

PERFORMANCE ON NATURALISTIC DISSEMBLANCE TASKS IN 7-11 YEAR
OLD CHILDREN WITH LANGUAGE IMPAIRMENT AND TYPICALLY
DEVELOPING CHILDREN

by

Noel Quist Hurst

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GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Noel Quist Hurst

This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

Date

Martin Fujiki, Chair

Date

Bonnie Brinton

Date

Shawn L. Nissen

BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the thesis of Noel Quist Hurst in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

Date

Martin Fujiki
Chair, Graduate Committee

Accepted for the Department

Date

Ron W. Channell
Graduate Coordinator

Accepted for the College

Date

K. Richard Young
Dean, David O. McKay School of Education

ABSTRACT

PERFORMANCE ON NATURALISTIC DISSEMBLANCE TASKS IN 7-11 YEAR OLD CHILDREN WITH LANGUAGE IMPAIRMENT AND TYPICALLY DEVELOPING CHILDREN

Noel Quist Hurst

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Studies over the past several years have shown that children with language impairment (LI) have greater difficulty in social situations than typically developing children. More specifically, studies have shown that children with LI have more difficulty with dissemblance. This study was conducted to assess whether these children are less likely to dissemble in real-life situations. Forty-four children aged 7 to 11 years (22 LI and 22 typically developing) were presented with four situations designed to elicit dissemblance. Their reactions were scored and compared. The results of this study showed subtle differences between children with LI and typically developing children. Children with LI were more likely to display emotions, and the typically developing children were more likely to have non-committal and dissembled responses. These tasks were pilots, and further research is suggested.

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Introduction

There is significant evidence that children with language impairment (LI) have social deficits. These children have fewer friends, are less socially satisfied, experience more bullying, and are less accepted than same age peers (Brinton, Fujiki, & McKee, 1998; Conti-Ramsden & Botting, 2004; Fujiki, Brinton, Hart, & Fitzgerald, 1999; Fujiki, Brinton, Morgan, & Hart, 1999; Fujiki, Brinton, & Todd, 1996; Gertner, Rice, & Hadley, 1994). For example, Fujiki, Brinton, and Todd (1996) reported that 8- to 12-year-old children with specific language impairment (SLI)¹ have fewer social interactions and are more lonely than typical peers. Conti-Ramsden and Botting (2004) found that children with SLI have high levels of internalizing social deficits and are often the target of victimization.

Impaired language skills are often thought to be the primary cause of social deficits in children with LI (Redmond & Rice, 1998). Although language ability is certainly influential, there are reasons to believe that LI does not completely explain the social deficits observed in these children. For example, the severity of language impairment is not always related to the severity of social problems. Additionally, not all children with LI have social difficulties (Fujiki et al., 1999). Thus, it is likely that other factors may interact with language to produce the social outcomes observed in children with LI (Fujiki, Spackman, Brinton, & Hall, 2004).

There are numerous factors which may interact with language ability to impact social behavior (McCabe & Meller, 2004). Several recent investigations have suggested

¹ Both the terms 'language impairment' (LI) and 'specific language impairment' (SLI) are used to talk about children who have LI but have relatively typical cognitive, sensory, and motor development. In referring to previous studies, I have used the terms used in the original paper. However, I generally used the term LI rather than SLI to avoid the implication that language is the only concern for these children.

that children with LI have difficulty interpreting, or understanding, the emotions of others. This deficit, more typically associated with other categories of impairment such as Autism Spectrum Disorders, is likely to have a notable impact on social interaction.

Emotion Understanding

The relationship between problematic social competence and the ability to read the emotions of others is well established (Denham, Salisch, Olthof, Kochanoff, Caverly, & Smith et al., 2002). Several recent studies have shown that children with LI have difficulties with various aspects of emotional understanding (Boucher, Lewis, & Collis, 2000; Ford & Milosky, 2003; Fujiki, Brinton, & Clarke, 2002; Fujiki et al., 2004; Spackman, Fujiki, & Brinton, 2006; Spackman, Fujiki, Brinton, Nelson, & Allen, 2005; Trauner, Ballantyne, Chase, & Tallal, 1993). Illustrative of this work, Spackman et al. (2006) found that children with LI were significantly less able to identify the emotions that a character in a story would be likely to experience and to explain why the character would experience those emotions. These difficulties in understanding the emotions of others are likely to interact with impaired language skills to impact the social interactions of children with LI. The current study focuses on a specific aspect of emotion understanding, the ability to dissemble (hide) emotion when it is socially appropriate to do so.

Emotional Dissemblance and Emotion Understanding

This study looks at dissemblance, an aspect of emotion understanding. Dissemblance can be defined as hiding an experienced emotion for social reasons such as to protect one's self or to be prosocial. Display rules dictate when it is appropriate to display or dissemble emotions (Ekman & Friesen, 1975). In order to recognize and

follow social display rules one must understand that others have different perceptions of situations than oneself. This ability is often referred to as theory of mind (ToM). ToM, as defined by Premack and Woodruff (1978), is the ability to predict the thoughts, feelings, and intentions of others. Within the general domain of ToM is the ability to understand the emotions of others. Because children with LI have difficulties with simple emotion understanding tasks (e.g., recognition of emotion in faces), they likely would have difficulty with more complex emotion understanding tasks like dissemblance (Boucher et al., 2000; Spackman et al., 2005).

In one of the few studies to examine dissemblance in children with LI, Brinton, Spackman, Fujiki, and Ricks (2007) examined the ability of elementary school age children with SLI and their typically developing peers to determine when a character in a scenario should dissemble emotion. These researchers presented the children with stories about a same gender character (e.g., if the participant was a boy the story was structured to be about a male), in which the socially appropriate emotional response to the situation would be to dissemble. The children were then asked what the character should do and what the character's parent would want the character to do. In these hypothetical situations, children with LI were significantly less likely than the typically developing children to appropriately suggest that the character should dissemble.

A limitation of the Brinton et al. (2007) study was that it relied on hypothetical situations rather than examining real situations. It may be the case that children would behave differently if actually faced with an opportunity to dissemble. Thus, I extended the work of Brinton and her colleagues by looking at dissemblance in natural contexts. In

this study I examined whether children with LI have more difficulty in disassembling in naturalistic situations than their typically developing same-aged peers.

Review of Literature

The literature is quite extensive on both the topics of emotional dissemblance and LI. However, there are relatively few studies that examine the ability of children with LI to dissemble emotion. Thus, there is need for more research to clarify the relationship between the two. In this review of literature dissemblance is defined. The importance of social skills and their relationship to dissemblance is then examined. This section is followed by a review of what is known regarding the typical development of dissemblance. Last, the development of dissemblance in children with LI is considered.

An Overview of Dissemblance

Dissemblance is the ability to hide or mask one's true emotions with a different emotion, a neutral emotion, or an increase or decrease of the experienced emotion (Feldman, Devin-Sheehan, & Allen, 1978; Young, 2002). An individual may dissemble emotion to save face, protect another's feelings, or avoid punishment (Gnepp & Hess, 1986). Individuals dissemble emotion in accord with social display rules, which are defined as the rules that govern what is an appropriate display of emotion as opposed to an inappropriate display of emotion in a given social situation within a given culture (Ekman & Friesen, 1975). Sometimes one's experienced emotion can be displayed as it is experienced, but in other situations the emotion needs to be enhanced, decreased, neutralized, or masked by another emotion. This distinction can be based upon a variety of factors, including who the person is with, where they are at, and what their social goals are. Therefore, social display rules dictate when one should dissemble, or hide emotions, in order to be socially appropriate (e.g., hiding sadness at a disappointing birthday gift

from a favorite uncle). Social display rules may be applied to protect the feelings of others, for self protection, or to further one's personal goals.

ToM is essential to dissemblance (Barbaro & Dissanayake, 2007). ToM is a person's understanding of their own and other's thoughts and feelings. Having a developed ToM entails understanding that another person can have different thoughts than one's own and that one's own thoughts may be based on incorrect perceptions or an inaccurate view of reality, based on perspective (Muris et al., 1999). In order to realize that one's own expression of emotions needs to be regulated, a child also needs to realize that the expression of emotion may elicit undesirable reactions from others. When a person displays an emotion in a social interaction, that emotion is likely to impact how the other members of the interaction feel. In order to avoid negative reactions, children need to be able to recognize potential social outcomes if they do not dissemble in a given situation. A child needs to realize that others feel differently than they do because of a different perspective.

The understanding of social display rules and the ability to dissemble is important to effective social interaction. In order to not offend or hurt others, a child must learn when it is appropriate to dissemble emotion (Gnepp & Hess, 1986; Shields et al., 2001). In order to appropriately dissemble they must understand the social display rules that dictate the social interactions that they are involved in.

Typical Development of Dissemblance

There have been many studies examining the development of dissemblance in typically developing children. Some researchers have focused on natural situations in which the child was actually faced with a situation that required dissemblance, such as

receiving a disappointing prize (Cole, 1986; Feldman et al., 1978; Underwood & Bjornstad, 2001; Young, 2002). Other researchers have presented children with scenarios in which a character should dissemble and asked the children what they would do or what the character should do (Gnepp & Hess, 1986; Gosselin, Warren, & Diotte, 2002; Josephs, 1994; Saarni, 1979; Underwood, Coie, & Herbsman, 1992; Young, 2002). Both types of research are reviewed in the following sections.

Studies of dissemblance using structured scenarios. Several studies have been done to discover how children dissemble by presenting the child with scenarios and then asking what the child or character would do under the given circumstance. Studying children in the first, third, fifth, and tenth grades, Gnepp and Hess (1986) found that children continue to develop their understanding of how and when to display emotions until about fifth grade. They presented the children with eight scenarios in which the character should dissemble either to self-protect or to be prosocial. The children were asked after each story about the facial expression that the character would have, as well as what the character would say. The children studied understood prosocial rules better than self-protective rules.

Gosselin et al. (2002) studied children's responses to questions regarding what emotion a story character would feel and what emotion they should display to be prosocial or self-protective. The stories were identical except for the last sentence which was structured to indicate that the child wanted to self-protect or be prosocial. The children used a scale to answer the questions regarding emotion, with a range from very sad to very happy. Children aged 6-7 years and 10-11 years appeared to believe that

neutralization, in other words, showing no emotion was the best way of dissembling, followed by masking or displaying a different emotion to hide the actual felt emotion.

Misailidi (2006) read children, aged 4-6 years, six stories (three happy and three sad) in which a character would feel a particular emotion but for self-protective or prosocial reasons should hide their true emotion. The children were asked to predict the facial expression of the child in the story. The children were then asked to tell why this was the expression that they would expect. The researchers found that the children were more competent in explaining both prosocial and self-protective reasons for dissemblance with increase in age.

Josephs (1994) presented 4-6 year old children with stories, supplemented by pictures, in which the character dissembled emotion. The first picture had a facial expression but in the second picture for each story, the character's face had no eyes, nose, or mouth. The children were told explicitly that the character did not show the emotion that they felt with their face. The children were then asked to identify the character's real emotion and the character's facial expression. The older children were more accurate than the younger children. Also, girls were more accurate than boys.

Banerjee (1997) presented preschool children with six stories about a same-sex character. In order to simplify the task, the children were explicitly told that the character in each story felt one emotion but wanted to hide that emotion or express another emotion because of the presence of another person. The children were then asked comprehension questions followed by questions about the character's real emotion and their displayed emotion. Pictures were provided demonstrating each choice of emotions. The children could point to the pictures or verbally answer the emotion questions. The preschoolers

had an understanding of the difference between displayed and actual emotions, but there were age differences. Five year olds were better at these tasks than three year olds.

Banerjee (1997) also presented the children with a task to assess their understanding of emotional display rules. A doll told the child about an emotional situation and the emotion that she experienced. The doll then asked the child if she should display or hide the emotion. These preschoolers were generally able to distinguish between when the doll should display her emotions (e.g. when she was happy to get a gift she liked) and when she should not (e.g., when she got a gift that she disliked).

Gnepp and Hess (1986) presented children in first, third, fifth, and tenth grades with eight stories requiring dissemblance. After each story the child was asked what the character would say and what their facial expression would be. Children increased their understanding of emotional display rules from the first to fifth grade, but after that time they leveled off. Fifth grade children knew how and when to use verbal display rules appropriately more than 70% of the time and facial expression display rules appropriately 25% of the time.

Saarni (1979) presented comic strip style stories with actual photographs. The children were asked which facial expression, presented in pictures, was appropriate for each situation presented. Each child was then asked why that facial expression was chosen and why it fit the situation in question. Ten-year-old children followed display rules spontaneously more than younger children. They also gave more complex reasons for the facial expression that they chose for the situation. Compared to 6 and 8-year-old children, 10-year-old children more often selected a picture with a dissembled emotion than the character's true emotion, when presented with a story about a character who, in

order to be socially appropriate, ought to dissemble. The older children also gave more sophisticated reasons for dissemblance. In addition, these children used display rules more often.

Underwood et al. (1992) used videotaped vignettes of anger provoking situations to assess the way that children in the third, fifth, and seventh grades would recommend dissembling. After showing the children the vignettes, they asked questions about how the child would feel, look, and act. The children were also asked why they would feel and act the way that they reported. These children were more likely to dissemble anger with a teacher than with a peer. They also found that girls were more likely to dissemble than boys. They assessed dissemblance by facial expressions and actions of the child.

These studies demonstrate that as children matured, they were more likely to suggest that a character in a scenario should dissemble. They also gave more sophisticated reasons for dissemblance. Older children also referred more to social display rules in suggesting appropriate behaviors. In addition, girls were more likely than boys to suggest appropriate dissemblance.

Natural dissemblance studies. Several studies have assessed the development of dissemblance skills in natural situations where, in order to follow social display rules, children were required to dissemble. Young (2002) studied 8- to 10- year-old children by having a 20 minute interview with each child. Each child was asked to list their favorite and least favorite television or movie characters. The children were then asked to make the researcher believe that they really liked the character that they did not like. Their emotional responses (facial expressions, verbal expressions, and gestures) on the first task were considered the baseline for the next task (e.g., the happy baseline was their

emotional reaction when they were telling about the characters that they liked in the first part of the study). Therefore, if the child was able to present with the same emotional response when describing an undesirable character as when they told about characters that they liked, the child was effectively dissembling. The ability of the children to dissemble emotions on the task of describing a disliked character, attempting to portray that they liked it, was compared to peer acceptance ratings. Results showed that different types of dissemblance skills were related to social acceptance in 8 to 10-year-old boys and girls. For girls, the ability to dissemble using positive expressions to mask negative emotions was related to social acceptance. For boys, the ability to neutralize negative expressions was most important.

Feldman et al. (1978) studied third and sixth grade children. The researchers had each participant teach a child confederate a geometric concept, and then the participants gave the confederate a 20 question test on that concept. The confederate either preformed well or poorly depending on the instruction given by the researchers. The children teaching the geometric concepts (the subjects in the study) were instructed to give a positive comment (praise) after each item on the test, regardless of whether the trainee answered the question correctly or incorrectly. Because the trainer was required to give praise no matter how the trainee was performing on the tasks, the trainers had to dissemble their true feelings as they gave praise when the child was doing poorly. Feldman et al. found that verbal dissemblance was possible without nonverbal dissemblance. Although children dissembled verbally when giving praise to a peer, those who were verbally dissembling could still be differentiated by their facial expressions, less smiling, and more pausing, from those who were giving genuine praise.

As part of a larger study, Kerllenevich (2006) examined children in a head start program. There were two tasks used to provoke children. The first was presenting the child with a desirable toy and then immediately telling the child that it was time to clean up. In the second situation, the examiner gave the child a piece of candy. The child's mother then said the child could not have it. The researchers videotaped the children's reactions and found that dissemblance depended on several factors, including language ability, age, and parenting style.

Saarni (1984) gave children a desirable gift after an initial work session, wherein questions from workbooks were answered as a diversion to the real purpose of the sessions. However, after a second session, the children were given a baby toy. The children were instructed to open their gifts at the table and their reactions were videotaped. After their reaction, the disappointing gift was replaced with a desirable prize. When children were presented with a disappointing gift, boys were more likely to show negative emotion than girls. It was suggested that girls who do not dissemble will be regarded as less socially acceptable than boys who perform in a similar manner.

Previous research has shown that preschool girls are more prone to respond to the social situation rather than the prize itself when given a desirable or a disappointing prize (Cole, 1986; Josephs, 1994). In two studies, Cole (1986) studied preschoolers' dissemblance. In the first study, the researcher began by establishing a positive expectancy. She had the children rank prizes and then rewarded the child with the prize ranked highest at the end of the session. In the next session the lowest ranked prize was given to the child. The examiner waited 30 seconds with a neutral facial expression to allow the child to express feelings without being influenced by the examiner's

expression. The final session was a debriefing in which the child was asked what their actual feelings were when they received each prize in the previous two sessions. In the second study the examiner again awarded prizes, desired or disappointing, to the children. The key difference, however, from the previous study was that in some cases the examiner was present as the child opened the gift and in others the examiner was absent. Girls as young as 3-4 years old dissembled when the examiner was present, but did not necessarily do so when the examiner was absent.

Josephs (1994) again used a disappointing prize to create a situation in which the 4-6 year old subjects should dissemble, in order to be socially appropriate. In this study the examiner was in the room for only some of the reactions. In the social situation, when the examiner was in the room, the participants dissembled more than when the examiner was not in the room. Children dissembled more when the examiner was in the room, regardless of the age of the child.

Underwood and Bjornstad (2001) studied approximately 8, 10, and 12-year-olds. They created opportunities for children to naturally dissemble by having the children play a game with a peer. The children were provoked by losing a computer game, which was being played for a prize. They were also provoked by being taunted by the peer confederate after losing the game. After the session, the children were interviewed by the researcher about their experience, how they had displayed or dissembled emotions, and why they had reacted in that way. There was a small but significant association in regards to what the children actually did in these situations to further their goals and what they told the interviewer they would do, after the session. The key finding in this study is that there is a small positive correlation between what children do and what they say they

would do. This emphasizes the importance of studying natural opportunities for dissemblance.

The findings of these studies demonstrate that children can dissemble in different ways and to different degrees. Although children do not always apply display rules, when children do employ them, their use makes the child more socially accepted. Researchers also found that, to be most socially appropriate and socially accepted, the children need to follow social display rules, specifically regarding appropriate dissemblance.

In addition, it has been suggested in the literature that there may be differences in children's performance on structured tasks as opposed to naturalistic tasks. For example, Banerjee (1997) and Cole (1986) suggested that children dissemble at earlier ages on simplified tasks. Josephs (1994) found that older children did better on the scenario tasks, whereas on the natural tasks all of the children, regardless of age, performed well. Thus, it is important to extend the research that has been done regarding children with LI to include naturalistic studies. Naturalistic studies will broaden our understanding and ultimately allow us to help these children perform better in natural situations.

Emotion Understanding in Children with LI

Research has found that children with LI have greater difficulty with several aspects of emotion understanding than typically developing children. Ford and Milosky (2003) asked children to identify and label facial expressions from pictures. Both typically developing children and children with LI performed this task accurately. Then, the researchers asked the children to predict the emotion of a character in a story who experienced various emotions. The stories were presented in three ways, visual only,

verbal only, and both visual and verbal. Kindergarteners with LI had greater difficulty predicting what emotion another person would feel in a given situation than their typically developing peers. Children with LI made more valence mistakes (substituting, for example, positive for negative emotions) than their typically developing peers. This study suggested that children with LI had difficulty making emotional inferences about others.

Spackman et al. (2006) replicated Ford and Milosky's (2003) work with older children. These authors read children stories about a fictional character and asked how the character would feel in each situation. Happiness was most consistently identified, with anger being the most inconsistent. Children with SLI were significantly less likely to predict the feelings of the character in the stories, suggesting that they do not consistently recognize others emotions.

In their article reviewing the literature, Carpendale and Lewis (2004) suggested the possibility that social understanding is influenced not only by age and theory of mind formulation but that social interactions may also be influential. Because it is well established that children with LI are reticent, they experience fewer social interactions. Thus, they would not have the wealth of experience that a typically developing child would have.

Trauner et al. (1993) presented typically developing children and children with LI with photographs of faces and audio clips of voices, each photo or voice portraying an emotion. These authors found that children with LI had greater difficulty identifying affect in the voices than typically developing children. This suggested that children with LI had difficulty recognizing emotional cues in voice. However, the children with LI

were better able to indicate affect presented in facial expressions. Trauner et al. also tested the children's ability to display emotions by having them finish a story using the tone of voice, facial expression, and words that they would use if they were the character in the story. Children with LI had greater difficulty creating appropriate vocal affect. The children with LI consistently had more dramatic facial expressions than their typically developing peers. This display of more dramatic facial expressions may be due to their poor ability to demonstrate affect through their voices.

Boucher et al. (2000) studied the ability of children with SLI, autism, and typically developing children to discern affect from voices. The children with SLI did more poorly than either of the other groups. This difficulty may lead to difficulty in knowing what others are feeling and thus in reacting within social situations.

These difficulties of children with LI in understanding emotion lead to difficulties in knowing how and when to dissemble. The ability to empathize with another and recognize their probable emotion should lead to greater sensitivity and thus more appropriate dissemblance. It is suggested however that children with LI are able to compensate to a degree through recognition of facial expressions. They may not understand why another person is displaying that facial expression, but they recognize and can consider this sign of emotion.

Dissemblance in Children with LI

Only two studies specifically address natural dissemblance of children with LI. Pearl, Donahue, and Bryan (1985) asked children with learning disabilities (LD) to role play situations with peers in which they were required to deliver negative news. They presented situations where the child had to pretend that they were favoring one friend

over another, or telling the friend other negative news (e.g., the friend could not go to ice cream with the child's family). The children role played what they would say to the friend. They also participated in situations in which the child reported good news to a friend. First and second graders were less tactful than third and fourth graders. Also, in these situations, children with LD were less tactful when compared to same age peers. Learning disabilities often stem from earlier and prevailing language impairment. Although not labeled as having LI, language problems are a defining aspect of LD. This is another demonstration that children with language difficulties may also have deficits in dissembling emotion.

Brinton et al. (2007) found that children with LI were significantly less likely than typically developing peers to suggest that a character should dissemble emotion in a story. As mentioned previously, the child was read a short story about a same-age, same-sex child and asked what the child should do, and what their parents would want them to do, in that situation. Although the perception of social display rules (based on what their parents would want them to do) did not significantly differ, the children with LI were less likely to suggest that a character should dissemble than were typical children.

The current study will add to our understanding of how children with LI are able to dissemble emotion by examining their performance in natural situations where it is socially appropriate to dissemble. In the present study I attempted to learn if the deficits observed in structured tasks carry over into the way that children with LI function in natural contexts.

Method

The current study was part of a larger project that explored the emotion understanding of children with LI. The natural dissemblance scenarios described below were presented between four tasks designed to further investigate emotion understanding in typically developing children and children with LI in various contexts and situations. The scenarios were presented in a single session by the same two examiners. The order of the scenarios was counterbalanced to control order effects.

Participants

Study participants included 44 children; 22 children with LI and 22 typically developing children, matched for age and sex. The participants were selected from the 2nd to 5th grades. The group with LI ranged from 7;1 to 11;0 ($M = 9;3$, $SD = 12$). The typical group ranged from 7;1 to 11;0 years of age ($M = 9;4$, $SD = 14$). Prior to beginning the study, an application for protection of human subjects was approved by the IRB, Brigham Young University. In addition, permission was obtained from the school districts from which the participants were selected, the principal of each school involved, and the parent or guardian of each child involved in the study. Each child also signed a written agreement to participate in the study.

Children with LI. Children with LI were identified as follows. Speech-language pathologists within the participating school districts were asked to recommend children with LI from their current caseloads or children who were receiving resource services for language problems. The participants with LI were required to meet the following criteria:

1. Diagnosis of LI by certified speech-language pathologist or resource room teacher.

2. Current enrollment in speech and language services or resource services for language issues.
3. Standard score of 70 or above on a standardized intelligence test, in order to rule out mental retardation as a basis for language difficulties.
4. No history of emotional or behavioral problems, cognitive deficits, or neurological problems (i.e., autism) requiring special services, as indicated by school records and placement.
5. Standard score below 85 on a standardized language test (one standard deviation below the mean).
6. Native English speaker.
7. Unremarkable audiological status.

Existing intelligence and language test scores were used to identify children as language impaired, if such scores existed. The selected participants were given the *Universal Nonverbal Intelligence Test* (UNIT; Bracken & McCallum, 2003) and the *Comprehensive Assessment of Spoken Language*; (CASL; Carrow-Woolfolk, 1999) in order to have consistent measures of language and intelligence across participants and to verify proper group placement. Acceptable performance was specified as a minimum score of 70 on the UNIT and a score below 85 on the CASL.

Typically developing children. Each participant with LI was matched with a typically developing child from the same classroom. The classroom teachers were asked to submit names of children who met the following criteria:

1. Same gender and age (within 6 months) of the child with LI.
2. Not enrolled in any special services (i.e., resource, speech language intervention).

3. No diagnosis of emotional, behavioral, cognitive, or neurological deficits.
4. Standard score of 85 or above on a standardized language test (one standard deviation below the mean).
5. Standard score of 85 or above on a standardized intelligence test.
6. Typical performance in language, behavior, and academics as reported by the classroom teacher and school placement.
7. Native English speaker.
8. Unremarkable audiological status.

The typically developing peers were selected based on gender and on a chronological age within 6 months of a child with LI. For each child with LI, permission slips were sent to the parents of all the typical children who qualified as matches. The actual participant was randomly selected from those children whose parents gave written consent for their child to participate. The selected participants were given the UNIT and the CASL to ensure that their nonverbal intelligence and language levels were within normal limits for their age (standard scores of 85 or higher on both measures).

Materials

Comprehensive Assessment of Spoken Language (Carrow-Woolfolk, 1999). The CASL was developed to assess language abilities of children aged 3 to 21 years. The CASL was given to each of the children to assess their language abilities, ensuring that the children fell into the proper group according to the study specifications. It also provided a uniform measure of language ability for all participants. The core set of tests for children aged 7-10 years was given. This core battery consisted of the following

subtests: antonyms, syntax construction, paragraph comprehension, nonliteral language, and pragmatic judgment (Carrow-Woolfolk, 1999).

Universal Nonverbal Intelligence Test (Bracken & McCallum, 2003). The UNIT was developed to assess general intelligence of children aged 5-17 years of age, while eliminating the linguistic demands of most intelligence tests (Bracken & McCallum, 2003). During testing, neither the administrator nor the child spoke. All instruction was given through hand signs (e.g., holding hand up for stop) and the child was trained as to how to do each task by watching the administrator complete an example and then doing a practice item. The child was corrected on that task, if he or she appeared to be confused. The core set of tests for children aged 7-10 were given. These included the following subtests: symbolic memory, cube design, analogic reasoning, and spatial memory.

Dissemblance scenarios. The following materials were used in the four dissemblance scenarios. For scenario 1, Examiner 1 had a 5x7 picture of a young man who was wearing large glasses, making a funny face, with rice falling out of his mouth. For scenario 2, Examiner 1 had a watercolor painting of a girl on white construction paper. The nose and mouth of the girl were misshapen and the hair was sticking up in the middle. Examiner 1 also had an envelope which she pulled the picture from to show the child and into which she replaced the picture before giving it to Examiner 2. For scenario 3, Examiner 1 had an old perfume bottle filled with white vinegar mixed with a small amount of men's cologne. For scenario 4, prior to testing, Examiner 2 had three undesirable prizes for the children to choose from: a plastic spoon, a coffee stirrer, and a paperclip. Examiner 2 also had three desirable prizes for the children to rank. Examiner

2 had a paper bag to place the undesirable prize given to the children by Examiner 1, as well as another paper bag to place the desirable prize in before giving it to each child.

Procedures

This study was part of a larger project conducted with these participants to assess various aspects of their emotion understanding. All of the dissemblance scenarios were completed during the same testing session. This session was video taped with two cameras, thus capturing the child's reactions from two angles for later scoring.

Four scenarios were developed in which children were presented with situations that required dissemblance. These scenarios were embedded within other testing that was being conducted. Two second-year graduate students in communication disorders were involved in the presentation of each scenario. The first examiner (Examiner 1) began each naturalistic dissemblance scenario. Then, a second examiner (Examiner 2) entered the room to assist in presenting each scenario to the child. After the scenario was completed, the second examiner left the room while the child performed other tasks.

Scenario 1: The ugly boyfriend. The first situation was presented as follows. Examiner 1, who was administering the test battery, pulled a picture of her boyfriend, a homely young man, out of her papers. The interaction was structured as follows.

Examiner 1: "I have a new boyfriend. I think he's so cool! This is my boyfriend. (The examiner showed the child the picture.) What do you think of him?"

Child: (opportunity to respond)

After this exchange between Examiner 1 and the child, Examiner 1 left the room and Examiner 2 entered the room. The picture of the boyfriend was left out on the table.

Examiner 2: "Who is this?"

If the child did not answer that question, Examiner 2 followed up with a second question.

Examiner 2: “Is this [name of Examiner 1’s] boyfriend?”

Child: (opportunity to respond)

Examiner 2: (looked around conspiratorially) “What do you think of him?”

Child: (opportunity to respond)

Examiner 2: “Do you think he looks cool?”

Child: (opportunity to respond)

The last set of questions was asked to find out the true nature of the child’s emotions.

Although this scenario had not been used in previous research, pilot testing with typically developing children suggested that children between the ages of 7 and 11 would dissemble their impressions.

Scenario 2: Ugly painting of person present. The second situation was presented as follows. After issuing the second test of the battery Examiner 1 began the second scenario.

Examiner 1: (showed the child a picture that she painted of Examiner 2) “You know (name of Examiner 2), the girl that was in here earlier?”

Child: (opportunity to respond)

Examiner 1: “I painted this picture of her. I worked really hard on it. What do you think?”

Child: (opportunity to respond)

Examiner 1: “Do you think it looks like her?”

Child: (opportunity to respond)

Examiner 1: (put the picture in an envelope and gave it to Examiner 2 and left the room)

Examiner 2: (entered the room and opened envelope) “Do you think this is good?”

Child: (opportunity to respond)

Examiner 2: “Does it look like me?”

Child: (opportunity to respond)

This presented a unique opportunity to dissemble with Examiner 2, to avoid telling her that she looked like the ugly picture. Again, this scenario had not been previously used in research. However, pilot testing with typically developing children suggested that children of the age being studied should recognize the need for dissemblance.

Scenario 3: Gross perfume. The third situation was presented as follows. After another of the structured tasks, Examiner 1 pulled a bottle of perfume out of her bag.

Examiner 1: “My boyfriend just gave me this perfume. I love it!” (the examiner sprays the perfume) “Can you smell it?”

Child: (opportunity to respond)

Examiner 1: (the examiner sprayed the perfume again if the child indicated that he or she could not smell it.) “What do you think of it?”

Child: (opportunity to respond)

Following this interaction, Examiner 1 left the room, leaving the bottle on the table.

Examiner 2 entered the room.

Examiner 2: “What is that smell?”

Child: (opportunity to respond)

Examiner 2: (if the child did not respond, the examiner picks up the bottle) “Is this her perfume?”

Child: (opportunity to respond)

Examiner 2: “Do you think it smells good?”

Child: (opportunity to respond)

Although this scenario had not been used in previous research, pilot testing with typically developing children indicated that children between the ages of 7 and 11 would dissemble their impressions.

Scenario 4: Disappointing prize. The fourth and final situation was presented as follows. Prior to beginning the tasks, Examiner 2 took each child into another room and had him/her rank 6 prizes in order from the most to least desirable. The child was then taken into the test room to do the tasks. After the completion of the final task, Examiner 1 gave the child the prize that they ranked as least desirable in a paper bag. If the child did not spontaneously open it, Examiner 1 told the child to open it. The child then had an opportunity to dissemble or display his/her emotions. Examiner 1 then told the child that Examiner 2 would take the child back to class and that Examiner 2 would be in shortly. Examiner 1 left, and Examiner 2 entered the room. Then the following conversation took place between Examiner 2 and the child.

Examiner 2: “How do you like your prize?”

Child: (opportunity to respond)

Examiner 2: “Let’s see it.” (pause) “Wait, is that what you wanted?”

Child: (opportunity to respond)

Examiner 2 then gave the child their top ranked prize. This replacement prize was issued in order to discourage the child from telling other children about the occurrence as well as to compensate the child for the time spent working. The disappointing prize scenario has been used in previous studies assessing dissemblance in typically developing children of the same age as the children in the current study, as well as children of younger ages (Bohnert, Crnic, & Lim, 2003; Cole, 1986; Garner & Power, 1996; Josephs, 1994; Saarni, 1984). It has also been used with children who were blind (Cole, Jenkins, & Shott, 1989).

In order for the structured dissemblance task, also used in the larger study, not to influence the child's behavior, three of the naturalistic dissemblance scenarios were presented prior to the formal dissemblance battery. However, the disappointing prize was presented at the end of the session as a reward for their cooperation and time. The first three scenarios were randomized to avoid order effects.

Scenario Scoring

All four scenarios were videotaped and scored later by the author of this study. The vocalizations as well as facial expressions were assessed. A certified speech-language pathologist rescored 10% of the data to ensure scoring reliability. The two scorers produced a 96% rate of agreement. As mentioned previously, Feldman, et al. (1978) found that children may dissemble verbally without dissembling their facial expressions. Joseph (1994) suggested facial expression would be a truer measure of the child's emotions than verbal display. Therefore, in the present study, facial expression and other non-verbal features were used to assess when the children were dissembling.

The following categories were used. *Display* was used for obvious displays of emotion. *Dissemble* was used to code obviously dissembled emotion. *Non-committal* was used to code neutral comments, pauses, and fillers that might or might not be examples of dissemblance. Detailed guidelines for scoring in each of these categories are presented in Appendix D. For example, if the child said nothing, it could be that the child was dissembling. It might also be the case that the child was not paying attention, did not understand, or did not care enough to respond.

Descriptive statistics were used to analyze the data because of the small sample size, the differential salience of the scenarios, and the inherent differences between scenarios. The last two reasons require some additional explanation.

The scenarios varied in their level of salience to the child and to each of the examiners. For example, the disappointing prize was most salient to the child because this was the child's reward for working. This scenario was less salient to Examiner 1, however, because her main concern was that the child complete the tasks. On the other hand, the picture of her boyfriend, her painting, and her perfume were more salient to Examiner 1. These scenarios reflected personally on Examiner 1. The child, however, was much less invested.

The fact that the ugly painting scenario provided two opportunities to dissemble highlighted the final reason for examining these data descriptively. A descriptive analysis provided the opportunity to consider how the various sequences unfolded as the child interacted with the examiners. In most of the scenarios the second examiner provided the child with an opportunity to reveal true emotions. As noted above, however, in the scenario involving the ugly painting the child had to dissemble to the

second examiner as well. A descriptive analysis allowed examination of how the children's responses changed from the first to second adult statement as well as from the second to third.

Results

During the course of the overall assessment the examiners presented four scenarios requiring dissemblance. Each of these opportunities to dissemble was considered individually.

The Scenario of Importance to the Child: The Disappointing Prize

Table 1 presents the number of times children displayed and dissembled their emotions in response to the disappointing prize scenario. The disappointing prize was the most reliable scenario used, having been used extensively by other researchers. It was also the only scenario which was highly salient to the child. Participants also produced the most change in their responses as the situation evolved within this scenario. When first given the prize by Examiner 1, the children with LI displayed more often than the children with typical language skills. Next, Examiner 2, who had been with the children when they had ranked the prizes, asked “How do you like your prize?” By asking this question, the examiner implicitly gave the children permission to reveal their true emotion. Six of the typical children did so. In contrast, there was relatively little change among the children with LI. When Examiner 2 asked the second question, “Wait, is that what you wanted?” nearly all of the children in both groups indicated that it was not, revealing their true emotions.

Scenarios of Importance to the Examiner

The ugly painting. The ugly painting scenario was more meaningful to the examiner than the child. It differed from the other scenarios because of the opportunity to dissemble for both examiners. The numbers of times the children displayed and dissembled to this scenario are presented in Table 2.

Table 1

Results on Disappointing Prize Scenario for Language Impaired (LI) and Typically Developing Children

	Opportunity to dissemble		
	Examiner 1	Examiner 2a	Examiner 2b
LI			
Display	11	13	19
Hide	3	5	1
Non-committal	8	4	2
Typical			
Display	5	11	20
Hide	7	6	0
Non-committal	10	5	2

Table 2

Results on Ugly Painting Scenario for Language Impaired (LI) and Typically Developing Children

	Opportunity to dissemble		
	Examiner 1	Examiner 2a	Examiner 2b
LI			
Display	8	10	19
Hide	10	7	2
Non-committal	4	5	1
Typical			
Display	8	7	12
Hide	6	7	3
Non-committal	8	8	7

In response to Examiner 1's painting and her question, "Do you think it looks like her?" typically developing children and children with LI displayed at approximately the same rate. The children with LI did dissemble more often, whereas the typical children were more likely to be noncommittal. When Examiner 2 posed her first question, "Do you think this is good?" more of the typical children produced answers that either dissembled or were noncommittal, but in general differences were small and most likely not meaningful. Depending on how the children interpreted the question, this might have been considered a request for an opinion rather than presenting a context calling for dissemblance. When Examiner 2 asked if the picture looked like her, asking a question which specifically required dissemblance, children with LI were more likely to display than typical children.

The ugly boyfriend. The ugly boyfriend scenario was also more meaningful to the examiner than to the child. The number of times the children displayed and dissembled in response to the ugly boyfriend scenario is presented in Table 3. In response to this picture children in the group with LI displayed somewhat more than the typically developing children. Similar differences were observed in response to Examiner 2's questions, "What do you think of him?" and, "Do you think he looks cool?"

The gross perfume. This scenario was also more meaningful to the examiner than to the child. The results of the gross perfume scenario are presented in Table 4. There was little difference in rate of dissemblance between groups in responding to the perfume scenario. This was the case both for the initial opportunity to dissemble, as well the second examiner's question, "Do you think it smells good?" About half of the children in

Table 3

Results on Ugly Boyfriend Scenario for Language Impaired (LI) and Typically Developing Children

	Opportunity to dissemble		
	Examiner 1	Examiner 2a	Examiner 2b
LI			
Display	13	16	15
Hide	8	3	2
Non-committal	1	3	5
Typical			
Display	9	11	11
Hide	6	6	2
Non-committal	7	5	9

Table 4

Results on Gross Perfume Scenario for Language Impaired (LI) and Typically Developing Children

	Opportunity to Dissemble	
	Examiner 1	Examiner 2
LI		
Display	10	13
Hide	10	4
Non-committal	2	5
Typical		
Display	9	12
Hide	11	3
Non-committal	2	7

both groups displayed their emotions to the first examiner. A little over half of the children in both groups displayed to the second examiner.

In summary, the results of the scenarios showed subtle differences between the two groups of children. The children with LI were generally more likely to display, however, there was variability from scenario to scenario. Typically developing children were also more likely to produce non-committal responses. In addition, typically developing children adjusted more to the social context and examiner than did the children with LI.

Discussion

Children with LI and their typically developing peers were presented with four naturalistic opportunities in which to dissemble. Each situation dictated that the child dissemble in order to be socially appropriate. Their responses to the questions in each social situation were coded. There were several differences in the results between the groups.

Overall Trends

Analysis of the data revealed several observations. An unexpected finding was the high number of displays among all children (those with LI and the typically developing), mentioned previously. Typically developing children were somewhat more adaptable to the examiner and the situation and tended to dissemble more often. Across scenarios, typically developing children showed more non-committal responses to questions and children with LI showed more displayed responses. Within each scenario specific trends appeared, which are discussed below.

Findings by Scenario

Prize. One notable difference between this scenario and the other three situations is that this scenario had been used previously with a number of different populations (Bohnert et al., 2003; Cole, 1986; Garner & Power, 1996; Josephs, 1994; Saarni, 1984). Thus, it would be expected that this scenario would yield the clearest results. It was also the scenario which was the most meaningful to the child. In keeping with these expectations, this scenario yielded the clearest group differences, with the children with LI displaying more often than the typically developing children. An example of this can be seen in the following responses for a child with LI.

Examiner 1: And to thank you for helping us, here is your prize. You can go ahead and open it.

LI: Okay.

Examiner 1: I'm going to go and get (Examiner 2) to bring you back to class, okay?

LI: Why is there a straw?

Examiner 2: How do you like your prize?

LI: Umm, not really that much.

Examiner 2: Let's see it. Oh, wait, is that what you wanted?

LI: No.

In the sequence above the child with LI displayed his emotions in response to each question. In contrast, in the following example the typically developing match first disassembles, then uses a non-committal response, and finally displays. However, even when the typically developing child displays his emotions he softens the response.

Examiner 1: And to thank you for helping us, here is your prize. You can go ahead and open it.

Typical: (said and did nothing)

Examiner 1: I'm going to go and get (Examiner 2) to bring you back to class, okay?

Typical: Okay.

Examiner 2: How do you like your prize?

Typical: Okay.

Examiner 2: Let's see it. Oh, wait, is that what you wanted?

Typical: No, but it's okay.

The typical children dissembled twice as often as the children with LI when questioned by Examiner 1. One child with LI began to cry when given his disappointing prize. This was not socially appropriate for the 7- to 11-year-old participants in this study, and no typical child produced similar behavior. This suggests that typically developing children were better able to dissemble during a highly salient situation than the children with LI.

Another difference observed was that the typically developing children appeared to be able to adjust to the changing context more readily than the children with LI. Consider the context surrounding Examiner 2's first question, "How do you like your prize?" The children had previously rated the prizes with Examiner 2, and should have had some feeling that this was an opportunity to reveal true emotion without penalty. The number of children in the group with LI who displayed remained about the same. In the typical group almost twice as many children now displayed their emotion. Finally, by Examiner 2's second question, which specifically asked if this was what the child wanted, almost all the children in both groups understood that they were free to display their emotions.

Ugly painting. This scenario was unique in that on the final question asked by Examiner 2, the children were required to take into account both the feelings of Examiner 1 and Examiner 2. In the context of the ugly painting, the child was required to consider the feelings of Examiner 2 rather than Examiner 1. In this scenario, children in the groups performed similarly on the question asked by Examiner 1. However, as Examiner 2 entered and the social atmosphere changed, the children with LI were less able to

adjust. The typically developing children were better able to adjust to the final question and to the particular examiner who was present more easily than the children with LI. In this situation it would be more socially appropriate to tell Examiner 2 that the painting did not look like her. The typically developing children showed more ability to be flexible and adjust their response dependant upon the circumstances.

Ugly boyfriend. In this scenario there were more non-committal responses among the typically developing children than among the children with LI, especially with Examiner 1. The following two examples illustrate this point. The first example was produced by a child with LI. His answers are direct, leaving little doubt as to his feelings.

Examiner 1: I have a new boyfriend. I think he's so cool. This is my boyfriend.

What do you think of him?

LI: (covers face) Uhh.

Examiner 2: Who's that?

LI: The other girl's boyfriend. She said it.

Examiner 2: What do you think of him?

LI: (covers face) He looks kind of weird.

Examiner 2: Do you think he looks cool?

LI: No.

The following is an example produced by the typically developing match of the child quoted above.

Examiner 1: I have a new boyfriend. I think he's so cool. This is my boyfriend.

What do you think of him?

Typical: (pause) I don't know.

Examiner 2: Who's that?

Typical: She said it was her new boyfriend.

Examiner 2: What do you think of him?

Typical: I don't know.

Examiner 2: Do you think he looks cool?

Typical: Not really.

The child's answers are more neutral, reflecting greater care to avoid offending the examiner.

Perfume. This scenario also had more meaning to the examiner than to the child. Performance on the perfume scenario was the most similar between groups, with nearly identical responses on both questions. It maybe that the reason for such similar results between the children with LI and their typical peers is that disliking the perfume was not a direct insult to the examiner, and was more removed from the children's experience. Because commenting on the perfume was less personal, it may have been less offensive for the children to display their emotions.

General Information about All Scenarios

Categories used to classify responses. There are several points regarding the methodology that require comment. These include the limited number of scenarios presented, the differences between scenarios, and the use of the non-committal category. First, the session in which the scenarios were presented was relatively short, with all four inserted into less than an hour long session. Statistically it would have been beneficial to have more scenarios, however, it was believed that the children could only be presented with four scenarios in this time frame without impacting naturalness. More opportunities,

spread out over a longer sampling period, would have been likely to provide a clearer picture of the children's ability to dissemble.

The scenarios used to examine dissemblance in this study differed from each other in their importance to the child as well as the importance to each examiner. The children certainly found the prize to be most personally meaningful since it impacted them directly. However, the painting, perfume, and boyfriend were of less importance. These scenarios did not directly impact the child.

The scenarios also ranked differently in their salience for Examiner 1. The most salient was the painting. It was her own handywork, which she "worked really hard on." The next most salient was the boyfriend; she chose him. Third was the perfume. If the child did not like the perfume, however, it was not a direct insult to the examiner as she was not wearing it and did not choose it herself. Finally, the scenario which was most salient to the child was ranked as least salient to Examiner 1. Examiner 1 did not know what prize the child wanted; this examiner did not know which prize the child ranked as most desirable, and was thus unaware that the child was receiving the least desirable prize.

Finally, the scenario that had the most salience to Examiner 2 was the painting. In the other scenarios, Examiner 2 was set up to be the confidant, the person who the child could tell that the perfume smells bad or that the prize was not the one wanted. When the question was asked, "Do you think this looks like me?" Examiner 2 was looking for a different response. The child no longer had to protect only Examiner 1's feelings but also Examiner 2's. The child must bear in mind that if he or she previously

told Examiner 2 that the picture was ugly it would be an implied insult to tell her that the painting looked like her.

In order to analyze the responses to the scenarios three categories were used. These were display, dissemble/hide, and non-committal. The non-committal category was used due to the high number of reactions which were difficult to clearly interpret. The difficulty arose because a non-committal response could result from a desire to dissemble or apathy toward what was being discussed. It was also likely that the unfamiliar adult-child interactions into which the scenarios were inserted would lead to more non-committal responses than would be expected in peer-peer interactions, or in interactions with a familiar adult. Finally, because children with LI are often reticent, it might be expected that they would be more likely to produce minimal results than their typical peers.

It is important to point out, however, that a non-committal reply is more like dissemblance than display. Some studies have included neutral (non-committal) as a subcategory of dissemblance (Feldman et al., 1978; Young, 2002). The children who used a non-committal response are at the very least softening a more direct response.

High number of displays. This experiment revealed that children in both groups displayed their emotions more often than anticipated. There are several possible reasons for this result. One possibility is that dissemblance is a skill which is developed over time, as children mature. Thus, due to the wide age range studied, some children may not have developed the emotion understanding necessary to dissemble in these situations. Another possibility is that due to social norms within the family there were differences in what was considered as appropriate for dissemblance or display. For example, one child

who participated in the pilot study prior to this research displayed more than anticipated. In later talking to her father, it was found that he felt she should always speak her feelings. Although the scenarios were developed with the idea that social display rules would require dissemblance, this rule may not have been the case for all of the children studied.

A final factor that may have impacted the situation was that the relationship between the child and the examiners was relatively weak. Although good rapport was attempted, there was not sufficient time available to develop a personal relationship with each child. The children may have had more apathy regarding the examiners' feelings because a closer relationship had not been established.

Conclusions

The results of this study suggest that children with LI and their typical peers responded differently to the different scenarios requiring dissemblance. These differences were associated with the level of salience to the child as well as the examiners. In addition, this study provides us with further evidence that children with LI perceive some social situations differently than typically developing children. Typical children were able to dissemble more often when presented with salient scenarios. Thus, in emotionally charged situations with peers, these children would likely follow social display rules associated with dissemblance more readily than children with LI, thus maintaining relationships. In some of the less salient contexts, however, the group with LI and the typical group performed nearly the same. Also, it is important to realize that there was significant overlap between the performance of the groups in this study. Some children in the group with LI performed more like the typical children and vice versa.

Therefore, in naturally occurring situations, some children with LI may perform more appropriately than their typically developing peers. However, this would occur less often than the reverse, especially in highly salient situations.

As can be seen by differences across examiners, another finding of this study was that typically developing children adjust more readily to changes in social situations regarding the need to dissemble. Again, this suggests that children with LI have more difficulty shifting their reactions to suit the needs of the situation. These are preliminary findings however, as three of the four tasks were piloted in this study. Thus, further research is needed to further clarify these outcomes.

Suggestions for Future Research

Children with LI have been found to have poor emotion understanding skills. This study is further evidence of differences between children with LI and their peers in this sphere. There is still much to learn regarding these differences, however. This study was exploratory by nature. Only one of the four scenarios had been used in previous research.

The scenarios developed for this study were not as salient to the child as the disappointing prize. If scenarios which were more salient to the child were used, new patterns may appear. In addition, if more scenarios are developed and more children are tested the results could be analyzed more easily using quantitative statistics.

Another suggestion for future research is the use of confederates. This study employed a context in which the child interacted with an unfamiliar adult. This could have skewed the results. Because of the adult-child power difference, children may have been hesitant to reveal their emotions. If peers were used as confederates the relationship

between partners would be more equal. Differences in their interactions with peers might also provide useful information as to why children with LI have fewer friendships. If teachers or parents were enlisted as confederates, there would also be an established relationship, which the children would be more prone to want to preserve. A final suggestion regarding this issue would be to build greater rapport with the children prior to testing. This could be useful due to the fact that training others to do what the researcher desires is difficult and training several people could lead to differences in presentation of the scenarios. Thus, the researchers could become more acquainted with the children over a period of time. If this were done there would be more of a relationship for the child to preserve.

One further concern which could be addressed is the question of social norms in the homes of the children. In different homes, there may be a variety of behaviors that are considered socially appropriate. Not all adults have the same level of emotion understanding or identical notions of social display rules. Thus, their children may follow these examples. Additionally, some children get mixed messages. They may be told to both, “be honest” and, “don’t hurt others’ feelings.” This mix of messages could confuse some children or they may arbitrarily select one rule as more important. In fact, many children may be taught the social rule of being honest so intensely that it may overshadow their inclinations to dissemble. These children may display because this is what they have been taught to do. Additionally, the amount of emotion talk in the family may be influential. Children whose parents explicitly discuss emotions (e.g., what emotions a specific act may elicit) may develop greater emotional competence. A parent questionnaire could help to answer some of these questions. The further understanding of

patterns, causes, and consequences of appropriate or inappropriate dissemblance in children with LI could have far reaching practical value in treating these children.

Therefore, further research in this area is warranted.

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Appendix A

Consent to Take Part in Research (for parents of children with LI)

Introduction

This research study is being conducted by Dr. Martin Fujiki, Brigham Young University, to study the ability of children with language impairment to correctly interpret the emotions of other people. Your child was selected because he/she is currently receiving language intervention.

Procedures

I will ask your child to complete the following tasks: (1) listen to a short paragraph read with various emotional tones of voice and judge what emotion is being conveyed, (2) listen to a short story and tell how the main character feels and what he/she should do, (3) look at pictures of facial expressions and tell what emotion is conveyed, and (4) make judgments about how emotion should be expressed in social situations. These tasks will be videotaped. Your child will also be asked to complete a test of nonverbal intelligence, a standardized language test, and a short memory test. Your child's teacher will complete a questionnaire focusing on social skills. This work will take about 2 to 2.5 hours (divided into shorter segments) of your child's time and 10 minutes of your child's teacher's time. All testing will take place in your child's school.

Risks/Discomforts

Your child will miss some class time. I will work closely with your child's teacher to make sure that research activities do not conflict with normal educational activities.

Benefits

There are no direct benefits to participants. It is hoped, however, that the research will help educators work with the social problems experienced by most children with language problems.

Confidentiality

Be assured that your child's participation will be confidential. All materials will be stored in a locked cabinet at BYU. Names will be removed from research materials and neither your name nor your child's name will ever be used in connection with any presentation of this research. All videotapes will be erased.

Compensation

At the end of each segment of work, your child will be offered a small toy, treat, or school supply to keep.

Participation

Participation is voluntary. If you give permission to include your child in the study, he/she will also be asked if he/she would like to participate. Even if you give consent, your child may withdraw at any time without penalty. Also, you may withdraw him/her at any time.

Questions about the Research

If you have any questions concerning the study, please contact me. My phone number and email address are (801) 422-5994, martin_fujiki@byu.edu.

Questions about your Rights as a Research Participant

If you would like to discuss this study with a person not involved in the research, you may contact Dr. Renea Beckstrand, Brigham Young University, 120 B RB, (801) 422-3873 (renea_beckstrand@byu.edu).

I have read, understand, and received a copy of the above consent and of my own free will allow my child to participate in the study.

Signature _____

Date _____

Consent to Take Part in Research (for parents of typical children)

Introduction

This research is being conducted by Dr. Martin Fujiki, Brigham Young University, to study the ability of children with language impairment to correctly interpret the emotions of other people. Your child was selected because I need children without language problems to serve as a comparison group.

Procedures

I will ask your child to complete the following tasks: (1) listen to a short paragraph read with various emotional tones of voice and judge what emotion is being conveyed, (2) listen to a short story and tell how the main character feels and what he/she should do, (3) look at pictures of facial expressions and tell what emotion is conveyed, and (4) make judgments about how emotion should be expressed in social situations. These tasks will be videotaped. Your child will also be asked to complete a test of nonverbal intelligence, a standardized language test, and a short memory test. Your child's teacher will complete a questionnaire focusing on social skills. This work will take about 2 to 2.5 hours (divided into shorter segments) of your child's time and 10 minutes of your child's teacher's time. All testing will take place in your child's school.

Risks/Discomforts

Your child will miss some class time. I will work closely with your child's teacher to make sure that research activities do not conflict with normal educational activities.

Benefits

There are no direct benefits to participants. It is hoped, however, that the research will help educators work with the social problems experienced by most children with language problems.

Confidentiality

Be assured that your child's participation will be confidential. All materials will be stored in a locked cabinet at BYU. Names will be removed from research materials and neither your name or your child's name will ever be used in connection with any presentation of this research. All videotapes will be erased.

Compensation

At the end of each segment of work, your child will be offered a small toy, treat, or school supply to keep.

Participation

Participation is voluntary. If you give permission to include your child in the study, he/she will also be asked if he/she would like to participate. Even if you give consent, your child may withdraw at any time without penalty. Also, you may withdraw him/her at any time.

Questions about the Research

If you have any questions concerning the study, please contact me. My phone number and email address are (801) 422-5994, martin_fujiki@byu.edu.

Questions about your Rights as a Research Participant

If you would like to discuss this study with a person not involved in the research, you may contact Dr. Renea Beckstrand, Brigham Young University, 120 B RB, (801) 422-3873 (renea_beckstrand@byu.edu).

I have read, understand, and received a copy of the above consent and of my own free will allow my child to participate in the study.

Signature_____

Date_____

Consent to Take Part in Research (for teachers)

Introduction

This research study is being conducted by Dr. Martin Fujiki, Brigham Young University, to study the ability of children with language impairment to correctly interpret the emotions of other people. You are being asked to participate because you are the classroom teacher of a child with language impairment.

Procedures

A child with language impairment and a typically developing child in your class are being asked to take perform a series of tasks that measure the ability to read the emotional reactions of other people. They will also be asked to take a test of nonverbal intelligence, a standardized language test, and a short memory test. We are asking you to complete a questionnaire focusing on social skills. You may return the completed questionnaire in stamped, self-addressed envelope that will be provided.

Risks/Discomforts

This questionnaire is 74 questions long and will take about 10 minutes, per child, for you to complete.

Benefits

This research will help educators work with the social problems experienced by most children with language problems.

Confidentiality

Be assured that participation will be confidential. All materials will be stored in a locked cabinet at BYU. Names will be removed from research materials and neither your name nor your students' names will ever be used in connection with any presentation of this research..

Compensation

We will compensate you \$5 per completed questionnaire as a thank you for your participation.

Participation

Participation is voluntary. You may withdraw at any time.

Questions about the Research

If you have any questions concerning the study, please contact me. My phone number and email address are (801) 422-5994, martin_fujiki@byu.edu.

Questions about your Rights as a Research Participant

If you would like to discuss this study with a person not involved in the research, you may contact Dr. Renea Beckstrand, Brigham Young University, 120 B RB, (801) 422-3873 (renea_beckstrand@byu.edu).

I have read, understand, and received a copy of the above consent and of my own free will agree to participate in the study.

Signature _____
Date _____

Child's Assent

Introduction

My name is Martin Fujiki. I work at Brigham Young University. I study the way that children learn to tell what other people are feeling. I am working with children in Mrs./Ms/Mr. _____'s class. I would like your help.

What Will Happen (Procedures)

I will ask you to do several things. I will ask you to listen to a story and tell me how a person in the story feels. I will ask you to listen to another story and tell me how a person in the story feels and what he/she should do. I will ask you to look at some pictures of people and tell me how the people feel. I will ask you to tell me what a person should say when certain things happen. I will ask you some questions about things you like. I will videotape you doing some of these things. I will also ask you to take some tests. You will need to point to pictures, answer questions, follow directions, repeat some words, and solve some puzzles on these tests. Your teacher will answer some questions about how you work with others at school. You will do all the work at school. You will work with us two or three times. It will take an hour or less each time.

Possible Problems (Risks)

You will miss some class time. I will work with Mrs./Ms/Mr. _____ to make sure than you do not miss things in class that are really important or really fun.

Good things that will happen (Benefits)

You will get to pick a small toy or prize every time you work with us.

Who will know about this work (Confidentiality)

You, your parents, and your teacher will know that you are working with us. No one else at your school will know. We will not put your name on any of our papers. We will not put your parents' names or your teacher's names on any of our papers. We will keep all of our papers and work locked up in a cabinet at BYU.

What you will get (Compensation)

Every time you work with us, you will get to pick out a small toy or prize.

Working with us (Participation)

You do not have to work with us if you don't want to. You may quit this work any time you want to. You will still get your prize.

Questions

If you have any questions, please ask me. You can also ask your parents or your teacher. If you want to ask someone else questions about this work, you may call Dr. Renea Beckstead. Dr. Beckstead is a professor at BYU. Her number is (801) 422-3873.

I want to take part in this study.

Signature_____

Date_____

Appendix B



Appendix C



Appendix D

Conventions:

verbal, facial expression, gesture, posture, and intonation

H-Dissemble (Hide):	D-Display:	Non-committed	Other
Positive: “Good” “Cool” Positive description “Smells like a flower” “I like the smell of vinegar and oil” Gesture: Thumbs up Nodding Redeeming Value: “Depends on his attitude” “She worked hard” “He looks smart” sincere smile at examiner in response to prize	>5 second delay + negative statement Verbal: “I don’t like it” “It’s not my favorite” “Not good” Negative description Negative adj. “Scary” “Weird” Realistic Appraisal “Smells like vinegar” Laugh out loud Gesture: Hands over face Thumbs down Shake head “no” Pinch nose Facial: Obvious grimace Pause, roll eyes (w/ or w/o grin) Intonation: Obvious sarcasm Pause followed by something negative like “bad I guess.”	Doing nothing *Neutral: “I dunno” Shrug “I guess” “Kind of” “A little” “Umm . . .” “It’s ok.” “It’s fine” Non-commit/ avoid: “What do you think?” >5 second delay + positive statement Doing and saying nothing Saying “I guess,” followed by something mildly positive, like “good I guess.” Slight facial expression Fillers, e.g., “he’s. . . .”	Off topic uninterpretable

*any display, listed above, trumps an attempt to dissemble

*if a question was repeated the responses were combine to determine dissemblance vs. display

*for the painting (since examiner 1 gives two opportunities to dissemble or display) display in regards to either question is coded as a display