & Castellan, 1988, p. 89, p. 332). Second, given the sample size, all five participants had to show the same direction of results for a significant result to be obtained. For example, every focal child had to have had taken more turns than their partner to conclude a significant difference existed between the two groups. Thus, any significant results here directly reflect both individual and group performance.

Results

Continuity of Talk

Continuity of talk was measured in terms of number and duration of talk sequences. A sequence ended each time prolonged silence between the children ensued or when talk by one child did not meet with any response by the partner after 30 seconds (the talk thus became a kind of self-talk). Fewer sequences thus indicate more sustained conversation. Duration was measured as the numbers of turns by both partners within a sequence; a greater number of turns indicate longer duration of sequences. These data are reported only descriptively given that they are drawn from both members of the dyad. As shown in Table 5-1, the mean number of sequences in dyads composed of two children with SLI (hereafter SLI+SLI dyads) than in the SLI+TLD dyads, indicating more sustained talk in the former. Furthermore, the duration of those sequences was nearly twice as long. A similar pattern emerged for dyads composed of the focal child and a partner they had selected (hereafter, SLI+CS, for child-selected). Fewer and longer sequences were found in the SLI+CS dyads relative to those composed of a child with SLI and an assigned partner (SLI+ASN).

Table 5-1.

Continuity of talk: Mean number of interactive sequences and average number of turns (in utterances) per sequence

Measure	Dyad type			
	SLI+SLI	SLI+TLD	SLI+ASN	SLI+CS
mean number of sequences	4.00	6.00	5.88	4.50
mean # of turns/sequence	63.04	32.32	40.24	49.05

Note: Fewer sequences and higher mean # of turns/sequence indicate more sustained conversation

Distribution of Talk: Conversational Moves

Who's Doing the Talking?

The proportions of total turns taken by the focal children in the different dyad types are provided in Table 5-2. As noted previously, statistical significance for an n of 5 can only be obtained with the Wilcoxon if findings flow in the same direction for every child. It was sometimes the case that four of the five focal children shared a result pattern. These cases are noted in the text and tables as a data trend.

Focal children with SLI: SLI+SLI compared to SLI+TLD dyads. The focal children did not take a significantly different proportion of turns in the SLI+SLI and SLI+TLD dyads ($p > .03$). Although results did not reach significance, there was a trend; four of the five focal children took a greater proportion of the total turns in the SLI+TLD dyads than they did in the SLI+SLI dyads.

Focal children with SLI: SLI+CS compared to SLI+ASN dyads. The results were again not significant ($p > .03$) for the SLI+CS and SLI+ASN dyads. Four of the five focal children took a greater proportion of the total turns in the SLI+ASN dyads relative to the SLI+CS dyads.

Focal children with SLI compared to partners with TLD. The proportion of turns by the partner can be derived from the data here for the focal children. Figures exceeding .50 indicate that the focal child took more turns than their partner did. The difference between the focal children and their partners with TLD was significant ($T^+ = 15, p < .03$).

How Much of the Talk is Comprised of Initiations Relative to Responses?

A second set of findings is provided in the shaded area of Table 5-2. These are the

number of initiations relative to the number of responses. Every utterance of the focal child and his/her partner was coded either as an initiation, a response, or as a "maintain": a new utterance that continued either the initiation or the response. For these analyses, maintaining utterances were collapsed with the initiation or response which preceded them. Proportions of about .50 indicate that speakers devoted equal number of utterances to initiating and responding. Those exceeding .50 indicate more utterances devoted to initiations than responses.

Focal children with SLI: SLI+SLI compared to SLI+TLD dyads. The proportion of initiating utterances by the focal children was not significantly different in the SLI+SLI and SLI+TLD dyads ($p > .06$). However, there was again a trend. Four of the five focal children initiated more often than they responded in the SLI+TLD dyads, with an average of nearly three-quarters (.73) of all their utterances devoted to initiating. These high rates of initiations would have contributed to the significantly greater proportion of turns taken by children with SLI relative to their partner reported in the previous section. In the SLI-SLI dyads, a little over half of the utterances (.55) were initiations; the rest were responses.

Focal children with SLI: SLI+CS compared to SLI+ASN dyads. There were no significant differences ($p > .06$) between the SLI+CS and SLI+ASN conditions and there was no clear trend in the data.

Focal children with SLI compared to partners with TLD. The focal children with SLI were also compared directly to their partners with TLD in the SLI+TLD condition. The difference was not significant ($p > .06$).

Table 5-2.

Turns and initiations by focal children with SLI by dyad types

	Dyad Types			
	SLI+SLI	SLI+TLD	SLI+ASN	SLI+CS
% turns (focal child turns/total turns by focal child & partner)	.51 ^a	.63 ^t	.57 ^a	.55 ^t
range	.43 - .56	.52 - .82	.44 - .66	.42 - .61
% initiations (focal child initiations/ focal child responses)	.55 ^b	.73 ^t	.65 ^b	.62
range	.50 - .60	.52 - .86	.52 - .76	.59 - .66

Note: Critical values of the Wilcoxon Signed Rank Test are only available for an alpha level of .03 for one-tailed tests and .06 for two-tailed tests with an *n* of 5, as discussed in Methods

^a $p < .03$, one-tailed test; ^b $p < .06$, two-tailed test

^t trend of four of five focal children showing pattern; all other results not significant.

What Percent Of Initiations Do Not Elicit A Verbal Response By The Partner?

Here, two measures were statistically tested: the proportion of initiations by the focal child that did not get a response from the partner and the proportion of initiations by the partner that did not get a response from the focal child.

Focal children with SLI: SLI+SLI compared to SLI+TLD dyads. The focal children with SLI did not respond verbally to over half ($x = .56$) of the initiations by their TLD partners. They also did not respond verbally to many initiations by SLI partners, but their "no verbal response" rate was significantly lower at .45 ($T^+ = 15$, $p < .06$).

Focal children with SLI: SLI+CS compared to SLI+ASN dyads. There were no significant differences ($p > .03$) in the focal child's rate of response in the SLI+ASN and SLI+CS dyads ($x = .48$ ASN, $x = .51$ CS).

Focal children with SLI compared to partners with TLD. Partners with TLD also had high rates of "no verbal response". Their rate of no response was not significantly different ($p > .03$) from that of the focal children with SLI ($x = .69$ TLD, $x = .56$ SLI).

Further Analyses of Initiations That Did Not Elicit a Verbal Response

Given the high "no verbal response" rates overall, the sequences involving them were examined in more detail as described in the Methods section of this chapter. This analysis showed that in both the SLI+SLI and SLI+TLD dyads, approximately half of the initiations lacking a verbal response were followed by: (a) a nonverbal response, i.e. gaze at partner, action pertinent to initiation, or visual attention to something being spoken about by partner, (b) a verbal contribution that was, by coding definition, a 'counter-initiation' rather than a response, (c) a vocalization, or (d) re-initiations by the original speaker or interruptions that did not allow the partner time to respond.

The other half of the initiations were not followed by any behaviour that was clearly interpretable as responsive. It appeared they were ignored. These ignored initiations were, in turn, examined with respect to their communicative function. This analysis showed that the majority did not necessarily obligate a response: most were describing comments, communicative markers, or assertions. One might, in contrast, expect questions, bids for attention, requests for action, and requests for and offers of materials for assistance to be followed by some response. When only these types of initiations were considered, the rate of "no response" decreased considerably for all dyads to 5-12%.

Figure 5-2 shows how the focal children and their TLD partners responded to one another. As the graphs illustrate, children with SLI and with TLD were very similar, with identical rates (11%) of ignoring utterances that obligated a response. Partners with SLI failed to give a response in an obligatory context even less often, about 5% of the time.

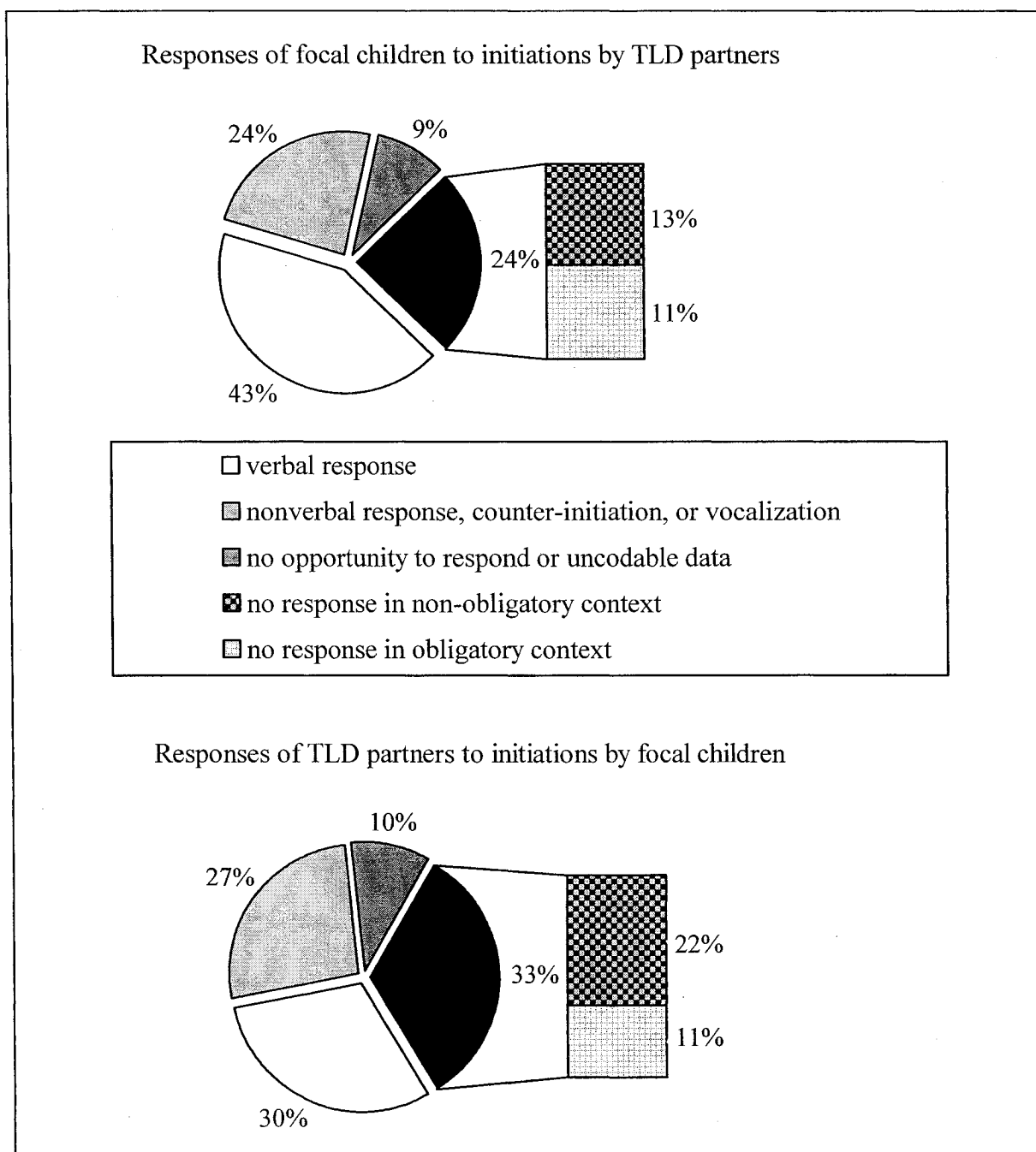


Figure 5-2. Responses of children with SLI and TLD to initiations (SLI+TLD dyads)

The presence of structural errors in an initiation did not alone account for ignoring by children with TLD. In fact, analysis showed that initiations that involved errors (lexical, phonological, syntactic, or morphological) were ignored at the same average rate as were well-formed utterances. Informal review of some of the videos was undertaken to ascertain other reasons why children might have ignored even some utterances that required a response. Reasons were multiple: the listener was simply not paying attention, a speaker's question seemed rhetorical, intelligibility was reduced, including due to "pretend" voices in play, or one speaker interrupted the other.

One focal child with SLI provided humorous insight into the reasons children might ignore even a partner's repeated bids for attention:

Shakina: *Lilah, look.*
 Shakina: *Lilah.*
 Lilah: [doing something while sitting on floor with back to Shakina, doesn't turn around].
 Shakina: *Lilah!* [in a gruff "pretend" voice]
 Lilah: *I'm busy right now* [laughs and continues her activity].

Functions of Talk: Communicative Acts

What Are Children with SLI and Their Partners Using Language For?

Across all the dyads, 3315 utterances were coded for communicative act according to the coding system described in the Method section above and provided in its entirety in Appendix 5-2. The distribution of communicative acts is provided in Table 5-3. As the figures show, the three categories of **Comments**, **Regulates**, and **Asks Info/Informs** jointly accounted for 90% of the data.

Table 5-3.

Distribution of communicative acts across all children and all dyads (in order of frequency).

Communicative act	Frequency	% of total communicative acts
Comments	1435	43.29
Regulates	1186	35.78
Asks Info/Informs	381	11.49
Asserts	131	3.95
Shares	75	2.26
Assists	30	.91
Negotiates Play Entry	29	.87
Uncodable	28	.84
Kids/Teases	20	.60

Furthermore, only four of 43 sub-categories occurred at rates higher than 5%. These were: (1) *Describes Ongoing Activity/Events/Materials* (2) *Marks or Evaluates Events*, both within the **Comment** category and (3) *Controls/Protests/Judges Partner Behaviour* (4) *States Desire/Intention/Plan for Self or Self & Partner*, both within the **Regulate** category.

Statistical analyses were conducted only for these predominant categories and subcategories, with the addition of the most frequent subcategories in the **Asks Info/Informs** category: *Asks Information/Label/Explanation* (ASK-INFO) and *Gives Information/Label/Explanation* (GIVE-INFO). Brief definitions of the categories and short transcript segments are provided below to elucidate the numerical data.

Comments. Comments were all declaratives related to events and the material environment. The subcategories *Describes Ongoing Activity/Events/Materials* (COMT:DESC) and *Marks or Evaluates Events* (COMT:MARK) are shown in the following

example from an SLI+TLD dyad. Transcript excerpts have been adjusted from CHAT format to enhance readability.

Situation: Nora (SLI) and Danielle (TLD) are placing Caillou stickers on a storyboard

Nora:	<i>Hey!</i>	[reacts to sticker she's put on board]	COMT:MARK
Nora:	<i>Caillou!</i>	[names sticker]	COMT:DESC
Nora:	<i>Daddy's sitting.</i>	[points to different sticker]	COMT:DESC

Although describing comments could consist of one or two words, as above, most comments were consistent with children's MLU's. One of the longer comments from the children with SLI was "*My doggie want to go play with this*". Another long comment was produced as a child viewed a sequence of cardboard cutouts that he'd laid out: "*A dog and a man's fly behind a car and playing in a boat*".

Asks Info/Informs. This category included requests for information about events and materials and responses to such requests. The subcategories ASK-INFO and GIVE-INFO are reflected in talk by the same two girls as in the preceding segment:

Danielle:	<i>There're two Caillous?</i>	AI/I:ASK-INFO
Nora:	<i>Yup.</i>	AI/I:GIVE-INFO

This 'yes/no' question and response sequence above was the most minimal type. Most requests were about location of objects (e.g. *Where's the truck?*) and children with SLI generally responded accurately to these. However, responses to some requests reflected either difficulty formulating an accurate response or misunderstanding of a question. In the next segment, a child appears to misunderstand her partner's use of the prepositional phrase "in" and tries to explain what a shovel is instead.

Situation: Shakina (TLD) is curious about white sand and asks Lilah (SLI) about it		
Shakina:	<i>What is this?</i>	AI/I:ASK-INFO
Shakina:	<i>Lilah, what's this in it?</i> [shows sand stuck to shovel blade]	AI/I:ASK-INFO
Lilah:	<i>That's a shovel.</i> [moving around on floor with toy]	AI/I:GIVE-INFO
Shakina:	<i>What's in it?</i>	AI/I:ASK-INFO
Shakina:	<i>What's in the shovel?</i>	AI/I:ASK-INFO
Lilah:	<It's> [//]* <i>There's something here, and there's something there.</i> [touches handle then shovel blade]	AI/I:GIVE-INFO

Later, I told Shakina it was sand in the shovel. She laughed and confidently replied:
"White sand! There's no such thing as white sand!"

Regulates. The **Regulate** category involved attempts by children to manage joint or partner activity and responses to those attempts. The most frequently occurring acts were *Controls/Protest/Judge Partner Behaviour* (REG:CO/PRO) and *States Desire/Intention/Plan* (REG:DES/INT). These subcategories are reflected in the next segment along with additional examples of the **Comment** category.

Situation: Earl and Brian (both SLI) are ending a fishing game then choosing a new activity		
Earl:	<i>Tada!</i> [shows last fish he has caught]	COMT:MARK
Brian:	<i>Yay!</i> [looking at fish Earl has caught]	COMT:MARK
Earl:	<i>Hmmm, I wanna play something else.</i>	REG:DES/INT
Brian:	<i>Yeah.</i>	REG:COMPLY
Brian:	<i>Let's play something else.</i>	REG:DES/INT
Brian:	<i>Let's play pirates.</i>	REG:DES/INT
Earl:	<i>You be xxx.</i> [xxx = unintelligible; hands Brian an unidentifiable figurine]	REG:CO/PRO

* [//] = rephrasing, as per CHAT format

Utterances in the REG:CO/PRO category could involve some kind of role or character assignment as in the preceding transcript, but most often did not. They were usually explicit demands: i.e. "*Wait!*", "*Push it really hard*", or clear protests regarding an action by the partner, i.e. "*Not do that!*"

Sharing and assisting. Acts which have been termed *prosocial* in other studies, like **Shares** and **Assists**, collectively represented only about 3% all the communicative acts. Both the **Shares** and **Assists** categories included subcategories of offering and requesting, as well as responses to them. The low rates of sharing acts may have resulted from the availability of adequate materials for both children. Children typically asked others to share when items or roles were unique, and responded to requests with delaying (e.g. "*Wait a second*"), declining, and accepting. Requests for and offers of assistance by the focal children occurred rarely but at nearly the same rates, and most requests met with a positive response.

Are There Differences in Frequency of Communicative Acts across Dyad Types or Children?

Two types of comparisons of the proportion of communicative acts are reported below. First, the most common acts by the focal children with SLI in the different dyad types are compared. These results are displayed in Table 5-4. The communicative acts by the focal children are then compared to those of the TLD partners, with the results provided in the text.

Focal children with SLI: SLI+SLI compared to SLI+TLD dyads. As shown in Table 5-4, the focal children used significantly more **Regulates** when paired with another child with SLI (SLI+SLI) ($T^+ = 15, p < .06$), but the results were not significant for the subcategories. Four of the five focal children used proportionally more communicative acts of the category *States Desire/Intention/Plan* in the SLI+SLI dyads.

Table 5-4

Communicative acts by focal children with SLI by dyad type: Proportion of total acts in frequently occurring categories

	Dyad Types			
	SLI+SLI	SLI+TLD	SLI+ASN	SLI+CS
Regulates	37.78	32.14 *	31.26	38.90 ^t
<i>Controls, protests, or judges partner behaviour</i>	12.30	10.74	10.16	12.94
<i>States desire, intention, or plan for self or self & partner</i>	13.26	11.10 ^t	9.91	14.52 *
Comment	42.97	49.06 ^t	48.25	43.49
<i>Describes ongoing activity/events/materials</i>	21.09	36.71 *	31.00	25.96
<i>Marks or evaluates events</i>	14.30	8.24 ^t	10.50	12.35
Asks Info/Informs	8.71	11.64	11.44	8.76 *
<i>Asks info/label/explanation</i>	2.64	5.19	4.18	3.51 ^t
<i>Gives info/label/explanation</i>	2.64	4.48	4.44	2.67 ^t

Note: The three principal (bolded) categories represent 90% of the total data; the subcategories represent 69%.

^t indicates trends in data; 4 of 5 focal children showing same pattern

* $p < .06$, two-tailed.

The difference for **Comments** was also not significant, but four of the five focal children used fewer comments with SLI partners than with TLD partners. In the subcategory analysis, all of the focal children used 'Describes' less often in the SLI+SLI dyads than they did in the SLI+TLD dyads. Four of five focal children also used more *Marks or Evaluates Events*.

Focal children with SLI: SLI+CS compared to SLI+ASN dyads. Focal children used significantly more **Asks Info/Informs** communicative acts when with an assigned partner (SLI+ASN dyads) than when with one they selected themselves (SLI+CS dyads) ($T^+ = 15, p < .06$). Trends were again present: more use of **Regulate** and subcategory *States Desire/Intention/Plan* in the SLI+CS dyads and more use of *Asks Info* and *Gives Info* in the SLI+ASN dyads.

Focal children with SLI compared to partners with TLD. Focal children used significantly more **Comments** than did children with TLD and, more specifically, significantly more communicative acts in the *Describes* subcategory ($T^+ = 15, p < .06$). There were no other significant differences between the focal children and their TLD partners in the **Regulates** or **Asks Info/Informs** categories, but the partners with TLD used each of these types of communicative acts more than the focal child did in four of five cases.

'Breakdowns' In Talk

How Frequently Did Requests for Clarification Occur?

The analysis of 'breakdowns in talk' began with identification of a particular communicative act, *Request Clarification*, and its counterpart *Give Clarification*, both in the **Asks Info/Informs** category. Together these comprised little of the communicative act data: less than 2% for both categories. In all, there were 38 separate requests for clarification

across all children and all dyads. The analysis of communicative acts showed no significant differences in the number of times the focal children with SLI made requests for clarification in the different dyads ($p < .06$). Given the lack of significant differences in the numbers of requests and the small number of tokens, additional data are reported only descriptively.

The number of requests is interesting in light of the number of turns and number of errors by the focal children. Of the nearly 2400 coded utterances by the focal children, only 1% generated a request for clarification. This was so despite the fact that focal children made either commission or omission errors in semantics, syntax, phonology, or morphology in an average of 16% of their utterances.

How Were Requests for Clarification Distributed?

Data were derived from the focal children with SLI and their partners given that clarification sequences involve, by definition, a speaker and a respondent. Requests were nearly evenly distributed across the dyad types: 20 in the SLI+SLI dyads, 18 in the SLI+TLD dyads. When broken down by partner selection, there were 17 requests in the SLI+ASN dyads and 21 in the SLI+CS dyads.

What Kinds of Utterances Prompted Requests for Clarification?

Both children with SLI and those with TLD requested clarification of each other. They did so following both well-formed utterances and utterances involving errors. Nearly half (47%) of the total queries followed misunderstood or inappropriate lexical items or content. In the following example, Nora requested clarification of a child with TLD. Her adoption of the erroneous "boller" for "roller" suggests she did not know the label for a rolling pin to begin with.

Situation: Nora (SLI) and Danielle (TLD) are making pizza with playdoh		
Danielle:	<i>I need the boller.</i>	[referent is playdoh rolling pin]
Nora:	<i>Boller?</i>	[asks clarification with specific request for confirmation]
Danielle:	<i>That.</i>	[provides clarification with specific information]
Nora:	[gives Danielle rolling pin she's been using]	
Nora:	<i>I have another boller.</i>	

In several cases (18%) the reason for the request was not clear and may simply have been a strategy to resist an assertion by the original speaker, as in the following example:

Situation: Brian and Nora (both SLI) are sitting in a train made of cardboard with chairs as seats. Brian is acting as the conductor and Nora as a passenger.		
Nora:	<i>Brian, later I be the bus driver?</i>	
Brian:	<i>We're not in [//] We're in the train.</i>	[corrects Nora's use of 'bus' driver]
Nora:	<i>Later I be the driver?</i>	
Brian:	<i>What?</i>	[asks clarification with non-specific request for repetition]
Nora:	<i>Later I be the driver?</i>	[provides clarification with repetition]
Brian:	<i>Who?</i>	[asks clarification for unclear reason]
Nora:	<i>Okay?</i>	
Brian:	[turns around and keeps driving]	

The source of the remaining clarification requests were as follows: 4 unspecified pronouns or referents (10.5%); 4 utterances of low volume (10.5%); 3 unmarked topic

changes (7.9%); 1 grammatical error (2.6%), and 1 unintelligible utterance (2.6%).

How Did Children Request Clarification and How Successful Was Repair?

The two examples above show the two most common types of requests for clarification. "Non-specific requests" such as *What?* or *Huh?* occurred 16 times, representing 42% of the data. This type of request resulted in successful repair only half of the time (56%). "Specific requests for confirmation" occurred 11 times, representing 30% of the data, and also resulted in successful repair only half the time (55%). Two other types of requests were present in the data, each involving the identification of elements that needed clarification or repetition but the rarity of these requests precludes meaningful interpretation of the rates of successful repair.

For most requests (32/38), repair was attempted, and these attempts were distributed equally across the SLI+SLI and SLI+TLD dyads. However, the repair in the SLI+SLI dyads was less successful than in the SLI+TLD dyads and children with TLD successfully repaired at higher rates (80%) than did children with SLI. The outcome of requests for clarification across both members of the dyads is shown below in Table 5-5.

Table 5.5.

Outcome of requests for clarification

	successful repair	failed repair	no attempt to repair
SLI+SLI dyads	9 (45%)	7 (35%)	4 (20%)
SLI+TLD dyads	12 (67%)	4 (22%)	2 (11%)

Note. Definitions of each outcome category are provided in Appendix 5-5.

Although the children in both the SLI+SLI and SLI+TLD dyads did not achieve repair in some cases, they usually did try. In the two following examples of SLI+SLI dyads, the children persisted in their attempts to understand each other. In the first segment, both Nora and Brian manifested a concern with repair and ultimately seemed to achieve an understanding although Nora did not respond to Brian's final request for clarification.

Situation: Nora (SLI) is in the large wooden playhouse which has been serving as the train station during dramatic play. She is manipulating papers which have been serving as tickets on other days. Brian (SLI) is outside of the playhouse.		
Brian:	<i>Why you wanna stay here all the time?</i>	Nora is in the playhouse
Nora:	<i>'Cause I want to fix my cards for you.</i>	
Brian:	<i>What?</i> [he is a couple of feet away]	[asks clarification with non-specific request for repetition]
Nora:	<i>I wan' fix this [= ? these] cards for you.</i>	[provides clarification with repetition]
Brian:	<i>What?</i> [approaches playhouse]	[asks clarification with non-specific request for repetition]
Brian:	<i>Cards for you?</i>	[asks clarification with specific request for confirmation]
Nora:	<i>No, you.</i>	[provides clarification with specific info]
Brian:	<i>Me?</i>	[asks clarification with request for specific info]
Nora:		does not respond; has back to Brian
Brian:		goes off to play alone

As shown in the next segment, the children did not always achieve repair through uniquely verbal means. Jason began by providing clarification verbally but ultimately resorted to showing Earl which instrument he wanted, labelling it simply as "this one".

Situation: Jason and Earl (both SLI) are playing veterinarian and treating dogs		
Jason:	<i>Okay now the other ear. The other ear you didn't check.</i>	
Earl:	<i>This?</i> [holds up otoscope]	[asks clarification with request for specific info]
Earl:	<i>Check?</i> [perhaps interprets "check" as the name of an instrument]	[asks clarification with specific request for confirmation]
Jason:	<i>No, no, no, that's not ch ...</i> [Jason wants syringe]	[begins to provide clarification]
Earl:	<i>This one?</i>	[asks clarification with request for specific info]
Jason:	<i>No, this one, this one.</i> [takes syringe]	[provides clarification]

Finally, communication breakdowns were not always signalled by requests for clarification. There were instances where children did not provide adequate information to their listener resulting in misunderstandings between the children. A marked example of this occurred when one of the children with SLI suggested that she and her partner play "the hammer game". She took a boxed game off the shelf, sat down, and told her partner "*You need to pick another one. I pick this one!*". It was only in transcribing the video that Lilah's intention became clear; she wanted Shakina to take a duplicate of the game on the shelf. That breakdown indirectly shaped much of the subsequent talk, as Shakina and Lilah competed repeatedly, half-seriously and half-jokingly, for the single hammer and pegboard.

In another example illustrated below, a breakdown seemed to be due to a combination of shifting intention and unintelligible words (line 7), unclear meaning (lines 9 and 11), and rising tension between the children. I intervened briefly as the two boys were nearing a

physical struggle over who was to write on a mini-clipboard while playing veterinarian, and the interaction ultimately ended on a positive note (lines 19 and 20).

- Jason: *Okay, okay, I'll do it.*
- Earl: *I want to write it.*
- Jason: *No, I'm gonna write it.*
- Earl: *I want to write it.*
- Jason: xxx* *I want* [whining].
- Jason: *I'm the doctor.*
- Earl: ***I want to xx the paper xx.*** (7)
- Jason: *I want, I'm writing it.*
- Earl: ***No, I showing this.*** (9)
- Jason: *No.*
- Earl: ***I putting the paper on.*** (11)
- Jason: xxx.
- Earl: *I not write it anymore* [sounding annoyed].
- Jason: *I'm writing it!*
- [Researcher explains that Earl just wants to show Jason something]
- Jason: [vocalizing in whining tone].
- Earl: *This one.*
- [turns pages on pad of paper on clipboard, stops at a blank one]
- Jason: *Okay.*
- Jason: *Oh #* oh.*
- Jason: *That's why.*
- Jason: *Thank you.* (19)
- Jason: *Thank you Earl.* (20)

These last examples demonstrate that discourse analysis combined with consideration

* xxx = unintelligible words, # = pause, as per CHAT format

of the situation allows an understanding of aspects of interactions that utterance-level coding sometimes fails to provide.

Summary

The results for turns indicated that the conversations between children with SLI were more sustained than conversations between children with SLI and those with TLD. There was also a tendency for those conversations to be more balanced in terms of proportion of turns, but the results failed to reach significance. The focal children with SLI, did, however, initiate significantly more than their partners with TLD did.

The response data showed that the focal children with SLI and the children with TLD frequently neglected to respond to their partners. The focal children were more responsive to their partners with SLI than they were to children with TLD. There were no significant differences in rate of response between the SLI+CS and SLI+ASN dyads. Descriptive statistics further showed that all children were more likely to provide a response when a question, bid for attention, or request for action was directed to them. Initiations that did not obligate a response, such as descriptions, communicative markers, and assertions were more likely to be ignored.

All of the children in the study used language primarily to comment on or evaluate immediate events and materials and to regulate activity by expressing their own desires and intentions and by managing the actions of their partners through demands, requests, and protests. In fact, these types of communicative acts comprised about 80% of the data overall. About a tenth of all the communicative acts were devoted to requests for information and for clarification and responses to those requests.

Across the dyad types, only a few significant differences in communicative acts were

observed. Focal children with SLI used fewer descriptive comments and more regulatory acts in the SLI+SLI dyads than they did in the SLI+TLD dyads. The result for regulatory acts was primarily due to a tendency for the focal children to state their desires, intentions, or plans in the SLI+SLI dyads. There were also significantly more acts in this subcategory in the SLI+CS dyads than in the SLI+ASN ones.

The findings for communication breakdowns and repair indicated that clarification and repair was attempted in both the SLI+SLI and SLI+TLD dyads. The data, while limited, further showed that the SLI+SLI dyads were less successful in their repair than were the SLI+TLD dyads. Interpretation of all of the results is provided in the Discussion chapter.

Chapter 6

ZOOMING OUT: GROUPS AT PLAY

Objectives and Design

The same five focal children with SLI observed in dyadic contexts were also observed during class free play and at recess. These two contexts are jointly referred to here as group play sessions, in contrast with the dyadic play sessions described in the previous chapter. The particular group contexts were chosen for four reasons: (a) they were similar in terms of children's relative freedom to select activities and partners (designated as "free play" by educators); (b) they were different in that classroom play was a "segregated" or SLI-only situation while recess was an "integrated" situation involving a minority of children with TLD as well as a majority with physical disabilities of variable severity; (c) they were both part of the children's preschool program rather than researcher-determined; and (d) they were expected to allow the greatest number of opportunities to observe undirected peer interaction as preliminary observations suggested that adult involvement was lower in these contexts than in most others.

The design for the quantitative analyses was a single group one-within-factor repeated measure, with Group comprised of the focal children with SLI and Group Play Context as the repeated measure (Class Free Play - SLI ONLY and Recess Free Play - SLI + TLD + children with physical disabilities, hereafter PD). The dependent variables were different from those investigated in Data Set 1. The variables were: (a) principal activity type (solitary, parallel/adjacent, interactive, etc.), (b) interactional context (dyadic or group), and (c) presence/absence of verbal exchange. Children's attempts to access ongoing play and

responses to others' attempts were analyzed descriptively. The focal children's activity partners were also recorded and the data analyzed to yield descriptions of peer relationships. Finally, some of the findings regarding individual children were interpreted in light of information drawn from teacher and parent interviews.

Methods

Data Collection

Presentation of Research to Participants and Researcher Role

As discussed earlier, the focal children knew their play was being recorded. Their teacher knew the goals of the study. At recess, teaching assistants, called "educators" at the site, supervised the children. They were told that the study was related to children's play interactions and could easily identify the focal child by the presence of the wireless microphone. Taping and its purpose were not discussed with the other children. Although clearly adults and children were aware of my presence, they typically ignored me and moved around me in the constrained recess area with little comment. I initiated to children occasionally: twice when I felt concerned about their safety, and once when I felt a child was likely to break an item he was playing with. Children initiated to me on three occasions, once to protest another child's behaviour, and twice to express their chagrin that another child was refusing to play with them.

Taping Schedule

Each of the five focal children with SLI was videotaped on two different days during periods designated as "free play" by the children's teacher and on two different days during a scheduled 15-minute morning recess period. The four sessions for each child were recorded within a two-week period for four of the children, and within a month for a single child.

Location

Class free play took place in the focal children's home classroom. Recess took place indoors in the winter and early spring. The children in the language class were brought by their teacher to another preschool classroom for recess to join children from three other preschool classes.

Duration

Class free play was variable in length, ranging from 11 to 29 minutes. Recess was scheduled for 15 minutes but was occasionally shorter due to prolonged snack or delays in transitioning from the home classroom to recess.

Organization of Free Play and Available Activities

Prior to the beginning of data collection for this study, free play in the language class usually took place as children entered in the morning. The teacher of the language class began scheduling additional and longer free play sessions during the data collection period. That decision was not based on accommodating the present research. Rather, the teacher independently decided that the children's needs had changed over the year and that a period of less structured activity would be beneficial. During free play in their 'homeroom', children were free to be in most areas of the classroom, with the exception of the circle area where daily routines and teacher-directed activities typically took place. Toys and activities that were available included: large vehicles that children could drive, dramatic play materials and props set up for the week, dress-up clothes, marble towers, car tracks, a playhouse, books, and playdoh.

At morning recess, four classes of preschoolers totalling 33 children joined daily and had been doing so since the beginning of the year. Three educators supervised recess.

Typically, some children were still snacking when the children from the language class arrived. All children were free to be in the desk area where snack was eaten or in a carpeted play area. The play area included large wooden building blocks, small vehicles, figurines, kitchen (stove, toy food, utensils etc.), dress-up clothes, foam letters, books, and other toys.

Interviews

Interviews of three mothers of approximately 45 minutes in length were conducted by the researcher after all observational data were collected. For one interview, an Arabic-speaking research assistant provided clarification and informal translation when the interviewee elected to answer in Arabic, her first language. The interviews were audio recorded as described in Chapter 5 and transcribed in their entirety. The questions on which the interviews were based are provided in Appendix 6-2. A 45-minute interview of the language class teacher was also conducted. Those questions are provided in Appendix 6-3.

Coding

Coding System and Implementation

The coding system in Appendix 6-1 was used to code play. The system was developed by the researcher to capture broad features of peer interaction and talk. As noted in the Design section of this chapter, these features were as follows:

- Activity type:* solitary, parallel/adjacent with peer, interactive with peer, interactive with adult, other (wandering, observing, or transitioning between activities), uncodable
- Interactional context:* solitary, dyadic, group, uncodable
- Verbal exchange:* nonverbal, overheard talk, verbal, vocalization, self-talk, uncodable

The researcher and assistant recorded codes by hand on sheets designed for this purpose while viewing the video on a large computer screen. Coding from video allowed continuous sampling in contrast to "partial interval sampling" where on-site observers typically alternate between observing and recording.

Code Assignment

Codes were recorded for the first 10 consecutive minutes of play. Coders assigned codes while or immediately after reviewing each 15 seconds of video. Repeated viewing and listening to each segment was the rule. In some cases more than one activity type occurred. These segments were treated in two ways: (1) judged according to a hierarchy, ascending from least to most interactive and from least to most verbal, with the "higher" level recorded for that segment and (2) double-coded when activity plus partners changed within a segment. That is, if a child was engaged in interactive activity with one child, and then began a new, interactive activity with another, he/she received two codes for interactive activity. When activities involved verbal interactions initiated in one segment but completed in another, the verbal code applied to the segment in which the exchange was completed.

Coders and Coding Reliability

The segments were coded by the same research assistant who participated in transcription and in the coding of the dyadic play sessions. The researcher reviewed all of the coding while viewing the videotapes and independently coded a portion for the purpose of calculating reliability. Inter-coder reliability was calculated for 25% of the group play samples: three 10-minute recess sessions and two 10-minute class sessions. The sessions for reliability were chosen to collectively represent each of the 5 children and the 2 contexts. Sessions of 10 minutes were preferred over a segment of each session to be sure that the

coding system adequately captured transitions and changes in activity and playmates.

Reliability was calculated using the formula: $[number\ of\ agreements / the\ number\ agreements + disagreements] \times 100$. Inter coder reliability was as follows:

<i>Activity:</i>	%agreement	84.92
<i>Interactional context:</i>	%agreement	91.77
<i>Verbal exchange:</i>	%agreement	85.11

Although the coding appears straightforward, the reliability figures demonstrate that disagreements did arise. Most disagreements had to do with (a) interactions that were transitory and that occurred while other interactions involving multiple interlocutors were taking place and (b) instances where the focal child took a peripheral role in a group interaction.

Statistical Analysis

Code frequencies were entered into Excel spreadsheets to generate data for statistical analyses. As originally planned, the data for each focal child were collapsed across the two sessions to yield a single "Class Free Play" and single "Recess" score. The Wilcoxon Signed Rank Test, described in detail in Chapter 5, was then used to test differences between the two group play contexts.

Interlocutor Analysis

For each 15-second coded segment, the peer partners of the focal child were also recorded whenever applicable. From these, the percent of total segments during which focal children were observed interacting with specific peers was calculated and categorized: less than 25%, 25-50%, 50-75%, 75-100%. The findings were then compared across play sessions and the aggregated data used to derive the graphical display of peer relationships provided in the Results. The data are supplemented with observations conducted in the course of this study and with information from teacher interview.

Results

Activity, Interactional Context, and Verbal Exchange: Comparison across Play Contexts

In the first analysis, activity, interactional context, and verbal exchange were compared across the class and recess group play contexts, and the differences tested with the Wilcoxon test. The findings in Table 6-1 show that there were no significant differences between the group play contexts in any category. Trends in the data - specifically, four of five children displaying a pattern - have been noted as was done for the dyadic play results. Trends were towards more parallel play and more adult participation, generally child-solicited, in the class context as well as more talk that was self-talk, vocalization, or overheard talk. The "overheard talk" category refers to talk by peers that the focal child was clearly attending to but was not directly engaged in.

Table 6-1.

Activity type, interactional context, and presence of verbal exchange by group play contexts

	<u>% of total observations</u>		
	Group Play Context		Result
	Class	Recess	
<i>Activity Type</i>			
<i>Interactive (with peers only)</i>	63.49	71.37	n.s. ^a
<i>Interactive (with adult(s) and peers)</i>	10.92	02.95	n.s. ^a
<i>Parallel (adjacent to peer(s))</i>	10.89	06.13	n.s. ^t
<i>Solitary (alone)</i>	11.58	12.78	n.s.
<i>Other (wanders, observes, transitions)</i>	03.12	05.68	n.s.
<i>Uncodable (temporarily out of camera view)</i>	00.00	01.09	n.s.

Table 6-1 continued

		<u>% of total observations</u>		
		Group Play Context		
		Class	Recess	
<i>Interactional Context</i>				
<i>Dyad</i>	<i>(one partner)</i>	52.21	33.51	n.s.
<i>Group</i>	<i>(multiple partners)</i>	33.08	47.16	n.s.
<i>Solitary</i>	<i>(alone)</i>	14.71	18.22	n.s.
<i>Uncodable</i>	<i>(temporarily out of camera view)</i>	00.00	01.09	n.s.
<i>Verbal Exchange</i>				
<i>Verbal</i>	<i>(speaks to other(s) or is spoken to)</i>	68.62	72.30	n.s.
<i>Nonverbal</i>	<i>(neither speaks nor is spoken to)</i>	18.89	15.17	n.s.
<i>Other</i>	<i>(vocalizes, attends to others talking, engages in self-talk)</i>	11.15	11.60	n.s. ^t
<i>Uncodable</i>	<i>(unintelligible exchange or interaction out of camera view)</i>	01.33	00.91	n.s.
^a tested at $p < .03$, one-tailed test; all results with no superscript tested at $p < .06$, two-tailed test				
^t trend, difference was found for four of five children; n.s. not significant				

Activity, Interactional Context, and Verbal Exchange: Collapsed across Play Contexts

Given that the class and recess play were similar, the results can be collapsed and discussed as a whole. The children engaged in a considerable amount of interactive activity when left to their own devices. In fact, nearly three-quarters (over 74%) of all the observed play segments involved some interaction, and most of that interaction was with peers. If parallel activity is added, the figures rise above 80% (.85 for class play; .81 for recess).

When children were engaged in interactive activities, they sometimes were with a single child in dyadic interaction and sometimes with a group of children. Patterns varied across children. Individual results are discussed in the next section and also displayed graphically.

There was a good deal of talk going on, with over two-thirds of all the segments (68.6% in class, 72.3% at recess) involving verbal initiations by or directed towards the focal children. Almost all of the talk involved other children with SLI, including the talk during the "integrated" recess period. The tendency for the focal children to remain together partially explains the similarities across contexts where some differences had been expected based on the different composition of the two groups. The section below on Partners addresses the issue of interlocutors and their selection.

Activity, Interactional Context, and Verbal Exchange: Individual Results

Individual results for the five focal children are displayed in the bar graphs in Figure 6-1. These data relate to peer interaction only. Interactions involving adults represented only 6-10% of the data for each child and uncodable data represented less than 1%; these data have been excluded from the chart.

A few points can be made about the results displayed in Figure 6-1. The first relates to how representative the data are of children's interactional patterns across the four observed play sessions. Earl, the first participant, generally interacted more than the interactive column of data indicates. His results were influenced by solitary play in one class play session. The results for Jason are somewhat atypical in the other direction. He played alone often, particularly at recess. The mean score across contexts for interactive activity conceals that somewhat. The results for Lilah, Nora, and Brian appear fairly typical, although these children too showed some mild variation. The data imply that multiple observations are

optimal for drawing accurate conclusions about children's interactional patterns.

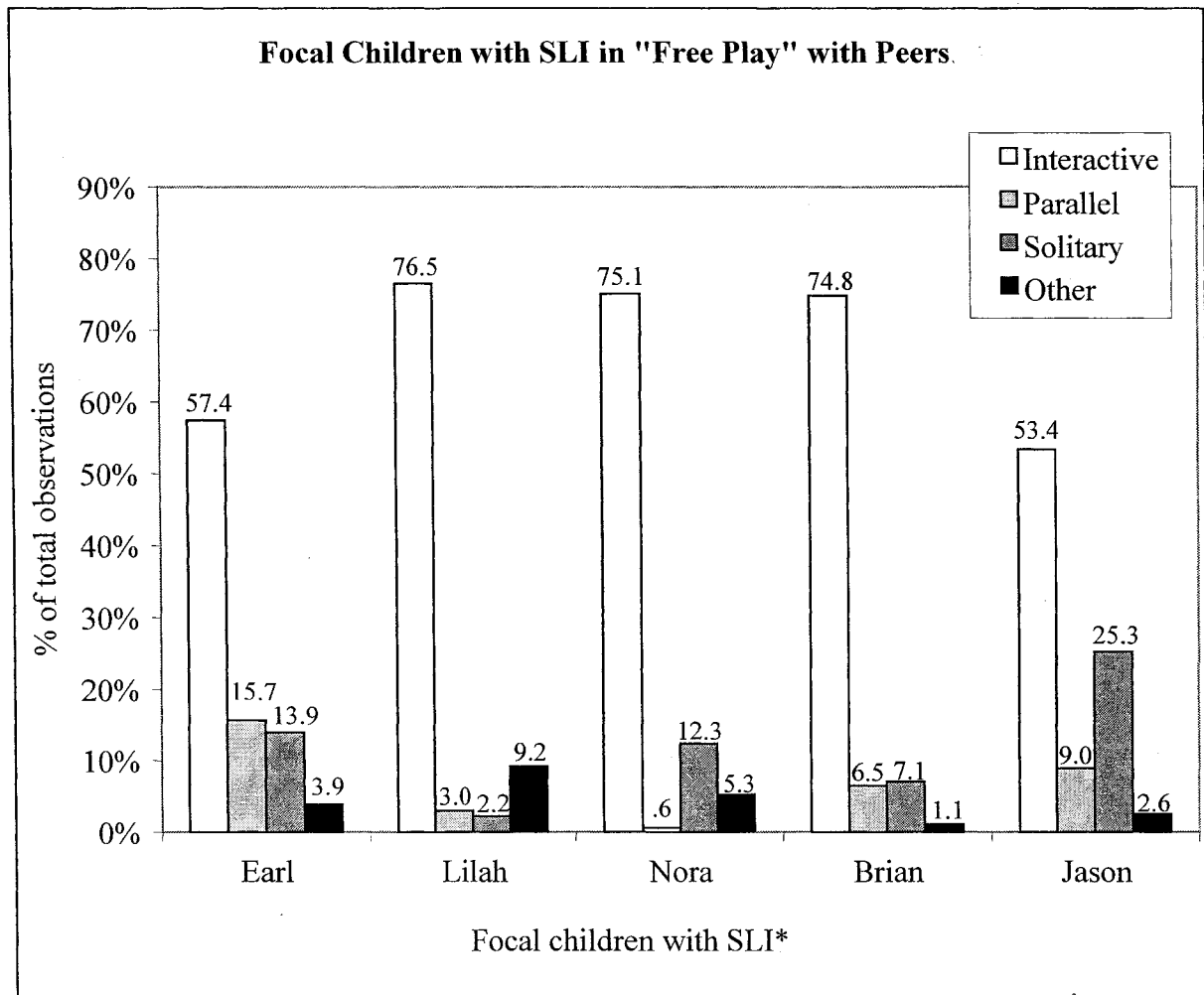


Figure 6-1. Children with SLI in free play with peers: Individual data

* A diagnosis of SLI for Jason was questioned in the year following data collection

Note: The columns add to less than 100% as interactions involving adults (6-10% across children) and uncodable data (<1% in each case) have not been plotted.

Interactive activity, the white bars in Figure 6-1, can be further divided into dyadic or group activity. Earl and Brian spent about half their interactive activity in dyads and half in groups. Their respective dyad/group splits were .46/.54 and .48/.52. For Lilah and Nora, about one-third of their interactive activity involved dyads and two-thirds, groups; the

dyad/group splits were .36/.64 and .40/.60, respectively. Jason spent most of his interactive time in dyads (.74) and little time in groups (.26). As the graph shows, Jason is also the child that spent the most time in solitary play. The other children did not spend much time in solitary play. Nor did they spend much time observing from the periphery or wandering around, behaviours indicated by the "other" category. Although the coding definitions allowed an interactive code for joint activity, whether verbal or nonverbal, the majority of interactive activity involved verbal exchange.

In summary, the group and individual data showed that four of the five focal children were engaged and active interlocutors in dyads and groups and during both class and recess free play. Who exactly were these children interacting with and where did the fifth focal child who had a greater tendency to play alone fit in? These questions are addressed in the next section.

Partners

The focal children with SLI were, by definition, potential partners for each other during the class play. They also tended to remain with their classmates with SLI during recess despite the following facts: there was no obligation to do so; there were 25 other children present that the focal children had attended recess daily with for several months; some of these children took the same school bus as the focal children according to teacher interview; and the focal children had become at least superficially acquainted with some of the reverse-integrated children during the dyadic play taping for this study.

Figure 6-2 shows the usual partners of the focal children with SLI. These data are based on partners within and across play sessions. For example, Brian was a focal child in two recess sessions. For the other 8 observed recess sessions in which he was not the focal

child, he was a partner in 7 of them. In 4 of those 7 sessions he was a partner more than half the time. It is through a like process that the generalizations for each child displayed in Figure 6-2 were derived.

The named children in the figure are all children from the language class. The double arrowed lines ($\leftrightarrow$) indicate that the two children sought each other out; initiations were bilateral. A dashed but double-arrowed line indicates that bilateral initiations occurred, but at a lower rate than those indicated by the solid lines. A single arrow line ($\rightarrow$) indicates that the initiations were unilateral. A dotted line indicates fleeting, unsustained interactions or rejected initiations. A lack of connecting lines means that interactions were not observed.

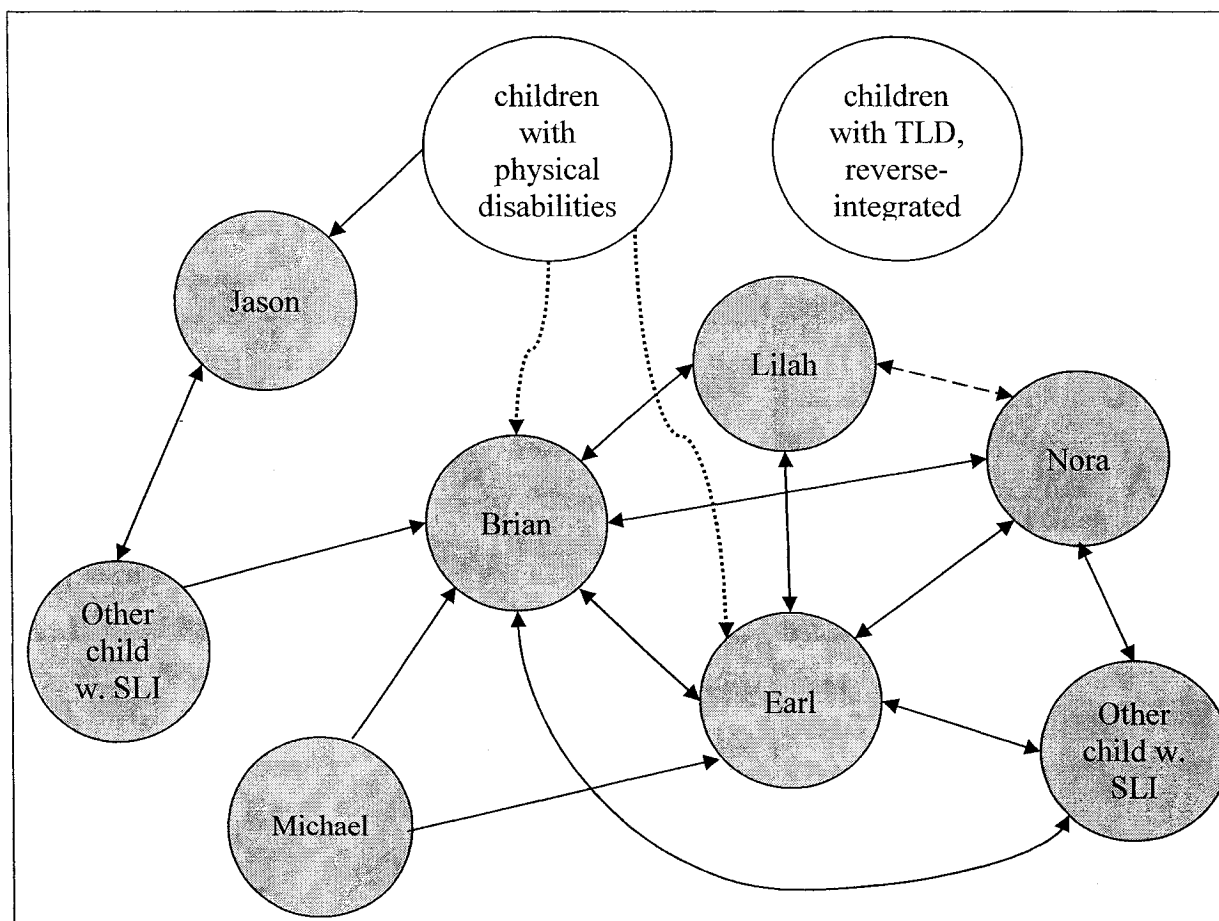


Figure 6-2. Peer relationships of children with SLI observed in free play.

Children with SLI Relative to Children with TLD and PD

As Figure 6-2 illustrates, in the 10 observed recess sessions there were no occasions where the focal children with SLI approached any of the children with TLD, nor did those children approach the children with SLI. However, observational notes for recess sessions not intended for these analyses indicated the following. First, Brian asked to play with the girl he had chosen for the dyadic session of this study on the preceding day. She said no, reconsidered and said yes, and Brian joined her in building a block tower. On a second occasion, Lilah was observed interacting with two children with TLD. On a third occasion, I suggested to one boy with TLD that he join Jason in play, which he promptly did. The coded data reported for the analyses here certainly capture the predominant pattern but the data do not reflect occasional exceptions like these, probably because of their rarity.

There were four occasions where children with physical disabilities initiated some sort of interaction with the focal children, but these were either transitory or unsuccessful. In one of the two transitory cases, a trio of boys in the PD group participated as firefighters in a "*Fire! Fire!*" scenario acted out by the children with SLI. In the unsuccessful initiations, a single child with PD made some nonverbal move towards a child with SLI that was not accepted. For example, one girl picked up a book that a focal child had just been flipping through a moment earlier, and he grabbed it back. She then retrieved a different book and laid it near him, but he pushed it onto the floor. Only Jason sustained interaction with a physically disabled child during one recess session. That child joined in to play marbles, Jason accepted, and the two played adjacently and jointly for several minutes with some talk involved.

Children with SLI in Interaction with One Another

The "other children" with SLI in the diagram are those whose parents did not want them to become a focus of study. One of them is part of a core group of children who select each other often, and one is a bit more on the periphery of that group, as are Jason and Michael. The solid connecting lines between the children with SLI are indicative of strong, consistent patterns of selection and interaction that held true both at recess and in class free play. These results were confirmed by observations of other situations, children's choices in the child-selected condition for the dyadic sequences reported in Chapter 6, and, as described below, through teacher interview.

Insiders and Outsiders

Figure 6-2 shows that the children with SLI banded together in the presence of others and within that band further divided into an "inside" or "core" group and a somewhat more marginal "outside" group. In an interview conducted after play data were collected, the teacher was asked about children selecting each other for play in the classroom. She noted the tendency for selection patterns to spread:

Having a specific partner, it seems to spread, you know, like, if one person sees it as desirable then everybody sees it as desirable ... So at the beginning of the year Brian was the desirable one and it might not have occurred to ... say Lilah, on her own, to want to be paired up with Brian. But because you know William wanted and Earl wanted and Nora wanted, well then it must be something good. And I'm finding that the same thing is going on with William you know, like he's the desired one (author note: William was a child in the language class but not a focal child in this study) .

The teacher, Annie, further identified Lilah as being the one child who had not really been in the "desirable role", that is, overtly and consistently sought out by one or several classmates. The teacher's impression was partially confirmed by observations. The class and recess free play data here showed that Lilah did participate with others in play, but somewhat less

frequently and for shorter periods compared to the other children in the core group shown in Figure 6-2. Lilah was also rarely in a leading role but rather joined activities underway, and as the data showed, tended towards group interactions rather than dyadic ones. The tendency for Jason to play with the particular child noted in Figure 6-2 was also confirmed by the teacher. Finally, the teacher confirmed that Michael and Brian were likely to play together but she evaluated their relationship as more reciprocal than the free play data here indicated.

Observations and interviews suggest that group status arose from a combination of individual characteristics and group dynamics. As for individual characteristics, in Lilah's case, personality and developmental history seemed to play a role. The teacher described her as "pretty independent" but also noted that she was sometimes "quietly waiting to be chosen". When Lilah's mother was interviewed, she described Lilah as "strong", "smart", "quiet", and "observant". She also described Lilah as refusing interaction with other children when she was a toddler, screaming "No!" when approached, and as having few friends when she attended daycare: "[N]obody['s] best friend ...best friend her teacher and her computer". According to Lilah's mother, it was only during the data collection year that Lilah had really expressed a desire to play with other children other than her older sister at home. Her language skills had improved rapidly at the same time, and although she had initially been diagnosed with a severe language impairment, the speech-language pathologist serving the language class evaluated the impairment as "mild" at the end of the data collection period for this study.

Jason's position may have resulted in part from a strong preference for a single activity: constructing a marble tower and then racing the marbles down the chute. He occasionally invited others to join him by playing with the second available marble tower and

generally accepted peers' participation happily when he was approached. Records of Individual Education Plan meetings showed that Jason's mother reported that he also often played alone at home, quite unlike his twin brother who interacted more with other children. Both Jason and Lilah, then, seem to show patterns of interacting that were similar in and out of school.

In the year following this study, Jason's diagnosis with SLI was questioned due to concomitant fine and gross motor delays of an uncertain but possibly neurological cause. At the time of this study, his language test scores were similar to those of the other focal children, though his MLU was shorter. One feature of his speech noted in the analyses of the dyadic interactions but absent in the speech of the other children was high frequency of intra-utterance or intra-turn repetitions, e.g. "*Right, right, right, right, right, there*", or, in a single turn: "*I want two [marbles]. You get three. You get three. You get three. I want two*". A causal relationship between these kinds of turns and Jason's peripheral status clearly can not be determined from this study, but such turns were often ignored by partners and suggest idiosyncrasies in speech as a potential avenue of further investigation.

Michael, the other child on the periphery, was excluded as a focal child because he was believed to have more general developmental delays, as described in the Methods in Chapter 5. Test results showed that his language skills were similar to his classmates, but observations suggest that his expressive language was similar to or perhaps even more advanced than his classmates. Michael tended to float in and out of interactions with different partners at recess or to play alone. He sometimes sought out others in the core group with variable success. Michael might have stood out somewhat because of physical characteristics: he was shorter and frailer than his peers were, he needed to wear a helmet for

gym, his lungs were periodically checked by the school nurse in front of the other children, and he had a breathy, low intensity voice.

These characteristics of particular children, however, should not imply that position in the group was uniquely attributable to their qualities. There were also group dynamics and characteristics of children in the core group that might have contributed to the patterns seen. Two of the children in the core group – Earl and Nora – were very persistent in assuring themselves a playmate through a variety of strategies. Nora, for example, often "adopted" a particular child for free play, and seemed to play a big sister role to the smaller, slightly younger boy of her same ethnic group. Nora and Earl also repeatedly made requests to play with Brian, sometimes competing with one another for his attention. They thus inadvertently and publicly situated Brian in a coveted role. Brian, in turn, gained access to all members of the group, as indicated by the many arrows pointing in his direction in Figure 6-2, and with that access, the "power" to refuse or accept interaction. Some children, then, by virtue of their own characteristics, tenacity, and needs, assured their own acceptance while granting popularity to others. Furthermore, relationships were sometimes actively negotiated in explicit talk about friendship. This talk is reported in the next chapter along with other kinds of peer talk observed across a variety of activities.

Summary

In summary, there were no significant differences between class and recess play for activity type, interactional context, or verbal exchange. Children with SLI tended to be engaged with peers in interactive activity marked by verbal exchanges in both contexts, and interacted in dyads as well as in groups. Solitary activity, wandering, and prolonged

observing were rare. Even at recess when other interlocutors were available, the vast majority of interactive activity was among the children with SLI. Within the group of children with SLI, stable patterns of interaction and relationship were found.

Chapter 7

TAKING A DIFFERENT ANGLE: DISCURSIVE EVENTS AT SNACK, PLAY, AND CIRCLE TIME

Objectives

The data reported in Chapters 5 and 6 were complemented by an exploratory investigation of other features of the peer talk of children with SLI. In this third data set, longer stretches or episodes of peer talk were examined with attention to their content and functional properties and with a focus on group processes rather than individual performance. Most of the episodes involved multiple participants. The data showed how the children use language to negotiate their relationships and the world of play.

Data Sources and Data Collection

The data were drawn from observations of 10 snack periods, eight of them videotaped; several play sessions from Data Sets 1 and 2, all of them videotaped; and 10 circle times, one of them videotaped and the remainder described in observational notes (see Appendix 7-1 for an example).

The class schedule, provided in Appendix 7-2, was adhered to strictly on some days and more loosely on others. Morning snack was just before recess and usually lasted about fifteen minutes, with children getting up to put away their lunch bags and play once their food was eaten. The snack at the end of the day was briefer and concentrated on drinking and eating. At snack-time, the children and their teacher were seated in the snack area as shown in the diagram in Appendix 4-4.

Morning circle was also a daily routine, typically occurring within a half hour of children's entry into school. Morning routine included weather, days of the week, daily "job"

assignment, and review of the day's schedule. Afternoon circle time often involved teaching or review of weekly concepts or vocabulary, book reading by the teacher, and a closing song.

The dyadic and group play sessions recorded and reported on in Chapters 5 and 6 are reconsidered here with a particular focus on pretend play. A single session of the group play sessions was transcribed for the purposes of the analyses in this chapter.

Methods

Blum-Kulka et al. (2004) have proposed a model for systematically investigating peer talk. A coding system associated with the model is not yet available in English, but the model is sufficiently detailed in their report to allow its use as an interpretive framework here. The model is based on a view of peer talk as a *double opportunity space*. In this view, talk functions simultaneously as an opportunity to negotiate childhood culture, including friendship norms, and as an opportunity for pragmatic development. The model is empirically derived from a longitudinal study of peer talk by two cohorts of 20 Israeli children each, one cohort 4-6 years old at the outset of the study and the other 9-10 years old.

In the model, *discursive events* found in spontaneous peer interactions have four significant dimensions: *activity type*^{*}, *thematic frame*, *generic resources*, and *key*. *Activity type* is externally or institutionally framed and the temporal and physical boundaries are adult-determined. So-called "free play" would be an activity type in preschool. *Thematic frames* can be defined by general topic, e.g. food, or in terms of how distant in space or time or how familiar the events or people being talked about are to the speaker. *Generic*

^{*} *Activity type*, is, by coincidence, the same term used in Data Set 2 to describe what children were doing during free play; here it is used differently

resources refer to genres. The authors define these as "culturally conventionalized" discourse associated with some prototypical communicative end. While the authors' own ongoing research is intended to identify preschoolers' genre repertoire, examples given included stories, gossip, explanations, arguments, and jokes, and the report suggests these were further divided, e.g. "pretend-narrative" might be considered a subgenre of stories.

Finally, the model draws on Goffman's notion of keying. *Keying* refers to internal framing of events and the tones that accompany the framing: serious or pretend, funny. The most salient keying reported for preschoolers in Blum-Kulka's study was in pretend play. During such play, children evoked the pretend frame through register shift, voice, discourse markers, and statements such as *"Let's say we make a trip"*, *"Let's say we were small"*. Using this model, the verbal duelling found by Varga described in Chapter 2 would be an example of a "poetic/playful" key, a "ritualistic" key, and a "subversive" key as one of the children starts to talk about eating people's "butts", apparently a forbidden word in that preschool.

In the next section, snack-time talk, free play talk, and circle-time talk are described with reference to these dimensions as well as to certain themes in the literature discussed in the final section of Chapter 2.

Results

Activity: Snack

Snack-time was typically not a quiet period, but it was a 'down time' from the group's otherwise busy schedule as shown in Appendix 7-2. Children spent time drinking and eating, of course, but they also talked together, with their teacher, and with a teaching assistant or volunteer when they were present. Snack was externally framed in the sense that it began and ended when the teacher said it would and followed certain rules, for instance, remaining

at the table while eating.

Keys and Keying

For most observed snack-times, talk was spontaneous and undirected by adults, although some of the talk was addressed to the teacher or teaching assistant. On a single occasion, the teacher used snack-time as an opportunity to have the children practice a linguistic form: the modal "*will*". Each child was asked to take a turn asking a classmate the question "*What will you eat for lunch today?*". As the children responded, the teacher reiterated, elaborated, or recast their responses, and then recorded the responses on a flip chart attached to an easel board, a practice children were accustomed to as it was used in other structured activities. The children also prompted the responses of their peers. For example, when one child was asked a question but failed to respond, a peer alerted him: "*Brian, someone's talking to you*". Brian, in turn, disagreed when Michael said he would have yogurt for lunch, pointing out that yogurt was for snack. When Brian realized that Michael had two yogurts, one for snack and one for lunch, a flurry of comments ensued:

"Two yogurt" and big watermelons

Brian:	<i>You have two yogurt!</i>	[loudly]
	<i>You have two yogurt!</i>	
William:	<i>Where?</i>	[getting out of seat to look]
Roberto:	<i>Two!</i>	[also getting out of seat to look]
Brian:	<i>Two yogurt.</i>	
Roberto:	<i>That's xx.</i>	
Brian:	<i>It's that one and that one.</i>	[pointing]
Michael:	<i>Yeah, that's one different than that one's um ...</i>	
William:	<i>What?</i>	
Michael:	<i>Different.</i>	
William:	<i>Watermelon.</i>	
	[no response]	
	<i>I said watermelon.</i>	
Michael:	<i>Yeah, that one's watermelon.</i>	
	<i>I love watermelon.</i>	

William: *Me too.*
 Brian: *Me too, I like to eat watermelon.*
 Roberto: *Me too!*
 Brian: *I like to eat xx big xx.*
 Earl: *Me too!*
 Brian: *I like to eat a lot, a lot of watermelon.*
 Lilah: *I want to [//] I like to eat big big <watermelon> [?].*
 [stretches arms out to show how big]
 Roberto: *xxx watermelon.*
 [overlaps almost completely with Lilah]
Not xx.
 Brian: *Because if you eat all that big one you'll get sick.*
 [stretches arms out as Lilah had]
 Michael: *Brian, Brian, look.*
 [shift in topic]

[Episode 1-snack April 28]

During the exchange above the teacher was talking with Nora who had solicited her attention during Michael's turn to recount a time she had opened a yogurt container at home. Both Nora and her peers temporarily and effectively re-keyed the structured snack-time to its usual key of casual child-led conversation, reflected in the episodes below.

Themes

Sameness. While the initial and overt topic in Episode 1 was Michael's snack, the talk could also be described as having two other themes: preference and sameness. These themes emerged on several different days at snack-time. In "sameness" talk, children typically verbally compared their snack to that of their peers. The children sometimes also called upon the teacher or teaching assistant, Carl, to "mark" the sameness, as in the following episode.

"We got the same"

Roberto: *Jason, the same!*
 Jason: *Oh yeah, it's the same.*

Roberto: *Ah Jason, Carl, Carl, same grapes!*
 Lilah: *Carl, we got the same together.* [compares juice to Brian's and Earl's]
 Earl: *Annie, look!* [Annie has left classroom]
 Carl, look!
 Lilah: *We got the same.*
 Carl: *Wow, three juices all the same.*
 Jason: *um Carl, Roberto's got the same grapes.*

[Episode 2-snack May 2]

Another episode involving Nora and Brian followed a couple of minutes later:

Brian: *I got cheese.* [holds up his cheese]
 Nora: *The same cheese.*
 Hey, Brian, the same cheese.
 Brian, the same cheese.
 Brian, the same cheese. [calls repeatedly; Brian is chatting with Earl]
 Brian: *No, this is my cheese.*
 Nora: *The same.*
 Earl: *No, white, is white, is white.*
 Nora: *It's the same.*
 Brian: *No, that's, you have, you have xx and white.*
 [seems Nora's cheese is not the same colour as Brian's]

[Episode 3-snack May 2]

The final comparison on this particular day was made by Earl, who noted the similarity of Brian's snack to William's:

William: *Look, I got chocolate.*
 Chocolate bar. [granola bar]
 [A few seconds later Brian unwraps something from his snack box]
 Earl: *William!* [William is talking to Nora]
 William!
 Brian have a granola bar like you!
 Brian: *Yay!* [holds up his bar]
 William: *Yay!* [holds up his bar]

[Episode 4-snack May 2]

"Sameness" talk served as a way of sharing experience, as a *common ground* activity as discussed in Chapter 2. The snacks themselves provided concrete reference points for discussion. There were also opportunities for children to learn vocabulary from each other, as in Earl's accurate use of *granola bar* instead of *chocolate bar*. Finally, the talk permitted children to act as "commentators", as when Earl found his way into the conversation not by comparing his food to anyone else's, but by noting the similar snacks of his friends in Episode 4. Sameness talk was observed in different contexts, too, with children remarking on similarities of their clothes, right down to the designs on the bands of their underpants.

Food preference. A second type of talk observed during snack had to do with expressing opinions about food as in Episode 1 in which several children expressed their love of watermelon and further elaborated on the topic by expressing just how much watermelon they could eat. In the episode below, Nora's mango became the center of attention after Annie, the teacher, commented on it. Although the teacher was involved in the conversation, the children were attentive to their peers' turns, both responding to them directly and to their content in subsequent initiations to Annie, the teacher. Children evidently felt no obligation to echo the teacher's positive opinion of mangos:

Who likes mangos?

Annie: *Oh, that's mango.* [teacher comments on what Nora is eating]

Nora: *Mango.*

Annie: *Oh yummy.*

I love mango.

Nora: *Me too.*

William: *Not me, I don't love mango.*

[the conversation breaks and rebegins about 90 seconds later]

Nora: *I love, I love mango.* [to Annie]

Annie: *You love mango?*

Nora: *Yeah.*

Annie: *Oh I love mango too.*

William: *Not me!* [to group]
 Lilah: *Not me!*
 Earl: *And not me!*
 William: *I don't like that.* [to Annie]
 Annie: *You don't like mango?*
 William: [Shakes head no].
 Lilah: *Me too, I don't like that mango.* [to William]
 Earl: *Me too, me too!*
 William: *Not me!*
 Annie: *Have you ever tasted it?* [to Michael]
 Lilah: *Not me!* [to Annie]
 William: *Nope.*
 Earl: *No.*
 William: *Not me I don't ...*
 Brian: *I put the mango in the garbage.*
 Earl: *Yeah, me too.*
 William: *And you too.*
 Brian: *Annie? Annie?*
 Annie: *Yes Brian?*
 William: *I ate the mango.*
 Brian: *I don't like mango.* [to Annie]
 Annie: *You don't like mangos?*
 Brian: *They're yucky.*
 Michael: *I like mango.*
 Annie: *They're very sweet.*
 William: *Michael said he like mango.* [to Annie]
 Annie: *You like +/-*
 I love the texture of mangos, they're soft.
 Nora: *My momma like mango.*
 Annie: *Your mummy likes mangos?*
 Nora: *Yeah.*
 Michael: *Not my daddy and not my momma.*
 Lilah: *Not my sister and not my daddy and not my mommy and not me.*
 Earl: *And my momma don't like mango.* [overlaps with Lilah]
 Annie: *Nobody in your family Lilah?*
 Lilah: *Yeah.*
 Annie: *Nobody likes mangos?*
 Lilah: *Yeah.*
 Michael: *I love mangos # and my mom loves mangos # and my sister loves*
 cheese xxx.
 [as Michael speaks children disperse as their snacks are completed]
 [Episode 5-snack April 30]

It is not clear who had actually tasted mangos and who had not. The children were nevertheless motivated to participate in the conversation by aligning themselves with one position or the other: liking or disliking mangos. With some adult support, the children were able to participate in multi-party talk, to imitate and counter each other's contributions, and to take part in the gradual elaboration of topic, represented in Episode 5 in the shift from personal to familial opinions of mangos.

Affiliation. On another day, a child expressed a different kind of preference: affection for a particular child. First, Roberto stated that he liked Earl. Earl did not explicitly deny the claim, but countered by saying he liked Michael, and Brian echoed. Roberto then turned his attention to Lilah, who reciprocated. Jason meanwhile steadfastly stated his friendship with Annie, the teacher.

"I like Earl"

Roberto: *Annie, I like Earl.*
[the children had previously been talking about their snacks]
Jason: *I like Annie.* [the teacher]
William: *I don't love Earl.*
[unclear if William is serious or not or who has heard this as he is moving around as he speaks]
Roberto: *Annie?*
Annie: *Yeah?*
Roberto: *I like Earl.*
Annie: *You like Earl?*
Roberto: *Yeah.*
Jason: *I like Annie.*
Teacher: *I like Earl too.* [to Roberto]
Jason: *I like Annie.*
Annie: *I like you too Jason.*
Roberto: *We are friends.* [means he and Earl]
Earl: [looks over at Roberto then at Michael sitting across from him]
Earl: *Well I like Michael.*
Brian: *No, I like Michael.*
Roberto: *I like Lilah.*

Jason: *Annie's my friend.*
Lilah: *I like you Roberto.*
Jason: *Annie's my friend.*
Roberto: *I love Annie.*

[Episode 6-snack May 23]

There are three striking features to this episode. First, it illustrates how children negotiated alliances through talk, and just how bluntly. Second, Roberto, the child who initiated the talk, and Jason, the one who affirmed his relationship to Annie, are friends themselves but also among the children identified as a bit peripheral to the peer group, as described in Chapter 6. Third, Lilah, also described in Chapter 6 by the teacher as least likely to be chosen by peers for activities, reciprocated when Roberto said he liked her. That exchange culminated a week during which Roberto had been observed seeking Lilah out: asking to sit with her at circle, comforting her when she fell, watching her paint, and generally being more attentive to her than he had been in the preceding weeks of observation.

The teacher's response to talk about friendship varied depending on its tone. At the end of this particular episode, she said to me she liked "their little love fests". On a different occasion, Nora was annoyed at something Earl had said and retorted by saying she didn't want to be his friend. The teacher suggested "Let's everybody be everybody's friend", and responded similarly on other occasions when friendship was publicly questioned.

Genres

The episodes above were among the longest at snack-time. Most of the talk involved briefer exchanges between children, or children and adults. Frequent topics were snack itself and requests to adults for help with snack containers and wrappers. The most common genre during snack-time was conversation about immediate events, including the longer multi-party expressions of preference discussed in the preceding section.

One kind of extended discourse emerging during the preschool years is narratives of personal experience. Narrative has been defined differently across studies*. For example, in one study of 3-5 year-olds, a "description of one or more past events" was considered a narrative (Stone, 1992, p. 373). In another study, "two or more utterances referring to a recounted event temporally displaced in the past or in the future" constituted a narrative (Küntay & Şenay, 2002, p. 563). Applying the latter and broader criteria to the snack-time data, still only three narratives were observed. One of these was noted above and consisted of a child recounting to the teacher her feat of opening a yogurt container at home. Another account of a past experience by the same child was addressed directly to a peer. Others, including the teacher, were listening too, while three children were engaged in a different conversation.

Nora's little brother

Nora: *Roberto?*
 Roberto: *What?*
 Nora: *My brother's angry and I laugh to him when xx on my birthday.*
 'Cause 'cause my momma put in the chair.
 And Ali said "Hey!"
 xxx.
 Roberto: [laughs]

[Episode 7-snack April 28]

The brief anecdote included several elements often associated with narrative: an attention-getter to secure the floor, reference to past events, a specific temporal setting "on

* There is an extensive literature on narrative in which narratives have been characterized with reference to their correspondence to particular schemas, whether they are elicited or spontaneous, whether they are about fictive or actual events, personal or vicarious experience, ongoing, past, or upcoming events, etc. The term narrative is used here interchangeably with "recounts" or "anecdotes", with an understanding that subtler distinctions can be made.

my birthday", an introduction of "*my brother*" followed by nominal reference "*Ali*", and reported speech. An object has been omitted ("*My momma put ____ in the chair*") and the chair has not been specified, as, perhaps, "*a high chair*" or "*a baby chair*"; Nora may have been talking about her mother putting Ali, her three-year-old brother, in a high chair against his wishes. Roberto reacted by laughing, perhaps because he inferred the missing information, perhaps in response to either Nora's tone in the reported speech "*Hey*" or to the final utterance which was unintelligible to the researcher from the tape, or perhaps simply to fulfill his role as audience. If the interpretation suggested here is correct, appreciation of the narrative would be enhanced by knowing that Ali does not usually sit in a high chair. Nora apparently assumed that her listeners knew her brother or could infer why his sitting in a chair was funny. It is possible that they did as children were sometimes picked up by parents accompanied by siblings.

Ely and McCabe (1994) adopted a broad definition of language play in their study of kindergarteners, including in it word play, sound play, and verbal humour, including riddles, jokes, teasing, and "humorous descriptive accounts and narratives". Adopting Ely and McCabe's definition, children were observed engaging in language play at snack, circle time, and in dyadic play. While not every instance of language play was recorded, several were. Examples including Nora making and describing a "*cheeseman*" she'd made out of her snack, a description her smiles indicated she found amusing. On one occasion, the teacher wanted the children to finish their snack before recess and asked for "*Less talking, more eating*", a request Lilah reversed by suggesting "*More talking, more eating*", with a playful-mocking tone, and which Roberto echoed, laughing. During other activities or during transitions between them, Lilah was also observed teasing peers occasionally. For example, she

answered a question by Nora with "*no Monsieur*", apparently knowing that she was calling Nora "Mister" in French. On another occasion, she joked playfully, for example, handing out paintbrushes but asking her peers "*You want some paper towels?*" and laughing. Brian, too, joked by substituting an inaccurate word for an accurate one, like describing Earl as "*coloring it purple*" when he and Earl both were aware he was not using purple at all. Earl was observed using what Ely and McCabe categorized as word play, producing nonsense rhymes like "*donkey wock, five clock*". He and William were also observed bumping into each other on purpose on a few occasions and saying "*Excuse me!*" and laughing, presumably at the incongruity between their actions and words. Roberto played with sound and perhaps meant to tease Jason as he purposefully mispronounced his name. Jason often calling out "*Pokemon*" while he played marbles, apparently just for the fun of saying the word, a kind of "sound play" according to Ely and McCabe. Finally, Nora narrated a scenario in dyadic play with Earl in which she gradually removed all the stick-on facial features and hair from her puppet.

"The monster get all my things"

Nora: *Hey I no can find my eyes or anything!*
They're gone!
The monster get all my things now.
Oh no they're get everything now!
Now I no can see.

[Episode 8-dyadic play June 3]

Ely and McCabe (1994) noted that language play can serve a variety of functions, including expressive, poetic, and metalinguistic ones. In this study, language play also appeared to serve multiple functions, among them the expression of *merriment* and *amity*. The children also expressed positive affect through simple interest in one another, as seen in

the enthusiastic response to Michael's two yogurts in Episode 1 and in the excitement about sameness in Episodes 2-4, and in praises of one another, as noted in the discussion of circle time in a later section of this chapter.

Activity: Pretend Play

The dyadic play in Data Set 1 and the group play in Data Set 2 both included some pretend play. In the dyadic play, four episodes of pretend play occurred in the SLI+SLI dyads. Of the five episodes in the SLI+TLD dyads, Jeannette was involved in four of them. One episode involving her and Lilah and one episode involving two children with SLI are discussed. Two episodes of group pretend play are presented first.

Themes

Taking care of doggie. On seven different occasions, six of them during recess, some of the children with SLI were observed playing "doggie". The play sometimes began, stopped, and restarted. That pattern was typical of recess generally, where play and play partners often changed rapidly. The origin of the dog play could not be determined. Animals and pets was a classroom theme in late May, while the doggie play was observed from mid-April to early June.

In the first episode below and in three others, William played the role of "dog", although he had the capacity to play a talkative role. The dog role was also taken by others but only briefly on other occasions. Nora almost always assigned the dog role and, as evident in the excerpt below, also tried to control the other roles.

"He's the dog"

Earl:	<i>William? William? William?</i>	[calls from few feet away]
Nora:	<i>He's a dog.</i>	

Earl: *Lil' boy, lil' boy.* [to dog]
 [Earl joins Brian in petting the dog, Lilah joins in]
 Lilah: *Hi doggie.*
 [Nora glares at Lilah]
 Lilah: *Stop!* [to Nora; objecting to glaring]
 Brian: *You wanna be xxx?* [to Lilah]
 Lilah: *No.* [to Brian]
 Nora: *No not her, not her.* [to Brian]
 Brian: *Well, who do you wanna be?* [to Lilah]
 Nora: *Not her.*
 Lilah: *The mother.* [to Brian]
 Nora: *No, I'm being the mother.*
 Brian: *xxx (unintelligible).* [to Lilah].
 Lilah: *Well, I decide to be the daddy.* [others are moving, she stands
 apart with hands on hips]
 Nora: *No, no, he's the daddy.* [points to Earl].
 Brian: *You're the daddy.* [to Earl].
 Lilah: *So I decide to be the brother.*

[Episode 9-Doggie, recess pretend play April 16]

As Nora, Brian, Earl, and William, the dog, moved away, Lilah abandoned the group as did Brian and Earl soon after, leaving Nora and William to continue their play and the others to rejoin it again a couple of minutes later:

Brian: *This be, you be the mommy.* [re-establishes roles]
 Nora: *Yeah.*
 Earl: *This is a big doggie.* [puts down his truck and begins to pet the dog]
 Lilah: *Doggie! Doggie! Doggie!*
 [from few feet away, William does not respond]

The play continued later with William, a "*big doggie*", playfully jumping on Brian and knocking him over, a chorus of "*It's breakfast time*", the dog pretending to eat from a toy bowl, the dog running away and being chased, the introduction of a real cloth to cover the doggie, and the literal dragging of the dog to "*go caca*". The play continued on and off for over ten minutes in the same vein.

Rescuing. With the exception of one episode of "doggie play" in class, the themes of pretend in the class free play corresponded to the weekly theme and dramatic play scene. Elements of the play script and some vocabulary had thus already been provided explicitly by the teacher. One of the class themes was Boats, with an associated "Rescue" theme. Episode 10 below began with four children getting into a large cardboard boat equipped with a lifesaver on a cord, sailor hats, a sail, paddles, and an anchor. One child began throwing the lifesaver to Earl outside the boat. A shark was then introduced into the scene by Brian.

Shark!

Brian: *Watch out, the shark is coming!*
William: *The shark is coming!*
Lilah: *Aah! [screaming].*
The shark is gonna eat Earl!
Earl: *Ah, there's a shark, he's eatin' me!*
[Nora throws lifesaver, Earl grabs it]
Lilah: *Heave ho, heave ho! [others join in]*
[Earl is safe and in the boat]
Brian: *Shark! Shark!*
Earl: *Nora, wanna go stuck on the mud?*
[The child being saved is to be "stuck in the mud"]

[Episode 10-class pretend play April 30]

Very similar sequences followed for about five minutes, with the same elements: a shark, a child "*stuck in the mud*", and a lifesaver being thrown to rescue him or her.

An additional scenario in recess play was "Fire!"; it consisted of hollering "*Fire*" repeatedly then running helter-skelter to put out the flames. "Fixing the car" and "fixing the house" also occurred. Only Jason was not observed participating in any of the group pretend play. As discussed in Data Set 2, he was typically engaged in solitary or parallel play with his favorite marble game during the group play sessions, but he did engage in pretend play in the dyadic play sessions.

Keys and Keying

In all of the "*Doggie*" episodes, the keying, or signalling of entry to pretend play, was accomplished through the announcement of roles. The dog then played its role and Nora, in the self-appointed role of mother, usually walked it and prepared its food. The other roles, brother, sister, grandpa on one occasion, did not seem to have specific actions or verbalizations associated with them. The children simply took turns greeting the dog, occasionally described it as a "*big doggie*", or "*little doggie*", pet it, called it to come play or eat, watched it eat, and pulled or dragged it. The episodes thus involved little verbal co-construction of scenario, but the repetitive and simple storyline and the action component allowed the children to enter and stay in a shared world of pretend.

In the *Rescue* episode, children had props, and one of three roles: "driver" as a couple of children called the captain or sailor role, "thrower" of the lifesaver, or "needing to be rescued". The roles were not assigned; rather the children took turns at them with a couple of brief disagreements over who would take what actions and who would wear a particular sailor cap. Children's entry into the cardboard boat and subsequent use of props signalled the pretend; no verbal keying was used or really necessary. The children used language to establish the minimal plot but not to elaborate it much. Rather, they re-enacted the plot several times, similarly to what was seen in the doggie episodes. It is not clear how the idea of being "*stuck in the mud*" took root instead of a more conventional scenario of someone drowning or encountering a shark while swimming. The children had been read a storybook not long before in which a car was stuck in the mud and probably borrowed the reference from there.

In summary, a small set of pretend meanings was communicated, acted on, and

enjoyed in the two episodes discussed. Language was used to assign roles, to set up a scenario, as in *The shark is coming!*, and formulaically, as in "*Heave Ho*". The re-enactments of the *Doggie* play and the repetitions within the *Rescue* episode allowed the children to create and maintain pretend play with uncomplicated plots and multiple participants.

Establishing Shared Meaning

In the dyadic play, each participant had a heavier role in sustaining the play and plots that tended to thicken with varying degrees of success. In the first episode, Lilah, a child with SLI, and Jeannette, a child with TLD, were continuing their airplane play. The episode begins with them seating themselves in the "plane": chairs arranged as passenger seats beside a cardboard facade of an airplane.

The airplane trip

Jeannette: *Hello!* [in "airplane"]
Lilah: [smiles at Jeannette and gets into airplane]
Lilah: *I just wanted to wait* (pauses) *for it.*
[sits in the pilot seat and arranges objects on desk in front of her]

The referent for the pronoun "*it*" used by Lilah could not be determined from the videotape. She continued by insisting they "*Wait*", until Jeannette asked her to please drive:

Jeannette: *Please drive please!*
[stands up to see what Lilah is doing]
Lilah: *Wait!*
We need to wait for the cook.
We need, we need to wait for the coo(k), cook comes.
Jeannette: *The cook, what's a cook?*
Lilah: *The cook who's over there.*
[indicates with chin thrust and glances over to the other side of room;
Jeannette seems satisfied and waits]

[Episode 11-dyadic pretend May 16]

Lilah has introduced an unusual character into the airplane play: the cook. She may have been referring to a flight attendant role that she took in classroom play on another day under teacher supervision. That role involved serving food to passengers. While the play may have gone in a different direction had Lilah requested they wait for a flight attendant, Lilah's introduction of a cook was acceptable to Jeannette, and perhaps even accurately interpreted as an original elaboration of the airplane trip script.

In the next excerpt, Jeannette wanted to land but Lilah introduced the idea that her house was broken by the police. Jeannette then suggested the fanciful idea that a bird ate her house, but Lilah returned to the "broken house" theme and even acted as "director", instructing Jeannette to " *Say, 'I want to go to another house' "* as shown in the final utterance below:

Jeannette:	<i>C'you take me home?</i>
Lilah:	<i>Your home is broken.</i>
	<i>Somebody broked it.</i>
	<i>Maybe the police who broked your house.</i>
Jeannette:	<i>No the bird did it.</i>
Lilah:	<i>The bird +/. [interrupted by Jeannette]</i>
Jeannette:	<i>The bird, the bird, say "Ooh, it's my food, yummy yum"!</i>
Lilah:	<i>Go to another house so it won't be broke.</i>
	<i>So say, "I want to go to, to, another house", okay?</i>

As the play continued for another four minutes, Jeannette introduced other ideas that departed from the ordinary, for example, calling the airplane on the phone to pick her up at home, and telling Lilah she wanted to arrive somewhere on the pretend trip by saying "*Please make me*". One reader suggested that the idea and forms used by Jeannette might be borrowed from television, for example, a program like *Star Trek*. Both girls contributed to the airplane trip script while adding creative and unique elements. The play ended with Jeannette being deposited at "*grandma's house*", a destination suggested by Lilah and

perhaps drawn from a story read by the teacher in class about a train ride to Grandma's.

In the next episode, Jason and Earl are playing veterinarian. Here, Earl manifested some difficulty in communicating the sequence in which he wanted his pets checked by Jason, the veterinarian. Rather than saying *The cat is first, then the dog*, or *The cat is before the dog*, he produced "*The cat is first the dog*", leading Jason to understand that he was to check the dog then the cat. Earl then tried a different tactic, simplifying to a single subject in line 11.

The cat is first

- Jason: *I need your pets, pets.*
Where's, where's one th(at) I co(uld) check first?
- Earl: *Uh ...*
Where's my cat?
- Earl: *Oh.* [brings cat to examining table]
- Jason: *Cat, okay.*
Cat.
- Earl: *The cat is first the dog.*
- Jason: *Dog, okay.*
xx the cat.
- Earl: *The cat is first. (11)*
The cat is first the dog.
- Jason: *xxx.*
- Earl: *The cat the dog, the cat the dog, the cat the dog, the cat the dog.*

[Episode 12-dyadic pretend May 29]

As the play continued, Earl described his dog's injury as follows:

- Earl: *He get hurts his tummy and crash the car.*
- Jason: *Crash the car.*
- Earl: *And xx broke his head.*

Earl struggled with expressing more complex meanings than his syntactic abilities allowed. He and Jason tried to achieve a mutual understanding of events, but Jason

ultimately acted out the role of veterinarian independently of the scenarios Earl was proposing.

In a different episode, also involving vet play, Earl wanted to his dog to have "bugs" (fleas):

"I wanna play bugs"

Nora: *This is all your pets.*
Earl: *Yeah.*
Nora: *They're sick, huh?*
Earl: *Yeah.*
[touches stuffed animals]
Nora: *Hey!* [objects to Earl touching stuffed animals]
Earl: *xxx.*
Nora: *Earl!* [objects again]
Earl: *Yeah?*
Nora: *They're sick!*
Earl: *Yeah, <he> [?]* get hurt in the ear and xxx.*
Nora: *I get a shot.*
Earl: *And after shot, and after then it be this.*
[points to flea powder container which has picture of a "bug" on it]
He get scratched his bugs.
And there's bugs in there.
Nora: *There.* [has given shot]
Earl: *And there's bugs.*
Nora: *This one.* [refers to bandage]
Earl: [goes behind vet table, presumably to get flea powder]
Nora: *Hey Earl, this!*
Earl: *I wanna play bugs.*
I want to stay at home.

[Episode 13-dyadic pretend June 3]

Earl abandoned the play at the end of the episode, apparently frustrated with his limited role in directing the play. It is likely that Nora understood Earl's desire to treat the

* [?] = questionable utterance, as per CHAT format

dog for fleas, but was simply resisting his scenario so as to assert her own. This episode and the previously discussed ones illustrate the contribution of language to sociodramatic play and the potential for grammatical difficulties and lexical errors to disrupt meaning temporarily, but they also attest to the importance of other factors in shaping play, including the roles children adopt and their patterns of relating to one another. Finally, all of the episodes demonstrate that the motivation to engage in and even direct pretend play is present in these children with SLI and not easily thwarted.

Activity: Circle Time

During morning circle, each child selected a task for the routine. The tasks included singing the attendance song "Who is at school today?", singing the days of the week, writing the date on a calendar, putting beads on a string to mark the date, singing a weather song, and graphing the weather. Another rotating "task" was to be the first person in line as the children walked to other classes or left for the day, a role the teacher devised to avoid daily competition for that position. Daily roles were all represented visually with pictograms attached to a carpet board with velcro. The pictograms were thus movable and easily coupled with the photograph and name card of the child responsible. Visual reminders of the schedule for the day were also posted. Although circle time was a routine activity that generally proceeded in a predictable sequence, children interacted spontaneously with one another and with the teacher, too.

Negotiating Companionship

As at snack-time, children sometimes expressed their desire to be with a particular child as circle began, either by inviting someone to sit in an adjacent chair, or by asking someone if they would like to play later on. In Episode 14, William was seated beside

Roberto waiting for circle time to begin. Nora wanted William to sit near her, as usual, and took him by the hand to come sit beside her.

"Wanna play with me?"

Nora: xxx. [takes William's hand, leads to seat near her]
Roberto: No! [objects to Nora 'taking' William away]
Nora: Come Roberto. [invites Roberto to move too]
Roberto: I sit William. [he's on one side of William, Nora on the other]
William: You like Roberto? [to Nora]
Nora: Yes.
Lilah: I sit with Nora! [goes over to Nora's other side]
Roberto: Nora, wanna play with me?
Nora: Yup.
Roberto: What game?
Nora: Um xx xx game.
Roberto: <Boat> [=? both]. [may have said "both"]
Nora: <Boat> [=? both].
Roberto: William you play with me too?
William: Yeah.
Roberto: OK.

[Episode 14-circle April 28]

Earl, listening in on the conversation, then decided to declare his affection for Brian, who was in the bathroom at the time:

"I love Brian"

Earl: Annie?
Annie: Yes?
Earl: I love Brian.
Annie: You know what?
You could tell him that too.

[Episode 15-circle April 28]

In fact, Earl did not tell Brian he loved him on this particular day but he did on others. He also often asked "Brian, wanna play with me?", during circle, recess, and other times.

Brian usually said yes, and also asked Earl to play at times. When Brian said no, Earl did not give up easily, as evident in the following segment:

"Can I play with you?"

Earl: *Can I play with you?*
Brian: *No!* [he is with Michael, both acting as train conductors]
Earl: *No?*
Earl: *Can I play with you tomorrow?*

[Episode 16-entry May 6]

Brian's answer could not be heard on that particular day but on another day he replied to Earl's same question "*Tomorrow and tomorrow and tomorrow*", and Earl appeared to be more than satisfied.

Keys and Keying

Once circle time had begun, children took their turns in accomplishing the morning routine but punctuated it with talk on other topics. Typically, bids to the teacher, i.e. calling "*Annie, Annie*", marked the move from routine to talk on other topics. The children used the bids to re-key the event and to introduce their own topics, much as they had restored the one structured snack-time to its usual 'chatty' tone in Episode 1. Even when children spoke to the teacher, it was not uncommon for peers to respond or to join in, as shown in the following excerpts. The teacher, Annie, generally let the children talk for a bit then redirected them to the next step in the morning routine.

William: *Annie, why Michael walking like that?*
Nora: *Because he hurt on his two knees.*

Nora: *Annie, Annie, there's a bead there* [on the floor]
Annie: [asks Nora to pick it up and put it back in its place]
Earl: *Where is it?*
 Oh there is.
 There's a bead on the floor.

William: *xxx bead.*
Roberto: *A bead on the string.*

Brian: *Hey, look the book!* [to Annie, about book on display]
Roberto: *Yeah.*
Brian: *What's that book <it> [?] called?*
Annie: *It's called "Who sank the boat".*

[children join in asking 'Who?' sank the boat; Earl looks at book cover]

Earl: *It's a horsie and a cow.*
William: *Horse and a cow.*
Roberto: *Horse and cow?*

Earl: *Annie, where's Terence?*
Earl: *Where's Terence?*

[asking about a child who had visited for program admission]

Annie: *Terence, he's only gonna be back next year.*

Earl: *Oh.*

Brian: *Next year?*

Nora: *Terence?*

Terence? [to William]

A curly hair? [to William]

William: *Nah, it's not xx.* [Terence had straight hair]

Children also echoed what Annie, the teacher, said occasionally, directing their talk to peers:

Annie: *Nice 6 Roberto.*
Earl: *That's a nice 6.*
William: *Nice 6 Roberto.*
Nora: *Nice 6.*

The children were observed complimenting each other in the same way a couple of other times at circle time without teacher modelling. During other activities, such as art, they also praised, e.g. "*Good coloring*", sought praise, e.g. "*You like mine?*" and competed about who would complete their work first, e.g. "*I go faster*".

As the short episodes above indicate, certain children were more likely to talk to peers during circle time. Jason was never observed initiating a topic unrelated to the morning routine and rarely contributed to the topics established by peers. Topic initiations by Lilah were also rare, and neither child initiated a narrative about a past event over the ten observed circle times, while each of their peers tried at least once.

Genres and Themes

There were three kinds of talk at circle time: talk specific to morning routine, like "talking about the weather"; conversational exchanges between peers or between child and teacher on child-determined and miscellaneous topics, and the sporadic reporting of past events, ranging from single utterances to somewhat more elaborated narratives. Reporting of past events was usually prompted by a physical or conversational referent. For instance, Brian's comments on a new book on boats were followed by two peers' reports of their own experience with boats, one of which is provided below. Another child told about visiting a farm right after the teacher announced that the class would soon be visiting one. The children's reports usually elicited responses from the teacher as well as peer contributions:

Roberto:	<i>Annie, I cut my hair.</i>	[touches hair]
Annie:	<i>You did cut your hair!</i>	
	<i>It looks very nice.</i>	
William:	<i>And Samir cut all the hair.</i>	[Samir is a boy in another class]
Annie:	<i>Oh, did he shave his head?</i>	
William:	<i>Yes.</i>	

Earl:	<i>My daddy take me to the farm.</i>
	<i>I see lots of animals.</i>
	xxx. [unintelligible]
	<i>And he's going run to the road.</i>
	<i>And he said "Wait, Wait, Wait"</i>
	<i>Daddy's going to get the horse.</i>

Nora: *Annie?*
 I swim on a swimming pool. [makes swimming motions]
 And I see the boat far away.
 A big boat. [stretches arms out to show big]
 William: *Not me, I don't.*
 I don't have a pool.

Occasionally, narratives got "lost in the shuffle" because others were engaged in the routine of circle time or in conversation. The teacher did, however, generally scaffold children's narratives through questions and elaboration and encouraged the children to do the same for each other.

In the snack-time data, even children who had not tasted mangos gave an opinion of them. In the final segment above, William reports what he does not have. Küntay and Şenay (2002) noted the same kinds of contributions by preschoolers in their study, and called them reports of "non-events". These kinds of turns, as well as all of the data discussed in this chapter, attest to children's perception of talk as a social activity and as a terrain where belonging and differentiation are negotiated. They say, both directly and through emulation: "Me too!". They say, directly and through silence: "Not me!" and "Not you!". They do not act simply as transmitters of information but rather as engaged participants who use language for many purposes: to negotiate and affirm their links to one another, to assert their position and, occasionally, to deny a position to others, to talk about past events and imagine other ones, to be competitive and encouraging, too. What is salient in the analysis of the discursive events is the children's willingness to talk, the close attention they pay to the talk of their peers, and their ability to fulfill a wide range of functions, regardless of their language impairments.

CHAPTER 8

DISCUSSION AND CONCLUSIONS

The research questions, their rationale, and interpretations of the findings are summarized in the first section of this chapter. The second section focuses on how the study contributes to knowledge. In the third section, directions for future research are recommended.

Summary and Interpretation of Results

The study focused on pragmatics, defined both as the conversational behaviours of individuals and more broadly as children's collective use of language for instrumental and interactional purposes. The data consisted of three sets, each involving the same children with SLI. The results and the conclusions for each data set are summarized below.

Data Set 1: Dyadic Play

In the first data set, five children with SLI, referred to as the focal children, were paired with four different peers for dyadic play. Two of the partners were classmates with SLI, one of them assigned by the researcher and one of them selected by the child. The other two partners were children with TLD from other preschool classes in the same school, again one assigned and one child-selected. Coded transcripts of the videotaped play sessions yielded data on conversational moves (i.e. patterns of initiating, maintaining, and responding), communicative acts, and communication breakdowns. The goal of the analyses was to determine whether language use by the focal children with SLI was (a) affected by conversational partner and (b) comparable to patterns exhibited by their age mates with TLD in the SLI+TLD dyads.

Predictions

As outlined in Chapter 1, the SLI+SLI dyads were predicted to meet certain criteria of successful conversation more closely than the SLI+TLD dyads. The focal children were expected to engage in more sustained conversation, to take a relatively equal number of verbal turns as their partners, and to be more responsive to partner initiations when paired with an SLI rather than a TLD partner. These predictions were based on the reasoning that similar linguistic abilities of the children with SLI would have positive and equalizing effects on turn-taking. In contrast, the focal children were predicted to produce a greater variety of communicative acts and to participate in relatively more successful repair of communication breakdowns in the SLI+TLD dyads. These predictions were based on previous research reviewed in Chapter 2 suggesting greater dependence of these variables on linguistic ability.

Results and Conclusions

As noted in Chapter 5, the Wilcoxon Signed Rank test detects a significant difference in samples of five participants only if all the individual results show the same directionality. Instances where four of the five focal children showed similar results were reported as trends in Chapter 5, and are referred to in the same manner in this chapter. The child constituting the exception to the trend depended on the variable; no single child was an outlier for all.

Continuity of talk and conversational moves. The predicted outcomes for the SLI+SLI dyads were supported when trends and significant results were combined. Children's conversations in the SLI+SLI dyads were more sustained, there was a trend towards relatively balanced numbers of verbal turns, and the children with SLI responded significantly more often to their SLI partners than to TLD ones. These results can, as originally proposed, be attributed to the greater linguistic similarity of the children with SLI,

as well as to their familiarity. As discussed in Chapter 6, the children in the language class were less familiar with their peers with TLD than initially anticipated. There are no studies investigating the influence of familiarity on language use by children with SLI with which to directly compare these results. A relationship between familiarity and communicative behaviour has, however, been found for children with TLD. Howes et al. (1994) examined the dyadic interactions of 4 year-olds and found that friends used significantly more communicative behaviours that extended conversation and play than unacquainted children did. It is also interesting to recall that Hansson et al. (2000) found balanced and smooth interactions in dyads composed of children with SLI and familiar peers.

Three of the four predictions for partner selection method were not supported. There was more sustained talk in the SLI+CS (child-selected) dyads, but there were no significant differences between the SLI+CS and SLI+ASN dyads in how often the focal children with SLI initiated, responded to partner initiations, or asked for clarification. Other potential contributors to levels of initiating, responding, and repair are discussed later in this chapter.

The expectation that children with TLD would dominate conversation was also not met. In fact, four of the five focal children took more turns than their partner in the SLI+TLD dyads and initiated frequently, presumably with the intention of engaging their partner in conversation or play. This pattern was especially pronounced in two dyads involving the same TLD partner, a boy who spoke little during the play sessions. The children with TLD may have differentially affected the children with SLI. Pershey and Visoky (2002) have demonstrated considerable variability even in the conversational and interactional profiles of children specifically selected to act as peer models in integrated preschool settings. *Social relations modeling* could elucidate partner effects in larger

samples than the one here. Designed specifically for the analysis of dyadic data, the model allows one to determine the effects of each party in dyadic interaction as well as the effect of the relationship between particular individuals (Kenny, 1998; Simpkins & Parke, 2002). The tendency of the children with SLI to initiate at high rates to TLD partners may also have resulted from children perceiving themselves in a "host" role, given that the taping was in their home classroom.

Responsiveness. The children with SLI and their TLD partners responded verbally to only a minority of their partner's initiations. When nonverbal responses were also taken into account, the rates of responses corresponded more closely to those found in studies in which verbal and nonverbal responses were collapsed at the coding stage (Hadley & Rice, 1991; Tremblay et al., 1981). Both the SLI and TLD groups ignored comments and assertions more often than they ignored questions, bids, imperatives, or requests for action. In addition, while requests for or offers of help or materials were rare, children responded to these acts at high rates, just as Tremblay et al. (1981) found. The anticipated relationship between communicative act and likelihood of response was thus supported. The declarative communicative acts which were interpreted as not obliging a response are the same ones which are probably most likely to be perceived as self-talk by children. Indeed, *self-talk* and *alternating self-talk** were prevalent in the speech of the 4-5 year-olds studied by Schober-Peterson and Johnson (1991), constituting about a quarter of all their speech. It is conceivable that children with SLI and with TLD ignore some of their peers' utterances

* The possibility that children ignore "private speech" is not mean to imply that it is unimportant. The significance of private speech for language and cognitive development has been articulated repeatedly, following Vygotsky (1978).

simply because they perceive them as self-talk and consequently deem a response unnecessary.

Finally, the ignoring of initiations of children with SLI did not appear to be connected to structural errors; descriptive data (proportions) showed that children with TLD ignored utterances with errors at nearly identical rates as well-formed utterances. This finding evokes questions posited in Chapter 2 about the nature of communicative failures presumed to influence peer interaction in SLI. If difficulties with linguistic structure impede peer interaction, the route by which they do so remains unclear and may be circuitous. For example, linguistic form difficulties may have minimal effects on communication but may give children with TLD the impression that children with SLI are "babyish". The perspectives of children themselves are needed, as suggested in the Future Directions section.

Communicative acts. The prediction that the focal children with SLI would use a greater diversity of communicative acts in the SLI+TLD dyads was not supported. In fact, the opposite was true; there was a trend towards greater diversity in the SLI+SLI dyads. This heightened diversity was due to instances of the rarer categories listed in Table 5-3. The more striking finding in the communicative act data was the predominance of certain acts. The focal children with SLI as well as their TLD partners all used comments that described objects and ongoing events with greater frequency than any other communicative act. The other acts that uniformly ranked among the top five most frequent were as follows: statements of desire, intent, or plans; directives and protests aimed at managing partner behaviour; and communicative markers, e.g. exclamations of pleasure or discontent and routine politeness markers.

The predominance of the 'describe' category mirrors findings for 4-5 year-olds with TLD (Pershey & Visoky, 2002) and for 4 year-olds with specific language impairment (Rom & Bliss, 1981). The aggregated results are also congruent with Nicholas (2000). Employing a distinction originally made by Halliday, Nicholas divided children's communicative acts into two categories: "instrumental", represented mainly by directives, and "informative/heuristic", represented mainly by statements, questions, and commitments to future action. Informative/heuristic acts, claimed by some to be later-developing than instrumental ones, allow children to give and get information about their environment, to give information about the self, and to get information about interlocutors (Nicholas, 2000). The data in this study were recalculated according to Nicholas' coding definitions for the sake of comparison. In this study, informative/heuristic acts constituted 72% of the SLI children's data and 67% of the data of their TLD partners, versus 75% for the TLD group in Nicholas. In summary, various indices showed that the children with SLI in this study closely resembled age-mates with TLD in terms of the distribution and variety of their communicative acts during interactions with peers.

Repair. The analysis of communicative acts showed no significant differences in the number of times the focal children made requests for clarification across the dyad types. The most common reason for requests was to clarify content or word meaning. This finding is in keeping with the principal reasons mothers of preschool-age children with TLD request clarification (Yont et al., 2002). Children occasionally appeared to ask for clarification as a strategy for not complying with the wishes of their interlocutor, an interesting result that has not been reported elsewhere.

Analysis of repair sequences showed that SLI+SLI dyads attempted repair and

achieved successful repair less often than the SLI+TLD dyads did. Furthermore, the children with TLD were more successful in repairing than the children with SLI. These results are consistent with Brinton and Fujiki's (1982) finding that SLI+SLI dyads were less successful at repair than TLD+TLD dyads. There were, however, a total of only 38 requests for clarification in this study, too few to draw strong conclusions about group differences. Of greater interest is the sensitivity to meaning displayed by children with SLI and their ability to spontaneously signal non-comprehension at least some of the time in peer contexts.

In summary, the most remarkable findings for Data Set 1 are the readiness of the children with SLI to engage in conversation and play with one another, the tendency for the children with SLI and their TLD partners to provide responses in contexts that clearly obliged them, the overall similarity of children with SLI to children with TLD in the variety and distribution of their communicative acts, and the greater success of repair in dyads involving a TLD partner.

Data Set 2: Group Play in Class and at Recess

The same children with SLI observed in Data Set 1 were also observed during group play, twice during instructional hours in the classroom and twice during recess. Data were coded directly from videotapes using a system designed by the researcher. Peer talk was coded in terms of the activity type in which such talk was embedded and the number and identity of interlocutors. The predictions outlined in Chapter 1 are presented in the next section, along with the outcomes.

Results and Conclusions

Comparisons of class play and recess play. There were no significant differences between class and recess play for any of the variables investigated: activity type (e.g.

parallel, interactive with peer, interactive with adult), interactional context (e.g. dyadic, group) and verbal exchange (e.g. nonverbal, verbal, self-talk.). Contrary to prediction, adults were not engaged in activities significantly more often during class play than at recess but there was a trend in this direction. Still, only a small proportion of all activity included the teacher. These findings contrast with the high proportions of initiations to adults by preschool children with SLI and TLD found in other studies (Hadley & Rice, 1991; Pershey & Visoky, 2002; Weiss & Nakamura, 1992). Nor was interactive activity between children greater in the class play; children readily interacted without adult prompting both in class and at recess.

Low involvement of the teacher may well have been purposeful as she had instituted free play so that the children with SLI would have opportunities to engage in relatively unstructured, peer-focused, and child-led activities. The teacher responded to all initiations by children during free play, supervised the play, and engaged in it when she was actively solicited by children. The teacher was also aware of the study's focus on peer interaction and may have minimized her involvement as a result. At recess, low adult involvement might have arisen for similar reasons, but was likely also related to the fact that the three adults present were attending to the safety and needs of many children, including those with physical disabilities. The results demonstrate that children's choice of interlocutors in preschool or classroom settings depends partly on the way adults organize and participate in activities.

Activity, interactional context, and verbal exchange. Given the lack of significant differences between the two play contexts, the results were collapsed for subsequent analyses. Social play, chatting unaccompanied by play, and joint preparation of materials or

cleaning-up were coded as interactive activity. Each of the focal children spent more time engaged in these activities than they spent in non-interactive ones. In this study, over two-thirds of all children's activity was interactive, and most of it included talk, ranging from single to multiple turns in each 15 second interval examined. Solitary and parallel activity occurred at considerably lower rates, with the exception of the one child whose SLI diagnosis was questioned after completion of the study, as discussed in Chapter 6. Wandering aimlessly and observing from the sidelines was rare for all. The children with SLI in this study were clearly not silent, lonely, on-lookers. Rather, they were active and verbal co-participants in various forms of activity. These findings contrast with those for older children with SLI. As discussed in Chapter 2, observations of playground activities indicated that school-age children were more isolated and withdrawn than peers with TLD (Fujiki et al., 2001) and teachers' ratings have confirmed that impression (Hart et al., 2004). The peer interactions of children with SLI thus seem to decline in quantity and quality over time, an issue raised again in the section of this chapter on peer acceptance and friendship.

Finally, there was no significant difference between amount of time spent in dyadic and group interaction. Individual results indicated that three boys spent more time in dyadic activity, and the two girls spent more time in group activity. Although this difference between the boys and girls invites speculation on the contribution of gender to interactional patterns, neither the literature review nor the analyses in this study were directed towards this issue and it is consequently not discussed at any length here. It is nevertheless important to note that older girls with SLI have been described as more successful than boys with SLI in entering and participating in the ongoing play of peer dyads (Brinton, Fujiki, Spencer, & Robinson, 1997), suggesting gender as a potentially important variable for future studies of

peer interactions involving children with SLI.

Interlocutors. The expectation that children would have different interlocutors in the classroom and recess group play was not met. Children with SLI were in daily contact with children with TLD at morning recess and lunch hour, on the busses most children took to school, and in the gym where children congregated at school entry. However, the children with SLI hardly played with the children with TLD. It was not that they were ignored; they just rarely sought out the children with TLD and were also rarely sought out by them. One factor that likely contributed to this pattern was organizational. The class with SLI was one of three attending indoor recess. One of the classes was usually still eating snack when the children with SLI arrived and one class typically arrived to the classroom after the SLI class. The children with SLI began playing immediately, eagerly, and with each other. The organization of recess facilitated adequate supervision of many children by a limited number of adults but was not conducive to the original goal of an integrated play period. Proximity is a necessary but insufficient condition for interaction; in this setting it was reduced by staggered arrivals to the play scene.

The findings of interactions among the children with SLI can also be discussed in terms of proximity. Daily contact between the children surely contributed to the relationships observed. It is essential to remember that their proximity was supported. The children with SLI were intentionally oriented towards one another as interlocutors as part of the entire language program, including explicit social skills instruction. In addition, proximity was actively negotiated by children, as shown in Data Set 3, through declarations of affiliation, seating choices, and selection of certain partners for activities. Yet, even within this small group of eight children, the second data set indicated that some children

tended to remain in a core group, while others were a bit more on the outskirts of that group. In Chapter 6, individual variation was briefly discussed and some of the attributes of particular children that might have contributed to their relatively more "peripheral" status were noted, i.e. interactional history, personality, or, in one case, discourse features (repetitiveness, in particular). Other interpretations of patterns of inclusion and exclusion are discussed in the section immediately following.

Peer acceptance and friendship. In Data Set 2 of this study, it was proposed that group dynamics as well as individual traits played a role in determining children's status among their peers. For example, it was proposed that the preferences of a couple of children might be echoed by others as a strategy to negotiate their own belonging to the group and not necessarily because of qualities inherent to the 'chosen' children. In Data Set 3, the children appeared to be conscious of and to enjoy ways in which they were the same, for example, in their preferences for foods; children might feasibly seek the same similarity in asserting their preferences for particular children, and in doing so, inadvertently leave others out. The study pointed to the need to consider the behaviours of all participants when considering how children with SLI fare with their peers.

A greater understanding of the peer interactions of children with SLI would also benefit from increased attention to the pervasiveness of "pecking orders" in society at large, the social categories that define them, the institutional arrangements that create and maintain them, and the transmission of the values that inform them to children. As Paley (1992) has documented, even kindergarteners believe strongly in their right to exclude others, as evident in their reactions to a rule "You can't say 'You can't play'" that she instituted in her classroom. Addressing exclusion ultimately requires that we grapple with issues of how children are

socialized and how schools and other institutions are organized. Peer interactions are partly determined by children, but they are also reflective of adult commitment to inclusive, democratic environments, both in the classroom and outside of it.

Despite the existence of a core group, none of the children in this study were friendless. The data attested to stable friendships between children with SLI. Recall that McCabe and Meller (2004) found comparable rates of friendships between children in an SLI-only preschool program and TLD peers in other preschool settings. Guralnick, Gottman, and Hammond (1996) also found that levels of friendship were similar across "main-streamed" and "specialized" settings for children with a variety of communication disorders. Yet, studies reviewed in Chapter 2 indicated fewer and less satisfying friendships for older children with SLI. Longitudinal study of children with SLI who do form mutual friendships in the preschool years would provide valuable insight into the trajectory of peer relationships.

Data Set 3: Discourse Events

The third data set involved an exploratory analysis of yet other dimensions of peer talk. The same children with SLI who participated in Data Sets 1 and 2 were involved: the five focal children and their three other classmates. The results were derived from snack period, circle time, and the dyadic and free play sessions. In Data Sets 1 and 2, peer talk was respectively segmented by utterance and by temporal unit. In Data Set 3, longer stretches or episodes of peer talk were analyzed according to categories proposed by Blum-Kulka et al. (2004) and others suggested in the literature reviewed in Chapter 2. The intention of these analyses was to explore how a group of children composed uniquely of children with SLI used language to negotiate relationships, to establish their identity in the group, to amuse themselves and others, and to frame and participate in joint activities. Given that the

analyses were exploratory, a number of themes emerged. Some of the most salient ones are discussed in this section.

Results and Conclusions

Talk about the present, the self, and the group at snack and circle time. As in the dyadic play segments, the children with SLI were most likely to note, describe, and evaluate ongoing events at snack. The findings were as predicted, and consistent with the content found for children with TLD of about the same age (Marvin, 1994; Schober-Peterson & Johnson, 1989). In addition, the children with SLI asserted their preferences for people or foods, and confirmed or disagreed with the assertions of others. Snack was thus an arena in which children engaged in the "person-related" talk observed by O'Neill and colleagues (2003) and in which they expressed their similarities and differences, reaching the "common ground" proposed by Gottman (1986). Snack and circle time were also contexts in which the children with SLI expressed the "amity" observed between children with TLD (Dunn & Cutting, 1999; Gottman, 1986; Pershey & Visoky, 2002).

During both snack and circle time, it was not uncommon for children to address themselves to the teacher first. Once dyadic talk between the teacher and a child began, peers freely joined in by either addressing the child who had initially bid for the teacher's attention or by claiming the teacher's attention anew. It is possible that children addressed themselves to the teacher simply because it was her attention they most desired, as Küntay and Şenay (2002) concluded for the preschoolers with TLD they studied. Alternatively, they may have viewed Annie, the teacher, as the authority, the one who could assure them the right to speak. The teacher in this study can be thought of in yet another way, as the 'holder' of the topic and an anchor for children with SLI as they learned to participate in multi-party

conversations with peers.

Only a few narratives emerged at snack. More were expected based on Stone's (1992) finding that lunch was a likely time for preschoolers to report past events and O'Neill and colleagues' (2003) findings that about a fifth of snack-time talk among preschoolers was about past or future events. Circle time was the more likely context in this group for narratives to emerge; perhaps observations of still other contexts might have revealed more talk of this kind. Although there were several classroom practices designed to aid children in using appropriate tenses and vocabulary to reference displaced events, it is of importance to note that the impulse to talk about past events at circle time stemmed from children themselves. Furthermore, talk about past experience was rarely about routine events, but rather about events that seemed special to children in some way. They thus fulfilled an expressive and interactional purpose, and not simply a referential one.

Talk about pretend events in dyadic and group play. Pretend play sequences free play in the classroom and at recess were observed. The children initiated the play; it was not suggested by adults and was chosen among other available activities. The play sequences analyzed in Chapter 7 involved minimal verbal elaboration of scenario, simple narrative plots, and actions. Themes were repeated across play sessions or re-enacted within them. The simplicity and repetitive elements of the play may have simply reflected the children's abilities. However, the pretend play in class and at recess sometimes had multiple participants, and the need for coordination of several players might have influenced its structure and complexity. Jacquert and Keppeler (2002) have discussed the demands of multi-party conversations and described preschoolers' participation in them. Multi-party pretend play may likewise have placed high demands on the children in this study and led

them to simplify their play. The findings may therefore underestimate their capacities in dyadic situations.

In organizing pretend play, the children with SLI assigned, adopted, and competed for roles such as mother, or train conductor. They sometimes shifted into a pretend voice, particularly when taking an authoritative role. Role negotiation and register or voice shifts were also found in the pretend play of 4 to 6 year-olds in Blum-Kulka et al. (2004). In the Blum-Kulka study, children also made explicit statements to set up pretend play, e.g. *"Let's say we make a trip"*, *"Let's say we were small"*. These kinds of explicit devices were occasionally observed in the dyadic pretend play sequences, and the children with SLI also frequently announced their intentions once play had begun.

The willingness or desire of the children with SLI to engage in pretend play was present in the SLI-only group and dyads and in the SLI+TLD dyads as well. These findings were congruent with DeKroon's (2002) case studies of two children with LI, one of them with "borderline" cognitive function, and of them fitting an SLI profile. The two children in that study engaged in social pretend play with each other or with a third child with LI at even higher rates than certain TLD+TLD dyads. However, according to DeKroon, the children with LI showed less variety and expansion of play themes when paired together and made fewer verbal contributions that organized and extended the play when paired with TLD partners. In the treatment study by Robertson and Ellis Weismer (1997) reviewed in Chapter 2, children with SLI in the SLI+TLD condition made greater gains in vocabulary and theme knowledge than those in the SLI+SLI condition, though their actual play was not observed.

Some of the findings in this study and the research just cited lead to the conclusion that preschool children with SLI might especially benefit from engaging in pretend play with

peers with TLD. Other results in the literature review, however, imply that adults will need to guide children into such interactions. Children with SLI and TLD will not necessarily join in such play on their own and children with SLI may also be unlikely to enter successfully the ongoing play of children with TLD. Other ramifications of the findings for practice are discussed later in the chapter.

Contribution to Knowledge

Theoretical Contribution

The research in this dissertation makes an original contribution by demonstrating participants' engagement with peers rather than their disengagement, and pragmatic strengths instead of weaknesses. Together, the results are indicative of pragmatic and social competency in a small group of children with SLI. Donahue (2002) recommended that the discourse of socially resilient children with language impairment be studied as a means of identifying effective strategies for promoting successful peer interaction. This study fulfills a related need for research that reveals not only difference and deficit but strengths in all children. The identification of the abilities of children with SLI rather than their weaknesses is crucial to helping them expand their language use to engage effectively in social interaction and collaborative activity. This study is aligned with Donahue's call for the study of resilience, increasing attention to the intact capacities in children with SLI even in terms of grammar (Paradis, Crago, Genesee, & Rice, 2003), and with the competence-based approaches to communication disorders introduced in Chapter 2.

The findings in this study are theoretically important in that they indicate different developmental paths for language form and at least some aspects of language use. Despite their relatively less developed linguistic abilities, the children with SLI were similar to the

children with TLD who participated in this study for the pragmatic features examined. The study was novel in its analysis of extended and multi-party discourse in children with SLI. The findings from that analysis were consistent with reports in the literature for children with TLD. The results from all three data sets are congruent with theoretical models of SLI that identify linguistic structure as the primary locus of impairment.

Models of the relationship between language impairment and social behaviour discussed in Chapter 2 assume that social behaviours are negatively affected in SLI and then go about trying to explain the source of those behaviours. This study was not designed to directly test these models but the findings imply that children's social and communicative behaviours are a product not only of their intrinsic qualities but of their social environments. This point was most salient in Data Set 2, where group dynamics and the organization of recess were proposed as contributors to individual patterns of interaction. The lack of interactions of the children with SLI with others, i.e. peers with typical language development and with physical disabilities, was problematic in light of the goals of an integrated recess. However, the cohesion of the group of children with SLI was also an accomplishment that one might attribute to the children themselves, to programmatic attention to peer interaction, to a teacher with a strong commitment to her work and a reflective stance towards the practices she adopted, and to a school with a palpable ethic of caring and collaboration. Classroom and school climate, often neglected in studies of peer interaction (Schneider, 1993), are important factors to consider in further studies of the interactions of children with SLI.

Finally, this study raises a question about the advisability of grouping together children with SLI. The question requires some prefacing. One of the fundamental premises

of the functional approaches discussed in Chapter 2 is that language develops through children's interactions with others and in the service of communication. In such approaches, the "other" is often implied to be a more knowledgeable language user who guides the child in language learning, not simply by transmitting information, but through a process of collaboration, scaffolding, and negotiation of meaning. This assumption is characteristic of a Vygotskian approach to children's development and of social-interactionist approaches to language development (Schneider & Watkins, 1996). Vygotsky (1978) proposed that a peer could act as a "more knowledgeable other". This idea has been tested with positive results in investigations of the impact of young first language learners on their peers' second language learning (see Blum-Kulka & Snow, 2004 for discussion). The "novice-expert" model also logically leads to the notion that children with SLI will learn 'more' or 'better' language from interactions with children with TLD than from each other, a hypothesis tested by Robertson and Ellis Weismer (1997).

Some researchers and theorists have suggested that children can concurrently act as novices and experts; the roles are not fixed. In this view, peers, e.g. second language learners, can jointly construct knowledge in their interactions through collaborative dialogue and then can each internalize that knowledge (Swain, Brooks, & Tocalli-Beller, 2002). Educational policies such as single-grade classrooms, "welcome classes" attended only by second language learners, and French immersion classes across Canada are presumably also partly based on the assumption that children can develop language through interactions with others at a similar developmental level. The question that arises is: Is there a theoretical justification for the idea that children with SLI will make greater or faster gains in language development if they interact with peers with more advanced language abilities than

themselves? The study in this thesis does not resolve this question, but it does demonstrate that the participants with SLI fulfilled the minimal requirement for co-construction of meaning; they willingly interacted and used language for a wide range of purposes with one another. If we are convinced that interactions between children with SLI and children with TLD will be more beneficial, at least to the children with SLI, then the challenge is to ensure that those interactions take place.

Methodological Contributions and Challenges

The study is original in its combination of methods to examine multiple dimensions of pragmatics. The fine-grained analysis of peer talk in dyadic play yielded information on several variables, as well as insight into the tendency of children with SLI and TLD to ignore each other's talk at times. The more global analysis of group play included a novel and effective way of identifying peer relationships in small groups that served as an alternative to nomination procedures and a complement to teacher report of children's preferred play partners. Multi-party conversations of preschool-age children with SLI were documented for the first time, and the piloting of a schema to analyze those conversations showed potential for further investigations. Together, the methods permitted a richer portrait of the conversations of children with SLI than any single procedure would have. Furthermore, information on the program the children with SLI were enrolled in and interview data allowed interpretations of observational data that would have been missed if children were seen in a laboratory or if contact with them had been more short-lived.

The nonparametric statistics and descriptive analyses used in this study preclude generalizing the results to the population of children with SLI. The findings are best appreciated by considering the research as a case study. Research in child language includes

a long and informative tradition of individual case study, but case studies of groups, not unusual in other disciplines, are rare or perhaps even absent in the study of communication disorders. The 'case' in this study was selected purposefully because it permitted consideration of the ramifications of SLI-only groupings for peer talk and relationships and additionally provided opportunities to observe children with SLI in the presence of peers with physical disabilities and with peers reverse-integrated to their school. An additional criterion of selection was age span in the group. Some studies of "preschoolers" involve children ranging in age from 3-6 years. One of the strengths in this study was the narrow age range of the participants with SLI, as well as those with TLD.

One of the challenges of conducting the research was in combining various research methods for the different data sets. Data Set 1 was more typical of study within a quantitative paradigm; interactions were 'engineered' by the researcher, qualities of the interaction were subsequently coded, frequencies of those codes were analyzed statistically, and the results of the statistical tests were the primary focus in reporting. In contrast, in Data Set 3, discourse events were recorded in their "natural" context, a discourse analysis method was applied to them, transcript segments replaced tables and graphs of numbers, and findings were reported in a more narrative style, as is more typical in qualitative research. The procedures in quantitative and qualitative research reflect fundamentally different assumptions about the nature of reality, the nature and origin of knowledge, the relationship between researcher and participants, the place of values in research, the ways research questions should be formulated, the means of establishing credibility, and the goals and style of reporting. One cannot adopt the two sets of assumptions simultaneously; one can only

adopt one then the other in answering different research questions. However, the use of both sets of assumptions provided a complex and nuanced understanding of the issues.

Clinical Implications

The findings of the research in this thesis have implications for practice in clinical speech-language pathology and in education. First, they show that grouping children with SLI together does not preclude positive peer interaction and may even foster it under certain conditions. Developmental synchrony in terms of language might be advantageous for children at times. This point can be elaborated using the pretend play sequences as an example. The children with SLI enjoyed their play together. It is possible that children with TLD, had they been participating, might have found the pretend play too simple or repetitive, or might have elaborated the scenarios beyond a point that children with SLI could fully understand, thus reducing the likelihood of equal contribution. At the same time, studies reviewed previously demonstrated that children with TLD expressed a greater variety of themes and were better able to elaborate scripts in pretend play. Such children might have positive effects on the amount and kind of language used by children with SLI. Programs which ensure interactions between peers of similar and different language status might be ideal. The intentional grouping of children, as in the research design here, could be integrated to pedagogical practices in integrated settings. For example, rotating schedules for dyadic play with different partners might be easily instituted. Permitting children to always select their own partners may not achieve the desired goal of pairing children with SLI and those with TLD. Indeed, one of the practical contributions of the study is the clear demonstration in Data Set 2 that physically "mixing" children, even during the preschool years, does not guarantee their interaction.

The coding systems used in this study proved to be reliable and could be adapted and used to assess features of interactions of children with various communicative impairments, including SLI. The coding system in Data Set 1 had many categories but could easily be simplified, especially given the predominance of only five communicative acts. The coding system used for the group play sequences was simpler and could be used in clinical practice with minor modifications. Although coding systems are admittedly time consuming for clinicians to learn and implement, some form of systematic observation is needed given that standardized language tests do not address the use of language in social contexts and are, in any case, rarely sensitive enough to adequately capture children's progress.

Some of the findings suggest specific interventions. The ability of children with SLI to request clarification and to provide repair is one that might be fostered through explicit instruction. The children in this study participated in a social skills group in which conversational skills were learned about and practiced through games, stories, and role-plays. Repair could also be focused on in such a group. One might, for example, stage a dialogue full of comical errors by a pair of puppets, and give children opportunities to observe and then practice repair.

A final idea for practice is the use of Paley's (1994) method of transcribing children's stories and providing daily opportunities for children to enact them. Paley reported children's dedication to this practice, and Nicolopoulou (2002) has demonstrated gains in children's narrative development through its introduction into Head Start preschools. Such a practice could be adopted in integrated settings, or in ones involving only children with SLI like the one studied here. Story enactment would allow children with SLI to use the full range of their communicative skills, linguistic and nonverbal, and additionally afford opportunities for

the development of both narrative and pretend play, two areas that some have suggested are vulnerable in SLI.

Directions for Future Research

Several directions for future research follow from the findings in this thesis. Some of them arise directly from the findings of this study, others from consideration of the literature on peer interaction and SLI as a whole. As mentioned previously, a longitudinal study of children with SLI who appear to interact well during the preschool years is important.

Further Analysis of Data from this Study

The dyadic sequences in this study were analyzed in terms of exchanges, i.e. initiations and responses, and adjacency pairs of communicative acts, e.g. *Asks Information* and *Gives Information*, but analysis at the discourse level would provide a more holistic look at children's interactions and the activities in which their talk was embedded. The dyadic play sequences might also be analyzed in terms of the forms used to express particular functions, given claims that pragmatic deficits in children with SLI are primarily a problem in mapping available forms to acquired functions (Craig, 1995; van Balkom & Verhoeven, 2004). The SLI+SLI dyads and SLI+TLD dyads could also be compared with respect to lexical diversity or particular grammatical forms in an attempt to determine whether interactions with TLD partners have an immediate positive effect on these variables.

The group play in class and at recess could also be analyzed specifically for children's strategies in gaining access to interactions. Although older children with SLI have been found to have difficulties in accessing ongoing interactions (Brinton et al., 1997; Craig & Washington, 1993), the impression from this study is that access was generally successful.

Further analysis would be needed to confirm that impression and to identify children's access strategies. The children with SLI in this study also allowed and blocked the access of others to their play. These interactions would certainly also be of interest.

Discourse Analysis of Sharing and Helping

The social competency of children with SLI has sometimes been described in terms of their *prosocial behaviours*. In this study, sharing and assisting were included as communicative act categories, but together constituted little of the data. Low rates of these communicative acts cannot be taken as evidence that children with SLI have difficulties with them. The availability of adequate materials and activities within children's capabilities might simply have reduced the need for such acts. If acts of sharing and helping were of principal interest, a play situation could be designed to elicit them. For example, Sheldon (1990) found that a single pickle in a domestic dramatic play scenario became a source of negotiation in her study of boys' and girls' dispute styles. One could easily intentionally place a single desirable object in a play area and record the sharing strategies of children with SLI, or, in a similar vein, design a situation that requires helping and collaboration.

Qualitative Studies: Peer Interactions of Children with SLI and TLD Peers,

Socialization of Peer Interaction, and Children's Views

Finally, an entirely qualitative study of the interactions of children with SLI with peers with TLD would be an appropriate extension of this study. A qualitative study would be suited to capturing the tenor of SLI-TLD interactions, the personalities of the children involved, and the ways children 'accomplish' inclusion and exclusion, dimensions of

interactions that quantitative studies have not captured well. The literature reviewed in Chapter 2 implied that children with SLI may be more vulnerable to exclusion by children with TLD in group situations and in dramatic play. These situations would be important ones to observe. A qualitative study could also include interactions outside of school, e.g. with siblings or friends. Data could be also obtained through interview and observation. In the few interviews conducted for this study, parents brought up situations in which their child had been rejected, but were less likely to spontaneously bring up successful peer interactions. Interviews could be designed to elicit both kinds of information.

Another area not addressed in the present study was the socialization of peer interactions and friendship: the explicit and implicit messages children receive at home and at school about friendship generally and about specific children. This issue has been completely ignored in the literature on SLI but may exert an influence on observed interactional patterns. For example, Nora's parents may have discouraged their daughter's interaction with Lilah. They mentioned to me and to the teacher that they had witnessed and disapproved of Lilah calling other children names like *poopoo face* early in the school year. With respect to the issue of friendship socialization, the teacher also brought up the tension she experienced between allowing children the freedom to make their own friends and the responsibility of insuring all children's participation. The views of parents and teachers, only alluded to in this study, could provide significant insights into the peer interactions of children with SLI and potential avenues for facilitating them.

Last, but not least, a qualitative study could include the views of children with SLI and with TLD about their own interactions. The analysis of discourse in this study provided a glimpse of children's understanding of their own social worlds, a fascinating perspective

that warrants a longer and closer look. Understanding children's views requires entering into more extended relationships with them and watching and listening for the ways and times those views emerge spontaneously or might be elicited: acting, in short, as what qualitative researchers have called 'the human instrument'.

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Ethics Certificate Institutional Review Board

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CERTIFICATION OF ETHICAL ACCEPTABILITY FOR RESEARCH INVOLVING HUMAN SUBJECTS

The Faculty of Medicine Institutional Review Board consisting of:

NEIL MACDONALD, MD

MICHAL ABRAHAMOWICZ, PhD

ARTHUR CANDIB, MED

PATRICIA DOBKIN, PhD

CATHERINE GARDNER, BSC

LAWRENCE HUTCHISON, MD

CELESTE JOHNSTON, DED.

WILSON MILLER, PhD, MD

ROBERT MUNRO, BCL

has examined the research project **A10-B38-02A** entitled **“Peer Interactions of Children with Specific Language Impairment and Enrolled in a Language Program”**

as proposed by: Martha Crago to
Applicant Granting Agency, if any

and consider the experimental procedures to be acceptable on ethical grounds for research involving human subjects.

February 19, 2003
Date

Chair, IRB

Dean of Faculty

Appendix 4-2

Ethics Approval School Board

Note: Information identifying school has been removed

March 17, 2003

Ms. Diane Pesco

Montreal, Quebec
H2P 2K6

Dear Ms. Pesco:

Your research proposal "Peer Interactions Of Children With Specific Language Impairment Enrolled In A Language Program" was considered by the School Board's Research Committee at their meeting on March 13, 2003.

This is to inform you that your proposal was approved and that permission is given for this research to be conducted at [redacted] School.

The principal, [redacted] will be advised that this research project has been approved.

The School Board would appreciate a brief resume of your findings, as well as a copy of your report once it has been finalized.

I wish you well with this project and all future endeavours.

Yours truly

Chairman
Research Committee

Appendix 4-3

Guidelines for Excluding Utterances from MLU Counts

Acceptable utterances are based on exclusionary criteria. Utterances that should be excluded are as follows:

1. utterance formed entirely of vocalizations or purely exclamatory material as in examples below

e.g. Aha!
Yummyum!
Choo-choo!
Oh no!
Hey!
Aw!
Ouch!

2. utterance formed entirely of an exact imitation of part or all of the immediately preceding utterance of the self or of another speaker which the child is parroting and/or repeating on command

e.g. speaker 1: You get three.
speaker 1: You get three (self rep)

speaker 1: Want some cake?
speaker 2: Want some cake? (other rep)

note: if an utterance is repeated but is clearly not parroting, include it.

e.g. speaker 1: I want to make this one.
speaker 2: I want to make this one (this emphasized for stress).

3. utterance that is entirely unintelligible or has multiple unintelligible portions

e.g. xxx.
e.g. The white one's not xxx.
e.g. The white one's not xx xx.

4. utterance formed entirely of quoted material (e.g. a line from a book)
 - e.g. Polar Bear, Polar Bear, what do you hear?

5. utterance formed entirely of routines (e.g. counting routines, reciting alphabet, listing letters on computer keys, singing, spelling)
 - e.g. q, w, e, r, t, y, u, i, o (labelling computer keys)
 - e.g. l - e - n - n - y.
 - e.g. Row, row, row your boat.

6. utterance that trails off or is interrupted before completion
 - e.g. I think he +...
 - e.g. Then she + /.

7. utterance composed entirely of single word affirmations or negations in response to questions (or two words when the second word adds no new information, e.g. yeah okay)
 - e.g. speaker 1: Can I have blue?
 - speaker 2: No.
 - Nah.
 - Yeah.
 - Yes.
 - Okay.
 - Sure.
 - Alright.
 - Yeah okay.

 - e.g. speaker 1: What color do you want?
 - speaker 2: Blue.

8. utterance that is a backchannel response or minimal acknowledgment
 - e.g. speaker 1: I've got blue.
 - speaker 2: Yeah.

Appendix 4-4

Form for Observation Notes

Activity:

free play	snack
dramatic play	readiness activities
circle time	paired dyadic play
recess	lunchtime

Date: _____

Time: _____

Activity: _____

see list, specify further here

Location: classroom area: desks dramatic play sandbox circle

cubby computer

other pre-kg: desks carpet area

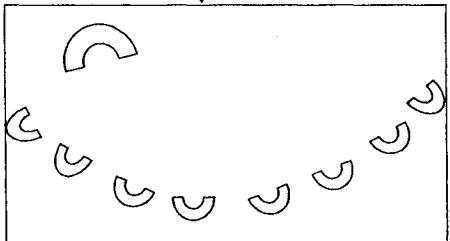
Participants: cross out participants who are absent

Children (pseudonyms): Earl Brian Jason Lilah Nora Michael William Roberto

Staff (pseudonyms): Annie (teacher) Carl (teaching assistant) Other (specify)

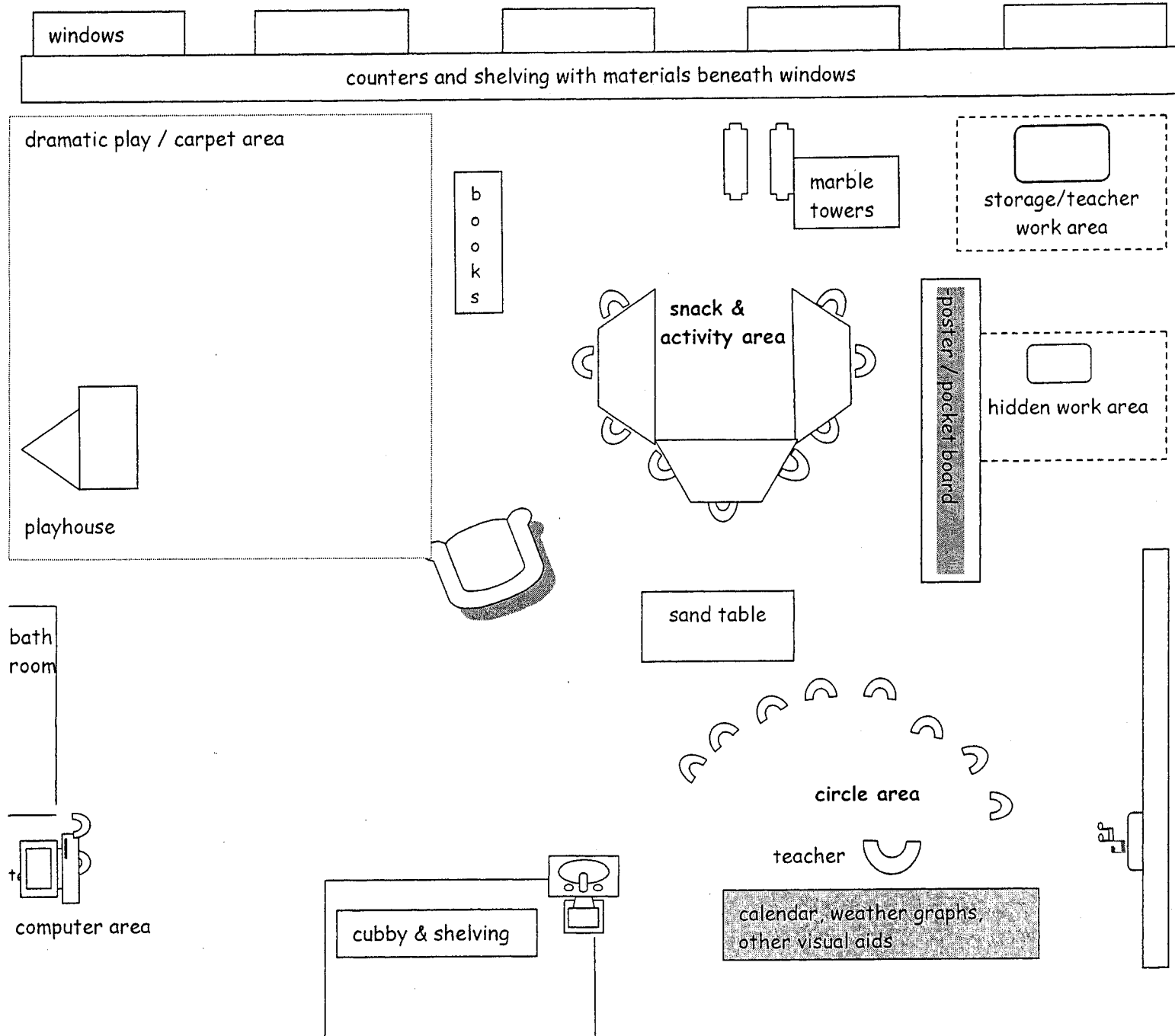
circle time seating

↓



Appendix 4-5

Classroom Layout
(scaled to approximate size)



Appendix 5-1

Toys for Dyadic Play Provided by Researcher

Caillou

cut-outs and storyboards of character widely known to children in area

Aquarium

fishing game; fish various items using rods

Magnetic Theatre

small stage and wooden figurines manipulated from beneath with magnetic wands

Tactil

small cardboard colored items of various sorts food, household objects, animals, people, etc. used for guessing game or to make a story or scene

Quercetti Choo-Choo

train set with color coded track (e.g. yellow curves, purple straight, etc.)

Unisets

stickers of a rabbit family and scene of their home

Magnetic Mr. Potato Head

stiff magnetic pieces to make a Mr. Potato head face and body

Magic Noodles

multi-colored foam-like materials that are dampened with sponge then stuck together to build and sculpt

Puppets

one dog, one person-like with removable hair, eyes, mouth etc.

Appendix 5-2

Coding System for Conversational Moves and Communicative Acts

CONVERSATIONAL MOVES
INITIATES: <u>Speaker:</u> requests info, clarification, item, action, approval, opinion bids for/seek partner's attention by naming partner, exclaiming, or telling partner to look shifts to wholly new activity, e.g. new game makes comments that are unrelated, with new referents, and non-parallel to preceding turn by self or partner speaks after gap in interaction filled by www, adult talk, or long (approx. 20 sec) pause returns to established topic after responding to an initiation by partner
RESPONDS: <u>Speaker:</u> answers question responds to bid for attention responds directly to preceding <i>verbal turn</i> (distinct from preceding <i>events</i>), for example, spells following directive to spell, gives approval/agrees with idea, continues sequence of events established/proposed in immediately preceding or earlier initiation, provides "matching" comment, parallel in structure &/or function, as below: CHI 1: <i>I'll be a fire truck.</i> CHI 2: <i>I'll be a car.</i>
MAINTAINS: <u>Speaker:</u> holds speaking floor until next INI by self or INI or RESP by partner –note that sometimes a child will ignore partner INI (momentarily or wholly) and maintain.
UNCODABLE <u>Speaker:</u> produces unintelligible or uninterpretable utterance

COMMUNICATIVE ACTS	
All categories in capitals have “other” as a subcategory; to be used in cases where the utterance cannot be classified according to any available subcategory.	
Code	Examples
COMMENTS: remarks on events and environment or responds to remark	
comments environment	
Comments on events external to immediate activity	<i>Ryan is my friend (hears in hallway). That's Janice's name on the blackboard (while playing vet)</i>
describes ongoing activity/events/materials	
Narrates actual activity/events as they are happening.	<i>I got a starfish.</i>
Narrates character actions/needs	<i>She need a shot. The daddy's sitting.</i>
Describes objects (qualities, location etc.)	<i>It's blue. This go here. He's funny. Here it go.</i>
Describes events and their progress.	<i>The track goes here. The cake's almost done.</i>
Labels items or actions.	<i>Caillou. I sitting.</i>
communicative marker or onomatopoeia	
Exclaims as part of repetitive play sequence	<i>Gotcha! (said repetively as children crash cars)</i>
Uses sound effects	<i>Choochoo (as plays with train on track).</i>
Evaluates events (expresses pleasure/discontent with exclamation)	<i>Alright! That's cool! Wow! It's cool/yummy/nice!</i>
Uses routine greetings/politeness markers	<i>Hi. Goodbye. Thanks. Sorry.</i>
Acknowledges or marks place	<i>CHI 1: Want to play this? CHI 2: No. → CHI 1: Ok.</i>

counts/recites/names letters (routines) Counts, spells, names keys on computer keyboard	1, 2, 3; (keyboard) ay, s, d, f. ; abcdefg...
discusses nonpresent Talks about events (past/future/potential) removed in space or time from play session	My dad had 15 dollars. Yesterday, we had gym. My mommy gonna buy me candy.
agrees/disagrees with comment (any subcategory)	(imitates partner) It's stuck. (follows partner: Still tricky) Yes, too tricky. CHI 1: He rides in a boat. → CHI 2: No he doesn't.
REGULATES: manages activities of self and partner or responds to management attempt	
bids for attention (Note: if bid occurs with other talk, code main clause) Calls partner, demands attention	Hey! Jill! Look what I did. Watch this.
controls/protests/judges partner behavior (Note: if demand is to Look, Watch, etc. code as bid) Demands partner action, Protests/counters partner action or partner attempt to control action, Proclaims ownership of materials to partner	Together, Hanna. Stop! No do that! You're making it fall down! Wait! (following directive to count). You use this, Matthew. That's mine!
asks partner action/desire/approval/opinion Asks question of partner to: regulate/affect partner/joint action, seek approval, opinion, or confirm action/desire	Can you move? Should we run? Do you like it? Okay? (following I'm gonna throw it); Do you want one?; Are we there?

(Note: Yes/no questions to confirm <u>info</u> e.g. labels, explanations, states, attributes, locations, etc. are coded as ASKS INFO/INFORMS; yes/no questions can also fall under categories like SHARE or ASSIST)	
states desire/intention/idea/plan for self or self partner (Note: if desired materials/space are in partner's control, code as SHARE: request materials space) States own actions that might or will take place later States that has idea or explicitly marks comment as idea States plan or narrates for self or self and partner States desire/need for material, action, or activity	<i>Maybe I'm going to play with it. Later I get the doll. I got an idea! How about this one?</i> <i>Let's make soup then eat it.</i> <i>Then we using the yellow one. I'll be the lion. This will be the soup.</i> <i>I need the bowl. I don't want the dog. I want to play pirates. I want orange playdoh. I gotta drive this. I have to see.</i>
manages turns Establishes turn-taking in game/activity	<i>Your turn. My turn. I go next.</i>
complies with reg (any sub-category, including bid) Responds to REG w/ acceptance, or acknowledgment, or refusal but no new content (Note: Counter-regulations are coded as RESPONDS + appropriate REG subcategory)	<i>Okay! Sure. What? (following bid). Yes. No.</i>

ASKS INFO/INFORMS: asks questions about partner's talk or about environment and responds to such questions	
requests clarification Requests clarification of partner utterance	<i>Which game? Huh? What you say?</i>
gives clarification Responds to ask clarification	<i>The fishing game.</i>
asks info/label/explanation Asks information or confirmation Asks label Asks explanation (how-to, reason why) Asks confirmation of labels, info, or explanation	<i>What is this for? Where's the game?</i> <i>What is this called?</i> <i>How do you play? Why you do that?</i> <i>Is this a peacock? This is peacock, right? Do you do it like this?</i>
give info/label/explanation Gives information (non-personal) (Note: to be used for responses to ask info/label/explanation, otherwise see COMMENT category) Gives label Gives explanation (how-to, reason why)	<i>That's for shoveling. It's over there. (see ask label)</i> <i>Shark.</i> <i>You do like this then pull.</i>
integrates new info (labels, info, explanation) Repeats/considers information provided by partner with give label info explanation	<i>Oh, it's a shark. A shark, not a whale (in response to provision of label).</i>
other Initiates or responds giving information that does not fit well into COMMENT category, e.g. predicts outcomes	<i>If you drop the glass, it will break.</i>

SHARES: offers and requests materials or responds to offer or request (Note: Items in this category are easily confused with others in the REGULATE category. The SHARE category has to do with materials/space that are in one child's possession/control)	
offers materials/space offers materials or space desired or required by partner or activity	<i>Here you go (child gives marbles from own hand). Want to sit here too? (child makes place on chair for partner).</i>
requests materials/space	<i>Can I have it? Can I use that for one second? I need the hammer (when other CHI is using it).</i>
accepts/declines request for materials/space	<i>Wait (in response to request). Here (in response to request).</i>
accepts/declines offer of materials/space	<i>Oh, thanks (in response to offer)</i>
ASSISTS: offers or requests help or responds to offer or request	
offers/agrees to help Uses question or declarative to offer help	<i>Can I help you? Want me to do it? Let me help you. I'll bring your dolly (when partner clearly cannot manage alone)</i>
accepts/declines to help Responds to help offer with acceptance or refusal	<i>Okay. No, I can do it.</i>
requests help Explicitly asks partner for help	<i>Can you open this?</i>

NEGOTIATES PLAY ENTRY: negotiates participation in play or responds to entry attempt	
invites to play Explicitly invites to participate in non-specific or specific activity (children NOT playing together, one child engaged in play the other wants to join)	<i>Want to play? You wanna do puppets too?</i>
excludes from play Explicitly excludes partner States desire to play alone	<i>You can't play. Nobody else can play.</i> <i>I play all by myself.</i>
attempts entry Attempts to join in activity partner is engaged in w.: Explicit request Directive to other intended to gain entry Implicit attempt to join in	<i>Can I play? I wanna play with you.</i> <i>Call me on the phone!</i> <i>Knock-knock (one child in playhouse)</i>
accepts/declines invitation or entry attempt Accepts/declines invitation to play Responds to entry attempt with explicit acceptance Responds to entry attempt by allowing partner to join in	<i>Okay. No, thanks.</i> <i>Sure, you can play.</i> <i>Oh, hello! (to child knocking; see entry attempt ex.).</i>
KIDS/TEASES: jokes, teases, kids around using sound play, voice, word choice	
word play Jokes with word choice	<i>You're not Nina, you're Nino! (kidding)</i> <i>Scatological humor (references to bums, poop, etc)</i>
voice play Uses different voice, for own or other's amusement	<i>(repeating after self or partner in silly voice) Go away doggie.</i>
mimics or imitates error/word choice	<i>(imitates) I'm using this.</i>

Appendix 5-3

Samples of Coded Transcripts

(excerpt of SLI+SLI dyad followed by excerpt of SLI+TLD dyad)

Excerpt from an SLI+SLI dyad

@Begin

@Languages: English

@Participants: ERL Earl Focal_Child, BRI Brian Partner_SLI

@Age of ERL: 04;09.01

@Transcriber: DP (AS reliability 00-04:24)

@Coder: DP (AS reliability 04:51-9:10)

@Date: 02-MAY-2003

@Tape Location: Video (Master tape 11) (00:00-23:32)

@Transcript Duration: 00:00-23:32

@Situation: Dyadic play in the classroom; Boys are deciding on something to play with

*ERL: Brian ?

%cma: \$INI:REG:BID

*BRI: what?

%act: goes over towards ERL

%cma: \$RESP:REG:COMPLY(acknowledges bid)

%tim: 03:25

*ERL: let's play this ones [= figurines] .

%cma: \$RESP:REG:INTENT

*BRI: yeah .

%cma: \$RESP:REG:COMPLY(agrees)

*ERL: you be xxx .

%act: hands BRI an unidentified plastic figure

%cma: \$RESP:REG:CO/PRO

*ERL: I be a lion .

%cma: \$MAIN:REG:INTENT

*BRI: no, I want to be the lion .

%act: takes ERL's piece; ERL yields without argument or any apparent dismay

%cma: \$RESP:REG:INTENT \$RESP:REG:COMPLY(refuse)

*ERL: okay, I am <monkon> [?] [= naming unidentified figure] .

%cma: \$RESP:REG:INTENT \$RESP:REG:COMPLY(accept)
 *BRI: yyy [= making roaring sounds] .
 *ERL: yyy [= sound effects with unidentified figure] .
 %tim: 03:44
 *BRI: hey [/2] .
 %cma: \$INI:REG:BID
 *BRI: let's play something else .
 %act: bringing back lion figure to bin
 %cma: \$MAIN:REG:INTENT
 *ERL: I don't want to play with that anymore .
 %act: follows BRI, bringing back his figure to bin
 %cma: \$RESP:REG:INTENT
 *BRI: I want to play this.
 %act: takes car from another bin
 %cma: \$RESP:REG:INTENT
 *ERL: the train track ?
 %cma: \$INI:REG:ASK+PART
 %exp: suggesting new idea

Excerpt from an SLI+TLD dyad

@Begin
 @Languages: English
 @Participants: NOR Nora Focal_Child, JEN Jeannette Partner_TLD
 @Age of FOC: 05;04.04
 @Transcriber: AS (DP reliability 04:24-08:48)
 @Coder: DP (AS reliability 01-05)
 @Date: 03-MAY-2003
 @Tape Location: Video (Master tape 13) (14:50-40:25)
 @Transcript Duration: 00:00-25:30

 @Situation: Dyadic play in the classroom; Girls are making pizza out of playdoh

 *JEN: I finished it .
 %act: has succeeded in compacting playdoh in garlic press
 %cma: \$INI:ASRT:CAP
 *JEN: okay I did it .

%act: puts away garlic press
 %cma: \$MAIN:ASRT:CAP
 *JEN: I'm gonna [: going to] make numbers .
 %cma: \$INI:REG:INTENT
 *JEN: I need the boller@c [= roller] .
 %cma: \$INI:SHR:RQ+MAT
 *NOR: boller@c [= roller] ?
 %cma: \$INI:LRN:ASK+CLAR
 *JEN: that .
 %act: indicates rolling pin in NAD's hand by reaching for it
 %cma: \$RESP:LRN:GIV+CLAR
 *NOR: 0. [=! yields rolling pin without objection] .
 *NOR: I have another boller@c [= roller] .
 %act: finds another rolling pin in bin
 %cma: \$INI:COMT:DESC
 *JEN: there .
 %act: rolling own playdoh here and next turn
 %cma: \$INI:COMT:DESC
 *JEN: yyy right here .
 %cma: \$MAIN:COMT:DESC
 *NOR: I'm gonna [: going to] make a big xx pizza .
 %cma: \$INI:REG:INTENT
 %tim: 20:50
 *JEN: I'm gonna [: going to] make numbers .
 %cma: \$RESP:REG:INTENT
 *NOR: numbers pizza ?
 %cma: \$INI:LRN:ASK+CLAR
 *JEN: yup .
 %cma: \$RESP:LRN:GIV+CLAR
 *NOR: oh das [: that's] a tricky one .
 %cma: \$RESP:COMT:DESC

Appendix 5-4

Coding System for Initiations (INI) without Responses

The codes below describe what children did when they did not respond to an initiation; responses were defined as per the codes for conversational moves provided in Appendix 5-2.

CI: counter-initiation

INI is followed by an initiation that is semantically contingent on prior INI by interlocutor (often questions, since questions were, by definition, initiations)

NVR: nonverbal responses (more than one may apply)

- A action clearly relating to INI (e.g. doing what speaker asked)
- G gaze at eyes, face, head of interlocutor
- V vocalization clearly relating to INI (e.g. laughter in response to joke)
- JA joint attention; attention to some referent in INI

NR: no response

- I followed by lack of response (or undetected response) while within hearing range of partner

NA: not applicable or ambiguous

- CT continued attention to object or actions referred to in INI
- NO partner has no opportunity to respond, because the speaker reinitiates, talks to researcher, or engages in self-talk within one second
- O offscreen; body and/or face not adequately visible
- OV speakers overlap
- xxx unintelligible utterance follows

Appendix 5-5

Coding Systems for Communication Breakdowns

The following information has been excerpted verbatim from the following source, with copyright permission from the journal and author

Yont, K. M., Hewitt, L. E., & Miccio, A. W. (2000). A coding system for describing conversational breakdowns in preschool children. *American Journal of Speech-Language Pathology*, 9(4), 300-309.

Identifying Breakdowns Using the BCS	
Type of Clarification Request	Definitions
1. Nonspecific requests for repetition [NRR]	Neutral requests, such as "Huh?", "What?", or "I don't understand."
2. Specific requests for confirmation [SRC]	Repetitions with rising intonation (i.e., caregiver ¹ repeats the child's utterance in the form of a question), repetitions with reductions (i.e., caregiver repeats part of the child's utterance in the form of a question), and repetitions with elaboration (i.e., caregiver repeats the child's partial or full utterance while adding some new information).
3. Specific requests for repetition [SRR]	A "wh"-question in which there was a partial repetition of the child's utterance with the wh-element replacing part of the original utterance.
4. Specific requests for specification [SRS]	Requests that indicate the type of additional information needed to clarify the misunderstanding. This form is different from SRR because it does not ask the child to repeat his or her original utterance, but rather asks the child to provide more information to clarify the breakdown.

¹ In the study in this dissertation, peers rather than caregivers were involved.

Appendix 5-5 continued

Describing Breakdowns Using the BCS	
Source	Definition
1. Reduced volume	The child speaks too quietly and/or does not account for ambient noises.
2. Phonological	The child's utterance is unintelligible or contains a phonological error (i.e., sound substitution, omission, addition, or distortion).
3. Lexical	Child produces a word that the caregiver does not understand or that is not appropriate/correct within the context of the interaction.
4. Content rejection	Caregiver questions the content or truthfulness of the child's utterance.
5. Pragmatic	a.) Child uses pronouns that were previously not specified. b.) Child produces unmarked topic changes and/or ambiguous utterances.
6. Nonverbal	Child uses a gesture that the caregiver does not understand.
7. Incomplete	Child produces an utterance that is abandoned and incomplete.

Judging outcome of repair (codes developed by dissertation author)	
Outcome of repair	Definition
Successful	Interlocutor provides requested clarification and conversation or action resumes as if clarification was adequate.
Inadequate	Interlocutor provides requested clarification but repair either: elicited further requests for clarification or did not match or adequately address the request.
No-repair	Interlocutor does not respond to request for clarification.

Appendix 6-1

Coding System for Free Play (classroom and recess) Analysis

Note: a similar sheet in "landscape" format was used for actual coding, with interval rows through to 10 minutes and a column for notes and utterance transcriptions on the right

Activity of focal child:			Verbal content:
Solitary: engaged in separate, solo activity Parallel: near peer(s); independently engaged in related/same activity; no exchange or verbal interaction Interactive: engaged in cooperating, playing, talking, cleaning, or preparing/organizing play with peers. AD: engaged in dyadic or group activity involving an adult; adult may be in initiator or respondent role Other: wandering, observing Uncodable: unable to determine focal child activity			NV: no verbal contributions by focal child or by group s/he is participating in OV: focal child only overhears others talking in group activity; is clearly <u>not</u> the addressee V: focal child verbally initiates or is initiated to ≥ 1 time as individual or group member U: uncodable, either because not clear if anyone has spoken or because the focal child is involved in an unintelligible verbal exchange VZ: vocalizes ST: self-talk
	S, P, I (IA, RIA), AD, O, U		NV, OV, V, U, VZ, ST
Interval (in seconds)	group activity	dyadic activity	
0:00-00:15			
0:15-00:30			
0:30-00:45			
0:45-01:00			
1:00-1:15			

Appendix 6-2

Parent Interview Sample Questions

parenthetical remarks provide interviewer probes/reminders

Language program

1. Tell me about your daughter/son and how he/she came to participate in the language program at ____ School.
- 2a. What are some of your goals or hopes for your child this year as he/she participates in the program?
- 2b. Do you feel your goals are shared by the language program staff, e.g. teacher, speech-language pathologist etc.?
- 2c. Describe the program as you see it.
- 3a. Do you have any concerns or worries about your child as he/she participates in the program?
- 3b. What are they?

Interactions and conversations in and out of school

- 4a. Where do you observe your child interacting with other children?
(probe context: home/family, community/religious events, neighbourhood)?
(probe composition: dyadic, small/large group, younger/older, familiar/unfamiliar)
(probe activity: type of play, conversation, etc.)
- 4b. Can you give me an example of a time when your child got along well with other children? A time when he/she did not?
5. Has your child changed over the last couple of years in his/her interactions with others? How? (probe stability or changes)
- 6a. Do you think that your child's language affects how he/she gets along with other children?
- 6b. If so, in what way?
(probe for both positive and negative instances of language use in peer interaction)

Appendix 6-3

Teacher Interview Questions

1. How would you describe peer interaction in your classroom this year? Is this similar to other years or different?
2. What do you see as major influences on the way peer interaction develops and “unfolds” in your classroom? How do you see your role as the teacher?
3. Do you think that children’s language skills directly affect how they get along with other children? If so, in what way(s)?
4. Let’s say a child is described (e.g. in an IIP) as “interacting well” with other children. What might that mean to you?
5. Earlier in the year, children were selecting partners to play in pairs at activities or stations in your class. Other times, you’ve assigned partners or groups for activities (e.g. journal, table games). What motivates whether you choose to assign partners or ask children to select their own partners?
6. Some of the children in your class this year seem to have distinct patterns of interaction and pretty stable relationships. Can you talk a little about how you see each child in your class in terms of how they interact?

Appendix 7-1

Sample Observational Notes

free play
dramatic play
circle time
recess w. other prek
other (specify)

snack
readiness activities
paired dyadic play
lunchtime

Date: *April 22, 2005*

Time: *8:40 am*

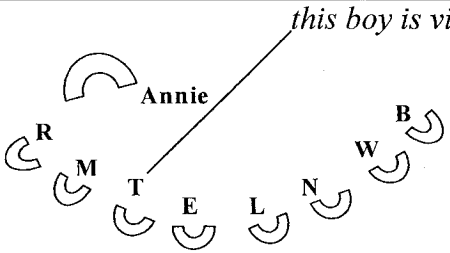
Activity: *Circle time.
morning routine*

Location: desks dramatic play sandbox circle cubby computer

Participants: cross out participants who are absent

Children (pseudonyms) Earl Brian ~~Jason~~ Lilah Nora Michael William Roberto

Staff (pseudonyms) Annie (teacher) Earl (teaching assistant) Other (specify)



circle time seating

8:40 am

Prior to circle time: When I enter, the children are taking turns going to the toilet. Earl and Roberto are looking at books, Lilah and William are giggling in the bathroom; I can see Lilah wrap her arms around William's chest.

Nora indicates to William that he should sit next to her, with a gesture.

Brian says to Lilah that she has chosen the same morning task as she did on a different day.

There is a boy visiting the class for possible admissions next year; he was also here yesterday.

Nora: "Hello Terence"

Lilah: "Come, come!"

Terence sits.

[Impression: Beautiful. Greeting the Newcomer]

William claims his chair. He had been in the bathroom. Terence moves without complaint. "That's a new boy!". (who says this?)

Brian asks: "What was the other girl's name?" (does somebody answer?)

The teacher initiates one of the morning circle songs: "Everybody do this, do this, just like ____", with each child taking a turn providing an action and filling in their name.

Teacher: "Did everybody have a turn?"

Brian: "No, not him". Points to Terence.

Terence gets a turn, then the group moves into choosing jobs, e.g. carrying the ball bag, singing the days of the week.

8:50 am

Nora spontaneously recounts a story about a movie (I am not recording fast enough to transcribe it). Then she says "I want to tell my friend's names. Ashley and Denis".

Teacher asks: "When did you play with them?". Teacher stresses word "When".

Nora replies: "I played with them outside". Confusing when and where.

The group now begins the song: "Who is at school today?".

Brian chooses Terence's name.

William repeats: "Terence! Terence!"

Earl: "Brian likes Terence".

Earl: "Annie, Brian likes Terence".

Earl: "William, you like Terence?"

William: nods yes.

Earl: "Me too" [he is looking at Brian]

[Impression: Earl seems to be taking his lead from Brian and William]

Michael is to give today's date and write it on the calendar. It is the 22nd.

Nora: "I said 22!"

William: "I said 22!"

Earl: Me too, "I said 22!"

While Michael writes on the calendar, several children chorally say "Nice two"

Now there is lots of teacher-led counting up to today's date.

Teacher: "What will tomorrow be?"

The children kind of quiet, fiddle in their chairs a bit. (I think the teacher then gave the answer but I didn't record it)

William is now doing the weather song.

Brian to William: "Go doggie" (Brian must be referring to the recess play where William was being a dog last week).

While some kids are talking about the weather, Earl talks to Annie, the teacher, and

others chime in.

Earl: "Annie, I was rolling xxx. [xxx = unintelligible part]

Nora: "Annie, Earl have a haircut".

Terence: joins in on something William is saying, about falling down (?)

Michael: "I didn't fall down".

Brian: "I didn't fall down".

Michael: "Yesterday I fall down".

Nora: Annie?

Nora bids for teacher attention then tells a story about self, brother, and mom, being in bed. Weather is still going on, the children and teacher are looking at the weather graph. Initiation-Response-Evaluation format, e.g. Teacher asks "More overcast or more sunny days". Children put hands up. Teacher nominates, says "Good thinking".

Several children are shouting out about the weather graphs, mostly directed to the teacher. Terence is looking out the window, then attending. Earl claims his right to a turn. He wants to be asked a question relative to the weather graph.

Brian is making faces at William. ? Not sure why. Not mean, just scrunching up faces. Lila is playing with Nora nonverbally, making faces at Nora and Brian while waiting for her turn to put the bead on the string.

The bead is soon put on the string, that has 2 strands, representing a ones and a tens column. The teacher asks about the number of columns; the number she has shown on the string. Choral response. Earl is complaining to peers re: everybody yelling, holding his ears. Nora: "I said it's 15!!".

[Impression: This is the second time this morning that Nora is asserting her knowledge, "I knew", "I said it"]

9:19 am

Circle moves into a bit of stretching. Nora says she is wearing her brother's shirt. Everybody starts talking about their own shirt. Nora is putting her arms up in front of her eyes, don't know why. Lilah copies. William is telling Earl not to go too fast "Not faster Earl!", directing! The children are looking at me occasionally.

9:25 am

The teacher announces they will do an activity. It is a phonological awareness activity. When the teacher announces that, the children disperse a bit, start looking at toys around the classroom, Lilah goes to the bathroom.

The activity then begins. The children are moving around to music, then freeze when the music is stopped by the teacher and make a sound, e.g. a prolonged "s" sound.

Earl and William are giggling and jumping. Terence, the visitor, stays with Brian.

Nora: "Annie, I go to the car wash yesterday".

Someone else: "Me, too!"

Earl is touching William's face. (it looks playful). Annie, the teacher, says he should keep his hands to himself. A few seconds later, William leans on Earl (looks playful again).

The activity continues with lots of merriment while hopping and noting sounds in their own or each other's names, William & Lilah tickling each other's necks ...

Appendix 7-2

Class Schedule

	Mon	Tues	Wed	Thurs	Fri
8:30 - 8:35	Homeroom	Homeroom	Homeroom	Homeroom	Homeroom
8:35 - 9:05	morn routine free play circle	morn routine free play circle	morn routine free play circle	morn routine free play circle	morn routine free play circle
9:05 - 9:35	new theme intro story	gym	OT group	french	french
9:35 - 10:05	french; snack	library; snack	snack	readiness activity; snack	drama or readiness; snack
10:05 - 10:20	Recess	Recess	Recess	Recess	Recess
10:20 - 10:50	weekly concept	music tx group	social skills gp.	readiness; pool	gym
10:50 - 11:20	dramatic play & groups		social skills	swim	readiness activity
11:20 - 11:50	table activity			swim	readiness activity
11:50 - 12:50	Lunch	Lunch	Lunch	Lunch	Lunch
12:50 - 12:55	Homeroom	Homeroom	Homeroom	Homeroom	Homeroom
12:55 - 1:30	quiet read	relax & mvt. w. S.; Lucie BJA	quiet read	computer	outdoor readiness act.
1:30 - 2:00	free play sometimes	outdoor activities; free play	outdoor or other activity	computer	
2:00 - 2:42	snack - story song - review	snack - story song - review	snack - story song - review	snack - story song - review	snack - story song - review