Maternal Control Reframed: A Longitudinal Study of Hearing Mother-Deaf Child Interaction From a Vygotskian Perspective

by

Carrie Anne Bailey

A thesis submitted in conformity with the requirements for the degree of Ed.D.
Department of Adult Education, Community Development, and Counselling Psychology
Ontario Institute for Studies in Education of the University of Toronto

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MATERNAL CONTROL REFRAMED: A LONGITUDINAL STUDY OF HEARING MOTHER-DEAF CHILD INTERACTION FROM AVYGOTSKIAN PERSPECTIVE
Carrie Anne Bailey, Ed.D., 1999
Department of Adult Education, Community Development and Counselling Psychology
University of Toronto

ABSTRACT

This study examined hearing mother-deaf child interaction during early school age and adolescence. Previous quantitative research, which has consistently focused on conversational control, has found hearing mothers of deaf children to be more controlling than hearing mothers of hearing children and deaf mothers of deaf children. The current study sought to: a) use qualitative methods to examine maternal control from a Vygotskian perspective and develop a more comprehensive framework for describing how hearing mothers and deaf children interact; b) examine hearing mother-deaf adolescent interaction to determine if maternal control extends into this developmental period; c) uncover any longitudinal trends related to maternal control that may exist.

Using videotaped data, this study examined the interactions of 10 hearing mothers and deaf children (81-97 months) during free play. When the children reached adolescence (16-17 years old), the same mothers and children worked on a block design puzzle. Both data sets were transcribed, coded and scrutinized for patterns of interaction.

Results indicated that mothers and children had two distinct play styles. Narrative play occurred when mothers actively played with their children, providing structure and creating stories which their children enacted. Episode play occurred when mothers involved themselves in the interaction indirectly. They exerted control by tracking play, asking questions, suggesting
ideas and responding to their children's enactments. While narrative children often responded by following their mothers' lead, episode children frequently acted independently of their mothers' suggestions. All mothers used play to teach their children. Teaching was central for episode moms while, for narrative moms, it was secondary to the development of the story. Findings indicated that narrative moms operated in their children's zones of proximal development and provided them with enriched play experiences. Episode mothers allowed their children to play at their existing developmental level.

The adolescent data revealed two styles of interaction: Working together (collaborative interaction) and working separately (cooperative interaction). Although many mothers exerted control by initially deciding the style of interaction, mothers and adolescents generally shared control during the puzzle construction. No longitudinal trends were found. Implications for future research were discussed.
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CHAPTER 1: INTRODUCTION

Interest in the area of deafness has produced ongoing discussion and a wealth of empirical research that enriches our knowledge about how hearing impairment affects individual development and family functioning. In our dynamic pursuit, as our exchange becomes more astute and our investigative strategies more focused, some essential truths remain while others are challenged, contradicted or disproven.

One enduring essential truth is the notion that the inability to hear and communicate effectively with others has important implications for the development of the deaf child. Hearing impairment prevents a child with hearing parents from learning about the world and learning to communicate through informal and incidental assimilation of information (Mindel & Vernon, 1971). The far-reaching consequences of this are seemingly inconspicuous at first, as invisible as the hearing impairment itself, but its effects are ubiquitous and profound. To varying degrees, deafness affects language acquisition (e.g., McAnally, Rose & Quigley, 1994; Meadow, 1980), cognitive development (e.g., Greenberg & Kusche, 1989), academic achievement (e.g., Moores, 1996), emotional development (e.g., Greenberg & Kusche, 1989; Bachara, Raphael, & Phelan, 1980) and the social development of deaf children (e.g., Schloss & Smith, 1990; Freeman, Malkin & Hastings, 1975).

Given these effects and importance of early childhood experiences on psychological and social growth, one research area that has received considerable attention during the past 25 years is that of hearing mother-deaf child interaction, specifically how hearing mothers exert control when playing with their deaf preschoolers. In an early, landmark study exploring the effects of communicative processes on hearing mother-deaf child interaction, Schlesinger and Meadow (1972) found hearing mothers of deaf children to be more inflexible, controlling, didactic, intrusive and disapproving compared to matched controls of hearing mothers-hearing children and deaf mothers-deaf children. The reasons cited to explain this behaviour include differences in interactional style directly related to the hearing deficit, the frustration moms feel because of impaired communication, and a proactive approach to teaching language and social skills. Many later studies also found hearing mothers to be controlling (Brasel & Quigley, 1977; Greenberg, Calderon, & Kushe, 1984; Meadow, Greenberg, Erting & Carmichael, 1981; Wedell-Monnig & Lumley, 1980; Musselman & Churchill, 1991).
There is an implicit assumption that maternal control negatively affects child development, and this is supported by much of the literature. For example, in a comprehensive review of the literature on effects of maternal control on development, Gartner (1993) reported that maternal control is associated with lower compliance, less advanced moral development, lower problem solving skills, inhibited development of internalized controls, child submissiveness, dependence directed toward adults, delays in language development and social skills. Conversely, few studies provide evidence of the positive effects of maternal control. For example, Musselman and Churchill (1993) suggested that children who use total communication benefit from the greater linguistic structure their mothers provide. Caissie and Cole (1993) maintained that conversational control is a strategy used by mothers to keep their children involved in the interaction. Thus, the effects of maternal control on development remain unclear.

In addition to these conflicting findings of the effects of maternal control there are other problems with the characterization of maternal control and with research in this area, in general. They include methodological problems, the lack of theoretical foundation on which to base studies of hearing mother-deaf child interaction, the lack of longitudinal data to substantiate the long term effects of maternal control, and an overall, limiting view of hearing mother-deaf child interaction. The present study seeks to address these limitations, insofar as possible, and to develop a broader based framework from which to view the concept of maternal control.

Research on maternal control is primarily quantitative and has yielded results that are variable and inconsistent. Not only are sample sizes typically small and drawn from select populations, there are differences in instrumentation, communication mode, communicative competence and previous participation in early intervention programs. These qualitative differences in design and sample characteristics inevitably affect research outcomes and make replicability and generalizability difficult. It is important to note however, that these problems reflect the complexities of the research area and do not necessarily undermine the methodological integrity of published studies.

In addition to problems of external validity, a second problem with the conceptualization of maternal control, and of research in this area in general, is the lack of a theoretical framework. Hall and Lindzey (1978) addressed the importance of theory when they state its purpose as the:

...collection or observation of relevant empirical relations not yet observed. The theory should lead to a systematic expansion of knowledge concerning the phenomena of interest and this expansion ideally should be mediated or stimulated by the derivation of a theory of specific empirical propositions (statements, hypotheses, predictions) that are subject to empirical test. In a central sense, the core of any science lies in the
discovery of stable empirical relationships between events or variables. The function of a theory is to further this process in a systematic manner. (p.12)

Although theory is important for conceptualizing observations in a systematic, comprehensive way and furthering our understanding of the relationships that are uncovered, few studies in the field of deafness are motivated in this direction (e.g., Lederberg, 1993 for her theoretical perspective of primary and secondary effects; Jamieson, 1994 for her application of Vygotsky). Marschark (1993) insightfully suggested this inattention to theory lies in the erroneous but tacit assumption of many researchers that the development of deaf children is essentially the same as for hearing children. This means that researchers in the field, perhaps almost reflexively, apply general principles of development to their work instead of considering specific developmental differences. In doing so, no theoretical advancement is made and no new conceptualizations of the development of deaf children are generated.

A third problem with the existing research is the dearth of studies examining the longitudinal effects of hearing mother-deaf child interaction. One way to evaluate the validity of the maternal control framework and to substantiate the effects of delays in language and social development is through longitudinal data. Unfortunately, few longitudinal studies examining hearing mother-deaf child interaction exist (see Musselman & Churchill, 1992) and few studies, longitudinal or otherwise, explore the dynamics of hearing mother-deaf adolescent interaction (see Nohara, MacKay & Trehub, 1995). Although unintentional, this striking oversight is related to the focused and deliberate attention given to the area of early childhood development. Because the developmental differences of deaf children deviate from the hearing norm in so many critical ways, researchers have understandably viewed early development with greater urgency.

A fourth problem with the conceptualization of maternal control is that it incompletely describes the interactions of hearing mother and their deaf children. Depicting these mothers as controlling, intrusive and disapproving is an over simplification. It does not consider control in the context of the total interaction. Furthermore, it has a "mother blaming" tone and carries a negative connotation which, over time, can become associated with these mothers' general behaviour. This conceptualization does not capture other important, constructive features of mother-child interaction which may be operating concurrently (e.g., instruction, modelling, direction, helpfulness, humour). This narrow scope affects the validity of the conceptualization itself.

The present study seeks to address these issues. First, this study intends to explore hearing
mother-deaf child interaction from a Vygotskian perspective. The theory of L.S. Vygotsky (1896-1934) is particularly relevant to the work on hearing mother-deaf child interaction. As a developmental theorist, Vygotsky made important contributions to the study of disability as part of the burgeoning interest in special education following the Russian Revolution. While concurrently working on general issues of child development, Vygotsky created a new, theoretical perspective which focuses on the development of residual strengths and other intact functions of disabled children (Knox & Stevens, 1993). He maintained that a deaf child experiences her/his deafness as normal and only experiences it as a disability because of the social feedback s/he receives (Vygotsky, 1993). In this way, Vygotsky focuses on developmental differences, not the deficiencies of disability.

While other developmental theorists have done extensive work in the area of child development and may be appropriate for the study of hearing mother - deaf child interaction (see A. Bandura's social learning theory; J. Piaget; E. Erikson;), the theory of L.S. Vygotsky is especially fitting. Not only has Vygotsky explored issues of development as it relates to disability, his writing on natural and cultural development, adult-child interaction, the zone of proximal development and the role of play provide a solid substructure on which to base hearing mother-deaf child interaction. These concepts will be outlined in greater detail later.

Secondly, this study will move away from a positivist orientation which quantifies mother and child interactional behaviours. While a quantitative approach has been useful in confirming and refining the parameters of maternal control as it is presently understood, it is limited in its conceptualization of interactional dynamics. By exploring hearing mother-deaf child interaction qualitatively, this study intends to open up the concept of maternal control to new formulations. It will examine what hearing mothers are doing within the interaction, while at the same time, explore the children's responsiveness and their role within the interaction.

Thirdly, this study will look at hearing mother-deaf adolescent interaction. As very little research has been carried out in this area, this will be an exploratory endeavour. Examining the ways hearing mothers interact with their deaf teenagers and how the adolescents respond may reveal new styles of interaction. Exploring this qualitatively will move us toward an understanding of mother-child interaction for this developmental period.

Finally, this study will compare the interaction in both time periods to determine if any longitudinal trends emerge. Comparing the similarities and differences of interaction of young school age children and adolescents may lead to a better understanding of the notion of maternal control and its effect on the development of deaf children over time.
CHAPTER 2: LITERATURE REVIEW

Academic literature commonly recognizes that mothers remain the primary caregivers in Western industrial society and as such, exert a strong influence on the social, emotional and linguistic development of their children. Because of this primary role in socialization, it is important on both practical and theoretical levels to examine early hearing mother-deaf child interaction. Determining the ways in which hearing impairment changes mother-child interaction and observing how hearing mothers promote, or perhaps unknowingly impede, the growth of their deaf children is necessary to broaden our understanding of this developmental relationship.

The growing body of research exploring interactional patterns of hearing mothers and their young deaf children has uniformly focused on maternal control. The specific meaning of control varies according to how researchers code their data; however, studies have emphasized conversational control in terms of response control, turn control and topic control (e.g., Musselman & Churchill, 1991; Spencer & Gutfreund, 1990a).

In addition, the current research generally examines maternal conversational control within the context of hearing mother-deaf child free play interaction. Plapinger and Kretschmer (1991) stressed the importance of examining hearing mother-deaf child interaction in a variety of situations in order to obtain a reliable representation of the child's communication environment. They concurred with Cheskin (1981) who reported that the high incidence of questions and imperatives used by hearing mothers within research settings may be influenced by their perceptions of what researchers want to see (e.g., their proficiency at mothering; their child's intelligence and abilities). In this way, the artificiality of the laboratory setting, and specifically the commonly used context of free play interaction, may not always offer a natural sample of interactional behaviours.

While it is appropriate and beneficial to observe interaction in a variety of different settings, it is unlikely that mothers respond in ways that pose a serious threat to external validity. Over time, maternal control has been observed in many different ways by many researchers, and is a consistent finding. If it were only an experimental artifact, it would likely be found less consistently.

Prior to developing the design for the present study, we will review the literature in order to ground the current investigation in previous findings. The literature review will examine issues
related to the topics of hearing mother-deaf child and hearing mother-deaf adolescent interaction. Given the scope of this research, it is necessary to survey topics from a wide range of areas. Part 1 reviews the core body of work on hearing mother-deaf child interaction and maternal control. Part 2 examines the theoretical underpinnings of the work of L.S. Vygotsky and the significance of play. Together, these provide the foundation for the design and encompass the guiding principles of the current investigation. Part 3 peruses the literature on adolescent development. An awareness of the developmental issues faced by adolescents is essential to extending the investigation of mother-child interaction into this age group.

**PART 1: Mother-Child Interaction**

Following Schlesinger and Meadow (1972), subsequent work on maternal control has focused on the communication occurring between mothers and children. In addition to exploring the style of mother-child interaction, communicative competence and mode have been found to have a direct bearing on the way the partners interact. Differences based on how well hearing mothers and their deaf children communicate with each other as well as differences related to aural/oral or manual communication methods influence the kind of interaction experienced by mothers and their children.

How successfully communication is coordinated, another key factor influencing the communication processes of hearing mother-deaf child interaction, also affects interaction. Hearing mothers must ensure they have their children's visual attention before communicating. Conversely, children must give their mothers their attentional focus before effective communication can occur. If communication is missed because a deaf child has not seen it, then the course of the interaction changes dramatically. Thus, research on communication coordination will be reviewed.

Beyond communicative processes, the context in which interaction occurs impacts upon the ways mothers and children relate to each other. Most studies on hearing mother-deaf child interaction and maternal control have focused almost exclusively on free play interaction. However, a small body of literature reveals that hearing moms and their deaf children interact differently in different contexts. Since this can affect the conceptualization of maternal control, two relevant studies which address this issue will be reviewed.

Finally, the literature on maternal control over time is explored. Research exploring
maternal control longitudinally reveals a shift toward less controlling interaction.

Early work on interaction revealed that hearing mothers of oral deaf preschoolers used less verbal praise and showed more verbal antagonism than mothers of a matched group of hearing children (Goss, 1970). These findings were later replicated and expanded upon in the seminal work of Schlesinger and Meadow (1972). This was the first large scale, empirical study in which the interaction of hearing mothers-deaf children was systematically compared to the interaction of hearing mothers-hearing children.

Schlesinger and Meadow's sample of 40 hearing mother-deaf child dyads were recruited from various preschool programs and matched with 20 hearing mother-hearing child pairs. Videotaped interaction of free play and semi-structured activities were collected along with a parental personality profile (i.e., California Personality Inventory), interviews of child rearing practices and a measure of child communicative competence (i.e., the Mecham Language Development Scale). Results indicated that the hearing mothers of deaf children were significantly more inflexible, controlling, didactic, intrusive and disapproving than mothers of hearing children. Information on child rearing practices revealed that hearing mothers of deaf children provided more constant supervision to protect their deaf children from accidents and used a narrow range of disciplinary strategies. It also showed that these mothers experienced frustration with regard to communication.

In addition to establishing an overall profile of maternal interactional behaviours, a significant effect of communicative competence was established. Researchers divided their data into three homogenous groups: (a) hearing children, (b) deaf children with good communication skills, (c) deaf children with poor communication skills. An analysis of behavioural ratings of mothers (i.e., flexibility, non-didactic behaviour, permissiveness, non-intrusiveness and encouragement) revealed that mothers of hearing children scored highest, followed by mothers of deaf children who were good communicators, then mothers of deaf children who were poor communicators. Further analyses of between group differences demonstrated that deaf children who were good communicators performed similarly to hearing children on ratings of happiness, enjoyment of interaction and pride in mastery. From this, Schlesinger and Meadow concluded that, when the communication deficit of deafness is controlled for or alleviated, hearing mothers and deaf children interact in ways similar to hearing mothers and hearing children.

This comprehensive study is responsible for generating ideas leading to the replication, refinement and enhancement of the knowledge in this area. It produced a profile of maternal
interactional behaviour characterized by control which has been replicated over time (Brinich, 1980; Cheskin, 1981, 1982; Musselman & Churchill, 1992, 1993; Spencer & Gutfreund, 1990b) and, an equally enduring main effect for communicative competence (Greenberg, 1980a; Caissie & Cole 1993).

The Effects of Communicative Competence on Interaction

Since deafness is commonly understood as a disability of communication, exploring the effects of communicative competence on mother-child interaction is an obvious starting point. Replicating the findings described in the Schlesinger and Meadow (1972) study and further explicating the relationship between communicative competence and maternal control is important for developing a deeper understanding of this phenomenon.

In contrast to Schlesinger and Meadow (1972), who composed comparison groups on the basis of the communicative competence of the deaf child, Greenberg (1980a) based his comparison on the communicative competence of the dyad. An examination of between group differences showed that low competent dyads were higher in aggression and gaze aversion, lower in total interaction time, and that mothers in these dyads had difficulty sustaining the interaction. In contrast, high communicatively competent dyads communicated more, asked more questions and discussed objects and events not present.

The work of Schlesinger and Meadow (1972) and Greenberg (1980a) reveal that communicative competence affects the quality and quantity of mother-child interaction. In highlighting this, Greenberg stressed that the relationship is reciprocal, i.e., that positive social interaction fosters further communication gains. High levels of communicative competence gives deaf children a pronounced advantage in their social relationships and, in having this advantage, they continue to benefit in other areas.

Another way to investigate the effects of communicative competence upon interaction is to control for mothers' communicative ability. Exploring the impact of maternal deafness on mother-child interaction essentially eliminates the communicative deficit found in hearing mother-deaf child dyads. Collecting data on social interaction during free play, Meadow et al. (1981) observed the effects of communicative competence by comparing dyads of hearing mothers-deaf preschoolers (using simultaneous communication); hearing mothers-deaf preschoolers (using oral-only communication); deaf mothers-deaf preschoolers (using a variety of sign language systems) and hearing mothers-hearing preschoolers. These researchers found that deaf-deaf and hearing-hearing dyads were similar in their social and linguistic interaction. They exhibited more complex, extended, elaborated and child-initiated interactions than the hearing mother-deaf child dyads.
This strong, sustained effect of hearing status on mother-child interaction highlights the critical role played by effective communication and demonstrates that deafness does not preclude the development of positive, reciprocal interaction when mother and child are both deaf (Meadow et al. 1981).

These findings were supported by Spencer and Gutfreund (1990a) who compared measures of maternal topic control within four groups of mother-child pairs (i.e., hearing mothers-hearing infants; hearing mothers-deaf infants; deaf mothers-deaf infants; and deaf mother-hearing infants). They found that hearing mothers of deaf children were less likely to follow their infants' lead and, as a result, provided them with less contingent language input than the other three groups. Although not as pronounced, increased maternal topic control was also seen in the deaf mother-hearing infant dyads, suggesting that hearing status influences topic control. Among other reasons cited, these researchers speculated that the intuitive and automatic nature of mother-child interaction is disrupted when mothers have to be continually alert to the differences in their own communication modalities and that of their infants'.

These studies underscore the importance of hearing mothers' ability to effectively communicate with their young deaf children. Hearing mothers may not innately know how to effectively interact in a manner that accommodates deafness. Paradoxically, hearing mothers and their deaf children are both learning to communicate. For mothers learning manual communication, sign language is a second language. Mothers communicating orally must learn new ways of expressing themselves and develop the ability to understand their child's gestures and speech. From their position of second language learner, hearing mothers attempt to teach their deaf children their first language. Thus, it is not surprising that ineffective communication is a significant barrier to positive social interaction for hearing mothers of deaf children.

Communication Mode and Interaction

Since communicative competence affects hearing mother-deaf child interaction, the mode upon which that ability is built may also affect interactional patterns. Current literature reveals inconsistent effects for mode although there is a trend which favours manual communication. For example, Musselman, Lindsay and Wilson (1988a) reported significant differences in hearing mother-deaf child communication by mother's mode. In a longitudinal study spanning the preschool period, these researchers employed a structured communication task where the mother, using her preferred mode, required her child to identify objects both receptively and expressively. Findings indicated a mode effect favouring manual communication. Children who used manual communication scored higher than children using oral communication. Brasel and Quigley (1977)
reported similar results with older deaf children.

Although group differences were nonsignificant, Greenberg (1980a) maintained that mode influences the quality of interaction. His analysis of hearing mother-deaf child free play showed that children using simultaneous communication demonstrated longer, more complex interactions, exhibited more cooperative behaviours and expressed more positive affect than oral children. Similar non-significant trends are reported in Meadow et al. (1981).

Musselman and Churchill (1991) found mode effects on measures of child directiveness. Results indicated that children using total communication (T/C) were more directive in their interactions with their mothers than children using aural/oral (A/O) communication. Thus, control was more evenly distributed between mothers and children who used total communication. On measures of maternal directiveness, there were no overall significant differences by mode: A/O and T/C mothers showed equally high levels of conversational control. However, A/O mothers had significantly higher rates of communication than T/C mothers. The researchers attributed this to the use of self-repetitions by A/O mothers, a suggestion also made by Greenberg (1980b). Unexpectedly, although oral children were less intelligible, the T/C mothers requested more clarification from their children. This suggests that some A/O mothers hesitate to repair communication breakdown when they do not understand their children's speech.

In addition to these overall findings which shows a positive effect for manual communication, Musselman and Churchill (1993) reported an interaction between mode, communicative competence and maternal control in gains in communicative competence over time. In this longitudinal analysis, the researchers looked at gains in communicative competence over time as a function of these three variables. They found that, for both expressive and receptive communication, low communicatively competent T/C children with high-control mothers showed greater gains than those with low-control mothers. This suggests that low-competent T/C children benefited from the greater linguistic structure provided by their mothers. Thus, maternal control is not always negative.

The reverse was true for A/O children. Low communicative A/O children with low controlling mothers showed greater gains than those with high controlling mothers. Consistent with the finding that A/O children were less directive in their interactions with mothers (Musselman & Churchill, 1991), these researchers argued that deaf children may have greater difficulty comprehending maternal speech than maternal sign with the result that maternal control attempts for this group are rendered ineffective. Increased maternal responsiveness with A/O children shifts the perceptual load to the mother, allowing the child to develop through
exploration and experimentation.

Notwithstanding the overall findings favouring manual communication, it is how well children can communicate using their chosen method that is important. Parents intuitively understand this, since many deaf children switch from A/O to T/C by adolescence (Musselman, MacKay, Trehub & Eagle, 1996). The Musselman and Churchill (1991) study showed that the effectiveness of an interactional style depends on a complexity of factors.

**Divided Attention**

Since deafness places constraints on auditory input and changes one's use of perceptual channels, the process of communicating and interacting with a deaf child is essentially altered. Without the benefit of hearing, a deaf child is less able to attend to multiple channels of interaction. Wood, Wood, Griffiths and Howarth (1986) pointed out that, beginning in infancy, deaf children do not have the simultaneous input of vision and hearing and, as such, need to process sequentially what hearing children assimilate in parallel. To do so means they must shift their attentional focus between objects in the environment and their adult partners. Put another way, given the nature of sign communication, a deaf child must divide his/her attention between linguistic and non-linguistic information (Musselman & Churchill, 1991; Swisher, 1992). A similar problem occurs with aural-oral children, who rely on speechreading and facial expression to augment spoken language.

The problem of divided attention effects the way hearing mothers interact with their deaf children. Meadow et al. (1981) reported that, in dyads where mothers used oral communication, 40% of their behavioural requests and attention bids were ignored. While these researchers attributed this behaviour to children's recalcitrance or lack of comprehension, it may also reflect the problem of divided attention. These deaf children may not have been ready to change their attentional focus when their moms wanted them to do so. Thus, the problem of divided attention may go unrecognized and, as a result, a child's behaviour may be misinterpreted by adults.

Empirical evidence also shows how divided attention affects maternal control. In response to the problem of divided attention, hearing mothers may increase their communicative attempts when confronted with an "inattentive" child, in an attempt to compensate for the disruption by furthering the interaction (Schlesinger & Meadow, 1972; Wood et al. 1986). In doing so, moms may behave in a controlling fashion. This is consistent with the interpretation of Meadow et al. (1981). Similarly, research suggests that hearing mothers of deaf children were less likely to follow their child's lead and use contingent language (Kenworthy, 1986; Spencer & Gutfreund, 1990a). Further, this occurred despite similarities in the children's responses across groups of
hearing-hearing, deaf-deaf or hearing-deaf pairs (Spencer and Gutfreund, 1990a). These researchers hypothesized that hearing mothers try to constantly maintain their children's visual attention so as to avoid having to regain it later. They suggested that for these mothers, who are unaware of the rules of visual turn-taking, the intuitive and automatic nature of interaction is disrupted. In attempting to compensate, they behave in a more controlling manner.

These disruptions to interaction may impact on the deaf child's language and social development. Spencer and Gutfreund (1990a) claimed that by not responding sensitively to their deaf infant's cues, hearing mothers provide interactions which do not effectively promote language acquisition. By relating noncontingently "...mothers may inadvertently reinforce passive rather than active communicative behaviours and may have given the infants the impression that their own interests were not as important as those of their mothers. " (p. 363).

These authors make an interesting point. When hearing mothers fail to respond contingently to communicative attempts of their children, they do not reinforce their children's behaviour. Both Spencer and Gutfreund (1990a) and Wood et al. (1986) support this view when they emphasized that infant development is not affected by the amount of language produced by mothers, but by the amount of contingent language. Thus, what becomes important is that hearing mothers and their deaf children learn communicative turn-taking in a way that accommodates deafness. Since this is not intuitive for hearing mothers of deaf children, then turn taking must be learned in more formal and structured ways, perhaps through parental intervention programs.

Wood et al. (1986) also recognized that adults are responsible for the timing of communication and its contingency to the child's visual attention. They highlighted the fact that children learn most effectively when the help they are offered is contingent upon their developing competence. Both help and control must be presented when the child faces difficulty and relinquished when opportunities for initiative and success exist. A parent who responds contingently by negotiating with, building upon, or extending the child's communication facilitates the child's understanding, self efficacy and linguistic development (Wood et al. 1986). What this means, however, is that hearing parents must learn a new skill, then teach their children the same.

These findings suggest that hearing mothers must learn how to adapt to their children's need for communication that is contingent on their visual attention. Learning the skills of visual turn taking, then teaching them to their children will not only enhance the quality of hearing mother-deaf child interaction, it will foster the child's developing competence in the areas of cognitive, linguistic and social skills.
Interaction and Context

While mode and communicative competence are important factors influencing interaction, examination of context lends another perspective on interactional dynamics. Henggeler, Watson and Cooper (1984), in their re-analysis of previously reported data, made interesting observations about both verbal and non-verbal controlling behaviour during free play and during teaching tasks. In doing so, they inadvertently revealed differences in interaction related to context.

Results indicated that, compared to hearing mother-child pairs, hearing mothers of deaf children employed higher overall rates of non-verbal and verbal control during both teaching and free play sessions. Furthermore, although non significant, these mothers exerted less verbal and non-verbal control during teaching, a time when control is expected. These researchers concurred with Stinson (1974) who explained a similar pattern by suggesting that hearing mothers were trying to protect their deaf children from failure. Generally, Henggeler et al. concluded that these high levels of maternal control have implications for the deaf child's social development because it prevents them from engaging in independent experimentation.

Plapinger and Kretschmer (1991) also studied the effects of context on mothers' interactional style. In an ethnographic study of one hearing mother-deaf child dyad, these researchers collected 80 hours of videotape data from various contexts of family life (i.e., mother initiated activities: reading, alphabet play; child initiated activities: doll play, imaginative play; activities where interaction was not the focus: preparing dinner, bathing). Through qualitative analyses, these authors identified two distinct maternal styles: (a) labelling, where mom's style is didactic and controlling; (b) dialoguing, where, while mothers still take most of the conversational turns, they interpret their child's communicative attempts and respond contingently. Similar to the functional language analysis of mother's language by Cheskin (1982), this conceptualization differentiates between a teacher role and that of a facilitator.

Both these studies reveal that mothers' interactional behaviour varies with context. However, free play remains important because it presents an opportunity for children to develop initiative and take an active role in interaction and, it is in this context, that Henggeler et al. (1984) found moms of deaf children more controlling. In order to broaden our understanding of maternal control, investigation of hearing mother-deaf child interaction needs to occur in free play settings as well as other contexts.

Interaction and Change Over Time

Exploring whether the character of hearing mother-deaf child interaction and maternal control has changed over time is important to our present understanding of the research area.
There are two ways to explore whether change has occurred. First, examining longitudinal studies provides useful measures of within subject changes in interaction. Secondly, exploring the efficacy of early intervention programs provides information of changes resulting from intervention.

Very few longitudinal studies of hearing mother-deaf child interaction exist, but there are two that are noteworthy. In a longitudinal study spanning a two month period, Wedell-Monnig and Lumley (1980) hypothesized that the quality of interaction between hearing mothers of deaf children decreases over time. Using a sample of six low communicative deaf children and their hearing mothers and six hearing mother-hearing child pairs, these researchers replicated the high level of directive behaviours of hearing mothers of deaf children found by Schlesinger and Meadow (1972). Further, a nonsignificant decrease in total number of behaviours directed toward their children and a nonsignificant decrease in amount of time spent interacting was found for hearing mothers of deaf children at the second time period. Similarly, a nonsignificant age effect was uncovered where deaf children during the later time period spent less time interacting with their mothers than two months earlier.

Wedell-Monnig and Lumley (1980) concluded that these decreases indicate the beginning of a trend toward less interaction for hearing mothers and deaf children dyads over time. Two possible explanations for these trends were offered: (a) hearing mothers flood their deaf children with stimulation to compensate for the sensory loss to the point where the child makes few independent responses, (b) the deaf child exhibits symptoms of learned helplessness.

Although the results of this study are often cited in the literature as evidence of relationship difficulties between hearing mothers and their deaf children, given the very small sample size (N=6) and the nonsignificant nature of the decreases in interaction, these findings and concomitant explanations must be accepted with caution. Moreover, by examining the data reported, unexpected problems are found. During the second phase, hearing mothers of deaf children directed an average of 42.3 behaviours toward their children whereas mothers of hearing children directed 41.7. Similarly, mothers spent 138.0 seconds interacting with their deaf children whereas mothers of hearing children spent 110.0 seconds. These between group differences demonstrate that, despite decreases over time, hearing mothers of deaf children spent slightly more time interacting with their children compared to mothers of the control group, and that the number of behaviours directed toward the children were essentially the same for both groups. Thus, while there is limited evidence to support the hypothesis of flooding, the data actually negates the notion of learned helplessness proposed by Wedell-Monnig and Lumley (1980).

An alternate interpretation of these results is possible. First, since the number of maternal
behaviours was similar for both groups during the second period, the slight decrease in the number reported for hearing mothers of deaf children over time (i.e., 46.5 to 42.3) may reflect the healthy adjustment of these mothers to their child's deafness. Together with minimal between groups differences in the amount of time spent in interaction, this is positive evidence of mothers being effectively engaged with their deaf children. Thus, by re-examining and re-interpreting these data, this study provides support for positive change in hearing mother-deaf child interaction over time.

The second longitudinal study of interaction, which is by Musselman and Churchill (1992), also suggests positive behavioral change in interaction. These researchers investigated maternal conversational control in hearing mother-deaf child dyads over a 29 month period. Results indicated that, as the communicative competence of deaf children increased over time, their mothers' control of the conversation decreased in important ways. Findings revealed significant decreases in mothers' rate of communication and their propensity to control turn-taking. A significant increase in mothers' ability to ask real questions of their deaf children combined with a significant decrease in behavioral requests suggested that quality of maternal input improved over the

While these results suggest positive trends, Musselman and Churchill (1992) surprisingly noted that the decreases in maternal control were not commensurate with their deaf children's language growth. These researchers found that mothers' tendency to control conversational turn-taking decreased as their children's language competence increased, but their control of their children's responses in conversation did not. This finding, however, may not be as deleterious as it seems. From their analysis of gains over time, Musselman and Churchill (1992) reported that less maternal turn-taking control was the critical variable related to language gains, not response control. Framed in this way, maternal response control, although disruptive to conversation, was primarily directed at correcting language errors rather than controlling the content of play. Mothers were engaging in an instructive role by correcting their children's errors in speech.

The results of Wedell-Monnig and Lumley (1980) and Musselman and Churchill (1992) provide evidence of positive change in the quality of hearing mother-deaf child interaction over time. Although not reflecting a complete reversal of the high level of maternal directive behaviours, these studies demonstrated encouraging movement towards healthier, reciprocal interaction.

Studies which explored the effects of early intervention on maternal control reveal variable long term results. Greenberg et al. (1984) evaluated the impact of an early intervention program
on linguistic, intellectual and social skills development of deaf children. Comparing 12 families receiving systematic intervention with 12 families receiving sporadic assistance from less qualified professionals, these researchers concluded that intervention children demonstrated more advanced communications skills as well as advanced comprehension and expression of abstract concepts. Intervention children were more active and responsive in interaction. They asked more questions, communicated spontaneously and were more compliant. Mothers of these children used fewer directives, made more declarative statements and interrupted their children less. Free play interaction was of longer duration and topics discussed were expanded upon, brought into focus and maintained for longer periods. Taken together, these findings indicate the benefits of early, systematic intervention.

One recent study is similar in design to that of Schlesinger and Meadow (1972). In their study of 41 hearing impaired toddlers selected from intervention programs and matched hearing controls, Lederberg and Mobley (1990) found that hearing mothers of deaf toddlers spent significantly less time interacting with their children, but that they initiated more interaction than mothers of hearing toddlers. These researchers concluded that mothers' greater rates of initiation were compensatory since their deaf toddlers were significantly more likely to terminate interaction than hearing toddlers. They recognized that hearing impaired toddlers responded less to their mothers because they did not hear or see their communication. Contrary to the previous findings, mothers in the two groups did not differ on qualitative ratings of maternal dominance or directiveness. Hearing mothers allowed their deaf toddlers to set topics and control the interaction as much as did the control group. In contrast to the results of Schlesinger and Meadow (1972), Lederberg and Mobley (1990) found no differences in the child ratings of the two groups. Hearing impaired children were equally as likely to be compliant, take pride in mastery, show initiative, express affect and focus on the activity. Mothers in both groups did not differ in ratings of affect, sensitivity, control or teaching behaviour.

Compared to the findings of Schlesinger and Meadow (1972), the differences in maternal control and child ratings found in the Lederberg and Mobley study may be attributable to the effectiveness of the early intervention program in which the deaf toddlers were involved. Although encouraging, these results need to be replicated before the prevailing maternal control hypothesis is supplanted.
CONCLUSION

The findings presented thus far suggest that several factors may contribute to maternal control within hearing mother-deaf child interaction. Clearly, high communicative competence improves the quality of the interaction and a trend exists for manual communication being beneficial over an aural-oral approach. Successfully coordinating communication with the child's visual attention is essential to ensuring that meaning is received and interaction continues. However, the inexperience of hearing mothers with respect to the new skill of visual turn taking may contribute to their controlling manner within the interaction. Although most research in this area uses free play as the context for hearing mother-deaf child interaction, there is an increasing awareness that context may influence the kind of interaction experienced. More research with free play setting as well as different contexts needs to occur. Finally, recent findings suggest an overall trend exists toward less maternal control within hearing mother-deaf child interaction over time.

More research needs to be done before the current conceptualization of maternal control can be transformed. Although we know a great deal about the factors influencing maternal control, we hold a limited view. Looking at maternal control from a broader perspective will help us gain additional insight into hearing mother-deaf child interaction. It will allow us to see the overall character of the interaction, discover the role moms play in the interaction and how their deaf children respond. By exploring hearing mother-deaf child interaction using qualitative methods, we will describe the nature of maternal control and possibly identify different interactional styles.

PART 2: A Theoretical Foundation: Vygotskian Principles And The Significance Of Play

Part Two of this literature review deals with the theoretical domain. A Vygotskian orientation guides the current re-examination of hearing mother-deaf child interaction and provides the theoretical framework upon which this investigation rests. Vygotsky's writings of natural and cultural lines of development, the general genetic law of cultural development, the zone of proximal development, scaffolding and transferring responsibility will be reviewed.

The second theoretical section addresses the significance of play. Like much of the work in this area, play provides the context upon which this study of hearing mother-deaf child is based. Understanding the role of play in child development will lead to an appreciation of the data presented.
Vygotsky’s Theory of Child Development and Adult-Child Interaction

Wertsch, Minick and Arns (1984) claimed that theories of cognitive development differ in the emphasis placed on the role of social forces in individual development. From a socio-cultural perspective, Vygotsky viewed individual cognitive processes as the result of social interaction (Wertsch et al. 1984). A fundamental claim of Vygotsky’s work is that development occurs in two lines. Natural processes consist of physiological growth and maturation whereas cultural development involves mastering various cultural means and instruments. While these developmental domains are intertwined and difficult to distinguish at times, Vygotsky recognized that the acquisition of new cultural instruments is preceded by a period of natural development (van Der Veer & Valsiner, 1991).

Vygotsky considered lower psychological functions as those arising from natural development and which biologically condition a child’s development. They include elementary perception, memory, attention, and some characteristics of the nervous system (Gindis 1995). Higher psychological functions are not biologically-based but appear when lower psychological functions are transformed. These are the result of socialization and include (but are not limited to) the ability to use the psychological tools of gestures, sign systems, counting, writing, art, diagrams and maps (Gindis, 1995).

The distinction made between natural and cultural lines of development provides the foundation for Vygotsky’s General Genetic Law of Cultural Development. Briefly, this law describes how children acquire knowledge through their interactions with adults. The law states that a child’s cultural development occurs on two planes: first on the interpsychological (i.e., interpersonal) plane and later, on the intrapsychological (i.e., intrapersonal) plane. In essence, Vygotsky (1981) believed that children learn first through their interactions with adults and then they internalize their learning. The outcome is what Vygotsky referred to as ‘higher mental functions’ (as described above) or cognitive and intellectual growth.

As a core construct of Vygotskian method and the means of examining developmental processes, the concept of the Zone of Proximal Development describes the principle that children exceed their actual developmental level when they problem solve with the assistance of an adult or a more capable peer. Because children accomplish more with assistance than they do on their own, Vygotsky (1978) believed that the results reported from standardized psychological tests reflect only children’s actual achievement and not their potential development.

Although the notion of scaffolding was not developed by Vygotsky, many researchers draw parallels between it and the zone of proximal development (Newman & Holzman, 1993). Scaffolding occurs when an adult monitors the child’s level of skill in order to elicit a higher level
of competence, and in doing so, structures and models appropriate solutions to problems (Wertsch, 1979; Wood, 1998; Rogoff, 1984). It involves helping the child transfer relevant concepts known in a familiar setting to a novel one (Rogoff, 1984) or teaching the child to do a new task (Wood, 1998). It also involves making adjustments and presenting material that is just beyond what the child can manage independently so that s/he develops new capacities (Rogoff, 1984). Rogoff exemplifies this idea when she recalled how mothers routinely promote their infants learning by adjusting their interaction in ways that are consistent with their developmental level. She further maintained that parental guidance is a tacit process of modelling and regulating a task's difficulty in order to advance a child's development.

Related to the concepts of zone of proximal development and scaffolding is transferring responsibility. Rogoff (1984), who coined the term, explained that as informal instruction proceeds and the child gains greater understanding of the task, the initial high levels of scaffolding are adjusted. As a result, the child is permitted and encouraged to assume a greater level of responsibility for carrying out the task (Rogoff 1984). Thus, scaffolding and transferring responsibility to a child in a way that s/he can successfully manage, are two ways to facilitate cognitive growth while working in the zone of proximal development.

**The Significance of Play**

Since play forms the context of hearing mother-deaf child interaction in the present study, it is important to understand the role of play in a child's development as well as to discern the developmental stages of play. Doing so will naturally lead to a richer appreciation of the data.

The extensive body of literature on play advances the premise that play is an important aspect of child development. Generally, Vygotsky (1978) believed that play satisfies unrealized needs and is a context where children gain knowledge about something unnoticed in life. He strongly advocated that a child's greatest achievements are possible in play and that these will form the basis of his/her later actions and morality. Lefrancois (1980) maintained that play is a fundamental and necessary part of a child's activities that affects every aspect of his/her development. In their review of the literature Spencer and Deyo (1993) concluded that play allows children to explore new combinations of ideas and behaviours. They viewed play as a mechanism through which cognitive growth proceeds and believes it provides information on a child's cognitive and social developmental status. Similarly, McCune, Dipane, Fireoved and Fleck (1994) suggested that play provides a window on a child's cognitive, language and social development. Thus, not only is play an important developmental, growth-producing endeavour
for children, it provides an important context for researchers to study child development (McCune et al. 1994).

Descriptions of the stages of play are as varied as their prescribed purposes, however they have a common and expected progression from immature to more mature forms of play behaviours. For example, Lefrancois (1980) classified play into three general categories: (a) sensorimotor play involves the manipulation of objects or engagement in activities for the sensations they produce, (b) imaginative play includes make believe games and activities where either the person or activity represents something different from what it is, (c) social play involves interaction between two or more children and frequently takes the form of games. Lefrancois (1980) further addressed the social aspects of play when he described the progression of play as going from solitary play (playing alone) to parallel play (where children play side by side but do not interact) to cooperative play (playing together).

More elaborate descriptions of play are developed when play behaviours are examined and categorized in greater detail. Whereas Fiese (1990) described eight levels of play behaviours that are microanalytic in nature, Ungerer and Sigman (1984) described five categories of play behaviours that depict progressively more mature forms of play. The differences in detail of these conceptualizations do not intimate that one is better than the other. The differences in how play is categorized relate directly to the diversity of research purposes and the questions that one seeks to explore.

For the current purpose, the framework of Ungerer and Sigman (1984) provides sufficient detail. Their categories consist of: (a) simple manipulation which involves physically exploring a single toy by mouthing, waving, banging, fingerling or throwing it; (b) relational play which includes relating objects in non-functional ways e.g., banging two objects together, stacking them or using one to hold another; (c) functional play which involves using objects for appropriate or conventional purposes; (d) symbolic play which consists of using one object as if it were a different object, the creation of people or objects having no physical presence or pretending a doll is engaged in an independent activity, and; (e) sequencing which involves a series of functional or symbolic acts which are meaningfully integrated and related in a sequential manner. Thus, the framework of Ungerer and Sigman (1984) describes a child's play behaviour as evolving and developing in a series of stages from the physical manipulation of objects to mature forms of behaviour where play may be functional, symbolic and/or sequential.

Although research is not conclusive, many believe that children develop more mature forms of play through their interactions with others. For example, Connolly, Doyle and Reznick
(1988) reported that social pretend play is associated with positive changes in social behaviour, and is a context where children can exercise social skills and develop social competencies. Howes, Unger and Matheson (1992) observed that more complex forms of play develop when children play with their moms than when they play alone. However, these researchers found it difficult to determine who was responsible for the structure of play. Fiese (1990), in part, concurred and concluded that social interaction affects the complexity of play but qualifies this when she cited Gauvain and Rogoff (1989). These researchers maintained that simply having a partner may not ensure cognitive gains. They believe that shared responsibility and joint problem solving are important aspects of interaction. Similarly, Denham, Renwick, and Holt (1991) maintained that young children's social-emotional competence is in part dependent on mother's interactional behaviour. Thus, current research suggests that a having a play partner is beneficial to the child's social development. Less clear is the role of the play partner and the type of interaction occurring within the joint context.

Specifically concerned with the play behaviours of deaf children, Spencer and Deyo (1993), in their review of the literature, concluded that the play of deaf children consistently revealed differences in the social realm (evidenced by excessive amounts of solitary play), the cognitive realm (evidenced by a decrease in object substitution or the use of imaginary objects) and in the lower frequency of play. In their own research comparing the play behaviour of 3 groups of mother-child dyads, (five dyads each of deaf children with hearing moms, deaf children with deaf moms and hearing children of hearing moms), these researchers found that the levels of symbolic play interact with language development, characteristics of social behaviour and cognitive maturity. They concluded that delays in language development and disruptions in the development of patterns of social interaction interfere with the acquisition and demonstration of symbolic play.

In contrast, Blum, Fields, Scharfman and Sibler (1994) advanced a competing view of the effects of language delays on the play of deaf children. In their study of 16 deaf children ages 1-3, they claimed that their deaf children possessed the cognitive and representational skills that are a prerequisite for symbolic play, in spite of their delays in language acquisition. They suggested, however, that language does play an important role in the development of complex play sequences and in the later development of more mature forms of social play.

Although there is conflicting evidence about how deafness and language delays, in particular, impact the quality of children's play, there is agreement that play is a context where cognitive, social and language development occur.
CONCLUSION
Since mothers appear to play a proactive role in providing their deaf children with compensatory experiences, Vygotsky's socio-cultural theory provides a highly appropriate means through which to explore hearing mother-deaf child interaction and maternal control. Not only does Vygotsky's theory support the importance of play for development, it provides an appropriate context for examining how moms to support their children's developing skills. The concepts of the zone of proximal development, scaffolding and transferring responsibility provide new avenues for conceptualizing maternal control. Using these concepts within the context of play, we will look at the reciprocal nature of mother-child interaction. Bell and Harper (1977) suggested that although science typically looks at how a parent's behaviour modifies a child's behaviour, the relationship between them is, in fact, bi-directional. They maintained that parent-child interaction occurs in a reciprocal social system which involves mutual adjustment and accommodation. Thus, guiding our investigation, these theories help generate a new understanding of interaction and maternal control.

PART 3: Adolescence Development
A review of the key aspects of adolescent development that are relevant to this study will now be presented. The purpose of this study is to view mother-child interaction over time, in order to understand its evolution from childhood to adolescence. First, a general overview of the developmental changes faced by adolescence will be presented. This will place the developmental tasks specific to this review in a broader context. An understanding of these general changes is important because they tacitly affect how adolescents relate with others. Secondly, the development of autonomy will be reviewed followed by a discussion of the parent-adolescent relationship. These are directly related to mother-adolescent interaction and maternal control. Then, by reviewing the limited number of studies which examine the effects of deafness on adolescent development, we will develop a better understanding the issues faced by deaf adolescents. Generally, such a review will give meaning to the data and help further our understanding of the way the deaf adolescents in this sample interact with their hearing mothers.

Overview of Adolescent Development
Adolescence, like infancy and childhood, has developmental milestones and stages through which the young people advance. Because the stages of adolescence are not clearly demarcated and because there is no criterion by which to judge whether someone has reached adult status in
Western society, individuals discover their adult status themselves (Lefrancois, 1980). This ambiguity naturally contributes to adolescence being a lengthy period of enormous transformation. In addition, this vagueness is related to the variability of this developmental period. Santrock (1981) maintained that although there are common shared experiences, everyone experiences adolescence differently and the thoughts, feelings and actions of young people are unique.

From our evolving understanding of this stage, differing perspectives emerge about how to conceptualize the developmental tasks of this period. From an ecological perspective, Garbarino (1985) maintained that adolescence is a period of development beginning at ages 11-12 and ending in the early 20's. He claimed it is a period that results from the interplay between individual characteristics and the social systems in which an individual participates. Similarly, Collins, Gleason and Sesma (1997) conceptualized adolescence as "a period of tension between two developmental tasks: increasing conformity to societal expectations and attaining autonomy from the influences of others. Both perspectives consider individual factors and social influences as important to adolescent development.

In a comprehensive conceptualization, Steinberg (1985) addressed several domains in which change occurs. In addition to the biological, cognitive and social changes of adolescence, he cited changes in interpersonal skills, and legal, economic and political status. Then, in addition to these changes in status, there are concomitant changes in the way adolescents relate to members of their family, their peers, in school and in work. Beyond the changes, there are the psychosocial changes in the development of an identity, autonomy, intimacy, sexuality and achievement (Steinberg, 1985). Clearly, the myriad individual factors and social influences of adolescence together with their subsequent interplay makes adolescence a complex developmental period both to experience and to research.

**Adolescence and Autonomy**

As a developmental task which resurfaces across the life cycle, becoming an independent person is especially important for adolescents (Steinberg, 1985; Coleman & Hendry, 1990; Horrocks, 1976; Montemayor, 1986). Like cognitive development and the formation of identity, developing autonomy is important for both personality development and the attainment of adult status (Ausubel, 1965).

Adolescents who face issues of autonomy today must make difficult decisions about lifestyle, values and behaviour (Steinberg, 1985). Whereas traditional views of autonomy were marked by a departure from home, independence today often represents freedom within the family
to make day to day decisions, and the freedom to take responsibility for educational choices, political beliefs and career aspirations (Coleman & Hendry, 1990). It also means the desire and ability to accept responsibility for one's thoughts, feelings, moral judgements and practical decisions as well as the ability to stand by one's own convictions whether or not others approve (Jersild, Brook and Brook, 1978).

Moreover, because of the demands of today's contemporary society and because of changes in family constellations, the expectation of young people to behave autonomously is greater today than before (Steinberg, 1985) and achieving autonomy is more complex (Santrock, 1981). In cases where adolescents do not successfully achieve autonomy or where it is delayed, they are at risk for growing to accept this status and preferring their more dependent state (Horrocks, 1976).

The Parent - Adolescent Relationship

As the adolescent experiences myriad changes in physical, sexual and cognitive growth as well as in identity development and autonomy, there are concomitant changes in their relationships with their parents (Santrock, 1981). During the adolescent period, a process of adaption and restructuring within the family occurs as adolescents develop new interests, abilities and needs (Kreppner, 1996). Although researchers search for fundamental principles to explain the character of the family during this period, the impact of adolescence on the family is not likely to follow a universal pattern because of the differences in family composition. (Steinberg, 1991; Santrock, 1981).

Notwithstanding these differences, adolescence is often characterized as a stormy and conflictual period where differences in attitudes, beliefs and values create a "generation gap" Interestingly, research does not support this "storm and stress" perspective (Holmbeck, 1996; Lerner & Galambos, 1984). Reference to the generation gap often gives the impression of discontinuity between adolescents and parents, but on the whole they seem to share similar beliefs and values (Haviland & Scarborough, 1981). In fact, Holmbeck (1996) reported that less than 10% of families endure serious relationship difficulties during adolescence that are characterized by chronic and escalating levels of conflict. When relationship problems between parents and adolescents do exist, Geurney and Arther (1984) submitted that it is unknown whether these are newly generated or simply a continuation or exacerbation of earlier conflicts.

In addition to differences in family structure and relationship history influencing how adolescence is experienced within the family, Santrock (1981) maintained that the parent-adolescent relationship is bidirectional insofar as both the adolescent and the parents are maturing
and growing at the same time. Although this often goes unnoticed and there is little research available on adult development, Santrock accepts the perspective of learning theorists when he maintained that parents and adolescents engage in reciprocal socialization. Adolescents socialize their parents just as their parents socialize them.

**Adolescence and Deafness**

While much has been researched and written about deafness and child development, relatively little attention has been afforded to deafness and adolescent development. Notwithstanding this oversight, a small number of researchers attempt to address the issues of deaf adolescents. For example, Head, Long and Stern (1991) maintained that hearing impaired adolescents are faced with the same pressures and hold similar attitudes toward sex, drugs and independence as hearing adolescents. However, Cohen (1978) indicated that deaf adolescents face additional complex issues that exacerbate the normal developmental stresses at this stage.

For example, Head et al. (1991) claimed that one's attitude toward his/her deafness influences the development of identity and affects one's place in the family. In addition, these researchers suggested that the hearing status of other family members may also affect identity as well as possibly creating an overprotective family environment. However, Head et al. (1991) did not identify the kind of effect these circumstances might have for the developing adolescent. Despite this shortcoming, in their review of relevant literature, these authors addressed another developmental difference. They maintained that the educational system of the deaf results in a longer adolescence because many schools have extended programs which attempt to compensate for the developmental lag brought about by deafness.

In addition to potential differences as they relate to family members' hearing status, a possible sheltered environment and a prolonged school placement, Kolod (1994) claimed that hearing parents and their deaf adolescents do not share a common language and as a result can not easily share ideas with each other. As a psychoanalyst who works with deaf persons, she advanced two interesting ideas with respect to deaf adolescent development. First, Kolod claimed that deaf adolescents with hearing parents tend to internalize a sense of damaged identity. She then suggested that one way deaf adolescents assuage this problem and separate from their parents is by identifying with the Deaf World. This obvious rejection of the Hearing World results in a shift in identity from disabled to culturally different. According to Kolod, doing so promotes pride, self acceptance and "can be a sign of creative selfhood" (p. 648).

During this period of identity development, a second response to deafness can occur. Kolod (1994) purported that deaf adolescents sometimes remain in a state of denial about their
deafness. She explained that some deaf teens claim to be hard of hearing when their audiogram indicates profound deafness. Although Kolod did not comment on its impact beyond citing ensuing communication difficulties, the current author speculates that such a crisis of identity may have far-reaching consequences on other aspects of the adolescent's development in the social domains of peer and family relationships.

In contrast to reports of developmental differences as derived from clinical populations and practice wisdom, Musselman et al. (1996) reported results from data collected from a representative sample of deaf adolescents. Comparing the longitudinal data of deaf children and adolescents, these researchers found that early language difficulty impedes social development and may lead to compromised long-term psychosocial adjustment. They suggested that the level of communicative ability attained by deaf adolescents may be sufficient for simple social interactions and insufficient for more complex interactions and for school. Furthermore, they reported that the differing communicative abilities of parents, teachers and deaf adolescents may thwart the development of normal social relationships and lead to problems of adjustment.

Thus, deaf adolescents are faced with the same developmental tasks as their hearing counterparts. However, they are faced with additional challenge of attaining adult status with a Deaf identity. What this means will likely vary over time since data suggest that a developmental lag possible, especially with respect to issues of psychosocial development.

CONCLUSION
Like childhood, adolescence is a time of dramatic change and development. Developing greater independence and self reliance, adolescents undergo a re-definition of who they are. For adolescents who are deaf, this process of change also means integrating their hearing impairment with their evolving new self. Given that variability in adolescent development is expected, it is likely that variability in the interactions of hearing mothers and deaf adolescents will be seen.

In general, this review highlighted the complexities related to hearing mother-deaf child interaction and maternal control. It is important to consider the myriad influences which may impact on it, particularly when seeking to develop a framework from a qualitative research perspective. Being aware of relevant literature will increase one's sensitivity when looking for different relationships in the data.

By re-examining previously collected data on hearing mother-deaf child free play interaction, the present investigator seeks to understand maternal control interaction from a Vygotskian perspective. Assuming that mothers act in ways that support their children's
development, we will examine how hearing mothers and deaf children play together. How mothers control play by virtue of being the more knowledgeable play partner and how they facilitate the development of play will be examined using the notion of the zone of proximal development. We will also look at how the children respond to mom’s directive overtures while, at the same time, considering the impact of deafness on their interaction. Understanding the notion of maternal control in this way will provide us with a more constructive way to view interaction during this developmental period.

Analysing hearing mother-deaf adolescent interaction while they are engaged in a puzzle task will enable us to understand interaction during this developmental period. Since little research on the impact of deafness and the mother-adolescent relationship has been carried out, this investigation will produce a new conceptual framework of interaction. Although Vygotsky did not discuss his concepts of the general genetic law of cultural development and the zone of proximal development in the context of adolescence, we will examine the extent to which they apply to hearing mother-deaf adolescent interaction. We will view this interaction in light of the developmental tasks of deaf adolescence, specifically developing autonomy and re-defining the parent-child relationship.

Finally, by comparing the two sets of findings, this investigator may uncover patterns or trends linking early and later development.
CHAPTER 3: METHODOLOGY

The first section of this chapter examines the rationale for using a qualitative approach to study hearing mother - deaf child interaction. It is important to understand the assumptions that guide this inquiry. The second section describes the method used to conduct this research and the procedures used to establish the trustworthiness of the findings.

Rationale

Qualitative research is becoming accepted as a legitimate form of inquiry. "No longer is the literature preoccupied with justifying the use of qualitative methods, or debating the merits of qualitative versus quantitative research." (Merriam, 1989, p. 161). However, it remains important to discuss the epistemological assumptions and hermeneutical underpinnings that guide an inquiry. This will enable the reader to understand the findings within the context in which they occurred.

One dominant epistemological belief of this study follows the naturalistic inquiry axiom developed by Lincoln and Guba (1985). These researchers maintained that there are multiple realities and multiple ways of constructing these realities. This is consistent with my dissatisfaction of the current conceptualization of maternal control and my goal of re-framing it using qualitative methodology. My belief in multiple realities makes it possible for the prevailing conceptualization of maternal conversational control to simultaneously exist with the new framework that I develop. In fact, it is likely that they will have points of intersection. Thus, one reality does not negate the other. They are different ways of looking at the same phenomenon.

This ties in closely with a discussion of hermeneutics. Smith (1993) identified three different orientations to the process of interpretation. Validation hermeneutics involves objectively interpreting the interpretation of others. Critical hermeneutics is based on the assumption that an inquirer can understand what people mean better than the individuals themselves because the inquirer can assess meaning objectively. For the purposes of the current study however, philosophical hermeneutics is most appropriate. Smith (1993) described this as the ability to contribute to an ongoing process of interpretation and re-interpretation of meaning. He reported that the "circle of interpretation can be broadened and deepened, but it is a circle from which
escape is not possible." (Smith, 1993, p. 198). Thus, meaning evolves and is continually shaped and re-shaped as we go long.

Given the nature of multiple realities and ongoing interpretation, any inquiry is inconclusive. It suggests that nothing can be known for certain and that the process of knowing is continuous. However, it is precisely these qualities that make this form of investigation worthwhile. Challenging the current body of knowledge and developing new conceptualizations about social life and human behaviour enriches our understanding of the world. As our body of knowledge expands, researchers make their own judgements about what to believe based on the existing evidence and what resonates with them. In the end, we may choose to believe different things.

A second axiom based on the naturalistic paradigm is that qualitative research methods are inextricably related to the researcher's value system (Lincoln & Guba, 1985). Accepting this, it is important to understand the values that influence an inquiry. Instead of perceiving her values as a limitation, Marshall (1981) writes:

My bias is something I appreciate, it's part of me as a researcher. And while it is important for me and for others to recognize my bias, it really is what I can give as a researcher, it is my contribution, and it's coherent and it's felt and it has all these other qualities which make me value it more than a detached attempt to be objective. I work from a particular position; I appreciate other positions, and I feel that each has its own integrity and its own validity. (p. 399)

Although Marshall speaks of 'biases', it is evident that she is addressing the important role her values play in shaping her research. The principal value that directed this inquiry was my conviction that the notion of maternal control, as it is currently conceptualized in the literature, incompletely describes the interactional dynamics of hearing mothers and their deaf children. I strongly believed that there is more than conversational control operating during mother-child free play interaction and I felt compelled to learn more about what was occurring. My second bias was that qualitative research is an appropriate way to open up the data since qualitative researchers tend to analyze their data inductively. They do not search out data or evidence to prove or disprove hypotheses (Bogdan & Biklen. 1982). Thus, instead of testing relationships between variables, I sought out salient patterns in the data and identified the relationships among them. This enabled me to gain a fresh perspective about hearing mother-deaf child interaction.

My third bias was that, like many qualitative researchers (Lincoln & Guba, 1985; Bogdan & Biklen, 1982; Merriam, 1989; Evans, 1998), I believe the investigator is the primary instrument of the investigation. In advancing this position, Evans (1998) claimed that being the instrument of
investigation allows the researcher to discover what is in the data without the constraints and limitations of defined variables in a controlled experimental settings. Lincoln and Guba (1985) asserted that only the 'human instrument' is capable of understanding and evaluating the meaning of interaction. In these ways, qualitative researchers use themselves as the device through which to develop new conceptualizations from their data.

Thus, the current investigation is shaped and guided by my belief in multiple realities, an ongoing interpretive process, a conviction that something more than maternal conversational control was happening in hearing mother-deaf child interaction, a willingness to analyze the data inductively and a belief that I am the research instrument. Having outlined these tenets which form the foundation of this investigation, we can proceed to a discussion of its method.

The Method

Design

The design for this study was conceptualized when I was reading Vygotsky's theory on play. At preschool, Vygotsky believed children are capable of creating imaginary situations through action. Included in these situations are rules of behaviour that are sometimes hidden or concealed. Play and imagination always stem from rules which are not necessarily formulated and laid down in advance. They sometimes go unnoticed but exist as the guiding standard of children's behaviour (Vygotsky, 1978). Vygotsky maintained the relationship in play between imagination and rules changes over time. Play using overt imaginary situations and covert rules develops during the preschool years. Conversely, play having covert imaginary situations and overt rules develops during the school years and adolescence. For example, the knights, kings and queens of a chess game create an imaginary situation, yet they can only be moved according to prescribed rules (Vygotsky, 1978).

Although little is known about the play of adolescents and adults, we do know that age appropriate forms of play exist (Cohen, 1987). Free play, fantasy activity is important during childhood. Games as play, or structured, rule-based activities, are predominant during the school years and adulthood (Newman & Holzman, 1993). Accordingly, analyzing interaction longitudinally by comparing age appropriate play behaviours during childhood and adolescence is an appropriate way to explore development.

Thus, the design of this study crystallized when I decided to explore hearing mother-deaf child interaction longitudinally. Using age appropriate forms of play, I sought to qualitatively analyze hearing mother-deaf child free play interaction and hearing mother-deaf adolescent
interaction while they were engaged in a puzzle task. After developing a framework describing the processes of the two types of interaction, I sought to compare the emergent conceptualizations to determine if they shared common themes or unifying issues.

One important question remains unanswered. Why was play chosen as the context of this analysis when I identified in an earlier chapter the benefits of using different contexts through which to view mother-child interaction? The explanation of this is both practical and empirical. First, a rich source of longitudinal videotaped data was available. Although collecting new data may have been valuable in addressing the issue of context, it was not efficient given the comprehensive undertaking of a longitudinal comparison. Thus, where something is lost in not exploring another context, something more is gained from using a longitudinal approach. Secondly, the mother-child data was used in previous research to demonstrate maternal turn-taking, response and topic control. Using the same data to demonstrate findings from a qualitative analysis may open up a dialogue among researchers about the ways they view maternal control and how it is manifested within interaction.

**Sample Characteristics**

The videotaped data used in this study was collected as part of a larger study by Musselman, Lindsay and Wilson (1988b). The data pool consisted of 71 deaf children with severe to profound hearing losses (70 dB or greater) who resided in Ontario, Canada.

In order to create a homogenous sample, the data pool was limited to those elementary school age children who ranged in age from 81 to 97 months (average: 86 months) and those who were 16 or 17 years at adolescence (average: 17.04 years). Deaf mothers and their deaf children were also eliminated from the subject pool. Stratified random sampling based on gender and communication mode was then used to select 10 hearing mother-deaf child dyads. This method of sample selection was chosen over purposeful sampling to ensure that the characteristics of the study sample generally reflected those of the larger sample. This was considered important in light of the strong inductive approach used in the data analyses.

Specifically, stratification was based on gender and communication mode. Six females and 4 males were selected. Communication mode, based on the mode used in their educational programs, was distributed differently across the two time periods. When the children were elementary school age, there were 7 aural/oral dyads and 3 dyads who used manual communication. During adolescence, 2 dyads were aural/oral and 7 dyads used manual communication. The difference in the distribution of communication mode over time reflected a shift in mode for 5 dyads (i.e., they were aural/oral during elementary school but used sign
language in adolescence). Together, the distribution of gender and mode (both in childhood and adolescence) in the sample for this study reflected the characteristics of the larger sample.

The study sample was subdivided into 5 low communicators and 5 high communicators. The communicative competence of each child was determined relative to the others in the sample, based on the frequency of the children's expressive communication within the interaction. Low communicative children averaged 22.8 utterances during their interaction with a range of 10-28 utterances. Their utterances were generally shorter, less spontaneous and less self directed than high communicative children. High communicative children averaged 101.15 utterances during the interaction with a range of 75-126 utterances. Their expressions were longer, more varied and more self-directed than low communicative children.

**Procedure**

**The Interactional Activities**

Since the participants were geographically located throughout Ontario, most of the videotaping was done in family homes. Occasionally, video recording was done in a central location that suited both the families and staff.

Moms and children engaged in an unstructured activity where they played with dolls and toy furniture. Moms were instructed to play with their children as they would do normally. The toys included: a mother, father, brother, sister and baby doll, a kitchen table with two chairs, a stove, fridge, sink, plates, cutlery, cup, saucer, milk, apple, loaf of bread, a slice of bread, bed and bedding, car and television. The activity had no predetermined time limit. To increase the likelihood of a valid, representative sample, play was terminated when the moms asked to stop or when the research officer felt that interest in the activity was waning. The average length of play in this sample was 10 min 4 s (range: 5 min 12 s to 13 min 14 s).

The same hearing mothers and deaf children were recruited to participate in the second part of this study when the children reached adolescence. Here, moms and adolescents engaged in a block design problem solving task. This activity, derived from the Stanford-Binet Intelligence test, required the subjects to re-create the patterns of a diagram using 4 square blocks. Each block was the same as the others, having a solid white side, a solid black side, a side with a diagonal line dividing black and white and a side with 4 alternating black and white triangles. There were four distinct patterns to replicate from the model. The average length of interaction was 9 min 3 s (range: 6 min 56 s to 14 minutes 39 s). Except for one case, moms and adolescents sat on the opposite sides of the table, giving each participant the reverse perspective of the other's work.
The task was selected because it was an age appropriate activity that was non-verbal in nature, thereby lessening the impact of communicative competence on the interaction.

Transcription
After the mother-child videotapes were randomly selected, each tape was transcribed using the Computerized Profiling (Long & Fey, 1988) transcription program. This was done in order to leave open the option of carrying out quantitative analyses at a later date. However, after viewing the completed transcripts, the transcription program was abandoned. It was deemed inadequate because of its limitation of not recording simultaneous interactions. It was felt that the essence of the mother-child interaction was compromised because turn-taking was assumed and turns were forced into a sequential mode. In addition, given the structure of the program, the subtle nuances of the interaction could not be captured.

The transcripts were revised without using the program and written in prose. This enhanced their substantive content and gave the interaction dimension. To ensure accuracy, the transcripts were checked two additional times: once using the visual and auditory channels of the videotape; the other using the visual mode only. This technique was suggested by Wood et al. (1986) and used to enhance sensitivity and capture subtle and important non-verbal information.

The adolescent videotaped interactions were transcribed and written in prose without using the transcription program, then double checked for accuracy in the same way as the mother-child data. In both data sets, all interactions were transcribed for verbal and non-verbal communication, tone and volume of communication, action, facial expression, eye gaze and posture. Duplicate copies of transcripts were made so that I could use them as working copies without altering the originals.

Coding and Analysis
In addressing the process of qualitative analyses, Geist, (1985) stated:

The analysis and interpretation [are] not simple, technical processes. There are no formal, universal rules to follow in analyzing and interpreting qualitative data. Analysis is the process of bringing order to the data, organizing what is there into patterns, categories and descriptive units. Interpretation involves attaching meaning and significance to the analysis, explaining descriptive patterns and looking for relationships and linkages among descriptive dimensions. (p. 43)

Reason and Rowan (1981) concurred with this non-specific nature of the analytic process when they asserted that whatever methods are used to make sense of the data, each researcher has
his or her way of going about it so that it becomes a very personal and individual process. Thus, understanding the diverse and disparate ways to approach qualitative analyses is important to accepting the procedures used in this analysis.

Although the following description of method is written according to linear phases of analyses, in reality it was a circular process. Some phases were re-engaged in when it was deemed necessary.

Phase 1: A Coding and Categorizing the Data

After reading and re-reading the transcripts, I went through each case and identified every act or interaction with a conceptual label, seeking to capture and understand what was happening between mother and child. I coded mother and child interactions simultaneously, wanting to preserve the essence of the interaction. To differentiate the mother and child codes, I used bolded letters followed by an asterisk for mother codes; double underlined, small capital letters followed by a ^ for child codes. I combined the above formatting for simultaneous interaction. I also gave each line of the transcripts a number. These strategies permitted easy visual access to the mother and child codes as well as numerical coding for quick referencing. See Appendix A for examples of uncoded and coded data.

While coding each case, I frequently stopped and wrote coding notes. This was done when I thought of an idea, saw a relationship or felt uncertain or confused about the data. This was a reflective process at times, where I was able to describe my feelings of being blocked or frustrated, and a creative process at other times, where I was able to write about the relationships I saw in the data and what I found interesting.

After completing the initial coding, I made lists of these labels and began to organize them into categories. Not only did this allow me to become very familiar with the mother-child interactions, it enabled me to think conceptually about the data. Early examples of mother categories are: initiates play, advances scene, enriches scene, asks questions, uses attention getting strategies, transfers responsibility to child. Early examples of child categories are: engages in symbolic play, answers questions, follows mom's lead and takes initiative.

During this coding process, I noticed that many of the same play themes occurred across dyads (e.g., mealtime, cleaning up, driving the car, going to the store). As a result, I divided each transcript into segments of interaction each comprising independent themes, which I labelled scenes of play. Evaluating scenes made subsequent analyses discrete and more manageable.
However, after mapping the scenes of play, I discovered there were no emergent patterns related to topics of play.

Also at this stage, I observed two interesting phenomena. The play of one hearing mother-deaf child dyad was distinct from the others. This child independently developed rich symbolic play with little assistance from his mother. My reaction was "If all deaf children played like this, the issue of maternal control and its impact on free play interaction would not exist". Secondly, I noticed that some mothers played directly with their children while others assumed an indirect role. While I considered the first observation an "exception", I did not know how to classify the second one. I resisted identifying two types of interaction within hearing mother-deaf child free play because previous research did not allude to this possibility. I thought the idea was unconventional and therefore I put the idea aside.

Phase 2: Organizing the Data into Patterns and Attaching Meaning to It

After coding and categorizing the data, I wanted to put it back together in a meaningful way. At this time, it was necessary to make choices about which features of interaction I considered important and which were extraneous. I found making these decisions difficult. Like other qualitative researchers who approach their data with the assumption that nothing is trivial and that everything has the potential to be a clue which might unlock meaning (Bogdan & Biklen, 1982), I was concerned about discarding relevant material. However, I was also aware that a qualitative analysis is guided by instinct and tacit knowledge (Lincoln & Guba, 1985; Merriam, 1989) and that I must trust myself. Once I started looking at the "big picture", I began to identify emerging patterns in the data and felt more comfortable about my discretionary judgements.

During this phase in the analysis, I met frequently with my thesis supervisor to discuss my findings and the emerging framework. These meetings were useful because they allowed me to discuss features of the interactions with someone who was familiar with the data. Through our discussions, new ideas were developed and other features of the findings were modified, consolidated or discarded. To a lesser degree, two colleagues periodically performed a "debriefing" function. These individuals provided me with the opportunity to discuss my problems and insights as well as providing me with feedback about my work.

Organizing the mother categories into four larger classifications, I began to re-conceptualize the notion of maternal control. My central organizing theme was that mothers provide structure to play by suggesting play scenarios and instructing their children in their enactments. While doing so, they also used teaching strategies, communication strategies, and
created a warm milieu. The central theme for the child data was that the children were reactive. They played, responded to and communicated with their moms. From the data, it was becoming evident that the mothers adopted a leading role in the development of their children's play and the children assumed a reactive role in enacting scenarios.

Another way I explored patterns of interaction was by examining differences in the child’s communicative competence. First, I attempted to write summaries of play that highlighted these features, but found this non productive. Alternatively, I coded and listed the communicative features of both high and low communicative children. This analysis revealed features specifically related to how language affected the development of symbolic play and interaction: The play of low communicative children was primarily action based; the play of high communicative children was facilitated by their more developed use of language.

Before moving on to the adolescent data, the mother-child analysis went through an additional transformation. This occurred as a result of a discussion I had with my thesis supervisor. The final refinement resulted in the central functions of the mother’s role being identified as: accepting the task (engaging in play); carrying out executive functions (providing structure to play); explicitly teaching; facilitating communication and constructing a warm milieu. I felt these categories completely represented the components of the mothers’ role when playing with their elementary school age deaf children. I continued to view the children as playing, reacting and communicating with their mothers. The meaning I attached to the mothers’ role in play, and the way I re-framed maternal control, was to view the mothers’ role as both ‘regulating the interaction’ and ‘teaching their children’. I viewed the meaning of the children’s role as ‘players’ and ‘learners’

The adolescent data was coded and analyzed using the same procedures of transcription, coding, categorizing and discovering patterns in the data. From the beginning the mother-adolescent interaction did not appear to possess the same dynamic complexity as earlier free play interaction. The non-verbal, task oriented nature of the mother - adolescent partnership resulted in a typical kind of interaction. Two naturally occurring groups, collaborative and cooperative interaction, were defined on the basis of whether the partners worked together or separately. How the working conditions were decided upon, the role that mothers and adolescents assumed during the task and problem solving strategies used to construct the puzzle were classified according to the collaborative and cooperative categories. These revealed a general theme of ‘maternal directiveness’.

One phenomenon which made the adolescent data interesting was not found in how the
mothers and adolescents constructed the puzzle, but in the tone of their interaction. The disagreements which occurred and how they were resolved during collaborative interaction were identified in the data as the Effect of the Evaluative Process. The ways in which the cooperative dyads related to each other was labelled Social Interaction. Whether the dyads completed the puzzle within the time allotted was coded as Puzzle completion for both styles of interaction.

How the adolescents responded within the interaction was viewed within the context of their developmental stage and the skills they were acquiring. The skills of independence and autonomy, receptivity to feedback, thinking critically and reaching beyond oneself were identified and labelled in the data.

The final phenomena identified in the adolescent data were the emotional responses of the adolescents. These were coded as Responses to the task difficulty and its ambiguity. The wide range of emotional responses exhibited by the adolescents while engaged in the task with their mothers were included in this category. How mothers managed these responses were also identified.

A longitudinal comparison based on the categories which were identified in the child and adolescent data revealed no consistent, discernable patterns. In order to compare the main themes of interaction the longitudinal data was discussed along the dimensions of: Cooperation and Collaboration Interaction versus Narrative and Episode play, Communication mode, Communication coordination.

**Phase 3: Writing and Re-analyses**

After these analyses were completed, I began to write my Results chapter. Choosing examples from the data to illustrate my mother-child framework\(^1\), I described the way mothers regulated the free play interaction and how their children responded. In doing so, I continued to refine the framework. This is consistent with Richardson (1994) who advanced the premise of writing as a form of inquiry and a way of knowing. She stated:

Students are trained to observe, listen, question and participate. Yet they are trained to conceptualize writing as "writing up" the research, rather than a method of discovery. Almost unthinking, qualitative research training validates the mechanistic model of writing, even though that model shuts down the creativity and sensibilities of the individual researcher. (p. 517)

Thus, through the process of writing I was able to further examine my conceptualization.

\(^1\) How the examples were chosen is addressed later in the discussion of Trustworthiness.
While writing, I became aware of two things: (a) the hearing mother-deaf child framework was too microanalytic, (b) my feeling that there was ‘something’ missing. Although I had a substantial portion of my results written, I decided to re-enter the analysis phase and re-examine my framework.

It was here that I remembered the observation I made early in my analysis. There seemed to be two styles of mothers' play. Acknowledging and exploring this idea opened up the data in an entirely new direction. Some mothers were playing with their children directly; other mothers were playing indirectly. In essence, some mothers defined the interaction as play while others defined it as a task. These became the new central organizing themes of my framework. I labelled them narrative play and episode play, respectively.

I found that much of my preceding analysis fit easily into the new framework. However, I was able uncover new dimensions of interaction and re-organize others. For example, episode mothers defined Play as a Task and played indirectly with their children. Narrative moms defined Play as play and engaged in symbolic play with their children. Moms of both styles of play provided structure to play. Narrative moms directed play by initiating and advancing scenes, creating depth and dimension within play, enhancing the connectedness within and between scenes of play and transferring responsibility to the child for developing and executing parts of play. Episode moms provided structure to play by suggesting ideas, but infrequently played with their children.

In episode dyads there were frequent tussles for control. These resulted because episode moms acted incongruently. They sometimes attended to their children’s attentional focus but not to the meaning of their play or, they introduced ideas into play independent of their children’s attentional focus. Other times, episode moms acted congruently when they attended to both the child’s attentional focus and meaning of play.

I observed that when episode mothers were acting incongruently, their children often rejected their ideas. I also noted that episode children rejected their moms ideas even when they were acting congruently. Searching the data for further patterns revealed the following difference: When episode mothers played indirectly, their children often rejected their ideas; occasionally, when these mothers played directly with their children, their ideas were more readily accepted.

Both episode and narrative moms taught their children language, although episode moms did so more often. Episode moms taught conceptual knowledge while narrative moms conveyed information to their children. Both episode and narrative children responded when their moms when they acted as teachers.
Armed with this reformulation, I started writing again, this time describing narrative play and episode play within hearing mother - deaf child interaction. The writing phase of the adolescent and longitudinal portions resulted in minor refinements to these frameworks.

**Trustworthiness**

According to Bogdan and Biklen (1982), qualitative researchers are interested in both the accuracy and comprehensiveness of their data and the fit between the data and their interpretation of it. The findings in qualitative research are evaluated in terms of the degree to which they are credible (valid), dependable (reliable) transferable (generalizable) and confirmable (objective) (Lincoln & Guba, 1985). However, Lincoln and Guba cautioned against orthodoxy and asserted that trustworthiness cannot be proven. At best, trustworthiness can only persuade and a qualitative researcher must come to terms with the scepticism and doubt of others.

The current study employed three different strategies which addressed credibility. First, the strategy of prolonged engagement is the investment of sufficient time with the data in order to understand it (Lincoln & Guba, 1985). From the point of transcribing the first mother-child videotape to writing up the final longitudinal analyses took two years of consistent, daily work. Such immersion brings a deep knowledge of the interactional processes of hearing mothers and their deaf children. Similarly, the strategy of persistent observation was also used to gain a profound understanding of the findings. I observed the videotaped data frequently at the beginning of my work and periodically throughout the analytic process. Viewing the videotapes while working with the written transcripts was helpful in bringing the hearing mother - deaf child interactions to life and giving them dimension. Viewing the videotapes without sound gave me a different perspective of the interaction. It allowed me to view the mother-child play without the distraction of sound, language and communicative ability. It helped me maintain a flexible outlook. Together, these strategies afforded me sufficient familiarity with the data, giving me confidence that my insights and observations were supported by it.

The final strategy used to enhance credibility was peer debriefing. Exposing one's ideas to the scrutiny of others serves to make explicit those features of the analyses that may have remained implicit in the researcher’s mind (Lincoln & Guba, 1985). Other functions of debriefing include: exposing the researcher to questions that make him/her accountable, providing an opportunity to test working hypotheses, assisting in the development of the next step and providing an opportunity for catharsis (Lincoln & Guba, 1985). To achieve these ends, I met regularly with my supervisor during the analysis phase to discuss my work. She scrutinized and
challenged my framework as it developed. Two colleagues performed similar functions. With them, I was able to present ideas and, during our discussions, I frequently clarified aspects of the analysis that I found troubling. I believe it would be difficult, if not impossible, to conduct qualitative research without such input and feedback. It would be a closed and restricted process, otherwise.

Since the substantive theory used to guide an inquiry affects the analysis and interpretation of findings (Lincoln & Guba, 1985), being aware of the current literature is one way to enhance dependability. Being aware of the concepts and relationships discussed in the current literature stimulates ideas and creates awareness (Strauss & Corbin, 1990). In the case of this inquiry, the literature helped generate ideas, specifically related to transferring responsibility, scaffolding and the zone of proximal development. Being aware of these concepts allowed me discover them in my data. In turn, I was able to determine where and how they fit in.

Transferability of these findings remains to be judged. Often, qualitative researchers, having carefully documented their findings consider it "someone else's job to see how it fits into the general scheme of things." (Bogdan & Biklen, 1982, p. 41). While this view may seem as if it is abdicating responsibility, it has merit. When conducting an exploratory qualitative inquiry, such as this, where I sought to re-frame the well accepted notion of maternal control, it is important to allow myself and others to investigate it further. Not only would this determine transferability, it would enhance credibility and dependability as well. Certainly, disseminating the new framework and seeing if it holds up to scrutiny of others in the field is an important first step.

The last feature of trustworthiness is confirmability. According to Lincoln and Guba (1985) this refers to the characteristics of the data and not objectivity of the researcher. Similarly, Bogdan and Biklen, (1982) asserted that "the data must bear the weight of interpretation" (p. 42). With all other aspects of trustworthiness accounted for, whether or not the findings of a qualitative inquiry meets the criteria of objectivity is an interesting one. Qualitative inquiry has been criticized by researchers like Cappella (1990) who objected to using interactional examples to illustrate phenomena. He claimed that: (a) there are an infinite number of sequences most of which can be explained by random occurrence and, (b) the examples chosen are susceptible to selection bias. In articulating these objections, he asked an important question: On what grounds should we trust the representativeness of an example chosen by a researcher to demonstrate an expected claim...?" (Cappella 1990, p. 240).

Addressing the first criticism of random occurrence, Jacobs (1986) maintained that claims about patterns in data are not claims about regular occurrences, rather they are claims about
"what counts as a coherent configuration of moves and why such a pattern works the way it does" (p. 155). He asserted that these kind of claims are valid because the pattern and its features are intuitively recognizable. Thus, unlike quantitative research that makes frequency claims, qualitative inquiry regards the pattern as important and what it means to those who recognize it.

In addressing the selection bias of examples, Jacobs (1986) discussed several ways to maintain integrity in the presentation of examples: (a) display clear examples with high internal diversity, (b) display and discuss "fringe" cases, (c) display negative examples and, (d) ensure that the characteristics of one pattern relate to other patterns. Jacobs asserted that "the adequacy of any general claim supported by a series of examples can be evaluated in terms of that claim's overall consistency with the sense and order exhibited by the entire range of examples." (p. 155)

The examples of the present study were selected with careful consideration. They were chosen on the basis of their ability to clearly illustrate the pattern being discussed while highlighting their similarities and differences to other examples. Effort was made to ensure that all mother-child dyads were represented throughout. "Fringe" cases were included and consisted of those examples that were not obviously illustrative until the point was revealed in the description of the example. Negative examples were included. The component patterns of the mother framework fitted together cohesively with the component patterns of the child framework. Finally, the coherence of the overall framework was demonstrated through the repeated use of examples. Many of the examples used to illustrate patterns of mother behaviours were also used to illustrate the patterns of child behaviours.

In these ways, every attempt was made to secure a representative and intuitively recognizable sample of hearing mother - deaf child interactional behaviours. However, irrespective of the examples chosen, it is the reader who must make a judgement about the whether the data presented bears the weight of the argument.

In summary, the method of this study included a number of steps. It consisted of developing a longitudinal design which explored hearing mother deaf-child interaction during early school age and adolescence. Selecting a stratified random sample of 10 cases from previously collected videotaped data ensured homogeneity. The transcription of videotapes was carried out with great attention to detail since the transcripts, along with periodic viewing of videotapes, constituted the data of this study. The analytic process included the coding, categorizing, discovering patterns in the data and attaching meaning to them. The writing stage was also a form of inquiry. Through writing, I became dissatisfied with the mother-child framework I developed, and thus, re-entered the analytic phase. The second analytic attempt
resulted in a more cohesive framework. The analysis of hearing mother-deaf adolescent interaction and the longitudinal comparison was less complex. Throughout the analysis, attention was given to the characteristics of trustworthiness. These included prolonged engagement, persistent observation, peer de-briefing, knowledge of the current literature and thoughtful selection of excerpts of data to illustrate the characteristics of the frameworks.
CHAPTER 4: OVERVIEW OF RESULTS

To better understand the character of hearing mother - deaf child interaction, this author embarks on an exploratory, descriptive qualitative analysis. Dissatisfied with conventional thinking that maternal control is undesirable and deleterious to the development of deaf children, this author seeks to re-frame the concept of control. However, to uncover trends about the effects of early control on later development, it is necessary to approach the research problem longitudinally.

The first section of these results consists of a general overview of the framework when the children were elementary school age. The second and third sections consist of a descriptive analysis of hearing mother-deaf child free play interaction, Narrative play and Episode play, respectively. Re-analyzing video-taped data which support the notions of maternal topic, response and turn-taking control, this author moves away from describing how hearing mothers exercise control. Instead, this author examines the apparent purposes for control when hearing mothers interact with their deaf children during play.

The fourth section examines hearing mother-deaf adolescent interaction using longitudinal data collected from the same mothers and children, approximately 10 years after the early school age period. This analysis describes how the mothers and adolescents interact while solving a block design problem solving task and what issues of control exist.

The final section compares the emergent conceptualizations of interaction from the childhood and adolescent periods. This analysis describes any observable patterns of interaction which emerge relating early maternal control to later control.

General Overview of Frameworks of Hearing Mother-Deaf Child Interaction

For the purposes of this study, the free play of hearing mothers and deaf children is best examined using units of interaction called scenes. Scenes are vignettes of play which deal with one particular topic, for example, going to the store; bedtime; having breakfast. Each scene has varying degrees of advancement (e.g., going to the store, making a purchase, coming home); detail (e.g., putting the baby doll on the bed, covering her with a blanket, having mother doll and father doll give baby doll a kiss) and connectedness or linkages between scenes (e.g., having
breakfast then going to work and school).

Using scenes as a unit of analysis, a two distinct groups of hearing mother - deaf child dyads emerge in the data: Narrative dyads (N=4) and Episode dyads (N=5). One mother-child dyad did not fit into this conceptualization because the child played independently with little assistance from his mother. The interaction of this dyad is described in Appendix B.

Narrative and Episode Scenes

Scenes from both narrative and episode interaction are segments of imaginary play that are generally distinguished on the basis of their overt scene development. Narrative scenes are rich with detail, have a sense of linear progression and occur within the context of other scenes. Episodes are less developed. Episode scenes consist of imaginary play that appears less elaborate and the connections between scenes less apparent. The following examples illustrate a narrative and episode scene respectively, where low communicative children enact driving a car.

These, and all subsequent examples, are displayed in the following way: Mom's responses are on the left hand side; child's responses are on the right. Turns are numbered consecutively. Distinctive communicative modes are formatted in the following way: Action and non-verbal communication are italicized. Speech is presented in standard type and is underlined; Sign is displayed using small capital letters; Sign with speech is underlined, using small capital letters.

Narrative Scene Example 1: Driving car scene; Low communicative competence child (Case 5)

*Father doll prepares to leave for work; (1)*

*Smiles; EVERYONE SAYS 'BYE BYE DADDY' (2)*

*BYE BYE, HAVE A GOOD DAY AT WORK. (4)*

*SEE YOU TONIGHT. (6)*

*Bounces dog up and down; Smiles; Taking the role of the dog; Bark bark bark. (8)*

*BYE BYE. Waves father doll's arm; (3)*

*Glances away from mother; (5)*

*Reaches for car and puts father doll in it; (7)*

*Smiling; Looks at mom, then dog then back at mom. Takes father doll out of car. Holds doll near dog. Speaks to dog; STOP THAT. (9)*

*Mom and child look at each other briefly; (10)*
Bounces dog up and down; (11)

Mom smiles and moves dog to the side. When it is beyond child's reach, mom drives car. Waving father doll's arm; BYE BYE. (13)

Looking at child; WHAT NOW? (15)

And,

Episode scene Example 1: Driving car scene; Low communicative competence child (Case 2)

You can play. Makes gesture with hand as if to say 'come on'; (1)

Points to doll; Where's he going? (3)

Where's he going? (5)

In the car. (7)

Bend. (9)

He's too big for the car. (11)

Tries to fit doll in car and laughs He won't fit. Looks at child; Balances doll in car; turns car toward child; Looks at child; (13)

The mother's on the floor. Points to mother doll; (15)

Walks a doll across the table; (2)

Does not answer; (4)

Unintelligible utterance ending in "car" Walks doll around the car; (6)

Picks doll up and bends him into sitting position; (8)

Has difficulty sitting doll in car properly; (10)

Help me. (12a)

Watches mom; looks into camera; watches mom again (12b)

Moves car very slightly making car noises; Takes her hand off car; (14)

Picks up mother doll; Mother (16)

The preceding examples of imaginary play of low communicative children illustrate the differences between narrative and episode scenes. Driving the car in the narrative scene appears in the context of father doll leaving for work and is enriched with details of saying good bye to family members (2-6, 13-14) and scolding the dog for barking and jumping (8-11). After both the
child and mom participate in driving father doll to work (12-13), mom prompts the child to suggest the next scene in their play (15). The child responds by proposing that it is time to watch television (16).

The episode scene develops differently. This driving scene, occurring at the very beginning of play, is enacted simply (1). As the child walks the doll to the car, mom questions her about where the doll is going (2-6). After establishing the context of the doll going "in the car" (7), the child requests her mom's help in fitting the doll in the car (8-13). The child enacts the driving scene by moving the car slightly while making driving noises (14). When the child takes her hand off the car, mom re-directs her child's attention to the mother doll (15). Child changes her attentional focus accordingly by picking up the mother doll and saying "mother" (16).

Thus, the narrative scenes develop within the rich context of other details and scenes within play. They are elaborate and have a sense of linear progression and connectedness. In contrast, episode scenes are relatively simple and, for the most part, remain unelaborated. If details, a greater context or connections to preceding or subsequent scenes exist, they remain unexpressed and hidden in the imagination of the participants.

**The Role of Moms within Narrative dyads**

As narrative moms and children play together, moms assume a specific role and carry out specific functions within play. Actively engaged in play with their children, narrative moms provide their children with structured guidance in the development and execution of a story. Taking the role of director, moms initiate play, advance and enrich scenes, and create the logical connections within and between scenes. Within this role, narrative moms both participate in play and control the interaction by presenting play scenarios to their children and giving step-by-step instructions on how to execute them.

Another way moms provide structure within the interaction occurs when they transfer control to their children. Frequently, narrative moms transfer responsibility to their children for carrying out aspects of a scene's development. Within this context, and the interaction in general, moms accept both verbal and non-verbal responses as valid and place no predetermined production demands on their children.

The final function narrative moms perform within the context of play is teaching. Narrative moms use play as a vehicle to convey information to their children or to teach expressive language skills. However, consistent with their style of accepting their children's mode of responding, narrative moms usually teach by example either by modelling or incidentally correcting errors.
The Play of Narrative Children

Two children from the narrative dyads possess high communicative skills and two children possess low communicative skills. Two children use an oral/aural method and two children use signed communication. Despite differences in communicative competence and mode, all these children respond to the structured guidance their moms provide. In addition to accepting and executing moms' directions, including their intentional transfer of responsibility, these children contribute their own ideas to play.

However, children with high and low communicative competence play differently. The narrative play of low communicative children is primarily based on the children's non-verbal actions. It is, however, unimpeded by communication difficulties because moms accept their non-verbal responses. In contrast, the play of high communicative children is facilitated by their developed use of language. These children exhibit greater spontaneity and reciprocity while playing with their moms. Since communicative difficulties exist but are few in number, the contributions of high communicative children are more varied. This is the result of the children's ability to use language to bring play to a greater level of symbolism and abstraction.

The Role of Moms within Episode Dyads

Within their interaction with their children, episode moms assume a different role and carry out different functions than narrative moms. Episode moms act as facilitators of their children's play. Infrequently engaging in play themselves, these moms control the interaction by giving directions, making suggestions and asking their children questions about their play. Controlling the interaction in these ways, moms suggest play ideas by acting congruently (attending to both the child's attentional focus and meaning of play) or incongruently (attending to either their children's attentional focus or the meaning, or attending to neither). As a result of this play style, struggles for control emerge between episode moms and their children about the direction play should take. Sometimes, children yield to their mom's ideas but most often, moms follow their children's lead.

Similar to narrative moms, episode moms use play as a vehicle for teaching expressive language to their children. However, in addition to asking their children more language based test questions than narrative moms, episode moms also teach their children conceptual knowledge. Within this context, and the interaction in general, they often place production demands on their children.
The Play of Episode Children

Of the 5 children who play episodically, 4 possess low communicative competence and 2 possess high communication skills. One child uses manual communication while the remaining 4 children communicateaurally/orally. Two children are female and 3 are male.

The children of episode dyads engage in imaginary, sequential play in a self-directed way. Generally playing independently, these children develop simple unelaborated scenes that appear loosely connected to other scenes they develop. Stronger connections, while they may exist in the minds of the participants, are not overt.

Episode children attend to the structure and suggestions their moms provide, but they frequently dismiss their moms' ideas in favour of executing play scenes in their own way. In so doing, episode children engage in tussles for control with their moms about the form and direction that play should take. Children are most responsive to their mom's directive overtures when moms engage in play with their children. Episode children also consistently accept and respond to the language based and conceptual questions their moms pose. They are less receptive to their mom's input when moms act incongruently and when their moms are not participating in play directly. This variability in the children's to their moms is a function of the style of moms' engagement.

Despite differences in communicative competence, these deaf children participate in episode play. The play of the low communicative episode children is primarily action based, whereas the two high communicative children in this group supplement their action with verbal commentary.

Differences in narrative and episode play are summarized in Table 1.
TABLE 1. A comparison of Narrative and Episode Play

<table>
<thead>
<tr>
<th>Dimensions of Play</th>
<th>Narrative play</th>
<th>Episode play</th>
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<tbody>
<tr>
<td><strong>A) Moms’ contributions to play</strong></td>
<td></td>
<td></td>
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<tr>
<td>Defining play</td>
<td><strong>Play as play</strong></td>
<td><strong>Play as a task</strong></td>
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<td></td>
<td>a) Moms engaged in play and played directly with their children</td>
<td>a) Moms facilitated their child’s play; they engaged their children indirectly</td>
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<tr>
<td>Providing structure to play</td>
<td><strong>Moms direct play</strong></td>
<td>Moms provided structure verbally, infrequently engaging in play with their children</td>
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<td></td>
<td>a) Initiated and advanced play</td>
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<td>b) created depth and dimension within play</td>
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<td>c) Enhanced connectedness within and between scenes</td>
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<td>d) Transferred responsibility to child for developing and executing parts of play</td>
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<tr>
<td>Tussles for control</td>
<td>Not salient</td>
<td><strong>Incongruent Interaction</strong></td>
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<td>a) Moms attended to their children’s attentional focus but not to the meaning of their play</td>
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<td>b) Moms introduced ideas into play independent of their child’s current focus</td>
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<td><strong>Congruent Interaction</strong></td>
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<td></td>
<td>a) Moms attended to both their children’s attentional focus and meaning</td>
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<tr>
<td>Teaching</td>
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<td>B) Child contributions to play</td>
<td>a) Both high and low communicative children contributed to play as it developed</td>
<td>a) Children developed unelaborated scenes of play</td>
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<td>b) The play of low communicative children was primarily action based</td>
<td>b) Children often rejected moms ideas when they were presented both congruently and incongruently</td>
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<td>c) The play of high communicative children was facilitated by their developed use of language</td>
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<td></td>
<td>d) Children responded to moms when they acted as &quot;teachers&quot;</td>
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CHAPTER 5: NARRATIVE PLAY

There are 4 narrative dyads in this sample. Two dyads consist of hearing moms and their low communicative deaf children. One dyad uses manual communication. The mom of the other dyad communicates orally while her daughter uses a combination of oral and manual methods. Both children are female.

The other two dyads consist of hearing moms and their high communicative children. Both dyads communicate using the oral/aural method. One child is female and the other is male.

Moms as Narrative Executives

Maternal control within the narrative dyads emerges in distinct ways and with specific purposes. Like their children, moms of the narrative dyads define the play activity as play. Although this appears prosaic, it is a critical feature that forms the foundation and shapes the experience of narrative play. Narrative moms play with their children. In doing so, they actively assume responsibility for the story's development.

Narrative moms control and shape the interaction by creating a story which their children enact. Moms provide structure to the story by initiating and advancing scenes, adding depth and dimension to them and enhancing the logical connectedness within and between them. In carrying out these executive functions, moms sometime transfer responsibility to their children, expecting them to contribute to and participate in the development and execution of the story. By doing this, they allow their children autonomy within the given structure.

Secondary to the story and within the context of play, moms use play as vehicle for teaching. Narrative moms convey information to their children about activities of daily living and what they know about the world or teach/test expressive language skills as they relate to particular play scenarios.

The narrative framework is discussed in terms of four characteristics: (a) How Moms Define Play: Playing at play, (b) Directing play: Providing Structure and Transferring Responsibility, (c) Informal Teaching: Conveying information and Teaching Expressive communication, (d) Child contributions to play.
PART 1: How Moms Define Play: Playing At Play

Moms, of the narrative dyads, engage in free play interaction with their deaf children. These moms define the play as play and, with their children, actively participate in imaginary play. Thus, both moms and children are engaged with each other in the same activity.

In the following example, a mom and her high communicative child play at developing a breakfast scene together:

Narrative dyad Example 1: Mom engages in play with her high communicative child (Case 4)

Referring to boy doll; How about some bread? Is he going to have some bread? (1)

Holding boy doll in chair; Yeah. (2)

Walks mother doll to fridge to get bread; (3)

Watching mom; Pretend to give it to me. (4)

Not looking at child; Ok, these hands don't work too well, Annie. Walks mother doll to table and gives bread to child; (5)

Laughs; (6)

There you go. (7)

Laughs more; Looks at mom; Thank you. Moves boy doll and chair closer to table; (8)

This short excerpt illustrates that mom is playing with her child. Enacting a role play scene where the mom adopts the role of mother doll and the child assumes the role of the boy doll, this dyad engages in a breakfast scene. Taking the role of mother doll, mom asks her child if the boy doll wants bread with his breakfast (1). Answering on behalf of the boy doll, the child responds affirmatively (2). Executing the role play, mom walks the mother doll to the fridge to get the bread (3). Then, contributing to the scene's development, the child instructs her mom to give the bread to her (4). When mom does, the child expresses her enjoyment by laughing and saying "thank you" (6, 8). Thus, as this example illustrates, both mom and child define the activity as play as they enact the scene together.

Moms' participation in narrative play with their deaf children is independent of their children's communicative competence. In contrast to the previous example where a mom plays at developing a breakfast scene with her high communicative child, the following example illustrates
a mom and her low communicative child role playing a scene where father leaves for work.

Narrative Dyad Example 2: Mom engages in play with her low communicative child (Case 5)

Looking at child; YOU KNOW. (2)
KISS MOTHER. (4)
YEAH. (6)
Smiles; EVERYONE SAYS 'BYE BYE DADDY' (8)
BYE BYE, HAVE A GOOD DAY AT WORK. (10)
SEE YOU TONIGHT. (12)
Bounces dog up and down; Smiles; Taking the role of the dog; Bark bark bark. (14)

Mom and child look at each other briefly; Mom laughs; (16)
Bounces dog up and down; (17)

In this example, mom plays with her daughter enacting a scene where the father doll leaves for work. Signing without using her voice, mom initiates a role play by prompting the child to have mother doll kiss father doll good-bye (4). Without using language, this child follows through with the correct action (5), then expands this enactment by having father doll kiss his children (7). In the play sequence which follows, mom and child engage in an exchange of farewell wishes.
where the child responds as the father doll (9, 13, 15, 18) and mom takes the role of all other family members, including the family dog (8, 10, 12, 14, 17). Actively immersed in the scene, both play partners smile or laugh as they animatedly and reciprocally fulfill their respective roles in play (14, 15, 16, 18).

In addition to engaging in play by role playing and manipulating toys, some moms of the narrative dyads play with their children by tracking their actions and contributing to the scene using parallel talk. Attentive to and interested in the child’s attentional focus, the narrative mom in the following play sequence engages in a mealtime scene where she plays with her child by asking questions and tracking the scene’s development.

**Narrative Dyad Example 3: Mom plays with her low communicative child by asking questions and tracking the scene’s development (Case 1)**

*Points to mother doll; What's the mother going to give the baby? What's she going to eat? What's she going to eat? Looks at child; (1)*

*GRANDMA (1b)*

*Picks up cup; Shows it to mom; (2)*

*Nods; Gives mother doll a drink (4)*

*Is she going to have a drink? (3)*

*Looks at mom; Mommy. (6)*

*Makes a palm-up gesture with hand. What? Points to cup; What's in the cup? (5)*

*Puts cup on table; (8)*

*Smiles at mom; Takes milk bottle off table; (10)*

*Oh mommy's going to have a drink. (7)*

*You have some milk. Put some milk in the cup. (11)*

*Pretends to feed baby using the milk bottle; (12)*

*Instead of involving herself directly in play, this mom and her low communicative child play together in a different way. As the mom and child create a mealtime scene together, the child enacts the scene while mom uses parallel talk, at different points, to track its development. For instance, after engaging her child by asking the question, "what's she going to eat?" (1a), mom responds to her daughter's non-verbal answer. Engaging in parallel talk, mom articulates the meaning of her child showing her the cup (2). Interestingly, when the child introduces the idea of*
'grandma' into play (1b), it seems that mom did not see the communication or, if she did, she did not understand its meaning or chose not to attend to it.

Notwithstanding this missed communication, the same technique of tracking the child's play is seen moments later. In providing structure to play, mom asks the child what is in the cup (5). It is unclear by the child's response whether she introduces a new idea into play again or whether she misunderstood mom's question. Interpreting her daughter's response as an error, mom manages it in two ways. First, she stays within the context of imaginary play and again, attends to the meaning of her daughter's response. By saying "Oh mommy's going to have a drink" (7), mom uses parallel talk to integrate the error into the scene. Second, mom manages the error by repeating her question in conjunction with a non-verbal cue. Engaged in play, she asks "What's in the cup?" then leans over and looks into it. Responding with correct action, the child takes the milk bottle off the table. Again, mom uses parallel talk when instructing her child saying "You have some milk. Put some milk in the cup." (9, 11) Although mom contributes to the creation of the scene by directing the child to pour the milk into the cup, the child uses the milk bottle as a baby bottle (12). Accepting this non-verbal contribution to play, mom partially articulates the change in action by saying "Oh you're going to feed...ok" (13). Interacting in these ways, this mom is actively engaged in imaginary play with her low communicative child.

Summary

Regardless of the play style moms choose to adopt, narrative moms play with their children by creating scenes within play. This is an important feature of the narrative dyads because, even though moms perform specific functions in play, they relate to their child as an engaged play partner, regardless of their children's communicative ability. In addition, these examples show that misunderstandings do occur as a result of communication difficulties. When one mom possibly misunderstood her low communicative child, the error went unaddressed. When the child misunderstood mom, mom used the error to facilitate further interaction and scene development.

PART 2: Providing structure: How Moms Direct Play

While playing with their children, moms of the narrative dyads assume responsibility for and control free play interaction by providing structure to play on two distinct levels. First, by giving specific, concrete direction, these moms contribute structure and organization to their children's play. They initiate play; introduce their own ideas into play and create scenes; advance scenes within play by moving them forward in a linear fashion; enrich scenes by furnishing them
with detail and dimension; create cohesiveness within and between scenes by correcting logistical errors or by creating the connections between them.

In addition to these structural and organizational aspects of developing play, narrative moms control the interaction by directing their children in its execution. Besides assuming responsibility for creating the story, moms promote their children's participation in play. Doing so, moms either give step-by-step instructions or transfer control to their children by encouraging them to contribute to the development of the story and its dramatization.

**Providing Structure: Initiating and Advancing Play**

From the beginning, moms furnish the play with a plot. In developing play, moms provide their children with step-by-step instruction about the story and its execution. Moms move play forward, in a linear way, by making suggestions, giving directions or asking questions.

In its simplest form, one mom initiates play by asking a leading question and getting a direct response from her child.

### Narrative Dyad Example 4: Mom provides structure by initiating and advancing play with her low communicative child (Case 1)

Ah, let me see. (1)

*Mom and child look at each other; (2)*

I hear the baby crying. We get the baby up? (3)

*Picks up baby from bed and shows it to mom; (4)*

We're going to feed the baby? (5)

*Yeah. (6)*

Better feed the baby. Makes palm-up gesture with her hands; Set her on the chair. Pulls chair out from table; Take sister off. Takes other doll off chair; (7)

*Tries to sit the baby doll on the chair (8)*

On her own initiative, mom begins play by providing form and structure to the interaction. Suggesting an opening scene and appropriate action (I hear the baby crying; we get the baby up?), mom gives the child the context of the story and concrete direction using a leading question (1, 3). Following mom's lead, this low communicative child participates in play. She responds correctly by getting the baby out of bed, then communicates her actions nonverbally by showing mom the doll (4).
Because the child accurately follows directions but does not extend the scene in any way, mom continues to provide structure to play in a linear, sequential manner. Mom advances the scene and actively involves her daughter by asking her another leading question "We're going to feed the baby?" (5). When the child agrees, mom continues to build upon her directions, instructing the child to put the baby doll on the chair (6, 7). Again, the child correctly follows mom's lead and tries seating the baby doll (8).

Initiating play in this way, the narrative mom presents the beginning of a story, step by step. Within imaginary play, mom creates the structure through which the child enacts the scene. The development of structure within the interaction is an important feature of the narrative dyads. Narrative moms control play when they present their children with a series of directions and questions. At the same time, they expect and are sensitive to their children's non-verbal contributions.

Although the type and degree of the children's input may vary depending on his/her level of communicative ability, moms' role within the narrative dyads does not. Since it is mothers' role that determines how play proceeds, both high and low communicatively competent children can participate in the development of narratives.

In contrast to the previous example which illustrates the interaction of a mom and her low communicative child within narrative play, the following play segment depicts the interaction of a mom and her high communicative child. This mom provides structure by directing the child to make a decision about how to begin play then takes cues from her child when providing the structure needed to develop the scene further.

**Narrative Dyad Example 5: Mom provides structure by encouraging her high communicative child to decide how to begin play (Case 4)**

*Not looking at child; Ok Annie, what are we going to play? Rearranges furniture making more space; (1)*

*Has finger in her mouth while holding doll; Looks at mom; What? (2)*

*Looks at child; What are we going to play? (3)*

*Smiles; With you. Taps doll on table; Glances away briefly then looks at mom; (4)*

*While looking at child and laughs slightly; Ok well what? What are we going to do? Arranges toys; Not looking at child; (5)*

*Moves furniture too, in a haphazard way; Smiles at*
Looking at child; Nods; Speaks softly; Um hum. (7)

Not looking at child; What are they going to have? Supper? Picks up mother doll; (9)

They're not? (11)

Oh breakfast. Ok, Do you want the mom on the chair? Looks at child; (13)

Smiles; Laughs slightly; Looks toward researcher then looks back; (15)

Oh I see. Ok, What's the mother going to do? Looks at child; (17)

mom; I can do that. (6)

Takes chair from table; Places it in front of her and puts the doll on the chair. (8)

No. (10)

Having breakfast. Pushes doll's chair to the table. (12)

No they have to do. The mother has to do some work. Moves the chair to other side of table; (14)

Smiles; (16)

She wants. She has to wash the dishes. Looks at mom; Smiles; (18)

In contrast to the previous example where the mom provides specific structure to the beginning of play, this mom initiates play by soliciting her child's input. Here, mom asks "What are we going to play?" as a way of providing structure and encouraging her child to participate in play's development (1). In the error sequence which follows, the child reveals her communicative or conceptual misunderstanding of mom's question (2, 3, 4, 5).

Although the child does not respond directly to this question, she participates with mom by imitating her actions (6). Mom responds to the child's engagement with general acknowledgement ("um hum" ) (7). When the child sits a doll at the kitchen table, mom accepts this act as a non-verbal response to her question, then uses that point of interest to develop a possible scenario (having supper) (8, 9). The child, demonstrating her sense of autonomy, suggests an alternate but related story line (having breakfast) which mom accepts (10-12).

In the short segment which ends this example, mom provides structure to the breakfast scene by developing it in a linear fashion. Similar to the previous example, mom advances the scene by asking a leading question ("do you want the mom on the chair?") (13). Instead of following mom's lead by sitting mother doll on the chair, the child independently introduces a new gender-based line into play, the concept of mother doing work (14). Mom follows the child's lead
and assists in the development of the daughter's idea by asking her a direct, open-ended question ("What's mother going to do?") (17). In doing so, mom shows that she expects and encourages her daughter to contribute to the structure and creation of their story.

**Summary**

Narrative moms provide structure by initiating play and moving it forward in a linear way. When low communicative children do not assist in advancing the scenes, moms provide them with step by step instruction in the development and execution of the scene. When high communicative children contribute their own ideas to the development of the scene, narrative moms, still provide structure, when they solicit and/or incorporate these ideas into the emerging narrative.

**Providing Structure: Creating Depth and Dimension Within Play**

In addition to introducing the plot of a story to their children and directing them in its advancement, moms assume responsibility for the play's substantive content. Furnishing play with depth and dimension, moms ask a series of questions or introduce details into the scenes which enrich the story and give it substance. In the next example, following the dramatization of a family breakfast scene, mom assists the child in executing an elaborated scene where the baby doll goes back to bed.

**Narrative Dyad Example 6: Mom adds depth and dimension to a scene with her low communicative child (Case 5)**

NOW IT'S TIME FOR the BABY to GO BACK TO BED. (1)

**I'M COLD.** (3)

*Helps child by lifting blanket and arranging pillow; There we go.* (5)

Pats baby; Looks at child; Taps child's arm to get her attention; (7)

**DOESN'T MOTHER GIVE her a KISS?** (9)

*Looks back but does nothing;* (11)

Puts baby in bed on top of the blanket; Looks at mom; (2)

*Requires to put baby under the blanket;* (4)

Glances away; (6)

*Looks at mom;* (8)

Walks mother doll to the bed; Pretends to kiss the baby; Walks mother doll back to the table; Looks at mom; (10)

*Takes father doll from chair and makes him kiss the baby;* (12)
Smiles; GOOD girl. Helps child sit father doll back in his chair; Ok. (13)

Begins speaking/signing quickly: FATHER has to EAT NOW because he has to GO FAST TO WORK. (14)

Laughs to herself; Looks up; Smiles into camera; (16)

Moving quickly, feeds father doll; (15)

In this play segment, mom provides structure to the bedtime scene in ways that give it dimension. When this low communicative child puts the doll on the bed (2), mom enriches the scene when she takes the role of the baby doll and says "I'm cold" (3). By cuing her child instead of providing overt direction, mom builds detail into the scene in a way that requires the child to process information and determine the next step herself.

In developing the scene further, mom is explicit when she furnishes the scene with detail. Asking her daughter a leading question, "Doesn't mother give her a kiss?", mom gives the story dimension by directing the child to enact a mother's warmth and affection for her baby (9). Responding correctly with action, the child pretends mother doll kisses the baby doll (10). The child then, looks at mom, perhaps for direction, but this time mom says nothing (10, 11). By not responding, mom transfers control to the child allowing her to make the decision about what happens next. When the child pretends father doll kisses the baby doll, mom warmly praises her daughter (12, 13).

In concluding the scene, this mom suggests that now that the baby doll is back in bed, father doll has to eat breakfast and quickly go to work (14). Enacting the scene correctly, the child quickly feeds father doll (15). Developing play in these ways, this narrative mom creates a well developed, sequential segment of the family's morning routine.

The following shows a mom adding depth and dimension to a scene with her high communicative child. Engaging in a more reciprocal exchange, the mom and child develop a "going to the store" scene. Although mom still assumes primary responsibility for providing structure to play, her son, who possesses the strong communication skills, spontaneously contributes to the development of the scene. Preparing the scene, the child puts one doll, John, into the car then drives it near his mom:
Narrative Dyad Example 7: Mom adds depth and dimension to a scene with her high communicative child (Case 3)

*Holding mother doll near car; Looking at child; Did he take his key with him? Points to car; (2)*

*Well you better check his pocket and make sure he has the key for the mailbox. Motions toward driver using her head; (4)*

*Is the girl going too? (6)*

*What's her name? (8)*

*Instructs child on how to negotiate the small play space; Holding mother doll: Good-bye John. (10)*

*Good-bye Jennifer. (12)*

*Playing with mother doll in the kitchen; (14)*

*Looks at watch; I wonder what time they're coming back? I think they're coming in five minutes. I'll put some bread out for them. (16)*

*Moments pass. (18)*

*Holds out mother doll: Here they come. Here they come back again. Smiles; (19)*

*Looks at mom; Smiles; No way...she's going to the store. (20)*

*She went to the store, I thought I could see her. I could see her car coming at the bottom of the street. (21)*

*Hi John, Hi Jennifer. (23)*

*Drives car making car sounds; Stops car in front of mother doll; (1)*

*No. (3)*

*Yeah I got it. Picks up girl doll and tries putting her in car; Girl's coming. (5)*

*Yep. She's going in the store. (7)*

*Ummm. Jenny. Continues fitting girl doll into car; There. Girl doll is now in car; I can be. (9)*

*Good-bye. (11)*

*Makes car noises and moves car around table; (13)*

*Stops driving car and looks at mom; (15)*

*Makes driving sounds; (17)*

*Making car noises; Drives car back to mother doll. (22)*
In a highly verbal exchange, this narrative mom and child develop an imaginary play scene rich with detail. Taking the role of mother doll, mom provides form and depth to the scene by introducing the notion of needing the mailbox key, implying that the doll can pick up the mail when he is out (1). The child responds affirmatively, then contributes to the development of this story line by introducing another character into the scene (5). Proposing that the girl doll is going out too and that both dolls are going to the store, the child demonstrates direct, creative involvement (5-7). Following the child's lead, mom adds further substantive detail to the scene by asking her son the name of the girl doll (8).

After the child drives to the store, mom allows a moment to pass before she attempts to advance play in a dynamic way. Mom suggests that the dolls are coming back and she will prepare them a snack (16). Objecting to this suggestion, the child returns to his original idea of going to the store (20). Accepting his objection, mom makes another attempt to advance the play. Addressing the child's input, mom incorporates his idea into her second bid. She suggests that the dolls went to the store already and that she can see them coming down the street (21). The child responds positively to this transition and follows his mom's lead by driving the car and dolls home (22).

Summary

While narrative moms still assume primary responsibility for providing depth and dimension to play, their role is influenced by the responses of their children. Low communicative children follow their moms' lead and execute scenes according to the instructions given. In contrast, high communicative children, although equally as responsive to their mom's suggestions, often contribute their own ideas into scenes. In doing so, high communicative children influence the direction of play more than their low communicative counterparts.

Providing Structure: Enhancing Connectedness Within and Between Scenes

In addition to providing structure by initiating play, advancing scenes and enriching them, narrative moms develop a sense of connectedness within and between scenes. Thus, moms ensure that play is coherent and consistent.

The following example illustrates how a mom creates internal consistency in a scene. In this segment, the child, who initiates and engages her mom in a ballet scene which takes place in the bedroom, is unaware that the bed is not situated in the bedroom.
Narrative Dyad Example 8: Mom enhances connectedness by ensuring scene is internally consistent (Case 4)

Mother came in the bedroom. Ok.
Moves bed; (2)

Looks at child; Is the bedroom over here? Points to an area near the toy bed; (4)

It's over there. Well then how come the bed's here, Annie? Points to the bed; (6)

Mom moves chair; We need the bed over there if that's the bedroom, right? Passes child the bed; (8)

Rearranges furniture to make space; There you go. Moves mother doll to the bed's new location; Ok here she is. (10)

Holding mother doll; Looking at child; What's her name? Leanne right? Leanne what are you doing? (12)

Oh, let's see ya. (14)

Pretend the mother came in bedroom. Points at mother doll which mom is holding; (1)

Pretend you said 'what are you doing'?
Looks at mom when she begins speaking; (3)

No right here. Points to where she is playing with girl doll; (5)

I don't know. (7)

Yeah. (9)

Can you? (11)

Leans backward against couch; I'm being a ballerina. Smiles. (13)

In this play segment, the child engages mom in a play scene in the bedroom without realizing the space she identifies as the bedroom does not contain the bed. In recognizing this structural inconsistency, mom seeks to correct it. Questioning her child about why the bed is in a different location and getting no clear response, mom rectifies the problem by passing the child the bed (4-7). After the inconsistency is corrected, mom re-engages her child in the original scene and together they develop a ballet segment (10-14).

In contrast to creating consistency within a given scene, narrative moms also create a sense of connectedness between scenes of play. In this next play segment, not only does mom facilitate and encourage her child to enact a breakfast scene where mother doll feeds baby, she then makes the transition to a clearing up scene:
Narrative dyad Example 9: Mom enhances connectedness by making a smooth, realistic transition to the next scene (Case 1)

Points to egg then mother doll; Looks at child; How are you going to give the egg to mother? (2)

You're helping but you better use a fork. Gives fork to child; Touches child's hand; You pretend/You pretend. (4)

Watches child; There you go. Give her the egg. Continues watching child; (2)

Baby has some egg too. (4)

You all finished? (6)

Brief pause; Picks up the milk; Gives it to child; Put the milk in the fridge. (8)

Mom picks up the apple from table; (10)

Mom watches while holding apple; Holds out the apple to the child; Katie, where do we put the apple? (12)

Nods; Ok. (14)

Feeds egg to mother doll by putting egg in cup and bringing cup to mother doll's lips (1)

Looks at mom; Mother EAT HUNGRY/HUNGRY (3)

Yeah: Using a fork, pretends to feed mother doll; (1)

Pretends to feed baby doll some egg; (3)

Pretends to give mother and baby doll some more egg; Looks at mom; (5)

Nods and puts down fork; Looks at mom; (7)

Takes the milk and puts it in the fridge; (9)

Has difficulty closing fridge door so re-arranges the items (11)

Takes apple; Looks at mom; Put it in the fridge. (13)

Puts apple in fridge; Picks up cup from table. (15)

In this example, mom actively observes as the child executes the mealtime scene. Tracking her actions, mom engages in parallel talk while her daughter feeds the egg to both the mother and baby dolls (2-5). Then, checking in and confirming that the child has completed the feeding (6), mom makes a smooth transition to the next scene. By suggesting that the child put the milk and other items in the fridge, mom initiates a new but logically connected scene of cleaning up after a meal (8-15). Although, mom acts in a highly controlling way when making this transition, the child follows her mom's lead and correctly responds to the directions given. The child willingly
enacts the scene as instructed, and does not challenge her mom's control.

This example illustrates two interesting points with respect to communication. First, this low communicative child primarily uses manual communication to express herself while her mom uses an oral/aural approach. Secondly, similar to another play segment of this dyad (see Narrative dyad Example 3), this mom possibly misunderstands her daughter's signed communication. After mom asks the question, "How are you going to give the egg to mother" (2), the child either misunderstands mom's question or responds with an independent thought "Mother EAT HUNGRY/HUNGRY" (3). As mom gives her child the answer to her original question (4), the interaction proceeds without addressing the child's independent contribution.

Occasionally, when narrative moms try to create flow, their children object. In the following example, mom mediates her child's objection by incorporating his idea for the scene's development with her own.

Narrative dyad Example 10: Mom enhances connectedness between scenes by managing her child's objection (Case 3)

Sits John on ground. (2)

I'm going back to. Is fitting doll into car; (1)

There is a short pause. (3)

Looks at child; Is it supper time now? (4)

Is it supper time now? (6)

Looks at watch then child; It's getting pretty late. I think it's going to be supper time. (8)

Looks at mom; Huh? (5)

No. Unintelligible utterance; (7)

Ready to drive car; Ok I'll come back. I forgot one more item. Get the trip for father. (9) Looks at mom intermittently

Making car noises; Drives car quickly to end of table; She got it. Drives car back quickly; Takes Jennifer out of car; Here. (11)

Looks at child; Just in time for supper. Have to wash up all your hands and face. (12)

Parks car; Put it like this. This way. (13)
In order to maintain a sense of connectedness and logical flow to play, mom takes play in a specific direction. In guiding play toward a suppertime scenario, mom models a story of family life which reflects the unfolding of a typical day. In confronting her child's objection to her suggestion of suppertime (7), mom negotiates a compromise between her child's wishes to repeat a previous scene (going to the store) and her own desires to move the play forward. Permitting her child to go the store quickly before supper (10), mom allows him to enact his play segment within the parameters of the greater context. Consistency and a sense of logical connectedness between scenes within play is maintained.

**Summary**

In addition to providing structure by initiating, advancing and adding depth and dimension to play, moms assume responsibility for the logical connectedness of play. Moms facilitate play by making scenes internally consistent and creating connections between them. This creates a well organized story and models sequential play for the children. Again, for the low communicative dyad of Case 1, communication difficulties appear to exist. Either mom is not seeing or misunderstands her daughter's signed communication. In any case, the child's contributions go unaddressed.

**Providing Structure: Transferring Responsibility to Child**

While narrative moms control the play's story, its linear development and substantive content, they also provide structure by directing the child to carry out particular segments of play. Within the context of the existing story, moms transfer responsibility to the children for development and execution of parts of play.

In the following excerpt, mom introduces a new scene into play. Agreeing to the bathtime scene, the child asks her mom for direction. Responding directly, mom transfers responsibility to the child for deciding how the scene should be dramatized. For example:

**Narrative dyad Example 11: Mom transfers responsibility to her low communicative child for deciding how to execute the scene (Case 5)**

Mom touches child's arm; (2)  
NO/NO, IT'S TIME FOR MY BATH. (4)

Finishes giving baby doll a drink; Talking directly to doll; NOW BED YOU. (1)  
Looks at mom; (3)  
Ok, BATH WHERE? (5)
WHERE DO YOU THINK ABOUT THAT. (6)

After short pause, takes mother doll and baby doll to the foreground; Unintelligible utterance: Pretends mother doll is bathing the baby; Not looking at mom (7)

Comments to researcher in a low voice: I thought she was going to put her in the kitchen sink but she didn't. Says loudly to child: Oh NICE. (8)

This example illustrates how mom provides structure to play in two ways. First, she introduces a new scene into play ("It's time for my bath") (4). Second, she responds to her child's request for direction by transferring responsibility to her child for deciding how to proceed (6). Demonstrating autonomy and accepting the task of designating the location of the bath, the child finds an area in the foreground where she pretends the mother doll bathes the baby (7). Although mom allows her daughter the freedom to choose and praises her for it, as an aside, she comments to the researcher that her child did not make the choice she expected (8).

In another example, this narrative mom and her high communicative child develop a scene together which involves the babysitter. Following the child's lead, mom agrees to the scene her child proposes and transfers responsibility to her son for executing it.

Narrative dyad Example 12: Mom transfers responsibility to her high communicative child for the execution of a scene which he proposes (Case 3)

Doll finishes her snack; Boy, that was good. That was a good snack. Now I think I'll go downstairs and watch tv. Looks at child; Takes Jennifer off chair and straightens her legs; (1)

Is trying to fix the shelf in fridge; Not looking at mom; (2)

Walks Jennifer toward tv; Jennifer is going downstairs and she's watching tv. Mom sits Jennifer on floor in front of tv; (3)

Succeeds in fixing shelf of fridge; shuts the door and moves it aside; Looks at mom; And the babysitter was waking up. (4)

Looks at child; And the babysitter there too? (5)

Yep. (6)

Pointing around play area; Ok.
Which one can be the baby sitter? (7)

_POINTING TO THE BABY DOLL IN BED; LOOKS AT CHILD; YOU BETTER PICK THE BABY UP THEN. THE BABY'S CRYING._ (9)

_SMILES AT CHILD; OK, YOU DO THAT PART THEN. YOU COME AND GET [TO] THE GIRL TO PICK UP THE BABY._ (11)

_CAN YOU COME AROUND THIS WAY? MOTIONS TOWARD THE CHAIR WHICH IS BesIDE HER; WATCHES CHILD_; (13)

_DOES SHE SING A LITTLE SONG? (15)

_TAKES BABY DOLL; SHE GETS HER TURN. MOMMY? OK. LOOKS AT CHILD; MOMMY WILL HOLD THE BABY FOR A LITTLE WHILE AND ROCK HER. ROCKS MOTHER DOLL AND BABY DOLL TOGETHER_; (17)

In this play segment, mom transfers responsibility to her child for the development and execution of the scene at three different points in time. First, mom asks her son to identify which doll is the babysitter (7). Responding by choosing John, the child continues to develop the scene by suggesting that the baby is waking up (8). Mom contributes to this new theme and transfers responsibility to her child again. She directs her son to execute the scene by proposing that he pick up the baby because she is crying (9). Exerting his autonomy and staying within imaginary play, the child modifies this idea by suggesting that the girl doll should pick up the baby (10). Mom transfers responsibility to the child once more when she explicitly directs the child by saying "You do that part then...You come and get to the girl to pick up the baby" (11)

In addition to instructing the child on how to logistically negotiate the space restrictions of the play area (13), mom further facilitates the development of the scene when she draws attention to her child's action by saying "Does she sing a little song?" (12, 15). Mom also accepts the child's act of reciprocation of a transfer of responsibility when he suggests that the mother doll should get her turn in holding the baby doll (17).
A third example of transferring responsibility occurs when the imaginary play scene of going to the store is interrupted because of car trouble. In the joint problem solving task which follows, mom transfers responsibility to the child for fixing the problem after she expresses interest in it. In this instance, however, the child declines the transfer.

Narrative dyad Example 13: Mom transfers responsibility to her child for problem solving; the transfer is rejected (Case 4)

*Tries to fit mother doll in car*; (2)

*Looks at under car; Laughs; She's got her leg caught.* (4)

*Her leg's caught in the car.* (6)

*Yeah, Can you fix it?* (8)

*Takes car; Tries to fit doll in; Smiles; Laughs; It's not that funny! Succeeds in fixing the problem; There we go, Ok* (10)

*Ok we're going to the store.* (12)

*Fits boy doll in car* (1)

*Look it in here, Look it in here. Lifts car up and points to the underside; It's got a hole.* (3)

*What? Smiles;* (5)

*Can I see it? Lifts up car; Wiggles mother doll's leg.* (7)

*Puts car down; Laughs; Throws herself backward unto couch behind her;* (9)

*Let's see. Looks at underside of car;* (11)

In this excerpt, mom and child engage in a mutual problem solving task. When mom identifies the problem saying "She's got her leg caught in the car" the child expresses interest in examining it (4-7). When mom transfers responsibility to the child asking if she is able to fix it (8), the child laughs and throws her body backward, declining the transfer (9). Enjoying the interaction while adjusting the doll's position, mom smiles, laughs and casually comments "It's not that funny" (10). When the problem is repaired, mom provides structure by re-focussing the child's attention back to the original scene of going to the store (12).

**Summary**

In carrying out executive functions, moms not only control the development of the story in various ways, they facilitate their children's involvement by transferring the responsibility to them for certain aspects of its execution. In doing so, moms encourage their children's direct, active
involvement in play. Children respond to moms' transfer by choosing to follow through with correct action, presenting an alternate idea or rejecting it entirely.

PART 3: Informal Teaching: Conveying Information and Teaching Language

In addition to playing with their children and providing structure to the interaction in specific ways, another function moms fulfill is teaching. As opportunities naturally present themselves, narrative moms use play as a vehicle for conveying information and teaching language to their children. Both kinds of teaching are addressed.

Informal Teaching: Conveying Information

Periodically, moms use the context of play to informally teach their children about things that are relevant to the current scene. In the following example, one mom and child develop a role play where the mother doll makes breakfast for the boy doll. Informal teaching occurs when mom asks her child what the boy doll needs to use when he eats.

Narrative dyad Example 14: Mom informally teaches her child by asking her what the boy doll needs to use when he eats (Case 4)

Ok here it comes. Walks mother doll to table holding pot; Using mother doll, pours the egg from the pot to the plate; Get it on the plate here... there we go. (1)

Using mother doll, puts pot back on stove; (3)

What does he need to eat with? (5)

Mom and child looks at each other; (6)

Right. (8)

Puts cutlery in mother doll's hands; There we go. Walks mother doll to table; Gives child both pieces of cutlery; Ok give him the knife. (10)

Watches mom; Giggles; (2)

Moves plate in front of boy doll; Egg. Adjusts boy doll's arms; (4)

Knife and fork. (7)

Moves doll's arm; Picks up cup that she tipped over; (9)

Takes cutlery from mother doll as boy doll falls off his chair; (11)
Together, mom and child put boy doll back on his chair; (12)

Puts knife beside plate; Knife. Puts fork on other side of plate; and fork (13)

Knocks over cup; Opps. Using mother doll, picks up cup; Looks at child; How about some bread? Is he going to have some bread? (14)

In this segment, mom role plays the mother doll bringing the boy doll's breakfast to the table while her child observes and laughs (1-2). As the child spontaneously labels the egg and adjusts the boy doll's arms, mom introduces the notion of cutlery into the scene by asking her child "What does he need to eat with?" (5). Establishing eye contact with mom (6), this child correctly answers the question (7). Advancing the scene, mom uses the mother doll to pass the child the cutlery, then instructs her to give the boy doll the knife (10). The child places the knife and fork on each side of the plate as she labels them (13). Mom then, continues to advance the scene by introducing the idea of the boy doll having bread with his egg (14).

Not only does play provide opportunities for the children to learn about appropriate social behaviour, imaginary play enables the child to practice what s/he knows about the world and other activities of daily living. In the following example, the child enacts a play scene where he has returned from gathering wood in the bush. Informal teaching occurs when mom shows him how to unload wood from the trunk of the car.

Narrative dyad Example 15: Mom informally teaches her high communicative child about the relationship of one's action to another and the attributes of objects (Case 3)

Looking at child; Takes John out of car; Stands him by the trunk; Can we open the trunk? (2)

Using John, pretends to open the trunk; In very softly voice: Open the trunk. In a normal tone of voice: And take out the wood. Lifts John up. (4)

Smiles; No, you can't move the car when he's taking out the wood. See. Look. Pretends John is removing wood and piling it in the yard; Heavy logs. (6)

Backs up car near the pretend woodpile; (5)

Picks up Jennifer, imitates mom but moves doll back and forth quickly; Pshh/Pshh/Pshh. (7)
Shakes her head; No you can't go fast when you're lifting the wood. It's very, very heavy. Look. Moves John slowly and breathes to indicate heaviness; (8)

Watches mom; Holds Jennifer; Sometimes I /Sometimes I can take/I can take the wagon to put the wood in. Like. Makes lifting gesture with arms; Like with the one wheel. Like Cameron had. (9)

Looks at child; Nods; Well next time you can take the wagon. I think that's enough work for today. (10)

Within the context of imaginary play, mom informally teaches her high communicative child how to enact the scene realistically. She points out that the child can not drive the car backward while she is pretending to take out the wood (6). She demonstrates how to remove the wood in a way that reflects the wood's weight (6). In presenting these activities in this way, mom informally conveys information about social behaviour (e.g., how one person's actions affect another) and the attributes of objects (e.g., wood is heavy).

The child responds by watching mom then contributes to the scene by suggesting he use a wheelbarrow (9). Mom acknowledges this idea but chooses to close the scene and move play forward. In doing so, mom acknowledges her son's idea by saying "Well next time you can take the wagon. I think that's enough work for today" (10).

In contrast to the previous examples of narrative moms informally teaching their high communicative children, the last example depicts a narrative mom teaching her low communicative child. Cleaning up after the dog is finished eating, the child begins to put things in the fridge. Introducing a "dirty dishes' theme into the scene, mom tests her child when she asks her what needs to be done with the dirty dishes.

Narrative dyad Example 16: Mom tests her low communicative child about what to do with dirty dishes and cake (Case 1)

Referring to dog; He's hungry (1)

Looks at mom; Yeah. Pretends to feed the dog the egg from the pot; (2)

Goes and claps; Glances up; You want to give him the rest of the egg. Looks at child; (3)

Takes egg out of the pot; (4)

Softly spoken; Well fed pooch. Yeah. (5)

Puts egg and pot in the fridge; (6)
Looks in the fridge; Points; Katie look. Takes pot out of fridge and shows it to the child; Points to the inside of the pot; That's dirty. What do we have to do? Palm up gesture; (7)

Wash it. Points in fridge; Is that? This is dirty too remember? Takes cup out of fridge and gives it to child; Have to wash that. (9)

Points to cake on table; Where to put the cake? (11)

Ok. (13)

Looking in the fridge; Points; Katie look. Takes pot out of fridge and shows it to the child; Points to the inside of the pot; That's dirty. What do we have to do? Palm up gesture; (7)

Looks at mom; Puts pot in the sink; (8)

Puts the cup in sink; Clears plates and utensils off table; Puts them in sink. (10)

Puts cake in the fridge; (12)

After feeding the dog, the child puts the pot and egg in the fridge (1-6). Intervening in an informal teaching capacity, mom draws the child's attention to the fact that the pot is dirty (7). Asking a question that tests the child's knowledge about what to do, mom transfers responsibility to her child for deciding the next step (7). Responding nonverbally, the child puts the pot in the kitchen sink (8). In her teacher role, mom uses parallel talk to articulate the meaning of her child's actions saying "wash it" (9). Being prompted by mom that the cup in the fridge is dirty as well, the child also puts it in the sink (9-10). Consistent with the emergent pattern, the child takes the plates and utensils off the table and puts them in the sink, too (10). In completing the clearing up sequence, mom asks the child another test question "What [where] to put the cake?" (11). This tests the child's ability to distinguish what goes in the sink and what goes in the fridge. Mom acknowledges the child's correct action of putting the cake in the fridge (11-13).

Summary

For both high and low communicative competence children, narrative moms use imaginary play to informally teach their children about how one's actions affect another; the attributes of objects; and activities of daily living, in general. Although the "lessons" do not always require the children to respond directly, causal presentation and meaningful exposure to information within play is important to learning.

Informal Teaching: Teaching Language

In addition to informally teaching by imparting information, narrative moms informally teach language within the context of play. For children with low communicative ability, narrative
moms model language when the opportunity presents itself. Since the high communicative children of this sample do not have the same need, their moms correct errors in language usage.

In the following example, this mom models language for her low communicative child:

Narrative dyad Example 17: Mom models language for her low communicative child using parallel talk (Case 1)

Watches child; There you go. Give her the egg. Continues watching child; (2)

Baby has some egg too. (4)

You all finished? (6)

Yeah: Using a fork, pretends to feed mother doll; (1)

Pretends to feed baby doll some egg; (3)

Pretends to give mother and baby doll some more egg; Looks at mom; (5)

Nods and puts down fork; Looks at mom; (7)

In this short play segment, mom observes as the child engages in play. As a way of participating in the scene, mom informally exposes her child to language using parallel talk. When the child feeds the mother doll, mom says "That's a girl...give her the egg" (1-2). When the child feeds the baby doll, mom says "Baby has some egg too" (3-4). Although this may seem commonplace, mom is serving a specific teaching function. Besides participating in play, she is exposing her child to language by modelling it for her.

In contrast to modelling language by articulating the child's actions, the mom of the following dyad models language when she lists the foods the dolls should have for breakfast.

Narrative dyad Example 18: Mom models language for her low communicative child by stating what food to have for breakfast (Case 5)

WHAT DO YOU WANT THE BABY TO EAT FOR BREAKFAST? (1)

MILK AND. You Points to table; YOU FIX ...(slight pause) (3)

THE BREAKFAST/THE BREAKFAST. (5)

NO CAKE FOR BREAKFAST. Out
Puts cake on floor near stove;

Looks at mom; MILK. Looks away then back at mom; (2)

Without looking at mom, sets milk carton in an upright position; (4)

EGG. Picks up the egg and holds it; Looks at mom; (6a)
Smiles; **CAKE IS NOT GOOD FOR YOU FOR BREAKFAST.** Knocks over boy doll; **Oooh.** (7)

Moves bed near table and sits doll on the end of it; **There, Ok.** Looks at child; **FRUIT, that's GOOD. EGGS, YES.** Moves the milk to a different spot on the table. **DADDY should EAT FIRST.** (9)

Lightly touches child's arm; **Because he has to GO TO WORK, Ok?** (11)

In this example, mom transfers responsibility to her child by directing her to fix the breakfast (3, 5). As the child begins to make food choices (6), mom contributes to the scene by interjecting an informal lesson. Mom removes the cake from the table and reminds the child that cake is not good to eat for breakfast (7). Moments later, mom provides structure and models language when she, very simply, lists the breakfast foods to be used in the scene ("Fruit, that's good... eggs, yes...") (9).

Another way in which narrative moms teach language is by correcting their children's use of language. In the following example, a high communicative child dismisses a role play scene suggested by mom in favour of one she prefers. In doing so, the child makes a lexical error. Interestingly, there are very few examples of moms correcting language use in the data from narrative dyads.

**Narrative dyad Example 19:** Mom corrects a lexical error made by high communicative child (Case 4)

*Holding girl doll; Make her ask him. Say 'Steven'* (1)

Well I didn't hear her. (3)

She's doing ballet you mean, right? (5)

Takes doll from mom; **She's already did.** (2)

She's doing the ballerina. Laughs; **She's doing a ballerina.** (4)

Yeah. Short pause. Pretend the mother came in bedroom. Points at mother doll which mom is holding; (6)
As the child dismisses mom's role play idea as one already performed, she initiates a new scene in which, engaged in imaginary play (1-2), she describes her doll as 'doing the ballerina' (4). Recognizing the lexical error, mom casually corrects the mistake by asking her child a rhetorical question, "She's doing ballet you mean, right?" (5). The child readily agrees. After a short pause, the child continues within imaginary play by initiating the next step in the scene (6).

Narrative moms do not always correct errors in language usage. After a warning from the researcher that play needs to finish soon, this narrative mom directs play toward a conclusion. As her child engages in clearing away the food, he observes mom putting the doll, John, to bed. Commenting on this, the child makes a grammatical error which his mom does not correct.

Narrative dyad Example 20: Mom of high communicative child does not correct his error in language usage (Case 3)

They're getting very tired. Picks up John; Oh dear the boy's yawning. He has to go downstairs. (1) 

Walks John to the bed; Lays doll on the floor beside the bed. (3) 

Well we'll leave the bed for the little girl. Shall we? Takes Jennifer off the chair. (5) 

Looks at child; Well, she can have a shower in the morning. Smiles; (7)

Looks at John; (2) 

No. He go to use the bed. Points at bed; (4) 

Takes cup off the table. Looks at mom; She gets a shower? (6) 

In this example the child makes a grammatical error which his mom does not correct. Objecting to his mom making John sleep on the floor, the child remarks "No, he go to use the bed" (3-4). Instead of correcting her son's use of language, mom addresses its meaning and explains that she is saving the bed for the other doll, Jennifer to use (5).

Summary

Narrative moms often informally model language for their low communicative children and, less frequently, correct errors in language for their high communicative children. Although secondary to the development and execution of a story, informal teaching of language is an important function that narrative moms carry out within the context of play.
PART 4: Child Contributions to Play

As illustrated, narrative moms control the interaction when playing with their deaf children in a number of specific ways. Moms initiate play, advance scenes, enrich scenes, create connectedness within and between scenes, transfer responsibility to their children for executing specific parts of play; teach their children language and convey information. In carrying out these executive functions however, moms share control with the child.

Although moms control play, they encourage and accept the ideas offered by their children. Regardless of their level of communicative competence, children often influence the direction of play by contributing their own ideas. This can occur in three ways. Children suggest ideas in response to mom's transfer of responsibility; they influence the direction of play within the structure moms provide; they independently initiate their own scenes in lieu of those moms propose.

In the following example which was seen previously, this child responds to her mom's transfer of responsibility

Narrative dyad Example 21: Low communicative child influences play by responding to her mom's transfer of responsibility (Case 5)

Mom touches child's arm; (2)
NO/NO. IT'S TIME FOR MY BATH. (4)
WHERE? YOU THINK ABOUT THAT. (6)

Finishes giving baby doll a drink; Talking directly to doll; NOW BED YOU. (1)
Looks at mom; (3)
OK. BATH WHERE? (5)

After short pause, takes mother doll and baby doll to the foreground; Unintelligible utterance; Pretends mother doll is bathing the baby; Not looking at mom (7)

Comments to researcher in a low voice:
I thought she was going to put her in the kitchen sink but she didn't. Says loudly to child: Oh nice. (8)

The child, in this short play segment, demonstrates her influence on the direction of play when she responds to her mom's transfer of responsibility. The child independently decides that the bath is located in the foreground (7). Expecting a different response, mom does not attempt to alter her child's decision but praises her choice (8).
In the following example which was seen previously, the child exerts influence by modifying the direction of play within the structure mom provides.

Narrative Example 22: Low communicative child influences the direction of play within the structure her mom provides (Case 1)

Points to mother doll; What's the mother going to give the baby? What's she going to eat? What's she going to eat? Looks at child; (1)

Is she going to have a drink? (3)

Makes a palm-up gesture with hand. What? Points to cup; What's in the cup? (5)

Oh mommy's going to have a drink. (7)

What's in the cup? Leans over; Looks in the cup; (9)

You have some milk. Put some milk in the cup. (11)

Oh you're going to feed. Ok. (13)

GRANDMA (1b)

Picks up cup; Shows it to mom; (2)

Nods; Gives mother doll a drink (4)

Looks at mom; Mommy. (6)

Puts cup on table; (8)

Smiles at mom; Takes milk bottle off table; (10)

Pretends to feed baby using the milk bottle; (12)

This low communicative child influences the development of play in a number of ways when she modifies the ideas suggested by mom. First, the child decides to give a doll a drink instead of giving her something to eat as mom suggests (2). Second, the child modifies the direction of play slightly when she decides to give the mother doll a drink instead of the baby doll (6-7). Third, the child uses the milk bottle as a baby bottle instead of pouring the milk into the cup, as mom suggests (11-12). Thus, without fundamentally changing the cohesiveness of the scene, the child influences the development of play as she independently modifies mom's original structure of the scene.

In the following example which was seen previously, this high communicative child overtly rejects her mom's proposed structure to enact a different scene.
Narrative dyad Example 23: High communicative child influences play by rejecting a scene suggested by mom and initiating a new scene of her own (Case 4)

*Holding girl doll; Make her ask*

Him. Say 'Steven' (1)  

Well I didn’t hear her. (3)  

She's doing ballet you mean, right? (5)  

Mother came in the bedroom. Ok. (7)

Takes doll from mom; She's already did. (2)  

She's doing the ballerina. Laughs; She's doing a ballerina. (4)  

Yeah. Short pause. Pretend the mother came in bedroom. Points at mother doll which mom is holding; (6)

This high communicative child influences the direction of play when she blatantly dismisses her mom’s idea as one that was already performed (2). Initiating her own scene, the child engages her mom in an imaginary play scenario where her doll is dancing (4). In response, mom follows her child's lead and participates in the scene after correcting the child's lexical error (5, 7).

**Summary**

These examples illustrate how both high and low communicative children of the narrative dyads freely influence and contribute to play as it develops. They also demonstrate that the children's responses are not completely dependent on the structure that moms provide. Not only do children respond autonomously when moms transfer responsibility to them, they independently bring their own ideas into play. Narrative moms are receptive to their children's responses and, within their role as directors of play, accept the changes their children make.

**Responses of Low Communicative Children Within Narrative Dyads: (N = 2)**

A striking difference appears in the children's responses within play as a function of their communicative competence. Low communicative children's responses are largely action-based. Because narrative moms focus on developing and executing a story with their children, there is a de-emphasis on their children's verbal communication skills. Production demands are few and are not critical to the interaction. When narrative moms ask a question or make a suggestion and their low communicative children respond non-verbally, these responses are accepted as valid, without an expectation being placed upon the child to produce a verbal expression.
In this example which was previously seen, mom accepts her daughter's non-verbal responses as valid.

Narrative dyad Example 24: Low communicative child responds non verbally in play; no production demands are being placed upon her by mom (Case 1)

Ah, let me see. (1)

Mom and child look at each other; (2)

I hear the baby crying. We get the baby up? (3)

Picks up baby from bed and shows it to mom; (4)

We're going to feed the baby? (5)

Yeah. (6)

Better feed the baby. Makes palm-up gesture with her hands; Set her on the chair. Pulls chair out from table; Take sister off. Takes other doll off chair; (7)

Tries to sit the baby doll on the chair (8)

The narrative mom of this segment initiates play and instructs her child in how to enact the scene. The child's responses are primarily action based. For example, in response to mom's leading question, "We get the baby up?", the child communicates her agreement by following through with the correct action, then communicates her compliance by showing mom the baby doll (4). As mom directs the child in the next step, the child follows mom's lead and again responds with the correct action by sitting the baby doll on the chair (8).

A similar example of a mom's acceptance of non-verbal responses occurs in the following:

Narrative dyad Example 25: Low communicative child responds non verbally in play without production demands being placed upon her by mom (Case 5)

NOW ITS TIME FOR the BABY to GO BACK TO BED. (1)

Puts baby in bed on top of the blanket; Looks at mom; (2)

I'M COLD. (3)

 Begins to put baby under the blanket; (4)

Helps child by lifting blanket and arranging pillow; There we go. (5)

Glances away; (6)

Pats baby; Looks at child; Taps child's arm to get her attention; (7)

Looks at mom; (8)
DOESN'T MOTHER GIVE her a KISS? (9)

Walks mother doll to the bed; Pretends to kiss the baby; Walks mother doll back to the table; Looks at mom; (10)

Looks back but does nothing; (11)

Takes father doll from chair and makes him kiss the baby; (12)

Smiles; GOOD girl. Helps child sit father doll back in his chair; Ok. (13)

Begins speaking/signing quickly:
FATHER has to EAT NOW because he has to GO FAST TO WORK. (14)

Moving quickly, feeds father doll; (15)

Laughs to herself; Looks up; Smiles into camera; (16)

Similar to the previous example, this low communicative child responds to her mom's structure and direction with a series of non verbal communications and enactments. Following mom's first direction (1), the child puts the baby doll on the bed, then communicates her action by looking at mom (2). Next, the child follows through with correct action by putting the baby doll under the blankets (4-5). Then, responding to mom's attention getting strategy (tapping child's arm) (7), the child communicates her attention by looking at mom. (8). Again, when mom directs her daughter to have mother doll give baby doll a kiss (9), the child enacts the segment, then communicates with mom by looking at her (10). The final instance of non-verbal communication and enactment occurs when mom advances the scene. Instructing her child that father doll has to eat and quickly go to work, the child responds by feeding the father doll quickly (14-15).

Moms' acceptance of the non-verbal responses of their low communicative children does not denote indifference to their linguistic abilities. As previous examples have illustrated, moms may use parallel talk in relation to their children's non-verbal responses as a way of informally modelling and teaching language.

Narrative dyad Example 26: Low communicative child responds non verbally in play while mom engages in parallel talk (Case 1)

Yeah; Using a fork, pretends to feed mother doll; (1)

Watches child; There you go. Give her the egg. Continues watching child; (2)

Pretends to feed baby doll some egg; (3)
Pretend to give mother and baby doll some more egg; Looks at mom; (5)
Nods and puts down fork; Looks at mom; (7)
Takes the milk and puts it in the fridge; (9)
Has difficulty closing fridge door so re-arranges the items (11)
Takes apple; Looks at mom; Put it in the fridge. (13)
Nods; Ok. (14)

The first part of this play segment demonstrates how this narrative mom uses parallel talk to model language and engage her child when she enacts a scene of feeding both the mother and baby dolls. (1-5). In the latter part of this excerpt, mom initiates a clearing up scene where the child puts the food away. Within this segment, mom accepts both her child's verbal and non-verbal responses. Mom tests her child's receptive language skills by directing her to put the milk in the fridge (8). After the child follows through with correct action, mom accepts her daughter's verbal response when she correctly identifies where to put the apple (13).

Summary
The responses of low communicative children in narrative play are primarily non-verbal and action based. Not only do their moms accept and build upon their these responses, they provide structure and present information to their children in such a way that few production demands are made. This acceptance of their children's non-verbal communication increases the natural fluidity and reciprocity of dyads of hearing mothers and their young school age deaf children. This is not to say that narrative moms are indifferent to the language development of their low communicative children. In their style of play, these moms often use parallel talk to engage them and model language.
Responses of High Communicative Children Within Narrative Dyads: (N = 2)
The responses of high communicative children are different than those with low communicative ability. The interaction engaged in by high communicative children reflect a highly verbal exchange and includes elements of language-based creativity not seen with low communicative children. For example, in the play segment, which was previously seen, where mom instructs her son in how to remove the wood from the trunk of the car, the child responds by introducing the idea of using a wheelbarrow to assist in the work.

Narrative dyad Example 27: High communicative child and his mom enact a scene that is influenced by the child’s creativity and his developed use of language (Case 3)

Looking at child; Takes John out of car; Stands him by the trunk; Can we open the trunk? (2)

Using John, pretends to open the trunk; In very softly voice: Open the trunk. In a normal tone of voice: And take out the wood. Lifts John up. (4)

Smiles; No, you can't move the car when he's taking out the wood. See. Look. Pretends John is removing wood and piling it in the yard; Heavy logs. (6)

Shakes her head; No you can't go fast when you're lifting the wood. It's very, very heavy. Look. Moves John slowly and breathes to indicate heaviness; (8)

Watching mom; (1)

Yes. (3)

Backs up car near the pretend woodpile; (5)

Picks up Jennifer, imitates mom but moves doll back and forth quickly; Pshh/Pshh/Pshh. (7)

Watches mom; Holds Jennifer; Sometimes I /Sometimes I can take/I can take the wagon to put the wood in. Like. Makes lifting gesture with arms; Like with the one wheel. Like Cameron had. (9)

Looks at child; Nods; Well next time you can take the wagon. I think that's enough work for today. (10)

This play segment highlights the creativity of this high communicative deaf child in two ways. First, mom and child are engaged in a scene where they are unloading wood from the trunk of a car. The wood gathering scene, introduced prior to this segment (not shown), was initiated by the child in response to mom's question "Where are you going?" The subsequent unloading of wood is an imaginative contribution to play that is language dependent (4). There are no "wood"
toys and no symbolic substitution for wood toys (mom and child do not pretend that a rolled up blanket is a log of wood). The wood only exists in the participants' imagination and is a product of language.

A second instance of language-based creativity occurs when this child introduces the notion of using a wheelbarrow to assist in the work (9). Since a toy wheelbarrow does not exist, the introduction of a wheelbarrow into play is the child's imaginative contribution made possible by his use of language.

In another example, a mom and her high communicative child engage in the development of a shared story. Here, the mom provides structure to a mealtime scene by suggesting ideas for its development. However, contributing to the development of the scene, her daughter introduces her own ideas into play.

**Narrative dyad Example 28: A high communicative child influences the direction and development of play using language skills and imagination (Case 4)**

*Not looking at child; What are they going to have? Supper? Picks up mother doll; (2)*

*Takes chair from table; Places it in front of her and puts the doll on the chair. (1)*

*They're not? (4)*

*Oh breakfast. Ok. Do you want the mom on the chair? Looks at child; (6)*

*No. (3)*

*Having breakfast. Pushes doll's chair to the table. (5)*

*No they have to do. The mother has to do some work. Moves the chair to other side of table; (7)*

*Smiles; (9)*

*Smiles; Laughs slightly; Looks toward researcher then looks back; (8)*

In this play segment, the child uses language to contribute her ideas into the story. First, the child dismisses her mom's idea of having supper and suggests an alternate, but related idea of having breakfast (5). Moments later, the child objects to her mom's idea that the mother and boy dolls sit together at the table (6-7). In an imaginative, language based response, the child introduces the gender-based concept of mother doll doing work into the scene (7).
Summary
Because the play of high communicative children is affected by their developed use of language, these children exhibit greater spontaneity and reciprocity with their moms than do low communicative children. Communicative difficulties exist, but are few in number. Therefore, the contributions of high communicative children are more varied. This is the result of the children's ability to use language to bring play to an greater level of symbolism and abstraction.

Summary of the Narrative Dyads
Narrative play is the result of mother-directed free play interaction. Hearing moms in narrative dyads orchestrate play by providing its structure and form. In doing so, they create an environment and direct their children in acting out a story of family life rich with detail, dimension and cohesiveness. While carrying out these functions, narrative moms actively play with their children. This results in a mutually reciprocal play experience where the moms and children are operating within the same context.

In directing play, narrative moms provide structure by initiating play, advancing scenes in a linear direction, enriching scenes with detail and dimension, and making the connections between scenes explicit. Within this role, moms offer step-by-step instruction in the development and execution of the scenes as well as transferring responsibility to the child for carrying out parts of scenes independently. In cases where the children contribute their own ideas to the structure of the scenes, narrative moms address or incorporate them into the existing structure.

Secondary to the development of a story, narrative moms informally teach their children language by using parallel talk or asking them language based test questions. Doing so, moms use the context of play to provide meaning to the lessons as they occur. Similarly, narrative moms informally teach their children by using play as a way to convey information about activities of daily living or social behaviour.

Irrespective of communicative competence, children of narrative dyads are actively involved in their play with mom. All children are responsive to the structured guidance their moms provide. In addition to accepting and executing moms' directions, including the transfer of responsibility, these children contribute their own ideas to play. They sometimes influence the direction of play by suggesting alternate ideas within a given scene. Alternately, they change the direction of play by rejecting moms' structure in favour of an idea of their own.

Children's participation in narrative play is affected by their communicative ability. The play of low communicative children is grounded in their non-verbal communication and enactments. Because their moms use parallel talk to facilitate play and place few production
demands on their children, the play of low communicative children is generally unimpeded by communication difficulties. In contrast, the play of high communicative children is facilitated by their more developed language. These children engage their moms in spontaneous, reciprocal and imaginative verbal exchanges as they participate in development of a shared story. Experiencing few communicative difficulties, high communicative children use language to bring their play to an greater level of symbolism or abstraction.

In only one dyad does mode make a notable difference to the interaction. In Case 1, mom uses an oral/aural approach and her low communicative child uses a mixed approach (both oral/aural and signed communication). Although this mom is very attentive when addressing her child's non-verbal communication, she occasionally misses, misunderstands or does not incorporate her daughter signed communication into play. Thus, when this child communicates via sign language, her ideas remain unaddressed.
CHAPTER 6: EPISODE PLAY

There are five episode dyads within this sample. Three dyads consist of hearing moms and their low communicative deaf children. Of these partners, one dyad communicates uses manual communication and the other two use an oral/aural method. Two children are female and one child is male.

There are two dyads consisting of hearing mothers and their high communicative children. One child is male and the other is female. Both dyads use an oral/aural method to communicate.

Overview of Episode Play

In contrast to moms and children of the narrative dyads who play together with the toys, episode moms and children approach the play activity differently. The essence of this difference is found in how the episode moms, in particular, define the interaction. While their children define the activity as play and engage in imaginary activity with the toys, episode moms predominantly define their role as a task and facilitate their children's play. Instead of actively participating in play with their children, these moms generally stay on the periphery and infrequently engage in segments of play. In their role of facilitators, they suggest play topics, ask questions and make comments about their children's play.

This striking difference in the situational definition results in a very different kind of interaction and play experience for the episode dyads. Because moms allow their children to play without structured guidance, episode play is generally characterized by discrete, unelaborated scenes which possess a general sense of connectedness by virtue of the "playing house" context. Episode play lacks the logical consistency and richness of narrative play. It typically presents as a series of play scenes that, when compared to similar scenes of the narrative dyads, appear underdeveloped. However, what episode play lacks in depth, dimension and consistency, it gains in dynamic interaction, specifically in the process of struggling for control of play. Moms and children, who are able to tolerate the irregular flow of episodes, share an exchange of ideas and the acceptance or rejection of them.

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When episode moms attempt to provide structure to play, they often suggest play topics and allow their children to enact them without giving specific direction. Within this context, episode children sometimes accept and execute their moms' ideas and other times, tacitly or overtly, object to them then enact their own ideas. Close examination of how moms provide structure to play reveals that they sometimes act congruently (attending to both the child's attentional focus and meaning of play) or incongruently (attending to either the child's current focus or meaning, or attending to neither). When the latter occurs, moms and children engage in tussles for control about which direction play should take. Although the children sometime concede to their moms' wishes, more often moms follow their children's lead.

Like narrative moms, episode moms also use the context of play to informally teach their children. Whereas narrative moms teach by conveying information about activities of daily living to their high and low communicative children, episode moms teach their high communicative children specific concepts related to play. Similar to narrative moms, episode moms test their high and low communicative children's language skills, however, they do so with greater frequency. One mom of a high communicative child is the exception. She does not test her son's language and he makes few errors.

Children of episode dyads are most accepting of their moms' ideas when moms act congruently while participating in play with their children. At these times, children are also receptive to their moms' informal teaching of language or concepts. Episode children are least receptive when their moms suggest play ideas that are incongruent or when they do not engage in play with their children.

The episode framework is discussed under the following headings: (a) How Episode moms Define Play: Playing at Task and Playing at Play, (b) Providing Structure, (c) Tussles for Control: Incongruent and Congruent Interaction, (d) Teaching: Conceptual Knowledge and Expressive Language and, (e) Child Contributions to Play.

PART 1: How Episode Moms Define Play: Playing At Task and Playing At Play

Playing at Task: Moms are Laissez Faire

In episode play, moms and children define the free play setting differently. Where the children understand the activity as play, their moms predominately define play as a task. In doing so, these moms do not play directly with their children and the toys. Instead, they facilitate their
children's play. One way moms do this is by encouraging their children to play.

In contrast to narrative moms who often introduce a narrative story line from the outset, the following example from the episode dyads illustrates how a mom of a low communicative child initiates the interaction by encouraging her deaf child to play independently. Mom engages her daughter in the scene after she begins playing:

**Episode dyad Example 1: Mom facilitates play by encouraging her low communicative child to play (Case 2)**

**You can play. Makes gesture with hand as if to say 'come on'; (1)**

**Points to doll; Where's he going? (3)**

**Where's he going? (5)**

**In the car. (7)**

**Bend.** (9)

**He's too big for the car.** (11)

**Tries to fit doll in car and laughs He won't fit. Looks at child; Balances doll in car; turns car toward child; Looks at child; (13)**

**The mother's on the floor. Points to mother doll;** (15)

**Walks a doll across the table;** (2)

**Does not answer;** (4)

**Unintelligible utterance ending in "car" Walks doll around the car;** (6)

**Picks doll up and bends him into sitting position;** (8)

**Has difficulty sitting doll in car properly;** (10)

**Help me.** (12a)

**Watches mom; Looks into camera; Watches mom more;** (12b)

**Moves car slightly making car noises; Takes her hand off car;** (14)

**Picks up mother doll; Mother** (16)

In this episode segment, mom encourages her child to begin by telling her that she can play (1). When this low communicative child engages in non-verbal play (2), mom asks her a question about her actions and engages in parallel talk (3, 5). When mom interprets the child's unintelligible utterance, she does so in a literal, concrete way, not assisting the child in taking play to a more abstract level (for example, the doll is going to something (literal/concrete) instead of going somewhere (imaginary)) (7). After mom responds to her child's request for assistance by fitting the doll in the car, the child executes a driving scene by moving the car slightly, augmenting her action with sound (14). This is the extent to which the driving scene is developed by the child.

Thus, as her child plays, this episode mom does not engage in play herself. Instead, within
her role as facilitator, mom encourages her child's play and engages in parallel talk. The result of this mom's laissez faire approach is that the play her child develops is less elaborate.

In another example, an episode mother observes her child play and asks her questions about the scene she is developing:

**Episode dyad Example 2: Mom asks questions about the scene her low communicative child develops but does not engage in play herself (Case 6)**

- **What? (2)**
  - Moves car a little then takes father doll out. Straightens father doll's legs. Glances at mom and walks father doll over to bed; Stops and looks at mom and smiles; (1)

- **Is he going to bed now? (4)**
  - Glances into camera, pauses and holds father doll in standing position near the bed. Sits father doll on edge of bed; Looks at mom; (3)

- **No? Shakes her head; (6)**
  - Shakes her head; (5)

- **Points to girl doll; Is she getting up? (8)**
  - Points to girl doll laying on bed then to father doll; (7)

  - Nods; Uses father doll to get girl doll out of bed. Puts dolls in one hand and makes the bed with the other. Holds dolls facing each other. Looks at mom. (9)

This example illustrates how an episode child plays independently as her mother observes and involves herself indirectly. As this low communicative child develops and executes a play scene, she frequently communicates with mom by looking at her (1, 3, 9). Although mom responds to these communicative acts, she does not engage in play with her child. Instead, she asks her child questions about the scene she is developing (4, 8). In this way, this episode mom engages her daughter by facilitating her play.

Similar to the narrative dyads, the style of episode play does not depend on a child's communicative competence. In contrast to the previous examples, the mom in the following example does not explicitly encourage her high communicative child to begin play. Instead, she involves herself in the interaction by answering her child's questions, making a suggestion and monitoring his play. This segment of interaction occurs at the beginning of their interaction.
Episode dyad Example 3: Mom does not play but responds to and interacts with her high communicative child as he engages in imaginary play (Case 9)

No just two. (2)

Looks at child; Well you can put the man to bed while the other ones are eating. (4)

Watching what child is doing; You can't put it too close cause it's in the way of the camera. (6)

Looks at child and then at fridge; I don't know. (8)

Moves the sink to his left; Moves the two chairs slightly; Laughs and looks at mom; Where's the other chair? (1)

Moves chairs again; Motions to the pile of dolls then to the table The man can (partial unintelligible utterance). (3)

Moves the bedding slightly; Picks up the loaf of bread from the floor; Stands; Reaches for the fridge and moves it closer; This not over there. Opens fridge door; (5)

Puts bread in fridge; Just like that. Picks up cake and looks at it; Why it broke? (7)

This example illustrates how a high communicative child in an episode dyad initiates play independently by exploring and organizing the toys. Although not directly involving herself in play, this mom is responsive to her son. In her role of facilitator, mom answers her child's questions (2, 8). When the child appears puzzled about how to arrange the dolls (3), mom volunteers her own idea (4). Although the child tacitly reveals his attention to the suggestion by touching the bed, he does not act upon it (5). Instead, the child returns to his previous task of organizing the toys (5). Finally, mom performs a regulatory function when she instructs him not to move the refrigerator too close (6). Thus, this mom does not directly engage in play, but actively responds to and interacts with her son. This child, who is very self directed, ignores his mom's ideas and continues playing on his own.

Summary
These examples illustrate an important difference between episode and narrative play. In narrative dyads, both moms and children play together in a complementary way. Narrative moms direct a well-developed story which their children enact. In contrast, moms of episode play define the task differently. They encourage their children's independent play and interact with them as facilitators. As a result of episode moms' laissez-faire approach, the play developed by their
children is less elaborate than the play enacted by narrative children and their moms.

**Playing at Play: Episode Moms Relax their Role of Facilitator**

Although generally approaching the task by facilitating the child's independent play, moms sometimes step out of this role and engage in play directly. In the following example, mom takes the doll that the child is examining and asks her the doll's name. As the child observes, mom engages in play herself.

**Episode dyad Example 4: Playing at play: Mom engages in imaginary play as her low communicative child observes (Case 2)**

That's a girl; Points to doll; What's her name? (2)

Looking at child; Takes doll and bends her in sitting position What's her name? (4)

But what are you going to name her? NAME. (6)

Melanie. Corrects herself immediately; Mary/Mary. (8)

Tries sitting girl doll in the chair and it almost tips; Ooppss. In a soft quick voice: I don't think she'll sit. (10)

Mom and child look at each other; (11)

Raises her eyebrows; Bends doll and props her in the chair; Shrugs her shoulders; Picks up milk carton that is laying on the table on its side; Milk's going to spill. Puts bread on plate; Ok, you can play. Motions to child that it is her turn using a hand wave; (12)

Looking at child; I don't think it opens. (14)

Picks up doll; Girl. Bounces her on the spot; (1)

Looks at mom; Down. Points to the chair; (3)

Looking at mom; Girl. (5)

Says a name which mother misunderstands; (7)

Watching what mom is doing; (9)

Picks up sink; Unintelligible utterance. Tries to open cupboard under sink; (13)

Unintelligible utterance. Puts sink aside and picks up doll from the chair; Straightens doll's legs; Walks doll to sink; Pretends doll is working at the sink; Discovers that the faucet moves; Huh. (15)
As the child observes, this mom engages in play. By asking the doll's name, sitting the girl doll on the chair and arranging the food items on the table, mom steps outside her role as facilitator and briefly becomes a participant (6, 10, 12). When she steps back into her role of facilitator, she does so abruptly, as if she realized she was playing and stopped (12). Then, consistent with this role, she encourages her child to play independently. Interestingly, this child does not engage in the scene her mother created, but develops a different scene. She explores the toy sink, then pretends that mother doll is washing the dishes (13, 15) Observing and responsive, this mom enjoys her child's play as evidenced by her parallel talk and laughter when her child discovers that the faucet moves (15-19).

On rare occasions, episode moms and children engage in play together. The interaction which results is similar to a scene developed by the narrative dyads except, being an anomaly, it does not occur in the greater context of a well-developed, connected story. In the following excerpt, a mom and child develop a going-to-the-store scene together:

**Episode dyad Example 5: Playing at play: Mom and her high communicative child engage in role play together (Case 7)**

<table>
<thead>
<tr>
<th>Where...where are they going? (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Places her hand on child's forearm; (3)</td>
</tr>
<tr>
<td>Yeah...do they have money? (5)</td>
</tr>
<tr>
<td>What are they going to buy? (7)</td>
</tr>
<tr>
<td>What? (9)</td>
</tr>
<tr>
<td>They're going to buy a cup. (11)</td>
</tr>
<tr>
<td>Ok. (13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Looks at mom; (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>They go store. Alternating glances between the car while fitting the doll in and mom; (4)</td>
</tr>
<tr>
<td>Using the same inflection: Do they have money? (6)</td>
</tr>
<tr>
<td>Buy. Pauses; Looks at mom while fitting father doll in car. (8)</td>
</tr>
<tr>
<td>Moves cup to front of table; They buy cup. (10)</td>
</tr>
<tr>
<td>Yep. (12)</td>
</tr>
<tr>
<td>Picks up boy doll that drops to the floor; Is out of camera's range (14)</td>
</tr>
</tbody>
</table>
Sit here. Pats chair; (15)

Takes boy doll off chair and moves him near car; I want to come too. (17)

I want to come too. (19)

And the dog wants to come. Woof/ woof. He wants to come. Puts dog in car; (21)

Can the dog go to the store? (23)

Mother's going to watch tv. (25)

Sits down; He's there. Puts boy doll in chair; (16)

Looks at mom; No. (18)

Moves girl doll near boy doll; No. Watches mom; (20)

Nods; Yeah. (22)

No answer; Points to the boy doll mom is holding then changes her mind and takes mother doll out of bed; Mother/ mother sit down/ mother sit down. Glances at mom; Sits mother doll on chair in front of tv; (24)

Yeah, Got a hurt. Points to doll's hand; Looks at mom (26)

In this play segment, a high communicative child and her mom engage in a scene about going to the store. In contrast to her usual role of facilitating play, this mom provides structure by attempting to create a scene. Mom guides the development of play when she asks the child where she is going (1), does she have money (5), and what will she buy at the store (7, 9). Responding with appropriate answers, the child indicates that the dolls are going to the store (4) to purchase a cup (10). She then indicates the purchase by moving the cup to the forefront (10).

When the child decides to put the boy doll in the chair and not include him in the current scene (16), mom takes this opportunity to develop the scene further. Engaging the child in a light-hearted role play, mom initiates an exchange in which they discuss whether or not the boy and dog can go to the store (11-17). The child then displays her diminished interest in the scene when she ends it abruptly. She changes her attentional focus and initiates a new scene of mother doll watching tv (18).

In contrast to the play of narrative dyads which occurs in the greater context of a connected story, this scene occurs without such context. Because of mom's dual role as participant and facilitator, she not only allows the child to change the scene abruptly, without making a transition, but she follows the child's lead in a totally different direction.

The following example depicts a mom and her high communicative child engaging in an unusually sophisticated segment of imaginary play, as they discuss whether mother doll is angry.
Episode dyad Example 6: Playing at play: Mom and her high communicative child engage in play by discussing mother doll's emotional state. (Case 9)

Looking at child; Sleeping. (2)

What's mother going say when she sees the dog on the bed? (4)

What's momma going say when she sees the dog on the bed? (6)

Think so? (8)

Oh yeah. She's mad. Yeah. (10)

Let me see. (12)

Looks closely at doll; She looks a little... Maybe a little bit mad. (14)

Lays dog on his side at foot of the bed; Sleeping. (1)

Now what? Looks at mom when she begins speaking; (3)

What? (5)

Shrugs and lifts his eyebrows; Smiles; She's gonna get mad. (7)

Closes fridge door with his free hand; Walks mother doll to the bed; Holds mother doll over the dog and vocalizes; Turns doll so mom can see doll's face; Points to doll's face; She's mad. (9)

Covers dolls face with hand; Not mad. She's mad. (11)

Uncovers doll's face; (13)

Looks around; Where's the other mommy?

In this play segment, mom participates in imaginary play with her son when she asks him about the mother doll's reaction to the dog laying on the bed (4). Pretending that the toy doll is capable of feeling emotion, the child responds by proposing that the mother doll is angry (7). Extending the scene, mom engages in play by requesting confirmation (8) then agreeing that the doll looks mad (10). When the child changes his mind and maintains the doll is not angry, mom continues to engage in play by asking to see the doll's face (11-12). Upon doing so, mom suggests that the doll is "...maybe a little bit mad" (14).

Although this episode mom and high communicative child engage in imaginary play, they only develop one aspect of the scene (e.g., mother doll's emotional state). There is no action taken or consequences enacted in the scene. Because there is no linear movement, this play segment appears disconnected from its original context of the dog sleeping on the bed.

Summary

These examples illustrate that, irrespective of their children's communicative ability, episode moms can engage in imaginary play with their children and that they do develop elaborate
play segments together. What is so interesting is that episode moms, for the most part, choose not to do so. The tendency for these moms to engage in imaginary play increases over the time of the interaction. These latter two examples are developed during the last third of the ten minute play period. This indicates that, although episode moms maintain their role of facilitator, they may occasionally step out of it as time passes. Despite episode moms' ability to engage in imaginary play with their children, the scenes they create together never occur within the context of play as the whole. Consequently, these shared scenes appear disconnected and never develop into meaningfully connected segments of play.

PART 2: Providing Structure
In addition to facilitating independent play, episode moms, in carrying out executive functions, sometimes provide structure by presenting play topics to their children. Introducing possible themes into play, these moms provide a very different kind of structure than moms of the narrative dyads. Consistent with their role of promoting independent play, the structure provided by episode moms does not include details about scenes or instructions about how the children should execute them. Unlike narrative moms, who furnish play with depth and dimension, episode moms suggest topics, leaving the development of them to the child.

For example, in the following play segment, an episode mom presents her low communicative child with the idea of cooking:

**Episode dyad Example 7: Mom provides structure without giving her low communicative child details about how to execute the scene (Case 10)**

**ARE YOU O.k. Set? (2)**

**SLEEP. O.K. PUT her IN.** Observes child; (4)

**DO YOU WANT?** Touches child's arm to get his attention; **DO YOU WANT TO COOK?** **DO you WANT TO COOK? The stove.** Points to stove; (7)

**SIT down THERE.** Points to the toy chair. (9)

*Holding baby doll; Looks at mom; (1)*

*Looks at doll then at mom; Signs slowly: SLEEP. (3)*

*Puts baby doll in bed under the blanket; Picks up other doll off floor (5)*

*Looks at mom; (6)*

*Moves mouth without sound. Forcefully walks doll; Looks at mom half smiling; (8)*

*Forcefully walks doll more; Smiles at mom; Continues to walk doll and stretching limbs; (10)*
The MAN CAN SIT DOWN. Points to the toy chair; (11)

Rests doll against the chair at the table; Picks up stove close to him; Sets it down in front of him; Opens oven door. Picks up cake from table, Drops it; Looks at mom and smiles; (12)

Nods; It's ok. (13)

Drops cake once more; Puts it in oven. Closes oven door; Turns to mom; SHHHH. (14)

Ok. Nods; (15)

Adjusts dial of oven and puts oven back beside sink. (16)

This play segment illustrates how an episode mom provides structure to play. First, this mom begins to ask her low communicative child if he wants to set the table (2). Using a one word utterance to communicate a concept, the child preempts her suggestion and interjects with his own idea of putting the baby doll in bed (3). Mom follows her child's lead and observes as he executes this short segment of imaginary play (5). Once completed, mom attempts to provide structure again, this time suggesting that her son develop a cooking scene (7). Initially unreceptive, the child is soon drawn into the scene after mom's repeated attempts to engage him (8-12). Once the child is engaged, mom allows him to develop the cooking scene himself. Choosing to bake a cake, the child executes the scene by putting it in the oven (14), instructing mom to be quiet while the cake is baking (14) and adjusting the oven's dials (16). Thus, in this example, mom provides structure to play and successfully facilitates her son’s engagement in the cooking scene. She then allows her child to execute the scene without assistance.

In contrast to the previous example of mom providing structure to her low communicative child, the following example illustrates a mom providing structure to the play of her high communicative child. Taking her cue from her son, mom proposes a scene where the baby is hungry. The child chooses not to accept mom's idea and explains why.

Episode dyad Example 8: Mom provides structure which her high communicative child does not accept (Case 9)

Takes items from on top of the fridge and places them inside; Fridge tips slightly and spoon falls off top of fridge to the table; (1)

Ooppps. (2)

There's three plates...(partial unintelligible utterance). How hungry...? (3)

I think the baby's hungry. (4)

What? (5)

I think the baby's hungry. (6)
Why? (8)

Oh it's night time. Oh. (10)

Oh, Doesn't she get to eat before she goes to bed. (12)

Doesn't she get to eat before she goes to bed? (14)

Why? (16)

Looks at child; It's Friday...[mom laughs]...and she's not hungry. (18)

Looks away; Oh Bradley. (20)

Looks at child; (21)

No. Have to wait. (7)

Cause it's time for the night. (9)

Puts items in fridge; Time for bed. Oh. (11)

What? (13)

No. (15)

Because she's not hungry Friday. (17)

No. I said Brad. (19)

Pulls at dolls pants;

Makes a face with wide eyes and open mouth; (22)

The conversation stops after the child corrects mom; (23)

After taking her cue from her child's remark "how hungry", this episode mom attempts to provide structure to her son's play by suggesting that the baby is hungry (4, 6). When the child immediately opposes his mom's idea (7), it is clear that the suggestion was not related to either his current attentional focus (cleaning up) or his meaning (he did not mean that the baby was hungry). In objecting to his mom's idea, an exchange occurs where the child explains why a hungry baby does not fit into his going-to-bed scene (7, 9, 11). When mom continues to challenge her child's ideas (12, 14, 18), the exchange deteriorates. When this segment ends, the misunderstanding is not resolved and the conversation simply stops (18-23).

In contrast to the previous examples, where the children are unreceptive to their mom's play ideas, the following excerpt illustrates a high communicative child's acceptance of the structure mom provides to the play. After the child initiates a new scene, mom engages her high communicative daughter by asking her who will drive the car.

Episode dyad Example 9: Mom provides structure by role playing a scene with her high communicative child (Case 7)

Within excited tone; He go drive. Looks at mom while speaking; Points to the car and motions in a circle; (1)
Want to go for a drive? (2)

Alright who's going to drive? The baby's going to drive? (4)

No the baby's going to drive. (6)

The baby. (8)

The baby doesn't drive? (10)

Why? (12)

Sit down/sit down. I'll get the car. You sit down. (14)

Gives child car; (16)

Yeah. Looks at mom; Takes father doll off chair; (3)

Looks at mom; Daddy. (5)

The baby? (7)

The baby. Noooo. Smiles at mom; (9)

No. (11)

He no money. He no buy car. Gets up to get car; Moves out of the range of the camera; (13)

Sits down; (15)

Tries to put father doll in car; (17)

This episode mom provides structure by contributing dimension to the scene her child initiates. Participating in play and developing a role play scene, mom asks her child who is going to drive the car (4). Before the child has a chance to respond, mom provides further structure by playfully suggesting that the baby drive the car (4). Attending to these ideas, the child disagrees and maintains that "Daddy" should drive (5). The verbal exchange continues when, in a light-hearted manner, mom insists that the baby should drive (6). After considering this proposal and challenging it, the child concludes that the baby does not drive (6-11). Accepting this answer, mom provides structure once more when she tests her daughter by asking why the baby does not drive (12). Able to respond with an appropriate answer, the child claims that the baby has no money and can not buy a car (13). The segment ends when mom assists her daughter in getting the car and the child puts the father doll in it (16-17).

Summary

The moms of episode dyads attempt to provide structure to play by proposing ideas to their children. However, in contrast to narrative moms who play interactively with their children through the manipulation of toys, role play or verbal exchange, episode moms, for the most part, present their ideas without participating in these ways. Episode moms generally provide structure
verbally and do not engage their children in the enactment of scenes. Often responding for short periods of time to the ideas their moms propose, it appears that without the shared enactment of play scenes, the children's attention is soon diverted to other points of interest.

PART 3: Tussles for Control: Incongruent and Congruent Interaction and the Emergence of Power Struggles

In their interactions with their children episode moms relate to them in both incongruent and congruent ways. Acting incongruently, moms attend to their children's attentional focus but not to the meaning of their play or attend to neither their current focus or meaning. Conversely, episode moms act congruently when they simultaneously address both their children's current focus and meaning of play. Notwithstanding the way in which the ideas are proposed, scenes resulting from congruent and incongruent interaction generally appear underdeveloped and disconnected to the play context.

Incongruent interaction

Sometimes moms provide structure to play in an incongruent manner. There are two ways in which this occurs. First, moms act incongruently when they attend to their children's current attentional focus, but do not address the meaning of their play. Second, moms act incongruently when they suggest play ideas that are unrelated to both the child's attentional focus and meaning. The outcome of both these situations is one in which moms and children tussle for control within the context of play.

In the following example, when mom attends to the topic of play but not to its meaning, a power struggle for mom and child results.

Episode dyad Example 10: Incongruent interaction: Mom attends to her low communicative child's attentional focus but not to the meaning of his play (Case 10)

**ARE YOU going to DRIVE THE CAR? (2)**

*Looking at car; (1)*

*May have seen mom signing in his peripheral vision. Turns car on its side and touches a wheel; CAR. (3)*

*Places car on four wheels. Not looking at mom. (5)*

**Points to wheel: Wheel. (4)**

**WHAT COLOUR? Mom points to car; KIRK. Waits for child to look at her (6)**

**WHAT COLOUR IS THE CAR? (8)**

*Child looks at mom. (7)*

*CAR. (9)*

*Signs slowly and deliberately;*
In this play segment, the child initiates play when he attends to and examines the toy car (1). Mom attempts to facilitate imaginary play by asking her child if he is going to drive it (2). The child, who possesses low communicative skills, maintains his attentional focus and responds to mom's question in a perfunctory manner, repeating the word "car" (3). When the child touches the wheel of the car, mom models appropriate language, yet without signing, says "Wheel" (4). Then, attempting to facilitate interaction, mom tests her child by asking a simple question ("What colour is the car") (6).

This mom has difficulty engaging her son. However, close examination of this segment reveals that mom acts incongruently. When trying to engage her child, mom attends to the child's attentional focus (the car), but she does not address the meaning of that focus (his physical manipulation of it). Moreover, this child is unyielding. Not only does mom repeatedly try to get her son's attention (6, 13, 15), she asks about the colour of the car five times within this short segment (6, 8, 10, 12, 17). Mom finally gains her child's cooperation and he answers her question correctly, but then continues playing independently. His exaggerated signing and actions may indicate annoyance with mom's intrusiveness or represent attention seeking behaviour.

In a second example of incongruence, a mom introduces a topic into play that is independent of both the child's current attentional focus and meaning:
Episode dyad Example 11: Incongruent Interaction: Mom suggests an idea independent of the current scene and her high communicative child opposes it (Case 7)

Points to tv; Partial unintelligible utterance. Empty. Smiles; Picks up the baby; Puts baby doll on bed; A baby sleep. (1)

Looks at mom; No. (3)

Yeah. No. Takes boy doll from mom; (5)

Um, the boy. (7)

Pauses with a thoughtful expression on her face; (9)

Shakes head; No. Pauses and looks at play area; Sits doll on floor in front of the tv. (11)

Independent of both the child's attentional focus and meaning, this mom introduces an idea of her own into play. After the child talks about the tv not being turned on and the baby sleeping (1), mom initiates a new scene. Acting incongruently, mom takes on the role of the dog and pretends he is hungry (2, 4).

Objecting to mom's idea, the child simply tells mom "No" (3). Tussling for control, mom attempts to engage the child in the proposed scene yet she refuses to be swayed (4-6). When the child chooses a new attentional focus (the boy doll), mom concedes and follows her child's lead (7-8). Anticipating that the child is looking for a chair for the boy doll to sit on, mom engages her in the new scene by articulating the problem (10). Although in this instance, mom appears to act congruently by attending to the child's attentional focus and meaning, the child continues to assert her autonomy and decides upon an alternate solution to the problem (i.e., sitting the doll on the floor) (11). In following the child's lead, mom uses parallel talk, then praises her it (12).

This example clearly illustrates that this child is unreceptive to her mom's play ideas and that tussles for control result. Involved in her own imaginary play, this child refuses to be swayed, regardless of whether mom is responding incongruently or congruently.

As an exception, the following example illustrates how an episode mom introduces an idea into play that is incongruent with the child's play focus. In this instance, this low communicative
child does not tussle with mom for control. Instead, she follows her mom's lead and executes the new scene.

**Episode dyad Example 12: Incongruent Interaction: Mom acts incongruently but her low communicative child follows her mom's lead (Case 6)**

**Points to doll; She sleeping?** (1)

*Looks at mom then at bed; Yes.* (2)

*Nods;* (3)

*Re-arranges blanket on the bed;* (4)

*Points to dolls at the table, taps child's arm and points to doll's again;* (5)

*Looks at table; Looks at mom as mom begins to speak, then looks at table again;* (6)

**What are they eating?** (7)

*Places a plate and utensils in front of father doll; Puts a slice of bread on father doll's plate; Moves milk carton to the side of the table near father doll and places cake in front of mother doll;* (8)

*Laughs; She gets the whole cake to herself eh?* (9)

*Takes pot off the table and glances into camera;* (10)

This episode mom introduces a new idea into play that is independent of her child's current attentional focus. As this low communicative child is making the bed (4), mom taps her arm and draws her attention to the dolls sitting at the table (5). Independent of the bedroom scene, mom introduces a mealtime scene by asking her child what the dolls are eating (7). The child responds by changing her attentional focus and engaging in the scene her mom proposes. She begins to prepare a meal for the dolls (8, 10).

**Summary**

Incongruent interaction occurs where moms attend to their children's attentional focus in play but not its meaning or where moms introduce their own ideas into play, independent of the child's current focus. When moms suggest ideas or interact with their children incongruently, tussles for control often result because their children object to their contributions. When such opposition develops, the play partners tussle for which direction play takes. This means that the children sometimes concede to their moms' wishes; but more often, it is the moms who follow their children's lead.

The effect of incongruent interaction on the quality of the play experience is striking. Not
only do such tussles compel the participants to resolve their differences, they impede the flow of play such that the scenes become disconnected.

**Congruent interaction**

More frequently, episode moms act congruently when playing with their children. Congruent interaction occurs when moms attend to the same attentional focus and meaning as their children. Although the children still block moms ideas occasionally, it is not a salient feature of congruent interaction. Generally, in this instance, interaction is reciprocal.

In the following play segment, this episode mom acts congruently when she responds to her daughter's ideas. In turn, the child is also responsive to her mom.

**Episode dyad Example 13: Congruent Interaction: Mom and her high communicative child respond to each other's ideas (Case 7)**

**Ok.** (2)

*Looks at child; She's not going to eat? Why?* (4)

*Because there aren't enough chairs. There's only two chairs.* (6)

*Smiles; Ok. Where's the baby?* (8)

*Takes doll that the child is holding and compares it to another. Listen. Which one do you think is the father?* (10)

*Lifts doll that child pointed to slightly; This one's the father?* (12)

*Looking; Uh oh he's got a broken leg. Take him to the hospital.* (14)

*Get a cast to put on his leg.* (16)

*He's got a broken leg. What's he doing?* (18)

*Uhhuh.* (20)
Many times in this play segment, the episode mom and child respond reciprocally to each other's ideas. For example, the child agrees and laughs happily when mom corrects her misattribution about why the girl doll can not eat (3-7). In turn, mom responds to her child when she chooses the father doll as her attentional focus, instead of the baby doll (8-10). The child responds to mom's test questions about which doll is the father and which one is the boy (10-13). Mom attends and responds to her child's discovery of the dolls' broken leg (13-14).

In the segment which ends this scene, mom engages in imaginary play when she proposes taking father doll to the hospital to get a cast put on his leg (14-16). The child is amused by the idea and laughs (17). Not taking the idea seriously, the child ultimately dismisses it and moves the scene forward by putting the doll in front of the T.V. (17, 19). Then again, in a congruent manner, mom follows the child's lead and engages her in the scene by asking what the doll is doing (18, 20).

In addition to the reciprocal, complementary nature of this interaction, what is striking about this example is its fluid, rapid exchange of ideas. Each play partner introduces and addresses the ideas briefly before continuing to next. While such attentiveness is positive, there seems to be little development of any play theme.

In contrast to this mutually reciprocal exchange of ideas, the mom of the following example attends to both the child's attentional focus and meaning while her child to play independently. As the low communicative child engages in a 'moving house' scene, mom tracks her actions and contributes to it as it develops.

**Episode dyad Example 14: Congruent interaction: Mom tracks the actions of her low communicative child as she plays independently**  (Case 2)

*Laughs; There. You got it.* (2)

*Succeeds at making the plate fit in fridge; Closes the door; (1)*

*Continues moving furniture using two male dolls. Looks at bed but moves table in front of fridge. Takes chair with tv sitting on it.* (3)

*No. Don't pile that on. Laughs; Susie. Taps child's leg. What are you doing? (4)*

*Tosses baby off the bed.* (5)

*Looks at mom and smiles. Moves bed in front of table; Puts bedding on floor.* (7)

*What are you going to do with that? Points to the bedding on the floor.* (8)
Looks at mom; **Unintelligible utterance.** Puts the two male dolls down; Folds bedding. Places the bedding and pillow on the bed. (9)

**Picks up dolls.** Uses dolls to pick up chair. Balances chair on top of one doll's head. (11)

**Looks at mom.** Puts one doll on floor; Places chair on bed. Picks up doll from floor. (13)

**Looks at mom.** (15)

**Reaches around the piled furniture to get the car; Pulls it near her.** Put those there. Points to furniture then car. (17)

In this episode segment, the child develops a scene where she is moving house. Although the child is determined to play independently, both mom and child are very engaged. Mom relates to her child by asking questions (4, 8, 14, 16), making light-hearted objections (4), commenting (12), laughing (2, 4, 6, 16) and touching her child's leg or hand to get her attention (4, 14). At first glance, the child appears as if she is not responding to mom's overtures. However, closer examination reveals that the child is not responding to mom's production demands but is responding non-verbally. In addition to smiling and giving mom her visual attention (7, 13, 15), the child responds to mom's input with action. For example, when asked "What are you going to do with that?", the child responds contingently to the question. She looks at mom, makes an unintelligible utterance, puts down the dolls she is holding, then folds the bedding and places it and the pillow on the bed (8-9). When mom asks "Where are they going? What are they doing?", the child responds contingently again. She answers non-verbally by pulling the car near her and pointing to the furniture and then the car (14-17). In these ways, mom and child are attending to the same attentional focus and meaning while each influences how play develops.

Episode moms who sometimes act congruently sometimes have their ideas accepted then abandoned by their children. In the following example, a mom suggests to her low communicative daughter that she feed the dolls who are sitting at the table. Although this child agrees, she does not follow through:
Episode dyad Example 15: Congruent Interaction: Mom acts congruently but her low communicative competent child abandons the idea (Case 6)

Bends doll and sits her in chair; Adjusts doll then moves chair closer to the table; Sets the milk carton upright on the table. Stops and looks at mom. (1)

There is a brief pause; (2)

Smiles: What are they doing? Are they just sitting there? (3)

Looks away while mom is talking but looks at mom before saying: Girl. (4)

Yes it's a girl. Are they going to eat? (5a)

Looks away while mom is talking; (5b)

Are they going to eat? (7)

Looks at mom (6)

Nods; (8)

Ok feed them. Give them something to eat. (9)

Pauses; Picks up another doll; Picks up a utensil from the floor and sets it on the table; Puts doll she is holding on the bed; (10)

Mom and child look at each other. (11)

Going to put mommy to bed, eh? (12)

Mom and child smile; (13)

Puts doll in bed under the blankets (14)

In this play segment, mom acts congruently when she uses her low communicative child's current attentional focus to provide structure and suggest an appropriate play idea. After the child sits the dolls around the table, mom asks leading questions suggesting that the dolls have something to eat (1,3). This mom appears to be acting congruently and her child indicates her agreement by nodding (8). What makes this example interesting is that, although the child agrees to the scene, she does not follow through. Perhaps the child abandons the idea because she did not intend the dolls to eat in the first place or perhaps she simply changed her mind. In any case, the child adopts a new attentional focus and begins to put mother doll in bed (10). Mom, still acting congruently however, follows the child's attentional focus. She models language and engages her child by saying "Going to put mommy to bed, eh?" (12). Thus, in both these
instances, it appears this episode mom acts congruently, but it is the child who ultimately determines how the scenes develop.

In contrast to these examples of episode moms and their low communicative children, the following illustrates how a mom and her high communicative child tussle for control within congruent interaction. In this example, this mom acts congruently by answering her child's questions. Her answers however, are not accepted.

**Episode dyad Example 16: Congruent Interaction: Mom acts congruently yet her high communicative child does not accept her ideas (Case 9)**

*Looks at child then at fridge; I don't know. (2)*

*Picks up cake and looks at it; Why it broke? (1)*

*Cleaning up. Picks up one plate. Sits down and looks at mom. Where the plate go? (3)*

*No way. Smiles and stands; Picks up cup and other plate from the floor. (5)*

*Put up there. Puts plates and cup on top of fridge; (7)*

*And this. Picks up other small kitchen items and puts them on top of fridge. Can't break it, right? (9)*

*Ok that's a good idea. (8)*

*No. (10)*

Playing independently, this high communicative child engages his mom by asking her questions. Involved in a cleaning-up scene where he examines and organizes the toys, the child asks his mom why the cake is broken (1). After responding that she does not know (2), the child poses a second question. Seeking her advice, the child asks her where he should put the plates (3). When mom suggests putting the plates on the table (4), the child immediately objects to this idea saying "No way" (5). Accepting his objection, mom proposes a second idea when she suggests that he put them in the fridge (6). This time the child tacitly objects to this idea by choosing a related alternative. Instead of putting the plates in the fridge the child decides to put them on top of it (7). Following her son's lead, mom agrees then praises her child for his 'good idea' (8).

**Summary**

Congruent interaction, where moms and children attend to the same attentional focus and meaning, results in an exchange where the partners are operating within the same context. From
this common perspective, mom and child respond reciprocally to each other’s ideas, in both verbal and non-verbal ways, and their interaction is reciprocal and fluid.

Sometimes when acting congruently, episode moms encounter their children’s objections. When this occurs, the development of play is affected. Again, scenes appear disconnected and underdeveloped. However, when dealing with their children’s contrary responses and their introduction of independent ideas, episode moms follow their children’s lead, commenting positively on their new focus.

PART 4: Informal Teaching: Conceptual Knowledge and Expressive Language

In addition to facilitating their children’s independent play and suggesting play ideas, episode moms teach their children conceptual knowledge and language. Similar to moms of the narrative dyads, who use the context of imaginary play to impart information to their children, episode moms use the context of play to ask their children questions. Episode moms teach expressive language to their high and low communicative children more frequently than narrative moms. Unlike narrative dyads, however, they use play to teach concepts to only their high communicative children.

Informal Teaching: Conceptual Knowledge

Episode moms use the context of imaginary play to teach their high communicative children concepts. Their children respond attentively and with interest to these questions. There are no instances in this sample where episode moms teach concepts to their low communicative children.

In an example involving the testing of conceptual knowledge, mom asks the child a hypothetical question about his play scene:

Episode dyad Example 17: Mom tests the conceptual knowledge of her high communicative child by posing a hypothetical question (Case 9)

*Looks in fridge*; *Yeah.* (2)

*Looks at child and nods*;

*Picks up milk*; *Where the milk go? Have to lay down like this.* Holds milk on its side; (1)

*Yeah?* (3)
**Looks in fridge;** (4)  

**Looks at child; What's going to happen?** (6)

**Looks at child; then in fridge; then looks at child again; What's going to happen if it lays down like that?** (8)

**Mom and child look at each other;** (9)

**Puts milk in fridge on its side;** (5)  

**What? Looks at mom;** (7)

**Smiles; What?** (10)

**Smiles; Spill it.** (12)

**Looks at mom; Nods slightly.** (14)

**Shakes head and smiles; Not our milk.** (16)

**Smiles and shakes head; No.** (17)

**laughs.** (18)

In this example, mom uses the context of play to test her child's conceptual knowledge of hypothetical events. Because this high communicative child does not understand the question the first time she asked it, mom, in her role of informal teacher, explains the question to the child (4-7). The hypothetical question, "What's going to happen to the milk if you lay it down like that?" requires the child to speculate about the consequences of laying the milk on its side. When the child answers correctly, mom and child smile at each other (8-9). Then, extending the informal lesson, mom contextualizes the present situation as "pretend" by comparing it to the "real" situation (9, 11). Reciprocating and demonstrating his comprehension, the child then personalizes the concept, saying "Not our milk" (12).

In the following episode example, mom tests the child's knowledge of causation. In this segment of interaction, mom tries to elicit from her high communicative child the concept of carelessness as the cause of mother doll burning herself on the stove.
Episode dyad Example 18: Mom teaches her high communicative child about the cause of events (Case 7)

**What's mother going to do? Did mother make the bed? Who made the bed?** (1)

*Mother.* (1)

*Looks at mom then at stove; Mother [unintelligible utterance] cook. Pretends mother doll touches stove. Gasps and moves doll away; Burn.* (2)

*Mom and child look at each other;* (3)

**Why?** (3)

**Why did she get burned?** (5)

**Why?** (7)

**Because she was careless.** (9)

**Ok that's good enough.** (11)

**Burn.** (4)

**Unintelligible utterance.** (6)

**Because she.** (8)

**Careless. She go bed. Glances at mom while she puts doll in bed; Covers her with blanket then adjusts it and doll; Unintelligible utterance.** (10)

**Re-arranges the blanket;** (12)

In this episode segment, mom introduces a new topic into play when she asks her high communicative child a question about mother doll making the bed (1). Interested in developing her own scene, the child does not address mom’s question. Instead, the child engages her mom in a scene where she role plays the mother doll touching the stove and getting burned (2). Testing the child’s conceptual knowledge about the cause of this action, mom asks her child "Why did she get burned?" (3). Using a one word utterance that communicates a concept, the child explains that mother doll was "cooking"(6). Although conceivably correct, mom, in choosing a different label, tells her daughter that the mother doll was burned because she was careless (9). In the role of the learner, the child repeats the operative word "careless" (10). Within the context of imaginary play, the child demonstrates her understanding of the concept when she responds by deciding that the consequence of being careless is going to bed (10).
Summary
In contrast to narrative moms who use play to impart information to their children, episode moms use the context of play as a vehicle for teaching/testing their high communicative children's conceptual knowledge. Engaging in this kind of teaching infrequently, episode moms present their children with questions that directly and meaningfully relate to their current attentional play focus.

Informal Teaching: Expressive Language
Similar to the narrative dyads, teaching language within episode dyads is dependent upon the existing language skills of the children. However, moms of episode dyads teach/test the language skills of their low communicative children more frequently than narrative moms. One mom of a high communicative child frequently tests and teaches her child's language, while the mom of the other high communicative child does not engage in this form of teaching at all. In general, episode moms model language, correct pronunciation, expand utterances and prompt their children to label objects or actions.

Because the play behaviour of low communicative deaf children in episode dyads is often based on non-verbal action, one way moms expose their children to language is to model it for them. Similar to narrative dyads, the following example illustrates how an episode mom uses parallel talk. For example:

Episode dyad Example 19: Mom of a low communicative child models language using parallel talk (Case 10)

\[ Puts \text{ down the doll he is holding}; Tucks other doll in bed; Picks up another doll and twists him; (1) \]

\[ \text{YOU are BENDING HIM} \text{ (2)} \]

\[ Looks \text{ at mom}; Bends doll more then looks in the direction of the bed; Looks at mom; \text{HE SLEEP.} \text{ (3)} \]

\[ \text{YES.} \text{ (4)} \]

\[ Puts \text{ doll he is holding on floor and his attention is there}; (5) \]

This low communicative child engages in imaginary play by putting the doll he is holding into bed (1). Then, indicative of a less mature form of manipulative play, he begins twisting another doll (1). Mom, who engages with her child, responds to her child using parallel talk. When mom verbalizes her child's actions using a rhetorical question "Are you bending him?", she is modelling language for her son within the context of his play (2). The child, who does not react to mom's informal presentation of language, responds by changing the subject and communicating
that the other doll is sleeping (3).

Another way episode moms model language is to expand their children's communication. In the following example, a mom models language when she expands the one word utterance made by her child.

**Episode dyad Example 20: Mom of a low communicative child models language by expanding her child's utterance (Case 6)**

*Points to cup on table; What about this? (1)*

**Wash.** Moves the chair slightly. (3)

*Looks at mom; Wash. Puts the cup in the sink; (2)*

*Takes girl doll off chair; re-arranges chairs at table; Takes the girl doll and stands her at sink. Stands; Pretends to turn on the water. Sits down and smiles at mom; (4)*

**Washing the dishes.** (5)

*Smiles and nods. (6)*

In this example, mom models language when she expands her child's one word utterance. When mom provides structure by pointing to the cup on the table and asking the child what she is going to do with it, the child uses a one word utterance that communicates the concept of washing (1-2). As the child nonverbally enacts the scene by putting the cup in the sink (2), mom models language by expanding the child's utterance. After mom says "washing the dishes", the child acknowledges mom's communication when she smiles and nods (5-6).

In addition to the techniques of parallel talk and expanding their children's utterances, another episode mom teaches language skills by modelling correct pronunciation for her child.

**Episode dyad Example 21: Mom of a low communicative child corrects her child’s pronunciation (Case 2)**

*Corrects child's pronunciation; Milk. (2)*

**Takes cup off table; Cup. Places cup in fridge; Takes milk off table; Milk. Tries to put milk in fridge; (1)**

**Milk. (3)**

*Both mother and child are arranging items in fridge; (4)*

*Referring to the milk; That won't fit. Unintelligible utterance. (5)*

**Tries to open oven door with one finger; (6)**
Assists child a little; (7)

I know. Oh yeah. Holds stove while child puts milk in oven; (9)

Motions to mom to put the plate she is holding in the oven; Unintelligible utterance. (10)

This child engages in play by putting the milk away. Before putting it in the fridge, she identifies it by incorrectly pronouncing the word "milk" (1). In her role of informal teacher, mom corrects her pronunciation (2). Responding as a language learner, the child repeats the word correctly (3). Following this, mom and child continue playing by identifying the presenting problem (the milk won't fit in the fridge)(5) and developing a solution (putting it in the oven) (5-9).

In another example, as child develops and executes a mealtime scene, mom intervenes with the intention of testing the child's expressive language skills. In doing so, mom asks her to identify the names of objects.

Episode dyad Example 22: Mom of a low communicative child tests language by asking her child to label objects (Case 6)

Places a plate, egg, utensils and cup in front of father doll. Moves milk carton in front of father doll and places cake in front of mother doll; Not looking at mom; (1)

Looks at mom; (3)

What's father eating? (4)

Points to father's plate; (5)

What is it? (6)

Egg. (7)

Egg. What else? (8)

Points to girl doll; Girl eat cake. (9)

The girl has cake. Right. (10)

Puts the pot she is holding on the stove; (11)

Taps child on the arm; (12)

Looks at mom; (13)

Motions with her head toward the stove; What's that? (14)

Stove. (15)

In this example, as the child enacts a mealtime scene, mom asks her questions that test her
verbal language skills. Responding to the question "What's father eating?" (2, 4), the child correctly identifies the "egg" (5, 7). Seeking additional information, mom asks "What else?" (8). Within imaginary play, the child reports that the "Girl eat cake" (9). After mom confirms the answer is correct, the child changes her focus and puts the pot on the stove (10, 11). Mom, who continues teaching, asks another test question (14). For the third time, the child answers her question by correctly labelling the "Stove" (15-16).

A variation of the previous test situation occurs when the episode mom, in the following example, asks her child to label her actions.

**Episode dyad Example 23: Mom of a high communicative child asks her to label her actions (Case 7)**

- **Oh, mother's going to close the oven door.** (2)
- **She can't? You better do it.** (4)
- **Looks at child; What did you do?/What did you do?** (6)
- **Gestures toward oven; You turned on the oven.** (8)
- **That's right.** (10)

    *Tries to close oven using mother doll; (1)*
    *No she can't. (3)*
    *Closes door and pretends to turn on oven; Looks at mom; (5)*
    *Looking at mom; Moves arms side to side; Shrugs shoulders; I don't know. (7)*
    *Looks toward oven; Turned on the oven. (9)*

This child tries to close the oven door using the mother doll (1). When she reports that she can't do it, mom suggests that the child do it herself (3-4). The child closes the door, then enriches the segment by pretending to turn off the oven (5). Within this context, mom asks a language based question to determine if her daughter knows the label for her actions. When mom asks her child "What did you do?" the daughter reports that she does not know (6-7). Mom then provides her with the correct answer "you turned off the oven" (8). As a language-learner, the child repeats the correct answer and mom validates that her answer is correct (9-10).

In contrast to the previous examples where episode moms ask their children language based test questions, the high communicative child in the following segment asks her mom for a label.
Episode dyad Example 24: High communicative child asks mom for a label then mom asks child for a different label (Case 7)

Nods; Ok. (2)

What's that? You know what that is. (4)

Oh yes you do. (6)

Takes doll from child; (8)

That's an apron Touches child's arm; What's that? Points to apron; (10)

Apron. (12)

Apron. (14)

Referring to mother doll; What colour are her tights? (16)

What colour are her tights? (18)

Looks at mother doll's tights; Are they blue? (20)

Yeah, they're black. (22)

Leans forward bringing mother doll's feet close to girl doll's feet; (24)

Mom and child compare the colours of the doll's tights; (25)

They're black. (26)

Continues playing with car; (27)

Alternating glances between her actions and mom, sets milk carton on table; Using mother doll, pretends to clean up spilled milk; Pretends to pour it into sink. Looks at mom and smiles (1)

Points to mother doll's apron; What's that? (3)

Shrugs; I don't. (5)

Glances at bed; (7)

Looks at mom and looks away; (9)

Looks at mom and shrugs; (11)

Looks down at car; Apron. (13)

Removes the dog from car; Apron. Puts girl doll in car; (15)

Looks at mom; What? (17)

Pauses; Blue. (19)

Black. (21)

No. Takes girl doll out of car; Points to her tights; (23)

This excerpt illustrates a rare example of a high communicative child asking her mom a language based question. Not knowing the name of what the mother doll is wearing, this child asks her mother what it is (3). A brief exchange occurs where the mother and daughter debate whether or not she knows the word. (4-9). When the mom tells her the correct word ‘apron’, the
child repeats it twice as she continues playing (13, 15). In the segment that follows, mom asks the child to identify the colour of the mother doll’s tights (16, 18). While the child answers the question by saying “blue”, a debate occurs about whether this answer is correct (20-23). The issue is resolved when both mother and daughter compare the colour of the girl doll’s tights to the mother doll’s tights (24). This comparison reveals that the mother doll’s tights are black (25). The child continues playing without acknowledging the correct colour. Thus, even in the context of teaching and learning language, this mother and child tussle for control within the interaction.

In a final example, the mom of this episode dyad does not correct her son’s language even when errors are made. The high communicative child, in the following segment, enacts a scene where the dog is jumping on the mother doll's back. When mom questions her son about the scene, he uses an incorrect pronoun when referring to the mother doll.

**Episode dyad Example 25: Mom of a high communicative child does not correct her son when he uses a pronoun incorrectly (Case 9)**

*Glances at mom. Lays down mother doll at foot of bed; Pretends dog is jumping on mother doll's back*  
*Woof/woof. Looks at mom and laughs; Looks at bed.* (1)

*Looking at child; What’s she doing now?* (2)

*Standing on him. Looks at mom.* (3)

*Why?* (4)

*Looks at bed; Because he like (partial unintelligible utterance) Looks under doll's clothes;* (5)

This play segment demonstrates that this episode mom does not correct her high communicative child when he uses an incorrect pronoun when referring to the mother doll. In response to mom's question, "What's she doing now?", the child refers to the mother doll as a 'him" (1). Instead of correcting this error, mom continues to question her son about the scene he is developing (4).

**Summary**

Those episode moms whose children have low communicative ability test their children's language skills periodically. In contrast to narrative moms who test their children's language skills within the context of play, episode moms often take their children out of the context of imaginary play and into the role of learner. This style of teaching is consistent with the episode moms' definition of the play situation as a task. The one mom of an episode dyad whose son possesses
high communicative ability does not teach/test his language skills. Moreover, she does not address his errors in language as they occur. The other mom of a high communicative child frequently tests language. Moreover, this child asks her mother a language based question.

PART 5: Child Responsiveness Within The Episode Dyads: Episode Children Develop Unelaborated Scenes of Play

In the episode dyads, both high and low communicative children respond autonomously when their moms facilitate their play. These children engage in self-directed, imaginary play and develop scenes that reflect activities of daily living. Irrespective of communicative competence, the scenes these children develop are generally unelaborated, short scenes of sequential play lacking overt connections made to other scenes.

A previous example of a going-to-bed scene, initiated and executed by a low communicative child, illustrates his short, simple scene development. When he completes his enactment, his mom facilitates a scene change by suggesting the next scene.

Episode dyad Example 26a: Low communicative child develops an unelaborated bedtime scene; Mom introduces a new scene without attending to how the scenes connect (Case 10)

**Holding baby doll; Looks at mom; (1)**

ARE YOU OK. Set? (2)

**SLEEP OK. PUT her IN.** Observes child; (4)

**DO YOU WANT?** Touches child's arm to get his attention; **DO YOU WANT to COOK?**/Do you want to COOK? **The stove.** Points to stove; (7)

**SIT down THERE.** Points to the toy chair. (9)

**The MAN can SIT DOWN.** Points to the toy chair; (11)

Nods; It's OK. (13)
Drops cake once more; Puts it in oven. Closes oven door; Turns to mom; SHHHH. (14)

Ok. Nods; (15)

Adjusts dials of oven and puts oven back beside sink. (16)

This play segment illustrates the enactment of two imaginary play scenes engaged in by the child. The first scene is an unelaborated going-to-bed scene. After communicating his intentions to his mom (3), the child enacts the scene by simply putting the baby doll on the bed and under the blanket (5). Following this segment, mom provides structure and introduces a cooking scene that is not explicitly related to the one just enacted. This time, developing a play scene that is somewhat more elaborate, the child pretends to bake a cake. Engaged in sequential play, this child puts the cake in the oven (14), instructs mom to be quiet (14), adjusts the dials (15), and moves the oven to a different position (15).

While children of the episode dyads may be capable of developing sequential play, the quality of their play is usually underdeveloped. This point is exemplified when comparing a similar scene enacted by narrative dyads. The following example from narrative play involves a mother-directed, going-to-bed scene that is enriched with detail and dimension.

Narrative example of corresponding scene 26b: Narrative mom and her low communicative child enact a well developed bedtime scene (Case 5)

NOW ITS TIME FOR the BABY to GO BACK TO BED. (1)

Puts baby in bed on top of the blanket; Looks at mom; (2)

I'M COLD. (3)

Begins to put baby under the blanket; (4)

Helps child by lifting blanket and arranging pillow; There we go. (5)

Glances away; (6)

Pats baby; Looks at child; Taps child's arm to get her attention; (7)

Looks at mom; (8)

DOESN'T MOTHER GIVE her a KISS? (9)

Walks mother doll to the bed; Pretends to kiss the baby; Walks mother doll back to the table; Looks at mom; (10)

Looks back but does nothing; (11)

Takes father doll from chair and makes him kiss the baby; (12)

Smiles; *good girl. Helps child sit*
father doll back in his chair; Ok. (13)

Begins speaking/signed quickly:
FATHER has to EAT NOW because he has to GO FAST TO WORK. (14)

Moving quickly, feeds father doll; (15)

Laughs to herself; Looks up; Smiles into camera; (16)

In this segment of narrative play, the child enacts a going-to-bed scene rich with detail and dimension. With mom's structured guidance, the child enacts elaborate and imaginary sequential play. The baby doll is put on the bed (2), put under the blankets (4), then kissed by both mother and father dolls (10, 12). After mom assists in making a smooth transition to the next scene, the child begins feeding father doll before he goes to work (13, 14).

Not only is episode play unelaborated when enacted by low communicative children, the play of high communicative children demonstrates the same simplicity. In the next example, the scene development and connections between scenes are not made explicit during the play of a high communicative child. Following a scene where this episode mom and child discuss the consequences of laying the milk on its side, the child engages in further organizing behaviour then makes a seemingly tenuous transition to the next scene.

Episode dyad Example 27: High communicative child makes a transition to the next scene without making the connections between scenes explicit (Case 9)

Shakes her head; You can't do that with a real one though. (1)

Smiles and shakes head; No. (3)

Smiles, (5)

Hmm... no. (7)

Points to bench; Well just put it on the side. On your bench. (9)

Gestures with head toward bench;

Shakes head and smiles; Not our milk. (2)

Laughs. Looks at the toy shoe he is holding. Moves sink slightly. Smiles at mom in an exaggerated way; If you laugh I'll punch your face. Makes a fist (not near mom) (4)

Puts the shoe on top of tv. Moves sink to spot near fridge; Picks up car; Puts car on his lap; Have to put the car on the floor. Looks at mom. (6)

To ride. (8)

Looks in the direction mother points to while she is speaking. Looks at mom again. What? (10)
Looking down, child puts the car down beside him; Looks back at mom. (12)

Looking down; Then can go on the floor. Makes a motion of car descending to floor; (14)

Looks at mom; (15b)

Following the discussion about laying the milk on the side (1-3), the child engages in organizing behaviour when he puts the shoe he is holding on top of the tv and moves the sink (4, 6). He also makes a playful, yet threatening remark about punching his mom's face (4). Reacting only with a smile, this mom does not take his remark seriously (5). Then, this child makes a transition to the next scene when he proposes that he drive the car (6). In the discussion which follows, mom does not permit the enactment of the play scene (7-14). Setting limits, mom explains to her child that he can not play on the floor because the camera will not be able to “see” him (15a).

Notwithstanding the disagreement which ensued following the child's suggestion of driving the car, the transitions from laying milk on its side to organizing behaviour to driving the car are not obvious or made explicit. Thus, the play of high communicative children of the episode dyads is similar to that of low communicative children. Their enactments consist of simple and loosely connected scenes. If stronger connections exist they remain unexpressed.

Summary

Irrespective of communicative competence, episode children generally develop unelaborated scenes of imaginary play in a linear, sequential manner. However, without specific, guided structure from their moms, these children infrequently enrich their play. Scenes represent segments of play which appear discrete, simple and unelaborated. Any enrichment or connections, which may exist, remains unexpressed.

Child Receptivity to Mom's Input Within Episode Dyads

Children of episode dyads show varying degrees of receptivity to their mom's input. There are times when episode children dismiss their moms' input and other times where it is accepted. Using previous examples, each will be discussed.
**Episode Children Oppose Their Moms' Input**

Children's receptivity to their moms' input is influenced by their individual differences and the varied styles of play moms' exhibit when interacting with their children. In a previous example, this mom provides structure incongruently. Independent of her child's attentional focus, she suggests to her son that he develop a cooking scene. This child objects to this idea initially but, after mom's repeated attempts to engage him, he decides to bake a cake.

**Episode dyad Example 28: Low communicative child is unreceptive to his mom's idea initially but engages in the proposed scene after her repeated attempts to engage him (Case 10)**

*DO YOU WANT? Touches child's arm to get his attention; DO YOU WANT to COOK? DO YOU WANT TO COOK?*  
The stove. Points to stove; (2)

*DO YOU WANT? Touches child's arm to get his attention; DO YOU WANT to COOK? DO YOU WANT TO COOK?*  
Moves mouth without sound. Forcefully walks doll; Looks at mom half smiling; (4)

*SIT down THERE. Points to the toy chair.* (5)

*SIT down THERE. Points to the toy chair.* (5)

*The MAN CAN SIT DOWN. Points to the toy chair.* (7)

*The MAN CAN SIT DOWN. Points to the toy chair.* (7)

Nods; It's ok. (9)

Nods; It's ok. (9)

**Ok. Nods;** (11)

Ok. Nods; (11)

Puts baby doll in bed under the blanket; Picks up other doll off floor (1)

Looks at mom; (3)

Moves mouth without sound. Forcefully walks doll; Looks at mom half smiling; (4)

Forcefully walks doll more; Smiles at mom; Continues to walk doll and stretching limbs; (6)

Rests doll against the chair at the table. Picks up stove close to him; Sets it down in front of him; Opens oven door. Picks up cake from table, Drops it; Looks at mom and smiles; (8)

Rests doll against the chair at the table. Picks up stove close to him; Sets it down in front of him; Opens oven door. Picks up cake from table, Drops it; Looks at mom and smiles; (8)

Drops cake once more; Puts it in oven. Closes oven door; Turns to mom; SHHHH. (10)

Drops cake once more; Puts it in oven. Closes oven door; Turns to mom; SHHHH. (10)

Adjusts dials of oven and puts oven back beside sink. (12)

Adjusts dials of oven and puts oven back beside sink. (12)

Independent of her child's current attentional focus and meaning, this episode mom acts incongruently when she suggests to her son that he engage in a cooking scene (1-3). After walking the man doll in an exaggerated way (6) and after his mom's repeated attempts to engage him (4-7), this child decides to bake a cake (8-12). Thus, this child is receptive to a new play scene only after mom attempts to convince him.

In the following example, although mom acts congruently by attending to her child current attentional focus and meaning, the child does not follow through with the idea mom suggests.
Episode dyad Example 29: Low communicative child abandons her mom’s idea although mom acts congruently (Case 6)

Bends doll and sits her in chair; Adjusts doll then moves chair closer to the table; Sets the milk carton upright on the table. Stops and looks at mom. (1)

There is a brief pause; (2)

Smiles; What are they doing? Are they just sitting there? (3)

Looks away while mom is talking but looks at mom before saying: Girl. (4)

Yes it’s a girl. Are they going to eat? (5a)

Looks away while mom is talking; (5b)

Are they going to eat? (7)

Looks at mom (6)

Ok feed them. Give them something to eat. (9)

Nods; (8)

Pauses; Picks up another doll; Picks up a utensil from the floor and sets it on the table; Puts doll she is holding on the bed; (10)

Mom and child look at each other. (11)

Going to put mommy to bed, eh? (12)

Mom and child smile; (13)

Puts doll in bed under the blankets (14)

Attending to both her child’s current attentional focus and meaning, this mom suggests that her daughter give the dolls something to eat (3, 5a, 7). Although this idea extends the current scene and the child initially agrees to it, she does not follow through (8, 10). Instead, the child changes her attentional focus entirely and decides to put another doll in bed (10, 14). Thus, the child acts independently of her mom’s congruently suggested play idea.

In another example, this high communicative episode child solicits his mom’s input then dismisses her ideas when they are given.
Episode dyad Example 30: Mom acts congruently yet her high communicative child does not accept her ideas (Case 9)

Looks at child then at fridge; I don’t know. (2)

Looks around; Hmm you can... put the plates on the table. Points to the table; (4)

No? Put them in the fridge, then. (6)

Ok that’s a good idea. (8)

No. (10)

Picks up cake and looks at it; Why it broke? (1)

Cleaning up. Picks up one plate. Sits down and looks at mom. Where the plate go? (3)

No way. Smiles and stands; Picks up cup and other plate from the floor. (5)

Put up there. Puts plates and cup on top of fridge; (7)

And this. Picks up other small kitchen items and puts them on top of fridge. Can’t break it, right? (9)

Acting congruently, mom responds to her son’s request for her input. Asking his mom where he should put the plates (3), this child opposes both the ideas that mom proposes in favour of one of his own. Instead of putting the plates on the table or in the fridge (4, 6), the child decides to put the plates on top of the fridge (7). Thus, the child rejects his moms ideas even though he asked for her input.

Summary
These three examples highlight episode children’s tacit or overt objections to their moms’ input. Whether moms provide structure by acting incongruently, congruently or in response to a specific request, the children dismiss their moms’ ideas. Episode children appear to exercise their autonomy within the context of their independent play.

Episode Children Accept Their Moms’ Input
While there are times when episode children dismiss their moms’ input, there are other times where the children accept it. First, episode children appear receptive to the structure their moms provide when it is offered congruently within the context of imaginary play. Second, they tend to accept moms’ structure when moms act in a teaching capacity.
Episode Children Accept Moms' Ideas When They Engage in Imaginary Play

In the following excerpt, this child accepts the structure mom provides when mom engages in a role play with her:

Episode dyad Example 31: High communicative child accepts her mom's play ideas when they engage in imaginary play together (Case 7)

**What are they going to buy?** (1)

**Buy. Pauses;** Looks at mom while fitting father doll in car. (2)

**What?** (3)

**Moves cup to front of table; They buy cup.** (4)

**They're going to buy a cup.** (5)

**Yep.** (6)

**Ok.** (7)

**Picks up boy doll that drops to the floor; Is out of camera's range** (8)

**Sit here. Pats chair;** (9)

**Sits down; He's there. Puts boy doll in chair;** (10)

**Takes boy doll off chair and moves him near car; I want to come too.** (11)

**Looks at mom; No.** (12)

**I want to come too.** (13)

**Moves girl doll near boy doll; No. Watches mom;** (14)

**And the dog wants to come. Woof/woof. He wants to come. Puts dog in car;** (15)

**Nods; Yeah.** (16)

**Can the dog go to the store?** (17)

**No answer; Points to the boy doll mom is holding then changes her mind and takes mother doll out of bed; Mother/mother sit down/mother sit down. Glances at mom; Sits mother doll on chair in front of tv;** (18)

**Mother's going to watch tv.** (19)

**Yeah. Got a hurt. Points to doll's hand; Looks at mom** (20)

This episode mom engages her high communicative child in imaginary play. Enacting a going-to-the-store scene, mom facilitates a role play with her child by asking her what she is going to buy (1) Then, taking the role of the boy doll, mom advances the scene by engaging her child in discussion about whether this doll can come (11). Later, mom takes the role of the dog and proposes that he go to the store as well (17).

Responding that she wants to buy a cup, this child engages in the scene her mom develops
Although the child responds negatively saying that the boy doll can not go to the store (12, 14) and permits the dog can go, she is responding within the context of imaginary play. Thus, this high communicative child engages in play with her mom and accepts the structure she provides.

Similar to this example, the following previously seen example illustrates how a high communicative child accepts his moms play ideas.

**Episode dyad Example 32: High communicative child accepts his mom's play ideas when they engage in imaginary play together (Case 9)**

*Looking at child; Sleeping.* (2)

*What's mother going say when she sees the dog on the bed?* (4)

*What's momma going say when she sees the dog on the bed?* (6)

*Think so?* (8)

*Oh yeah. She's mad. Yeah.* (10)

*Let me see.* (12)

*Looks closely at doll; She looks a little... Maybe a little bit mad.* (14)

*Lays dog on his side at foot of the bed; Sleeping.* (1)

*Now what? Looks at mom when she begins speaking;* (3)

*What?* (5)

*Shrugs and lifts his eyebrows; Smiles; She's gonna get mad.* (7)

*Closes fridge door with his free hand; Walks mother doll to the bed; Holds mother doll over the dog and vocalizes; Turns doll so mom can see doll's face; Points to doll's face; She's mad.* (9)

*Covers dolls face with hand; Not mad. She's mad.* (11)

*Uncovers doll's face;* (13)

In this excerpt, this episode mom engages in play with her high communicative son. Responding to the structure she provides, this child considers the emotional reaction of the mother doll when she discovers that the dog is on the bed (7). As her way of participating in play, mom engages her son further by asking for confirmation (8). Responding within play, the child shows his mom the mother doll's angry face (9). When the child changes his mind and decides the mother doll is not mad, his mom asks to see (11, 12). As the child uncovers the dolls face and mom looks closely at her, she concludes that the mother doll is "maybe a little bit mad" (14). Thus, this example illustrates how a mom of a high communicative child engages in imaginary play with and how the child accepts the structure she provides.
The following example illustrates a low communicative child accepting her mom's idea when the proposed idea extends the scene she is developing:

**Episode dyad Example 33:** Low communicative child accepts her mom's idea when it extends her current scene (Case 2)

- Pretends to walk boy doll but he slips; Adjusts his feet; Tries to stand doll again and looks at mom; (1)
- Turns doll in circles; (3)
- Moves dolls as if they are dancing together; (5)
- Bends dolls while dancing; (7)
- Makes father doll do the splits; Looks at mom; (9)
- Smiles; (11)

This episode mom interacts her child by engaging in parallel talk. As the child turns the doll in circles (3), mom labels the actions as dancing then suggests that two dolls dance together (4). Not only does she extend the current scene by suggesting the idea, she facilitates it by passing her child the girl doll (4). As the child follows through with her mom's idea and engages in symbolic play (6), mom observes (7). Both mom and daughter express their enjoyment in the scene by laughing and smiling (6, 8, 10, 11)

Not all instances of mom suggesting ideas or engaging in role play results in their children's active acceptance of their ideas. The following example illustrates an episode mom engaging in role play and her child objecting to the idea.

**Episode dyad Example 34:** High communicative child is unreceptive to her mom's play idea when mom engages in a role play incongruently (Case 7)

- Points to tv; Partial unintelligible utterance. Empty. Smiles; Picks up the baby; Puts baby doll on bed; A baby sleep. (1)
Holding boy doll in one hand; Moves dog near child with other hand; Woof. I'm hungry. The dog's hungry. (2)

He's hungry. (4)

Feed the dog/feed the dog. (6)

Where's the boy going to go? (8)

You need another chair, huh? Do you need another chair? (10)

Let him. He can sit on the floor. That's a good idea/That's a good idea. Ok. (12)

Looks at mom; No. (3)

Yeah. No. Takes boy doll from mom; (5)

Um, the boy. (7)

Pauses with a thoughtful expression on her face; (9)

Shakes head; No. Pauses and looks at play area; Sits doll on floor in front of the tv. (11)

This episode mom provides structure by introducing a role play segment into the current scene. However, when mom does so in an incongruent fashion, her high communicative child dismisses the idea. Role playing a hungry dog within the context of imaginary play (2, 4, 6), mom introduces a new idea into play that is independent of her child's current attentional focus. Her child's responds by dismissing it with little consideration (3, 5). Moments later, the child objects to mom's input again. Although mom correctly identifies that the child needs another chair for the doll, she decides to sit the doll on the floor (10, 11). Thus, when mom acts incongruently and attempts to engage her child in play, the child dismisses the suggestion. Then, when mom correctly identifies what her child needs, the child also dismisses her input. Thus, this child is generally self directed in her play.

Summary

Independent of communicative competence, these examples illustrate that episode children accept the structure their moms provide when their moms engage them in play in a congruent way. Although episode moms infrequently engage in imaginary play with their children, these play segments illustrate that episode children are responsive to their moms when moms engage in role play scenes that are initiated congruently. Children often object to their moms attempts to play when they suggest play ideas that are independent of the child's current attentional focus or meaning.
Episode Children Respond to Their Moms They Act As Informal Teachers
In addition to being receptive to their moms' input when they act congruently in play, episode children are also receptive to the structure moms provide when moms act in their role of informal teacher. The following examples illustrate that episode children respond to their moms when they ask test questions within imaginary play.

Episode dyad Example 35: High communicative child is receptive to his mom's input when she tests his knowledge of hypothetical events (Case 9)

*Picks up milk; Where the milk go? Have to lay down like this. Holds milk on its side; (1)*

*Looks in fridge; Yeah. (2)*

*Looks at child and nods; Looks in fridge; (4)*

*Looks at child; What's going to happen? (6)*

*Looks at child; then in fridge; then looks at child again; What's going to happen if it lays down like that? (8)*

*Mom and child look at each other; (9)*

*Smiles; What? (10)*

*The milk, What's going to happen to the milk if you lay it down like that? Points to the milk in fridge; (11)*

*Smiles; Spill it. (12)*

*Yeah. Smiles; But that's ok. It's just pretend, so it doesn't matter. (13)*

*Looks at mom; Nods slightly. (14)*

*Shakes her head; You can't do that with a real one though. (15)*

*Smiles and shakes head; No. (17)*

*Shakes head and smiles; Not our milk. (16)*

*Smiles; What? (10)*

*Smiles; Spill it. (12)*

*Looks at mom; Nods slightly. (14)*

*Smiles and shakes head; No. (17)*

*Shakes head and smiles; Not our milk. (16)*

*Smiles and shakes head; No. (17)*

*Shakes head and smiles; Not our milk. (16)*

This example shows a high communicative child being responsive to the question his mom asks. Not only does the child respond correctly to the question "What's going to happen to the milk if you lay it down like that?" (8), it is clear that he enjoys the question. Both the child and his mom smile as they discuss spilling the milk and the difference between 'pretend' and 'real' milk (8,
9, 12, 13).

The following example depicts a low communicative child responding to her mom's language based test question.

**Episode dyad Example 36: Low communicative child responds when her mom asks her to label objects (Case 6)**

Laughs; She gets the whole cake to herself, eh? Taps child's hand; (2)

What's father eating? (4)

What is it? (6)

Egg, What else? (8)

The girl has cake. Right. (10)

Taps child on the arm; (12)

Motions with her head toward the stove; What's that? (14)

Stove, Right. (16)

Places a plate, egg, utensils and cup in front of father doll. Moves milk carton in front of father doll and places cake in front of mother doll; Not looking at mom; (1)

Looks at mom; (3)

Points to father's plate; (5)

Egg. (7)

Points to girl doll; Girl eat cake. (9)

Puts the pot she is holding on the stove; (11)

Looks at mom; (13)

Stove. (15)

This low communicative child of the episode dyads is receptive and responsive when her mom asks her language based test questions. Responding correctly by identifying the egg (5,7), the cake (9), and the stove (15), this child accepts the informal language lessons that mom provides.

The one example of a child not accepting mom's teaching attempts within play occurs with a low communicative child who needs repeated prompting before he answers his mom's test question.

**Episode dyad Example 37: Low communicative child answers his mom's test question after repeated prompting (Case 10)**

Are you going to drive the car? (2)

Looking at car; (1)

May have seen mom signing in his peripheral
vision. Turns car on its side and touches a wheel; CAR. (3)

Places car on four wheels. Not looking at mom. (5)

Child looks at mom. (7)

CAR. (9)

There is a pause; (11)

Looks down at car; Does not respond. (12)

Looks down at car but does not answer question; (4)

Looks at mom. (16)

Looking at mom; Signs in exaggerated way; RED. Handling car. (18)

Vocalizes; In an exaggerated way, puts dog in car (wiggles dog, presses him into car). Looks at mom; (20)

Although this child appears to know that the car is a red colour, he refuses to answer mom's test question without her repeated prompting and encouragement. His opposition appears as if it is attention seeking or limit testing. For example, this child withholds his visual attention to the point where his mom uses physical prompts (touching his chin) to gain his attention (13, 15). At the end of the segment this child concedes to his mom's persistent questioning (18), then continues to engage in play (20).

Summary
With one exception, these examples illustrate that episode children are generally receptive and responsive when their moms act as informal teachers. Generally, high and low communicative children willingly answer their moms' questions when asked.
SUMMARY OF EPISODE PLAY

In contrast to moms and children of the narrative dyads who play together with the toys, episode moms and children play together differently. This difference is reflected in how the episode moms, in particular, define the activity. While their children define the play activity as play and engage in imaginary play with the toys, episode moms generally define the activity as a task where they assume responsibility for facilitating their children's play. These moms engage in segments of imaginary play infrequently. In their role of facilitators, they suggest play topics, asks questions and make comments about their children's play.

This difference in the situational definition results in a very different kind of interaction and play experience for the episode dyads. Independent of communicative competence, moms allow their children to play without structured guidance. As such, episode play is primarily child developed and characterized by unelaborated scenes of imaginary play that are loosely connected to other scenes. If explicit connections exist between scenes, they remain unexpressed and in the imaginations of the children.

Irrespective of communicative competence, episode children respond to their mom's input in a variety of ways. When moms provide structure incongruently, attending to neither their children's current focus or meaning, their children often object to their ideas. Similarly, when moms provide structure congruently, attending to both their children's current focus and meaning, the children still dismiss their ideas sometimes. It is when the episode moms both act congruently and engage in play that their children are most responsive to their attempts to engage them play. In addition, high communicative episode children respond to both the conceptual and language-based questions that their moms ask. Low communicative children, who are not asked conceptual kinds of questions, respond consistently and willingly to their mothers language questions.

Although low communicative episode children generally engage in action based play and high communicative children usually engage in play that is supplemented with language, the episodic nature of play exists for children of both communicative abilities. The scenes these children develop appear underdeveloped and disconnected to other scenes. While 3 dyads use aural/oral communication and one uses sign, there are no notable differences in the development of play or communicative interaction as a function of mode.
CHAPTER 7: MOM - ADOLESCENT INTERACTION

Group Differences: Collaborative and Cooperative Interaction

Moms and adolescents, at the beginning of the joint problem solving task, were explicitly given a choice whether to work together or separately on the puzzle. From this choice, two naturally occurring groups emerge in the data.

Some moms and adolescents work together on solving the block design puzzle, a style which is termed Collaborative Effort. Collaboration involves working together toward a common goal. In this context, it means working together on the problem solving task with the goal of completing the block design puzzle within the allotted time. Working separately on the task is termed Cooperative. Cooperation occurs when partners work independently on a common task, toward a common goal. In these dyads, moms and adolescents work independently on their respective halves of the puzzle. When each half is completed, the moms and adolescents bring their halves of the puzzle together, making a whole.

These groups of collaborative and cooperative dyads manifest distinct interactional patterns which not only affect how the moms and adolescents approach the task, but also the roles each adopts and the kind of social exchange they share. See Table 2 for a comparison of the main features of collaborative and cooperative interaction.

Notwithstanding these differences, the adolescents, in their interactions with their moms, generally exhibit age appropriate social skills and cognitive abilities. They demonstrate varying degrees of independence and autonomy; receptivity to feedback; ability to seek out feedback; critical thinking; and, the ability to handle the ambiguity of the task.

The adolescent data will be presented in the following way: Part 1: A description of how dyads reached agreement on working conditions; Part 2: A description of the defining features, problem solving strategies, evaluative processes and puzzle completion within collaborative interaction; Part 3: A description of the defining features, evaluative processes, problem solving strategies, social interaction and puzzle completion within cooperative interaction; Part 4: Illustrations from the data of age appropriate skills exhibited by the adolescents in their interactions with their moms.
<table>
<thead>
<tr>
<th>Dimensions of Interaction</th>
<th>Collaborative Interaction</th>
<th>Cooperative Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a decision about how to work</td>
<td>Moms decided to work together and the adolescents agreed; or, the decision was made by engaging in the task</td>
<td>Without discussion, one dyad decided to work separately by engaging in the task; The mom of the other dyad decided to work separately in spite of her son's objections</td>
</tr>
<tr>
<td>Emergent Roles</td>
<td>Adolescents worked as 'primary constructor'; Moms acted as the 'primary monitor'</td>
<td>Each partner constructs and evaluates his/her own work</td>
</tr>
<tr>
<td>Problem Solving Strategies</td>
<td>Crossing over into the others' primary role; Experimentation; Starting Over; Changing Focus</td>
<td>Crossing over to contribute to the others' puzzle; Experimentation; Starting over</td>
</tr>
<tr>
<td>Effect of the Evaluative Process</td>
<td>Acceptance of Evaluations; Disagreement and Resolution</td>
<td>Not salient because minimal evaluation of the others' work occurred</td>
</tr>
<tr>
<td>Social Interaction</td>
<td>Not Salient</td>
<td>One dyad engaged in social banter; The other dyad engaged in limited social exchange</td>
</tr>
<tr>
<td>Puzzle Completion</td>
<td>Over half of the dyads required a clue about the correct proportions of the puzzle; No dyad completed the puzzle within the allotted time</td>
<td>Both dyads successfully completed the puzzle within the allotted time</td>
</tr>
</tbody>
</table>
PART 1: Reaching Contextual Agreement of Working Conditions

The task was set up to allow the participants to choose whether they wanted to work separately or together on the puzzle. Within the parameters of this choice, two distinct decision making styles are revealed. For some (n = 4), there is little discussion or negotiation about the decision to work separately or together. These dyads decide quickly when moms state their preference and the adolescents agree. For others (n=3), the decision about how to work emerges without discussion. Partners begin working on the puzzle and the decision to work together or separately emerges as a result of action.

For still other dyads (n=2), information about how partners choose to work is unavailable. Because of a missing segment at the beginning of these videotapes, the viewer joins these dyads after the puzzle activity is in progress. Approximately three minutes is missing from each of these video tapes.

Another dyad (n=1) is unavailable because of experimental mortality. This dyad participated in the mother-child portion of the longitudinal research but did not participate in the adolescent portion.

As a result of these decision making processes, two naturally occurring groups emerge in the data: Collaborative dyads (n= 7) and Cooperative dyads (n= 2).

Mom as Director
The way in which moms and adolescents reach agreement on how to work together points to the inception of moms' role as director within the interaction. Of the 7 dyads described above on whom information is available, four cases (Cases 1, 5, 7, 9) exist where moms direct the interaction by articulating how they want to approach the task. Even when one of these adolescents (Case 9) disagrees with his mom's decision, the opposition went unheeded. In the remaining three cases (Cases 2, 3, 6) neither mom or adolescent expressed his/her preference. Without discussion, the working conditions were decided upon by engaging in the activity.

In the Collaborative group, three cases (Case 1, 5, 8) exist where moms directed that they work together; two cases (Cases 3, 6) exist where no discussion occurred; two cases (Cases 4, 10) exist where information was missing. In the Cooperative group, one case (Case 9) exists where mom decides to work separately and the adolescent's opposition went unheeded; one case (Case 2) exists where there was no discussion. See Table 3.
TABLE 3. Distribution of the methods used by each group to reach agreement of working conditions.

<table>
<thead>
<tr>
<th>Interaction at Adolescence</th>
<th>Decision Making</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moms Direct</td>
</tr>
<tr>
<td>Working Together: Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>Working Separately: Cooperation</td>
<td>1*</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4</td>
</tr>
</tbody>
</table>

Note. *Mom decided to work together despite her son's wishes to the contrary.

Considering only those dyads on whom information is available, over half of the moms in this sample make the decision about how to approach the joint problem solving task. The same trend exists across conditions. Over half of the moms in the collaborative effort choose to work together (n=4) and half the moms in the cooperative effort choose to work separately (n=1).

Thus, moms are the primary decision makers when deciding on the working conditions and the adolescents do not explicitly make choices or, when they do, they are ignored.

Summary
The data reveal that moms often take the role of director when deciding how to approach the joint problem solving task. With one exception, the adolescents do not take an active role in this decision making process. Where the moms do not make the decision, the dyads tacitly decide upon the working conditions by engaging in the puzzle.

PART 2: Working Together: A Collaborative Effort (n=7)
Of the seven collaborative dyads, 4 adolescents were female and were 3 were male. Of the 4 female adolescents, 3 used an aural/oral method and 1 communicated using sign language. Of the 3 male adolescents, 2 used an aural/oral method and the other used signed language. Interestingly, three of the oral adolescents were late signers (i.e., those oral in childhood but who changed to manual communication later). However, they chose not to use manual communication during the puzzle task.

Moms and adolescents, who engage in a collaborative effort, work together on solving the block design puzzle. Within a collaborative relationship, moms generally adopt the role of monitor and the adolescents generally assume the role of constructor. Working together within
these roles, moms and adolescents use a number of different problem solving approaches and engage in an ongoing evaluative exchange. However, because of the degree of task difficulty and because of conflicting ideas about how to accurately construct the puzzle, disagreements and their subsequent resolution are striking features of this mom-adolescent interaction. In the end, none of the moms and adolescents working in a collaborative effort solved the puzzle within the allotted time.

Collaborative interaction is presented in the following way: (a) Emergent roles: Primary constructor and primary monitor; (b) Joint problem solving strategies: Cross over, Experimentation, Starting Over, and Changing Focus; (c) Effect of the Evaluative Process: Acceptance of Feedback, Disagreement and Resolution; (d) Puzzle completion.

**Emergent Roles: Primary Constructor and Primary Monitor**

Two roles within the collaborative relationship emerge: Primary Constructor and Primary Monitor. There was no discussion between partners about adopting their respective roles. It is a phenomenon that emerges naturally and is accepted by each participant. Because of the reciprocal nature of the interaction and because the roles are not mutually exclusive, the notions of "primary constructor" and "primary monitor" are meant as relative terms that denote a proportional acceptance of a role within the interaction.

The moms of the collaborative group generally assume the role of monitor, while their sons and daughters generally assume the role of primary constructor. The following examples show different ways moms direct the interaction as the primary monitor and the varied ways the adolescents respond as the primary constructor.

**Collaboration Example 1: Assuming Roles:** As primary monitor, mom observes the interaction and offers feedback when necessary; Adolescent works independently assembling the puzzle as primary constructor (Case 6)

*Picks up a block, places it in puzzle; Moves loose blocks aside slightly; (1)*

*Observes for the next 36 seconds; Glancing back and forth from model to puzzle 9 times as adolescent works; (2)*

*Puts two more blocks in puzzle; Presses puzzle together slightly; One after another, picks up 2 blocks and places them in puzzle; Scratches cheek; Picks up and puts another block in puzzle; Removes a block from puzzle then puts a different
Observing with down turned lips, shakes head no; (4)

Picks up block; Places it in the same spot in the puzzle; Adjusts puzzle slightly. (6)

Looks back and forth from puzzle to model; Looks at model with a puzzled expression on her face; Moves the model slightly; (8)

Looks at adolescent and laughs; (10)

Looking back and forth from model to puzzle; Re-arranges two blocks within the puzzle; (13)

Adds a block where mom was working; While looking at model, places another block next to the one just added; Removes same block; Picks up a different block and places it in this spot; Pauses; (14b)

Both mom and adolescent look at puzzle and model; mom has elbow on table and is resting her chin in her hand. (15)

In a collaborative effort, this adolescent works independently constructing the puzzle while her mom observes. As the primary constructor, the adolescent uses the model to guide her puzzle construction. Glancing to and from the model, she places blocks in the puzzle and removes them as she finds necessary (1, 3). Observing this work, mom evaluates her daughter's progress. In her role as monitor, mom frequently compares her daughter's current puzzle construction to the model (2). Acting as monitor, mom spontaneously provides feedback to the adolescent about her work. With down turned lips, mom shakes her head and non verbally
communicates to her adolescent that her construction is incorrect (4). Attending to and acting upon this feedback, the adolescent removes a block from the puzzle (5). Taking the opportunity to contribute, mom correctly places a block in the same spot of the puzzle (6).

After evaluating her mom's move as correct (7), the adolescent continues with her construction of the puzzle (9). Then, responding to the puzzled expression on her mom's face and her laughter (8,10), the adolescent asks her what is the matter (11). Mom tacitly evaluates the puzzle when she manipulates blocks and corrects an apparent error (13). Mom then continues observing the adolescent as she resumes constructing the puzzle (14a,b).

Similar to this example, the following excerpt also highlights the role of mom as the monitor and the adolescent as constructor. Interestingly, during their verbal exchange, the adolescent uses "you" to mean either "we" (1) or "me" (9, 17b)

**Collaboration Example 2: Assuming Roles**

**As primary monitor, mom observes and evaluates the adolescent's puzzle construction; As primary constructor, adolescent works assembling the puzzle (Case 3)**

*Looks at adolescent; Where are you starting...where? (2)*

*Here ...(pointing to model) ...well, it has to go at this side. Taps the table opposite where adolescent started; Pointing to model; This is here... (pointing to puzzle) ...and this goes over here. (4)*

*Adjusts her chair then looks at model Ok. (6)*

*Points to the model; You have a white triangle at the bottom. (8)*

*Looking from model to puzzle; Ummmm...nope, this way....turn it around. (10)*

*Add block to the completed puzzle, extending it at the side; So you're doing this, right? (1)*

*Points to the model; I'm starting in the corner right here. (3)*

*Looks at model then puzzle; Oh, right. (5)*

*Looks at the model; So...um. Adds block to the top of the completed puzzle; Pauses; (7)*

*Oh wait a minute...ok, yeah, I know how to do it now. Picks up the block and rotates it in his hands; Places a block in the puzzle; It means you do it this way. Places block in puzzle; Looking from the model to the puzzle; Right? (9)*

*Mom turns block around while adolescent is handling it as well; (11)*
Looking out model; Look, look... which one are you doing? (12)

Looking at model; Look, look... which one are you doing? (12)

Looks from model to puzzle; (14)

Oh right. (16)

Points to the model; Now... you need a white block in here (17a)

You need another one go in... Slides a block into the puzzle; (17b)

Picks up block and puts it in puzzle; (18)

Looks from the puzzle to the model; Taps the block beside it with his finger, looking from the puzzle to the model (19)

Pauses; That's not quite right.
Removes the block and rotates it; (20)

Rotates block he just placed in puzzle; (21)

As this mom and adolescent begin a new section of the puzzle, their respective roles of primary monitor and primary constructor are revealed. As the adolescent adds a block to the puzzle, extending the completed section (1), mom evaluates this move as incorrect (2). Explaining that he should start the new puzzle on the adjacent side (4), mom corrects the adolescent's error. Accepting this correction (5), the adolescent begins constructing again, although he appears hesitant (7). Mom then instructs her son in his next step (8). Mediating the task by talking outloud, the adolescent adds a block to the puzzle and asks for confirmation (9). Again, evaluating her son's construction as incorrect, mom intervenes by attempting to position the block herself (10-11). Confused about how mom is approaching the puzzle, the adolescent questions her orientation to the task (12). Confirming that mom and he are working on the same section (13-16), the adolescent proceeds in his construction (17b, 21). Perhaps, because the adolescent appears to be having difficulty in his construction, mom contributes to the puzzle directly (17a). However, evaluating her own move as incorrect, she removes the block she placed (18, 20).

While moms and adolescents usually assume the roles of primary monitor and primary constructor respectively, this is not always the case. In a third example, this mom acts as both the monitor and a constructor of the puzzle, while continuing to direct her son's participation in the task.
Collaboration Example 3: Assuming Roles: As primary monitor and constructor, mom takes an active role in puzzle construction and directs her son’s participation in the task.

The adolescent follows his mom’s directions (Case 10)

Mom and adolescent study the puzzle; (1)

Points out a stripe in the model; Rotates the block that she just placed in the puzzle; (2)

MORE WHITE. Rotates block it so its white side is facing up; (4)

Points as if indicating an angle in the puzzle; (6)

Rotates a block; Places it in the puzzle; Moves model slightly; Taps adolescent’s hand; Well. Points to model; Softly says, We'll do this one. (8)

Points to blocks along the outer edge of puzzle; We got THREE. (10)

No that can STAY. PUSH THEM TOGETHER. (12)

YEAH. Points to block; This AND (14)

Removes the block beside the one the adolescent is touching; Points to model; Picks the same block up; Rotates it then places it back in the puzzle; Rotates it again within the puzzle, touching it and the block beside it; (16)

Moves block next to the one she just manipulated; Half smiles; Gestures: FORGET IT. (18)

Focuses on a different part of the puzzle; While pointing, One like that. There's that one. (20)

Ah ha. OK. Nods; (22)

Touches the block along with mom; Looking down at puzzle; (3)

Picks up a block; Rotates and examines it; (5)

Glances where mom is pointing then looks around the room; (7)

Looks at model; Nods; (9)

Looks at mom; Separates the row of blocks she pointed to from the rest of the puzzle; (11)

Moves blocks back to their original position; (13)

Points to the block mom is pointing to; (15)

Continues to observe; (17)

Looks at mom; Vocalizes, Shrugs his shoulders; Looks down at the puzzle; (19)

Picks up a block and puts it in the puzzle; (21)
In strong contrast to the previous examples in which the adolescents assemble the puzzle as their moms observe and offer feedback, this excerpt depicts a mom's diligent effort and her son's placid involvement in the task. As this mom works on constructing the puzzle, she verbally and non verbally mediates the task by monitoring her own work (2, 4, 6, 10, 14). In addition to helping her figure out the correct block configurations, this mediating function serves to engage her son in the task.

Although this adolescent is distractible and looks around the room (7), he is engaged in the task. Accepting his mom's direction, he imitates his mom (3, 5) and attends to her attentional focus (7, 9, 15, 17, 19). When following his mom's directions, his ability to do so may be affected by her communicative ability. Since mom often speaks without signing (8, 14, 20) or incompletely signs her speech (10), the adolescent sometimes appears to misunderstand her communication. For example, when mom confirms that three is the correct number of blocks (10), the adolescent misunderstands and incorrectly separates 3 blocks from the rest of the puzzle (11). Other times, the adolescent follows his mom's directions by placing a block in the puzzle correctly (21-22).

Summary
The roles of primary monitor and primary constructor are relative terms that denote a proportional acceptance of each role within the interaction. As moms generally assume the role of primary monitor, their responses can vary. Moms sometime direct the interaction by giving their adolescents feedback about a specific move, adding blocks to the puzzle, or guiding their sons'/daughters' ongoing participation. As primary constructors, adolescents take an independent and active role in constructing the puzzle. An exception in the data occurs when mom accepts both roles of constructor and monitor and her son participates in the task by following specific directions or cues from his mom.

Joint Problem Solving Strategies: Cross over, Experimentation, Starting Over, and Changing Focus
Within the collaborative effort, the adolescents and moms employ joint problem solving strategies while constructing the puzzle. Data reveal that crossing over of roles, experimentation, starting over and changing focus are the problem solving strategies used by collaborative dyads. Because of their simplicity and straightforward nature, only one example of each strategy is presented.
Cross Over: Stepping out of One's Primary Role into the Role of the Other

Since the roles of primary monitor and primary constructor are relative, the crossing over of roles from constructor to monitor and from monitor to constructor frequently occurs. Although collaborative adolescents and moms naturally step into their respective roles, they also step out of them, crossing over into the other's role. When moms cross over and act as constructors, they may contribute to the puzzle by removing, changing or adding blocks. In response to moms' contribution(s), the adolescents may monitor and evaluate their moms' construction.

Cross over often occurs following an error. As monitor, moms sometime sees an error in the puzzle's construction then cross over to correct it. Cross over may also occur when the adolescents appear to be struggling with the puzzle and moms cross over to contribute (see Collaboration Example 2; 9-20). Moms' contribution can also be spontaneous when they see a move that they think may fit (see Collaboration Example 3; 1-4). Notwithstanding the precipitating factors, cross over is an intervention which facilitates the solving of the joint problem solving task.

In the following example, one collaborative mom and adolescent experience a fluid and reciprocal crossing over of roles.

Collaboration Example 4: Cross Over: Mom and adolescent experience a reciprocal crossing over of roles (Case 5)

Mom and adolescent work at putting a block in place that would make up the corner of the design;
The attempt is unsuccessful. (1)

Mom slides the block out of the puzzle;
Picks up a different block; Rotates it in her hand; (3)

Looking; Points to the corner and traces the line; Removes the corner block; Replaces it with the block she is holding; Taps adolescent's hand; Points to the block; (5)

Points to the black block beside it;

Picks up a block; Rotates it while looking at mom's work; Looks at the block she is holding then looks at the model; (2)

Waves her hand to get mom's attention; Points to the adjacent corner of the puzzle; NOT FIT TOGETHER. (4)

Looks; (6)
ALL WHITE. Points to the black block again, moving it away from the puzzle slightly; (7) Rotates the block so the solid white side is facing up; (8)
Picks up a loose block; Observes adolescent; (9) Puts a white block in puzzle; (10)

As a problem solving strategy, this mom and adolescent share a reciprocal exchange of roles. Following an unsuccessful attempt at a construction (1), the adolescent observes her mom's work (2). Crossing over into the role of monitor, this adolescent evaluates her mom's construction telling her that it doesn't fit together (4) Accepting and responding to this feedback, mom, as constructor, changes the block configuration, then consults her daughter (5). As mom communicates her idea of the next step, she crosses over from constructor to monitor again. Mom removes a black block and suggests that it should be "All white" (7). Responding as a constructor, the adolescent places the white block into the puzzle (8). Thus, as one problem solving strategy, this mom and adolescent share a reciprocal crossing over of roles. They accept, implement and evaluate the moves and changes the other suggests.

Experimentation

In trying to replicate the design of the model, the adolescents, as the primary constructors, experiment with different block configurations. They arrange or change blocks according to how they think it might best reproduce the model. Moms participate in the experimentation within their roles as primary monitor by evaluating their adolescents' work and by making constructive comments. Together, collaborative moms and adolescents experiment with different placements of blocks as they attempt to solve the puzzle.

In the following example, one mom acts as monitor while the adolescent experiments with different block configurations:

Collaboration Example 5: Experimentation: As mom acts as monitor, the adolescent experiments with block configurations (Case 10)

Tilts her head; Hummm? (2)

Rotates a block; Looks up at mom; (1)

Shakes head; NOT the SAME.

Puts block, white side up, in the puzzle; Looks at mom; (3)

Points to model; (4)
In this short segment, the adolescent experiments with the positioning of one block. Three different times, in succession, he changes the position of one block in the puzzle then looks at mom for feedback (1-2, 3-4, 5-6). After each attempt, mom considers each move and evaluates it as incorrect (2, 4, 6). In a constructive move, mom changes this block back to its original position (8). In turn, the adolescent, as constructor, makes a different kind of contribution to the puzzle when he presses the blocks together, securing its shape (9). Responding as monitor, mom nods affirmatively (10).

**Starting over: Beginning the Same Section Again**

When repeated attempts fail to produce an exact duplicate of the model, other problem solving strategies are employed. When the work on one quadrant of the puzzle proves unsuccessful, a common strategy is to begin again. Deconstructing the current work and beginning the same section again is important for developing a new or different approach to a particular section of the puzzle.

In the following example, the adolescent takes the puzzle apart and begins the same section over again.

**Collaboration Example 6: Starting Over: Adolescent de-constructs the quadrant she and mom are working on then starts re-constructing** (Case 8)

Rotates the entire puzzle to a different angle; Like that. Rotates the model; You go like this. (1)

No? Shakes her head; (3)

Rotates block so that a different side is showing; (5)

Looks at mom; (7)

Presses the puzzle together; (9)

In this short segment, the adolescent experiments with the positioning of one block. Three different times, in succession, he changes the position of one block in the puzzle then looks at mom for feedback (1-2, 3-4, 5-6). After each attempt, mom considers each move and evaluates it as incorrect (2, 4, 6). In a constructive move, mom changes this block back to its original position (8). In turn, the adolescent, as constructor, makes a different kind of contribution to the puzzle when he presses the blocks together, securing its shape (9). Responding as monitor, mom nods affirmatively (10).
Looking at model; Ok. (4)

Adds block to puzzle; Picks up other block; rotates it and puts it in the puzzle; (5)

Observes, looking from model to puzzle; Unintelligible utterance. (6)

Adds block to puzzle. Reaches for another block; (7)

Observing; Ahh, that's right. (8)

Adolescent adds block to puzzle; Rotates it within puzzle until he finds the side he wants; (9)

Smiles while observing her son's work; Looks back and forth from puzzle to model; (10)

After working on the first quadrant of the puzzle for a short period of time (41 seconds), this adolescent employs the problem solving strategy of beginning again. After repeated experimentation (partially seen in 1-2), this adolescent takes apart the three blocks of the puzzle and, with mom's help, begins the same puzzle section again (4-5). Although the verbal exchange between mom and son is unintelligible to the viewer (6, 9), this simple problem solving strategy is effective. As the adolescent constructs the puzzle (8, 10, 12), the mom acts as monitor by comparing her son's work to the model (4, 6, 10). Within this role, mom confirms both verbally (8) and non-verbally (10) that the new puzzle construction is correct.

Changing focus: Beginning a New Section

A parallel problem solving strategy to starting over occurs when collaborative moms and adolescents put aside the current quadrant and begin a different section of the puzzle. When participants have difficulty with the particular section they are working on, beginning a new quadrant of the puzzle is a strategy that serves to rejuvenate interest and concentration. In contrast to starting over which can be implemented after a brief period of time, changing focus, is usually implemented following a longer period of trying to solve one section of the puzzle.

The following example illustrates one collaborative mom and adolescent beginning a new section.
Collaboration Example 7: Changing Focus: Mom suggests beginning a different section of the puzzle; Adolescent agrees (Case 5)

Adolescent and mom have been working on the same section of the puzzle for 6 minutes, 57 seconds; (1)

With both hands, reaches out and touches adolescent; Whispers I know. START. (2)

Looks at puzzle; Shakes her head no; Taps adolescent's hands; (4)

(Barely audible) START DIFFERENT SQUARE. Points to the model; We'll start over here. (6)

Nods her head slightly; (7)

Mom and adolescent start a different section of the puzzle; (8)

After diligently working, without success, on the same section of the puzzle for approximately 7 minutes (1), this mom implements the problem solving strategy of beginning a new section of the puzzle. As mom begins to suggest this idea to her daughter (2), the adolescent interjects with a different idea about the current puzzle (3). After briefly attending to the adolescent's comment about the perimeter of the puzzle, mom responds by repeating and expanding upon her idea to begin again (4). Mom directs the interaction by suggesting they start a different, specific section of the puzzle (6). Agreeing to the idea, the adolescent begins trying to replicate this different quadrant (8).

Summary

Collaborative moms and adolescents use a variety of problem solving strategies, all of which allow the partners the opportunity to generate new approaches to the puzzle. Crossing over of roles from constructor to monitor and from monitor to constructor serves to provide the partners with different perspectives when assembling the puzzle. Experimenting with different block configurations allows moms and adolescents the chance to test or develop new ideas. Taking apart the puzzle and starting the same quadrant over again, or beginning an entirely different section of the puzzle are strategies employed when participants are creatively blocked in their problem solving endeavour and need to start anew.
Effect of the Evaluative Process: Acceptance of Feedback, Disagreement and Resolution

Within a collaborative effort, evaluation of the other's contribution to the puzzle creates interesting interactional dynamics. Often, in their role as primary monitors, moms evaluate the constructions of their sons and daughters. When this occurs the adolescents can accept and use the evaluation(s) to implement changes or they can disagree with the input from their moms. When adolescents disagree with their moms, their emotional responses can range from neutral to intense. The following examples illustrate the wide range of reactions the adolescents have to their moms feedback.

Acceptance of Evaluative Remarks

The following example illustrates an adolescent, in a collaborative relationship, accepting and using her mom’s evaluative feedback to make a correction to the puzzle.

Collaboration Example 8: Accepts Evaluation: Adolescent is receptive to the changes suggested by mom (Case 6)

*Looks at model*; (1)  
*Rotates block within puzzle*; (2)  

*Observes; Reaches for block then stops; Gestures: TURN IT AROUND. Taps a block in a different section; Like that.* (3)  

*Looking from model to puzzle, turns the block around; Softly spoken: Yeah.* (4)  

*Nods and whispers: Yeah.* (5)  

*Shuffles other blocks within puzzle; Looks at model; There.* (6)  

In this segment, the adolescent accepts and uses the feedback given by her mom. Noticing an error in the adolescent’s construction of the pattern (1-2), mom initially reaches out to make the change herself, but stops and directs the adolescent on how to make the change (3). By referring to a different block in the puzzle, mom shows her daughter which pattern is needed (3). The adolescent considers her mom’s input by referring to the model, follows her instructions then agrees that the move is correct (4). As mom also confirms the change is correct (5), the adolescent continues with the puzzle construction (6).
Disagreement and Resolution

Given the nature of evaluation and the level of difficulty present in the problem solving task, the interaction between moms and adolescents in a collaborative effort at times involves disagreement. Disagreement arises when the adolescents object to the moves, suggestions or evaluations made by their moms. When moms and adolescents disagree, the tone of the interaction can vary dramatically. Sometimes the tone appears neutral and considerate. In this case, the emotional investment of the adolescent does not seem pronounced. In contrast, disagreement may be fuelled by the adolescent’s conviction that s/he is correct or exacerbated by the frustration created by the difficult task. When this occurs, the emotional tone of the interaction is elevated.

In contrast, moms do not overtly express their displeasure to the same degree as the adolescents. They are involved in the disagreement by virtue of a move they made, an evaluation stated or a proposed suggestion, but their tone remains more neutral.

The following four examples illustrate varying degrees of mom-adolescent disagreement and how each is resolved. In this first example, the mom and daughter disagree about each other’s puzzle construction. The tone of their interaction seems neutral.

Collaboration Example 9: Disagreement and Resolution: Adolescent disagrees with mom’s construction; Mom disagrees with adolescent’s construction; Resolution occurs through continued work (Case 1)

Points to the model on an angle; It’s supposed to go this way. Moves the angle of the entire puzzle; (1) Adjusts puzzle further when mom stops; Smiles; Shakes her head; Soft spoken, Unintelligible utterance. (2)

Slides a block into puzzle; Black. One more over here. Points to the puzzle; (3) Watches mom; Shakes her head; Soft spoken, Unintelligible utterance. Touches the model; (4)

Black. Puts a black block in corner of puzzle; I need one more over here. Points to puzzle; Moves a block; Black. Puts black block in puzzle; (5) Touches the block mom just placed; (6)

Ok, now we need. Picks up block and looks at it; (7) Adds block to puzzle; (8)

Shakes her head; Nope. (9) Removes the block; (10)
Puts a different block in its place; (11)

Both mom and adolescent nod their heads; (12)

That's good. (13)

In this example, both mom and the adolescent disagrees with the moves each other makes. First, the adolescent disagrees with mom's modification of the puzzle. By shaking her head, gesturing and speaking softly, this adolescent expresses her disagreement non verbally and verbally (2, 4). Because her objections are not communicated directly, mom, who continues constructing (3, 5) may not be aware of them. Later, when the adolescent contributes to the puzzle (8), mom disagrees with her move (9). Accepting this evaluation, the adolescent removes this block (10) and mom puts another one in its place (11). Simultaneously, both mom and daughter nod their heads, agreeing that the move was correct (12). The adolescent expresses her approval further by commenting "that's good" (13). Thus, within a neutral tone, the two disagreements in this example are resolved simply through continued work on the puzzle.

In contrast to this subtle disagreement, the following example illustrates a mom who challenges her son's puzzle construction directly.

Collaboration Example 10: Disagreement and Resolution: Adolescent and mom disagree about whether the puzzle is constructed correctly; Mom eventually concedes (Case 3)

Looking from model to puzzle; Laughs: Are you sure? (2)

Yeah but look/look/look. Holds model in one hand; Points to a specific area on it with the other hand; This/this is pointing this way. (4)

Does not let go of model; Holds up an index finger; Yeah. Ok. You're right. (6)

Both tug on model then adolescent lets go; (7)
The mom and adolescent, in this example, disagree about whether the adolescent's construction of a completed section of the puzzle is correct. As the adolescent places the last block in the section, he announces that this section of the puzzle is complete (1). Comparing his construction to the model, mom laughs and challenges her son (2). Asserting his position, the adolescent explains why the puzzle is correct (3). Challenging the adolescent again about the puzzle's design, mom compares the model to the puzzle. (4). The adolescent continues to describe the features of his construction and, in doing so, tries taking the model from mom (5). A physical manifestation of the disagreement occurs as both mom and adolescent tug on the model, but ends with the adolescent letting go (5-7). Conceding to the her son's perspective, mom agrees that the quadrant of the puzzle is constructed correctly (6). Thus, this example illustrates a mom's response to disagreement. Mom both verbally and physically expresses her disagreement, but in a neutral way. The issue is resolved when the adolescent explains his construction and mom, changing her viewpoint, concedes that the construction is correct.

In contrast to this confrontational, but non-emotional disagreement, the following excerpt illustrates one adolescent's unyielding position when mom attempts to explain that they have constructed the puzzle incorrectly:

Collaboration Example 11: Disagreement and Resolution: Adolescent disagrees with mom's evaluative input in spite of the evidence (Case 4)

Taking the block that mom is removing and puts it in its original position; Places another block next to it; (1)

Pushes back her hair; Looks at model; It is. (3)

Points to a different area on the model; Interjects: We're down here now mom. (5)

Pointing to the line designating half the puzzle; Well we can't be because it's not going to work out right. Pointing to a particular spot on the puzzle; Look this one here has to end up with this one here. Points to another spot on the puzzle, comparing the halves and their spatial
This example of disagreement illustrates how an adolescent refuses to be swayed by her mom's evidenced-based evaluation of the puzzle. Using the corresponding patterns of the puzzle to describe the ways in which the quadrants are not properly aligned with each other (4, 6), mom explains in a clear, concrete way why the puzzle is constructed incorrectly. Despite the tangible evidence to the contrary, this adolescent, entrenched in her own position, states that it does not matter (7, 9). As mom continues to argue her point, trying to convince her daughter that an error exists (8, 10, 12), the adolescent shows signs of frustration by sighing (11). Despite mom's cogent attempts, this adolescent is unyielding and objects to her mom's evaluation of the puzzle (14). Thus, this disagreement remains unresolved as partners continue working on constructing the puzzle.

The following example depicts the adolescent's apparent frustration with her mom's contributions to the puzzle. Appearing to respond to the tension created, mom switches from working collaboratively with her daughter to working independently on a different section of the puzzle.

Collaboration Example 12: Disagreement and Resolution: Mom reacts to the adolescent's objections by switching conditions (Case 1)

Places block next to the first; Rotates it; (1)

Moves her hand in a way that looks like she intends to help, but does not; (2)
Both adolescent and mom look at how the two blocks are placed; (3)

Tilts her head; No. Rotates the second block; (4)

Has furrowed brow; Nooo. Shakes her head; Takes the block from mom; changes it back to its original position; This way. (5)

Laughs; (6)

Looks up at mom; Smiles; I don't know. Picks up, rotates and places another block in puzzle; (7)

Neutral demeanour; Picks up a block; Looking at model, begins a different section of the puzzle; (8)

Mom and adolescent work on separate sections of the puzzle for a minute (57 seconds); Adolescent changes her focus and, still working independently, constructs a different section of the puzzle; Mom and adolescent casually engage each other by commenting on the task's degree of difficulty (9)

While pointing to puzzle, studies model; (10)

Points to model; This one? Ok. That looks. Pauses; (10)

Puts block in puzzle; Pushes puzzle to the middle of the table; (11)

This example illustrates a mom's response to her adolescent's objections to her contributions to and evaluations of the puzzle. After mom evaluates her daughter's construction as incorrect and changes the block configuration (4), the adolescent disagrees. Objecting to her mom's intervention both verbally and physically, the adolescent takes the block from mom, changes it back to its original position and asserts the block should be "this way" (5). Said without a malicious tone, the adolescent then smiles and admits to mom that she doesn't know (7).

Appearing to respond to her daughter's reaction, mom withdraws from the collaborative effort. With a neutral demeanour, she begins a different section of the puzzle (8). As both mom and daughter work independently on separate sections of the puzzle for a brief period of time, they engage each other by discussing the task's degree of difficulty (9). During this time, the adolescent uses the problem solving strategy of changing focus. In response to the difficulty she is experiencing with the puzzle construction, the adolescent begins a different section of the
puzzle (9). The re-engagement of the collaborative effort occurs when mom expresses interest in her daughters work and the adolescent reciprocates by pushing her puzzle into the middle of the table (10-11).

Although changing working styles may occur as a response to disagreement, this is not always the case. Following the successful completion of their first quadrant of the puzzle, this adolescent suggests to his mom that they each work on their own sections of the puzzle.

Collaboration Example 13: Without disagreement, adolescent suggests that he and mom switch from working together to working separately (Case 8)

Places one block in front of her; (2)

Taps model three times; (4)

Looks at model; Oh yeah, right. I can really do that. (6)

Points to the model; Ok, we'll do this one, then. (8)

Points to model; Which way? Which one are you doing? This way? Go this way? (10)

Looks back and forth from model to puzzle and very softly says: Ok. Observes adolescent puts blocks together; (12)

Moves completed puzzle aside; (1)

Places three blocks in front of him; Smiles; Oh boy. (3)

Looks at mom; Points to section of model that mom pointed to; Do you wanna; you gonna to that and I'll do this? Points to different part on model; Looks at mom; (5)

Smiles at mom; Points to the model; I get the hard one. Moves completed puzzle aside some more; Looks at mom then model; (7)

Looks at model; Turns block over on the table; Partial unintelligible utterance ending in: Black. Picks up another block and looks at it; (9)

Points to model; Go three and three. Looks at mom; (11)

After working collaboratively and successfully completing their first section of the puzzle (1), the adolescent suggests to his mom that they work on different quadrants of the puzzle (5). After mom objects, expressing her inability to construct the section that her son proposed (6), the adolescent reassures her that he will 'get the hard one' (7). Circumventing further discussion, mom becomes directive and decides which quadrant they will begin next (8). As the adolescent
begins the new puzzle (9), mom exhibits confusion and asks him about his new construction (10). After explaining his approach (11), mom softly agrees then observes his work (12).

Summary
Although adolescents sometimes accept and implement the suggestions proposed by their moms, disagreements commonly occur within the collaborative effort. A wide range of responses from both adolescents and their moms occur. Moms and adolescents sometimes quietly disagree with each other, then reach agreement. Moms sometimes challenge their adolescents' construction then, with their explanation, concedes that it is correct. Sometimes after moms challenge their adolescents' construction and discuss it, no resolution occurs. Moms sometimes react to their adolescents' disagreement by withdrawing from the collaborative effort and working independently on a quadrant of their own. The affective tone of the interactions, when disagreements occur, range from neutral to elevated.

Puzzle Completion
As part of the research protocol, a specific clue was devised to assist those dyads who were experiencing difficulty constructing the puzzle. After approximately half of the allotted time had lapsed, the dyads were told that each quadrant of the puzzle consisted of a 3X3 block square. Approximately half of the collaborative dyads required this clue (n=4). The remaining dyads (n=3) did not require this information since they were already constructing the quadrants using the correct dimensions.

Notwithstanding a clue being given, only one dyad in the collaborative group successfully completed the puzzle. However, this dyad, Case 4, was only successful because the researcher stepped outside of the protocol in order to facilitate success. After the usual allotment of time had passed, the researcher entered the room and assisted the adolescent in correcting one disproportionate section so she would be able to complete the puzzle. This dyad worked on the puzzle for 14 minutes and 39 seconds. Compared to the group average of 10 minutes, Case 4 spend considerably more time in their puzzle construction than other dyads.

A second anomaly in the protocol for this dyad was that the mom and adolescent sat on the same side of the table. Moms and adolescents of the other collaborative dyads sat on opposite sides of the table, giving each participant a mirror image/reverse perspective of the puzzle and model. Although worth noting, it is unclear whether this difference contributed to the successful outcome for this dyad (See Appendix C).
Collaborative Effort: Summary

Working together on the block design problem solving task, moms and adolescents engage in a collaborative relationship. Within this relationship, moms accept the role of primary monitor and the adolescents assume the role of primary constructor. Because of the interactive, fluid nature of solving a puzzle together, there is only a relative acceptance of these roles. Moms sometimes contribute to or construct the puzzle; adolescents occasionally evaluate moms' work.

One way to explain the stepping in and out of their respective roles is to view the change as a problem solving strategy. Moms sometimes cross over into the role of constructor and adolescents sometimes cross over into the role of monitor. Cross over can occur following a failed attempt at a puzzle construction or it can occur independently, simply as a way to approach to puzzle differently. In the latter case, cross over is used innovatively as a new move is attempted. Like the other problem solving strategies (experimentation, starting the same section of the puzzle again and beginning an entirely different section of the puzzle), crossing over is a method that moms and adolescents use in their attempt to replicate the design of the model and solve the puzzle.

Because of the evaluation inherent in this problem solving task, interesting interactional dynamics exist in the collaborative relationship. Moms usually tend to be directive in commenting on their adolescents' constructions or next moves. However, both partners participate in the disagreements that are evoked. Responses to evaluations can range from acceptance of the feedback to various degrees of conflict and resolution. At one end of the continuum, disagreements can be modest and resolved easily through continued work or discussion. Alternately, problems of puzzle construction can remain unresolved when an adolescent becomes entrenched in his/her position or when a mom switches conditions and works independently for a short period of time. Despite the division of labour or responses to evaluation, no dyads working in a collaborative relationship completed the puzzle within the allotted time.

PART 3: Working Separately: A Cooperative Effort (N = 2)

Of the two cooperative dyads, one was male and the other was female. The adolescent male communicated using an aural/oral method and the female used sign language. The female adolescent is one of four participants who changed their mode of communication. During childhood, she used an aural/oral method while during adolescence, she used sign language.

In the cooperative effort moms and adolescents work separately constructing their respective halves of the puzzle. In contrast to the collaborative effort where the roles of primary
constructor and primary monitor underlie the partners' ongoing interaction, the cooperative effort is, by nature, individualistic. Each partner 'primarily' constructs and evaluates his/her own work.

Cooperative partners engage in a subset of the same problem solving strategies as do collaborative dyads. Because of the independent nature of the work, the interaction of cooperative dyads is distinctly different than that of the collaborative dyads. Fewer disagreements occur. The kind of social exchange exhibited during the task varies. One dyad frequently engages in social banter while the other remains somewhat detached and task focused. Interestingly, cooperative moms sometimes praise their adolescents, but their son and daughter do not reciprocate. Thus, moms still assume an evaluative role.

In contrast to the collaborative effort where the dyads do not complete the puzzle within the allotted time, both cooperative dyads successfully construct the puzzle within the given time frame. Further, no clue about the puzzle's dimensions was needed by either dyad.

The cooperative effort will be addressed in the following way: (a) Self evaluation of puzzle/evaluation of other's puzzle; (b) Problem solving strategies: Cross over; experimentation, and starting over; (c) Disagreement in the cooperative effort; (d) Social interaction within the cooperative effort; (e) Puzzle completion.

Self Evaluation of Puzzle/Evaluation of Other's Puzzle

Because the moms and adolescents in the cooperative effort work separately on a common task, they are both the primary constructors and primary monitors of their own work. Partners engage in little evaluation of the other's task performance. With few exceptions, puzzle construction proceeds with both mom and adolescent being responsible for their own work.

In the following brief example, both the adolescent and mom demonstrate their ability to construct and critically evaluate their own puzzles.

Cooperation Example 1: Self Evaluation: Both mom and adolescent evaluate their own work (Case 2)

Placements a block in her puzzle; Points to her construction with a puzzled expression on her face (ie curled lip, tilted head); (1)

And all white: Picks up a block; Correctly places it into her puzzle; (2)

Presses her puzzle together; Nods slightly with pierced lips; (3)

Places another block in puzzle; Looks at adolescent; (4)
As this mom and adolescent work independently on their respective puzzles, both show that they critically evaluate their own work. As this adolescent places a block in her puzzle, her evaluation is evidenced by her puzzled expression. This adolescent curls her lip and tilts her head when considering either her current construction or her next move (1). By placing another block in the puzzle and nodding her head affirmatively (3), the adolescent affirms that her puzzle construction is correct. Likewise, mom displays critical thinking by articulating what her next move is, then following through with that correct construction (2).

In another example of evaluation, this mom evaluates her own work as "too big" then reconsiders. When her son assesses the situation, he affirms that she did, indeed, make one quadrant too big.

**Cooperation Example 2: Self evaluation/evaluation of other; Mom evaluates her own work; Adolescent evaluates moms work (Case 9)**

*Adds a block to her puzzle;  
Oops, I think I made this one too big. Removes the block then puts it back again; No that's right. Leans forward, looks at adolescent Uh oh...we're in trouble...we're running out of blocks. Smiles and Laughs; (2)*

*Smiling; We're running out of blocks. (4)*

*Ok. Removes blocks from her puzzle; Ok. Removes more blocks from her puzzle; Just a minute. Here. Ok, I get it. No probs. Scales down her puzzle by removing blocks; Presses puzzle together; (6)*

*Looks at mom; Huh? (3)*

*Looks around the table; Points to mom's puzzle; Too many. Glances from the table to mom; (5)*

*Continues working on his puzzle; (7)*

This example depicts two incidents of evaluation. First, mom evaluates her own work as being "too big" (2). After removing a block, mom reconsiders. She puts the block back in place and re-evaluates her construction as "right" (2). When mom presents the problem of running out of blocks to her son (2, 4), the adolescent, in a rare move, evaluates his mom's puzzle as using too many blocks (5). Accepting this feedback, mom successfully scales down her puzzle to its correct proportion (6).
Summary

As cooperative moms and adolescents work independently on their respective halves of the puzzle, each primarily constructs and evaluates his/her own work. One exception occurs when the problem of too few blocks arises. In this case, the adolescent correctly evaluates his mom's work as using too many blocks. Mom accepts this feedback and successfully works to make her puzzle smaller.

Problem Solving Strategies: Cross over, Experimentation, Starting Over

The problem solving strategies used in a cooperative effort are similar to those used collaboratively. As cooperative dyads work independently on their halves of the puzzle, they employ the same strategies of cross over, experimentation and starting over as their collaborative counterparts. Neither of the cooperative dyads use the strategy of changing focus (beginning a new section). Each will be discussed in turn.

Problem solving strategy: Cross Over

Similar to collaborative interaction, the problem solving strategy of crossing over occurs in a cooperative effort, but it takes a slightly different form. Instead of crossing over from primary monitor to primary constructor, cross over in cooperative interaction occurs when, working separately, one partner contributes to the other's puzzle. This assistance can be volunteered or solicited, then either accepted or rejected by the partners.

In the first example of cross over, mom voluntarily contributes to her daughter's puzzle. Responding positively, the adolescent is receptive to her mom's input.

Cooperation Example 3: Cross over: Adolescent accepts mom's input (Case 2)

*Picks up a block; Examines its sides; Puts it down; Moves other blocks slightly; Unintelligible utterance. Reaches across the table; Moves a block in front of adolescent; That goes like that. Unintelligible utterance.* (1)

*Looks at a block; Turns it over examining its sides while comparing it to the model;* (1)

*Laughs; Moves the block mom pointed out; Rotates it; Comparing it to another block and the model;* (3)
Looking at the model, shuffles the blocks in front of her; Makes a noise by blowing air past her lips; (4)

Close to the beginning of the task, in an unsolicited move, this cooperative mom crosses over and contributes to her daughter's puzzle. After examining a block, mom reaches across the table and moves a different block in front of the adolescent (2). Instructing the adolescent on how to position the block (2), the adolescent responds by examining and comparing the block to another block, and then to the model (3). It is clear that the adolescent appreciates mom's cross over. She not only uses the assistance, but her demeanour is happy as evidenced by her laughter (3).

In contrast to this adolescent's receptivity of her mom's cross over, the adolescent in the following example passively rejects his mom's assistance.

Cooperation Example 4: Cross over: Adolescent rejects mom's input when she crosses over (Case 9)

Stops constructing puzzle; Looks at mom; It's hard.
(1)

Looking at mom; Points to model and whispers: I can't do this. Looks at mom a moment longer; Takes his puzzle apart and begins again; (3)

Without responding, the adolescent picks up a block and adds it to his puzzle; (5)

Leaves block where mom puts it; Picks up another block; Puts it on the end of his puzzle. Moves this block to the top of puzzle; (7)

The adolescent of this cooperative dyad passively rejects his mom's input when she crosses over. In response to this adolescent's comments about the task's difficulty and his inability to solve the puzzle (1,3), mom crosses over to offer her assistance. In doing so, however, she does not
respond immediately. Moments pass before mom changes her attentional focus (4). When she
does, the suggestions she makes are ignored (6-7). The adolescent leaves the block where mom
puts it and maintains an independent focus (7). As a result of this inattention, mom continues her
work (8). Thus, although this adolescent indirectly solicited his mom's assistance by commenting
that he found the task difficult, he ultimately rejected her help when it was offered.

In contrast to one adolescent's indirect solicitation for help, this mom invites her
adolescent to assist her after the adolescent had finished her half of the puzzle.

**Cooperation Example 5: Cross Over: Mom solicits adolescent's input (Case 2)**

*Changes the position of blocks within her puzzle; (2)*

*Picks up a block; Looks at model, holding it; (1)*

*Adds last block to puzzle; Completing her second puzzle; Vocalizes; Presses puzzle together; Glances at mom; Mom? (3)*

*Looks up; Sighs; Playful look of disapproval; (4)*

*Mom and adolescent laugh; (5)*

*Looking at adolescent; Palm up hand gesture; Ok you do this/ you do this. (7)*

*Moves the two quadrants of her puzzle together; (6)*

*Laughs; Unintelligible utterance. While looking at model; NOT CLOSE. While looking at the model, picks up a block and adds it to the top of her puzzle; (8)*

*Moves her puzzle half more to the middle of the table toward adolescent; (9)*

*Putting blocks in puzzle, extending her half puzzle; (10)*

*Continues to work on her section of the puzzle; Rotates a corner block; Points to her the bottom-middle of puzzle; That's this part. Ok. Points to the model; This to this. Points to puzzle; And this is white. Pushes the corner block in place; (11)*
In this cooperative effort, mom crosses over by directly inviting her daughter to work on her puzzle. After the adolescent successfully completes her half-puzzle and engages her mom by showing it to her (3), mom responds playfully with a look of disapproval and a sigh (4). Crossing over in a lighthearted manner, mom solicits her daughter's help by telling her she can do her puzzle (7). Accepting the offer to help, the adolescent teases her mom by telling her she is not close (8). As the adolescent begins to add blocks to the top of her completed puzzle, mom pushes the section she is working on to the middle of the table (8-9).

What is interesting about this example is that, although mom invites her daughter to work on her puzzle with her, the adolescent does so in a way that maintains their cooperative effort (10-11). The adolescent works by adding blocks to the top of her completed puzzle and mom continues working on the quadrant she previously started. In this way, this example of cross over does not represent a full move from a cooperative to a collaborative effort.

**Problem solving strategy: Experimentation**

The problem solving strategy of experimenting with the design configuration and placement of the blocks in a cooperative effort is similar to experimentation in the collaborative effort. The difference in the experimentation within the two kinds of interaction lies in the feedback given. As previously discussed, the partners of the cooperative effort work independently on their respective half-puzzles, constructing and evaluating their own work. The feedback given when experimenting within the collaborative dyads (see Collaboration Example 4) does not exist for the cooperative dyads.

The following example illustrates how a mom and son independently experiment with the positioning of their blocks.

**Cooperation Example 6: Experimenting: Adolescent and mom independently experimenting (Case 9)**

*Rotates a block in front of her; (2)*  
*Adds another block to the first two blocks; (1)*

*Glancing at model, puts two blocks together; (4)*  
*Looks back and forth from puzzle to model; (5)*

*Picks up another block; Rotates it then adds it to his puzzle; Moves his puzzle to one side; (3)*

*Adds another block to his puzzle;*
Humm. Adds another block to her puzzle; Picks up a block and examines its sides; (6) Removes a block from his puzzle; Looks back and forth from puzzle to model; Puts it together with another block; (7)

While working independently on their own halves of the puzzle, this mom and adolescent exhibit the problem solving strategy of experimentation. Constructing his puzzle, the adolescent rotates blocks examining their sides (3), adds blocks (1,3,5,7), compares his puzzle to the model (5,7), and removes blocks (7). Likewise, mom experiments while constructing her puzzle when she examines blocks (1,6), compares her construction to the model (4); and adds blocks to her puzzle (4).

Similarly, the other dyad in the cooperative effort engages in experimentation.

Cooperation Example 7: Experimenting: Adolescent independently experimenting with puzzle construction (Case 2)

Beginning a new quadrant: Points to the section on the model that she's going to start; Picks up a block; Puts it in front of her; Looking at model, points to the pattern on the block; Turns block; OK. Points to the block; Puts another block beside it; Looking from puzzle to model, rotates block; (1)

Looks at model; Points to a block in her puzzle; This is ok. Removes a block from puzzle; Rotates it; Places it back in puzzle; Laughs; Glances at adolescent; Looks at block she is holding; (2)

This excerpt illustrates that the mom and daughter of the other cooperative dyad also uses the problem solving strategy of experimentation. This mom and adolescent experiments with the positioning of blocks when they examine blocks, compare their puzzles to the model, add blocks, rotate blocks and remove them (1-2).

Problem solving strategy: Starting Over: Beginning the Same Section Again

Only one example exists where the cooperative dyads demonstrate the problem solving strategy of beginning the puzzle again. Extending an example previously seen (see Cooperation Example 4), this adolescent begins his puzzle again after rejecting his mom's help.
Cooperation Example 8: Starting over: Adolescent begins his puzzle again after rejecting mom's help (Case 9)

Leaves block where mom puts it; Picks up another block; Puts it on the end of his puzzle. Moves this block to the top of puzzle; (1)

Continues to work on her puzzle, (2)

Looks up at mom; Breathes in deeply; Looks at model; Begins his puzzle again; Changes position of his four blocks; Shuffles them showing various combinations of patterns; (3)

Continues to focus on her puzzle; (Mom's manipulations are partially seen; The table is too small and the camera's focus is too narrow; (4)

Someone yells in the background; Looks to the side; Continues to work on his puzzle. (5)

Finishes her first puzzle; Presses it together and moves it aside; (6)

Assembles his quadrant correctly and quickly; (7)

This segment illustrates the adolescent using the problem solving strategy of starting over. Extending a previously seen example, the adolescent first changes the configuration of his blocks then begins same quadrant again (3). Re-engaging the task after being momentarily distracted (5), the adolescent constructs his puzzle quickly and successfully (7).

Summary

A subset of the problem solving strategies used by collaborative dyads are used by the cooperative partners. Crossing over in cooperative interaction takes a different form than in the collaborative effort. Instead of crossing over from primary constructor to primary monitor (or vice versa), the partners of cooperative interaction cross over by contributing to the other's puzzle. This assistance, which occurs infrequently, can be offered or solicited then accepted or rejected.

As a natural part of puzzle construction, cooperative moms and adolescents also experiment with the positioning of their blocks. In a single example of starting over, one cooperative adolescent takes apart his current puzzle and re-constructs the same section successfully.

Disagreement Within the Cooperative Effort

Although these dyads experience the same frustrations with regard to level of task difficulty and their puzzle constructions, the interaction of these moms and adolescents is less
conflictual. Because of the individualistic nature of the cooperative effort, conflict and its subsequent resolution is minimized. Only one incident of mild contention occurred within the cooperative effort. (See Cooperation Example 4).

This disagreement involves the adolescent's response to the level of the task difficulty and his frustrations about his puzzle construction. When he expressed his inability to do the task, his mom did not respond immediately. Responding moments later, mom tries to assist her son in his puzzle construction but her attempts are ignored. This incident is resolved when mom continues with her own work and the adolescent proceeds with his independent construction and does so successfully.

Social Interaction Within a Cooperative Effort

The kind of interaction engaged in by the cooperative dyads is dramatically different than the interaction experienced by the collaborative mom-adolescent pairs. Where the collaborative dyads engage in an ongoing exchange of ideas and feedback directly related to their joint puzzle construction, the cooperative dyads focus on their independent work. Given the nature of working separately on a common task, the two cooperative dyads in this sample engage in very different kinds of interaction. While working on their respective puzzles, one dyad (Case 2) frequently engages in light-hearted, social banter. The other dyad (Case 9) share only a limited social exchange. For example:

Cooperation Example 9: Social Interaction: Mom and adolescent engage in social banter (Case 2)

Glances up from her puzzle;  
Oh fast, are you?  (2)  

Adds a forth block to her section; (1)

Laughs; I'm fast...I'm fast. Looks at mom; Laughs more; (3)

Looks at daughter; Using one hand,  
HATE YOU/HATE YOU/HATE YOU.  
Put another block in her puzzle;  
Smiles; (4)

This brief excerpt illustrates the kind of social banter that is common for this dyad. While working separately on their own puzzles, this mom and adolescent engage each other in a light-hearted manner. As the adolescent constructs her puzzle quickly (1), her mom comments on her swift manner saying "Oh fast, are you?" (2). Responding with laughter, this adolescent agrees
with mom's perception (4). As the banter continues, mom playfully signs "hate you, hate you, hate you" before resuming her puzzle construction (4). Again the adolescent laughs (5).

In contrast to the playful social banter just described, the mom and adolescent of Case 9 engage in a limited social way. The following excerpt is drawn from a segment of interaction occurring while the Researcher adjusts the camera and before the instructions to the task were given to the participants. Notwithstanding a similar, limited display of social banter which occurred upon the successful completion of the task, the following represents a rare, light-hearted exchange between this mom and adolescent.

Cooperation Example 10: Social Interaction: Limited Social Exchange / Reaching agreement about working conditions (Case 9)

Researcher adjusts camera before mom and adolescent begin puzzle: (1)

Looks at adolescent; Smiles; Shrugs her shoulders a little; *I'm going to beat you.*

Laughs; (2)

Researcher laughs; Mom looks in her direction then looks at adolescent; (3)

Looking at adolescent; Leans forward in a poised position, as if ready for competition; (5)

Blows air through his lips; Smiles weakly; (4)

Direct and steady eye contact; Smiles more; (6)

Researcher interjects, instructing mom and adolescent to re-position their seats for the camera; Researcher explains instructions for task; (7)

Looks at mom; Points to the model and blocks; Same. (8)

Nods; *Um hum. Ok.* (9)

Mom and adolescent speak at the same time; (10)

Looking at adolescent; UNDERSTAND? (11)

Smiles; Points to himself then mom; Together. (12)

Smiles; Gestures: Closed fists facing up, Elbows bent, pulls arms close to body; Ready? (13)
Mom and adolescent look down at blocks; (14)

**Puts two blocks together then moves them aside:** (15)

**Looks at adolescent; WHERE? Which one are you doing?** (16)

**Oh, ok.** (18)

**Adds another block to the first two:** (19)

**Moves one block; Rotates another block;** (20)

This mom and adolescent engage in social banter before beginning the task. As the Researcher sets up, mom sets the tone of the interaction. Saying "I'm going to beat you" then poising herself as if ready for competition, mom communicates how she wants to approach the task (2, 5). Perhaps feeling uneasy, the adolescent blows air through his lips and simply smiles (4, 6).

After the instructions are given, mom and adolescent prepare to begin the task. Speaking at the same time (10), mom checks in with her son to determine if he understands the instructions (11). Simultaneously, the adolescent suggests that he and his mom work together (12). Either not hearing or simply not attending to his request, mom animatedly poises herself for competition again (13). As the adolescent begins constructing (15), mom asks him which section of the puzzle he is doing (16). Without further discussion about the working conditions, mom and adolescent work separately (19-20).

Notwithstanding the type and degree of social interaction the partners engage in, both moms make positive comments about their adolescents' progress during the task or highlights his/her accomplishments after successfully completing the puzzle.

**Cooperation Example 11: Social Interaction: Mom makes positive comments to adolescent (Case 2)**

**And all white. Places white block in puzzle; Looks up at adolescent then motions toward model with her hand; Unintelligible utterance.** (1)

**Points to adolescent's puzzle then the model; That's good. That's this one.** (3)

**Adds block to puzzle;** (1b)

**Vocalizes: Points to her puzzle;** (2)
This segment illustrates a cooperative mom giving her daughter positive feedback about her puzzle construction. After correctly adding a block to her puzzle, the adolescent draws attention to her work by vocalizing and pointing to her puzzle (2). Interested in her daughter's work, mom compliments her on her construction by saying "That's good", then identifies by pointing to the model which section the adolescent is constructing (3). Without directly responding, the adolescent concentrates on her work. Without responding directly, the adolescent considers her next move (4).

Similar to the previous example, the cooperative mom of the other dyad also makes positive social comments about her son's work.

Cooperation Example 12: Social Interaction: Mom makes positive comments about her son's work (Case 9)

Finishes the puzzle he is working on; Moves it aside; Glances at mom when she speaks; (1)

Glances at completed puzzle;
While working on puzzle: Gestures: "thumbs up"; Good boy. (2)

Looking at and pointing to the model; Which one are you doing? (3)

Points to the model; This one. Continues working on her puzzle; (4)

Beginning a new puzzle; Picks up a block and puts it in front of him; Puts a second block in from of him; (5)

This segment illustrates a cooperative mom positively reinforcing her son both verbally and non verbally. As this adolescent successfully completes his first quadrant, his mom praises him for his accomplishment. Although this mom praises her son in a child-like way by saying "good boy", (2) her comment was made casually as she continued working. Before beginning his next quadrant, the adolescent establishes which section his mom is doing (3-4).

In contrast to moms who praise their son's and daughter's work, the adolescents do not give their moms positive feedback. There was no evidence of the adolescent giving her mom positive feedback in Case 2. In Case 9, the adolescent does not respond with feedback, even after his mom asks for input.
Cooperation Example 13: Social Interaction: Adolescent gives mom no feedback even when he is asked (Case 9)

Works on her puzzle; There. Puts the last block in her puzzle; Leans back and looks at her puzzle; Waves her hand in front of adolescent to get his attention; (2)

Is that the SAME? (4)

Moves her puzzle aside; Ok. (6)

Adds a block to his puzzle; (1)

Looks up; (3)

Does not say anything; Continues working on his puzzle; (5)

This excerpt illustrates that this adolescent does not give his mom feedback, even when she asks him for it. As mom finishes her puzzle, she waves to get her son's attention (2). Seeking to get his opinion about the likeness of her puzzle to the model, mom asks him "Is that the same?". Responding only with his visual attention (3), the adolescent does not validate mom's construction even though it appears he saw her question (5). He simply continues working on his puzzle (5).

Summary

The interaction of cooperative dyads is dichotomous. One dyad engages in social banter while partners construct their puzzles independently. The other dyad remains solely task focused and engages in limited social exchange. Interestingly, while both cooperative moms make positive social comments to their adolescents, the son and daughter do not reciprocate even when, in one instance, feedback is requested. This suggests that cooperative moms take a directive role.

Puzzle Completion

In contrast to the collaborative dyads who did not complete the puzzle within the allotted time, the two dyads of the cooperative effort did so successfully. Furthermore, both dyads successfully completed the puzzle without needing the researcher's clue about the 3X3 dimensions of each quadrant of the puzzle. The partners in the cooperative dyads first complete their respective half-puzzles, then cooperatively complete the task by bringing the two halves together to make the whole.

Cooperative Interaction: Summary

In contrast to collaborative dyads who work together, cooperative dyads work separately on constructing the puzzle. In doing so, cooperative moms and adolescents primarily construct
and evaluate their own work. In limited ways, they evaluate each other's work. Cooperative dyads employ the same problem solving strategies of cross over, experimentation and starting over as collaborative moms and adolescents. However, because only two dyads engage in cooperative interaction, the frequency of these problem solving strategies are few and the strategy of changing focus (beginning a new section of the puzzle) is not present. Because of the nature of their independent work and the relatively few incidents of evaluation by the other, cooperative partners engage in few disagreements.

With the presence of few disagreements, the character of interaction within the cooperative effort is very different than that of the collaborative effort. One cooperative dyad engages in casual social banter when constructing the puzzle while the other interacts socially before the task begins and after the task is completed. This dyad remains task-focused and detached. Partners engage each other infrequently about the task. Finally, unlike collaborative dyads, the cooperative moms and adolescents complete the puzzle within the allotted time.

PART 4: Depictions of Adolescents' Skills and Abilities

The adolescent data reveal four dominant categories of skills and abilities which the deaf adolescents in this sample exhibit in their interactions with their moms. These age appropriate competencies are significant because they represent developmental milestones for the adolescents. They are markers that delineate important transitional points into young adulthood. An additional category addresses the adolescents' emotional responses to the task's difficulty:

(1) Demonstrates Independence and Autonomy
(2) Receptivity to Feedback
(3) Reaches Beyond Oneself
(4) Ability to Think Critically
(5) Responses to Task Ambiguity and Task Difficulty

Independent of the group to which they belong, the deaf adolescents in this sample exhibit these skills to varying degrees. Individual differences in the ability to perform these skills reflect the variability that is typical of this developmental period. Using specific examples from the transcripts each skill will be illustrated. Finally, the emotional milieu, created by the level of the task's difficulty will be addressed by illustrating the variation seen in the adolescents' responses.
SKILL 1: Demonstrates Independence and Autonomy

Whether engaged in a collaborative or cooperative effort, the deaf adolescents in this sample actively work constructing the puzzle. They demonstrate varying levels of independence and autonomy as they manipulate the blocks. Because of the independent nature of constructing the puzzle separately, presenting examples illustrating independence and autonomy from the cooperative dyads seems redundant. Therefore, Skill 1 examples reflect collaborative dyads only.

In a previously seen example, this adolescent from a collaborative dyad exhibits her independence and autonomy as she works on the puzzle.

Independence and Autonomy Example 1: Adolescent works independently in her role as constructor; mom observes and evaluates adolescent's work in her role as monitor (Case 6)

Picks up a block, places it in puzzle; Moves loose blocks aside slightly; (1)

Observe for the next 36 seconds; Glancing back and forth from model to puzzle 9 times as adolescent works; (2)

Puts two more blocks in puzzle; Presses puzzle together slightly; One after another, picks up 2 blocks and places them in puzzle; Scratches cheek; Picks up and puts another block in puzzle; Removes a block from puzzle then puts a different block in puzzle in a different place; Scratches head; Looks at model; Glancing at model, picks up and places two blocks in puzzle; Picks up and puts a third block in puzzle; (3)

Observing with down turned lips, shakes head no; (4)

Looks at model then removes a block; Reaches for another block; (5)

Picks up block; Places it in the same spot in the puzzle; Adjusts puzzle slightly. (6)

Points to a spot in the puzzle, looks at the model; OK (7)

Looks back and forth from puzzle to model; Looks at model with a puzzled expression on her face; Moves the model slightly; (8)

Puts two blocks in the puzzle, in succession; Pauses; Looking at model while pointing to the puzzle; (9)
Looks at adolescent and laughs; (10)  
Looking back and forth from model to puzzle; Re-arranges two blocks within the puzzle; (12)

Glances at mom; Smiles; What? (11)

Adolescent and mom point to the model together (12)

Adds a block where mom was working; While looking at model, places another block next to the one just added; Removes same block; Picks up a different block and places it in this spot; Pauses; (13)

Oberves adolescent glancing from puzzle to model; (14a)

Both mom and adolescent look at puzzle and model; mom has elbow on table and is resting her chin in her hand. (15)

At different points, as mom observes (2, 4, 8, 10, 13), this adolescent works independently assembling the puzzle. Adopting the role of constructor, she maintains her focus as she works industriously, experimenting with the placement of different blocks and the patterns they produce (1, 3, 5, 9, 14b). At one point during the adolescent's construction, mom, performing her role as monitor, non-verbally communicates her disagreement by frowning and shaking her head no (4). She intervenes by placing a block into the puzzle herself after the adolescent had removed an incorrectly placed block (6). Tacitly making another evaluation, mom looks at adolescent and laughs (10), before correcting another apparent error in the puzzle (13).

In a similar example which illustrates independence and autonomy in a collaborative dyad, another adolescent works independently then gives mom direction on how she can contribute to the puzzle construction.

Independence and Autonomy Example 2: As constructor, adolescent works independently on puzzle; as monitor, mom observes her son's work; adolescent gives mom directions on how to contribute to puzzle (Case 8)

Looks at model and a block; This will be a corner. (2)

Takes the three block puzzle apart; Looks at mom; (1)

Lifts a block slightly; Ok. corner right here. Points to model; Unintelligible utterance. Ok? (3)

Looking at model; Ok. (4)

Adds block to puzzle; Picks up other block; rotates it and puts it in the puzzle; (5)
Observes, looking from model to puzzle; Unintelligible utterance. (6)

Observing; Ahh, that's right. (8)

Smiles while observing her son's work; Looks back and forth from puzzle to model; (10)

Picks up a block; (11a)

Adds a white block to puzzle; (12)

Adds block to puzzle. Reaches for another block; (7)

Adolescent adds block to puzzle; Rotates it within puzzle until he finds the side he wants; (9)

Looking from puzzle to model. White. Places a white block in puzzle; Glances at model; Points to puzzle; Another white here. (11b)

Adds another white block to puzzle; Presses puzzle together; (13)

In this example of mom-adolescent interaction, the teenager works independently constructing the puzzle while mom observes and offers her input. In his role as constructor, the adolescent maintains his focus and actively works at assembling the puzzle. He looks back and forth from the model to the puzzle as he manipulates the blocks and puts them together in different configurations (5, 7, 9). He mediates the task non-physically by manipulating the blocks (5, 7, 9, 11) and verbally when he talks about what his is doing (3, 11). In her role as monitor, mom observes what her son is doing, giving him both verbal (4, 8) and non-verbal affirmation about his construction (10). When her son talks about his next move (11), mom accepts this cue and adds a block to the puzzle herself (12).

In addition to task-oriented independence, another way in which the adolescents express their autonomy occurs when they assert opinions that are different than their moms'. The ability to maintain their own views or challenge the views of their moms demonstrates that the adolescents are confident about their own ideas.

In the following example from a collaborative dyad, the adolescent and mom work together on constructing their first section of the puzzle. After experimenting with different configurations of blocks, mom proposes that they start a different section of the puzzle. The adolescent, however, rejects this idea and brings mom back to the original problem.
Independence and Autonomy Example 3: Working collaboratively, adolescent asserts her independence and autonomy by maintaining her own position and challenging her mom (Case 1)

No don't do it that way. Pointing to block; Take that one away. (2)

Take it away. Over there. Go put it over there. Makes sweeping motion of her hand, toward loose blocks; (4)

Makes circular motion from adolescent's side of the table to her side; Do you want to come around here? (6)

You want to do it from that side. Alright. Do you want to work on this one? Makes a circular pointing motion above the model; (8)

You do this one. Alright. Puts block in front of adolescent; (10)

Laughs; (12)

Nods; Alright. Try it that way. Try it. (14)

Nods; Ok/Ok. (16)

Points to the block; That way. That looks good. Good. (18)

Moves block within puzzle to different location; (1)

Looks at mom and rotates the block; Which way? (3)

Moves block as mom indicated; (5)

No. Smiles; (7)

Raises her eyebrows; Shakes her head slightly; (9)

Smiles at mom; Points to the block in front of her; I don't think it's wrong. (11)

Smiling; Turns block over to a specific side; This. Taps block with finger; (13)

Points to block; White here at the corner. Taps the model twice with finger; (15)

Changes the position of the block slightly but seems hesitant; (17)

This adolescent asserts her independence and autonomy by maintaining her own position and by challenging her mom. In her role as monitor, this mom is directive when relating to her adolescent. She tells her daughter "no don't do it that way...take that one away..." (2, 4). Then, aware that sitting across the table from each other gives her and her daughter reverse perspectives, mom suggests that the adolescent move to her side of the table (6). In response to these directive overtures, this adolescent demonstrates a balance between accommodation and
autonomy. Initially, she follows her mom's lead by removing the block as directed (3, 5). Then, asserting her autonomy, she decides not to change her seat (7). However, the most compelling display of this adolescent's ability to assert her independence occurs when she expresses that the way she is constructing the puzzle is not wrong (11). In disagreeing with mom, this adolescent remains polite. She smiles while describing her perspective (11, 13). When mom concedes and encourages the adolescent to try it her way, the adolescent explains to mom how she believes the section is constructed (14-16). However, when experimenting with her idea, the adolescent appears hesitant (17). When this occurs, mom acting as monitor, validates that her move is correct and offers encouragement (18).

Whereas the adolescent in the preceding example asserts her autonomy when confronted with her mom's directive approach to the task, the following excerpt from a collaborative dyad illustrates an adolescent demonstrating his autonomy by maintaining that his construction of the puzzle is correct in the face of his mother's evaluative comment.

**Independence and Autonomy Example 4: Adolescent demonstrates autonomy by asserting his puzzle construction is correct; Mom eventually agrees (Case 3)**

Looking from model to puzzle;  
**Looking from model to puzzle;**  
**Laughs:** Are you sure? (2)

Yeah but look/look/look. **Holds model in one hand; Points to a specific area on it with the other hand; This/this is pointing this way.** (4)

Does not let go of model; **Holds up an index finger;** Yeah. Ok. You're right. (6)

Both tug on model then adolescent lets go; (7)

Looking at and holding model;  
**Looking at and holding model;**  
**There's one.** (9)

This excerpt demonstrates how this adolescent maintains his position when confronted
with his mom's objections. As monitor, mom expresses doubt about the adolescent's puzzle construction (2). Upon being questioned, the adolescent asserts that the section is completed correctly (3). When mom raises a specific objection by pointing to and remarking about an area of the model (4), the adolescent asserts his position by explaining that it is supposed to be pointing that way (5). Moments later, mom re-considered her position and concedes that the adolescent's construction is correct (6,9).

In contrast to the preceding examples, the collaborative adolescent in the following excerpt demonstrates less independence and autonomy. Specifically, he often takes his cues from mom while constructing the puzzle.

**Independence and Autonomy Example 5: Adolescent demonstrates less independence and autonomy (Case 10)**

*Studies puzzle; (1)*

*Looks over his shoulder; Looks back at puzzle body, then looks to his left; (2)*

*Without adolescent's attention:*

*MORE WHITE* Reaches for a white block and puts it in the puzzle; Taps adolescent's hand; Says: Kirk? (3)

*Both mom and adolescent study the puzzle; (4)*

*Glances up at mom; (5)*

*One of those. Points to model; (6)*

*Points to the same place in the model; (7)*

*Touches a block; (8)*

*Picks up the same block mom touches; Rotates the block, looking at its sides; (9)*

*Observes; (10)*

*Places the block in the puzzle; Rotates block within puzzle; Looks at mom; (11)*

*Tilts her head; Raises her eyes; Softly says: Humm. (12)*

*Pierces his mouth; Glances away from puzzle briefly; Looks down at puzzle; (13)*

In contrast to the previous examples, this adolescent is less independent and autonomous in his work on the puzzle. While engaged in the joint problem solving task, not only is this adolescent distractible (2), he is dependent upon his mom for cues. The adolescent studies the puzzle with mom (4), points to the same place on the model as mom (6-7) and picks up the block...
that mom touches (8-9). Although appearing less able to take independent action within the context of this joint problem solving task, this adolescent may be reacting to the degree of task difficulty. Alternately, because this adolescent and his mom frequently engage in non-verbal communication, his ability to perform in this collaborative interaction may be affected by the absence of a reciprocal, effective communication system.

**Summary**

Independence and autonomy are important milestones of adolescent development. These examples illustrate two ways in which these deaf adolescents demonstrate these competencies. The adolescents are not only able to work in a focused and industrious way, they can assert their own opinions and defend their positions and actions. One low communicative adolescent, who takes less initiative and depends more upon cues given by his mom, may be hampered by poor communication skills.

The adolescents of the two cooperative dyads in this sample, both of whom successfully completed their half of the puzzle, exhibit independence and autonomy by virtue of their working separately in successfully constructing the puzzle.

**SKILL 2: Receptivity to Feedback**

In juxtaposition to independence and autonomy, the adolescents in this sample demonstrate varying degrees of receptivity to feedback. Whether constructing the puzzle collaboratively or cooperatively, the adolescents consider their moms' ideas. When balanced with independence and autonomy, receptivity to feedback is an important interpersonal skill that contributes to a balanced social self. There are times when autonomy and self assertion are necessary; other times when receptivity to others' ideas is needed. Both are skills of the developing, maturing adolescent.

In the following, previously seen, example of a collaborative dyad, this adolescent demonstrates maturity when she considers and utilizes mom's feedback.

**Receptivity to Feedback Example 1: Adolescent is receptive to the changes suggested by mom (Case 6)**

*Looks at model; (1)*  
*Rotates block within puzzle; (2)*

*Observes; Reaches for block then stops; Gestures: TURN IT AROUND.*

*Taps a block in a different section;*
Like that. (3)

Nods and whispers; Yeah. (5)

Looking from model to puzzle, turns the block around; Softly spoken: Yeah. (4)

Shuffles other blocks within puzzle; Looks at model; There. (6)

This example illustrates how this adolescent is receptive to the feedback her mom offers. As this mom and adolescent work on a puzzle together, mom recognizes an error in the emerging pattern (3). Acting as monitor, mom proposes that the adolescent change the position of a block, copying the configuration of a similar section of the puzzle (3). The adolescent, who is receptive to the idea, complies and changes the block as mom suggested (4). Then, before continuing with the puzzle construction, the adolescent and her mom successively evaluate the change as correct (4-6).

Where the preceding example demonstrates receptivity to feedback in collaborative interaction, the following segment illustrates an adolescent’s acceptance of her mom’s input while they work cooperatively. In the following excerpt, the adolescent is receptive to mom’s unsolicited input when mom crosses over to assist her daughter with her puzzle.

Receptivity to Feedback Example 2: Cooperative adolescent is receptive to mom’s input (Case 2)

Points to the place where next block goes in her puzzle; (1)

Pushes block in place; (3)

Tries to fit the last block in her section; WRONG ME. Rotates the block; Finds the correct side and places block in puzzle; Puzzle is correctly finished; Gestures: (a palm up hand gesture) THERE IT IS. ALL DONE. Laughs; Presses her puzzle together to secure its shape; (5)

STAY, STAY. (7)

This example illustrates the receptivity of this adolescent engaged in a cooperative effort
with her mom. Although this dyad works separately on their respective halves of the puzzle, mom offers unsolicited assistance when she intentionally places a block close to where it should go within the adolescent's segment (2). The adolescent accepts this help by pushing the block into its intended position (3). As mom laughs (4), the adolescent concentrates on working to complete her first puzzle segment (5). When done, she happily and proudly displays her work (5). Joining in, mom laughs too and playfully cautions her daughter not to move it (6). The adolescent agrees (7).

While some adolescents demonstrate that they are open to their moms' input, others are less receptive. The adolescent in the following example which was seen previously, also in the cooperative condition, resists his mom's input.

**Receptivity to Feedback Example 3: Adolescent is not receptive to mom's input (Case 9)**

*Glances up at adolescent then continues working on her puzzle; (2)*

*Stops her work 21 seconds later; Looks at her son, half-smiling; It's hard? (4)*

*Looking at mom; Points to model and whispers: I can't do this. Looks at mom a moment longer; Takes his puzzle apart and begins again; (3)*

*Without responding, the adolescent picks up a block and adds it to his puzzle; (5)*

*Try this. Generally points to some blocks then to the model; Try that. Points to a line in a block; And then. Picks up a block and attempts to put it in son's puzzle; (6)*

*Leaves block where mom puts it; Picks up another block; Puts it on the end of his puzzle. Moves this block to the top of puzzle; (7)*

*Continues to work on her puzzle; (8)*

*Looks up at mom and breathes in deeply; (9)*

Within this context of cooperative interaction, this adolescent is resistant to mom's input. Frustrated with the task, this adolescent stops working, remarks to his mom that he finds the puzzle difficult and expresses his inability to do it (1, 3). When mom does not respond, the adolescent resumes working on his section. Moments later, mom stops working herself and
addresses her son's comments (3, 4). Although the assistance mom offers is non specific (6), the adolescent appears to ignore her attempt to help. He does not give mom his attentional focus when she addresses him (4-5) or consider her suggestions (6-7). Interestingly, when mom withdraws her attention and continues with her own work (8), the adolescent displays anxiety by looking up at mom and sighing deeply (9).

Interestingly, this segment of interaction illustrates how each partner unsuccessfully tries to engage the other. When support is sought by the adolescent but not given immediately, he reacts by withholding his own attention when later, mom tries to engage him. This adolescent is not receptive to mom's feedback, perhaps because of its timing or because he had begun working independently.

Another example of an adolescent rejecting feedback occurs when a collaborative mom identifies a problem within the puzzle construction. When mom, recognizing that one section of the puzzle is disproportionately large, makes a suggestion, it is rejected by the adolescent.

Receptivity to Feedback Example 4: Adolescent not receptive to the ideas mom presents (Case 4)

Looks at adolescent; Made it too big. (2)

Hum? (4)

Touches puzzle with fingertips;
How can we? Moves model slightly.
Points to the disproportionate section of the puzzle; Looks at adolescent;
Can you make this one any smaller? (10)

I don't know/I don't know. You can take some sections out. (12)

You can't? (14)

Looks at model then puzzle; What's wrong? (1)

Unintelligible utterance. (3)

Unintelligible utterance. (5)

Partial unintelligible utterance. I don't know. (7)

Smiles. Removes a block from a completed section of puzzle and uses it to construct another section. (9)

Looks at mom; How? (11)

You can't do it. Can't make it smaller. (13)

Well. Removes a block from the correct, completed half of the puzzle; Looks at model then returns
Removes two blocks from the completed puzzle; **You need all black on that side.** Rotates blocks in her hand; Puts them on the table then picks up one of them. (16)

Puts block in a different location of the puzzle, black side up; **All black.** Like that? No? (18)

*block to its original position;* (15)

Attempts to take the block from mom; (17)

Looks at mom; **No. Unintelligible utterance.**
Smiles; (19)

This excerpt illustrates that this adolescent is unreceptive to her mom's evaluation that one quadrant of the puzzle is disproportionate to the others. When mom suggests that this section of the puzzle needs to be made smaller (10), the adolescent challenges her by asking how it could be done (11). When mom hesitantly remarks that the adolescent can remove some of the blocks (12), the adolescent objects saying "You can't do it... can't make it smaller" (13). The discussion ends there and both mom and her daughter continue to work on the puzzle. They cope with the presenting problem by removing blocks from completed, correct sections and using them to construct the other section of the puzzle (15, 16, 18).

Following this segment, the researcher enters the room and gives the dyad instructions on how to make the disproportionate quadrant smaller. Interestingly, this adolescent, who was not receptive to this idea when presented by mom, accepts feedback from the researcher carrying out the study (see Appendix C).

**Summary**

The adolescents in this sample show varying degrees of receptivity to their mom's input. When receptive, the adolescents accept and follow through with their moms' ideas then implicitly or explicitly evaluate its outcome. When unreceptive, these adolescents either ignore their moms' input or they expressly reject it.

**SKILL 3: Reaching Beyond Oneself**

A skill complementing receptivity is the ability to reach beyond oneself. Most commonly, this occurs when adolescents seek out their moms' opinion about their puzzle construction. Alternatively, reaching out can also occur when adolescents spontaneously assist their moms
while working on the puzzle. This capacity to reach out reveals another age appropriate skill. In the following previously seen collaborative example, one adolescent seeks out his mom's opinion about the moves that he makes.

**Reaching Beyond Oneself Example 1: Adolescent non verbally seeks out his mom's opinion about the moves he makes (Case 10)**

*Tilts her head; Hummm? (2)*

*Shakes head; NOT the SAME. Points to model; (4)*

*No that's. BLACK FINE. Half smiles; (6)*

*Moves the block to its original position (perhaps with adolescent's help); OK. (8)*

*YEAH; (10)*

Rotates a block; Looks up at mom; (1)

Puts block, white side up, in the puzzle; Looks at mom; (3)

Rotates block so that a different side is showing; (5)

Looks at mom; (7)

Presses the puzzle together; (9)

In seeking out mom's feedback about a move he just made, this adolescent reaches beyond himself and solicits mom's opinion. Using non-verbal communication, he rotates a block within the puzzle then looks to his mom for feedback (1). Responding, mom evaluates his move as incorrect (2). Making two consecutive adjustments, the adolescent, again looks to mom for feedback (3, 5). When evaluating these moves, mom assesses one as "Not the same" (4) then evaluates the other as incorrect when she tells her son that the original placement was fine (6). As mom moves the block back to its original position (8), the adolescent, tacitly accepts his mom's evaluation, then presses the puzzle together, securing its shape (9).

In contrast to the preceding example where the adolescent seeks out his mom's feedback non verbally, the following example illustrates a collaborative adolescent who verbally asks for her mom's opinion.

**Reaching Beyond Oneself Example 2: Adolescent asks mom her opinion about the moves she makes (Case 4)**

*Reaches to the top of the puzzle; One after the other, picks up two blocks and puts them in the puzzle; Looking at model; I don't know if that's right. (1)*

*Laughs; (2)*
Puts another block in the puzzle; Looks at the model; What do you think? (3)

Adolescent and mom look at the model and puzzle together; (4)

Pointing to the model; Well this point comes out here for a triangle. (5)

Rotates the block that was next to it; (7)

No. (9)

You see the point here. Pointing in the direction of the stripe; (11)

Pointing to model; Yeah. But look it. The point is here on this one. (13)

Begins to remove block from puzzle; (15)

Removes block she just placed in puzzle; (6)

That's right mom. (8)

Oh no, it isn't. Rotates the block. (10)

Turn it back. This is the way it goes. (12)

Looks at model; Picks up a block; Ok/Ok/Ok/Ok. Where does this go? (14)

Put it back. Put it back in. Takes the block that mom is removing; Puts it in its original position; Places another block next to it; (16)

This excerpt demonstrates an adolescent directly and explicitly seeking out her mom's feedback about a move she just made. After positioning blocks in the puzzle, this adolescent expresses doubt in her construction (1) and asks her mom, "What do you think?" (3). Accepting mom's explanation why the move is incorrect, the adolescent removes the offending block (5-6). When mom changes the position of a block within the puzzle, the adolescent first acknowledges mom's move as correct, then changes her mind (8-10). In the exchange that follows, the adolescent appears irritable with mom when she becomes directive and repeats her point (12-16).

Despite her focus in assembling the puzzle herself, this adolescent does seek out and use her mom's input. In contrast to a previous example where the same adolescent rejects her mom's unsolicited input (see Receptivity to Feedback Example 4), this segment shows her seeking out her mom's opinion.

In contrast to examples of adolescents seeking out their moms' opinion, this previously seen collaborative example illustrates an adolescent reaching out to assist her mom, who misunderstands the researcher's clue.
Reaching Beyond Oneself Example 3: Adolescent reaching beyond herself when she helps her mom understand the clue given by the researcher (Case 5)

Taps adolescent's hand; (1)

TRY and SEE. Points to/counts three blocks along the width of the section then places those blocks, which the adolescent previously removed, back into the puzzle; This makes the current section disproportionate to the rest of puzzle;
Whispers: THIS BIG. Traces the outside of the whole puzzle with finger, outlining a square; (3)

Looks at adolescent; Mouthing the words (barely audible) OR THREE BY THREE. OR REALLY SMALL. OR BIG. (5)

OK. TRY SMALL. (7)

Together, they remove the extra blocks from puzzle; (8)

Picks up block; Adjusts model, rotates it to a different angle; (9a)
Removes another block from puzzle; (9b)

This example illustrates the adolescent reaching out to assist her mom. This mom misunderstands the researcher's clue about the proportion of each quadrant of the puzzle (3). When the adolescent explains to mom that each section is a 3 X 3 square (4), she demonstrates her confidence in her own perspective. Moments later, the adolescent demonstrates this a second time. Still misunderstanding the dimensions of each quadrant, mom gives her daughter the choice of making the puzzle big or small (5). Responding according to the clue, the adolescent correctly chooses to make the puzzle small (6). Although it seems that the adolescent is unsuccessful in helping mom understand the proportions of the puzzle, when mom agrees to make the puzzle small (7), the adolescent does not belabour the point. Both mom and daughter move forward and continue working (8-9).

In contrast to the preceding examples where the adolescents reach beyond themselves either requesting their moms feedback or, the adolescent, in the following previously seen cooperative example, demonstrates failure to do so.
Reaching Beyond Oneself Example 4: Adolescent not reach out or respond, even when feedback is requested (Case 9)

Referring to her puzzle; Says very softly: It goes this way, Ok. Adjusts a block in puzzle; (2)

Works on her puzzle: There. Puts the last block in her puzzle; Leans back and looks at her puzzle; Waves her hand in front of adolescent to get his attention; (4)

Is that the SAME? (6)

Moves her puzzle aside; Ok. (8)

Looking at model, manipulates one of three blocks that are in front of him; (1)

Adds a block to his puzzle; (3)

Looks up; Appears to see mom sign; (5)

Does not say anything; Continues working on his puzzle; (7)

In this excerpt the adolescent does not reach beyond himself and respond to mom's request for feedback, even when she seeks it out. When mom finishes her puzzle first, she gets her son's attention and asks if her completed half of the puzzle resembles the model (4, 6). Responding only with his visual attention, this he does not answer his mom's question, although it appears that he saw the communication (5). Instead the adolescent continues with her own work (7).

Summary

The adolescents in this sample, to varying degrees, demonstrate that they possess the ability to reach beyond themselves. Taking different forms, these adolescents seek out their mom's opinion about their puzzle constructions; another attempts to help clarify her mom's misunderstanding. Another however, refuses to reach out and give his opinion, even when mom requests it. This variability in responses reflects differences in the interaction or perhaps, individual differences in the rate of one's development.

SKILL 4: Ability to Think Critically

The ability to think critically is necessary when working on a problem solving task. The deaf adolescents, in this sample, demonstrate this ability when they execute specific moves then evaluate them. In the following excerpt is from a cooperative dyad.
Critical Thinking Example 1: Adolescent demonstrates critically thinking when she evaluates her work; (Case 2)

*puts the two blocks together; Rotates both blocks while looking at the model; WRONG ME. Rotates blocks again, comparing them to model; Furrows then raises her eyebrows; HUH? Laughs; (1)*

Glances up; Laughs, too; (2)

In this simple example, this adolescent demonstrates her ability to think critically when she evaluates her own puzzle construction as incorrect. While comparing the model to the blocks she is holding, she exclaims "Wrong me" (1). She also demonstrates her analytic ability by questioning herself about her next move (e.g., "huh?") (1). Although this excerpt does not indicate the specific content of what she is thinking about, it does demonstrate that she is critically evaluating her work.

In the next example, an adolescent, in a collaborative dyad, demonstrates critical thinking primarily through the manipulation of the blocks.

Critical Thinking Example 2: Adolescent demonstrates critical thinking through the manipulation of blocks (Case 1)

*Moves a block near the first one; (1)*

Tilts her head; Ummm? (2)

Rotates both blocks together, changing the angle of the design; (3)

Touches puzzle; That. No. (4)

Yeah. Partial unintelligible utterance. Points to model and specifies the lines of the puzzle; (5)

Is that right? Ok. You need one.

Points to the puzzle; Moves a block slightly with her finger; (6)

Still pointing to the model, picks up this block;
Puts block on table near the puzzle; (7)

This example illustrates the critical thinking ability of an adolescent in a collaborative dyad. In contrast to the preceding example where the adolescent mediates the task both verbally and non verbally, this adolescent demonstrates her critical processes primarily through the physical manipulation of the blocks. She rotates a block within the puzzle, then rotates two blocks together, changing the angle of the design (1,3). When mom disagrees with her daughter's construction (4), the adolescent remains resolute, pointing to both the model and her puzzle as confirmation (5). Re-considering, mom agrees with her daughter and suggests the next move (6).
In another example of critical thinking, this excerpt from a collaborative dyad illustrates how this mom's and adolescent's critical thinking style manifests itself differently.

**Critical Thinking Example 3: Adolescent and mom have different styles of critical thinking (Case 5)**

*Manipulates a block with adolescent; (barely audible) Yeah that's it* Points to puzzle; Points to model; (barely audible) Look, see, This is there, And this is here.

(1)

*Looks at puzzle; Wait, let me think.*

(3)

*Turns a block; Let's try it this way.*

(5)

*Rotates block within puzzle; Wait.*

This way, That way? (7)

*Adds two blocks to the puzzle;* (2)

*Rotates a block within the puzzle;* (4)

BLACK/BLACK. (6)

*Points to the block; BLACK/BLACK.*

Points; BLACK. (8)

BLACK. Rotates the same block within puzzle.

Looks from puzzle to model and back; (9)

*Smiles; Points from puzzle to model and back; Yeah, that's it. Pauses briefly; No.* (10)

Looks at mom; Makes gesture above puzzle, indicating the direction of a line; (11)

*Uses same gesture above model; Unintelligible utterance.* (12)

*Picks up a block; Rotates it; Places it in the puzzle;* (13)

Reflecting a highly verbal style, mom speaks out loud, sometimes in fragments, as she manipulates the blocks (1, 3, 5, 7, 11). In other segments of interaction (not shown here), this mom effectively converses in sign language with her daughter. In contrast to this highly verbal analytic approach, the adolescent uses both action and verbal communication. Using action, the adolescent thinks critically when she both manipulates the blocks within the puzzle (4, 10, 14) and compares her constructions to the model (10). When she mediates the task verbally, she does so in a more limited way by repeating the one word utterance "Black" (6, 8, 10) and pointing to specific blocks or lines in the puzzle (8, 12).

The final example demonstrates an adolescent's ability to think critically using speech.
Critical Thinking Example 4: Adolescent mediates task and thinks critically using speech (Case 3)

*Picks up a block and drops it;* 
*Oops.*  

*Adds a block to puzzle; Rotates two blocks within puzzle;*  

*Looking from puzzle to model, Let's see if that's a... (pause) Ok. Is is that a big triangle?*  

*Holding model vertically with one hand; Looking from model to a block; We have it like this.*  

*Points to one block in the puzzle; Ok, that's the top. Points to another block in the puzzle; That's the bottom corner, right? Looks at model;*  

*Looks from puzzle to model; What's that supposed to be?*  

*Looking from model to puzzle; That looks. Points to model; Holds his index finger in the air; Ok, Yeah/Yeah. Points to puzzle; You've got one part right. Moves a block into puzzle; So, that's alright here... so...um... we need to fill in the....*  

*Mom holds model with adolescent;*  

*Points to model; Ok, we're up to about here;*  

*Slides block into the middle of puzzle; Presses puzzle together with palm of hand;*  

*Looks at model; Touching puzzle; Yeah. Looks at puzzle;*  

In this excerpt, the adolescent demonstrates his ability to think critically and analyze the design of the puzzle using speech. In a highly verbal exchange between the adolescent and his mom, this teenager locates his place in the puzzle by comparing it to the model (3). As mom manipulates two blocks within the puzzle (4), the adolescent questions her about her move (5). In critically evaluating her construction of a 'big triangle' (6), the adolescent agrees that the pattern mom produced is correct (7). In analyzing the puzzle further, the adolescent decides upon the next step and begins to fill in the puzzle (7, 9, 11).

**Summary**

The ability to think critically is an age-appropriate skill acquired by the deaf adolescents in this sample. These examples illustrate that the adolescents' possess the ability to critically analyze
their puzzle constructions and that of their mom's. In doing so, they mediate the task using both verbal and non-verbal means. The ability to demonstrate critically thinking is independent of the adolescent's mode of communication.

**Responses to Task Ambiguity and Task Difficulty**

The block design problem solving task was chosen for its degree of difficulty and challenge. During puzzle construction, the adolescents show a range of emotional and behavioral responses to the level of task difficulty, the ambiguity it holds for the participants and the difficulties that arise when working with a partner. The following examples illustrate the varied responses of repeated attempts (Case 8), distractibility (Case 10), frustration (Case 1), hostility (Case 4) and, playfulness (Case 2).

This example illustrates an adolescent, from the collaborative dyads, managing the task difficulty with persistence. Using repeated attempts, he successfully constructs the puzzle.

**Response to Task Difficulty Example 1: Dealing with task difficulty:** Adolescent exhibits signs of discouragement; With repeated attempts, succeeds in completing a quadrant (Case 8)

*Points to model; Ok, we're right here, right? Moves block slightly; Looks from block to model; And the one up there. Picks up block and rotates it in his hand; (1)*

*Picks up block; Rotates it in her hand; (2)*

*Puts block on the table; Moves model close to him; Points to a diagonal line in the corner of it; Pushes model away and manipulate blocks in front of him; (3)*

*Moves blocks in puzzle; (4)*

*Watches; Looks at the model; Slumped posture; Looks at mom; Straightens up and reaches for blocks mom is manipulating then withdraws his hand; (5)*

*Smiles; Looks at model; You can tell we're related. (6)*

*Withdraws her hands; That doesn't work either. (8)*

*Oberves; (10)*

*Looks at mom; Reaches toward puzzle; (7)*

*Looking from model to puzzle, rotate a block; (9)*

*Moves puzzle over; Picks up another block; Looking at model, rotates block in his hands*
Continues to observe; (12)

Oh, you're so smart. Smiles; (14)

Corner one. (16)

In a soft voice, That's it. (18)

Moves loose blocks aside; Very good. You got one done. (20)

examining it; Puts block in puzzle; Picks up another block, rotates it and adds it to the puzzle, too; (11)

Adds a block to the puzzle; Picks up another (13)

Looks at model; Rotates block; Sighs; (15)

Puts block in puzzle; (17)

Picks up another block; Places it in puzzle; Adds last block to complete the section; (19)

Moves completed puzzle aside; (21)

This excerpt reveals the adolescent's persistence as a way of managing the ambiguity of the task and its level of difficulty. Prior to mom contributing to the puzzle, this adolescent works diligently in his constructions (1, 2). Then, with slumped posture which suggests a discouraged demeanour, the adolescent observes mom as she experiments with her own idea (4-5). Her remarks, "You can tell we're related" (6) and later, "That doesn't work either" (8) reveal that both mom and adolescent are experiencing difficulty constructing the puzzle. A turning point occurs when the adolescent begins again to construct the puzzle (9). As the adolescent experiences success (11, 13, 15, 17, 19), mom encourages his endeavour until the section is completed correctly (14, 18, 20).

The following dyad represents a mom and adolescent from the collaborative dyads who did not successfully complete any quadrant of the puzzle. This adolescent's response to the task difficulty is inattentiveness and distractibility.

Response to Task Difficulty Example 2: Dealing with task difficulty: Adolescent is inattentive and distractible during puzzle task (Case 10)

Studies puzzle; Picks up corner block; Examines and rotates it; Puts block back in puzzle; (2)

Studies model; (4)

Looks around the room; (1)

Makes faces into the camera using soundless mouth movements; (3)
As this example illustrates the adolescent responds to the difficult puzzle task by being distractible, as indicated by looking around the room and making faces into the camera (1, 3) while his mom is working. In addressing this behaviour, his mom casually admonishes it (4) and assists her son in becoming more task focused. Mom gives her son direction and draws him back into the task by pointing to what she is looking for on the model. She directs him to "Find a straight one" (6).

Another way an adolescent deals with the ambiguity of the puzzle and the tension created by its level of difficulty is by expressing her difference of opinion. In the following, previously seen collaborative example, this adolescent's objections to her mom's input is the precipitating factor which leads mom to switch from working together to working independently.

Response to Task Difficulty Example 3: Dealing with task difficulty: Adolescent objects to her mom's input (Case 1)

Placing block next to the first; Rotates it; (1)

Tilts her head; No. Rotates the second block; (4)

Laughs; (6)

Picks up a block; Looking at model, begins a different section of the puzzle; (8)

Mom and adolescent work on separate sections of the puzzle for a minute (57 seconds); Adolescent changes her focus and, still working independently, constructs a different section of the puzzle; Mom and adolescent casually engage each other by commenting on the task's degree of difficulty (9)
While pointing to puzzle, studies model; (10)

Points to model: This one? Ok.
That looks. Pauses; (10)

Puts block in puzzle; Pushes puzzle to the middle of the table; (11)

In this example, the adolescent objects to her mom's attempt to manipulate blocks in an area of the puzzle on which they are working. By objecting both verbally and non-verbally (saying "Nooo" then shaking her head) and physically (taking the block away from mom and changing it back to its original position), the adolescent communicates that mom's intervention is unhelpful and unwelcome (5). Mom manages the dissonance created by her daughter's objections by laughing and working on a different section of the puzzle. (6, 8). Mom works separately for almost a minute before re-engaging with her daughter on a common section (10). As the adolescent pushes her puzzle toward the centre of the table, she tacitly communicates that mom's assistance is wanted (11).

The following example is similar to the preceding one except it illustrates a greater degree of emotional intensity. This collaborative adolescent manages the task difficulty and its ambiguity by appearing openly hostile and critical of both the task and her mom.

Response to Task Difficulty Example 4: Dealing with task difficulty: Adolescent directs strong feelings toward the task and her mom (Case 4)

Points to puzzle: This part... Annie? (1)

This is stupid, do you know that? (2)

Pointing to puzzle; This doesn't look right, does it? (3)

Points to the model; Look! (4)

Laughs, leans toward adolescent, touches her shoulder; I am looking. (5)

Mom, you embarrass me. (6)

Looking at the puzzle; Laughs; I don't want to it. It's too tough. Touches puzzle; (7)

You're not very smart. Puts a block in puzzle; (8)

Removing this same block and sets it down; Ok, my turn to be stuck. Looks at puzzle; Touches blocks deciding which to picks up. Looks at model;
Observing: I'm glad you do because I don't. (11)

I'm glad you've got it because I don't. Touches and slightly moves block that is in front of her; (13)

Adjusts puzzle; Now what? (15)

Um hum. Looks at model; (17)

Picks up block in front of her; Rotates it while examining it; Sets it down. Moves model slightly. (19)

Touches other blocks before deciding which to picks up; Unintelligible utterance. Puts the last block in this section of the puzzle. (10)

Looks at mom; Hum? (12)

Looks at model; You've got to think mom. (14)

Looks at model; You've got to think mom. (14)

Touch several blocks; Looks at them; Do I have to do all the thinking? (16)

Reaches to the top of the puzzle for a block; Puts it down in front of her; Looks at model; (18)

Looks at and touches a loose block then looks at the model. (20)

Perhaps, as her way of coping with the frustration she feels while working on this puzzle with her mom, this adolescent is openly hostile and critical. First, the task itself is the target of this adolescent's frustration when she says "This is stupid, do you know that?" (2). Second, she makes a series of hostile and critical remarks of her mom saying "Look!" (4); "Mom...you embarrass me" (6); "You're not very smart" (8); "You've got to think mom" (14); "Do I have to do all the thinking?" (16). In responding to these disparaging remarks mom demonstrates that she does not take them personally or seriously. Mom uses a number of strategies to diffuse the intensity of her daughter's emotional state. She uses humour to lighten the atmosphere when she laughs, leans toward her daughter and says "I am looking" (5). Mom admits the puzzle is too difficult for her (7, 11) and encourages her daughter's progress (11, 13, 15). Mom diffuses her daughter's insult when mom agrees that she is not smart (9). Although this adolescent's emotional response to the ambiguity of the task is strong, it illustrates the variability and range of responses.

In a final example of emotional responsiveness to the puzzle and its degree of difficulty, this cooperative mom and adolescent engage in light-hearted joking. This mom and adolescent do not find the puzzle difficult and therefore enjoy both the task and each other.
Response to Task Difficulty Example 5: Dealing with task difficulty: Adolescent and mom enjoy the puzzle and engage in playful banter (Case 2)

*Glances up from her puzzle;*  
*Oh fast, are you? (2)*

*Adds a forth block to her section; (1)*

*Laughs; I'm fast...I'm fast. Looks at mom; Laughs more; (3)*

*Looks at daughter; Using one hand, HATE YOU/ HATE YOU/ HATE YOU. Put another block in her puzzle; Smiles; (4)*

*Laughs; Continues constructing puzzle; (5)*

In contrast to the preceding examples which illustrate varying degrees of negative emotional reactions, this mom and adolescent, who do not find the task difficult, engage in playful banter as they work cooperatively constructing their respective halves of the puzzle. As mom comments to the adolescent that she is fast (2), the adolescent laughs and agrees (3). Mom then teases her daughter further when she playfully remarks that she hates her (4). In response, the adolescent laughs and continues constructing her puzzle. Illustrating that not all dyads have difficulty constructing the puzzle, this mom and adolescent display good humour and playfulness.

Summary
The adolescents in this sample exhibit a range of emotional responses to the level of task difficulty, its ambiguity and, often, the frustrations of working with a partner. These include persistence, distractibility, frustration and hostility as well as, in one case, playful banter.

CONCLUSIONS

Collaborative Interaction and Cooperative Interaction
Collaborative and cooperative interaction present interesting and distinct differences. Although both collaborative and cooperative dyads use the same problem solving strategies (or a subset thereof) to construct the puzzle, they differ in the kinds of interaction experienced. Within the collaborative relationship, moms tacitly accept the role of primary monitor and adolescents assume the role of primary constructor. Given the nature of this self-ascribed, although mutable role assignment, moms, as monitors, play a directive role within the interaction. They often engage their adolescents in process of evaluation which has an inherent directive mechanism.

While engaging in evaluative processes, collaborative partners spend more time interacting...
with each other. This interaction takes the form of exchanging thoughts and ideas about various constructions, making suggestions (directives), evaluating correctness and offering feedback (positive and constructive). As a result of this ongoing exchange, partners necessarily spend time negotiating the merits of particular constructions. Sometimes agreement is reached and other times, not. When disagreements occur, responses can vary.

The dyads working in a collaborative relationship are all unsuccessful in their attempt to solve the block design problem solving task within the allotted time.

In contrast, cooperative dyads work independently on the puzzle task. As partners construct and evaluate their own halves of the puzzle, they accept responsibility for their own work. Limited evaluative exchange occurs and, as a result, much less time is spent negotiating the merits of particular constructions.

The interaction shared by cooperative dyads is varied. During the task one dyad engages in playful banter while the other focuses almost exclusively on the task. Within a more individualistic experience, the two cooperative dyads in this sample engage in less complex, less interactive problem solving, where moms are also less directive.

Within the allotted time, the partners in the cooperative effort complete their respective half-puzzles then successfully complete the puzzle by pushing their halves together to create a whole.

Evidence of Age Appropriate Skills and Abilities
All adolescents in this sample demonstrate varying degrees of independence and autonomy, receptivity to feedback, reaching beyond oneself and critical thinking. Acquiring these skills at different rates is expected and consistent with the variability found in human development in general.

Similarly, the deaf adolescents in this sample manage the level of task difficulty and its ambiguity in different ways. A wide range of emotional responses, reflecting individual differences is revealed.

Communicative Competence and Mode in the Adolescent Data
Communication difficulties resulting from communicative mode is seen for the signing dyads. For the signing dyad of Case 10, communication difficulties appear to develop because mom sometimes speaks without signing or incompletely signs her speech. For the dyad in Case 5, who also uses sign language, some of their communication appears unimpeded, while other communication likely is not received because mom speaks without signing or the adolescent signs
without ensuring her mom's visual attention. However, because these partners use speech or sign to mediate the task, it is not known whether the missed communication is important to the interaction. The signing mom of Case 2 also speaks while mediating the problem solving task, but her signed and spoken communication appears otherwise unimpeded and received by the adolescent.

There are four adolescents who were late signers. They used aural/oral communication during childhood and changed to manual communication later. What is interesting about this is that 3 late signers in the collaborative effort chose not to use sign language during the puzzle task. There was one late signer in the cooperative effort who did. Irrespective of this status of mode, aural/oral partners appeared to understand communication as it occurred.

The implications of communicative competence are difficult to evaluate with any degree of certainty in the adolescent data. Since the block design problem solving puzzle was chosen specifically because it is task oriented and not dependent on language, participants use limited language to engage in the task. To further complicate matters, fewer communicative acts are needed for cooperative than a collaborative dyads. Given the independent and individualistic nature of working separately on a common task, this work proceeds with little reciprocal communication.

For collaborative dyads, an effective, reciprocal communication system appeared to be lacking for one dyad (Case 10). For the most part, these partners communicated non verbally. No other effects of communicative competence were noted for collaborative dyads.

Thus, insofar as communicative competence could be evaluated, it posed few problems for both collaborative and cooperative dyads.
CHAPTER 8: LONGITUDINAL ANALYSIS

Longitudinal Comparisons of Interactional Style

Longitudinal comparisons in this study may not have been apparent for a number of reasons. First, although the activities engaged in during childhood and adolescence are age appropriate forms of play, the activities and the relationship dynamics during these periods are so dissimilar that making statements about trends is unwise. Secondly, in adolescence there was an unequal distribution of dyads represented in the collaborative and cooperative groups. There were 7 dyads in the collaborative group and only 2 dyads in the cooperative group. This also makes comparisons of interactional style from childhood to adolescence difficult.

Further, there are confounding variables that affect the plausibility of longitudinal comparisons. First, there are many intervening years and a variety of circumstances that affect individual development and the mother-child relationship (e.g., temperament, personality, self esteem, motivation, social maturity, peer influences, teacher influences). Secondly, the sample size, while appropriate for qualitative analyses, is too small to make longitudinal comparisons with confidence. Thirdly, while all young children enjoy playing with toys, some adolescents may enjoy puzzles while others may not. Therefore, task preference may have affected individual performance in this study and thus the kind of interaction experienced by mothers and adolescents.

Longitudinal Comparisons of the Emotional Tone During Interactions

There were no general patterns observed related to the emotional tone of the interactions during the early childhood and adolescent periods. Even on a case to case basis, diversity existed. For example, a creative, engaging child who appeared to enjoy playing with her mom during childhood was openly critical of her mom during adolescence (see Case 4). A child who played independently with the toys was socially engaging in adolescence (see Case 2). A child who appeared oppositional during childhood was generally engaged in the task, albeit somewhat distractible during adolescence (see Case 10).

Longitudinal comparisons of the emotional tone, based on two 10 minutes segments of interaction, may be insufficient to detect consistencies in mother-child interaction over time. Longer and multiple observations may be required to identify reliable individual patterns. In
addition, over such a long period of time, multiple factors may impact on the mother-child relationship. These factors may have contributed to not finding consistencies in emotional tone overtime.

CONCLUSIONS

No longitudinal trends across groups were revealed by data. In order to uncover any individual longitudinal differences which may exist, an in-depth examination needs to occur by comparing individual cases over time.
CHAPTER 9: DISCUSSION

Summary of Hearing Mother-Deaf Child Interaction

Hearing Mother-Deaf Child Interaction

This study showed that hearing mothers have two distinct styles when playing with their elementary school age deaf children. Narrative moms played with their children by participating in and creating a story which their children enacted. These moms provided structure by initiating and advancing scenes, adding depth and dimension to them and creating a context where consistency exists. The second style, episode play, occurred when moms did not play directly with their children but were engaged with them indirectly. These hearing moms allowed their young school age deaf children to develop their own play while they involved themselves in the interaction by tracking, asking questions, making suggestions and responding to their children's questions or enactments. In contrast to narrative play where a cohesive story of family life unfolded, episode play resulted in loosely connected and unelaborated scenes of play. Within both play styles, the moms actively taught their children by either conveying information, asking questions or testing their children's language skills.

Although it was the moms' actions that determined what kind of play developed, their deaf children influenced it. Narrative children, who often followed their moms' directions, also contributed their own ideas to play, but did so without fundamentally altering the content. Children of episode play responded differently. These children often opposed their moms' ideas in favour of their own, regardless of whether the ideas were presented congruently or incongruently with the current play focus. The tussles for control which resulted were common place among the episode dyads, however the emotional tone of these struggles was rarely elevated. Children of both types of play responded freely to their moms' teaching.

Since the mode of communication during childhood was primarily aural/oral, differences with regard to mode are difficult to determine. Dyads using aural/oral and manual communication were similarly represented in both narrative and episode play. In narrative play there were two signing dyads and two aural/oral dyads. In episode play there was one signing dyad and four aural/oral dyads. Given that manual communication was represented in both narrative and
There were 2 high and 2 low communicative children in the narrative dyads and 2 high and 3 low communicative children in the episode dyads. Generally, communicative misunderstandings between moms and their high communicative children occurred infrequently. However, occasional communication problems were noted between moms and their low communicative children, irrespective of play style. On two occasions, one narrative mom was unaware that she misunderstood her child's communication. However, these did not appear to disrupt the interaction. When the misunderstandings occurred, the child did not attempt to repair the communication breakdown. Instead, she accommodated the misunderstanding by following her mom's lead. This pattern, although interesting, appeared to be an anomaly.

For another dyad, the communication between the episode mother and her low communicative child appeared strained at times. While the mother usually used appropriate attention getting strategies and waited for her child's visual attention, he appeared oppositional. His apparent opposition may have been attention seeking behaviour, related to the annoyance he felt about his mom's intrusions into his play or explained by mom's episodic style of interaction (i.e., not engaging in play with her son, yet imposing her ideas onto his play).

Examining incidents of communication breakdown within the mom-child interactions, while interesting, was not a primary focus of this analysis. The overall flow of communication within the interaction was the fundamental issue. In the mother-child data, the interaction did not seem particularly affected by communication difficulties. Those difficulties which did exist may have caused momentary disruptions, but generally, did not appear to affect the reciprocal interaction and flow of play. Communication difficulties were managed (i.e., resolved or circumvented) and play moved forward.

Hearing Mother-Deaf Adolescent Interaction

The data showed that hearing mothers and deaf adolescents have two distinct interactional styles when engaged in a problem solving task. They either worked together (collaboratively) or separately (cooperatively). Before beginning, most often moms decided on how to work and the adolescents usually agreed.

Within the collaborative effort, the adolescents worked primarily as the constructors of the puzzle while their moms acted as monitors, evaluating their adolescents' work. While constructing the puzzle, the partners used a number of problem solving strategies (crossing over,
beginning again, experimentation and changing focus). Collaborative partners sometimes accepted, and other times rejected, one another’s ideas about how to construct the puzzle correctly. When disagreements occurred, a range of responses from reaching agreement to briefly withdrawing from the collaborative effort were seen. The emotionality expressed, at these times, ranged from neutral to strong, with the adolescents more often given to this expression than their moms.

Over half the collaborative dyads required a clue from the research officer regarding the correct dimensions of the puzzle. No collaborative dyad successfully completed the puzzle within the allotted time.

Only 2 dyads worked cooperatively. Generally, each partner constructed and evaluated his/her own half of the puzzle. Only one example existed where the adolescent evaluated his mom’s puzzle after she requested his input. Because of the nature of their engagement, cooperative dyads used a subset of the same problem solving strategies as collaborative dyads but did so with less frequency. They also engaged in less social exchange and task talk.

In contrast to the collaborative dyads, who did not complete the puzzle task within the allotted time, both cooperative dyads successfully constructed the puzzle. Moreover, neither dyad needed a clue from the research officer to meet this end.

Irrespective of the style of interaction, the data revealed four categories of skills demonstrated by the deaf adolescents. Independence and autonomy, receptivity to feedback, reaching beyond oneself and the ability to think critically all represent age appropriate competencies. Individual differences were noted in the degree to which these skills were exhibited. Individual differences were also seen in the adolescents’ emotional responses to the level of task difficulty.

Overall, the data revealed that these deaf adolescents shared control in the interactions with their moms. Further, there was nothing unusual or surprising in the way the adolescents and their moms responded to each other in their interactions. The variation in adolescent responses to their mom’s input and to the level of task difficulty was viewed as typical for this developmental period.

Both aural/oral and manual communication were represented in collaborative and cooperative interaction. In the collaborative interaction, 2 dyads used manual communication, 2 dyads used aural/oral communication and 3 dyads used oral/aural communication although these adolescents were late signers (i.e., those who were aural/oral during childhood and changed their preferred mode to manual communication later). It is possible that these late signers, who had
early oral training, chose to communicate aurally/orally when their hands were occupied and the intended communication was simple. In cooperative interaction, one adolescent, who was a late signer, used manual communication. The other adolescent used the oral/aural method. Thus, there were no differences in the distribution of mode within collaborative and cooperative interaction. Also no differences related to mode were observed within the hearing mother-deaf adolescent interaction, in general.

Since the puzzle activity was task oriented, limited communicative discourse between partners was required. As a result, the adolescents' level of communicative competence and its impact on the interaction is difficult to determine. Although communicative competence appeared to affect the interactions of one dyad (see Case 10), other mom-adolescent interactions seemed relatively unimpeded by communication difficulties. Thus, similar to earlier interaction, communication difficulties between moms and adolescents caused minor disruptions and did not appear to impact the flow and meaning of the interaction in important ways.

THEORETICAL IMPLICATIONS

Maternal Control within Childhood and Adolescent Interaction

Maternal Control in Mother-Child Interaction

Moms of both narrative and episode play exerted control in their interactions with their children. Narrative moms took control by developing and directing a story of family life which their children enacted. They structured play by initiating and advancing scenes, adding depth and dimension to them and creating consistency throughout. In essence, narrative moms created the context within which their children played. The result was an enriched interaction between mother and child.

Episode moms exerted control differently. Instead of structuring play for their children, they exercised influence by asking questions, making comments and suggesting play ideas. Since these mothers sometimes contributed to play in ways that were incongruent with their children's attentional focus and/or meaning, the play that resulted appeared fragmented. Secondly, because episode moms did not provide their children with guidance in the development of play in the same way as narrative moms, the play that resulted from their children's efforts was unelaborated and disconnected. Thus, the ways in which maternal control was exerted in episode play contributed to the play's overall discontinuity.
Maternal Control Within Mom-Adolescent Interaction

How Partners Decide to Work

The data revealed that moms decided whether to work together or separately more often than the adolescents. If the partners were equitable, one would expect, on average, that moms and adolescents would decide on the working conditions 50% of the time or that it would be negotiated. However, given the power difference between moms and children (existing also in adolescence), it is not surprising that the adolescents accommodated their moms' suggestions.

Showing less initiative than their moms in making this decision, the adolescents may have been affected by being in a study. Although speculative, these adolescents, who have not yet achieved adult status, may have felt shy, less sure about whether they understood the research officer's instructions correctly or felt insecure about performing the task. If this was the case, some adolescents may have been inclined to allow their moms to take the lead, at least initially.

Interestingly, one cooperative mom decided to work separately even though her son expressed his preference to work together. While it is impossible to know whether she did not respond to the request because she did not hear it or because she chose not to attend to it, observation of this dyad revealed mom's enthusiastic attitude toward the task in contrast to her son's reserve. This mom was clearly the more active partner.

Moms as Directors

In the collaborative effort, moms typically directed the puzzle construction by acting as the monitor. Although this role was not rigidly adhered to, moms typically assessed and evaluated their adolescents' constructions. As a result, collaborative moms were often directive when giving their adolescents feedback. In the cooperative effort, moms and adolescents independently constructed, monitored and evaluated their own work. Although moms and adolescents occasionally commented on each other's work, for the most part, each worked independently. Thus, moms were more directive when working collaboratively than cooperatively. This appears to be a function of how the dyads were engaged and the role the moms played. No determination can be made regarding whether these moms are more controlling in general.
Differences in Interactional Style at Childhood And Adolescence

Differences in Interactional Style Within Hearing Mom-Deaf Child Dyads

The Role of Narrative Moms Within Play

A central feature of narrative play was that moms define the activity as play. As the more experienced play partner in adult-child interaction, narrative moms engaged their young school age children in play and created a shared context upon which all further interaction developed. This mother-child alliance, which was formed at the beginning of play, was the basis upon which moms created an enriched story of family life. It was the foundation upon which they provided structure to play by initiating and advancing scenes, adding detail and dimension to them and creating logical consistency. This is consistent with Rogoff and Gardner (1984) who maintained that, even in social situations, teaching and learning rely on the creation of a shared context.

Within narrative play mothers and children needed to coordinate their visual attention. Bakeman and Adamson (1984), who advanced the notion of coordinated joint attention, demonstrated that mothers create situations where they teach their infants to coordinate their attention between objects and a partner in the environment. In addressing the same communicative processes, Jamieson (1994) suggested that mothers gain their children's visual attention, maintain it throughout the communicative interaction, then allow or direct the child's attention to the object of discussion. In narrative play, where mothers and children engaged in the shared context of free play, joint coordinated attention was seen operating. Playing with their moms and enacting a story which their moms' directed, the narrative children coordinated their attention between their moms and the toys they were manipulating. The children attended to their mothers when moms were providing structure to play, then carried out the enactments using the toys.

Since play is conceived as an activity where learning occurs (Vygotsky, 1978), it is important that play be meaningful to the child. Vygotsky (1993) maintained that children learn more easily when they participate in meaningful contexts. When narrative moms introduced and developed enriched scenes of play that were germane to their children's daily experiences, they stimulated their children's interest and created an environment where learning could occur. Thus, a shared and meaningful context together with successfully coordinated joint attention created an engaged relationship upon which narrative moms could assist their children in developing play.

Within the context of free play, narrative moms performed the role of informal teachers.
Tacitly, they imparted knowledge about: (a) sequencing and organization, (b) appropriate social skills and behaviour (e.g., saying “please”), (c) family roles and relationships (e.g., what roles do mothers, fathers, brothers and sisters play within the family) and, (d) family routines (e.g., feed baby first). Thus, narrative moms socialized their children in general ways by providing incidental learning opportunities about family life throughout play.

The strategies narrative moms used to teach their children were consistent with Vygotskian theory of adult-child interaction. As informal teachers and directors of play, narrative moms frequently provided step-by-step instruction to their children about how to enact particular scenes. This form of informal instruction, called scaffolding, entails that children carry out simple aspects of a task, which build upon each other in a logical sequence. As a form of structured guidance, scaffolding allows learners to acquire new knowledge because an adult controls elements of a task until a learner can carry out additional steps (Wood, Bruner & Ross, 1976). In the narrative data, moms used scaffolding in two ways: (a) they gave their children step-by-step instructions about how to execute particular scenes of play, (b) they presented scenes of play in progressive sequences which created a story.

In addition to scaffolding, narrative moms explicitly transferred responsibility to their children for executing parts of the unfolding story. Generally occurring later in play, moms directed their children to execute segments of play independently. In this way, moms gave their children control as play progressed while concurrently relaxing the control they exerted within play. This is consistent with Vygotsky's notion of the developmental shift from other to self regulation in which the adult guides the child's activity until s/he can take initiative (Jamieson, 1994).

Although teaching language is secondary to the development and execution of a story, it was an important task that narrative moms performed while playing with their children. Irrespective of their children's communicative competence, narrative moms modelled language and informally exposed their children to conversation. Further, for low communicative children who required the additional linguistic support, moms used parallel talk. As a reactive language technique, parallel talk occurs when an adult talks out a child's participation during a joint activity (Hanrahan & Langlois, 1988). Here, narrative moms were observed articulating their children's actions in play. Not only did this serve to increase their exposure to language, it had a secondary benefit of maintaining the flow of interaction when the children were engaged in non-verbal play. For high communicative children, who had more advanced language skills, narrative moms corrected their language errors as they occurred. However, since the high communicative
narrative children in this sample made few language errors, moms made corrections infrequently.

When narrative moms directed play and provided their children with structured guidance in the development and execution of a story, a complex play experience resulted. Thus, moms not only provided important sequential order to play, they enriched it by incorporating relevant details into the scenes. Directing play this way, narrative moms were responsible for creating its complexity. This is consistent with the current literature which purports that children's play is more complex when they are playing with their mothers compared to when they play alone (Fiese, 1990, Beizer & Howes, 1992).

The Role of Episode Moms Within Play

The role of episode moms within free play interaction was distinctly different from that of narrative moms. Episode moms defined the activity of play as a task. They infrequently engaged in play, choosing to involve themselves in the interaction indirectly. The implication of this is that episode moms and children were not operating within the same context. In contrast to narrative moms, who played with their children directly, episode moms observed and tracked their children's play. As their children played independently, episode moms interacted by asking questions, making comments and proposing play ideas as well as responding to their children's comments, questions and ideas. In effect, episode moms possessed a laissez-faire approach within the free play setting and allowed their children to direct and develop their own play. The result of this play style was scenes of play that are unelaborated and disconnected.

In addition to their laissez-faire approach to the development of play, the responses of episode moms were not always consistent with their children's play behaviours. The contributions of episode moms were sometimes presented congruently (i.e., having the same attentional focus and meaning as the child's play) and other times, incongruently (i.e., having a different attentional focus and/or meaning). When this occurred, children tussled with their moms for control and discontinuity in play resulted.

The issue of why episode moms acted incongruently when they were observing and tracking their children's play is important to address. Although based on speculation, the reason may be a function of how episode moms engaged in play. These moms, who were indirectly involved, may have spontaneously suggested ideas to their children without attending to both the current focus and meaning of their children's play. Thus, given their play style, these moms, like their children, may have been responding episodically within the interaction. Other times, when
episode moms were operating from a teaching agenda, incongruency may have resulted because they believed that their test questions were more important than their children's play.

Although episode moms infrequently engaged in play with their children, this was when their children were most responsive. When moms played, they gained their children's willing participation and developed elaborate segments of play with them. While these were similar to the scenes developed by narrative dyads, they did not occur within the context of a well developed story. Instead, they remained the exception and usually occurred in isolation. What makes this interesting is that episode moms typically did not engage in this kind of shared play experience. Speculation about the reason again, brings us back to the way episode moms defined their role in play. Although these moms were involved in the interaction indirectly, it seems that this play style was not strictly followed. Through tracking their children's play, it appeared that moms might have became interested in particular scenes that their children were enacting. When this occurred, moms engaged in play and developed these scenes with their children. When the scenes ended or changed, moms reverted back to their indirect style of interaction. In this way, episode moms’ direct involvement in play was serendipitous and episodic.

Notwithstanding their style of interaction, episode moms assumed the role of informal teacher. However, in contrast to narrative moms, who incidentally conveyed information within the context of their shared play, episode moms taught by asking their children test questions about the scenes they developed. If children were unable to answer a particular question, then moms told them the correct response. Thus, the teaching of episode moms was more formal than that of narrative moms. They engaged in a direct question-answer style of teaching.

Another way in which teaching styles differed was with respect to teaching language. In general, episode moms taught language with greater frequency and used a wider range of strategies than narrative moms. Similar to narrative moms, episode moms modelled language using parallel talk. However, they also modelled language by expanding their children’s utterances, correcting their pronunciation and testing their vocabulary by asking them to label various objects or actions. Although the current research can not specify why episode moms concentrated more on developing their children's language skills, it may be that they considered teaching language an integral part of their role and viewed play an appropriate context for teaching. This suggests that not only did episode moms define play as a task for themselves, they considered play as a task for their children, too. From this perspective, teaching was a primary focus for episode moms whereas for narrative moms, teaching was secondary to the development of the story.
Another way teaching language differed was with respect to how episode moms taught their high and low communicative children. One mom of a high communicative child seemed to build upon her child’s existing language skills. One might recall how she introduced the word ‘careless’ into play as the explanation of why mother doll got burned. The other mom of a high communicative child discussed the difference between real and pretend milk with her son. This becomes interesting when one notes that moms of low communicative children did not teach language in this way. Episode moms of low communicative children appeared to build their children’s vocabulary in a direct and concrete way. They simply asked their children to identify specific items or labels simple actions (e.g., What is this? What are you going to buy?). In this way, episode moms taught language according to their children’s level of skill.

The Responses of Deaf Elementary School Age Children within Play

The responses of children showed that, irrespective of play style, they were active participants in play and not simply passive recipients of their mothers' direction. Narrative children often responded to their moms by following their lead in the development of the story. These children appeared to do so because they were enjoying the stories their mom were creating. Their interest was reflected in their willingness to enact the scenes and their displays of positive affect (e.g., smiling, laughing) while doing so. As well, narrative children spontaneously contributed their own ideas to the scenes, doing so without fundamentally changing its content. Thus, these children actively participated in play within the joint context their moms created.

Episode children reacted to their moms as well, but displayed it differently. Often, these children attended to their moms ideas and, after considering them, disagreed with their suggestions. Although by reacting this way, the episode children appeared oppositional, they might have been acting autonomously in their interactions with their moms. Their opposition, or assertion of autonomy, was most noticeable when they tussled with their moms for control. Tussles occurred when episode children initially opposed their moms' ideas and their moms, in turn, tried to convince their children to adopt them. When tussles happened, sometimes moms were successful in persuading their children to accept their ideas, however, most often, it was episode moms who followed their children's lead.

When examining the responsiveness of episode children more closely, a pattern emerged with respect to when children accepted or opposed their moms' ideas. As previously noted, these moms presented their play ideas either congruently or incongruously. One might expect that episode children would accept play ideas when moms presented them congruently and not accept
them when they presented them incongruently, but this was not the case. Surprisingly, the data revealed that episode children often disagreed with their moms' play ideas when they were offered incongruently and sometimes opposed them even though they were presented congruently. It seemed that episode children were most responsive to their moms ideas when they directly engaged them in play. Unfortunately, this happened infrequently. Thus, the oppositional behaviour of the episode children can also be viewed as a response to their mom's lack of direct engagement.

Finally, children of both types of play consistently responded to their moms when they taught. When moms explicitly asked test questions, corrected language or conveyed information, the children usually responded directly. These responses may be common for hearing mothers and deaf children because these moms are frequently proactive in facilitating their deaf children language development and other types of informational learning. However, teaching may be a common pattern existing in mother-child interactions in general. For example, Sonnenschein, Baker and Cerro (1992), using self report measures, explored the views of 60 middle class mothers to determine what they teach their normally developing preschoolers. These mothers reported teaching cognitive, academic, social and life skills to their children. In addition, they reported that they act as teachers in everyday situations. That teaching occurred in free play is also supported by Meadow et al. (1981). They reported that the percentage of time mothers engage in teaching during free play is similar across groups of hearing mothers-hearing children, hearing mothers-deaf children and deaf mothers-deaf children.

Given the prevalent view that mothers, in general, fulfil a teaching function for their children, it is reasonable to think that children are used to responding as learners. Moreover, young children often seem to enjoy answering questions from adults. It is a way that they can "show off" how smart they are.

**The Zone of Proximal Development and Narrative Play**

It appears that narrative moms were working within their children's zones of proximal development. Vygotsky (1978) defined the zone of proximal development as the difference between a child's actual development and his/her potential development when working on a problem solving task with a more experienced peer or adult guidance. While the current study did not attempt to determine the deaf children's actual and potential developmental levels, narrative moms seemed to provide their children with the necessary guidance that would elicit potential development.
This point is illustrated by comparing narrative and episode play. When playing with their moms, narrative children benefited from the structured guidance they provided. The play these children enacted was elaborate, complex and cohesive. In contrast, episode children, who generally played independently, did not have consistent adult guidance. The play that developed primarily from these children's own effort was disconnected and underdeveloped.

This contrast in the overall development of play is striking. The difference seemed to occur because of the style of moms' involvement. These results suggest that narrative moms, who made play more complex by providing structure guidance, were working in their children's zones of proximal development. In contrast, episode moms let their children play at their own developmental level.

The benefits and limitations of both styles of play is important to address. For narrative children, who were playing with a more experienced play partner, the benefits are compelling. Narrative play modelled organization and sequencing, helped the children practice activities of daily living and enabled them to integrate aspects of their families' routines. Through play, their moms conveyed information which might have been new or a review of something already known. They also informally taught language through conversation and modelling. Narrative children learned that they possessed influence when their moms accepted their ideas and incorporated them into the unfolding story. Both mom and child appeared as if they were enjoying the interaction. The main limitation of narrative play is related to the level of independence the children were afforded in the shared mother-child interaction. Narrative moms orchestrated play while their children exerted relatively constrained influence.

The benefits of episode play included the independence these children had in developing their own enactments. Playing independently and negotiating their moms' intrusions promoted self assertiveness in addition to exploration, experimentation independent thinking and decision making. These children also benefited from their moms' informal teaching in general, and their testing of language. The limitations of episode play included the lack of consistent guidance which resulted in these children developing unelaborated and disconnected sequences of play.

**Differences Related to the Use of Language in Play**

Irrespective of the style of play, the data revealed differences in play related to the children's communicative competence. As shown by the complexity of their play, high communicative children used language to bring play to a greater level of abstraction. One might recall the narrative child who introduced the idea of a wheelbarrow into play when such a toy
was not provided to the participants. This ability to use language to introduce imaginary ideas or objects into play broadens the possibility of what play can become. This is consistent with Blum et al. (1994) who claimed that language plays an important role in creating complex, rich play sequences.

The moms of high communicative children used language in much the same way. Like their children, they introduced ideas into play that were dependent on language. One might recall the episode mom who initiated a discussion about the difference between laying a real and a pretend carton of milk on its side. By doing so, this mom used language to engage her son in a hypothetical and imaginary play segment. Thus, not only did high communicative children use language to enhance play, their moms contributed to play in the same ways.

One result of using language to facilitate play is that further communicative gains are likely made by high communicative children. Evidence to support this is found in the study by Musselman and Churchill (1992). These researchers showed maternal turn control is negatively associated with an increase in deaf children's expressive language. They found that turn-control is the important factor and that language growth occurs as a result of the children's participation in interaction. This means the children can practice communicating and get feedback on their communicative attempts (Musselman & Churchill, 1993). Further support that language gains may occur as a function of exposure and practice can be taken from the literature the on reading ability. Stanovich (1986) suggested that good readers will read more and as a result, their reading will improve; conversely, poor readers will read less, and as a result, their reading skills will be inhibited. Thus, the Matthew effect, or the cumulative advantage hypothesis, suggests that practice leads to gains in reading. When applied to language learning, this hypothesis suggests that exposure and practice in using language may lead to gains in learning language.

Another benefit of high communicative competence occurred because well developed communication skills allows for great spontaneity and reciprocity in play. Both moms and their high communicative children used communication fluidly and reciprocally. Although misunderstandings sometimes occurred, they were usually repaired through the use of language.

In contrast, low communicative children, irrespective of play style, engaged in play that was primarily action based. As these children played, their enactments were dramatized in symbolic, but concrete ways. For example, a low communicative child drove the toy car, but did not use language to communicate where she were going or why. It is possible that low communicative children developed elaborate segments of play, but the details remained unexpressed, locked in the minds of the participants.
While there were no differences in how low communicative narrative and episode children played, there were differences related to the play style of their moms. Notwithstanding their children's low communicative ability, narrative moms used language to develop enriched stories which their children enacted. This is possible because, in general, children's receptive language skills develop at a more advanced rate than their expressive capabilities (Freeman, Carbin & Boese, 1981). Since low communicative children use less expressive language, narrative moms, being directly involved in play, utilized their children's receptive communication skills when they provided structure and developed a story. In addition, these children may have also understood their moms' non-verbal communication and cues.

In contrast, episode moms of low communicative children did not directly enhance their children's play using language. Because these moms allowed their children to develop their own play, their input was inconsistent and intermittent. As such, these moms' provided their children with incidental exposure to language, primarily during teaching/testing segments of play. Thus, while episode moms did interact with their children using language, they did not use language to enrich their children's enactments. As a result, play continued to appear unelaborated and underdeveloped. This is consistent with the observation of Blum et al. (1994) which suggests that the lack of a readily available language to aid in remembering, planning, organizing as well as communicating impinges on the development of play and its consistency and elaboration.

Comparing Maternal Control: Past and Present

This qualitative exploratory study revealed two different styles of maternal control: Narrative and episodic. In many ways, this framework includes themes of maternal control that are found in the current literature. Narrative and episode moms were didactic, intrusive, initiated more, took more turns, and suggested more topics than their children. However, what makes this framework distinctive is that, by examining the hearing mother-deaf child interactions qualitatively, one is able to infer what the mothers were doing and how it affected the quality of play. Narrative moms, who played with their children, developed a story of family life and directed their children in its execution. In doing so, play developed into an enriched story of family life. Episode moms, who did not play with their children, contributed to play inconsistently while allowing their children to make independent choices about their enactments. The play that resulted from the children's effort represented sequences that were underdeveloped and loosely connected.
This study uncovered new dimensions and characteristics of maternal control. It revealed that sometimes moms actively played with their children and other times they allowed their children to play while they observed and contributed occasionally. It illustrated that narrative moms appear most controlling when they take it upon themselves to direct the play, but that this kind of control, for reasons described previously, was beneficial.

Another interesting difference revealed by the current study relates to context. Current literature addresses the importance of examining interaction in a variety of contexts because this is important to understanding social behaviour (Landry, Gardner, Pirie & Swank, 1994) and mother-child interactional patterns. Past research has demonstrated that for hearing moms and deaf children, different conversational styles are dependent on the context in which they occur (Plapinger & Kretschmer, 1991). The present study revealed that even within one setting different interactional styles emerge.

Differences in Interactional Style Within Mom-Adolescent Dyads

Problem Solving Strategies Within the Interaction

The data revealed that collaborative dyads used the problem solving strategies of experimentation, crossing over, starting over and changing focus to construct the puzzle. These are adaptive techniques employed when attempting to replicate the block design puzzle. While the strategies themselves seem standard given the problem solving task, differences occurred according to the style of interaction. While collaborative dyads use all of these strategies in different combinations, cooperative dyads used only a subset of them and employed them less often. Reasons for this may be that the focus of cooperative dyads was narrower (i.e., each person working on half the puzzle) and they appeared to have fewer problems in constructing the puzzle. Specifically, no one in the cooperative dyads used the strategy of beginning a new section. There was no apparent need, since construction of their first segments advanced with few problems. Secondly, the strategy of crossing over was implemented differently for the cooperative dyads. Instead of crossing over from monitor to constructor, as collaborative dyads did, the cooperative partners crossed over by contributing to the other's puzzle. This input was either solicited or not, accepted or rejected.

Disagreement Within the Interaction

Because they were working together, collaborative partners disagreed more frequently with each other than cooperative dyads. Since collaborative dyads engaged in more ongoing
discussion and evaluation about the work in progress, there was more opportunity for partners to disagree. For example, as monitors, moms expressed more opinions about the correctness of their adolescents' constructions. In response, the adolescents countered these views when they thought they were incorrect or agreed when they considered them correct.

The affective tone of disagreements ranged from neutral to negative. Generally, as disagreements occur and frustrations rise, disagreements can intensify. However, the data revealed that disagreements were moderated by ongoing interaction. Tensions were diffused with agreement, withdrawal, humour, or mediated by success. In general, the collaborative partners disagreed frequently and the tone of these disagreements varied according to the reactions of the individuals. In contrast, since cooperative dyads worked independently, they interacted with each other less, evaluated their partners' work infrequently and typically engaged in fewer disagreements. The few disagreements which did occur revealed a neutral tone compared to those of collaborative dyads.

In addition to the emotionality expressed as a result of disagreements, what makes the adolescent findings interesting is the variability in their emotional responses while working on the task in general. Individual differences were demonstrated throughout. On one end of the continuum, one adolescent engaged in playful social banter with her mom. On the other, one adolescent expressed her frustration openly and was critical of her mom. Thus, the variability in the adolescents' affective responses to the degree of task difficulty spans the normal range.

**Demonstration of Age Appropriate Skills of Adolescents**

Like child development, the development of adolescents involves the acquisition of specific skills and abilities. The data in this study revealed that the adolescents showed varying degrees of independence and autonomy, receptivity to feedback, the ability to reach beyond oneself and the ability to think critically.

Adolescents, in general, mature at different rates and variability in their development is expected (Santrock, 1981). The deaf adolescents in this sample were no exception. They demonstrated autonomy and independence in two ways. They constructed the puzzle in a focused and industrious way and they asserted their opinions and defended their actions to their moms. One adolescent demonstrated less of these skills, taking less initiative and being more dependent on his mom's cues when constructing the puzzle.
These adolescents also showed variation in the degree to which they were receptive to feedback. Independent of their style of interaction, adolescents either accepted, ignored or opposed their mothers' feedback. All their responses involved varying degrees of attention to mom's comments. When receptive, the adolescents revealed that they considered their moms' ideas either by engaging in discussion or making appropriate changes. They sometimes demonstrated their receptivity by seeking out their mom's opinion. When unreceptive, the adolescents seemed less inclined to consider the feedback. They either ignored their moms' contribution or opposed it without considering the possibilities. Although some adolescents opposed their mom's feedback at times, the same adolescents accepted their moms' ideas at other times. Thus, not only was variation seen among adolescents, sometime the same adolescent varied in his/her receptivity to feedback.

As a skill which complements receptivity, these adolescents demonstrated variability in their ability to reach beyond themselves. Typically, this involved the adolescents seeking out their moms' opinions of their puzzle constructions, but it also meant explaining to one mom the puzzle's proportions after she misunderstood the researcher officer's clue. One adolescent, who did not demonstrate this ability, refused to give feedback to his mom even when she specifically asked him for it.

All adolescents in their interactions with their moms demonstrated their ability to think critically while working on the problem solving task. Evidence of this skill occurred when the adolescents were constructing the puzzle, when they explained a particular move to their moms or when they verbally or non verbally showed that they are considering the merits of a particular move.

**Puzzle Completion**

The data reveal that none of the collaborative dyads completed the puzzle within the allotted time while both the cooperative dyads successfully finished it. The reason for this difference may be a function of how the dyads were engaged. In the collaborative effort, partners spent time negotiating their relationship and discussing the merits of various moves. As a result, less time was spent directly working on the task. In contrast, cooperative dyads, who worked separately, spent more time constructing the puzzle and less time engaged in social or task oriented interaction.
Hearing Mother-Deaf Adolescent Interaction and Vygotskian Principles

Although Vygotsky did not discuss mother-child interaction from an adolescent perspective, three interesting observations about hearing mother-deaf adolescent interaction can be made from a Vygotskian perspective. First, in the adolescent data, moms and children were no longer interacting as an experienced adult and novice. Cooperative dyads interacted as peers when they constructed their own halves of the puzzle, and in limited ways, gave and received feedback. Collaborative dyads related to each other as peers by expressing ideas, experimenting with various moves and giving and receiving feedback. Thus, in the context of this task, the hearing mothers and deaf adolescents were more equitable in their interactions than during the elementary school age period. Secondly, partners in both styles of interaction used scaffolding while constructing the puzzle. Each partner used the emerging design of the puzzle to determine the next steps in the puzzle construction. Thus, within hearing mom-deaf adolescent interaction, scaffolding was no longer a teaching tool used by mothers, it was a problem solving technique implemented by both partners.

Thirdly, as previously discussed, the adolescents exhibited age appropriate skills on both intrapersonal and interpersonal levels. In contrast to the earlier period, where the children learned first on an interpersonal level then internalized their learning on an intrapersonal level, as adolescents they were expressing both types of skills. Interpersonally, the adolescents demonstrated that they were receptive to their mothers' feedback and exhibited their capacity to reach beyond themselves by requesting input and giving feedback to their mothers. Intrapersonally, the adolescents acted independently and autonomously while constructing the puzzle and showed their ability to think critically while doing so. This blend of interpersonal and intrapersonal competencies, although a subset of the developmental tasks faced by adolescents, were those relevant to the puzzle task and this context of hearing mother-deaf adolescent interaction. They also occurred within the emotional milieu created by the degree of task difficulty. See Figure 1.

Thus, Vygotskian principles can be extended into adolescence by recognizing that: (a) moms and adolescents moved from interacting as experienced and inexperienced partners to relating to each other as peers; (b) scaffolding occurred during the task as both moms and adolescents constructed the puzzle by building upon their present work; and, c) adolescents expressed both interpersonal and intrapersonal skills while engaged in the interaction with their mothers.
Figure 1. Relationship between the maturing skills and abilities of deaf adolescents.
A) Independence and Autonomy and Thinking Critically are intrapersonal processes;
B) Receptivity to Feedback and Reaching Beyond Oneself are interpersonal processes;
C) All skills occur within the milieu created by the task ambiguity, its degree of difficulty and, where appropriate, the interpersonal dynamics of working with a partner.

The Relevance of the Adolescent Findings

The interaction of hearing mothers and deaf adolescents uncovered interesting and important findings. Results from the adolescent data revealed that maternal control did not extend into this developmental period. While hearing mothers behaved in a controlling fashion when interacting with their young school age deaf children, the same mothers and children, when the children reached adolescents, shared control within their interaction. Since very little research in this area has been conducted, more needs to be carried out in order to corroborate this finding.

However, it is noteworthy that reciprocity was also found in a study of hearing mother-
deaf adolescent conversational interaction. Using data from the same sample of hearing mothers and deaf adolescents, Nohara, MacKay and Trehub (1995) found that hearing mothers of deaf oral/aural adolescents did not dominate the conversational interaction more than hearing mothers of hearing adolescents. These hearing mothers and deaf adolescents engaged in shared conversational turn taking. However, two factors mediating these findings were communicative competence and mode. Nohara, MacKay and Trehub noted that the deaf adolescents in their sample possessed high oral communication skills compared to their deaf peers. Thus, not only were their findings limited to those deaf adolescents with high communicative competence, they did not represent deaf adolescents who communicate manually.

The findings of the current study were also influenced by communication factors. Since the original investigators intentionally chose the block design puzzle because of its non-verbal orientation, they purposely diminished the impact of communication on the interaction. Thus, it may be that hearing mothers and deaf adolescents share control in their interactions when their exchange is relatively unimpeded by communicative processes (i.e., communicative competence, communicative mode, divided attention, turn-taking), and when the adolescents acquired age-appropriate skills.

Another interesting finding of this study related to communication mode. The communicative mode used by the deaf adolescents during the puzzle task was primarily oral/aural (i.e., six adolescents communicated aurally/orally; three adolescents used manual communication). Of the six adolescents who communicated aurally/orally, four were late signers who were auroral/oral during childhood and changed to manual communication at a later time. Findings indicated that three of the four late signers chose not use manual communication during the puzzle construction with their mothers. These adolescents, who had early auroral/oral training for a longer period of time, chose not to sign when their hands were otherwise occupied and when the production demands were few.

**Longitudinal Comparisons**

There were no overall longitudinal patterns observed in this study. One reason for this may be the dissimilarity in age appropriate forms of play. The free play and puzzle activities may
have been too disparate to be compared. Also, the differences in ages and stages of development may have been too great to reveal meaningful differences. Therefore, conducting longitudinal research where the age span and developmental levels is less disparate needs to occur.

**IMPLICATIONS FOR FUTURE RESEARCH**

**Hearing Mother-Deaf Child Free Play Interaction**

Since this new framework represents a broadly based conceptualization of maternal control, there are many directions future research can take. First, replication of narrative and episode play using other data is important in further verifying these results.

Secondly, although qualitative analysis is valuable in discovering new ways of thinking, quantification of a coding system would be useful in determining whether these styles of play stand up to the rigours of statistical investigation. This would add further credibility to the results.

Thirdly, it would be interesting to examine whether moms interact using the same play style over time. Do narrative moms *always* play with their children and create a story? Do episode moms *always* allow their children to play independently while they observe and contribute ideas? If not, in what situations do moms and children play narratively and episodically?

Fourthly, because dyads using manual communication were underrepresented in the present study, further exploring the effects of mode would be useful in refining the framework.

Finally, it would be interesting to examine hearing mother-deaf child interaction later during the school years to determine whether the narrative and episode play styles persist over time.

**Hearing Mom-Deaf Adolescent Interaction**

Very little research has been carried out on hearing mother-deaf adolescent interaction. The findings from this study revealed that hearing mothers and deaf adolescents seem to share control. They related to each others in ways that reflect the variability that might be found in hearing mother-hearing adolescent interaction, in general. However, from this exploratory study several ideas for future research are proposed.

Replicating the current research using a different sample of hearing mothers and deaf adolescents is important to examine the external validity of these research findings. Replicating the study using a different coding system is important to examine internal validity. Exploring
hearing mother-deaf adolescent interaction using a different task may uncover other dimensions of interaction not revealed here and unmask differences related to task. Using self report measures, one could evaluate the participants' perceptions of the task, its process and assess the participants' subjective evaluations of the existing mom-adolescent relationship.

**Longitudinal Comparisons**

It was beyond the scope of this study to do an in depth longitudinal comparisons for each participant. Longitudinally exploring individual differences for each participant may reveal differences not uncovered by this research. As previously noted, it may be more productive to conduct longitudinal comparisons where the time span and developmental levels are not as great. For example, comparisons of preschool and early childhood or, early adolescence and late adolescence may be more informative. This may make differences, if they exist, more discernable.

**SUMMARY**

While narrative play provided the deaf children with an enriched play experience because they enacted a well developed story of family life with their moms, episode moms allowed their children to develop their own play. The result was that narrative moms were working in their children's zones of proximal development and episode moms were not. Narrative moms were eliciting their child's 'potential development' by using techniques like scaffolding and transferring responsibility. Episode moms were tracking their children's play and frequently tussling with their children for control of the direction of play.

Moms of both styles of play taught their children. Narrative moms taught using the context of a well developed story. While playing with their children, they taught activities of daily living, social behaviour and family routines. They also modelled order and sequencing. In contrast, episode moms taught more explicitly. They frequently asked questions that tested their children's expressive language and knowledge of concepts. In their interactions, they allowed their children to choose and carry out their own play scenarios. This resulted in their children learning to assert themselves and learning that their actions and opinions have an impact. The strategies used by episode moms resulted in their children developing less complex forms of play. While both forms of play are valuable because they targeted a range skills which all children need to develop, narrative play seemed to provide the children with enriched learning environment.

The hearing mother-deaf adolescent interaction revealed that irrespective of their style of engagement, the mothers and adolescents in this sample exhibited a wide range of interactional
behaviours that indicated they have typical relationships. The variation which did exist, was indicative of what is expected for this developmental period.

My perception from carrying out this investigation is that the maternal control exhibited by hearing mothers while engaged in play with their deaf children is relatively benign. Both episode and narrative children seemed engaged and absorbed in their play. Generally, they appeared unaffected by their moms' controlling manner. Although expressed in different ways, they reacted to their moms. In turn, moms were responsive to their children.

What may be more important than examining maternal control is learning more about how hearing mothers relate to their deaf children within their interactions. This study revealed that narrative moms controlled the interaction by providing their children with enriched learning environments while working within their zones of proximal development. Further development of this framework is needed.

In addition, further exploration of hearing mothers and their deaf adolescents needs to occur. While the findings of this study indicate that control is shared by both moms and adolescents as they work on the puzzle, this framework needs further developing.
REFERENCES


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APPENDIX A: Excerpts From Uncoded And Coded Transcripts

Uncoded Transcript from Episode play (Case 2)

Child picks up father doll from kitchen chair and straightens his legs. Mom taps child's shoulder and asks "who's that?". Without looking at mom, child says "daddy". In soft voice, mom says "oh". Moments pass while mom watches child play. Child pretends to walk boy doll but he slips. Child adjusts his feet. Child tries to stand doll again and looks at mom. Mom says "tiptoe...on his tiptoe". Mom laughs slightly. Child turns doll in circles. Mom taps child's arm. Child looks at mom. Mom asks "what's he doing...dancing, dancing" while raising her eyebrows. Mom says "should have them dancing together". Mom picks up girl doll from chair and brings it close to doll child is holding saying "dance together". Mom gives doll to child. Child moves dolls as if they are dancing together. Mom says "there". Mom laughs slightly while she watches dolls dance.

Coded Transcript From Episode Play (Case 2)

Child's ATTENTIONAL FOCUS CHANGES and she INITIATES NEW SCENE by picking up father doll from kitchen chair and straightens his legs (SYMBOLIC PLAY). 017fp;10a In teacher role*, mom taps child's shoulder and asks "who's that?" (asks question*). 017fp;10b Without looking at mom, child IDENTIFIES DOLL saying "daddy". 017fp;10c In soft voice, mom says "oh" (non-specific affirmation, likely not heard by child*). Moments pass while mom watches child play (mom as observer*). 017fp;10d Child pretends to walk boy doll but he slips (SYMBOLIC PLAY). Child PROBLEM SOLVES when she adjusts his feet. Child tries to stand doll again and looks at mom (CHECKING IN, NON-VERBAL COMMUNICATION). 017fp;10e Mom gives child feedback/responds* when she articulates action* saying "tiptoe...on his tiptoe" (mom labels, models language*). Mom laughs slightly (enjoys child's play*). 017fp;10f Child DEVELOPS SYMBOLIC PLAY when she turns doll in circles 017fp;11a Mom taps child's arm (attention getting behaviour*). Child looks at mom (RESPOND WITH ATTENTION) In teacher role*, mom asks "what's he doing...dancing, dancing" while raising her eyebrows. (mom answers own question*). Mom makes suggestion contributing to scene* saying "should have them dancing together". Mom non verbally advances her suggestion* when she picks up girl doll from chair and brings it close to doll child is holding saying "dance together" (redundancy = non-verbal action + comment*). Mom transfers responsibility to child* by giving doll to
child. 017fp;11b Child **FOLLOWS MOM'S LEAD** when she makes dolls move as if they are dancing together (**SYMBOLIC PLAY**). 017fp;11c Mom says "there" (**non specific feedback possibly to maintain flow of play**) Mom laughs slightly while she watches dolls dance (**amused, observer**). 017fp;11d

Uncoded Transcript from Narrative play (Case 1):

Mom says "maybe mother can hold the baby" then she holds baby close to mother doll. Child says "yes" and takes baby doll from mom, Mom repeats "mother can hold the baby", points to mother doll, then adds, "yeah, you see". Child tries to balance the baby doll in the mother doll's arms. Mom reaches out to assist child in balancing the doll. When child lets go, the baby doll teeters. Mom says "whoop" as child presses her hearing aid mould. Child smiles at mom and says "same at home". While nodding mom responds "same at h...right, mommy holds the baby at home".

Coded Transcript From Narrative Play (Case 1):

Mom says "maybe mother can hold the baby" then she holds baby close to mother doll (**redundant**) Child says "yes" and takes baby doll from mom (**AGREES WITH MOM, SCENE DEVELOPMENT**). Mom provided structure to the scene but passed responsibility for enacting it to the child. Mom repeats her verbal directions "mother can hold the baby", points to mother doll (**redundant**) then adds, "yeah, you see" (**self talk for flow of interaction for herself**). Child **FOLLOWS MOM'S LEAD** and tries to balance the baby doll in the mother doll's arms. Mom reaches out to assist child in balancing the doll (**MOM AND CHILD WORK COLLABORATIVELY**) When child lets go, the baby doll teeters. Mom says "whoop" as child presses her hearing aid mould (**HEARING AID FEEDBACK**). Child smiles at mom (**ENGAGED**) and initiates a comment "same at home". While nodding (**non-verbal communication**), mom begins to repeat the comment but stops herself opting to agree with and extend the utterance saying "same at h...right, mommy holds the baby at home".

Uncoded Transcript From Adolescent Data (Case 3)

Looking at the model, mom says "now which one?" Adolescent says "ummm..." Mom
Coded Transcript From Adolescent Data (Case 3)

Looking at the model, mom says "now which one?" (direction question, asks for adolescent's input*) Adolescent says "ummm..." (considering^) Mom says "you gonna try (points to top of model)... (points to bottom of model) this one here?" (makes suggestion*) Looking at model, adolescent says "yeah, so..." (accepts suggestion^) Adolescent picks up a block and rotates it in his hands saying "you're looking at..." Adolescent pauses and looks from model to block. Mom moves puzzle slightly. Looking at and pointing to model, mom says "black...there's a black triangle here". Mom picks up block and rotates it. Holding a block, adolescent says "ok, let's do the one in...on the corner right here" then points to the model. Adolescent adds a block to the old puzzle, extending it. Adolescent says "so you're doing this, right?" Mom interjects and looks at adolescent saying "where are you starting...where?" Adolescent points to the model and says "I'm starting in the corner right here." Mom says "here (pointing to model)...well, it has to go at this side" as she taps the table in front of her, opposite to where adolescent started. Pointing to the model then puzzle, then touches his arm in front of her mom says "this is here.... and this goes over here." Adolescent looks at model then puzzle saying "oh, right".

Adolescent says "you gonna try (points to top of model)... (points to bottom of model) this one here?" Looking at model, adolescent says "yeah, so..." Adolescent picks up a block and rotates it in his hands saying "you're looking at..." Adolescent pauses and looks from model to block. Mom moves puzzle slightly. Looking at and pointing to model, mom says "black...there's a black triangle here". Mom picks up block and rotates it. Holding a block, adolescent says "ok, let's do the one in...on the corner right here" then points to the model. Adolescent adds a block to the old puzzle, extending it. Adolescent says "so you're doing this, right?" Mom interjects and looks at adolescent saying "where are you starting...where?" Adolescent points to the model and says "I'm starting in the corner right here." Mom says "here (pointing to model)...well, it has to go at this side" as she taps the table in front of her, opposite to where adolescent started. Pointing to the model then puzzle, then touches his arm in front of her mom says "this is here.... and this goes over here." Adolescent looks at model then puzzle saying "oh, right".
APPENDIX B: Excerpt and Discussion of Mother-Child Dyad Which Did Not Fit Into Narrative Or Episode Play

The dyad of Case 8 did not fit the conceptualization of narrative or episode play. This deaf child, who plays independently with occasional input and directives from mom, develops his own play scenarios in a creative, robust way. The following examples from the beginning, middle and end of play illustrate his well developed story lines and his mother's involvement within his play.

Appendix B: Beginning of Play: Child engages in self-directed play while mom attempts to direct and influence the development of play (Case 8)

 Passing child car; Ok. (2a) Holding doll; I want to drive car. (1a)

 Have to move the tv. Moves tv out of the way; (4a) Puts doll in car; Drives car making car noises; (3a)

 Let's put it over there. Moves car to the side of table; Points to some dolls; Why don't you play with these now? (6a) Parks car at front of table (foreground); There. Unintelligible utterance. (5a)

 Watching child; Ok. (8a) Picks up doll; Pretends doll picks up cup; Take a cup. Manipulates cup and doll for a moment; Partial unintelligible utterance; Gonna put it over... Puts cup on counter beside sink; (7a)

 Picks up dolls; Why don't you put these two in bed, then you'll have more room to do dishes. Puts dolls on bed; (10a)

 Apple. Picks up apple from table, puts down doll and stands up himself near fridge; Pull it open... put apple in there. Puts apple in fridge. Picks up doll and moves back to table. Picks up items; Partial unintelligible utterance...where's the [unintelligible utterance] and fork go? Looks at mom; (9a)

 Holds mother doll in one hand and fork and knife in the other, Looks around; Where does the [unintelligible utterance] and fork go...and knife? (11a)
$Side$. Points to section of counter on each side of the sink. (12a)

Ohhh. Puts fork and knife, one on each side of the sink; Put it and wash the dishes (13a)

Alright. (14a)

In this excerpt, this mom and her high verbal, aural/oral child begin to play. In a self-directed way, the child decides that he wants to drive the car (1a). Responding to this idea, mom facilitates play by passing the child the car (2a) and moving the tv out of his way (4a). After the child drives the car briefly (3a, 5a), mom directs his attention to the dolls in a general way (6a). However, deciding on a specific line himself, the child enacts putting the dishes and food away (7a, 9a). Then, engaging his mom in the scene he is developing, the child asks her where he should put the knife and fork (9a).

Responding, mom does not address her son’s question, rather she acts incongruently. By stating “Why don’t you put these two in bed, then you’ll have more room to do the dishes” (10a), mom introduces ideas into play that are independent of the child’s attentional focus and meaning. She then engages in imaginary play herself, following through with one of her ideas, when she puts the dolls on the bed (10a).

Instead of responding to his mom’s suggestions, the child re-directs her attention by re-stating his question (11a). This time, mom responds by engaging in imaginary play when she tries to open the cupboard and deciding her son can’t put the utensils in the oven (12a). Suggesting an alternative, mom proposes that the child put the knife and fork beside the sink (12a). Agreeing, the child puts the utensils by the sink then extends the scene adding that the dishes can be washed (13a).

Thus, at the beginning of play, this mom and her child are engaged. As the child plays, mom appears to function like an episode mom. She intervenes by making suggestions and attempting to direct her child’s play. Further, when mom introduces new ideas into play which are independent of his current focus and meaning, she acts incongruently. The child, however, does not accept her directives. Instead, he engages in independent imaginary play, and responds to her ideas when they are congruent and in answer to a specific question.
Middle Example:

As their play together continues, this mom directs play infrequently while her child engages in imaginary play independently.

Appendix B: Middle of Play: Mom facilitates play in a limited way while her son continues to engage in well developed imaginary play scenarios (Case 8)

Unintelligible utterance. (2b)

Referring to doll in car: What is he going to do. Is he going to come home? (4b)

Ok. Moves chair slightly; (6b)

Who's the father? Which one's the father? (8b)

Oh I see. (10b)

Looks around at toys; Picks up dog; He has to go outside. Stands as he walks dog along table in front of mom; (1b)

Ruff ruff. Stands dog on his hind legs; He going to sleep. Lays dog on its side; Looks at mom; (3b)

Yeah. Reaches for car; Makes driving noises as he moves it. Drives car near mom; Beep/beep. Takes boy doll out of car; I'm home, father, mother. Partial unintelligible utterance ending in: I want something to eat. Hey what you put this tv back. Turn it off. Pretends to turn off tv; Unintelligible utterance. Using doll, moves tv near bed; Put tv over here. (5b)

Walks doll back to the kitchen; Picks up father doll from chair; Puts boy doll down on chair; Father. Partial unintelligible utterance. Looks at mom; (7b)

Points to doll he is holding; (9b)

Points to mother doll sitting on chair; He's the mother. Points to bed where the baby is laying; And he's the baby brother this time. He's the daddy. Taps the father doll on the floor; (11b)

Holds boy doll near father doll and role plays a conversation between the dolls:

Holding father doll. Unintelligible utterance ending in "I want something to eat. Makes father doll step on boy doll's toes; Makes boy doll jump back; Get out. You step on my toes. Stop that. (12b)

Bends father doll and sits him in empty chair beside mother doll; Ok. Pushes chair near table; Now something to eat.
Gets off his chair, goes to fridge and moves it slightly; Takes mother doll from her chair; **What something to eat?** Partial unintelligible utterance. Ok. Takes mother doll to stove then to fridge; Opens fridge door; Takes egg from fridge; Takes a plate from top of fridge; Sets egg on plate and puts plate on table in front of other doll; **Eat the egg.** Takes fork from beside the sink and puts it on the table; Takes knife from beside the sink and in doing so, knocks the spoon to the floor; Puts knife on table; Oopps. Picks up spoon and puts it back beside sink; Moves cup from sink to table. Walks mother doll to fridge; **You want milk.** Takes milk out of the fridge; Sets milk bottle on table; Makes doll close fridge; Brings mother doll to the table; **There we go. All finished.** Unintelligible utterance. Touches mother doll’s apron; Glances at mom; (13b)

**Takes mother doll to stove;** Opens oven door; (14b)

Leans forward to see what child is doing; (15b)

Pauses; Takes mother doll near table; Unintelligible utterance. Faces mother doll in direction of stove; Puts the pot in oven; Closes the oven door; Bumps the table with his other hand; Milk bottle falls to the floor; Cup falls over; Ohhhh. Picks up milk bottle; Sets cup upright; Pours milk into cup; **Drink of milk.** Stands mother doll near table; **Something to eat.** Looks past mom to the dog which is near her; **Here boy. Here comes the boy.** Reaches for dog; Bumps the car which roles a little; (16b)

Both child and mom reach out to stop the car from rolling; Mom has the longer arm and she stops car. (17b)

This middle segment of play illustrates how mom facilitates play in a limited way while her child develops his own play scenarios. After engaging in independent imaginary play with the toy dog, the child finishes his current scene by stating that the dog is sleeping and looking at mom (1b, 3b). Mom introduces a new idea into play by asking her son if the doll in the car is going to come home (4b). Responding to this idea, the child pretends to drive the doll home (5b) then enriches the scene in a creative and elaborate way. He enacts a role play where the boy doll comes home, turns off the tv and moves it (6b). Advancing the scene further, the boy doll enters the kitchen.

Picking up a different doll and identifying it as the father, the child non verbally engages his mom by looking at her (7b). Although mom participates in the scene by asking her son to identify which doll is the father (8b) and later through observation (10b, 15b), she does not
engage in the subsequent role plays her son enacts.

After identifying all the family members (11b), the child independently initiates and dramatizes two related role play scenes. The first is enacted between the father doll and boy doll. Here, the child role plays the father doll stepping on the boy doll's toes (12b). Second, the child enacts a mealtime scene where mother doll prepares father doll a meal and converses with him (13b-14b, 16b). In the latter enactment, the child re-introduces the family dog into the scene (16b).

Thus, this segment illustrates that this mom behaves in ways similar to other episode moms. She facilitates play in a limited way. Although she does not participate in play with her child, she sometimes asks questions. In addition, she reveals that she is engaged and interested in her son's play by her ongoing observation, including leaning forward to see what her child is doing (15b).

In contrast to the play of episode children who develop simple, unelaborated scenes of imaginary play, this child independently develops and enacts creative, connected scenes of imaginary play in which he assumes and enacts the roles of several family members.

End Example:

In the final excerpt which ends this hearing mother - deaf child free play interaction, mom involves herself in the interaction by teaching language and regulating the child's play. In a limited way, this mom also engages in imaginary play with her son.

Appendix B: End of Play: Mom performs teaching and regulatory functions while her child continues to develop elaborate scenes of imaginary play; Mom engages in play in a limited way (Case 8)

Observes child; (1c)

There. Closes oven door using mother doll; Moves mother doll up and down in front of stove; Put the milk in. Pretends to pour milk in dog dish, making pouring sound; Holding mother doll in one hand; Father? Picks up father doll with the other hand; Yes? You go get the milk please. Puts mother doll on floor; Takes milk off the table; Ok, I am. Walks father doll out of the kitchen. (2c)

Turns to mom; He go store for it. Walks doll in direction of car; (3c)

Oh he has to get some more, does he? (4c)

We're all out. (5c)
Oh alright. Moves the tv; Here, let's move the tv back in the house. (6c)

Picks up tv; Better keep it. Moves tv in air while he decides where to put it; Places tv near fridge Over here. Turns to mom; You watch tv. (7c)

Unintelligible utterance. Puts milk and doll in car; He go to cow store. Looks at mom; (9c)

Yeah. (11c)

Holds up bottle; Examines it; Yeah. (13c)

Closely examines milk bottle; Dairy, where? Puts milk bottle in car; Adjusts doll in drivers seat but has difficulty; I can't open it. (15c)

Puts car back on table; Takes doll and milk out; We get more milk. Holds the milk bottle at a distance from the doll; Ok. Puts milk bottle on floor; Milk. Picks up milk bottle; Pretends doll is holding it; Here we go. Pretends to walk doll to car; Puts milk in car; Tries to fit doll in but can not. Looks at mom then looks back at doll; Takes doll out of car; The foot. Adjusts foot and fits doll into car easily; Turns car around; Making car noises drives it back to where mom is sitting; Parallel parks car in front of mom; (19c)

Sits down in his chair; Reaches across to the car; Taking doll and milk out of the car; I got the milk, mother. Brings father doll into kitchen; Got the milk. Picks up mother doll and faces her toward father doll. Good. Pretends dolls are kissing; Glances at mom. (20c)

No not that far out. Play in here. Gesture making circular motion with hand in the immediate area; So we can see you. Observes child playing; (18c)

They can kiss if you want. (21c)
Holds dolls apart, facing each other. Oh good. Milk falls over. (22c)

Looks at mom; What? (24c)

Puts down the dolls; Picks up the dog; Pretends dog is carrying milk; Glances at mom; He wants to help. Pretends dog pours the milk; Moves milk bottle across floor as if it is walking Moves milk back near dog. Grrrr. He's mad. Puts milk on counter behind sink. Faces dog opposite the sink; Grrrr. Moves dog in front of tv; Looks into camera; He's watching tv. (26c)

Ok. (27c)

Researcher ends play session; (28c)

In this segment which ends the play, this child continues to play independently and develop enriched and elaborate scenes of imaginary play. His mom continues to perform functions similar to episode moms when she engages in imaginary play infrequently, teaches language and performs regulatory functions.

In a self-directed, creative way, the child enacts a scene where mother doll asks father doll to get more milk (2c). When the child draws his mom into the scene by looking at her and saying "He go store for it" (3c), she responds in kind. Mom engages in imaginary play when she asks a rhetorical question: "Oh he has to get some more, does he?" (4c) then facilitates play in a limited way by moving the tv (5c-6c). Responding to this, the child draws mom into his play again by suggesting that she can watch tv (7c).

Enacting a scene where he shops for the milk, the child makes a lexical error, referring to the dairy as the cow store (9c-13c). Recognizing this, mom teaches language when she gives her son the correct label (14c). The child repeats the word "dairy" (15c).

In the latter part of this example, mom performs regulatory functions within her son's play. When the child is having trouble putting the doll in the car, she helps him position the doll and cautions him by saying "You're going to break the poor fellows arm if you're not careful" (16c). When the child engages in imaginary play by driving the car in the air, mom instructs him to play in an area that is within the camera's viewing range (18c). When the child enacts a homecoming scene where the mother and father doll kiss, then communicates this act by looking at mom, she reassures him that kissing is permitted (20c-21c).
In the brief segment which ends play, mom engages in imaginary play by commenting that the milk has spilled and that the dog might get it (25c). Engaging in the scene mom initiated, the child enacts a scene where the dog pretends to carry the milk (26c). As the child puts the milk on the counter and pretends the dog is watching tv, the researcher ends the play session (26c-28c).

The hearing mother-deaf child interaction of this dyad (Case 8) does not illustrate the features of narrative play. This mom does not play with her child or assist him in creating a story, as narrative moms do.

Instead, this mom performs in ways more consistent to that of an episode mom. For example, at different points in play, she is directive and controlling (6a, 11a, 13a, 4b. 8b). Other times, she performs regulatory functions (16c, 18c, 21c ). Another time, she teaches language (10c-15c). Infrequently, she engages in imaginary play (13a, 4c, 6c, 23c)

Although mom's involvement in play appears similar to that of other episode moms, the play her child develops is not episodic. This child plays independently and develops creative, elaborate and connected scenes of imaginary play. For example, he role plays the brother doll driving home (5b), announcing his arrival (5b), moving the tv (5b), encountering the father doll who steps on his toes (12b). Following the boy doll's encounter with father doll, father doll is served a meal by mother doll (13b, 14b, 16b). In a later segment, the child enacts a scene where mother doll asks father doll to go to the store for more milk (2c), the father doll drives to and from the dairy (17c, 19c), upon his arrival home, announces to mother doll that he got the milk (20c) and has mother doll and father doll kiss when they greet each other (20c) In developing these play sequences, this high verbal child depends heavily on language to develop his own imaginary play story.

Thus, although this mom behaves in ways similar to other episode moms seen in this sample, the child independently develops elaborate, creative and connected imaginary play scenes on his own. As a result, the play that is developed by this dyad does not fit the frameworks of either narrative or episode play.
APPENDIX C: Excerpt Showing the Researcher Facilitating the Successful Completion of Puzzle for One Dyad

The following example demonstrates two relevant features of the adolescent data. A) The researcher steps outside of protocol to facilitate the successful completion of the puzzle for this dyad (Case 4); B) This adolescent rejects her mom's suggestion to make one disproportionate quadrant of the puzzle smaller (See Episode 2; Example 4:), yet she attends to and accepts the same suggestion when it is made by the researcher.

Appendix B; Example 1: A) Researcher steps outside of protocol to facilitate the successful completion of the puzzle; B) Where the adolescent is not receptive to mom's idea of making one quadrant of the puzzle smaller, she is receptive to the researcher's didactic input (Case 4)

Pauses; Studies model while tapping her fingers on the table; Brushes her hair from her face; Removes block from the bottom of the completed puzzle; Puts the block in the uncompleted section; (1)

Observing: No. I don't think so. (2)

Brushes her hair from her face; (3)

Latch of door is audible, indicating that researcher is entering room (4)

Looks up; (5)

We ran out of blocks. (6)

Researcher: I've come to give you a hint. Pointing to one section of the puzzle; This one is absolutely correct. And they'll all the same size. So you need to have this one here [pointing to the disproportionate section] to be alot smaller. It has to be nine blocks as well. (7)

Observing: Oh. (8)

Researcher: Pointing to another quadrant of the puzzle; Ok, and this one was correct, too. (9)

Observing: Hum. (10)

Researcher: Pointing to one side of the puzzle then the other; So this side was correct, but this side was too big. (11)

So that's what we did wrong. Or she did wrong. Laughs and scratches head; I'm not of much help. (12) Unintelligible utterance. (13)
Researcher: No but this one. This one is perfect here. Points to one section of the puzzle; So see how its 3 X 3. Make this one the same size. So it'll be this size. With one finger, traces an outline on the disproportionate section of the puzzle; And then. See if you can.... (14)

Begins removing blocks; (15)

Researcher: Attending to what adolescent is doing: You've almost got it. actually. (16)

Looking at adolescent's construction;
It's a tough puzzle (17)

Researcher: But you've almost got it. You just have to. (18)

Hesitantly changes the position of one block; (19)

Researcher: Watching adolescent; That's it. No. (20)

Observing: Other way. (21)

Changes position of block; (22)

Researcher: That's it. See then you'll finish this block off. Places corner block in puzzle; Like that. (23)

Observing: Oh I see. (24)

Researcher: Points to one section; Now you've got this one finished. Points to a different section; And this one is almost finished. You took it a little bit apart, but it was right. Removes 3 blocks from puzzle; And these disappear. (25)

Partial unintelligible utterance. Points to one section; Finish that part off. (26)

Researcher: Right. Pointing to the three blocks she just removed; This one disappears too. Pointing to the changed section; Now this...see. (27)

Annie, there's the rectangle. (28)

Begins adding blocks to puzzle; (29)

Researcher: And that's. Points to the uncompleted section; You've got that one going already. (30)

Adds block to puzzle; (31)

Looks at researcher as she leaves;
Ok good. Thanks for your help.
Laughs; (32)
Researcher: (Out of sight but speaking:) Oh sure. She had so much of it done. I didn’t, I didn’t want her to not finish. (33)

Reaches for the model; Get frustrated here. (34)

Researcher: Right. (35)

Mom and adolescent continue with puzzle; (36)

Ok we just have to. (37) Unintelligible utterance. (38)

Yeah. (39)

Touches one block in front of her; Picks up another; Brings it near the first, then puts it back down; Slides a different block into the puzzle; (40)

Picks up the block the adolescent is touching; Puts it in the puzzle; (41)

A) This example illustrates how the researcher stepped outside of the protocol to facilitate the successful completion of the puzzle for this dyad. By her own admission, the researcher wants this dyad to finish (31). To meet this end, she becomes very instructive, explaining which sections of the puzzle are correct (7, 9, 11, 14, 23), which sections are incorrect (11) and how to make the appropriate corrections (7, 11, 14, 25). The researcher also manipulates the puzzle blocks herself (21, 23) and encourages the adolescent as she makes changes (16, 18, 21, 28). It is unlikely that this dyad would have successfully completed the puzzle without such intervention.

B) In contrast to a previous example (Episode 2; Example 4) where this adolescent rejects her mom’s suggestion to make one section of the puzzle smaller, she attends to the same suggestion when offered by the researcher. However, it is clear by the extent of the instructions given to the adolescent (7, 9, 11, 14, 16, 18, 21, 23, 25, 28), she did not know how to make the necessary changes. Likewise, although mom was correct in suggesting which changes needed to be made, she also appeared unsure of how to make them (10, 12, 19, 22, 26).