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Characteristics of Young Children's Longest Utterances

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CHARACTERISTICS OF YOUNG CHILDREN'S LONGEST UTTERANCES

by

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Abstract

This paper reviews research on mean length of utterance (MLU) and longest length of utterance (LLU) as measures of child language development. Although there has been much research on MLU, there is some controversy as to its validity, especially across different data gathering procedures and clinical populations. In contrast, LLU has rarely been the focus of research, but the limited amount of information available indicates that it is a potentially useful way to analyze child speech. This study provides a detailed analysis of 1655 utterances from three children at ages 3;10, 4;1 and 4;4, and 2938 utterances from adults interacting with the children. Variables included MLU, LLU, Fluharty-2 scores, utterance length distributions, and utterance intention codes. LLU did not co-vary strongly with either MLU or Fluharty-2 scores. Distributions of utterance lengths were highly skewed, with single-morpheme utterances occurring most frequently. LLU was highly dependent on language sample size, as shown in analyses of fixed-length samples. Longest utterances were nearly all topic expansions and responses to questions. Adults tended to use topic expansions and questions immediately before children's longest utterances. Overall, the results suggest that information from LLU may supplement MLU and standardized testing. However, LLU was dependent on a small number of utterances and very susceptible to change according to language sample size. Advantages, disadvantages, and a possible solution are discussed.

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Introduction

The scientific study of language development has been largely based in language sample analysis (LSA). There have been many variations of LSA, but since Roger Brown popularized MLU as a measure of child language development in *A First Language: The Early Stages* (1973), the measure has dominated the field of study. MLU, the average length of each utterance (a statement or speech act) in a speech sample as measured in morphemes (the smallest units of language with meaning), has been extensively used as a way to measure and define stages of typical language development in children, as a method of determining whether or not language is delayed or disordered, and as a means of grouping children into categories of similar language skills for research projects. Despite the reliance on MLU, there have been numerous studies (Chabon, Kent-Udolf, & Egolf, 1982; Dethorne, Johnson, & Loeb, 2005; Eisenberg, Fersko, & Lundgren, 2010; Klee & Fitzgerald, 1985; Plante, Swisher, Kiernan, & Restrepo, 1993; Rollins, Snow, & Willett, 1996) which have called into question the reliability and validity of MLU as a measure of child language competencies. This study is designed to examine the relationship between LLU, MLU, and other indicators of language development. Specifically, the following six questions are addressed:

1. Is there a significant correlation between children's MLU and LLU?

2. Is there a significant correlation between scores on standardized language screening instruments and the length of children's longest utterances?

3. Does LLU show promise as a measure of qualities of children's expressive language abilities not captured by MLU?

4. What are the characteristics of children's utterance length distributions within a language sample? (e.g., is the distribution normal, weighted toward short utterances, weighted toward long utterances?)

5. Does language sample size affect MLU and the length of longest utterances?

6. What are the characteristics of children's longest utterances? (e.g., questions, responses, topic expansion, topic initiation)

Overview of Typical Language Development

Typical language development follows a relatively standard pattern for most children. The approximate order of acquisition for phonemes, words, and various grammatical skills is fairly universal. However, there can be great variation in the pace of language acquisition from child to child, especially for those with language disorders. Typically, spoken language use begins with a child's first word, which often occurs around 1;0 (1 year; 0 months). As children mature cognitively and are exposed to more language learning opportunities, their vocabulary size and utterance lengths increase, and their language usage becomes more complex and more closely approximates adult language in both form and use. Often, in the latter half of the second year, there is a vocabulary spurt in which the pace of word learning increases. By the time children are between 5;0 and 6;0, their speech is usually fairly fluent and adult-like, and their vocabulary can be extensive. See Table 1 below for more information (Bloom, 1970; Bloom, 1993; Bloom & Lahey, 1978; Bloom, Lightbown, Hood, Bowerman, & Maratsos, 1975; Brown, 1973; Fletcher & Garman, 1986; Justice & Ezell, 2008; Nelson, 1973; Nelson, 1981). This complicated process of mastering the various skills needed for mature language

production is difficult to analyze and measure, and MLU has provided speech-language pathologists with a tool to simplify the developmental progression.

Table 1
Summary of Early Language Development

Age (Years)	Vocabulary Size (Words)	Utterance Length (Words)	Language Use
0 to1	Very limited	One-word utterances	• Uttering first word around 1;0
1 to 2	50	Two-word combinations	• Using mostly nouns together with a few verbs and pronouns
			• Labeling objects and making simple requests
2 to 3	300-400	Three-word phrases	• Starting to use descriptors and prepositions
			• Beginning to follow grammatical rules
			• Developing sentence forms
			• Expanding number of language uses and intentions
3 to 4	1000	Three- to four-word sentences	• Beginning to embed sentence elements
4 to 5	Continued increase	Continued increase	• Using articles, conjunctions, and descriptors more frequently
5 to 6	2000	Continued increase	• Using fairly fluent and adult-like speech

Origins of MLU

The idea of using MLU as a means of measuring the development of language has been present since Nice (1925), who stated:

A child's skill in sentence structure affords a simple criterion of his advancement in the mastery of speech… The mere recording of a series of 30 or more sentences and finding their average length gives us a cross-section of a child's speech development and enables us to know many things as to his progress in this distinctly human achievement. (p. 370)

However, Brown (1973) studied MLU in new detail and prompted many clinicians and researchers to rely on it. Brown studied three children, whom he called Adam, Eve, and Sarah. Brown started to follow these children when they were just beginning to combine words and continued to document their language development for years (although Eve dropped out of the study after only a year). For each child, Brown recorded at least a two-hour speech sample every month. These language samples consisted primarily of spontaneous speech during interaction between the child and one of their parents. In addition, Brown examined data from many children that other researchers had studied to form some of his conclusions.

Brown saw MLU as an ideal way to quantify the qualitative data of a language sample. In his words, "The mean length of utterance (MLU) is an excellent simple index of grammatical development because almost every new kind of knowledge increases length" (Brown, 1973, p. 53). Other researchers, such as Blake, Quartaro, and Onorati (1991), Miller and Chapman (1981), Rice, Redmond, and Hoffman (2006), Rice, Smolik, Thompson, Rytting, and Blossom (2010), Rondal, Ghiotto, Bredart, and Bachelet (1987),

and Scarborough, Rescorla, Tager-Flusberg, Fowler, and Sudhalter (1991), have since supported this conclusion. Brown also used MLU, in combination with upper bound (longest utterances), to quantify language development, rather than focusing on age or other features. He claimed that similar MLUs were more likely to indicate that children had the same level of language complexity than similar ages were (1973). In order to make this measure as accurate and uniform as possible, Brown set out rules for calculating MLU that have since been the standard for researchers and clinicians. These rules include using 100 utterances (allowing for a warm up period beforehand), only using fully transcribable utterances, including repetitions but not stuttering, not counting fillers, counting compound words and similar constructions with a single meaning as a single word, counting irregular past verbs as a single morpheme, counting diminutives (e.g. doggie or kitty) as a single morpheme, counting auxiliaries (or helping verbs) and catenatives (verb forms that may precede a gerund or infinitive) as separate morphemes, and counting inflections as separate morphemes. Despite the fact that Brown did not explicitly define the terms MLU and utterance, his rules offer a fairly consistent way to analyze language samples for MLU.

Brown's stages.

Brown created five stages based on MLU to categorize language development, and they have become important to speech language pathologists as a way to quantify levels of language development. However, as Brown states (1973):

The stages are not known to be true stages in Piaget's sense; that is they may not be qualitative changes of organization forced on the investigator by the data themselves.

The original equidistant samples based on MLU were simply a device for sampling

the data; a discontinuous sampling imposed upon more continuous data. (p. 58)

Although the stages have little significance in and of themselves, they have made it

possible for clinicians and researchers alike to utilize a standard measure for their

analyses. Besides creating parameters based on MLU, Brown described each stage as

having a target value (expected value) of morphemes for longest utterances. See Table 2

(Brown, 1973; Owens, 2008) for more information about the characteristics of each

stage. Brown did not take his developmental stages beyond Stage V because

By the time the child reaches Stage V… he is able to make constructions of such

great variety that what he happens to say and the MLU of a sample begin to depend

more on the character of the interaction than on what the child knows, and so the

index loses its value as an indicator of grammatical knowledge. (Brown, 1973, p. 54)

Since Brown, other researchers have largely concurred with the findings of Scarborough

et al. (1991) that, as language development progresses, MLU is less useful as a measure

of grammatical development. However, some believe the breakdown between the two

starts as early as Brown's Stage II while others found that MLU can predict grammatical

development even past Brown's Stage V.

Table 2

Brown's Stages Based on MLU

Stage	MLU (Morphemes)	Age (Years; Months)	Grammatical Characteristics	Longest Utterances (Target Value in Morphemes)
I	1.0 to 2.0	1;0 to 2;2	Linear semantic rules	5
II	2.0 to 2.5	2;3 to 2;6	Morphological development	7
III	2.5 to 3.0	2;7 to 2;10	Development of sentence forms (subject, verb, object, etc.)	9
IV	3.0 to 3.75	2;11 to 3;4	Embedding within sentences	11
V	3.75 to 4.5	3;5 to 3;10	Joining clauses within sentences	13

Uses of MLU in Research and Clinical Practice

MLU is arguably the most popular indicator of language capabilities derived from LSA. LSA involves collecting a sample of child language, transcribing it, analyzing it for semantics (content or meaning of language), pragmatics (use of language), vocabulary, and syntax (form and grammatical structure of language), and then interpreting the analysis to come to conclusions about language proficiency (Leadholm & Miller, 1994). This process provides a valuable alternative to standardized testing because the spontaneous language used for the language sample is likely more representative of a child's actual language capabilities than language elicited in testing situations. Since this method relies on spontaneous speech, it may be a more valid measure than standardized testing because it relies on skills that the child actually uses in everyday life to measure ability, rather than creating artificial experimental conditions. However, MLU is not without weaknesses; proper use of the measure requires skill in LSA and depends largely on the speech sample used, which may not be representative of the child's language capabilities (Fenson et al., 1994). Stockman (1996) also discussed the difficulty of effectively and uniformly conducting LSA.

MLU is used to compare and quantify language abilities.

Many speech-language pathologists utilize MLU to compare the language abilities of children. Compared to other measures of language development, it is relatively time efficient and easy to calculate and compare to normative data, other children, and previous results. According to Rice et al. (2010), "MLU appears to be a reliable and valid index of general language development and an appropriate grouping variable from age 3 to 10. The developmental stability of MLU matches is indicative of shared underlying

growth mechanisms" (p. 348). Although most researchers have found that MLU is not useful past Brown's Stage IV, Rice's findings were similar to the earlier research of Rondal et al. (1987) and others, such as Blake et al. (1993), Miller and Chapman (1981), and Rice et al. (2006), who found that MLU was highly correlated with age and grammatical development. Studies such as these have provided support for the continuing use of MLU as a means of classifying and comparing language use.

MLU is also a very popular method of quantifying stages of typical development in order to understand how children develop language and to place participants into similar groups for studies of child language skills. In 1975, Bloom et al. stated that, for their study, "MLU was used as an index of linguistic maturity so that the children could be compared with one another in the course of the longitudinal study and with other children who have been described in the literature" (p. 5), a process used and supported by many, including Leonard and Finneran (2003), since. This approach has allowed speech-language pathologists to develop a widespread means of measuring general child language ability. Blake et al. (1993), Miller and Chapman (1981), Rollins et al. (1996), Rondal et al. (1987), and Scarborough et al. (1991) reinforced this perspective by adopting similar uses for MLU. Because the method of using MLU to place participants into groups (usually in .5 morpheme increments) is used by so many, it makes it possible to compare an individual's language development to that of many other children, and it also provides a more relevant and objective criterion than age or subjective assessment to divide children into groups according to language ability for research.

MLU can help determine whether an individual's language is disordered.

Related to the idea of placing children into groups based on MLU is the practice of using MLU as a measure to determine whether child language is disordered. MLU is actually a part of many definitions of disordered or delayed child language. Low MLU for a given age is strongly associated with language disorders in the case of specific language impairment (SLI), which is language delay without a known cause. Hewitt, Hammer, Yont, and Tomblin (2005) studied 54 children (both typically developing children and children with SLI) of varying ages and found that children with SLI, even those older than six years, have lower scores on language sample measures, including MLU, than typically developing children. Rice et al. (2010) analyzed data from 306 children, some with language impairments and others who were developing typically, and came to the conclusion that MLU is a valuable measure of whether language meets developmental standards or is disordered. The researchers concluded that children with SLI often have a slower increase in MLU that persists past the ages for which MLU is typically useful as an index of language. In addition, MLU has been used extensively to measure the progress of therapy for children with language disorders and set appropriate treatment goals for individual clients.

Possible Shortcomings of MLU

Although MLU has been widely used for over thirty years as a measure of language abilities, there are many reasons to believe that it may not be a comprehensive measure, especially when utilized inconsistently. Leadholm and Miller (1994) stated:

Language sample analysis (LSA) has long been considered as one of the best evaluative procedures of expressive language performance. Several factors however, have limited its general use including a lack of standardized procedures for eliciting

language samples, validated measurement categories, normative data, and relevant

interpretation strategies. (p. 9)

Many researchers have pointed out inconsistencies in the use of MLU and provided

evidence that it may be neither as holistic a measure as Brown (1973) and Nice (1925)

suggested, nor as well correlated with other predictors of language complexity and

development (Chabon et al., 1982; Dethorne et al., 2005; Eisenberg et al., 2001; Klee &

Fitzgerald, 1985; Leonard & Finneran, 2003; Plante et al., 1993; Rollins et al., 1996).

However, there are also a substantial number of studies that support the reliability and

validity of MLU (Blake et al., 1993; Miller & Chapman, 1981; Rice et al., 2006; Rice et

al., 2010; Rondal et al., 1987). These conflicting data have created a controversy over

whether MLU is a good indicator of language development or whether its use has been

overextended and the methods used to calculate MLU are not standardized enough to

yield comparable data. "Despite the common use of mean length of utterance (MLU) as a

diagnostic measure, what it actually reflects in terms of linguistic knowledge is relatively

unclear" (Dethorne et al., 2005, p. 635). In addition, Eisenberg et al. (2001) pointed out

that we lack well-defined norms for MLU during the process of language development.

   MLU's correlation with other measures of development.

   If MLU is actually a valid measure of child language ability, it should have some

degree of positive correlation with other indicators of development, such as age and

vocabulary size. According to Eisenberg et al.'s review of the literature on MLU (2001),

MLU does not always increase steadily with age, but occasionally drops at some points.

Klee and Fitzgerald (1985) also found that "MLU did not correlate significantly with age

($r = 0.26$), nor did it discriminate children's profiles of grammatical development" (p.

251). The researchers also concluded that although MLU increases with age, it is not always in a predictable manner, especially between 24 and 48 months of age, and that MLU is not as useful for predicting grammatical development and skill once children pass the earliest stages of language development. However, other studies (Blake et al., 1993; Miller & Chapman, 1981; Rondal et al., 1987) have supported a significant correlation between age and MLU. It would appear that more research on this topic is necessary to resolve the conflicting accounts.

As a measure of child language complexity and development, MLU should be positively correlated with grammatical ability and syntactic complexity. Rice et al. (2006) studied children with Specific Language Impairment (SLI) in comparison with two groups of children, one with equivalent MLUs and one with equivalent ages. The researchers compared these children's MLUs with their scores for Developmental Sentence Scoring, Index of Productive Syntax, and MLU measured in words and found that the four measures were all well correlated, supporting the validity of MLU. Using a different set of subjects, Rice et al. (2006) also found that children who were matched according to MLU remained similar in their language abilities over a period of time. In addition, Blake et al. (1993) found a strong correlation between MLU and syntactic complexity. However, Eisenberg et al. (2001), who wrote a review on the use of MLU as a tool for diagnosing preschool language impairments, offered a different view of the use of MLU. The researchers stated that MLU is more a means of measuring length of utterances than syntactic development.

The use of MLU becomes even more controversial when it is used to place children into stages of development based on their scores. Due to individual variation and the

influences of the language sample setting, MLU is not likely a reliable indicator of development. As Leonard and Finneran (2003) and Brown (1973) pointed out, MLU values are not truly representative of qualitatively different stages in the progression of language acquisition. Scarborough et al. (1991) suggested that MLU should be used in conjunction with other language ability measures to provide more accuracy.

MLU as a measure for children with language disorders.

In children with language disorders, MLU can sometimes either overestimate or underestimate their overall language capabilities, both in vocabulary and grammar, occasionally leading to poorly directed treatment or misdiagnosis. Eisenberg et al. (2001) reviewed the available information on the topic and concluded that MLU can be a useful indicator of language impairment, but will not identify all language impaired children of approximately preschool age, when it is commonly used for that purpose. The researchers suggested that utilizing a low MLU cutoff could be an accurate means of identifying children with language disorders, but cautioned that children with MLUs above that cutoff would need more evaluation. They were cautious of letting MLU carry too much weight in a language impairment diagnosis. It seems possible that MLU would be better used as support for a diagnosis of language impairment than as a single criterion (Eisenberg et al., 2001; Leonard & Finneran, 2003; Miller & Chapman, 1981; Plante et al., 1993; Rondal et al., 1987).

For both typically developing children and children with SLI, "The linguistic details reflected in a speech sample cannot be predicted by the MLU computed for that sample" (Leonard & Finneran, 2003, p. 887). Although MLU can be useful for making general assumptions about the probable range of language abilities, it is incapable of identifying

specific language skills. Ninio, Snow, Pan, and Rollins (1994) and Johnson, Miller, Curtiss, and Tallal (1993) showed that children with language disorders are sometimes able to communicate more complex intentions than one would expect based solely on their MLU. In contrast, Scarborough et al., (1991) found that MLU can overestimate language abilities, especially for children with either a language disorder or unusually high MLU.

Individual variation and lack of procedure standardization's effects on MLU.

Although many researchers follow Brown's basic rules for calculating MLU, there is still a great deal of individual variation in LSA methodology. Some researchers have also questioned whether even the 100 utterances recommended by Brown is enough to yield a MLU that is closely replicable (Gavin & Giles, 1996); this is a legitimate cause for concern, considering both clinicians and researchers sometimes use samples as short as 50 utterances as the basis for their conclusions. In addition, Chabon et al. (1982), Fenson et al. (1994), Hoff-Ginsburg (1991), Miller and Chapman (1981), Rondal et al. (1987), Scarborough, Wyckoff, and Davidson (1986), Stalnaker and Creaghead (1982), and Lund and Duchan (1983) have shown that a child's MLU will vary according to the speaking task, the conversation partner's relationship with and behavior toward the child, the physical location and other environmental factors, and the sampling methods utilized. In addition, factors such as the child's gender, socioeconomic status, and parental education level can affect language development. Even the personality or mood of a child as demonstrated by willingness to talk during language sample collection (Stalnaker & Creaghead, 1982) can have a significant effect on MLU.

Even for children with the same MLU calculated from language samples collected in similar settings and of adequate length, language abilities can vary widely. Bassano and van Geert (2007) extensively studied the language development of two French children from two to three years of age. In this study, the researchers divided utterances into three categories: one-word utterances, two- to three-word utterances, and utterances longer than three words. As the children got older, they produced a higher proportion of longer utterances. However, between the ages of approximately 23 and 30 months, the ratios of long to short utterances were very difficult to predict and did not follow the overall trends of the data (Bassano & van Geert, 2007); Nieminen (2009) also found variations in MLU growth as children got older. According to Shore, O'Connell, and Bates (1984), children experience a limitation in the development of increased utterance length around the beginning of their second year. If this is something that occurs for many normally developing children, perhaps it would affect the MLU values for this period of development.

Fenson et al. (1994) questioned whether the language sample collected for any LSA measure is representative of a child's typical language use and recognized that these forms of language assessment focus on expressive language use only, as opposed to standardized tests which can also measure receptive language. Klee and Fitzgerald (1985) studied eighteen children of varying ages and found that their MLU-based placement in Brown's stages sometimes varied as much as three stages among the three 100 utterance language samples taken from each child. In a review of Brown (1973), Crystal (1974) also expressed doubt in the ability to make consistent measurements with MLU due to all of the confounding factors associated with its collection. Because language acquisition is

such a complex process and individual development and day-to-day and situational performance are dependent on so many factors, it is difficult to accurately quantify a child's language development stage or range based on a MLU score from a single language sample.

Despite attempts to control the extraneous factors present in the language sample collection setting, it is not always possible to understand how children will react to a particular situation or to keep the setting perfectly stable for all children in order to facilitate the most accurate data comparisons. Bornstein, Painter, and Park (2002) examined the effects of setting on language sample collection for MLU, total utterances, and word roots by looking at 30 two-year-old children in three different situations. The researchers found that "no one situation typifies child language production or gives an indication of the child's spontaneous verbal competence" (p. 688). This study showed that children had higher MLUs and a greater number of word roots while they were playing in settings chosen by their parent as optimal for language as opposed to other settings. In addition, boys had shorter MLUs and fewer word roots than girls, suggesting that perhaps MLU may not be as generalizable across children as Brown had hoped. Eisenberg et al. (2001) also observed how the setting of a language sample could affect MLU. They found that MLU was often higher when the sample was collected at the child's home, possibly because in those situations the child was interviewed by and conversed with a parent instead of an unfamiliar examiner. They also showed that the nature of the conversation or interaction, materials available at the time, sample size and amount of time spent collecting the sample, characteristics of the participant population (gender, SES, standard vs. nonstandard speakers, etc.), and method of scoring MLU

(segmentation of utterances, which utterances to include, and how to count morphemes) can have significant effects on the MLU outcome. Johnson et al. (1993) found that when a language sample contains speech elicited by examiner questioning, MLU often decreases due to the reductions in sentence length found when responding to questions. Language development is a highly variable process that is dependent on many factors which are hard to anticipate. Nelson (1981) explains that "Because functional contexts are correlated with frequency of particular forms and constructions and because different children are exposed differentially to various types of contexts … the course of acquisition will look different for different children" (p. 183). These differences can make it difficult to attain a true understanding of an individual's language level and use based on a MLU score or its corresponding stage. Even when context was held relatively constant, Klee and Fitzgerald (1985) found that "the child's group or stage membership in experimental and descriptive research may be influenced more by the particular 100 utterance block on which MLU was calculated than by his true linguistic ability" (p. 266). Similarly, Chabon et al. (1982) found that individual MLU values were not stable from one day to the next. According to Wells (1985), MLU, with a wide range of scores that could be considered normal for any given age, has more individual variation than Brown and other early researchers anticipated.

Other Measures of Language Development

MLU can provide valuable information about certain aspects of language development whether or not it is as valid as Brown (1973) expected it would be. No one measure can provide all of the information necessary to understand the language development of an individual. In addition to MLU, there are many other measures of child language, each

targeted to a particular ability that can then tell us something about the child's language production overall. According to Bornstein and Haynes (1998), "Different kinds of measures, even if functionally equivalent, validly index different beliefs about or behaviors of a child. It is unlikely that complex developmental phenomena, such as language or temperament, can be adequately represented from a single perspective" (p. 669). Rollins et al. (1996) concluded that a number of different language measures may be a more accurate indicator of child language acquisition than a single general indicator such as MLU. The studies on MLU discussed thus far often relied on other indicators of language competence in addition to MLU to either validate or question it. These other indicators include the Index of Productive Syntax, Number of Different Words, the MacArthur Communicative Development Inventories, vocabulary size, Developmental Sentence Scoring, Type Token Ratio, Total Number of Words, the measurement of MLU in words rather than in morphemes, and the Language Assessment, Remediation, and Screening Procedure. An additional measure of language development is the analysis of longest utterances, although it has not been frequently used.

Longest Utterances as an Indicator of Language Competencies

Since Brown (1973), most researchers and clinicians have focused on MLU and largely ignored longest utterances as a separate indicator of productive language capability. However, as the most influential researcher in the development of MLU believed longest utterances were important enough to include in the description of stages of language development, it seems reasonable to conclude that, either alone or especially in conjunction with other measures such as MLU, longest utterances can provide us with

information about how a child's language is developing. Even Brown admitted that MLU is not a faultless measure, stating that:

> It is important to realize that as utterances get longer, and MLU increases, some sort of increase in complexity is bound to occur, but there is no a priori reason why the increase should take just the forms it does and, in particular, that these forms should be the same for all children studied, whatever the language in question. (p. 65)

Although MLU is typically used to look at speech and language for children between the ages of 1;6 and 4;0 (the range between the beginning of multiple word utterances and the point where language use becomes so complex that MLU is a less useful indicator of language capabilities), multiple studies have shown that other measures may be necessary as well. Rollins et al. (1996) agreed with the concept of individuality in language development; their research provided support for the proposal that children do not all rely on the same strategies to lengthen utterances. This provides credibility for the idea that longest utterances can provide clues to language development. In addition, children also use many very short utterances that do not utilize their full language capabilities. Klee and Fitzgerald (1985) stated that, from their research,

> It was evident that single-morpheme utterances occurred rather frequently as the children conversed with the adult. Since these children were well beyond the stage of single-word production, these single-morpheme utterances were viewed as a pragmatic variable that affected, or distorted, the numerical value of MLU. (p. 260)

These short utterances can drastically decrease MLU, but do not necessarily indicate a lack of language ability. Interestingly, Johnson (2001) conducted a study investigating alternative MLU calculations and found that when single word or elliptical responses and

repetitions were removed before MLU was calculated, MLU became better correlated with language proficiency, especially discourse control. In reality, past a certain point in development, increased complexity does not necessarily equate to longer utterances due to increased usage of deletion and embedding (Chabon et al., 1982). According to Eisenberg et al. (2001), "It may be the case that utterance length can be used as evidence for language impairment but that MLU is not the best measure of utterance length for this purpose" (p. 339). Perhaps looking at longest utterances could show the peak language capabilities of a child, rather than merely determine which stage they should be placed into, and provide more information about their actual language use.

Several studies have looked at longest utterances as a part of their research even if they were not the primary focus. Rispoli and Hadley (2001) conducted a study to investigate the link between disruptions in sentence production and sentence length and complexity. They found that the longest utterances tended to contain more disruptions, possibly because these utterances are at the leading edge of a child's language development and require more mental effort to produce. However, their study was limited by the fact that they only looked at active declarative sentences with lexical verbs. Shore et al. (1984) looked at children's ability to combine words and/or gestures in both symbolic play and language production. Although this study focused more on the link between gestural development and language development, it also provided data about longest utterances, both in content words and morphemes. For the 30 children in the study who were examined at 1;8 and 2;4, the MLU at 1;8 was 1.13 and at 2;4 was 1.58. The longest utterance in content words at 1;8 was 1.33 on average, but the range was between 1 and 2 words. At 2;4, this increased to an average of 3.13 with a range of

between 2 and 5 words. When the researchers looked at longest utterances in terms of morphemes instead, the average length at 1;8 was 2.55 with a range between 1 and 5; at 2;4, this changed to an average of 6.83 with a range between 3 and 12 (Shore et al., 1984). Strömqvist and Verhoeven (2004) conducted a study looking at second language learning and used longest utterances as a measure of acquired language skills. Devescovi et al. (2005) took an original approach to MLU by calculating the MLU (in various forms) of the three longest utterances (based on parent recall) of children between 1;6 and 2;6. The researchers found that this ideal MLU was much more highly correlated with vocabulary size than chronological age. After reviewing the literature on MLU, Eisenberg et al. (2001) suggested that "Another possibility for analyzing utterance length would be to look at the length of the longer utterances above the mode" (p. 339).

Rationale

MLU has played an important role in the field of language development. However, several key studies (Chabon et al., 1982; Dethorne et al., 2005; Eisenberg et al., 2001; Klee & Fitzgerald, 1985; Plante et al., 1993; Rollins et al., 1996) have suggested that MLU does not fully capture children's level of language development. Children's longest utterances are an often neglected, yet potentially useful metric of language development. In past studies, anecdotal observations have suggested that longest utterances may provide useful information about language development (Devescovi et al., 2005; Eisenberg et al., 2001; Strömqvist & Verhoeven, 2004). This study is designed to examine the relationship between children's longest utterances, MLU, and other indicators of language development.

This study specifically investigates six different questions designed to provide data on the reliability, validity, and clinical usefulness of examining children's longest utterances:

1. Is there a significant correlation between children's MLU and LLU?

2. Is there a significant correlation between scores on standardized language screening instruments and LLU?

3. Does LLU show promise as a measure of qualities of children's expressive language abilities not captured by MLU?

4. What are the characteristics of children's utterance length distributions within a language sample? (e.g., is the distribution normal, weighted toward short utterances, weighted toward long utterances?)

5. Does language sample size affect MLU and the length of longest utterances?

6. What are the characteristics of children's longest utterances? (e.g., questions, responses, topic expansion, topic initiation)

<center>Methods</center>

Participants

This study is based on three participants, all from the state of Maine. Participant A, age 4;1 at the time of data collection, is male and had his mother for a conversation partner. Participant B, age 4;4, is female and also had her mother for a conversation partner. Participant C, age 3;10, is female and had her grandparents and a SLP for conversation partners. Participants of this study were selected according to three criteria: normal speech and language development as measured by the Fluharty-2 test (Fluharty, 2001), normal hearing, and age between three and four years old. This age group was selected because at three to four years, normally developing language includes multi-

word utterances and is often measured with MLU. See Table 3 for a summary of information about the three participants.

Procedure

The data from this study resulted from approximately hour-long interviews with each child and their conversational partners. These interviews were both audio and video recorded, and took place in the Conley Speech and Hearing Center at the University of Maine. Participants were given several minutes to warm up prior to the beginning of any activities. Similar to the study by Ninio et al. (1994), semi-structured activities were used to make the resulting language samples comparable. The first half of the interview was focused on each child's interaction with his or her family member or members. The participants and their family members played with several toys, previously identified as being relevant to the child's interests. They played with each of the toys, one at a time, while the others were kept out of the play area. After fifteen minutes, the children's family members were asked to attempt to encourage the child to talk as much as possible while playing with any or all of the four toys, as they choose. During this time, the family members were also asked to attempt to get the child to tell a narrative. In the second half of the interview, the researcher was included in the interactions with the children and their family members. In this time, the researcher attempted to elicit peak language output using language facilitation techniques such as repeating child utterances, making comments related to the child's activities or communication (such as answering questions, discussing the child's activities, expanding the child's utterances, and extending the child's utterances), and allowing pauses in the conversation for the child to speak, continue to talk, or respond. In addition, the examiner attempted to elicit a

narrative from the child by asking them about an experience that would be interesting and relevant to them and providing a model narrative.

Data Analysis

The language samples utilized for these analyses were approximately one hour long, and the lengths varied by no more than five minutes. The samples for Participants A, B, and C were 1:00:48, 57:16, and 59:02 in duration, respectively. There were several minutes of conversation prior to the point in the interview that the researcher began transcribing all child utterances and child-directed speech. Procedures to address each of the research questions are as follows:

1. Calculate the Spearman Correlation between MLU and LLU.

2. Calculate the Spearman correlation between LLU and the raw score for the Fluharty-2.

3. Compare the correlation between MLU and the Fluharty-2 with the correlation between LLU and the Fluharty-2.

4. Calculate MLU and LLU at sample sizes of 50, 100, 200, and the total number of utterances for each participant in order to determine whether sample size affects these measures.

5. For each child, categorize utterances according to their length in morphemes and determine an utterance-length distribution. Describe each distribution in terms of the number of peaks it contains (modality), whether it is spread widely or narrowly (kurtosis), and whether the distribution is normal, weighted toward short utterances, or weighted toward long utterances (skewedness).

6. Code all child and adult utterances according to conversational function. The codes are questions (Q), responses to questions (A), topic expansion (TE), topic maintenance (TM), requests for clarification (RQ), negation (N), simple agreement (SA), and topic initiation (TI). For each child-adult interaction, divide the number of utterances in each code category by the total number of utterances for that speaker, yielding a proportion of utterances for each of the eight conversational functions. To observe conversation function in longest utterances, compare the conversation function codes for each child's three longest utterances with the conversation function proportions from that child's entire language sample. To observe adults' role in the context of the longest utterances, compare the conversation function codes for adult utterances preceding children's longest three utterances with that adult's proportion of utterances for each of the utterance intention codes.

The language samples were transcribed according to Systematic Analysis of Language Transcripts (SALT) (Miller, 2008) conventions and analyzed with that program's software (see Appendix A for full transcripts). MLU for calculating the Spearman Correlations was hand counted using 100 child utterances. Unintelligible utterances, exact or reduced repetitions or imitations (other than single-word utterances), enumeration, abandoned utterances, rote passages, and noises were not counted toward the 100 utterances used for calculation. Utterances with unintelligible portions were counted if the complete meaning of the sentence was still understandable. When counting morphemes, false starts, fillers, noises without meaning in the context of an utterance, and repeated words were not counted toward the total number of morphemes for an

utterance. Catenatives, compound words, diminutives, phrases for which multiple words express one meaning, and gerunds were counted as one morpheme. Contractions, past and present participles used in verb phrases, past tense verbs, plural and possessive nouns, and comparative and superlative forms were counted as two morphemes. Adding an affirmative or negative to the beginning of an utterance was counted toward the total number of morphemes if the word added meaning. The portion of the interview used to calculate MLU began ten minutes into the interview and concluded after 100 countable child utterances. When calculating MLU for the different sample sizes, the researcher used the SALT software's data analysis program. This program allows for researcher discretion when calculating MLU because single words must have a forward slash in them to indicate that there are two morphemes and words that are not desired to be included in the morpheme count may be excluded with parentheses.

The researcher utilized a set of rules for calculating LLU, conversational codes, and utterance lengths. When assigning utterance intention codes, each utterance was allocated a single code unless an utterance equally fit the criteria for multiple codes. The most common type of utterance to receive more than one code was questions that also initiated a new topic. Simple agreement designates utterances that indicate agreement or sometimes encouragement, but no other information. Questions are utterances intended to request information, and include tag questions, but not intonation prompts. Responses to questions are answers. Topic expansion indicates that the utterance added significant relevant and new information to the established topic. Topic initiation is starting a new conversational topic. Topic maintenance is continuing on an established topic, but not necessarily adding new information. Requests for clarification are phrases or words that

request confirmation or additional information. Negation is a word or phrase that indicates disagreement, but is not a response to a question or a topic expansion. When distinguishing between topic initiation and topic expansion or topic maintenance, topic initiation was defined as instances when a speaker brought up a topic that had not been discussed for at least three child utterances or five total utterances. Topic initiation indicates a significant, sudden change in topic rather than a gradual shift typically found in conversation. When a family member started a sentence or word but left it partway through with the intent to have the child finish it (intonation prompts), these were coded as either topic extension or topic maintenance. When a speaker answered his or her own question, the answers were coded as either topic maintenance or topic extension. Repetitions, noises, abandoned and unintelligible utterances for which the intent was not clear were not assigned utterance intention codes. However, word-like noises such as "mhm" and "huh" were assigned utterance intention codes if they indicated a request for clarification or an answer, because they could potentially affect how the following utterances were coded.

To examine longest utterances, the three longest utterances (as measured in morphemes) were selected and analyzed in terms of overall length, the average longest utterance length's (LLU) (similar to the measure used by Devescovi et al., 2005) relationship to MLU, and for variables in the language of the child's conversational partner and the child's language intentions.

Results

Research Questions 1, 2, and 3

When calculating Spearman correlations, the two variable sets are each rank ordered

and then the correlation coefficient is computed based on these ranks, not on the actual

values of the variables. The Spearman Correlation for the Fluharty-2 and LLU showed a

negative correlation (-0.500) (Wessa, 2012). Although the ranks for these variables did

not correspond precisely, resulting in the negative correlation, two out of the three

participants seemed to have LLUs that matched their Fluharty-2 scores. Participant A had

a high both a LLU and a high Fluharty-2 score; Participant B had a low LLU and a low

Fluharty-2 score, but Participant C had a low LLU and a high Fluharty-2 score. The

Spearman Correlation between MLU and LLU was positive (0.500), as was the

correlation between MLU and the participants' Fluharty-2 scores. These results do not

indicate a statistically significant correlation between any of the variable sets. Although

there was a positive correlation, neither LLU nor the Fluharty-2 scores tended to co-vary

exactly with MLU, and the Fluharty-2 scores and LLU showed a negative correlation, but

did not co-vary exactly (see Table 4).

Table 3
General Characteristics of the Participants

Participant	Gender	Age	MLU	LLU	Fluharty-2
A	M	4;1	4.63	52.33	127
B	F	4;4	2.44	27.67	102
C	F	3;10	3.87	26.00	142

Table 4
Correlations among MLU, LLU, and Fluharty-2 Scores

	MLU	LLU	Fluharty-2
MLU	----	.500	.500
LLU	.500	----	-.500
Fluharty-2	.500	-.500	----

Research Question 4

Although the exact numbers were different, the utterance length distributions (see Figures 1, 2, and 3) for each child's language sample had similar characteristics. The distributions were heavily weighted toward short utterances. The skewedness for all three language samples was positive (4.27 for Participant A, 3.39 for Participant B, and 3.69 for Participant C). This indicates that the distributions each have a mode toward the lower values, and that the distribution for Participant A was most skewed. Fisher tests showed that each distribution was significantly different from outcomes that may occur by chance ($p < .01$). Visual inspection of each distribution indicated that one-morpheme utterances were by far the most frequently occurring category, and shorter utterance lengths tended to be more common than longer utterance lengths. The kurtosis values of each language sample were positive (30.57 for Participant A, 15.72 for Participant B, and 30.44 for Participant C). These values indicate that the distribution is more peaked than a normal distribution, and Fisher tests again showed that each distribution was significantly different from outcomes that may occur by chance ($p < .01$). Visual inspection of the data for modality clearly showed that there was a single peak corresponding to single-morpheme utterances for all three participants. Participant B had significantly more single-morpheme utterances than the other two participants (327 as opposed to 183 for Participant A and 162 for Participant C). Participant A had the most outlying data points toward the right side of the distribution, showing many utterances that were significantly longer than the mean (5.07). Standard deviation for the distribution for Participant A was 5.90, Participant B was 3.61, and Participant C was 3.76. This indicates that the participants' longest utterances were all over three standard deviations above the mean.

Figure 1
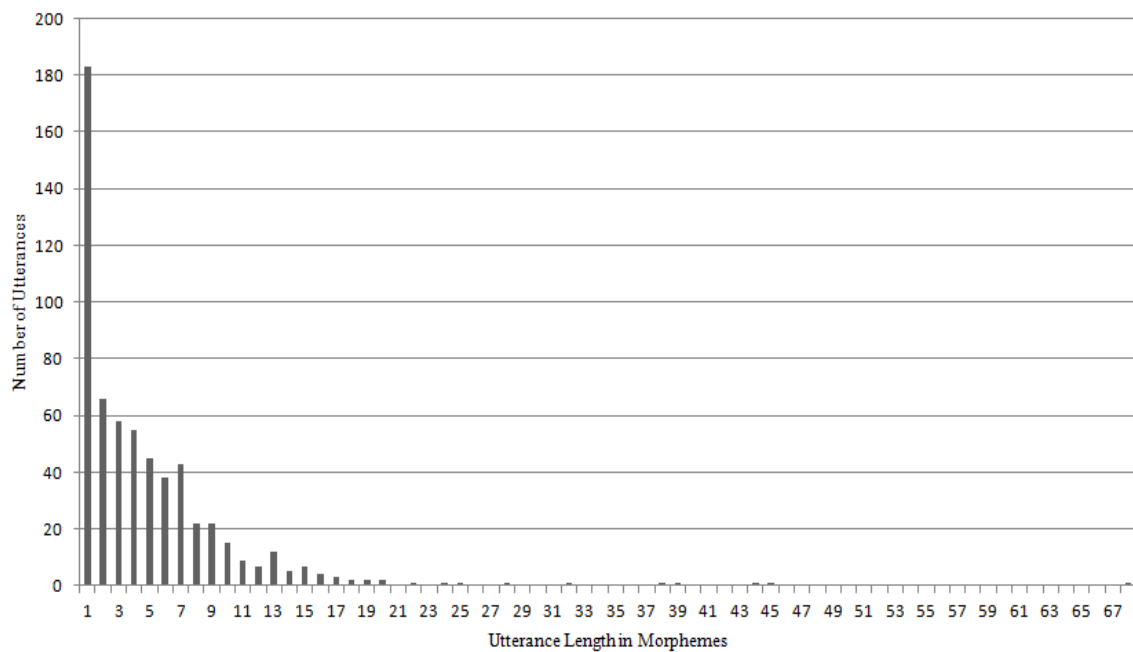*Utterance Length Distribution for Participant A*

Figure 2
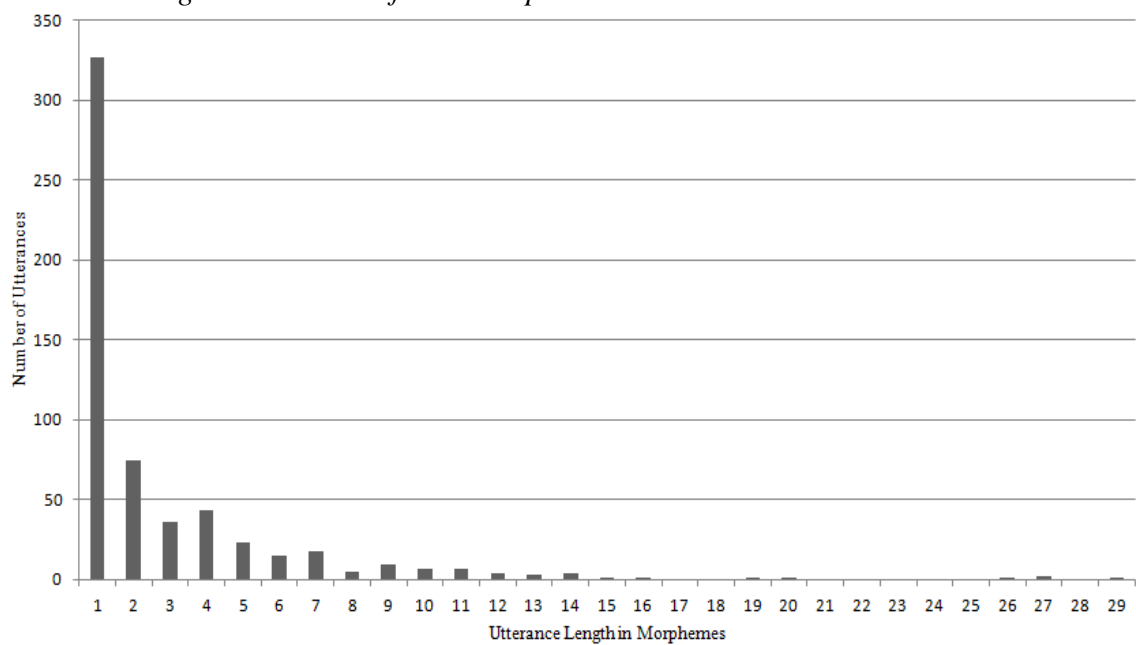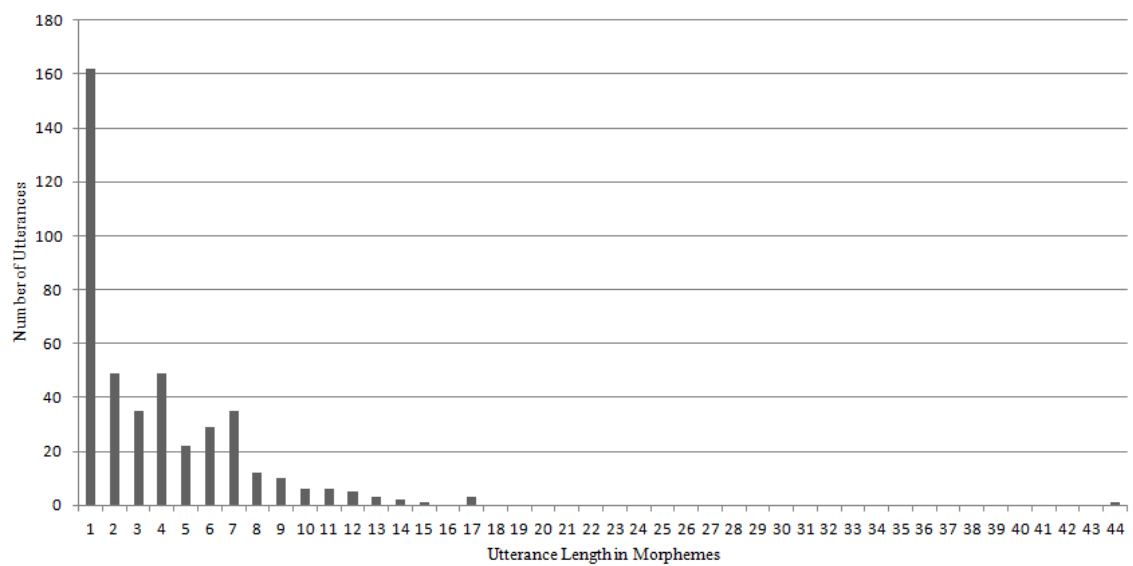*Utterance Length Distribution for Participant B*

Figure 3
Utterance Length Distribution for Participant C

Research Question 5

In order to assess the effect of language sample size on measuring MLU and longest utterances, analyses were conducted on portions of the three language samples. Three sizes of samples commonly used in research and clinical practice were examined (50, 100, and 200 utterances) in addition to the total sample. The 50-utterance sample was defined as the first 50 utterances in the sample following a brief warm-up period. The 100- and 200-utterance samples were created by including the utterances of the previous sample size and those immediately following. The total samples differed in size across the three children (612 utterances for Participant A, 586 utterances for Participant B, and 430 utterances for Participant C). LLU either increased or remained the same as the sample size increased (See Figure 4). For Participant A, it increased from 15 to 52.33, for participant B it increased from 15.67 to 27.66, and for Participant C, it increased from 12.67 to 26. It is important to note that LLU did not appear to plateau, even at over 200 utterances. Because extremely long utterances are rare events (as evidenced by the utterance length distributions), increasing sample size is likely to raise LLU, even in large samples. In contrast, MLU remained fairly constant across all four sample sizes, varying by at most .57 morphemes and not showing any notably similar trends among the participants (see Figure 5).
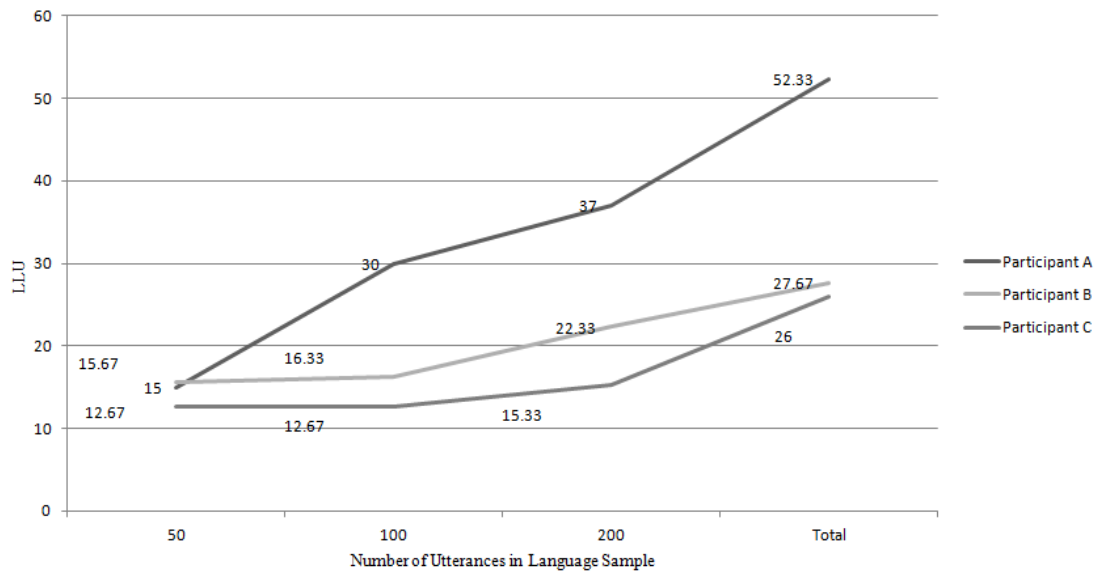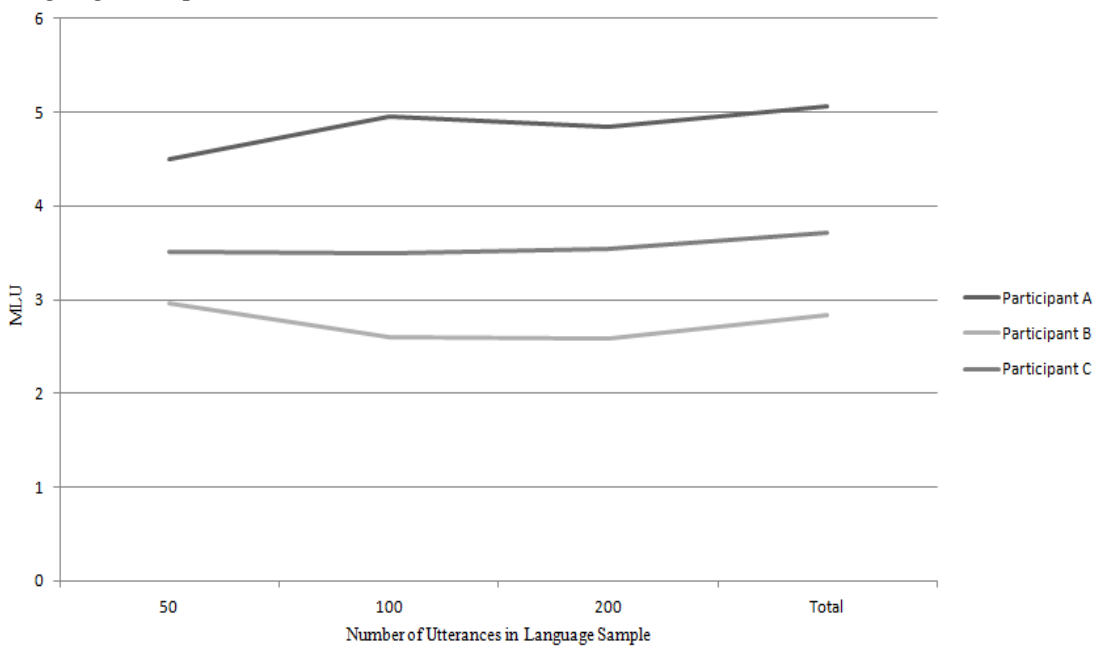
Figure 4
Language Sample Size vs. LLU

Figure 5
Language Sample Size vs. MLU

Research Question 6

The three longest utterances for each of the three participants were all from only four utterance intention codes. Four were topic expansions, four were responses to questions, and one was coded as a question and topic initiation. These results are logical because responses to questions (ranging from 28.41 to 44. 91 percent of all coded utterances) and topic expansions (ranging from 16.79 to 34.49 percent of all coded utterances) were the most common utterance intention codes given for all three participants (see Figures 6, 7, and 8). These utterances were preceded by topic expansions, requests for clarification, and questions from the adults, and questions and answers from the children. Questions and topic expansions were the most common utterance intention codes given for adults participating in the interviews (see Figures 9, 10, and 11). Longest utterances occurred at various points in the transcribed language samples, ranging from 4:42 to 1:03:29.

The first of the three longest utterances for Participant A, which occurred 13:49 into the transcribed language sample was a 45 morpheme topic expansion detailing a school project and preceded by another topic expansion from the parent. The next longest utterance in the sample, a topic expansion, occurred at 33:00 and was 44 morphemes long and preceded by the child asking the parent a question to capture her attention. The final longest utterance occurred at 35:23 and was 68 morphemes long. This utterance was a topic expansion detailing a class activity; it was preceded by the child giving a simple affirmative response to a parent question. The first of the three longest utterances for Participant B occurred 4:42 into the sample. This utterance, a response to a question, was 27 morphemes long and was preceded by a question from the parent. In this utterance, the child described a current activity. The next longest utterance, also 27 morphemes long,

was a topic expansion that occurred 19:00 into the language sample. This utterance was immediately preceded by the child giving a short response to a question. The parent had asked a question, and the child responded affirmatively in one short utterance; the longest utterance provided additional detail to the conversational topic by relating a story found in a children's book. The third longest utterance for this participant was 29 morphemes long and occurred 35:18 into the language sample. This utterance was a response to a question and was preceded by a request for clarification from the parent. The child was recounting a story about the family dog. The first of the three longest utterances for Participant C was 17 morphemes long and occurred 36:21 into the language sample. This utterance was a response to a question, preceded by a question from an adult. The second longest utterance was also 17 morphemes long and occurred at 57:41. This utterance was coded as a question and a topic initiation, and was preceded by a topic expansion by the examiner. The third longest utterance was 44 morphemes and occurred at 1:03:29. This was a topic expansion detailing how to get to the child's family's farm and was preceded by a topic expansion from the grandmother.

All three of the longest utterances for Participant A were topic expansions. This was the most common type of utterance for Participant A, accounting for 34.49% of his total coded utterances. Only one of the three utterances was directly preceded by an adult utterance, which was a topic expansion. Topic expansions accounted for 28.08% of the coded adult utterances, and were the second most common adult utterance code for that interview. For Participant B, two of the longest utterances were responses to questions, and one was a topic expansion. Answers were the most common type of utterance for Participant B, making up 44.91% of the total number of coded utterances. Topic

expansions were second most common, accounting for 16.79% of the total. Two of these longest utterances were preceded by adult utterances, a request for clarification and a question. Questions were the most common type of adult utterance for this interview, composing 33.82% of the total coded utterances, while requests for clarification were one of the two least common utterance intention codes, accounting for only 1.47% of the total. For Participant C, two of the longest utterances were responses to questions, and one was a question/topic initiation. Responses to questions was the most common utterance code, composing 28.41% of coded child utterances for this participant. Questions were the third most common utterance code, accounting for 18.18% of the total, while topic initiation was one of the least common utterance intention codes, composing only 5.1% of the total. All three utterances were preceded by adult utterances, two topic expansions and a question. These were the two most common utterance intention codes for the adults in this interview, accounting for 43.33% and 26.7% of the coded utterances respectively.

Figure 6
Proportions of Utterance Intention Codes for Participant A

Figure 7
Proportions of Utterance Intention Codes for Participant B
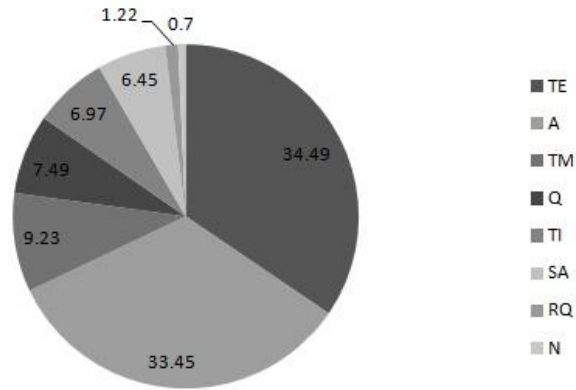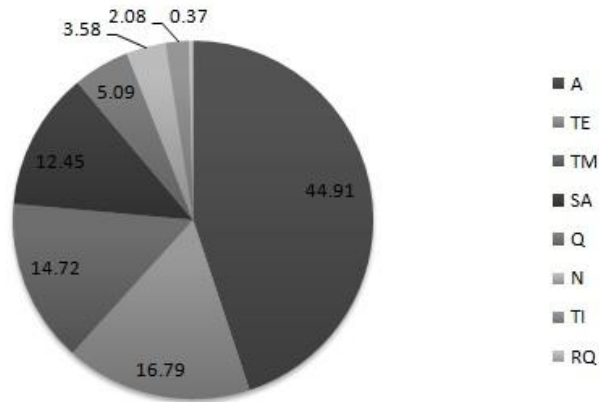

Figure 8
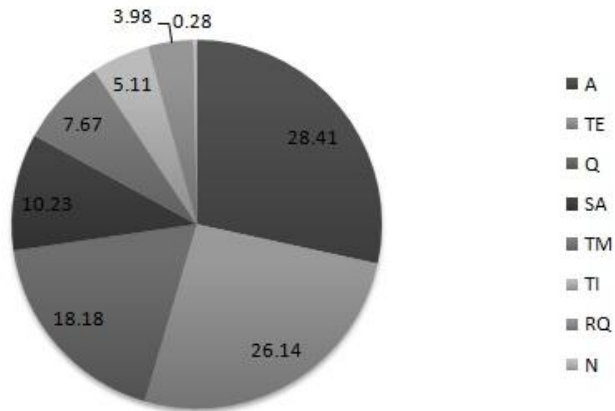*Proportions of Utterance Intention Codes for Participant C*

Figure 9
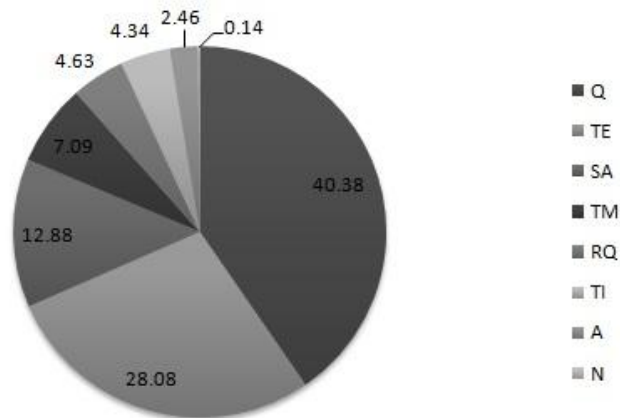*Proportions of Utterance Intention Codes for Conversation Partners of Participant A*

Figure 10
Proportions of Utterance Intention Codes for Conversation Partners of Participant B
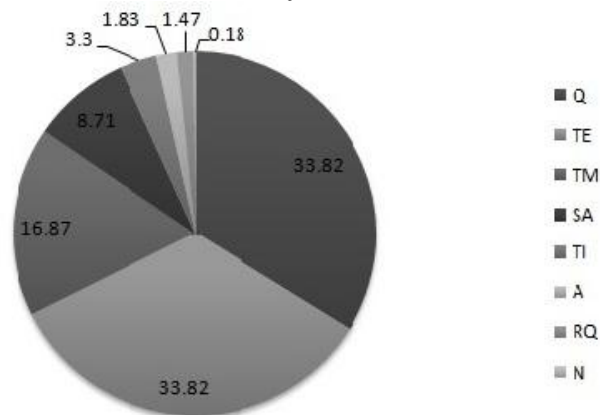
Figure 11
Proportions of Utterance Intention Codes for Conversation Partners of Participant C
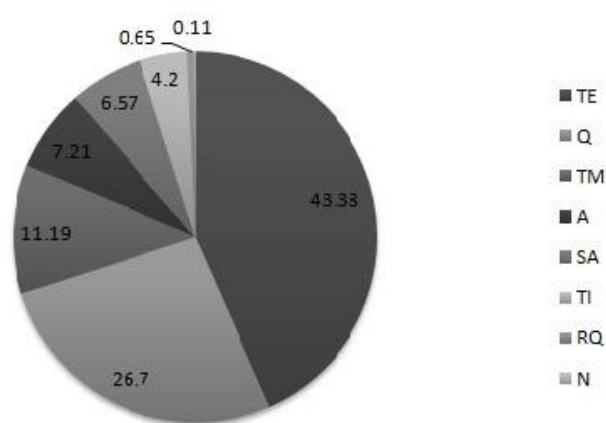
Discussion

For LLU to be considered a valid indicator of child expressive language capabilities, it was expected to have a significant positive correlation with the participants' scores on the Fluharty-2. The Spearman Correlation for these two measures was negative (-0.500) for the three participants in this study. Conversely, the Spearman Correlation between MLU and the Fluharty-2 scores was positive (0.500). Although neither of these correlations was very strong, the results indicate that, for these individuals, LLU was not more predictive of expressive language ability than the established measure of MLU. The correlation of LLU and MLU was positive (0.500). Although the sample size of this study is too small to make any generalizations, the results of the correlations between LLU, MLU, and the Fluharty-2 scores indicate that LLU may reveal something about language that MLU and the Fluharty-2 do not. As Dethorne et al. (2005) stated, we really do not understand precisely what types of linguistic skills MLU measures. Perhaps the consideration of LLU or a similar measure in addition to MLU and standardized language testing would provide a more complete picture of a child's expressive language abilities. According to Bornstein and Haynes (1998) and Scarborough et al. (1991), including multiple measures is likely necessary to measure all the complexities of language development.

LLU was found to be inconsistent with established measures of expressive language (MLU and the Fluharty-2) for the children in this study. This particular finding may be attributable to the instability of LLU. Because the measure is based on only three utterances, it is dependent on a very small set of variables. In contrast, MLU is based on a much larger sample of utterances, which lessens the impact of individual utterances on the overall measure. The utterance length distributions for all three participants were

highly skewed (4.27 for Participant A, 3.39 for Participant B, and 3.69 for Participant C).

These distributions were skewed toward low utterance length values; visual inspection of

the distributions shows that one morpheme utterances were by far the most commonly

occurring and long utterances were relatively infrequent. Consequently, LLU is based on

a small number of rarely occurring events, which means that it can vary widely if small

changes occur in the data. The analysis of different size language samples from the same

interview indicated that LLU generally increased as sample size increased. This indicates

that a sample taken with the same child at a different time or containing a different

number of utterances may yield a very different result for LLU. Different language

samples, especially in different settings, can significantly impact even less variable

measures than LLU (Fenson, et al., 1994; Leadholm & Miller, 1994; Stockman, 1996). In

future research, this problem may be best addressed by using confidence intervals (while

acknowledging the skewed distribution), rather than attempting to identify an ideal

language sample size at which LLU would stabilize.

While the distributions of utterance length highlight some possible problems with

LLU, some limitations of MLU are shown as well. In particular, the high occurrence of

short utterances (especially single-morpheme utterances) certainly has a substantial

impact on MLU. All three participants in this study were beyond the one-word stage

(varying between Stage III and Post-Stage IV according to the SALT calculated MLU for

the complete transcript), so the value of including so many short utterances when

calculating a measure of expressive language ability is questionable. Short utterances

may actually detract from a true assessment of language capabilities. Brown (1973)

thought that increases in utterance length indicated increases in utterance complexity, and

held that this correlation was what made MLU a good measure of expressive language. Including one-word utterances for children beyond the first two of Brown's five stages may decrease MLU's ability to measure these increases in utterance length. Klee and Fitzgerald (1985) proposed that including single morpheme utterances altered MLU. It is also possible that single-morpheme utterances reflect instances when children might have said more had their language abilities allowed. In this case, single-morpheme utterances would be important to include when calculating MLU to ensure a true reflection of language development. It could also be that single-morpheme utterances are merely instances when the child does not feel more information is necessary or elliptical answers where the phrasing of a conversational partner's question affected the complexity of the child's reply. For the children in this study, single-morpheme utterances typically expressed a complete semantic function, although all three children demonstrated the ability to communicate with much longer utterances.

Examining the nine longest utterances (three from each participant) showed that three of the nine utterances were not preceded immediately by an adult utterance, but by another child utterance. In two of the three cases, an adult had asked the child a question, and they replied with an affirmative response to the question and then proceeded to provide more detail in the next utterance. In the other instance, the child asked the parent a rhetorical question in order to capture her attention for the play scenario he was about to describe. This pattern of 33.33% of the longest utterances being preceded by child utterances is unusual because consecutive child utterances are not very common, and may indicate something that is special about formulating longest utterances. For the participants of this study, consecutive child utterances occurred an average of only

20.76% of the time. It is possible that this short-long sequence allows children the time to formulate an especially long utterance. This sequence may be of clinical importance when providing contexts that facilitate longer utterances.

The analysis of both adult and child utterances according to conversational function points to some interesting patterns. Five out of the nine longest utterances (three from each participant) were narratives, either of the present activity, a past event, or a story. These were all in response to adult questions (within two utterances, and no other adult utterances) about the experience or story. Topic expansions and answers were by far the most common utterance intention codes for children, while topic expansions and questions were the most common utterance intention codes for adults. Only one of the nine longest utterances was not in response to a question or request for clarification from an adult (within two utterances, and no other adult utterances). Based on this information, children appear to produce their most complex speech when prompted by adults and when talking about topics that they are familiar with. All but one child utterance and one preceding adult utterance were from the two most common conversational codes for the respective groups. Given that the two most common codes for each group made up over 50% of the coded utterances for each interview, it would be expected that the majority of long utterances and their preceding adult utterances would fall into these categories. However, 89% of these utterances were in these two most common codes. Although some utterance intention codes such as simple affirmation and negation are very unlikely to be among the longest utterances for children of this language development stage due to their necessarily restricted content, other types of utterances, such as topic initiation, questions, and topic maintenance, could be utterance intention codes for longest

utterances but were not well represented in the nine longest utterances. Adult utterances preceding longest utterances could have been any conversational code, but the vast majority was questions and topic expansions. Perhaps these types of utterances provide ideas and structure that encourage and assist children in creating long utterances.

Conclusion

Given the small number of participants in this study, it is not possible to generalize conclusions to any larger populations. However, for these participants, there were several noteworthy findings. Although LLU was not shown to have a positive Spearman Correlation with standardized expressive language testing, the correlations leave open the possibility that longest utterances may provide information about language abilities in addition to what MLU and the Fluharty-2 offer. However, it is acknowledged that because LLU is based on so few utterances and tended to increase with sample size for the children in this study, it is likely a highly variable measure. Although MLU was found to be relatively uniform across different sample sizes, the distribution of utterance lengths indicate that despite the capacity to speak in long utterances, the children in this study had a clear peak at single-morpheme utterances. This abundance of short utterances may interfere with the validity of MLU as a measure of language ability for children with this advanced level of expressive language skills. The vast majority of the nine longest utterances pinpointed in this study were from the most common utterance intention codes for all three participants, responses to questions and topic expansions. In all but one case, these long utterances were preceded by questions and topic expansions from the adult speakers (within two utterances, and no other adult utterances); these utterance intention codes were most common for the adult groups of speakers in this study.

These results do not allow concrete conclusions about longest utterances and language development. However, they do indicate a need for further research, based on a greater number of participants, into the connection between longest utterances and expressive language ability. Perhaps LLU would correlate more strongly with a more specific area of expressive language capacity as opposed to the general language abilities measured by the Fluharty-2. Further analyzing the relationship between adult utterances and longest utterances in children could point to useful language elicitation techniques. In addition, analyzing the longest 10% of utterances instead of only the longest three utterances would create a more reliable measure that is focused on peak language capabilities without being obscured by single-morpheme utterances.

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Appendix A

Participant A

= Parent, Child, and Examiner are choosing an activity to do first.
C I like puzzle/s [TI].
E I have puzzles [TE].
E I also <have> [TM]^
C <And> (Hannah) Hannah has a boy nam/ed Sam and he/'s my friend (and) and Hannah has lot/s of puzzle/s [TE]. {20 morphemes}
E What kind of puzzles does she have [Q]?
E What do they have on them [Q]?
C Um, they have all kind/s of picture/s [A].
C One has a castle [TE].
C (One has, and,) and Hannah has (two) two Elmo one/s, one in space and one in um [TE]>
C Hey, I like Clifford [TI]! {Child spots the Clifford the Big Red Dog puzzle}
E You like Clifford [Q]?
E I used to watch Clifford a long time ago [TE].
C I like Clifford too [A].
P You must watch Clifford programs, huh [Q]?
C Yeah [A].
E Do you usually start with the edge pieces or do you start in the middle [TI][Q]?
C I start sometimes on the bottom, in the middle, on the top [A].
E It doesn't sound like you have a plan yet [TE].
C I like truck/s and block/s [TI].
E Do you like to color [TI][Q]?
C %Mhm.
E I have pictures of trucks, and cars, and a train [TE].
C I like train/s [TE]!
E Trains are cool, aren't they [TI][Q]?
C Yeah [A].
E When I was little, we had a train, and it had a motor, and it had a track, and we would have it go all the way around our Christmas tree [TE].
P Whoa, that's pretty cool [TE]!
C Yeah, (and that/'s like) and I wish I had one of those [TE].
E That was really fun [TE].
E It even made the train noise [TE].
E The whistle [TM].
C Wow [SA].
E Excuse me, I'm sorry I'm in your way [TI]!
E Look, we have a corner [TI].
E Corners make things easier [TE]. {referring to a puzzle piece}
E Do you think it goes here, or is it maybe further out [Q]?
C I think it goes right there [A].
E I think I know how we could find out [TE].

P There you go [TM]!
E That's great [TM]!
E Look at that [TM]!
E Balloons [TM].
E So, do you like watching Clifford, or do you prefer other shows [Q]?
C I like Diego, Go_Diego_Go [A].
E I've never seen that one, can you tell me about it [Q]?
C Well, he save/s animal/s [A].
P He has a, he has a partner, right [Q]?
C Yeah [SA].
C And he/'s got a little pet (nam/ed) name/ed Baby_Jaguar [TE].
C Baby_Jaguar.
E So that's his pet [Q]?
E Is he a jaguar [Q]?
C Yes, Baby_Jaguar [A]!
E Does he have a name [Q]?
C That/'s his name, Baby_Jaguar [A]!
E Sounds like a fun pet [TE].
C And Alecia is his sister [TE].
C Alecia.
E That's almost like my name [TE].
E But I don't have an %A at the end, it's just Alise [TE].
C It/'s Alecia, so [TM]. {said with "Alecia" exaggerated, probably to emphasize the difference between the two names}
E Close, but not quite [TE].
C So it has Alise too [TE].
C %Lee_see. {sounding out the common part of the two names}
E Yeah [SA].
E That fit perfectly there [TI]. {referring to a puzzle piece}
P Look at you, you're almost done, huh [Q]?
E You're a puzzle whiz [TE]!
E So which ones go where [Q]?
E Do you have a dog at home [TI][Q]?
C Yeah, it/'s nam/ed Chloe [A].
E Chloe.
E What kind of dog is she [Q]?
E That looks great [TM]. {referring to puzzle}
E Is she as big as Clifford [Q]?
C No [A].
C She/'s a little bit small/er [TE].
P Is she red like Clifford [Q]?
C No [A].
C She/'s brown [TE]!
E Brown [SA]!
E What kind of dog is she [Q]?
E Is she a Labrador retriever [Q]?

C No, she/'s kind of brown and black [A].
P She's a mutt, right [Q]?
E Those are the best dogs [TE].
C And (I have finger, and) I have some puppet/s too [TI]. {becomes interested in puppets instead of the puzzle}
E He's on backwards [TE]!
P What is that, John [Q]?
C Tiger [A].
P Is it [Q]?
C This is a dog, this is a cow, this is a dog too [TE]. {identifying the different puppets}
P Wait, what is that [Q]?
C Dog, I think [A].
P What do you think [Q]?
C It, uh, chinchilla [A]?
P A chinchilla. {laughs}
P Maybe, um, maybe a more common one [TE].
P %growl.
C Bear [TE]!
C I want to do another Clifford *puzzle [TI].
P I don't know if they have another Clifford, but, you know there might be some other toys that we could look at [TE].
P Hey, John, before>
C <There/'s> two puzzle/s [TE].
P Hey, how about we pick up [TI]^
C I like Bob [TI].
C I like Bob_the_Builder [TE]. {referring to a Bob the Builder puzzle}
E Do you want to put Clifford away first so we can do him again later if we want to [TE]?
C Well, (I just,) I just want to>
E You want to leave him there [TE]?
C Yeah [SA].
C (I just, I want) I want to do him to the side [TE].
P Side by side [TM].
P Wow [SA].
P Yeah [SA].
P Now tell me about Bob the Builder [TI].
P Who does, uh, he hang out with [Q]?
C Um [SA].
P There's [Q]~
C Dizzy [A].
P Dizzy.
P Who's she again [Q]?
C Dizzy [A]!
P Yeah, Dizzy [TM].
P What is Dizzy [Q]?
C She/'s an XX, I don/'t know [A].

C (She/'s uh,) she mix/3s cement [A]?
P %Mhm.
C I do/n't know what she is, but she/'s <a> [TE]^
P <Cement> mixer, right [TE]?
C Oh, yeah [SA].
P And then there's Dizzy, Bob the Builder [TM].
C Bob_the_Builder, can we do it [TE]? {starts singing the song from the show}
C Bob_the_Builder, yes we can [TE]!
C Scoop, Muck, and Dizzy [TE]. {Bob the Builder characters}
C Scoop!
P %Mhm.
P Scoop is one [TM].
C Yeah [SA].
C Scoop is this guy [TE]. {points to puzzle}
P The yellow one [Q]?
C Yeah, I think [A].
P Didn't somebody call him a big banana or something like that [Q]?
C Yeah [SA].
P It's kind of funny [TE].
P Ok, then there's Muck [TE].
C %Mhm. {10:00}
C And then there/'s this and Muck [TM].
P %Mhm.
P I don't see all of the characters on here [TE].
C Bob too, Bob and Wendy [TE].
P %Mhm.
P Is, um, is the tall blue one [Q]?
C That/'s, uh, Lofty [A]. {Lofty is a character}
P Lofty [SA].
P And then there's a green one [TE].
C That/'s Roley [TE].
P %Mhm.
C They have a big house [TE]!
P Wow [SA].
P What are they doing [Q]?
C I do/n't know [A].
C Maybe they/'re start/ing work [TE].
P Yeah [SA].
P It looks like Muck's got something, huh [Q]?
C He/'s got brick/s [A].
C (This guy), this guy/'s kinda, see [Q]?
C XXX.
P Oh, bent [A].
C But it has to go in [TI].
P Is it still going to work, do you think [Q]?
C I think [A].

P Ok, good [TM].
C But look [TM].
P %Mmm.
C If I do it like that, it stay/3s [TE].
P That's good [TM].
C What/'s this [Q]?
C X backwards [TM].
P There you go [TM].
C It was backwards [TE].
C Then it would go that way [TE].
P Awesome [SA].
P So, it's been a while since we've seen any or read any, uh, Bob stories, huh [TI]?
C Yeah [SA]!
P Yeah.
P What, uh, what stories do you like to [Q]?
C (I like) I like (when, when, when) when Muck (came) go/3s in the tunnel he said
"Ahhh, there/'s a ghost" [A]!
P It was an episode where he saw a ghost [Q]?
C No [A].
C It was not really a ghost [TE].
P Oh, who was it then [Q]?
C (It was) I don/'t know, but he thought it was a ghost [A].
P That's funny [TE].
P Oh, is that the one where they're at the beach [Q]?
P No, that's something else [TE].
P I forget [TE].
P I remember like Lofty, who's usually the scaredy cat, was the brave one [TE].
C Yeah, (because) because somebody call/ed him a (scaredy) scaredy cat, I think [TE].
P Yeah [SA].
C This piece fell apart [TI]. {referring to puzzle}
P That piece, huh [Q]?
C They have lots of window/s [TI].
P And, uh, so Bob, he has lots of tools who else [TI]^
C Handy_Many [TE].
P Handy Many, that's right [TM].
P And then somebody got some tools for Christmas [TE]~
C I did [TE]!
P Oh, right [SA]!
P That's pretty cool, huh [Q]?
C Yeah [SA].
P You get to help Dada build stuff [TE].
C Yup [SA].
P Did you help^
C XXX.
P Did you help Dada, um, when he was putting trim around the door [Q]?
C No [A].

P You didn't [Q]?
P You didn't get your tools out [Q]?
C (No)no [A].
P No [RQ]?
P What did you do [Q] XX?
C (I) I do/n't know [A].
P You don't know [Q]?
P You just hung out [Q]?
C Yup [A].
P Oh, John, tell me about the experiment you did today in class XX [TE].
C (I do/n't know, but, but, I do/n't, I do/n't) I know it, so, um, it/'s about (it/'s) there/'s two eggshell/s (that were) that we pretend/ed (that really pretend) tooth/s, and when we put them in the water, which is good for our teeth, and then put them in soda, which is not good for our teeth [TE]. {13:49}{45 morphemes}
P Oh, wait, so you had two egg shells [TE].
C (Yeah) yeah, and two cup/s, one of soda, one of water <> (and we put, and we put, and we put) and we put one in the healthy, (in) in water, and one in the soda [TE]. {14:19} {25 morphemes}
P <%Uhuh>.
P What <is the>^
C <(And, and, and> the one) and so the eggshell <> in the soda <> (was, was) was brown [TE].
P <%Mhm>.
P The eggshell that was in the soda was brown [Q]?
C Yeah [A]!
P How long>
P So, did you put that in today and then you <got> to see it later, or [Q]?
C <No> [A].
C No.
C Marriann put it in [TE].
P Oh, and then you got to see it today [Q]?
C Yeah [A].
P Wow [SA].
P What do you think [Q]?
P What did that make you think [Q]?
C Um, oh, (I) I do/n't know [A].
P So they made the, so they made the eggshell turn brown, but the water [TE].
P What did the eggshell look like that was in the water [Q]?
C It look/ed like brown [A].
C But we/'re going_to leave it there (all) all today and all night [TE].
P Ok [SA].
C And then tomorrow we/'ll see what it looks like [TE].
P What do you think will happen [Q]?
C (I) I had a guess, and (maybe it will grow, um, maybe it will,) maybe it will go (brown) brownish more [A]. {11 morphemes}
P The, the <egg> shell that's in the soda [Q]?

C <Brown more> [A].
C Yeah [SA].
P What about the eggshell in the water [Q]?
P Do you think that will turn brown [Q]?
C No [A].
C (That/'s) that one>
C I see the reflection of it [TI]. {looking at himself in the one-way glass}
P You can see the reflection [Q]?
P You can see the reflection of you, can't you [Q]?
C Yeah [A].
P Look at that big mirror, huh [Q]?
C Yeah, you can even see the roof [TE]!
P Yeah [SA].
P What do you think of this room [Q]?
P It's kind of^
C Yeah [SA].
C I like the wavy thing/s [TE]. {referring to the wall art}
P Yeah [SA]?
P That's kind of neat [TM].
P So what do you think [Q]?
P Do you want to do, um, should we put the puzzles away and, <uh, play> with some trucks [TI][Q]?
C (No) no X [A].
P You don't like to put things away, do you [Q]?
C Yeah [A].
C I don/'t like to [TE].
C I just want to play with them (while) while people are put/ing them away [TE]. {14 morphemes}
P You like to play while people put stuff away [Q]?
C Yeah [A].
P Yeah.
P You don't like putting stuff away [Q]?
C Yeah [A].
C So I want to play with truck/s [TI]!
P Alright, we can play with trucks [TE].
P But, we need to put the puzzle pieces up first [TE].
P Ok [SA]?
P <How about> this [Q]?
C No [A].
C I want to slide them [TE]. {referring to moving the puzzle pieces to make room}
P Well, alright, <let's>^
C I/'m not going_to play truck/s on the table [TE].
P No [RQ]?
P Where are you going to play with them [Q]?
C On the floor [A].
P On the floor [RQ]?

P Well, I don't know [TM].
P We might need to play with them on the table [TE].
P This might be really the play spot [TE].
C No, I want to do it on the floor [TE].
P You want to play trucks on the floor [Q]?
E You want to play on the floor [Q]?
E We'll have to pick up first [TE].
P We'll have to pick up.
P What do you think [Q]?
P I know, these puzzles are really cool [TE].
P If we have time, we can make them again [TE].
P But let's put them up in the boxes now, and then we'll get, um [TE]^
C Alright, first I want to do this Bob_the_Builder one [TE].
P Ok, it goes in that way [TE].
C Mama, I do/n't want to help [TE].
P No help [RQ]?
P Alright [SA].
= Child makes machinery noises.
P So what, are you like a scoop doing this [TE]?
C Look at that [TM]!
P You know, you're making a mess [TE].
P Oh, man [TE]!
P How about we, uh, you know, the quicker we pick up these puzzle pieces, the quicker
we can play with some trucks [TE].
P Look, there are all these pieces underneath [TE].
P Would you get them please [Q]?
C Oh, there/'s really three of them [TE].
P Three [Q]?
P Ok [SA].
C Oh, and I like to (crawl) crawl under table/s [TE].
P You do, huh [Q]?
P Watch out for your head [TE]!
P Alright, come on back up and let's get old Clifford in the box [TE].
C What Clifford [Q]?
P What Clifford [RQ]?
P This Clifford [A].
C Oh, yeah [SA].
C And you know what [Q]?
C Handy_Many has a dog [TI][A].
P Handy Many!
C Yup [SA].
C (No, no) no [N].
C Bob_the_Builder [TM].
P No [N].
P What does Bob the Builder have [Q]?
P He doesn't have a dog [TE].

P What does he have [Q]?
= Parent makes a cat noise.
C A cat [A]!
C And^
P Do you remember his name [Q]?
C Um, Pilchard [A]?
P Yeah [SA].
P Something like that [TM].
C Um, (and, and) and his friend had a dog [TE].
P Who [Q]?
C Nam/ed Scruffy [TE].
P Oh, that's right [TM]!
C Nam/ed Scruffy.
P Who is it [Q]?
P Do you remember who that is [Q]?
C No [A].
P Who owned Scruffy [Q]?
P Oh, come on, he's something that that your dad is [TE].
C A farmer [A]!
P Yeah [SA].
P Farmer Pickles [TE].
C Yeah [SA].
P Whoa [SA].
C I like the fire_truck/s [TI]. {referring to toy trucks}
P That's kind of like, um, the fire trucks at the X, right [Q]?
C Yeah [A].
C And Mama [Q]?
C Mama, you know what [Q]?
P What [Q]?
C William for share, <he had> he had, (I) I just forgot [TE].
P <Yeah>.
P You>
P Ok [SA].
C But (two person/s) two person/s for special child <> had dragon/s [TE].
P <Yup> [SA].
P They brought dragons [Q]?
C Yeah [A].
P Tell me about them.
P Were they, like, ah, snuggly, squishy dragons [Q]?
C (No, no) no [A].
P Or were they [Q]?
C They were toy dragon/s [A].
P Yeah [SA].
P But they, how big were they [Q]?
C They were like this big [A]. {indicates with hands}
P That big [Q]?

C Yeah [A].
P Were they <> green [Q]?
C No [A].
C They were like this big [TE]. {indicates with hands}
P Did they breathe out fire [Q]?
C Yeah [A].
C Jack XX when you press/ed the button that/'s under him he open/ed his mouth (and)and just go %scream and then close his mouth and go %growl [TE]. {20:21}{28 morphemes}
P Whoa [SA].
C (Of) of fire in his mouth [TM].
P Wow [SA].
C And you could see part of the fire [TE].
P Really [Q]?
P That's Jack's dragon [Q]?
C Yeah [A].
P Was he like um bumpy and <green> [Q]?
C <No> [A].
C But he had a little square thing that people could ride in (and, and, and he had,) and the dragon that Jack had (had this little,) had this little button on the top of him with his wing/s so his wing/s could go flap_flap_flap_flap_flap [TE]. {20:48}{38 morphemes}
P That's cool, kind of like Buzz Lightyear, when you push the button his wings go %swoosh [TE].
P Kind of like that [Q]?
C (And then) and then when you push the button again %shoosh [TE].
P So the dragons sounded pretty cool [TE].
= Child makes flying noises.
P Who is that XX [TI][Q]? {asking about a toy}
P Do you know who that is [Q]?
C Ernie [A].
P Close [TM].
C Bert [A]!
P Yeah [SA]!
C And %oops [TM]! {talking about what is going on with the toys}
E That was a close call [TI]!
C I like drift racing [TE].
P Oh, right [SA].
P Oh, remind me, what's drift racing [Q]?
C Well, it/'s when the car/s they get to slide the bus along [A].
P They slide the bus along [RQ]?
C Yeah [A].
C Like %vroom [TM]. {demonstrating with toys}
C And it blow/s up some stuff and blow/s away dirt [TE].
P Oh, it blows up dirt when they drift race [Q]?
C Yeah [A].
C Yeah, on dirt roads [TM].
P Oh, do they ever drift race on tar roads [Q]?

C Watch out, %zoom [TM]! {car racing with toys}
P Whoa, John, easy, bud [TE]!
P Ok [Q]?
= Lots of car noises and playing with cars.
C (That/'s) that/'s>
P That's drift racing there [Q]?
C Yeah [A].
C No this [TM]. {demonstrates with cars}
P Ok [SA].
C And, Mom, watch this [TE]!
= Child plays with cars.
P Whoa, there goes Bert [TE].
C (My, you could, you could also) you could also drift race like this with the wheel/s spinning like this [TE].
P And who does a lot of drift racing [Q]?
C Um, I, uh, those cars XX (and, and) and don/'t you remember his name (that, that won) that win the race but Mater won [Q]?
P Mater [RQ]?
C Fran, uh, no [A].
C I was going_to first say Francesco but he/'s not in this spring/z order [TE].
P Are you talking about, um, the Tokyo Mater story [Q]? {from the movie Cars}
C Yeah [A].
C You were say/ing he would drift race a lot [TE].
P Yeah [SA].
P It's not Lightning McQueen though, huh [Q]?
C No [A].
C Sometimes they think that he drift race/3s [TE].
P Yeah [SA].
= Child makes lots of car racing noises.
P You know the, uh, the, uh, fire_truck that makes me think of the fire_truck that we painted on Poppop's cup [TE].
C (Yeah) yeah [SA].
C Can you get this out for me [Q]? {referring to the ladder on the toy fire_truck}
E Does it go out [Q]?
E I'm really not sure [TE].
C Maybe it does/n't [A].
E It looks like it should [TE].
P Oh [SA]!
C Oh, yeah X [SA].
C (Yeah) yeah.
C And the fire is this big [TI].
C Watch [TM].
C Let/'s go %footsteps [TE]. {going up the firetruck ladder}
P It's that big, huh [Q]?
C And (then) then they have to jump up [TE].
C (Watch) watch the XX jump %swoosh right up here [TE].

C And that side has to come too [TE].
P Yeah [SA].
P But what's on fire [Q]?
C The house [A]!
P Where's the house [Q]?
C Right up there [A]!
P What, all the way up there [Q]?
C Yeah [A].
C The fireman (has to go,) has to go %footsteps and then go in the elevator all the way up to the ceiling [TE].
P Really [Q]?
C Yeah [A].
P And does he carry his hoses up with him [Q]?
C Yeah [A].
P So that he can spray water on it [Q]?
C Yeah [A].
C And the ambulance/s is go/ing up too [TE].
P It's going to drive up to the building [Q]?
C Yeah [A].
C Up the side of the building (like) like the outside like this, <> the outside [TE].
P <%Uhuh>.
P But after that, inside [TE].
C (And he) and he is gonna fly up %whoosh [TE].
P Yeah, that makes sense [TE].
C And this guy is gonna (race) race down the hall and into the elevator (and, and) and the fast X [TE].
C Here (watch) watch this [TM].
C It go [TE]. {plays with toys}
P Whoa, yeah that^
C Hey, look at this [TE]!
= Child makes noises and plays with cars.
P What do you see [Q]?
P What is it [Q]?
C I don/'t know what it is [A]!
C It/'s like my car (that) that when it hit/3s something <> it flip/3s over <>, that/'s like [TE].
C So, watch this [TM]!
C Do/ing this [TM].
= Child demonstrates with car.
C You have to flip it over [TE].
P Oh, look at that [TM].
C See [Q]?
P So, he has like, it's like two cars in one, huh [Q]?
C Yeah [A].
P Yeah.
C Oh, it land/ed on the orange side [TE]!

P What do you think about all these toys [Q]?
C Oh, XX it/'s all over [TE].
P It's all over [Q]?
C So you have to go %footsteps (and) and then you all have to go back home [TE].
P So, tell me about, um, when you go play with Sam [TI][Q].
P What do you and Sam play with when you go [Q]?
C (They do) we do puzzle/s [A].
P Yup [SA].
P Oh, like the Elmo puzzles [Q]?
C (Yeah) yeah [A].
C I do the Elmo puzzle/s [TE].
P %Uhuh [SA].
C Sam does some other one/s [TE].
P What else do you and Sam do [Q]?
P Do you play with the cars [Q]?
= Child loudly playing with cars.
C Watch this [TI]!
C Watch out [TM]!
P Hey, John, how about, uh, you try not to run cars into people, alright [Q]?
C Sorry [A].
C Hey, watch this [TM]!
C (Can you) <> can you put this out for me [Q]?
P <Sure> [A].
C There [SA].
E There it is [TM]!
C That/'s go/ing in this [TM]!
C Watch this [TM]!
C People (has to) have to walk across to get to the building that/'s fall/ing in the ocean [TI].
P So what would this be [Q]?
C The water [A].
P Yeah [SA].
C (And), but the house is up high XX have to go this high [TE].
C Straight up [TE].
P Wow [SA].
C And then jump [TE].
P Do you think it would be scary to go that high [Q]?
C Yeah [A].
C And you might fall down [TE].
P %Mmm.
P Yeah [SA].
C And Mama, <> (I) I want to do something else, not really these truck/s [TI].
P <%Mhm>.
P Don't want to do trucks [RQ]?
P Well, we could see what other things, what other games there are [TE].
C Yeah [SA].

E Well, there's the puppets, and there's blocks, or I have fun things to color too [TE].
P John, would you like to do coloring [Q]?
C What [RQ]?
P Would you like to do coloring [Q]?
C No, thanks [A].
P No [RQ]?
C I want some of these [TE]. {referring to large cardboard blocks}
P You want to play with the blocks [Q]?
P Hey, John, before you get all of those out lets put their cars back [TE].
C XXX.
C Bird/s gonna fly over [TI].
P Ok [SA].
= Lots of playing noises
P What do you like to build with blocks [Q]?
C Sometimes I like to build bridge/s [A].
P %Mhm.
C What do I want to build now [Q]?
C These are made out of what I/'m going_to build [TE].
C (But) but it/'s soft, and I/'m going_to make a (some more,) need some of (these block/s) these block/s [TE].
C Here [TM].
P Aren't they fun to move around and knock over and all that stuff [Q]?
P These are like the blocks that Sam has <> but they're, they're bigger, aren't they [Q]?
C <Yeah> [A]!
= Child is playing with the blocks on the floor.
C %Hiya!
E I think there's two more [TE].
C Yup, there is two more [TM].
C I squeez/ed right into the cabinet/s [TE].
E Good thing you're small enough to do that [TE]!
C %Ow [TE].
E Are you all right [Q]? {child had bumped his head on the cabinet}
P Did you bump yourself on the head [Q]?
C Yup [A].
C Mommy, I want to make a brick stone wall [TI].
P Yeah [SA].
C And I need some help for it though [TE].
P You need help [Q]?
C Yeah [A].
P Alright [SA].
C (I want) I want to make a big one [TE].
P So, a tall one or wide one or <what are you thinking> [Q]?
C <No, I wanna> make a big one [A].
P Ok [SA].
C Look at this, Mom [TE].
P It looks like it's going to be very big [TE].

C And you know what [Q]?
P What, babe [A]?
C The ocean it is come/ing into here [TE].
C So we have to make a brick stone wall [TE].
P So, where's the ocean [Q]?
C It/'s right over there [Q]?
P Over there [RQ]?
P And it's coming this way [Q]?
C Yeah [SA].
C I wanna (we) we need some (other) other thing/s [TE].
P Like what [Q]?
C And these are going_to guard [TE]. {places toy trucks on the top of the bridge}
P The cars are going to guard [Q]?
C Yeah [A].
C Even this guy [TE].
P And, and so are they watching out for the ocean or are they watching out for something else [Q]?
C They/'re watch/ing for the ocean [A].
P Yeah [SA].
P What are they go/ing to do if the ocean gets closer [Q]?
C (They/'re gonna) they/'re gonna put fire in it [TE].
C Mama [Q]?
P Yeah [A]?
C If the ocean gets really close, <> it might burn this down if there/'s fire in it [TE].
P Really [Q]?
C Yeah [A].
C But look, there/'s space/s [TE]! {referring to gaps between the blocks}
P Oh, no [TE].
C Except right here [TE].
P Is that not good, spaces [Q]?
C Yeah [A].
C (Oh, no), oh no, look [TE]!
P You know what would fill up those spaces [Q]?
C What [RQ]?
P Cement [A]!
P We need Dizzy, don't we [Q]?
C What [RQ]?
C Yeah [SA]!
C I/'m gonna need some brick/s too [TE].
C From Bob [TE].
P That's right [TE].
P And usually Muck is, um, carrying bricks around, right [Q]?
C Yeah [A].
P Yeah.
C But it has to be from [TE].
P It has to be from somebody [Q]?

C Yeah [A].
C Like Muck [TM]!
C Hey, Mommy, look [TM]!
C You know what [Q]?
C Mom, (when you, when you) you know what [Q]?
C When he fell, it mean/3s he fell in the ocean but this guy (turn/ed X), he turn/ed around and then put his ladder out (and) and then this guy hop/ed on the ladder and then roll/ed on the ladder and then did this [TE]. {playing with fire_truck - 33:00}{44 morphemes}
E Wow [SA].
P Hey, John, did, uh, yesterday did Jeremy, uh, come to school [TI][Q]?
C Um, yeah [A].
C (But) but after share when we were still eat/ing <> we were read/ing some book/s but Sid never came because he was sick [TE]!
P Yup [SA].
P Oh, Sid didn't come [Q]?
C Yeah, because he was sick [TM]!
P Yeah [SA].
P What about Jeremy [Q]?
P Did he come [Q]?
C Yeah [A].
P Did he teach you music [Q]?
C XXX.
P What did you guys do [Q]?
C We use/ed instrument/s [A].
P Yeah [Q]?
C Hey, look at this [TI]!
P What, what did you use [Q]?
P Do you remember [Q]?
C Um, Jeremy had a new drum that you could go %drum_noises [A].
P Did you do drums [Q]?
C Yeah [A].
P You did [RQ]?
C One time [A].
P One time [RQ]?
C And then Charlotte did [A].
C Hey, Mom, watch this [TI]!
C %Hiya!
P Oh, John [SA].
P So, did you use any other instruments [Q]?
C No, (but yeah) but [A]>
C Mom, watch this [TM]! {jumps over wall and knocks over blocks}
P Whoa, whoa, whoa, whoa, yeah [TM].
P I know [SA]!
P You are, this looks a little fun, but, you know what [Q]?
P I, I think that maybe, uh, <jumping over such a high> wall could be kind of scary [TE].
C <Mom, (I) you know what> [Q]?

P What [RQ]?
C Mom, I want to build, (I want to) I want these guy/s to be like in the little in shape [A].
P So, <so tell> me, did you, did you>
C <Like this> [TM]! {stacking blocks}
E What if we went like this and put one halfway and the other halfway [TE].
P Did you guys sing any songs [TI][Q]?
C Yeah [A].
P When Jeremy was visiting [Q]?
C Um, yeah [A].
C (We, we sing/ed) we sang Off_to_the_Rodeo (and when the music) <> and when the person that goed off to the rodeo <> with Jeremy <> get/3s to shake hand/s and whenever the music and when the person get/3s to the other person, when the music is go/ing off to the rodeo <> the person that shaked hands with that person goes off to the rodeo with that person (and then, and then) and then start/s all over again [TE]. {35:23}{68 morphemes}
P <Come here> [SA].
P <Yup> [SA].
P <Yeah> [SA].
P <%Uhuh>.
P So, there ends up being lots of people going to the rodeo [Q]?
C No [A].
C Not all people [TM].
P Not all people [RQ]?
C Yeah [A].
P Do you remember how the song goes [Q]?
C Off to the rodeo XX [A]^ {child had trouble remembering}
P It's, it's not a problem [TE].
P But then there's handshaking going on, huh [Q]?
C (Yeah, yeah) yeah [A].
P Cool [SA].
C And XX what [Q]?
P What [RQ]?
C This brick is not a brick stone wall [TI].
P It's not a brick stone wall [Q]?
C Yeah [A].
C It/'s not [TM].
P Oh, we're going to lose our, uh, our fire engine [TE].
C No [N].
P No [RQ]?
P And, uh, so and tell me about share, did you, who did you, what did you take [TI][Q]?
P I forget [TM].
C I take/ed my flying Mater [A].
P Your flying Mater [RQ]?
C I do/n't know if I really take/ed it [A].
C What/'s this [Q]?
C This is the XX.
C Mom, look at that [TI]!

P Wow [SA].
E You made a tower [Q]?
C Yeah [A].
C They/'re in a tower look/ing [TE].
P Yeah [SA].
P And they're looking out in the ocean [Q]?
P Am I in the ocean [Q]?
C Yeah [A].
C In the>
C (And there/'s), and there/'s big cement right here [TE].
P %Uhuh.
C So the ocean does/n't come here, right here [TE].
C And, Mom, watch this [TM]!
C Mom, watch this.
C I/'m going_to do a big one [TE].
P Oh, yeah, yeah [SA].
E Did it fall in the ocean [Q]? {referring to the toy the child knocked off the block wall}
C No [A].
P Splash [TM].
P You know, I don't think that's strong enough for you [TI]. {referring to the block the child was sitting on}
P You might>
P I don't want you to break it or bend it [TE].
C You know what [Q]?
P What [RQ]?
C Look at this [TE]!
C You/'re on a big airplane [TE].
P Wow [SA].
P A brick airplane, huh [Q]?
C Yeah [A]!
C (And) and sometimes it break/s apart [TE].
P Hey, John [TI].
C XX and lot/s of people are in it [TE].
P You do need to calm down a little [TI].
C XXX.
P John [Q].
C What [RQ]?
P So what, what was like your favorite thing that was shared yesterday [Q]?
P Can you remember [Q]?
C XX what share/ed.
P %Hmm [RQ]?
C What share/ed [A].
P You know, your friends [TE].
P Everybody brought something in to share [TE].
C And you know what [Q]?
P What [RQ]?

C Mariann does/n't even know (it/'s gonna be, it/'s gonna, it/'s gonna,) it/'s gonna (be) be>
P Hey, John [Q]?
P How about we come over here and do a little coloring because I think it might be nice to <calm down a little> [TI].
C <But sometimes> when I color I <> feel like I gonna jump [TI]. {jumps}
P <Yup> [SA].
P Well, but you're, you're doing that now, so now you get all the jumping out of you [TE].
P Like, I see one more jump and then you'll get it all out [TE].
= Child jumps.
P Awesome [SA].
P Ok, now, let's come over here and kinda calm <down> a little bit [TE].
C <Oh, I wanna XX>.
E Which one would you like to do first [TI][Q]? {referring to coloring pages}
P Oh, whoa [SA].
E You have to choose one [TE].
C How about this one [Q].
P <XXX>.
C <Hey, you have> a monster truck too [TE]!
P Wow [SA].
C And a tow truck [TE]!
P Oh, that's cool [TM]!
C (And, and look, and look, and look,) and look [TM]!
E Which one do you want to do [Q]?
E You have to pick one [TE].
C This one [A].
E Ok, the train [Q]?
P Yeah [SA].
E I have brand new crayons [TE].
P Wow [SA].
E Now that is a treat [TE]!
P Oh, yeah [SA]!
E I had a set of crayons when I was little, and there were ninety_six of them [TE]!
E And there were so many of each color it was so much fun [TE].
E Can I help you color the train [Q]?
C No, look [A]!
E No [RQ]?
C I use/ed white but I [TE]^
E It doesn't show up, does it [TE]?
C Yeah [A].
C But only on paper that/'s not white [TE].
E Have you ever dyed Easter eggs [TI][Q]?
C What [RQ]?
E Have you ever dyed Easter eggs [Q]?
C (What are) what does dyeing Easter egg/s mean [Q]?

E Well, if you take a white egg, and sometimes you can paint it or you can put it in something colored and then it becomes colored [A].
E They're really pretty [TE].
E And if you use a white crayon on it before you put it in the color, then the parts that have the white on them are still white [TE]!
P We should try that, huh [Q]?
P That sounds like fun [TE].
P We haven't done that yet.
C Hey, look [TI]!
C I just drew the caboose [TE]!
P What are you coloring now [Q]?
C A choo_choo train [A].
P What part of the choo choo [Q]?
C This part [A]. {points}
C The train [TE].
P %Mhm.
E Is it orange [Q]?
C Yup, it/'s gonna be orange [A].
C It/'s gonna be orange, black X [TE]>
C I/'ve only got an orange, so now I need black [TE].
E There's two other kinds of orange [TE].
C (I) I need orange, black, orange [TM].
P Which one is that [Q]?
E This one looks like black [TE].
C Mommy [TM].
E What about this one [Q]?
C That/'s black [A]!
C (This, that's black) this is black [TM].
E And this one [Q]?
C No, that/'s pink [TE].
E You don't want a pink train [Q]?
C (I think I might) I think I/'m gonna have pink at the back of the train [TE].
E All sorts of colors [TE].
P Wow, look at the colors [TE]!
P John, what is your favorite color [Q]?
C Um, uh, red, blue, (I like,) my favorite color (is) is red and green [A].
P Red and green [RQ]?
C Yup [A].
C Hey, look you can see (the) the airplane in the mirror [TI]! {referring to the one-way glass}
E Where is it going [Q]?
C It/'s go/ing>
C Hey, this guy gonna fly [Q]?
C Is he gonna go out and fly [Q]?
P %Mmm.
E Have you ever been to an airport [Q]?

C Yup [A]!
C I fly (to, to, um, to Poppop) to Mommom and Poppop/z [TE].
E My Mommom and Poppop live right next door to me [TE].
E I guess I'm lucky [TE].
C No [N].
C A different one [TE].
C Like the one (that had) that had the tractor [TE].
P Yeah, your Mommom and Poppop live far away, but Alise's Mommom and Poppop live close by [TE].
P What do you think of that [Q]?
E They live right next to my house [TE].
C Wow [SA]!
E I know [TM]!
E I'm lucky [TM].
C And (Mimi and Grampy are mine are my, are my, are my) Mimi and Grampy are my aunt and uncle [TE].
P They're your other grandparents [TE].
C (Yeah, yeah, yeah)yeah [SA].
P They're Mama's mom and dad [TE].
P And they live closer [TE].
P We don't have to go on a plane, do we [Q]?
E I've only been on a plane one time, and I was <even younger than> you [TE]!
C (I/'ve been) I/'ve been on a plane one time too, I think [TE].
P You've been on a plane like three times [TE].
C Or four [TM].
C Or five [TM].
P You were a little baby the first time that you flew [TE].
E That sounds kind of scary, but really exciting too [TE]!
E Planes are so big [TE]!
C Yeah [SA].
C And even was it Aunt_Emily or Aunt_Joan or Aunt_Megan that took me on the plane [Q]?
P Well, last time we, we were on a plane Aunt Megan went with us [A].
C Oh yeah [SA]!
C I was mean/ing that [TE].
P Yeah, yeah [SA].
E Have you ever been on a train [TI][Q]?
C Yeah [A].
C (It/'s when) it/'s when I did/n't get to go on a train ride but did/n't after I did [TE].
P Do you remember when Aunt Joan came to visit us last year [Q]?
C Yeah [A].
P Do you remember what we did [Q]?
C I build/ed a bridge of her [A].
P You did do that [TM].
P But do your remember when we went to get on the train [Q]?
C Yeah [A].

P And the conductor, she said that that train was a lot like who [Q]?
C Thomas [A].
P Close [TE].
C Mavis [A].
P That's right [TM].
P And then we got to sit [TE].
P Do you remember more of the details of what happened [Q]?
C Well, we got to sit on a car (that, that, that) that not have roof/s or window/s [A].
P It was^
C It was (just, just) just air all over except the railing/s [TE].
P That's right [TM].
C All over us except railing/s [TM].
P What did you what did you think when we were on the train [Q]?
C Well, it was a green one and Dada and Aunt_Joan were with us [A]!
P That's right [TM]!
P Did you like it [Q]?
P Did you like the train ride [Q]?
C (Yeah, yeah) yeah, (I did) I did [A].
P Yeah [RQ]?
C I really liked it [A]!
C Hey, how many is this [TI][Q]?
E Can you count them [Q]?
C One, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, sixteen, seventeen, eighteen, nineteen, twenty_one, twenty_two, twenty_three, twenty_four [TE]!
E I think that there is twenty_four in all, but I think you missed two [TE].
E They're over here [TE].
C Oh [SA].
C And right here [TM].
E See, I cheated [TE].
E It says twenty_four right on the box [TE]!
C There/'s not twenty_four, there/'s twenty_four [TM].
C One, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve [TE].
E It's still a lot of crayons, isn't it [Q]?
C Yeah [A].
P And I kind of like the way she lined them up [TE].
P Do you like that too [Q]? {Examiner had lined up crayons by color}
C Yeah [A].
E It's kind of like <a> rainbow [TE].
C (<I did/n't>, I did/n't) I did/n't know she line/ed them up [TE].
P And then you looked over and [TE]^
C It was there [TE]!
C Hey, Mom, I want to color this part orange too [TI].
P That's some nice coloring you're doing there, John [TE].
E Is it all right if I use some of your crayons [Q]?
C %Hmm, sure [A]!

C I said, "%hmm, sure" [TM]!
E Thank you [SA].
E Where I live, we get to see a lot of rainbows [TI].
E Sometimes we even get to see two at a time [TE]!
P Whoa [SA].
C Yeah, and I have one in my bedroom and Mama has one (in my) in her bedroom [TI].
P What do we have [Q]?
C A window [A].
P Oh, window [TM].
P Yup [SA].
C And there/'s like three of them (in) in our house [TE].
C No [N].
C (Yeah) yeah, three [TM].
P Three windows [Q]?
C Yeah [A].
C In our house [TM].
P How many doors do we have [Q]?
C Three of them [A].
P Three doors [RQ]?
C No, four [A].
P Four doors [RQ]?
C Yeah [A].
C Because there/'s number one in the bathroom, one for outside, one for also outside, one for outside [TE], because first I mention/ed all of them for outside but then I thought, "%Hmm, oh, yeah," there/'s one for the bathroom [TE]! {46:23}{39 morphemes}
P There's one upstairs <> too, on somebody's bedroom [TE].
C <%Hmm, uh>, oh yeah, on mine [TE]!
P %Mhm.
C Dada built one on mine [TE].
P Our house is still kind of new, isn't it [TI][Q]?
C Yeah [A].
C But it/'s Etna [TI].
C We use/ed to live in Mountville [TE].
P That's right [TM].
P What do you think about living in Etna [Q]?
C Oh, Mommy, (you) you draw/ed a beautiful sun [TI]!
P Oh, thank you [TM]!
E Should we put a sun over top of your train [Q]?
C Sure [A].
E What do you think of this color [Q]?
E This is a nice <yellow> [TE].
C (<Let/'s>, let/'s) let/'s draw part sun and part moon together [TE].
E So, like half and half [Q]?
C Yeah, half and half.
E What color should we use for the moon [Q]?
E Blue [Q]?

C Yeah [A].
E Ok, I'll do that [TE].
E Half yellow, and half blue [TM].
C Yeah [SA].
C Mom, did you see [Q]?
C Half yellow and half blue [TM].
P That's pretty cool [A].
C Mom XX>
E So, you live in a new house [Q]?
C Yeah [A].
E I live in an old house [TE].
C In an old hutch [Q]?
E No [A].
E An old house [A].
C Oh, yeah [SA].
E It's very, very, <very> old [TM].
C (<But, but> sometimes, but sometimes, but sometimes people) but sometimes people
call old hutch/s, I mean old house/s, hutch/s [TE].
P <Really> [Q]?
E <Really> [Q]?
C Old hutch/s.
P Who does that [Q]?
C But you can>
C It/'s ok if you color that part [TI].
P Oh, you don't mind [Q]?
C Yeah [A].
P Oh, good [TM].
P I guess I should <have asked, huh> [Q]?
E <There's the> sun half [TE].
E Now <we need the> moon half [TE].
P <Wow, look at that> [TM]!
C Yeah [SA].
P That's pretty good [TE].
C But it/'s going_to be afternoon [TE].
E But my house is over a hundred and fifty years old and my family has lived there since
before I was born [TE].
P Wow [SA].
E That's a long time [TE].
P A hundred and fifty [TM].
P Can you imagine [Q]?
P That's a lot, huh [Q]?
C Yeah [A].
P Yeah.
C I wish I live/ed that long [TE].
P <Yeah> [SA].
E <Yeah>.

E It's a farm [TI]!
E I like living <on a farm> [TE].
C <But (we live)> we live on a farm (that) and Dad grow/s vegetable/s like carrot/s, and apple/s, and chard [TE]. {48:47}
P Chard [TE].
P What's your favorite vegetable when you go out in the garden [Q]?
C Carrot/s because that/'s my snack [A].
P What else though [Q]?
P You have another snack [TE].
C Yeah [A].
C But, my other snack is gone and it/'s [TE]>
P Do you remember [Q]?
C Hey, look [TI]!
C It/'s afternoon [TE]!
C And this train is go/ing [TE].
P Do you remember your other garden snack [Q]?
C Uh, kennel, but it/'s gone now [A].
P Close, fennel [TE].
C Oh, yeah [SA]!
C Fennel, but now it's gone [TE].
P It's gone, well pretty [TE]^
E Those are a lot of fancy vegetables [TE]!
E My dad grows vegetables too [TE]!
P Wow [SA]!
E We even grow strawberries, and raspberries, <and blueberries> [TE].
C <And, Mom, you know what> [Q]?
C Mom, you know what [Q]?
P What [RQ]?
C Um, today (is for Chris) for my new friend Christopher/z snack <>, there were strawberry/s [TE].
P <Yeah> [SA].
P You had strawberries for a snack [Q]?
C Yeah [A].
P Wow [SA].
E Strawberries make a very good snack, don't they [Q]?
E Do you like strawberries [Q]?
C %Mmm, yeah [A].
C But now they/'re gone [TE].
C (It/'s, it/'s and) it/'s past strawberry season [TE].
P Well, it's coming up [TE].
P Every year we have a new strawberry season [TE].
P So, that's, uh, that's going <> to be coming up at some point soon [TE].
C <Hey, Mama> [TI]!
C You can use black for here too [TE].
P Oh, ok [SA].
P Did you know that though, John [Q]?

C No [A].
P That it will come back, strawberry season [TE].
P Isn't that exciting [Q]?
C Hey, Mommy [TI].
C (I like) I like how there/'s a little side/s [TI].
P Yeah [SA].
C I want to do eye/s [TE]!
C Hey, Mommy [TM]!
C You know what [Q]?
C I want to do this black, and this orange [TE].
P Ok [SA].
P Do you want the black crayon [Q]?
P Or^
C No, thanks [A]!
P You're not ready yet [TE].
E What's your favorite vegetable, John [Q]?
C (My favorite vegetable for now in,in the) my favorite vegetable is carrot/s and my favorite fruit (is) is grape/s [A].
P %Mmm.
P That sounds good [TE].
E Those are good ones [TM].
E I think my favorite vegetable would have to be peas, and my favorite fruit [TE]>
E I don't know if I can pick [TE]!
E I really like pineapple [TE].
E But we don't grow pineapple at my house [TE].
E It's too cold [TE].
C Yeah [SA].
C (We do/n't) and we do/n't grow pineapple at our house either [TE].
P %Mmm, %mhm.
C But there/'s some at the store [TE]!
P That's true [TM]!
E Those are pretty good though [TE].
= Child makes loud noises.
P Whoa, whoa [TM].
E Is the train making that noise [TI][Q]?
E I would be worried if I were on a train and it made that noise [TE]!
C No, it/'s just me bouncing [TE]!
C Up and down [TE].
E We have a lot of animals at my house [TI].
C And Hannah has pig/s, cow/s, horse/s [TE].
E Horses!
E I had a horse [TE].
C And she has pig/s too [TE].
P Should we find out what animals Alise has [Q]?
C Yeah [A]!
E We <have lots> of animals [TE].

C <What do you [Q]>>
E We have birds [A].
C Oh [SA]!
E We have parakeets and we have pigeons [TE].
P Wow [SA].
C Wow!
C I have a birdfeeder, two of them [TE]!
C (I got one <> for Christmas, and one) I got one for Christmas (and one, and one, and one for) and one that is hang/ing up out on our tree [TE].
E <We don't have one of those> [TE].
E You see a lot of birds out there [Q]?
C No [A].
E That's too bad [TE].
C I do/n't see bird/s [TE].
P Yeah [SA].
E One time when I was little, we had a birdfeeder, but all the squirrels got into it and then they came into our house [TE]!
C Yuck [TM]!
P That's not good [TE]!
E I know [TE]!
E They were sitting on our shelves [TE].
E And they would <> yell at us [TE].
C <Hey> [SA]!
E In squirrel [TE].
C And I will draw the wheel/s yellow [TI].
P Ok [SA].
C Because train/s can/'t just have white wheel/s [TE].
P They can't [Q]?
P Um, if we had squirrels in our house, I bet Chloe would get them, huh [Q]?
C Yeah [A].
C Because Chloe like/3s to chase squirrel/s [TE].
P She does [TM].
E We have five dogs at my house [TE].
C Whoa, I have one [TE]!
C I have one dog and one cat [TE].
C One is name/ed Chloe, one is name/ed Kitty, but I call it Cecil [TE].
C I mean, my parent/s call it Cecil but I call it Kitty [TE].
P Do you wanna, do you wanna know what Alise's dogs are <named> [Q]?
C <Yeah> [A].
C What are your [Q]?
E Well, we have Purdy, <> and we have Tipper, <> and Topper, <> and Banjo, and Belle [A].
C <Wow, that/'s a good name> [TE]!
C <Wow>!
C <Wow>!
C <Wow>!

C Wow!
E And then we have three cats [TE]!
P Wow.
C What are their name/s [Q]?
E We have Starry, <> and Chester, <> and Katie [A].
C <Wow> [SA]!
C <Whoa> [SA]!
C <Whoa>!
P That's a lot of animals, huh [Q]?
C Yeah [A].
C You have more than me [TE]!
C Pet/s [TM].
E Yeah, one time, one of our dogs ran away [TE].
E My dad had to spend a really long time looking for him, but eventually we found him and he came back [TE].
E What's something funny one of your animals did [Q]?
C No, my animals did/n't run away [TE].
E Did they do anything else funny [Q]?
C (Hm, they just,) Chloe is a good girl (because) because whenever somebody come/3s down the stairs at Chloe, will have no chance because Chloe will just flip them over and kick them outside, I think [TE].
P You think so [Q]?
P You mean like if if Dada were to go downstairs Chloe would do that [Q]?
C No [A].
P Who, who are you talking about [Q]?
C Like a stranger [A].
P Oh, if a stranger were to come [TE].
P Yeah [SA].
P She's a good, uh, guard dog [TE].
C Hey, Mama [TM]!
C And she sleep/3s like this [TE]!
C Watch this [TM]! {imitates dog}
C With one eye open/ed (so if she, so, so) so whenever somebody come/3s, she will attack [TE]!
E She must make you feel really safe [TE].
P What does, uh, what else does Chloe do [Q]?
P She does a lot of sleeping, huh [Q]?
C Yup [A].
E Where is her favorite place to sleep [Q]?
C On her bed [A].
C But sometimes she lays down on the floor [TE].
E Is she allowed on the furniture [Q]?
C No [A].
E It's probably a good thing [TE].
E Dogs have a lot of hair [TE].
C Yeah, but sometimes it gets all over our bed [TE].

C And sometimes I want to snuggle with her but she does/n't let me [TE].
E %Awww.
E That's too bad [TE].
P She's not a good snuggler is she [Q]?
C No [A].
C She/'s not a good snuggler [TE].
P What do you think Chloe does that she's best at [Q]?
C Flipping over people [A].
P I don't know what you mean [TE].
P I've never seen her flip over people [TE].
C But only in secret she does that [TE]!
P Oh, really [Q]?
P What does she do when she goes outside [Q]?
P What does she like to do most of all [Q]?
C She like/3s to chase squirrel/s and eat bird/s, I think [A].
P Well, I don't know if I've ever seen her eat a bird but I know she loves to run [TE].
P She's a fast dog, isn't she [Q]?
C Yeah, (because, because) because she can run like this, %whoosh [TE].
P And, and if we take out a tennis ball [TE]~
C She can just %whoosh [TM].
P She likes to play, doesn't she [Q]?
C Yeah [A].
C And sometimes she pretend/3s (that, that, that, that she) that she is like sleep/ing like this [TE]. {demonstrates}
C But she has two leg/s, one under, one in back, and one in front [TE].
C And the ball is right here and she lay/3s down with it [TE].
C And, yeah [SA].
E Does she look anything like this when she's asleep [Q]? {demonstrates with puppet}
C No [A]!
E No [RQ]?
C She just stay/3s brown [A].
E See [Q]?
E This dog is pretty brown [TE]. {referring to puppet}
E She's kind of a light brown though [TE].
C (Does) does your dog (look) look that color when she/'s asleep [Q]?
E Our dogs look more like this [A].
E They have long ears and they have spots on them though [TE].
E They have brown and white and black spots [TE].
E They're beagles [TE].
P Oh [SA].
P You know who else has a beagle, John [Q]?
C What [RQ]?
C Who [RQ]?
P Eleanor and James [A].
P Do you remember their dog [Q]?
C Yeah [A].

P Murphy [Q]?
C Yeah [A].
P He's a beagle [TE].
P He's a little, he's a little guy [TE].
P Huh [SA].
C Hey, look at this [TI]!
C Do you want another puppet [Q]?
E That might be nice [A].
E This is a cow though [TE].
E We had a cow at my house once [TE].
C And they can both talk to each other [TE]. {referring to the puppets}
C Hi there, hi [TE]! {talking for the puppets}
E How are you [Q]? {having a puppet conversation}
C I/'m good [A]!
= Child makes loud noises.
E Oh, you're scaring me [TE]! {still talking as the puppet}
= Child makes more noises.
C See you [TM]!
E Did you fall off [Q]?
C No [A].
C XXX. {very squeaky voice for puppet conversation}
E You're a big, scary tiger [TE].
E You don't want to eat me, do you [Q]?
E I'm just a little cow [TE]!
C No [A].
E Oh, no [TM]! {tiger ran after the cow}
C %growl. {tiger noise}
E This is Chloe [TE]. {using dog puppet}
E She wants to protect the cow [TE].
P Oh, watch out [TM]!
E You can't hurt my friend [TE]. {as Chloe}
P She might flip you over [TE]!
P Right [Q]?
C %growl.
E Do you want to be my friend, Mr_Tiger [Q]?
E Oh, I guess I was too big and scary [TE]! {referring to Chloe}
E Do you want the dog [Q]? {asking John if he wanted to switch puppets}
C No [A].
P I know somebody who was a tiger at Halloween [TE].
C Me [TM].
P Yeah [SA].
C Hey, mama [Q]?
P What [RQ]?
C (I want) I still want to color [TI].
P Alright [SA].
E Did you go trick or treating on Halloween [Q]?

C Um, I do/n't know [A].
E No [RQ]?
P Did you go to houses and say "trick or treat" [Q]?
C Yeah [A].
P Yeah.
P That's trick or treating [TE].
C XXX.
C You know what [Q]?
P What, babe [RQ]?
C Watch this [TI].
C I/'m gonna get one [TE].
C And,Mom, (watch this) watch this [TM].
P Ok [SA].
P I'm watching [TM].
= Child makes lots of noises and has puppets roughhouse with each other.
P Those puppets are kind of rough, huh [Q]?
C Because they were do/ing karate [A].
P Alright [SA].
P Can I color your window red [Q]?
C Um, yeah [A].
C But my do/n't color this part [TE].
P Ok [SA].
C Mommy [Q]?
P What [RQ]?
C Mama [Q]?
C Can you color the rest of this in smoke (and in) and in this [Q]?
P You don't want to color the smoke yourself [Q]?
C No [A].
P What do you want to>
P Don't you want to color [Q]?
E Well, we have trucks too if you wanted to color trucks instead of trains [TE].
C Yeah [SA].
C I wanna color these [TE].
P Ok [SA].
C (I wanna color, I wanna) I wanna color one green, one purple, one blue, and one this color [TE]. {gestures}
E Yellow [TM]!
E That sounds like a good idea [TE].
C And Mama [Q]?
P Yeah [RQ]?
C These are all the color/s [A].
P Ok [SA].
P Green, blue [TM]^
C No, this color, this color, this color, this color, and this color [TM]. {pointing to each}
P Alright [SA].
C I want to start with this guy [TE].

P Ok [SA].
= transcribed to 1:00:48

Participant B

E Do you like big puzzles or puzzles like this [TI][Q]? {small wooden puzzles}
C I want this puzzle [A]. {indicates wooden puzzle}
P This puzzle [Q]?
E That looks like a fun one [TE].
P I like that one [TE].
E Oh, look [TM]!
E There's even pictures underneath [TE]! {images printed beneath the puzzle pieces on the wooden board}
P Oh, cool [SA]!
P So it helps you out a little bit [TE].
P This is a new puzzle [TE]!
C This is a new puzzle.
P It feels it, huh [Q]?
E What kind of animal is this [Q]? {referring to an animal puzzle piece}
C Giraffe [A]!
P What are all these pictures of [Q]?
P Are they boats [Q]?
C No [A]!
P Cars [Q]?
C No [A]!
C They/'re animal/s [A]!
P Are you sure [Q]?
C Yeah [A]!
P Oh, alright [SA].
P Can you name them [Q]?
C Giraffe [A].
P Giraffe.
P What else do we got here [Q]?
C Rhinoceros [A].
P Nope, not a rhino [TE]!
P There's no horn on it [TE].
C Oh [SA].
C Hippo [TM].
P Good job [TM]!
E They look <so much> alike, don't they [Q]?
C <Alligator> [TM].
P Alligator.
P What else could that be [Q]?
P Could be an alligator or a [TM]~
P What's the other one [Q]?
P Do you remember [Q]?

P Crocodile [A].
C Crocodile.
P It's kind of hard to tell those apart, isn't it [Q]?
C Lion [TM].
C Peacock [TM].
P Not a peacock [TM].
P I think it's a toucan [TE].
C Toucan [TM].
P But I'm honestly not sure [TE].
P It might just be a parrot [TE].
C Rattlesnake [TM].
P %Mmm, it is a [TM]>
P How do you know it's a rattlesnake [Q]?
P I see [TM].
E Is that a rattle on it's tail [Q]?
E I'ts got the rings on it't tail [TE].
C XXX.
E I don't like snakes [TE].
P Oh [SA]!
P We love snakes, don't we [Q]?
C Yeah [A].
P Yeah [SA].
E You like snakes [Q]?
C Yeah [A].
P You've picked them up before, haven't you [Q]?
C Yes [A].
P Yeah [SA].
C We touch/ed one that was liv/ing in a garage, <> (our) our garage [TE].{13 morphemes}
P <%Mhm>.
P Mhm.
P And who got it for us [Q]?
C Dad [A].
P Dad.
P What did he put it in [Q]?
P Do you remember [Q]?
C (In a) in a green bucket [A].
P In a green bucket [TE].
P That's a good memory [TE]!
E I don't mind little snakes, but I don't like big snakes or snakes with big teeth [TE].
P We like>
P What's your favorite kind of snake [Q]?
C Anaconda [A].
P Anaconda.
E Those things are so big [TE]!
E They're big big big snakes [TM]!

C Yeah [SA]!
P They're humongous [TM]!
P We watched a bunch of YouTube videos about of that woman who researches them, right [Q]?
P What happened to her [Q]?
P What happened to her arm [Q]?
C I do/n't remember [A].
P Sure you do [TE].
P What did the anaconda do to her [Q]?
C I do/n't remember [A].
P Did it bite her arm [Q]?
C Yeah [A].
P You don't have to whisper [TI].
P I think it would be better>
P I know I've been telling you all week to be quieter [TE].
P But I think it's going to help Alise if you talk loud enough so that, that she can hear you [TE].
E One time when I was little, we had a snake that lived behind our house, and I went behind the house, and he was in the tall grass, and I stepped on him [TE]!
P Oh, poor snake [TE]!
E The snake was fine, but I was really afraid [TE]!
P Oh, we love snakes [TE].
P We've got a couple garter snakes that live in the yard [TE].
E This was a pretty big snake [TE].
E It was <like this big around> [TE]! {gestures}
C <(And, and, and, and, and) and> Oscar kill/ed some snake/s [TE].
P <Nice> [SA]!
P He did once <didn't> he [Q]?
C <Yeah> [A].
E <Who's Oscar> [Q]?
P Who's <Oscar> [Q]?
E <Um, Our dog> [A].
P Yeah [SA].
E You have <a dog> [TI][Q]?
C And Caber is a dog too [TE].
E You have two dogs [TE]!
C Yeah [SA].
E We have dogs at my house too [TE].
C We have two dog/s too [TE]!
C They/'re hop/ing [TI]! {making wooden animal pieces jump on the table}
E Do you want to try the other puzzle [Q]?
E This is a harder puzzle though [TE].
P This is kind of like your other ones that you've got at home [TE].
P XXX.
C Will you help me [Q]?
E Of course I will help you [A]!

P What should we do first [Q]?
C Sort [A].
P Alright [SA].
P Which kind do you want to sort [Q]?
C And flip [TE].
P Ok [SA].
C Flip [TM].
P Flip first [Q]?
C Yeah [A].
P Alright [SA].
C Flip them the right way up [TE].
P Alright [SA].
P I'm all for that [TE].
P Alright, now how do we sort them [Q]?
C Uh, we sort them (by, we, we, um) so (the) the corner/s go here <> (and the, and) and the straight edge/s go in one pile and (the) the inside piece/s go in one pile [A]. {4:42} {27 morphemes}
P <Ok> [SA].
P Ok [SA].
P Should we put the edges right here <because> we have sort of a pile of those [Q]?
C Yeah [A]!
P Ok [SA].
P Oops, I found another corner [TE].
P Inside piece, straight, straight [TM]>
C Corner [TM]!
P Corner [TM]!
P Nice work [TM].
P Straight [TM]>
C No [N].
C That/'s not a straight there [TE].
P Oh, no [TM].
P You're right [TE].
C Put it in the pile [TE].
P Thank you [TM].
P Mama's not paying attention [TE].
P Alright, do you see any more edges [Q]?
C Yup [A].
C Straight piece [TM].
C Inside [TM].
P Inside [TM].
P How about over here [Q]?
C Inside, inside, inside, <> inside [TM].
P <Inside, inside, inside, inside> [TM].
C Straight [TM]!
P Straight [TM].
C Inside [TM].

C No, <> straight [TE].
P <Good job> [TE].
C Inside, inside [TM].
P Alright, so, do we start with the inside pieces [Q]?
C No [A].
C We start right there [TE].
P That was a trick [TE].
C Get a corner [TE].
P Ok [SA].
P Do you want to start with the corners [Q]?
C Yeah [A].
P Alright [SA].
P Well, we might need that box back [TE]. {referring to the puzzle box top with the finished puzzle picture on it}
P What do you think [Q]?
C Yeah [A].
E Do you want to cheat and use the box [Q]?
P Will it hold it up [Q]? {referring to propping up the box}
C Yeah [A].
P Ok [SA].
P So, let's look at this corner [TE].
P Which one is that one, do you think [Q]?
C That corner [A].
P This one down here [Q]?
C Yeah [A].
P Ok [SA].
C No [N]!
P No.
P I think you're right, because look, that flower is like right at the edge [TE].
P I think that is the right corner [TE].
C Yeah [SA].
P And then this one [TM].
P Is that part of the sky [Q]?
C No [A].
P No [RQ]?
P Where's it going to be [Q]?
C It/'s on the ground [A].
P Ok [SA].
C It/'s that one [TM]. {gestures to puzzle}
P It's that part, because [TM]>
P Do you know who that is [Q]?
C Eeyore [A].
P Right [SA].
C I have a special lovey Eeyore [TI].
P You do have a special lovey Eeyore [TM].
C Two/s [TM]!

C (One is) one is little and one is big [TE].
P That's right [TM].
P You do [TM].
E Wow [SA].
P This is true [TM].
P Alright, how's that one going to go [TI][Q]?
P Can you orient it [Q]?
C Uh, this way [A]!
P Ok [SA].
P And then, what about these ones [Q]?
C This one X.
C Um.
P Good job [TM].
P You're getting really good with these puzzles [TM].
C XXX.
C There [TM]. {putting in a puzzle piece}
P %Mhm.
C There [TM].
P %Mhm.
C There [TM].
P Nice work [TM]!
P Alright, you want to start on some of these [Q]?
C Yeah [A].
P Let's see [TM]>
P It's not going to go there, is it [Q]?
P Maybe like that [TM].
P We have a>
P Good job [TM]!
P %Mmm.
C You/'re work/ing on that [Q]?
P That works [TM].
P Should I work on the top and you can work on the bottom here [Q]?
P This is more flower pieces [TE].
P Um, <do you think that's>^
C <Does that go there> [Q]?
C No [A].
P No [RQ]?
P Why doesn't it go there [Q]?
C Because that/'s his head [A].
P %Uhuh.
P And why else doesn't that go there [Q]?
P What's this [Q]?
C Flower [A].
C Edge [A].
P Edge.
P And are you going to have an edge in the middle <> of the puzzle [Q]?

C <No> [A].
P No.
P We could try it there [TE]. {indicates a new spot}
P That looks like it might fit [TE].
P Maybe we might need one more piece here [TE].
P Well, you know what [Q]?
P I think it might be this one [TE].
P And then>
P Like that [TM]! {fits in puzzle piece}
C I want to work on the inside/s now [TE]. {9 morphemes}
P Well, we gotta finish the edge <> first, I think [TE].
C <Yeah> [SA].
P Ok [SA].
C Um, yeah [SA].
C I forgot [TM].
P Whose body is that gonna be [Q]?
P Good job [TM].
C No [N]. {puzzle piece didn't fit}
C No [N].
C This is X take/3s me a little time [TE].
C No [N].
C No [N].
P That's a tricky one [TE].
C Yeah [SA].
P Maybe we'll go back to that one [TE].
C This one [TM].
C This is tricky one [TM].
P That's a tricky one too [Q]?
C Yeah [A].
C This will help me [TE].
P Let's see [TM].
P Is that one going to fit over there [Q]?
C This [A].
P %Mhm.
P Good job [TM]!
C Go there [TM].
P Ok [SA].
C Now we have a little start of that [TE].
P I think that one's going to go there [TE].
C Nope [N].
P Let's see [TM].
C Nope [N].
P I think it is, I think it's just, this is <a little> wobbly [TE].
C <(well) well that>>
P I think this puzzle's just a little funky [TE].
C Yeah [SA].

P There, how's that [Q]?
C This connect/3s [TE].
P It does connect [TM].
P It might connect over here [TE].
P Should we see [Q]?
P Oops [TE].
P I'm taking it apart here [TE].
C There that [TE].
P Yup [SA].
P Um, does that fit in there [Q]?
P Nice work [TM].
P Alright [SA].
P We only have two pieces left [TE].
P Where are they going to go [Q]?
P That was confusing, wasn't it, because the head goes at the top [TE]. {10:00}
P He's actually like, if you look at the picture, he's actually grazing, so he's going down [TE].
C Yeah [SA].
P It's gotta go in there somehow [TE].
C This way [TM].
C There [TM].
P Cool [SA].
P Alright, now^
C <These are>>
P Yeah, these don't stay together correctly, do they [Q]?
C Yeah [A].
P Alright [SA].
C Like my Spiderman puzzle does/n't stay really great <together> [TE]. {10 morphemes}
P <Yours is just> like this, isn't it [Q]?
C Yup [A].
P Yours <is just like> this, isn't it, your Spiderman is just exact [TE]>
C <Oh, Mamma>^
P Oh, do you know where that goes [Q]?
C Yup [A].
P Yeah [SA].
P Here, how about I help keep the pieces together [Q]?
C Yeah [SA].
C There [TM].
P Alright [SA].
C And his cane [TE].
P His what [Q]?
P Oh, his cane [TM].
P I think, well, oh I see what it is [TE].
P It's, um, what is it [Q]?
P It's not a cane, it's [TE]~
C It/'s his umbrella [A].

P Yup [SA].
C Umbrella.
C This goes here [TM].
P Good job [TM].
C This goes [TM]>
E Close [TM]. {the puzzle piece wasn't fitting in}
P That might [TM]>
P Let's see [TM].
P It might be easier if [TM]>
P Hey, let's put Whinnie the Pooh's head on [TE].
P And that little piece X [TM].
P XXX. {talking about where puzzle pieces go}
P XXX.
P Good job [TM].
P Oops [TM].
P Who's missing some ears [Q]?
C That connect/3s it too [TM].
P It did connect it [TM].
P Where does that piece go [Q]?
P Who's that guy [Q]?
P Is that part of Tigger [Q]?
C No [A].
P Who is that part of [Q]?
C I kinda forget [A].
C Now, that part of (Tigger) <Tigger> [A].
P <That is> part of Tigger [TM].
C Tigger, bicker, flicker [TM]. {sing song voice}
P It's a tweedle beetle battle [TI]!
P Nice work [TM]!
P Good job [TM].
P We did it [TM].
P <Should we put it away> [TI][Q]?
E <XX puzzle>.
C (How about) how about I put it away and you break it up [Q]? {12:46}
P Ok, deal [A].
C Um, um, I/'ll tell you when to pick up [TE].
C Stop [TM]!
P Ok [SA].
P Stop [RQ]?
C Yeah [A].
C Because that/'s enough to break up <> for me to put in [TE].
P <Ok> [SA].
C Go [TM]!
P Go!
P There you go [TE].
C The XX piece.

P Ok [SA].
C There [TM].
P Do you wanna put the lid on [Q]?
C No, you [A].
P You try it [TM].
C Because they/'re hard [TE].
P They are hard [TM].
P How about you try it, and then I'll help you if you need help [Q]?
C Alright [A].
C XXX.
P There [TM].
P There [TM].
P Now^
E That was fast [TE]!
E That was a good puzzle, wasn't it [Q]?
C Yeah [A].
E So, what would you like to do next [TI][Q]?
E I have>
E Did you ever play memory [Q]?
C Yes [A].
E Do you <like that game> [Q]?
P <We like that> game, huh [Q]?
C Yes [A].
P Someone's kind of a champion at that game [TE].
P Pretty good at that game [Q]?
E I also have blocks [TE].
P Those are fun too [TE]!
P Oh, animals [TE]! {the memory game had mother and baby animals to match}
C Animal memory [TM].
P Animal memory.
C XXX.
P Want to set them up [Q]?
C Yeah [A].
P Now, are these [Q]>
P Do you match the mamas with the parents or do you match [Q]>
P Let's see if we can see here [TE].
P A dog and a puppy [TE].
P Yeah [SA].
P So I think what we do is we're supposed to match the when you do it you match the babies to the parents [TE].
P And that's a little extra [TE]. {there were more sets than she wanted to use}
C You do it like that [TE].
E I have one just like this at home [TE].
P Do you [Q]?
E Only there's a lot more pieces [A].
P We have a really huge one at home [TE].

C Yeah [SA].
P It's all about Holland [TE].
P It's random, but <someone gave it to us> [TE].
C <(And, and, and, and, and)> and at Christmas>
C Um, Mama, where did I get (the) the animal memory [Q]? {14:51}
P Animal>
P Oh, yeah [SA]!
P Someone gave you a wild animal memory, didn't <they> [Q]?
C <Someone> gave me a wild animal memory [TE].
P XX I think that might have been Aunt_Susie [TE].
C Animal memory [TM].
C Yeah [SA].
P Alright [SA].
P We may not get through this whole game here, chica [TE].
C Why [Q]?
P Well, because there are a lot of cards [A].
P Alright [SA].
P You wanna go first [Q]?
C You need to do those [TM]. {referring to flipping over all the pieces}
P Yeah [SA].
P There's one in <here that> goes to a different game [TE].
C Do those first [TE].
P Oh, my gracious [SA].
P This is a huge one [TE]!
P Alright, we probably won't get through the whole thing [TE].
C Yeah [SA].
P What did you get [Q]?
C This one [A].
P What is that [Q]?
C Baby [A].
P Baby what [Q]?
C Baby turtle [A].
P Baby turtle.
P And what's that [Q]?
C A cat [A].
P Big cat or baby cat [Q]?
C Baby cat [A].
P Baby cat.
P Alright [SA].
P A baby turtle and a baby cat [TM].
P Alright [SA].
P I turned up a rhinoceros [TE].
P See the horns on that [Q]?
C Yeah [A].
P This one's not a hippo [TE].
P And a baby rat, maybe [Q]?

E With <these pieces> it's hard to tell [TE].
C <Is that a>>
E I'm not sure what that is [TE].
P Sometimes it's hard [TE].
P I don't know [TM].
P We'll call it a rat [TM].
E I think it's an opossum [TE].
P It might be an opossum [TM].
C Mama [Q]?
P Yeah [A]?
C Or maybe it/'s one of those one/s (that) that mix the XX [TE].{12 morphemes}
P Oh, a kinkajou [Q]?
C Yeah [A]!
P Is that what it's called [Q]?
P A kinkajou [TM].
C Yeah [A].
C Maybe a <kinkajou> [TM].
P <Kinkajou>.
P Might be a kinkajou [TM].
E I've never head of those before [TE].
P We were reading about them in the waiting room [TE].
P I believe they're from Australia [TE].
P Alright, what do got [Q]?
C Mama camel [A].
P Mama camel.
P And~
C Rabbit [TM].
P A rabbit.
C Baby [TM].
P A baby rabbit [Q]?
C Yeah [A].
P Alright [SA].
P Oh, that's the baby kitty you turned over earlier [TE].
P Ok [SA].
P And a call it crocodile [TE].
C Yeah [SA].
P Alright [SA].
C Kitty [TM].
P Oh, where's the baby kitty that he goes with [Q]?
P Nice work [TM]!
P It's a match [TE]!
P You get to go again [TE].
C Dog [TM].
E Are you sure <that's not a dog> [Q]?
P <Oh, you know what> [Q]?
P I think that's a doggie that you turned up [A].

E I think that's a dog [TM].
P I think it is too [TM].
P I couldn't see it through your arm [TE].
P So, we'll put the grownup doggie here and the baby kitty here and the puppy here [TE].
C Yeah [SA].
P Alright [SA].
P Ostrich [TM].
P Don't know if that's a baby ostrich [TE].
P I wanna, I think that's a duck [TE].
P Does that look like a duck <to you> [Q]?
C <(Yeah) yeah> [A].
P I think that's a baby duckling [TE].
P Do you remember where those doggies are [Q]?
C Right here [A].
C Dog [TM].
P Dog and dog, good job [TM]!
P Alright, you get to go again [TE].
C Because XX have the XX ear/s [TE].
P They do have floppy ears [TM].
E Big ears [Q]?
E That looks like a lot of fun [TE].
E Although that one has big teeth [TE]!
P Yeah [SA].
C Yeah [SA].
C Mama [Q]?
P Yeah [RQ]?
P Oooh, what's that one [Q]?
C Elephant [A].
P An elephant [TM].
C Baby elephant [TM].
P Baby elephant.
P What happened to Jack and Annie with the elephant [TI][Q]?
P Do you remember in that story [Q]?
C (Oh) oh, yeah [A].
C (Um, they, um, um) Annie fell in some fast sand (and then, and then) and then Jack pull/ed (him) Annie out (and then) and then they found an elephant (and then) and then the elephant gave them a shower [TE]. {19:00} {27 morphemes}
P Was that <so funny> [Q]?
E Was that in the tree_house <books> [Q]?
P <Nicely done> [A]!
C <(Yeah) yeah> [A]!
P Oh, my gosh [TM]!
P Do you think maybe she's read the <magic> tree_house books [Q]?
C <Yeah> [A].
E Yeah [SA].
E I used to [TM].

P Yes [SA].
P Who reads those to you [Q]?
C Emily [A]!
P Emily reads them to you [TM].
P She loves them [TE].
C Camel [TI].
P %Ooo, we saw another camel, didn't we [Q]?
P Oh, no, maybe that was it [TE].
P Was that the camel I already flipped over [Q]?
C Yeah [A].
P Ok [SA].
P Mama is really rotten at this game [TE].
C Zebra [TM].
C Can you [Q]> {requesting a piece}
P Yeah [A].
P Was that a hard reach [Q]?
C Yeah [A].
P Alright [SA].
P What's that one [Q]?
C Cow [A]!
P A cow [RQ]?
P Look at that picture, girl [TE].
C Horsie [TM].
P Horsie!
C Horsie.
P %Ooo, what's that one [Q]?
C Seal [A].
P Not a seal [TE]~
P The one that looks a lot like a seal [TE].
C Yeah [SA].
P With the tusks [TE].
P Do you remember the name [Q]?
P A wal [TM]~
C Walrus [A]!
P There you go [TM].
P Walrus [TM].
P Nicely <done> [TM].
C <These are> my match/s [TE].
P Did you guys see walruses in>
P Didn't you watch something with polar bears where the walrus [Q]?
P The walruses were getting eaten by polar bears [TE].
C Oh, yeah [A].
P Yeah [SA].
P That was pretty crazy <huh> [Q]?
E <Wow> [SA].
C Yeah [SA].

E They're so big [TE]!
P %Mmm.
P You like that baby turtle [TE]. {child has turned the same piece over many times}
C Yeah [SA].
P What is that [Q]?
C But I keep <flip/ing> different stuff [TE].
P <Wait, I didn't see it> [TE].
P Who is it [Q]?
P What is that [Q]?
C Polar bear [A].
C <Baby polar bear> [TM].
P <Not a polar, the> other %P bear [TE].
P They eat bamboo and they climb trees and they live in China [TE].
P Remember what they're called [Q]?
C No [A].
P Pan [TM]~
C Panda/s [A]!
P Good job [TM]!
P Is that the mama or the baby [Q]?
C Baby [A].
P Alright [SA].
C Baby turtle, baby [TE].
C Chick [TM].
P Chick [TM].
P And>
C Squirrel [TM].
P Not a>
P You always think those are squirrels [TE]!
P Not a squirrel, a <raccoon> [TE]!
C Raccoon [TM]!
P What did you name your stuffed squirrel [Q]?
P Your special lovey squirrel is named [TE]~
P Remember [Q]?
C %Chimoon [A]?
P You named it "Raccoon" when you were a baby [TE].
C Raccoon [TM]!
P Because you couldn't tell the difference [TE].
E That sounds cute [TE].
P Alright, it is your turn [TI].
P Oh, you're going for that one again, huh [Q]?
C Yeah [A].
C And then^
P Do you know where the mama chicken is <> or the dada chicken is [Q]?
C <Yup> [A]!
P Oh, that's the baby duck [TE].
C Duck.

P Baby duck [TM].
P You knew right what you were going for though, didn't you [Q]?
P Alright, let's see [TM].
P Bear [TM].
C Yeah [SA].
P Oh, who's that [Q]?
C Penguin [A].
P Penguin [Tm].
P Do you think that's a dada or a baby [Q]?
C Baby [A]!
P Baby.
P Do you remember how penguins [TI]>
P Do they sit on nests [Q]?
C Yeah [A].
C No [A]!
P What do they do [Q]?
C They put their egg/s between thir leg/s [A].
P And then what do they do [Q]?
P And who does it [Q]?
P Is it the mama or the dad [Q]?
C Mama [A].
P It's the dada <that> does it [TE].
C <Dad> [TM].
P Remember that [Q]?
P We read that book about it [Q]?
P And then what do they>
P How do they keep it warm [Q]?
C With their feather/s [A].
P %Mhm.
C And they sit on the snow [TE].
P %Mhm.
P And they waddle around sometimes <don't> they [Q]?
C <Yeah> [A].
P Those penguins are crazy [TE].
C Yeah [SA].
P So cold out there [TE].
P Would you want to live in the South Pole [Q]?
C No [A].
P In the cold [TM].
C No [N].
P No [RQ]?
P %Ooo.
P %Mmm.
P Oh, my goodness [TM]!
P What did you find [TI][Q]?
C Both of these turtle/s [A].

P Both of those turtles.
C Next to <each other> [TE].
P <What kind of turtle> is that [Q]?
P Do you think it's a sea turtle or a snapping turtle [Q]?
C Snapping_turtle [A].
P You think so [Q]?
C Yeah [A].
P Yeah [SA].
C Or the turtle (that, that won his) that one is alive but all the other died [TE]. {23:02}
{12 morphemes}
P One is alive but all the others died [TM].
P Was it a story [Q]?
C Uh.
P A story we read, a book that we read [Q]?
C Um, Emily said it [A].
P Emily said it [RQ]?
P Was she reading you a book [Q]?
C No [A].
P %Hmm.
P Oh [A]!
C She just said <it and XX> [TE].
P You're right [TM]!
P There in one of those>
P What is it called [Q]?
P Because there's no more left except that one [TE].
C I do/n't remember [A].
P What is that kind of animal called when <there's no more left> [Q]?
C <I do/n't> remember [A].
P Enda [TM]~
C Endanger [A].
P That's right [TM].
P Endangered animals [TM].
P And you're right [TM].
P There was a turtle and there's only one of it's kind left and he's really, really old [TE].
C Yeah [SA].
P And when he dies are there going to be any more [Q]?
C No [A].
P No.
P So they'll be extinct [TE].
C Yeah [SA].
P Extinct.
C Yeah [SA].
E <That's sad> [TE].
P <That's sad>, huh [Q]?
C Yeah [A].
P What are we going to do this afternoon [TI][Q]?

P For animals [TE].
C Um, (save I/'ll) I/'m gonna save vampire bat/s and Emily/'s gonna save zebra/s [A].
{24:03} {14 morphemes}
P Zebras [TM].
P We're donating money, aren't we [Q]?
E Wow [SA].
P You guys <decided> to take all of your Christmas money and donate it <> to world wildlife [TE].
C <X money>.
C <Yeah> [SA].
E Did you get to choose [Q]?
C Yeah [A].
P You got to choose what animal [TM].
E And you chose>
E What did you choose again [Q]?
P Which animal you going for [Q]?
C This one [A].
P No, which animal are you saving, are you donating money to [Q]?
C Flying bat/s, vampire_bat/s [A]!
P Vampire bats [TE]!
C (Some, some) sometimes my mouth go/3s crazy [TI].
P Your mouth goes [TM]>
P It happens to everybody [TE].
C Cat [TI].
P Oh, that baby cat again [TE].
P Let's see [TM]>
C Hippo [TM].
P A hippo [TM].
P Can I see the picture [Q]?
C Big mama, %huh [Q]?
P Yeah [SA].
P Mama hippo [TM].
P Ok [SA].
P %Hmm.
C Baby racc>
C No [N]!
P No.
C Baby kangaroo [TM].
P Baby kangaroo, I think [TM].
P Are we reading>
P Oh, <there's> a X [TM].
C <Panda> [TM].
P See, I keep flipping that Panda [TE].
C <(Panda) panda> [TM]!
P <Oh, man> [TM]!
P That was a lucky flip [TE].

P I am totally losing this game [TE].
P All right <it's your turn> [TE].
E <You have three matches> [TE]!
E Wow [SA].
C Hippo [TM].
C Hippo [TM].
P Dude, you are so good at this game [TE].
P I XX.
C Cat [TM]!
P Baby cat [TM]!
P Let's see, will you be lucky and pick up the dada [Q]?
P Oh, who's that [Q]?
C Elephant [A].
P Elephant.
P I wonder, have we seen that elephant [Q]?
C Yup [A]!
P We did [Q]?
P We saw the <baby> elephant [Q]?
C <Yup> [A]!
P Rabbit [TM].
C Lizard [TM].
P Lizard, sure [TM].
C Elephant [TM].
P Elephant.
C Ele>
C No [N].
P Oh, what was it though [Q]?
P Flip it over [TE].
C Horsie [TM].
P Oh [SA].
P The horse [TM].
P Alright [SA].
P So you think that elephant is around there somewhere, so I'm gonna [TE]>
P Oh, darn [TM]!
P Walrus [TM].
P Alright, walrus and zebra [TM].
C Uh, I think>
P And that one [TM].
P Oh [SA].
P What's that [Q]?
C Cow [A].
P Cow.
C Cow.
P Cow.
P What's a cow say [Q]?
C %Moo [A].

P %Moo.
C %Moo.
P A cow and a lizard [TM].
C A cow <and a>>
P <Oh,> that's a match [TE]!
C No [N].
P No [RQ]?
P Oh, ok [SA].
C Why [Q]?
C Why did you say that <was a match> [Q]?
P <Oh, man> XX.
C Why did you say that match?
P Oh, I was just being silly [A].
P Alright, baby kangaroo and that rat thing again [TE].
C Rat XX.
P Opossum [TM].
C Opossum.
P Oh [SA]!
C Opossum.
P Awesome [SA].
P Nice work [TM].
E You're <good at that> [TE].
P <You get to go> again [TE].
P She is [TM].
P She's super lucky with the flips [TE].
P Oh [SA]!
C Kangaroo [TM].
P Oh [SA]!
C Kangaroo [TM].
P Excellent work [TM]!
E What is that [Q]?
P Um, ok [SA].
P I'm gonna go [TE].
P I have no>
P That's either a [TM]>
P What do you think it is [Q]?
C Cow [A]!
P I think it might be a baby cow [TE].
C Yeah [SA].
P I think you're right [TE].
P Do you remember where the mama was [Q]?
C Yes [A].
P No, that was the horsie [TE]!
P Alright, that's the baby cow [TE].
C Flip XX.
P Mama could get one [TE].

P Yes [SA]!
P Ok [SA].
P We'll call that a match [TE].
C Yeah [SA].
P Yay [TM]!
P Mama got one [TE].
P Ok [SA].
P Oh, I've turned that chicken up several times already [TE].
P Chicken and a bear [TM].
P Oh, what's that [Q]?
C Cat [A].
P %Ooo, oh, is that the baby again [Q]?
C Yeah [A].
P Oh, alright, I thought it was the mama or the dad [TE].
E If you get tired of this game we also have hand puppets, blocks, and coloring [TI].
P Alright [SA].
P That was a nose wrinkle [TE].
P what are you wrinkling your nose for [Q]?
C Mom, I/'m get/ing tired [A].
P What sounded better to you [Q]?
C Coloring [A].
P Coloring, yeah [TE].
P You said the magic word [TE]!
P Alright, shall we put this game <away neatly> [Q]?
E <We have to put this game> up first [TE].
C Why did/n't we use [Q]?
P Hmm [Q]?
E He's different, see [Q]?
P That one doesn't match, does it [Q]?
E I think we used, we used those cards with Cassie and Kelly though [TE].
C Color [TI].
P When we were here [TE].
P You remember them [Q]?
C Yeah [A].
P When we came here for speech and language therapy [TE].
P %Hmm.
P I'm not sure those are going to fit [TI].
P You might need to start a new section [TE].
C Hey [SA].
P Oh [SA].
P I just saw something [TI]!
C Spiderman [TM]!
P Yeah [SA].
E Spiderman!
P How did she know you liked Spiderman [Q]?
C I have Spiderman underwear too [TE].

P I think you have Spiderman underwear on right now, in fact [TE].
C Uh, yeah [SA]!
E That sounds <really exciting> [TE].
P <X you do>!
E <Spiderman is cool> [TE].
P <Do you like Spiderman> [Q]?
C Yeah [A].
P What did your Spiderman do last night [Q]?
C Um, he <climb/ed to my dollhouse at my (house) house> [A].
E <We have a dog, we have a house, we have a cat with a fish> we have other fish, and we have Spiderman, and another Spiderman [TI]. {showing different coloring pages}
P %Ooo, Spiderman on his web [TE]!
P You want the house [Q]?
P Really [Q]?
C Yeah [A].
P Alright [SA].
P Good enough [TM]!
E Would you like to [Q]>
E We have another house if you want another house, or we can color the house together [TE].
P We'll color the house together [TE].
E Alright, I have brand new crayons [TI].
P %Ooh.
P That means they'll all be nice and pointy [TE].
C Yeah [SA].
P Our crayons at home are getting a little flat [TE].
C Yeah [SA].
C Um, one is really flat, but I peel/ed it (so) so we could color it [TE]. {29:47} {14 morphemes}
P X you sharpened it [Q]?
C Yeah [A].
P Yeah.
P Cool [SA].
C This one [TM].
P Ok [SA].
P You do whatever you want [TE].
C XXX.
P I know, I see that [TE].
C No X.
P I would love to see you grip it a different way, but you do what you want today [TI].
C Yeah [RQ]?
P Yeah [A].
C Uh, this one [TM].
P Is that a better one [Q]?
C Yeah [A].
P How come [Q]?

C Because it/'s yellow/er [A].
P Yellower than the other one [Q]?
C Yeah [A].
P It's a little warmer color, isn't it [Q]?
P Got a little orange in it [TE].
C Yeah [A].
P Yeah.
C That/'s what I was gonna color the sun with [TE]. {30:22}
P %Mhm, that's a good idea [TE].
P Can you tell Alise about your Spiderman while you're coloring [TI][Q]?
C Uh, he climb/ed over to my (dollhouse) dollhouse [TE]>
P Do you want help with that word [Q]? {child had a difficult time pronouncing "dollhouse"}
C Yeah [A].
P Doll house [TM].
C (Doll) doll>
P <Doll> [TM].
C <Doll> house [TM].
P Dollhouse.
E <Wow> [SA].
P <Dollhouse,> good job [TM].
E How did he do that [Q]?
C I put him on the beanbag but he just climb/ed [A]. {30:50}
P What's special about your, your Spiderman [Q]?
C He can climb anywhere [A].
P What else is special about him [Q]?
P What does he do at night, sometimes [Q]?
C He sometimes climb/3s [A].
P He climbs [Q]?
P Is he a little magic [Q]?
C Yeah [A].
P Yeah, he sometimes does [TE].
P What does he>
P Where does he climb to [Q]?
C He climb/3s anywhere [A].
C In different (place) spot/s [TE].
P In different spots.
E <Wow> [SA].
P <Where does> he climb to [Q]?
P Where have we found him in the morning sometimes [Q]?
C Um, like his head stick/ing out of the closet [A].
P That's right [TM]!
P His head was sticking out of the closet one day [TE].
E Wow [SA].
P Where <else did he go> [Q]?
E <He sounds very special> [TE].

P What are you adding there [TI][Q]?
P What's coming out of that chimney [Q]?
C Smoke [A].
P Smoke!
P What do you think is causing that [Q]?
P <What do you think the smoke is from> [Q]?
C <Uh, fire> [A].
P The bad kind of fire or an ok kind of fire [Q]?
C I do/n't know [A].
P What do you think [Q]?
C Bad fire, <I think> [A].
P <You think> so [Q]?
P Coming out of the chimney [Q]?
C Yeah [A].
P I don't know [TE].
P I bet if it's coming out of the chimney it's coming out of a woodstove maybe, or a
fireplace [TE].
C Yeah [SA].
P Yeah.
P It's kind of funny, actually, that there's smoke coming out of that chimney [TE].
C Why [Q]?
P Well, what are these growing here [Q]?
C Flower/s [A].
P Flowers.
P And what are these growing here [Q]?
C Flower/s [A].
P Flowers.
P What season do flowers grow in [Q]?
C Summer [A].
P Yeah, do we usually have a woodstove fire in the summer [Q]?
C No [A].
P Not usually [TM].
P It's probably in Maine, where it's cold in the summer sometimes [TE].
P Those cold summer days [TM].
E So you said you have dogs at your house [TI][Q]?
C Yeah [A].
E And they are well behaved and perfect.
C Yeah [SA]!
C (But) except Caber, um, we have to gate them when we are gone (because) because
Caber might jump on the gold chair [TE]. {32:51} {19 morphemes}
P On the furniture, huh [Q]?
C Yeah [A].
P Is she naughty sometimes [Q]?
C Yeah [A].
P What else does she jump up and do sometimes when we're gone [Q]?
P What does she eat [Q]?

C Cloth [A].
P %Hmm [RQ]?
C Cloth [A].
P Cloth.
P Does she [Q]?
C No [A].
P Oh, my gosh [TM].
P That would be horrible, wouldn't it [Q]?
C Yeah [A].
P When we leave our breakfast on the table [Q]?
P What does she do [Q]?
C XX eat the cloth.
P Cloth [Q]?
P No, she jumps up and eats our breakfasts sometimes [A].
C (Yeah) yeah [SA].
P Super naughty dog [TM].
C Yeah [SA].
E Well, we have a lot of dogs at my house [TE].
E Beagles [TM].
P Beagles, oh [TM].
E Just a <little dog> [TM]!
P <Stubborn though> [TE]!
E Yeah [SA].
P Our Caber is part beagle, part who knows what [TE].
P And she is a very very stubborn dog [TE].
P She's very naughty [TE].
E Do you have any other pets at home [Q]?
C Nope [A].
P Just dogs [Q]?
C Yes [A].
P Just doggies [TM].
E We <have a lot of pets> at my house [TE].
P <That's enough> [TE].
P XXX.
C (Mama does/n't) Mama does/n't like cat/s [TE].
P I don't like cats [TM].
E I like cats [TE].
E I think they're nice, but [TE]>
P Why can't we have cats, other than their not being Mama's favorite [Q]?
C Yeah [SA].
P But <what happens> [Q]?
C <(Because)> because if we had cat/s, um, the dog/s would eat them [A]. {34:06}
P That's, uh, the other problem with having a beagle [TE].
P It's a hunter [TE].
E We have three cats at my house [TE].
P Wow, that's a lot of cats [TE].

E We have a grey cat and a black cat and a cat that's brown and black and white and grey all together [TE]!

P That sounds pretty [TE].

E Her name is Katie [TE].

P You are doing a good job on that roof [TI].

C Try not to color that [TE].

P I see that [TM].

P You're doing a nice job staying in the lines [TE].

E So do your dogs ever do funny things [Q]?

C No [A].

P No.

E <No> [RQ]?

P <They're> kind of older dogs [TE].

E Sometimes our dogs do [TE].

C What do they do [Q]?

E Sometimes they will run away and then we have to go looking for them [TE].

C One time Caber run/ed away, but [TE]>

E But what [RQ]?

C But, um, um, one lady catch/ed her (and then, and then) and then Mama go/ed out where that lady was and then took our dog and bring/ed it back to the house [A]. {35:18} {29 morphemes}

P Because what had happened [Q]?

P How did they get out [Q]?

P Remember [Q]?

P How did they get out of the yard [Q]?

C I do/n't remember [A].

P What do we always have to shut [Q]?

C The gate [A].

P The gate.

C I think it was the time that (I) I think Grammy was the one that XX [TE].

P That did happen once when Grammy was here, right [Q]?

P That she left it open by accident, didn't she [Q]?

C Yeah [A].

P But we got them back both times [TE].

E Well, that's very good [TE].

P Yeah [SA].

E When our dogs get out they like to run, and run, and run [TE]!

E Does your dog have a collar on it with your name on a tag so you can find him [Q]?

C Yeah [A].

E That's a good idea [TE].

P What did we do recently [TI][Q]?

P You and I went [TE].

C We check/ed the dog/s out [A].

P What was that called [Q]?

P Do you remember [Q]?

C No [A].

P Register [TM].
C Register/ed the dog/s [TM].
P Did you come with me to the town office [Q]?
C Yup, and got lollipop/s, (one for) one for Emily and one for me [TE]. {36:25}
P That was the highlight of that trip, huh [Q]?
E I always like it when I can get lollipops or stickers, like at the bank [TI].
E When I was little, I used to go to the bank and they would give me stickers, and now I work at the bank and I give other kids stickers [TE].
E That's a fun job [TE].
C Make/ing it winter [TI]. {referring to the coloring}
P Oh, that's a good idea [TE].
E And what's going to happen to the flowers [Q]?
E I think those are tulips [TE].
E These are spring flowers [TE].
E It can't be winter [TE].
C Yes it can [TM]!
E Will the flowers die [Q]?
P What do you think [Q]?
C Yes [A].
P Quite possibly [TM].
P I'ts what happened last year [TE].
C Yeah [SA].
P Didn't it [Q]?
P The bulbs came up and got smacked by snow [TE].
E That's always sad because flowers are so pretty [TE].
E You know what my Mom gave me for Christmas [Q]?
C No [A].
E She gave me flower bulbs so I can plant them inside and I can have spring flowers in the middle of the winter [TE].
C Oh [SA].
E Isn't that cool [Q]?
C Yeah [A].
E That was one of my favorite gifts [TE].
P What are we growing in our window right now [Q]?
P That you water [Q]?
C Plant/s [A].
C I/'m grow/ing some wheat (and) and it/'s really tall [TE]. {38:02}
E What are you growing [Q]?
C Wheat [A].
E Wheat [Q]?
E What are you going to do with the wheat [Q]?
C Cook stuff, Mom [Q]?
P I don't know [A]!
P It came home from school, right [Q]?
P And now we're just enjoying it because it's pretty [TE].
C I think cook stuff with it [TE].

P We could certainly try [TE].
C Yeah [SA].
P What <else are you growing, you've got wheat> [Q]~
E <I've never grown wheat> [TE].
C Uh, lettuce [Q]?
P No [A].
P No lettuce [TM].
C Garlic [A].
P Garlic.
E I've grown garlic [TE].
C Oh, what else [Q]?
P I think we have onions and basil [TE].
C Onion and basil.
P That might be it [TE].
C Onion/s and basil.
E That's a lot of stuff to grow inside [TE]!
C Yeah [SA].
C And we have some cactus [TE].
P %Mhm.
P We do have some cactus [TM].
E I have a lot of plants, inside and outside [TE].
E At my house, we grow a lot of vegetables, and then we sell them [TE].
P Oh, cool [TM]!
P What do we do with our vegetables that we grow [Q]?
C We eat them [A].
P We eat them.
P Because we don't XX.
E What's your favorite vegetable [Q]?
C Strawberry/s [A].
E That's a <fruit> [TM]!
P <That's not> a vegetable [TE]!
E That's not a vegetable, but strawberries are good [TE].
E We grow strawberries at my house [TE].
P Oh, cool [SA].
E Lot's and <lots of them> [TE].
P <What's your favorite> veggie [Q]?
P What did you have last night with dinner [Q]?
C Maybe you could sell some to us [TE]!
E Well, they're a long way away from here, and they're not growing right now because it's winter [TE].
C Yeah [SA].
E They will in the spring [TM].
C But when they grow in the spring [TE]>
E I think strawberries are one of my favorites too [TE].
E But I like raspberries [TE].
E Do you ever go to pick strawberries [Q]?

C Yes [A].
E We sometimes let people do that [TE].
E Almost like Tate's <or one of the strawberry farms> [TE].
P <Yeah, I think that's> where we often go [TE].
E That's always fun [TE].
E When I was little we would go to a little strawberry farm, and we'd get up early and get all sorts of containers, and we'd get all wet from all the strawberry plants <> and [TE]>
P <%Mhm>.
P That sounds familiar [TM].
E Then we'd come home and we'd make strawberry jam [TE].
P What do we make with ours [Q]?
C We make>
P It's Daddy's favorite [TE].
C Strawberry jam [A].
P No [N].
P We tried it [TE].
P Mama made a big mess when I tried to make strawberry jam [TE].
P With whipped cream and biscuits, what is that called [Q]?
P Strawberry short [TM]~
C Strawberry shortcake/s [A].
P Yum [TM]!
E Do you like to cook [TI][Q]?
C Yup [A]!
E Can you tell me about something you made [Q]?
C (We) we always make bread and I always help Mama [A].
P What do we put in the bread [Q]?
C I can tell you one thing, <> we put flour [A].
P <Yup> [SA].
E Flour [TM]!
C In the bread [TM].
E I bet you put, do you put water or milk [Q]?
C Water [A].
P Why water [Q]?
P Why not milk [Q]?
C Um, I do/n't know [A].
P X what does milk do to you [TI][Q]?
C Oh, um, we could put Lactaid milk in [TE].
P That's true, we could put Lactaid milk in [TM].
P Might work [TM].
C Yeah [SA].
C But not regular milk because we would get sick to our stomach/s [TE]. {41:33} {13 morphemes}
E That's no fun [TE].
P I know [TM].
P We try to avoid that, huh [Q]?
C Yeah [A].

C Or then, we get a Lactaid milk [TE].
E We make bread at my house too [TE].
P We make bread every week, don't we [Q]?
E Do you make plain bread, or do you make bread with things in it, or wheat bread [Q]?
P What kind of bread do you make [Q]?
C Uh, Mama/z homemade [A].
P Mama bread is what we call it, isn't it [Q]?
C Mama bread.
P We have whole wheat in there, and we put oatmeal, we put a little bit of everything [TE].
P We put whatever we have around, don't we [Q]?
C Yeah [A].
E That sounds like good bread [TM].
P It's pretty yummy [TE].
C Yeah [SA].
E Sometimes I make bread with cinnamon and raisins in it [TE].
P We've done that [TE].
P That's yummy bread [TE].
P What do you make with Dad on the weekends [Q]?
P What do you cook for breakfast for Mama [Q]?
P Mama gets to sleep in late and what do you cook me [Q]?
C Um!
P With dad [TM].
C Pancake/s [A]!
E On Saturday [Q]?
E Saturday pancakes [Q]?
P Saturday or Sunday [A].
P Weekend pancakes [TM].
C Yeah [SA].
C Yeah, weekend pancake/s [TM].
P <Is that Dada's favorite> [Q]?
C Yeah [A].
P What kind do we make him [Q]?
P We make raisin pancakes [TM].
C No [N].
P Apple pancakes [TM].
C No [N].
P Watermelon pancakes [TM]!
C No [N]!
P No [RQ]?
P I don't remember [TM].
C Blueberry pancake/s [TM].
P Oh, that's right [TM].
P %Ooh, and we have them plain [TE].
E They sound good [TM].
C Yeah [SA].

P And we eat them with spoons with nothing on them [TE].
C No [N]!
C Butter [TM]!
C And fork/s we eat them with [TE].
P Do we put anything on top [Q]?
C X cinnamon sugar [A].
P Sometimes cinnamon sugar [TM].
P What else do we put [Q]?
C Sometimes cinnamon sugar.
P What else do we put on top [Q]?
P We pour it on top [TE].
C Maple syrup [A]!
E Oh, that <sounds good> [TE].
C <And we try/ed to> tap the tree/s [TI].
P That's right [TM].
P We've got to do that again pretty soon, don't we [Q]?
C Yeah [A].
E Yeah, that's going to be soon [TM].
E Do you have a lot of maple trees [Q]?
C Yeah [A].
P Enough to get a year's worth of maple syrup out of them [TE].
E We don't have that kind of equipment [TE].
E We don't do that at my house, but we have friends who do, and they sometimes give some to us if they're being really nice [TE].
P Yummy [TM]!
P That's super nice [TM].
E So how do you and your dad make the pancakes [TI][Q]?
C Uh.
P I don't know [TE].
P I'm not there [TE].
P You're on your own, girl [TE]!
P What do you do [Q]?
E How do you start out [Q]?
E Do you get a bowl [Q]?
C Yeah [A].
E What do you put in it [Q]?
P Can we tell a story about it [Q]?
C Flour [A].
C We put flour in [TE].
P And what else do you do then [Q]?
C Egg/s in [TE].
P That's right [TM].
C Sugar in [TE].
E Sounds like good pancakes [TE].
E Now, you must mix it all up [Q]?
C Yeah [A].

P Do you mix it or does Papa mix it [Q]?
C We both mix it [A].
P You both mix it [Q]?
P You take turns [Q]?
C Yup [A]!
E Then your Dad cooks them, I guess [Q]?
C Yup [A]!
E My grandfather made good pancakes [TE].
E He was always our pancake cooker [TE].
P What's the cup that Daddy has [Q]?
C Pancake/s [A].
P Oh, that's funny [TM]!
C It says pancake/s always make you happy like [TE]>
C Pancake/s make you happy.
P That's right [TM].
E Do pancakes always make you happy [Q]?
C Yes [A].
C Especially Emily [TE].
P Yeah, Emily really loves them, doesn't she [Q]?
E What's your favorite food [Q]?
C Pancake/s [A]!
P Your favorite food is pancakes [Q]?
P No, it's not [TE].
P What's your favorite food [Q]?
C Bruschetta [A].
P Bruschetta [RQ]?
C Bruschetta [A].
P Bruschetta.
P What about what about lobster [Q]?
C Lobster too [A]!
P Clams [Q]?
C Yeah [A]!
E Those are good [TE]!
P Shrimpies [Q]?
C Yes [A].
E You like seafood [TE].
P Or pesto [TM].
C Yeah [SA].
C Look [TI]!
P That's really cool [TE].
P I like how you did it a different color [TE].
E That's a really pretty house [TE]!
E Does that look like your house [Q]?
C No [A].
C We do/n't have the right color/s [TE].
E What color is your house then [Q]?

P We do [TE].
P Our house is just not very exciting [TE].
C Blueish [A].
E This isn't a <very exciting house either> [TE].
P XX Blueish greyish [TM].
C Blueish greyish.
P It isn't very exciting to color [TM].
P With a black roof [TE].
P It's a red door [TE].
P It's about the most exciting thing on it [TE].
C Yeah, but I put pink [TE].
P I like the pink door [TE].
C Another step [TE]. {drew an additional step on the front walkway on the coloring page}
P XX another one.
P Do they live on a hill [Q]?
C Yeah [A].
E My house used to be white, but this year my parents decided to make it sort of a grey green instead [TE].
E It changed it [TM].
P %Hmm.
P We're going to paint our house this year [TE].
C Yeah [SA].
P We're going to change the color a little bit [TE].
C Yeah [SA].
P Do you remember what we're going to change it to [Q]?
C No [A].
P We're going to change it to darker grey [TE].
C Dark/er grey.
E That sounds nice [TM].
E Do you have your own room in the house or do you need to share with Emily [TI][Q]?
E When <I was little>^
P <Do you know what she asked you> [Q]?
P Do you understand what she asked [Q]?
C No [A].
E Do you have your own bedroom [Q]?
C Yeah [A].
E I didn't when I was little [TE].
E I had to share with my brother and my sister [TE].
C Why [Q]?
E We had a bunk_bed [A]!
C Oh [SA].
P Oh.
P Those are fun [TE].
E That was fun, because I had the top [TE]!
C Emily always has the top on the when (the) we go to [TE]>

C What is it [TI][Q]?
P What did I call it [Q]?
C I do/n't>
P Describe them to me [TE].
C What [RQ]?
P What are they like [Q]?
C Church [A].
P %Hmm [RQ]?
C Church [A].
P Church [RQ]?
P That's close [TE].
P Church is where people who are religious go to [TE].
P Yurts [TE].
C Yurt/s.
P Yurts.
C (We) Emily always has the top bed in the yurt, I think [TE].
C Are we go/ing to go out XX this year [Q]?
P I think <XX>.
C <(And) and can> I have the top bed [Q]?
P I think that there are two sets of bunk beds so if each of you want a top you can both have a top [TE].
P You just need to be able to climb up there [TE].
P That's really the only>
C Yeah [SA].
P I think you're big enough [TE].
C Yeah [SA].
E That sounds like fun [TE].
E Bunk_beds are fun [TE].
C Yeah [SA].
P Do you remember anything about staying at the yurts [Q]?
C %Ooh!
C We hear/ed the screech owl [A]!
C When we were toast/ing marshmallow/s we hear/ed a screech owl [TE]! {48:46} {13 morphemes}
P That was pretty cool [TM].
E What did he sound like [Q]?
C I do/n't remember [A].
E I bet he was loud [TE].
P Was he loud [Q]?
C Yeah [A].
P He was super loud [TE].
C Yeah [SA].
E One time I was staying at camp, and it was near the ocean [TE].
E And in the middle of the night we heard the fog horn [TE].
E And that was so loud [TE]!
P %Mhm.

E That was scary [TE].
P We've heard those before when we've been out by the ocean [TE].
C Mom, (and it, and it like) and I shake [TE].
P You shook [Q]?
C Yeah [A].
C Do I, Mom [Q]?
P I don't know [A]!
P You aren't usually startled by much, I have to say [TE].
C No [N].
P You're pretty tough [TE].
C Yeah [SA].
E So do <you like>^
C <(Only by) only by> nightmare/s [TE].
P Yeah [SA].
P You have a lot of nightmares, don't you [Q]?
C Yeah [A].
P It's the pits [TE].
E Those are no fun [TE].
C Yeah [SA].
E Once I had a dream that I had a horse, and then I woke up, and I didn't [TI]!
P Oh [SA].
E And that was very sad [TE].
E So it was a good dream, but then it was sad when I didn't actually have a horse [TE].
P I think Jane's always glad when she wakes up from her dreams [TE].
C Yeah [SA].
E Do you like horses [Q]?
C Yeah [A].
E Have you ever ridden a horse [Q]?
C Yes [A]!
P You have, that's right [TM].
P I wonder if you remember that [TE].
P Where was that [Q]?
P Do you remember [Q]?
C No [A].
P I'm not totally certain where you were either [TE].
P I think it was at the Blue Hill Fair [TE].
C Blue_(Hill)_Hill_Fair!
P Does that sound right [Q]?
C Good remembering [TM]!
P Thanks [TM].
P You're adorable [TM].
C Was at the Blue_Hill_Fair [TM].
E I've never been to the Blue Hill Fair, but I've always wanted to go [TE].
C Um, and there/'s horsie/s goed in a circle/s [TE]. {50:25}
P That's right [TE].
E I used to have a horse [TE].

C (We rode, we) we rode a horse [TE]!
P That was fun, wasn't it [Q]?
C Yeah [A].
E That sounds like fun [TE].
E I rode an elephant once at the circus when I was little [TI].
P Whoa [SA].
C We never [TE].
P No [N].
P I think the most exotic thing you've been on is a horse [TE].
C (Yeah) yeah [SA].
C Not an elephant [TE]!
P Not an elephant.
P That would be really cool [TE].
C XXX.
E Yeah, my horse was brown, and he had a black mane and tail, and he had a white mark on his forehead [TE].
C Oh [SA].
E And he liked to eat anything [TE]!
C Wow [SA].
E He would eat muffins and freezie pops [TE].
P Sounds more like a pig [TE].
E Oranges, but he didn't like cucumbers [TE].
P That's funny [TM].
E You would think a horse would like cucumbers [TE].
P Yeah [SA].
E He didn't [TM].
E He loved carrots [TE].
C (We) I love carrot/s too [TE]!
P Maybe you're a horse [TE].
C No [N].
P No [RQ]?
C No [A].
P Are you sure [Q]?
C No [A].
E So, are you looking forward to summer or do you like winter better [TI][Q]?
C Uh, winter [A].
E Why do you like winter [Q]?
C Um, because we can build snowman/s [A].
E Do you do that a lot [Q]?
C Yup [A]!
P When it snows [TE].
P What did we just come back from [TI][Q]?
P We love winter so much what did we just go to [Q]?
C Quebec [A]!
P Quebec.
C And the carnival [TE]!

E Oh, that sounds like fun [TE]!
E Was <that in Quebec> City [Q]?
P <You wanna tell Alise about the carnival> [Q]?
C Um, um, they have ice sculpture/s [A].
E Oh, <wow> [SA].
C <There/'s the> kid/z section that has toy/s [TE]. {50:24}
E That sounds like fun [TE].
E I've been <there, but not> for the carnival [TE].
C <(And I, and, and) and>>
C What are those call/ed [Q]?
P What are what's called [Q]?
C It spins [TE].
P It spins.
C Ferris wheel [TM].
P Ferris wheel, yes.
C Oh, um, (we rode the) we rode the Ferris wheel [TE]!
E That sounds like fun [TE]!
E I always liked the Ferris wheel [TE].
E Sometimes <at the fair in Bangor> [TE]>
C <That was our first time> [TE]!
P It wasn't our first time [TE].
P It was your first time [TE].
C Yeah [SA].
E Do you want this one [TI][Q]?
E It's a pretty color [TE].
C Thank you [TM].
E You're welcome [TM]!
E I can't decide what color to draw my whale [TE].
P What do you think [Q]?
C This color [Q]?
C This color!
E Oh, that looks like a better blue than this one [TE].
C Yeah [A].
E This one is just plain blue and this one this, one is better [TE].
C That color [TE].
P What else do you remember about Quebec [TI][Q]?
E Yeah, that looks>
P Do you remember [Q]?
C I forgot [A].
P You forgot already [Q]?
P Do you remember anything about the parade [Q]?
P XXX.
C Yeah [A].
P What did you see at the parade [Q]?
C No firework/s [A].
P No fireworks.

C But last year, we saw firework/s [TE].
E Oh [SA].
E That sounds like fun [TE].
E I love fireworks [TE].
C Out of the %Sss>
C And we were in the same room that we got last year [TI]! {53:22}
E Where did you stay [Q]?
E Did you stay in the big building that looks like a castle [Q]?
E No [Q]?
P Were we in the Frontenac [Q]?
C No [A].
P No.
P We wish [TE]!
C Why [Q]?
P Because that's a very fancy hotel [A].
P We were in Manoir de L'Esplanade [TE].
P Was that what it was called [Q]?
C I <think> [A].
P <That's what> it was called [TE].
E My problem is that I don't know how to speak French [TI].
E So, I had a hard time understanding everybody there [TE].
P That's^
C (But) but we got French book/s so we understand [TE].
E Oh, that's cool [TM]!
C Right, Mom [Q]?
P How do you say "thank you" in French [Q]?
P Do you remember [Q]?
C No [A].
P To say "thank you" you say mer [TM]~
C Merci [A]!
P Merci.
E I bet everyone there really appreciated it when you could say "thank you" in French [TE].
P Yeah [SA].
P We worked>
P Who speaks the best French in our family [Q]?
C Uh.
P Is it Mama [Q]?
C No [A].
P No.
C <Dada> [A].
P <Dada> [TM].
P Yeah [SA].
C (He, he) he did/n't hold the book (but) but any French (that we did/n't wanna) that we want/ed to know and it was not in the book, um, he could say it [TE]. {54:41} {26 morphemes}

E That's really nice [TM].
P That's pretty awesome [TM].
C Yeah [SA].
P Thank goodness [TM].
C Thank goodness!
E Did you go to restaurants there [Q]?
C Yes [A]!
P What was the special one [Q]?
C A spinny, (and, and) and we were at the top part (and, and we were, and) and the floor spin/3s so the table/s spin/ed [TE]. {55:00} {20 morphemes}
E Oh, wow [SA]!
E I've never been <to a place as fancy as that> [TE]!
C <(And, and, and) and> the window/s spin/ed (so) so you could see everything [TE].
C And it spin/ed so much (that) that soon you ca/n't see some thing/s [TE].
E Wow [SA]!
P That's right [TM].
E That sounds like something in a movie or something [TE].
E That's really cool [TM].
P We were lucky to get there [TE].
C Yeah [SA].
E We went to a restaurant where you could see the people making the food [TE]!
E They made crepes [TE]!
P Uh, we went to probably somewhere, maybe the same one <although ours XX> [TE].
C <Maybe the same one>!
P What did you have for crepes [Q]?
P Do you remember [Q]?
C Uh, whip/ed cream and strawberry/s [A]?
P %Mmm.
C Whip/ed cream and strawberry crepe/s [TM]!
P And then you ate <half of Mama's> [TE]!
E <That sounds like dessert> [TE]!
P Yeah [SA].
C (It had, it had) and then Mama had ham and cheese and we like at half of hers [TE]! {55:55} {14 morphemes}
E This restaurant didn't make anything but crepes [TE]!
E Didn't make anything else [TM].
E But they would put anything you wanted in them, so you could have a crepe for dinner or a crepe for dessert depending on what you put in the middle [TE].
E And it was really good food [TE].
P Sounds yummy [TM].
C Yeah [SA].
E I probably had too many crepes [TE].
P Hey, I've never seen small children eat as much crepe as they did that day [TE].
P You were pretty stuffed full of crepes [TE].
C Yeah [SA].
P Had to roll you home [TE].

C No [N].
P No [RQ]?
E I have one more toy, if you're interested [TI].
P You should check it out [TE].
C Yeah [SA]!
E I have puppets [TE].
C Yeah [SA].
P You could do a puppet show for us [TE].
C XXX.
P Should I hold onto this [Q]?
C Yeah [A].
P Alright, I'll hold onto this [TM].
P Do you want to take it home [Q]?
E We have an elephant, and a cat [TE].
E The cat's ear's crooked [TE].
E And we have a tiger, a pig, a cow [TE]>
C I have a pig at home [TE]!
C It/'s not a puppet, but it/'s like, fluffy/er but it not as fuzzy [TE]. {16 morphemes}
E I like the elephant best [TE].
E He has pink ears [TE].
= Transcribed to 57:16.

Participant C

1 Would you like to do some coloring [Q]?
1 Here, let's put them all back where they go [TE].
1 Jane, let's sit up to the table and do a little coloring so we can talk about coloring [TE].
C Well, I already done some coloring [TE].
1 I haven't done it [TE].
E I brought a bunch of different pictures to color [TE].
2 I am a very good colorer [TE].
E I even brought new crayons [TE].
2 Oh, that's great [TE]!
2 I am probably th coloring person in the world [TE].
1 Ok, here we go [TE]!
2 Would you agree with that, Jane [Q]?
C Yeah [A].
2 Yes [RQ]?
E We have [TE]^
C I think that chair/'s too small [TI].
2 Oh, but <Grampy likes it> [TE].
E Butterflies>
1 Look <> what she has [TE].
C <What> [RQ]?
E A cat, a horsie [A]>
1 I'm trying to decide which picture I want to color [TE].
E Yeah [SA].

E There's <a whole bunch> of different ones [TE].
C <I want>>
C You can have these if I will have this one and we/'ll X [TE]. {13 morphemes}
E Yeah [SA].
E Let's pick one and we'll work on that one for a while [TE].
1 I wonder which one Grampy would like to color [TE].
2 You tell me, which one would be a good one for me to color, Jane [Q]?
2 This is a picture of [TM]^
C Where's our>
2 What is this a picture of [Q]?
2 Jane [Q]?
C Flower/s [A].
2 Is it upside down [Q]?
C (Flower/s) <flower/s>.
1 <What could it> be [Q]?
C Flower/s.
2 Flowers, yeah [SA].
2 That looks like a hard one [TE].
1 I wonder which one I should choose, Jane [TE].
C This one [TM].
1 This one [Q]?
1 Alright [SA].
1 Let's give her, let's give Alise back all the ones we're not going to use [TE].
1 Alright, I'm going to color my [TE]^
2 I'd like to know what color should a butterfly be [Q]?
C (I) I>
C (Pink, pink) pink [A].
2 A pink butterfly [Q]?
C Pink.
C First I draw the wing/s and then the face [TE]. {10 morphemes}
C Not very good eyes [TE].
1 We'll I'm going to draw my kitty just like the one in the hay mow [TE].
1 I think she's gray [TE].
2 She's got a big belly [TE].
2 I think she's got some babies in her, don't you [Q]?
1 %Mhm.
2 I don't know about these <blue ones XX> [TE].
C Can I have a gray, please [Q]?
1 Certainly [A].
C Oh, I want to finish yours up [TE].
1 %Mhm.
1 You like the idea of making it gray [Q]?
C Yeah [A].
2 So tell me, um, Grammy, do flowers have all the same color petals or can I make different color petals on each flower [TE]?
1 %Hmm.

2 XXX.
1 Jane, let's look at that for a second [TE].
1 Grampy needs help [TE].
2 Have you ever seen a flower>
1 Do you think he could color different colors there [TE]?
C Hey [TM].
1 I think you could, Grampy [A].
2 Ok [SA].
C X it.
2 Red one [Q]?
1 When we were at the train restaurant we saw a purple fish and so <I'm going to make my fish> purple [TE].
C (Oh) oh we saw a (big) big enormous fish [TE].
E Wow [SA].
2 Was it really big, Jane [Q]?
C Yeah [A].
2 How big was it, would you say [Q]?
C It was just like this big [A]. {gestures}
2 No kidding [TE].
1 Well, that's a little bigger than I remember, but [TE]^
C Like this <> size [Q]?
2 <Yeah> [A].
1 It was pretty big [TE].
C Like this [Q]?
2 Was it swimming around or was it just [Q]^
1 When we went into the train restaurant, what did we do first [Q]?
1 Let me see, first thing [TM].
1 That lady was trying to do something to the train [TE].
1 Do you remember [Q]?
C She was try/ing to fix it so I could see it [A].
1 And she did, didn't she [Q]?
C Yes, but there was just>
C (I was) I was devastated [TE].
1 Why [Q]?
C Because I was try/ing to stop it and it did/n't ever [A]! {13 morphemes}
1 Never stop [TM]^
C Never ever [TM]!
1 You XX.
C Not ever [TM].
1 It used to devastate you when it wouldn't stop [TE].
C What [RQ]?
1 It used to devastate you when it stopped, and today it would/n't stop [A].
1 Alright, so, then, know what else she did [TI][Q]?
1 Do you remember [Q]?
1 She was bending down, under the counter, looking for something [TE].
1 Grampy, do you remember what it was [Q]?

2 Maybe she dropped something, because it was underneath the thing that she stands at [TE].

1 It has>

1 I can give you a clue [TE]!

2 Um.

1 She was putting them in a cup [TE].

2 Looking for crayons, wasn't she [Q]?

1 She was looking for crayons [A].

1 That's right [SA].

1 %Mhm.

S Did you have lunch [Q]?

1 We had a wonderful lunch [A].

S You did [Q]?

1 %Mhm.

S Was there a train [Q]?

= Child nods.

S There was [Q]?

S Did it make a noise [Q]?

C No [A].

S No [RQ]?

C It was %boom_boom_boom_boom [A]!

1 %Boom_boom_boom_boom.

C It did/n't have a whistle [TE].

1 <No, there's no whistle> [TE].

E <It didn't> [Q]?

S Did it have a conductor [Q]?

C No [A].

S A caboose [Q]?

C No [A].

C Did it [Q]?

1 Did it now [Q]?

1 It may have had a caboose [A].

S When I was a little girl, and I visited my grandma, she would wave down the real train in her backyard [TE].

1 And did they stop [Q]?

S They would stop, and we would get on [A]!

S And we would go into town, into the town called Moncton [TE].

S And we'd shop and then she'd tell the conductor or the engineer, um, where to stop, and we'd take the train home [TE].

1 Wow [SA].

S And it stopped in our backyard [TE]!

1 They got to ride the train [TE].

S It was a long, long time ago [TE].

2 Tell them what we do, Jane [TE].

C What [RQ]?

1 It's kind of a secret, Grampy [TE].

2 Tell her what we do [TM].
C What [RQ]?
2 We hear the whistle blow [TE].
2 (No), uh, no [N].
2 No [RQ]?
C No [A].
1 Usually she doesn't like anybody to know but I think it would be fun to tell [TE].
S A special <secret> [Q]?
C <(No)> no, let/'s not tell them [A].
2 <Ok> [SA].
S <Ok> [SA].
C Keep it our secret, %shhh [TE]!
C Keep it a secret!
S Sometimes it's good to keep secrets, isn't it [Q]?
S Well, you're so good I think if I had a secret, I'd tell you [TE].
1 She's a very good secret keeper [TE].
1 We don't really keep any secrets from Mommy and Daddy though [TE].
C Yeah [SA].
1 We tell them everything, don't we [Q]?
C Except our secret/s [A].
1 You tell Mommy and Daddy about that, don't you [Q]?
1 They know about that [TE].
1 In fact, they're in on it a lot of times [TE].
1 We live near a train [TE].
1 That stops on a regular basis [TE].
S Wow [SA].
C I know, but^
1 That's all I can tell you [TE].
C Um, (and) and it was this (really, really) really loud [TE].
1 %Mhm.
C Yeah [SA].
1 And it was loud enough to hear a couple miles away, three miles away where we live, we can hear it [TE].
E I can hear a train down near my friend's apartment [TE].
E It's down by the river and you can hear the train whistle [TE].
C (I, I) I figured my picture [TI].
1 You did [Q]?
1 You finished it [Q]?
= 8:27-26:35 was another activity
1 She has more things in that cupboard [TI].
S %Mmm.
1 Look how pretty Grampy's picture is getting, Jane [TI]!
1 Did you see [Q]?
C Yeah [A].
1 Nice, %huh [Q]?
E He did <his flowers with different color petals> [TE].

C <(Can we go) can we go to the squishy room> [TI][Q]?
1 To the squishy room [Q]?
C Yeah [A].
C Where we were before we came here [TE].
1 I'm not sure where that is [TE].
2 The other toy room with <the squishy toys> [TE].
1 <Oh, the toy room> [Q]?
1 We're going to look at the toys that Alise has brought [TE][A].
1 They're all <here for you> [TE].
C <(And then) and then> can we [Q]?
1 We'll see [A].
C Ok [SA].
E You know, Jane, I heard you talking about the matching game [TI].
E We have the matching game here [TE].
C Ok [SA].
E Do you think that would be good [Q]?
C Yeah [A]!
C (Is it) is it here [Q]?
E Yes [A].
E It's right here [TM].
E See [Q]?
E There's all sorts of pieces [TE].
E A cat [TM]>
C Does it make noise [Q]?
E There's no noise, there's just pictures [A].
C I/'ll go show to her [TE].
E Ok [SA].
C XXX.
C This is match game [TE].
C Would you like to play [Q]?
S Sweetie, I'd love to play the match game with you [A]. {28:00 - approx 10 minutes of conversation into the interview}
C Ok [SA].
C That/'d be perfect [TE]!
1 Where are we playing [Q]?
C Uh, right here on the floor [A].
S Oh, my word [TM]!
S Look at all the cards [TE]!
1 We're going to pick just a few of our favorites though [TE].
2 <Can I sit here or do I need to be on the floor> [Q]?
S XXX.
2 Alright [SA].
C You/'re red [TE].
1 Let's see [TM].
1 What are <our favorite pictures here> [Q]?
C <There/'s two card/s in here> [TE].

S <We need to do the soccer ball because> Grandpa used to [TE]>
C Oh [SA]!
C There/'s two set/s of those [TE]!
S Do you play soccer, Jane [TI][Q]?
S Do you kick the ball [Q]?
C Yup [A].
1 Let's do <strawberries> [TE].
C <I made a> match [TE]!
C I get to keep these [TE].
S Hey, Jane [TM]!
S Has the game started already [Q]?
1 We'll put some of these back because there's too many [TE].
C I like the trumpet [TE].
1 Alright [SA].
1 Let's do the trumpet [TE].
C (I) I match/ed these [TE].
1 Alright [SA].
C I match/ed these so I get to keep [TE]!
1 Let's <mix these all up> [TE].
S <Oh my word, you're so fast> [TE]!
S Poor <old me> [TM]!
1 <She needs a few> matches too, do/n't forget [TE].
C We need to flip them over [TE].
1 You do first [Q]?
C Yeah [A].
S See where everything is first and then see if we remember [Q]?
C Oh [SA]!
C <Yummy pizza> [TE].
E <That's actually> a good way to play [TE].
S Ok [SA].
S Now do we turn them over [Q]?
C Yup [A]!
C It/'s my turn and we flip them over [TE].
S Let's flip them all over and then it will be your turn [TE].
S Ok, honey [Q]?
C Ok, uh [A].
S There [SA].
S Now it's Jane's turn [TE].
C Ok, flip them back over and then it/'s your turn [TE]. {11 morphemes}
S Eggs in a nest, and %ooh yummy pizza [TE].
S Did you have pizza for lunch [Q]?
C %Mmm. {indicating no}
S What did you have [Q]?
C (We had) I had shrimp (and, and), um, and I do/n't know what else [A]. {10 morphemes}
S You had shrimp [TE]!

C %Mhm.
S Wow [SA].
S I just had potato soup [TE].
S Oh, a match for Jane [TE]!
S Now is it my turn [Q]? {child has not been giving other people their turn}
C Yup [A].
S Ok [SA].
S There's a red car [TE].
S Oh [A]!
S And the pizza [TE]!
S Soccer ball, pizza [TM].
S Soccer ball [TM].
S Good memory [TE]! {child got a match}
C Jesus [SA]!
C Jeez [SA].
1 Whoa [TM].
C Jeez.
S Drum and corn [TM].
S Does Grandpa grow this [Q]?
2 And Daddy does too [A].
S Daddy does too [Q]?
S Oh, I forgot about your dad <> and all his growing [TE].
C <I'll take>>
C XXX.
1 Oh, my goodness [TM].
S It's a <match for me> [TE]!
1 <Match for you> [TE]!
1 Yay [SA]!
1 She got one [TM].
1 Oh, there's that car [TE].
C Ok, um [SA].
S Fancy car, strawberries, corn [TE].
S Does Daddy grow strawberries [Q]?
C %Mhm.
S Oh, yum [TE]!
E My Dad grows strawberries too [TE].
S Does he [Q]?
E Wow, that makes four [TE]! {child made another match}
E That's a lot [TE]!
1 Look, Jane, <what she got> [TE]!
S Turn, look more [TM]!
C Yeah [SA].
S Hooray [TM]! {the child got another match}
1 Ok, now it's your turn to get one here [TE].
S A strawberry and corn [TM].
C %Uhoh.

C Do you X if I finish up [Q]?
S You finish her, finish it off, Jane [A].
S Strawberry [TM].
S Hooray [SA]!
S Oh, that was fun [TE].
S And you're very good at that game [TE].
S Do you play that at at home [Q]?
1 This is a lovely game of it [TE].
S Jane, do you play the matching game at home [Q]?
C Uh, yes [A]!
S %Mhm.
C We play/ed some on the ipad [TE].
S Oh, do you [Q]?
C Now see if anybody else want/3s to play [TE].
S Yeah [SA].
1 Yes, they <have an ipad and they have a lot of fun with it> [TE].
C <(Is anybody else XX, would you) would anybody else> like to play [Q]?
E Well, do you want to play again [Q]?
C Would you like to play [Q]?
2 I'll play a game with you, sure [A].
2 You wanna play [Q]?
C (Well) well you play the>
C Grampy, we gonna play these with her [TE].
2 Ok, <ok, you> get them all set and let me know when you're ready [TE].
C Play with her.
S We have to have the soccer ball [TE].
C We have to do it without you [TE].
S And then we have the pizza [TE].
2 Ok, you just tell me when [TE].
S And then do <you want> the two cars [TE]?
C (What) what XX?
S What about the ice cream [Q]?
2 Yes, put the ice <cream in,> yes [TE].
S <You want> the ice cream [Q]?
C Gramp, <um, (we have to do it) we have> to do it without you [TE].
S <Oh, you have to see them all> [TE].
2 You do [Q]?
C Yeah [A].
2 Well, you can't X me [TE].
S You know what [Q]?
S More than two people can play [TE].
2 Yeah, lots of people can play [TE].
1 If you want [TE]>
2 But I don't have to play [TE].
E You know, when you have more people playing, you can have more matches down [TE].

E So you get to use more pictures [TE].
C %Uhoh!
C I did XX.
C Let/'s wait until the game start/3s [TE].
2 What are you doing [Q]?
S Ok, have you seen everything there, dear [Q]?
C XXX.
S Wait, is there another cookie [Q]?
1 There's the other cookie [A].
2 Right there [TE].
2 Ok [SA].
S Tell me what kind of cookie you like [TI][Q].
C Well, I like frosting [A].
S You like the frosting [TM].
C And I might ask for a trumpet for Christmas [TI].
S For a trumpet [Q]?
C Yeah [SA].
1 You would really [Q]?
1 Isn't that interesting [TM].
S Do you have a birthday coming up [TI][Q]?
C XXX.
S And you'll be four [TE].
1 When is your birthday, Jane [Q]?
C April [A].
S April.
C Twenty_eighth [A].
1 That's not very far away [TE].
E My family has three birthdays in April [TE]!
E My sister's birthday is on the ninth, my Mom's is the fifteenth, and my Dad's is the nineteenth [TE].
S Wow [SA].
E So we get really, really tired of birthday cake [TE].
E So my Dad has us make an apple pie instead [TE]!
2 %Hmm, good idea [TM].
E And we put candles in the pie [TE].
E What do you want to do for your birthday [Q]?
C Oh, I don/'t know [A].
1 You haven't thought about it [Q]?
C No [A].
1 Do you remember a birthday that we recently celebrated [Q]?
1 What did we do for your Daddy's birthday [Q]?
C %Huh [RQ]?
1 Let me see [TM].
1 What did we do on Daddy's birthday [Q]?
1 It seems to me you decorated something [TE].

C I know but, um, before that, we had some present/s that Santa gave us [A]. {35:21} {14 morphemes}
1 Oh, at Christmas time [TI].
1 Yeah [SA].
C Yes [SA].
C (Remember), remember [TM]!
1 I do, I do [TM].
C X It/'s frustrating [TE].
C (I) I know it [TM].
S Um, well, Jane, <your Gramma showed> me pictures of you skating [TI].
C XXX.
C I know [TM].
C (I) ok [SA].
C Just a minute.
S Ok [SA].
C Um, I know this might be for three but there/'s nothing to be worried about [TE]. {35:45} {15 morphemes}
C XX all by myself [TE].
C Ok [SA].
C You do/n't talk about this right now [TE].
C Ok [SA]^
1 You want me to be very quiet [Q]?
C Yes, um [A].
C (Was you) what were you going_to say [Q]?
S I was going to say that your Grandma showed me pictures of you skating [A].
C Yeah [SA].
S Do you remember that day [Q]?
C Yeah [A].
S Yeah.
S Who went skating with you, Jane [Q]?
C Kate, and you, (and) and you, (and) um, and me, and Danny, and Rachel, and, uh, um, Jane, and Kate, and Maggie [A]. {36:21} {17 morphemes}
1 And Mommy [TE].
C And Mommy.
S Did the dogs go [Q]?
C No [A].
S No.
C They went down but they did/n't go on the ice [TE].
S Did you know I have a dog that's about that big [TE]? {gestures}
S And she goes on the ice [TE].
S But she only weighs, something went wrong and she only weighs about eight pounds [TE].
1 She's tiny [TM].
S So she's safe on the ice [TE].
S But she runs on it [TE].
1 Does she really [Q]?

1 Oh, that's funny [TE].
S She's very funny [TM].
1 These big dogs don't want to get on it [TE].
S Yeah [SA].
1 Do they [Q]?
2 No [A].
1 They're <smart> [TE].
E We had a big dog and he would go on the ice [TE].
E We live on a lake, and it would freeze over with ice and we would go skating [TE].
E And our big dog, we would put a leash on him, and he would pull us around on our ice skates [TE].
1 Oh, fun [SA]!
2 Oh.
S And did you have a fire [Q]?
C Yeah [A].
C Bonfire, remember [Q]?
2 I remember [A]^
C Remember <> that [TM]!
2 <I do remember> [TM].
C Ok [SA].
S Ok, are we going to turn them over [TI][Q]?
1 Do you still feel like playing [Q]?
C No [A].
1 You don't [Q]?
S Let's put them away [TE].
S They're such pretty pictures [TE].
1 It was fun to look at them [TE].
S I'm glad I had my lunch [TE].
1 This made me think of like a birthday party [TE].
C I too [TE].
1 %Mhm.
1 And Christmas [TM].
S Looks like you had fun at Christmas time [TE].
S Yeah [SA].
1 She sure did [TM]!
S Such a nice girl [TI].
S So nice of you to come and play with us [TE].
E Did you want to go back to coloring or did you want to try a puzzle [TI][Q]?
1 Alise is asking [TE].
C Let/'s go to the play room with the squishy room [TI].
1 We're gonna see what she has in her cupboard [TE].
C Ok, yeah [SA].
1 She's asking you a question [TE].
1 Let's listen to what she has to say [TE].
E Well, we could finish coloring our pictures, or we could do a puzzle [TE].
C Puzzle [TE]!

E Puzzle.
2 Ok [SA].
S Well I have to go to work [TI].
S Thanks for inviting me [TE].
S It was sure fun to play [TE]!
C What is your work [Q]?
S My work is, um, on my computer and in my office moving papers around [A].
1 She, she sees children like you.
S %Mhm.
E Does this look like a fun puzzle [TI][Q]?
C Yeah [A].
C But that makes me think of (Winie_the_Pooh, <> Winnie_the_Pooh,
Winnie_the_Pooh, Winnie_the_Pooh) <Whinnie_the_Pooh> [TE].
1 <Yes> [SA].
S <Do you like> Olivia [Q]?
S Do you know Olivia the pig [Q]?
C The pig [RQ]?
C Yes [A].
C Winnie_the_Pooh, Winnie^
S Jane, do you like Olivia the pig [Q]?
C %Huh [Q]?
S Do you like Olivia the pig [Q]?
C Yeah [A].
S I'll bring her [TE].
C (Winnie_the_Pooh) Winnie_the_Pooh!
1 Alright, let's sit right up and do a puzzle [TI].
2 I'm good at puzzles [TE].
1 Alright, let's see [TE].
C Would you get the diaper bag now [TI][Q]?
1 No, the diaper bag got left in the car [A].
1 You can get it when you go out [TE].
2 Ok [SA].
1 We'll go out in a few minutes [TE].
2 Grammy, you're really good at this [TE].
C Ok, (I) I>
C What/'s that [TI][Q]? {Olivia and the book were just brought in}
E That's Olivia [A]!
1 Did you see what she brought [Q]?
C What [RQ]?
1 She brought Olivia the pig with her book [A].
1 Shall we concentrate on the puzzle together [TI][Q]?
C Yeah [A].
C Will you help me put this together [Q]?
1 Well, let's take a look at what you're trying to put together [TE].
C I/'m try/ing to put together the, um [TM]>
1 I don't think they go together [TE].

C Oh [SA].
1 Shall we start trying to put [TM]>
1 Do you want to put Pooh together first [Q]?
C Um, yeah [A].
C I/'ll try to find the piece that [TE]>
1 Look [TM]!
1 I found a piece of Pooh [TE]!
C (Oh) oh, it goes XX her eye/s [TE].
1 And look, that looks like Pooh's feet [TE]!
C It do/3s [Q]?
1 %Mhm.
C That/'s where they miss XX I think [TM].
1 Good job [TM].
1 Now, I wonder if there/'s any more little piece of Pooh [TE].
1 %Hmm.
1 Well, maybe we should look for Tigger [TE].
E Jane, I bet it's this one [TE].
C Oh [SA]!
1 Oh.
1 She found a piece of Pooh [TM].
1 There [TM]!
1 Pooh's swimming [TE].
1 Now what>
1 That looks like Tigger [TE].
1 Should we look for other pieces of Tigger [Q]?
C Oh my [SA]!
C Not sure that this goes to, uh [TE]>
1 XXX.
C %Woohoo!
C %singing.
1 Look, Jane [TM].
C What [Q]?
2 XXX.
1 Tigger too [TM].
C There/'s some Eeyore X [TE].
1 Oh, good [TM].
1 We can do Eeyore next [TE].
1 Want to [Q]?
1 We have to turn it just a little [TE].
1 %Mhm.
1 Here's a piece that looks like it might go in there [TE].
C And>
1 XXX.
1 Nice turning [TM].
1 Really concentrating [TE].
1 There [SA]!

1 Alright [SA].
1 Now, should we build on Eeyore, do you think [Q]?
C Yeah [A].
C I/'ve been look/ing for [TM]>
C Oops [TM]!
C Is that Eeyore [Q]?
E You know what else we can do [Q]?
E We can help by putting this up here and then you can see how it's supposed to look when it all fits together [TE].
C We/'re suppos/ed to find some [TE].
1 %Mhm.
E Yeah [SA].
E Maybe like this [TM].
1 Let's pull that away and look at it, because I don't think it's going to go there [TE].
1 Jane, let's pull that away and see [TM].
C Oh, I found [TE].
1 Ok [SA].
C XXX.
1 I think you're right [TE].
1 Nice [TM].
C %singing.
1 Does that go down there by any chance [Q]?
1 I don't know [TE].
1 Turn it right around [TE].
C %singing.
1 Aha [SA]!
1 Now, let's see [TM].
1 I'm thinking [TM]^
C Oh [SA]!
1 Oh.
C This suppos/ed to go like that [TE].
1 Look at this, Jane [TM].
1 I think we can bring [TE]>
1 Maybe we can't quite [TE].
1 Not quite, %huh [Q]?
1 Maybe down here [TE].
1 Oops, I'm sorry [TE].
1 That is my fault [TE].
C That/'s not good [TE].
1 That's ok [TM].
1 We can fix it [TE].
1 We have the technology [TE].
1 There, ok [TM].
C XXX.
1 Now let's see [TM].
1 This looks like it might go in here [TE].

C This [Q]?
1 It's a little straight on the bottom [TE].
1 All the straight pieces are on the outside, aren't they [Q]?
1 Now I need a corner [TE].
C Are you wait/ing for it to see if it goes there [Q]?
1 %Mmm.
E Aha [SA]!
E It's a tricky one, but it fits [TE].
C %singing.
1 %Mmm.
1 That's a corner too [TE].
1 Probably goes up in this corner and I don't think we're ready quite yet [TE].
E This looks like the umbrella [TE].
1 Oh, on Pooh [Q]?
1 Let's try her umbrella piece and see if it goes [TE].
1 Turn it right on top of this one [TE].
1 Do you see it now [Q]?
1 %Mhm, good [SA].
C Let/'s do some long piece/s [TE].
1 Some long pieces [RQ]?
C Some long pieces [A].
C Oh, that/'s the wrong size [TE].
1 Yeah, that goes up here [TE].
C Look, Grammy [TM]!
C Grammy [TM]!
1 Oh [SA]!
1 You're all finished [Q]?
C Uh.
1 Is that what you're saying [Q]?
C I like to finish it [A].
1 What happened to it then [Q]?
C I rip/ed it open so I could finish it again [A]. {45:20}
1 Ok [SA].
1 Tell me who you want XX [TE].
E Do you want me to help you with it [Q]?
1 Let's see who wants to do Pooh [TE].
C You can do Pooh [TE].
1 Alright [SA].
E Ok [SA].
E I think I remember how to do it [TE].
1 Who wants to do Tigger [Q]?
1 He's diving [TE].
C Me [A]!
1 You're going to do Tigger [TE].
1 Alright, I'll give you Tigger pieces [TE].
1 And I will do Eeyore I think [TE].

E I think that's a piece of Pooh over there [TE]!
E What's he sitting on [Q]?
E I think it's like an inner tube [TE].
E Do you like to go swimming, Jane [TI][Q]?
C Yes [A].
E Where do you like to swim [Q]?
C In my lake [A].
E You have a lake too [Q]?
C Yeah, where do you have a lake [Q]?
E I have a lake too [TE]!
E Up near my house [A].
E It's a big lake [TE].
C We have a big lake too [TM].
E My lake is actually called Big Lake [TE].
E Isn't that a funny name [Q]?
C %Uhoh, is the>
E Oh, it doesn't fit [TI][Q]?
E Well, let's see [TM].
E Look, there's a tree over here and Tigger's over here [TE]>
1 Put this over by you because that's ready to hook onto Pooh [TE].
E So this must be a piece of Tigger right here [TE].
E And where do you think that goes [Q]?
1 And where is Big Lake [Q]?
E Big Lake is near Calais up on the Canadian border [A].
E On the Northern side of Maine all the way on the right hand side [A].
1 XXX.
E Yeah, I live on a farm [TI].
E We grow lots of vegetables, and we have lots of animals [TE].
E We have chickens and they lay lots of eggs [TE].
E Do you like eggs [Q]?
C No [A].
E Eggs are funny, aren't they [Q]?
1 You don't like eggs, really [Q]?
C No [A].
E But, yeah, I even got to see a chicken lay an egg [TE].
E That was exciting [TE].
C What [RQ]?
E I got to watch a chicken lay an egg [A].
1 Have you ever seen a chicken lay an egg, Jane [Q]?
C No [A].
1 Did you want to tell Alise about your chickens [Q]?
C Um, we have a chickens [TE].
E What color are they [Q]?
C Uh, there is>
C I do/n't know [A].
1 Well, you have a lot of different ones, don't you [Q]?

1 Let's think about it [TM].
1 I think I remember some reddish ones [TE].
1 Is that true [Q]?
1 Can you tell her about your reddish ones [Q]?
1 May I tell her about your chickens [Q]?
C %Uhuh.
1 Jane has quite a few chickens [TE].
1 Some of them are reddish [TM]>
C Yup, some of them (are) are reddish [TE].
C Have reddish.
1 Some are^
C %Uhoh [SA].
1 I think some are buffy colored [TE].
C Yup [SA].
1 You call them buffies [Q]?
C What's buffies [Q]?
1 Brown the beigey brown ones [A].
C XXX.
1 Tan colored [A].
C I do/n't know if <we have>>
1 <How about a>>
1 Are there any black ones [Q]?
C I need a piece of Eeyore [TI].
C Over here [TM].
E This might be it [TE].
1 I just thought of something else you might want to tell Alise [TI].
C What [Q]?
1 How about your pigs [TE].
E You have pigs [Q]?
C Yeah [A].
1 She doesn't know about it [TE].
1 She doesn't know about your pigs at all [TM].
E Pigs are a lot of fun [TE].
C Yeah [SA].
C And there/'s one problem, mud and them [TE].
1 Mud [RQ]?
1 Yeah [A].
1 That is a problem [TM].
C There's not a>
1 Try it over here [TI].
E Oh, do you think this might fit together [Q]?
E I don't know [TE].
E Let's see if we can do it [TE].
E Maybe [TM].
E Oh, look, it's going to do it [TE]!
E Do you want to push it down [Q]?

E Great [TM]!
C We almost>
C Now we did>
C I will do the other pieces [TE].
1 Looks like the dog at camp [TE].
1 Yeah [SA].
C Uh, no [N].
E Eeyore looks like he's tired of swimming [TE].
E He has a lily pad on his nose [TE].
1 We must need to turn that one, Jane [TE].
E Let's see [TM].
E Oh, look, it's the umbrella piece [TE].
E It must go over here [TE].
E Do you want to put it in [Q]?
1 So, last year Jane learned to run and jump off the dock [TI].
C Like>
1 Yeah, exactly like that [TM].
E My brother and sister and I do that too [TE].
E We have a funny dock though [TE].
E It's not attached to the land [TE]!
E We have it floating out in the middle of the lake [TE]!
E So, we have to swim out to it [TE].
E Then <we jump> [TE].
C <We did a whole> puzzle [TI]!
1 Yeah [SA].
E That's amazing [TM]!
E We have Pooh, and Piglet, and Tigger, and Eeyore [TE].
E Do you ever use inner tubes in your lake [Q]?
C Sometimes [A].
E They're a lot of fun [TE].
C Oh, what/'s Piglet say/ing [Q]?
E I think he's saying that he wants to get away from the big splash that Tigger is going to make when he dives in [A]!
E My little brother likes splashing me [TE].
C What do you say [Q]?
E I say "Weston, no, don't do that, you're going to get me wet, the water's cold" [A]!
E Do you like it when people splash you [Q]?
C No [A].
E No, it's no fun [TE]!
E What do you say when they splash you [Q]?
1 Look at this [TI].
1 He's all set [TE].
1 The sun won't get on him, and he won't even get splashed [TE]!
1 We'll have to remember that about umbrellas [TE].
E So how many pigs do you have at your house [TI][Q]?
C Now we have to do it again [TI].

E Oh, you want to do it again [Q]?
E Do you want to put it back in the box <> or do you wanna do it just from the table [Q]?
C <Yeah> [SA].
C Let/'s do it, put it back in the <> box [TE].
E <Ok> [SA].
E Maybe put it in this side [TE]. {put the pieces in the bottom of the box instead of the lid}
E We had a pig one time [TI].
E His name was Spot [TE].
E But he would always get out of his pen [TE].
E He would jump over the fence [TE]!
E And then he'd try to run away and we'd have to run after him [TE].
C (How, how) how fast [Q]?
E Oh, he was very fast [A]!
E He would always run, run, run all the way around the house and we would have to run after him [TE].
E And we'd always catch him, but it wasn't easy [TE].
E We'd be all out of breath and tired [TE].
E And then we'd make the fence just a little bit higher [TE].
E But you know what [Q]?
E He'd jump higher the next time [TE]!
E So we were always chasing Spot [TE].
E Do your pigs escape [Q]?
= Child shakes head for "no".
E They sound nice then [TE].
C Gram, let/'s go to the squishy room then [TI].
1 Let's see what's in the cupboard [TE].
1 Let's ask Alise if she'd let us look what she [TE]>
1 Oh, let's see what's in there [TE].
1 Let's go look [TM].
1 XXX.
E I have another puzzle [TE].
E I have^
C No, I/'m tired of puzzle/s [TE].
E Ok then, we have [TM]>
1 Let's look inside [TM].
E I have this game [TE].
1 Oh, she knows nothing about this game [TE]. {Break the Ice}
1 This will be fun [TE].
E I've actually never played it before [TE].
E I've watched people play it though [TE].
E Oh, look at all the pieces [TE]!
E X and blocks [TM]!
E I think we need to turn them all this way so you have the open side up [TE].
= Child is banging on the table with one of the hammers from the game.
1 X help her set it up, Jane [Q]?

1 After you set up, you will be able to do the pounding [TE].
C Like this [Q]? {child bangs more on the table}
1 After [A].
1 Watch [TM].
1 Watch what happens [TM].
1 Help Alise put the blocks in [TM].
1 See what she's doing [TM].
1 Then you'll tip it over and you get to knock the blocks out [TE].
1 The big one goes in the center and that's where the skater goes [TE].
E Let's see [TM].
E We'll have to put this one right here [TE].
1 Get in there very tightly [TE].
C Are we going_to do all these [Q]?
E Yeah, we're going to have to put them all in if we want them to actually stay in [A].
E They kinda depend on each other [TE].
C XXX.
E I heard you have a dog at home too [TI].
E What's his name [Q]?
E Or is it a girl [Q]?
C Uh, it/'s, uh>
C What/'s this guy [Q]?
E He's going to stand in the middle when we are done putting the blocks in [A].
C XXX.
E We're going to turn it over first though [TE].
C (I want) I will be busy pounding [TE].
C Pound/ing nails [TE].
1 Alise will tell you how to do it [TE].
E We're almost ready to start [TE].
C %Huh [RQ]?
E I said we're almost ready to start [A]!
C This [Q]?
E We're not going to pound quite yet [A].
2 What do you do here [Q]?
E Would you like to play too [Q]?
2 I'm going to see how it's done [TE].
E Well, we're going to turn it over like this XX we're going to use this little stick to break the blocks instead of our hands [TE]. {child had started to push at the blocks}
1 Try not to break them all [TE].
E Now we're going to try to put this man on the top side here, and we don't want him to fall down [TE].
E So we're going to take turns and we each get to get rid of one of the blocks [TE].
E XXX.
1 Oh, wait now [TE].
E And then it's my turn [TE].
1 Alright, you did it [TM].
C Now my turn [Q]?

E Yes [A].
1 Easy [TM].
E Oh, you don't want to get too many blocks because then the man will fall down [TE]!
E Oh, you got two [TE]!
C Is two bad [Q]?
E Well, you don't want the man to fall down [A].
E Oh, oh, I think he's going to fall if you take that one [TE].
E Why not pick one over here [Q]?
1 Oh, nicely done [TM]!
E That one was hard to get out, wasn't it [Q]?
1 See if she can get one without making all the ice fall away [TE].
C This is the ice [TM].
E Yes [SA].
E Oh, that was close [TE].
1 XXX.
E I don't know which block I can choose [TE].
E What do you think [Q]?
E Should I do this one or this one [Q]?
= Child gestures to a block.
E That looks dangerous [TE].
E I don't know about that one [TE].
E Maybe this one [TM].
E Do I have to keep going for the same one I was going for or can I count that one that fell down [Q]?
C You can count that one [A].
E Ok [SA].
E Thank you [TM].
E That means it's your turn [TE].
E Oh, it's getting close now [TE].
2 Oh, this is not good [TE].
C Why [Q]?
E Your turn [TM].
E Oh, that might do it [TM].
E We'll see [TM].
E It started to fall [TE]!
1 Oh [SA]!
C Oh!
1 That's called Don't Break the Ice [TE]!
1 Lose your man [TE].
E You want to play again [Q]?
C Yeah [A].
E We have to put all the blocks back [TE].
E Do you want to help me [Q]?
C Yeah [A].
C XX we knock/ed over (all the) all the building/s [TE].
E Do you have any cats at your house [TI][Q]?

E We have dogs and cats at my house [TE].
E We have three cats [TE].
E We have a grey cat, and a black cat, and a cat that's brown and black and white [TE].
C This is the ice [TM].
C Like %ssss>
E Like what you skated on, right [Q]?
C Yeah [A].
C What this [Q]?
E Did you go skating inside or outside [Q]?
C Outside [A].
E That's what I like to do too [TE].
C I/'m have/ing trouble getting that one but how can we put these all in [TI][Q]?
{referring to the blocks for the game} {57:41}{17 morphemes}
E Well, there's going to be two that don't fit [A].
E I think they like to have them in case somebody loses one [TE].
C This is the boy [TE].
E Wouldn't that be scary, to fall through the ice [Q]?
C This boy [RQ]?
E Well, that's why we don't want him to fall down [TE].
E We don't want him to go through the ice [TE].
C Now he fell through the ice [TE].
1 Jane has a dog too [TI].
1 Don't you, Jane [Q]?
C (He/'s) he/'s on skate/s [TE].
C What [RQ]?
1 You have a dog, don't you [Q]?
C He is on skate/s [TM].
C He is on skate/s, right [Q].
1 That he could be [A].
E He fell over [TE]!
2 Jane helps XX feed the pigs, don't you, Jane [Q]?
C (Ok) now my turn [Q]?
E Yes, your turn [A].
1 Let's talk about skating since we're talking about ice [TE].
1 Want to [Q]?
E Do Grampy and Grammy go skating with you [Q]?
C Yup [A].
2 XXX.
C I get another turn [TE].
E Oh, ok [SA].
1 Tell me about your skates, Jane [TE].
C I have skate/s [TM].
1 You do [Q]?
1 What do they look like [Q]?
C They're pink and pink [A].
1 Pink.

E I used to have skates that had Barbie on them [TE].
E Those were really fun skates [TE].
C You still have them [Q]?
E No, my feet got too big [A]!
E Seriously, look at the size of these feet [TE]!
E Now I just have boring grownup white skates [TE].
C %Hmm.
E Yeah, that's sad [TM].
1 That's too bad [TM].
E I have to get crazy hats and stuff instead for when I go skating [TE].
E My hat has green in it and pink and white and it's got crazy stripes [TE].
C I know, but these are hammer/s [TI].
1 Yes, they are hammers [TM].
C Yes they are.
C These are hammer/s!
1 Is it your turn to hit some ice [Q]?
E Yeah, I think it is [A].
E Because I got this one, now it's your turn [TE].
1 Can you remember what you wear when you go skating [TI][Q]?
E My turn [Q]?
C Yup [A].
C No, (I, you) you turn [TM].
E %Hmm, this is hard [TE].
E %Uhoh.
1 %Uhoh.
C What [Q]?
1 It's gonna go [A]!
2 XXX.
E Oh, I don't think you want that one [TE]!
1 %Whooo! {ice fell through}
1 It was a cold day, wasn't it, the last time we went skating [TI].
2 I'm glad I got the fire going [TE].
1 %Mmm.
1 Do you remember what you wore, Grampy, that day [Q]?
2 Well, I had my black skates which were too small for me because my feet really hurt [A].
1 How did you keep warm [Q]?
1 How did you keep warm that day, Jane [Q]?
C I wore snow_pant/s and lots of clothes [A].
2 Oh, yeah [SA].
C This is a hammer [TI].
1 It is a hammer [TM].
1 And I remember, after skating, we came back to the house and had something really hot to drink [TE].
C Hot choc [TM].
1 Hot chocolate [Q]?

C Yeah [A]!

1 Yeah, that was just X, wasn't it [Q]?

1 Please don't break our hammer [TI].

1 Thank you [TE].

1 Do you want to play one more time [Q]?

C Lots of time/s [A].

1 Careful XX.

E Yeah [SA].

E I was hearing you tell us about Christmas before [TI].

E We usually go skating at my house for Christmas [TE].

C I/'m just screw/ing it up [TE].

1 We did not go skating at our house for Christmas [TE].

E Instead of having a big dinner, we go down to the lake and we cook hot dogs over a fire and go ice skating and we have hot chocolate and marshmallows [TE].

E That's a lot of fun [TE].

1 What do you do on Christmas, Jane [Q]?

C We have present/s and XX [A].

1 No, we didn't, did we [Q]?

C XXX.

1 That's too bad [TE].

2 What did we do [Q]?

1 Well>

2 Was it warm that day when we XX [Q]?

1 I don't remember but I remember there were stockings involved [TE].

1 What about all the telephone calls that came in and you learned to take the phone calls [TI].

C Yeah [SA].

1 What were they looking for, all those people [Q]?

C I do/n't know [A].

1 You would say, "Family Business Name" [TE].

C Yeah [SA].

1 Yeah.

1 What were people wanting to know [Q]?

C What [RQ]?

1 You don't remember that story [Q]?

C No [A].

1 Ok, how to get to the farm [Q]?

1 And did we still have trees for sale [Q]?

C Yeah [A].

C And what did we tell them [Q]?

1 What did you tell them [Q]?

1 Something about the railroad tracks [TE].

C (They) they take 131 and turn left and turn right and take the left (and) and, um, um, cross the road, drive East over X Street, and take a left again (and) and (you) you can buy Christmas tree or a Christmas ball or kissy ball (or) or a wreath [A]. {1:03:29} {44 morphemes}

C Thank you very much [TE]!
1 Well done [TM]!
1 That's exactly what you told them [TE].
E Those are good directions [TE].
1 Very good directions [TM].
C Now (let/'s, let/'s) let/'s>
E You wanna play one more time [TI][Q]?
C Yeah, once we [A]>
C (These) these block/s [TE].
E There's no room for them [TE]!
E You see a place where we could put them [Q]?
C No [A].
E I know [TM]!
E I think they're extra [TE].
E So, do you guys make the wreaths, or do you buy wreaths to sell [Q]?
C We buy them and we sell them [A].
E My family used to make wreaths [TE].
C We make them too [TE]!
E It's a lot of work, isn't it [Q]?
1 Jane made the most beautiful wreath of all [TE].
1 It was one of the first ones to sell [TE].
1 It was covered with [TM]>
C Oh, that was a close one [TI]!
E We don't want to knock in any more then we have to because we want the man to stay up top [TE].
E Oh, I almost got two [TE]!
E Oh, we want to be careful [TE].
E You don't want the man to fall in [TE]!
C XXX.
1 Let Alise have a turn [TE].
C Whoops, I drop/ed the ice [TE]!
1 Do you know what the name of the game is [Q]?
E %Uhoh, that's the middle square [TE]!
C XXX.
1 Do you know what the name of this game is, Jane [Q]?
C What [Q]?
1 Don't Break the Ice [A]!
1 Now what did you do [Q]?
1 You broke the ice, didn't you [TM]!
C XXX.
1 So, you were hoping for that squishy thing [TI].
C Yeah [SA].
1 You want me to just go get it for you [Q]?
C I want (let/'s) let/'s play in there [A].
1 It's not a toy, it's a something to sit on [TE].
C A something sit in.

C A sit on.
1 I'll get it for you [TM].
C Ok [SA].
1 Alright, you, you help with the ice and I'll go get it [TE].
C No, (I) I will pick the one I want [TE].
1 I have to get it [TE].
C It/'s a yellow one with a XX sticking out [TE].
1 Alright [SA].
1 You stay here and don't break the ice [TE]!
C Ok [SA]!
1 Be right back [TE].
C Welcome to the business [TI].
E What was that [Q]?
C Welcome to the business I was do/ing [A].
E Sounds like a fun business [TE].
E We sell our vegetables, so we have to give directions too [TE].
E We tell people "When you get off Route 1, you have to make a right, and then you go all the way out and around two curves, and past a cemetery, and then we'll be right on the right and we'll have a stand out by the road with all our vegetables on it [TE]".
E We sell carrots, and onions, and tomatoes, and peppers, and just about everything [TE].
E Do you like vegetables [Q]?
C Yes [A].
C I mostly like carrot/s [TE].
1 Somebody has the seat, but this is here [TI]. {brought a plastic squishy ball}
E Oh, that looks even better [TE].
C Somebody has the seat [Q]?
1 Yeah, some other client is using the seat [A].
1 But I thought you might like this [TE].
C To what [Q]?
1 To hold and play while you play the game [A].
C %Scream.
1 Set it down and play the game [TM].
C %Scream.
C XX the squishy thing I do/n't like [TE].
1 Oh, you don't like it [Q]?
E We could play catch instead [TI].
1 Want to [Q]?
1 Would you like to play catch with it [Q]?
C Yeah [A].
1 Throw it to Grammy [TE].
1 You want to play too, Gramp [Q]?
2 I'm not sure, it's kind of scary, isn't it [Q]?
1 No, it's not scary at all [A].
C %Scream.
E You're good at catching [TE]!
1 It gives you a lot to hang onto [TE].

1 Give it a toss [TE].
1 So, before I throw it back, I want you to tell me about something you did today [TE].
1 Back right up by Alise [TE].
1 What did you do today [Q]?
C I>
1 Back right up [TM].
C XX I hang out with my Dad and, um, (I, I) we brought up to here and then throw the ball [TE]. {1:08:04}{17 morphemes}
2 I don't believe you caught that [TE].
1 Alise might like to have you throw it to her so she can ask you something [TE].
E Do you want to ask me something first [Q]?
C Yeah [A].
E Before you throw it [TM].
E Ok, what do you want to ask me [Q]?
C I want to, uh, XX.
E What was that [Q]?
C XXX.
1 That isn't even a question [TE].
C Um, I mean>
1 Here, let me give you an idea [TE].
C Yeah [SA].
1 You could ask her if she has any dogs [TE]. {whispered}
C (Do you) do you have any, um, dog/s or kitten/s [Q]?
C Or kid/s [Q]?
E I don't have any kids, and I don't have any kittens, but I do have three cats and five dogs [A].
1 Oh, now you throw it to her [TE].
C Catch it [TE].
E My uncle, his dog just had puppies [TE].
E He had seven puppies [TE]!
C %Huh.
E <Ok, now I'm going to ask> you a question [TE].
1 <Now she's going to ask you something> [TM].
E I can't think of a good one [TE]!
1 Just tell her something [TE].
1 Do you want to ask her about lunch, what we did [Q]?
E Ok [SA].
C We saw a train [TE].
E Can you tell me about the train [Q]?
C It did/n't have a whistle [A].
E It didn't have a whistle!
E That's no fun [TE].
E Your turn [TM].
C My turn XX [TM].
1 Why don't you throw it to Grammy [Q]?
2 You gotta ask Grammy a question first [TE].

1 I get to ask it, because I have the ball [TE].
2 Oh, whoever has the ball gets to ask the questions [Q]?
1 I think so [A].
1 Well, let's, let's tell Alise about dance class [TE].
1 Because you're doing some dance moves right now [TE].
1 Can you tell her what they are [Q]?
1 Can you tell her some of the moves [Q]?
C No, I [A]>
E Can you tell me about your dance class [Q]?
E What kind of dancing do you do [Q]?
= Child dances.
1 You have to use your words, Jane [TM].
C I, um, did this [TE].
1 What is that [Q]?
C And slapping your knee/s and galloping [TM].
C And, uh, falap/s [TE].
E Oh, this must be tap dance [TE].
= Child dances
1 Are you falaping right now [Q]?
C %Mhm.
E Do you do falap, toe, heel [Q]?
E Do you do that one yet [Q]?
= Child dances.
E Yes, I can tell you do [TE]!
1 Can you use your voice to tell us what you're doing [Q]?
1 What is>
1 Be the teacher [TE].
C Um, toe, heel, this is a toe, heel [TE].
C First your toe, and then your heel [TE]!
C I want to hear two sounds [TE].
= Child demonstrates step.
1 That's what she said [Q]?
E That's really good [TM]!
C Yeah [SA].
E I did that when I was little [TE].
E Can you tell me about a dance performance [Q]?
E Do you do recitals [Q]?
C No [A].
E No recitals [RQ]?
C Throw the ball [TI]!
E Ok [SA].
E Your turn to ask [TE].
C Why me [Q]?
E Because you have the ball [A]!
1 I have a question [TE].
1 You want to know my question [Q]?

C Yeah [A].
1 Ask her if she knows how to swim [TE]. {whispered}
C You know how to swim [Q]?
E I know how to swim really, really well [A].
E I actually used to be a lifeguard [TE].
1 You know what that is, Jane [Q]?
C No [A].
1 Ask her what is a lifeguard [TE].
C What is a lifeguard [Q]?
E Well, you know how there's someone who sometimes sits beside a pool or like a place where a lot of people swim [A]?
E And they make sure that nobody gets in trouble or hurt [A]?
E That's what I did [A].
1 Make sure people are safe [TE].
1 Ok, throw the ball please [TM].
E If you don't throw the ball, I'm going to have to [TE].
1 Ok [SA].
1 Let's see [TM].
1 I get to ask a question [TM].
1 I want you to tell, turn around and tell Alise about your dog [TE].
C My dog his name is Wiggly [TE].
C And I mostly feed him every day (if he has) if he (had) has/n't had any food. {1:12:21} {14 morphemes}
C And, um, I get him (some) some water sometimes [TE].
C That/'s all I have to say [TE]!
1 Ok [SA].
1 What happens after you feed your dog [Q]?
C I get a sticker [A].
1 Where is that [Q]?
C What [RQ]?
1 Where's that sticker business [Q]?
C Um, it/'s on my sticker chart [A].
1 And where's your sticker chart [Q]?
C Oh, I just meant "ok" [TM].
C (I not) I do/n't think we should do this part again [TE].
C Um.
1 What are you doing [TI][Q]?
C Change/ing her diaper [A]. {playing with her doll}
1 What are you doing, honey [Q]?
C Try/ing to change her diaper, but I do/n't think I can [A]. {1:13:11}
1 Do you want some help [Q]?
C Yes, but stay together [A].
E It's such a tiny diaper [TE]!
1 Oh, it's taped together [TE].
E Oh, there's tape right here [TM].

E Do you want to take it off or do you want to make sure it stays on, because we want her to stay dry [TE]?

C Want her to stay dry but think she has a poopy diaper [A].

E So do we need to take it off [Q]?

E Let's see if we can take it off so we can put it back on later [TE].

E It's a tiny diaper [TM]!

C Can we put it on later [Q]?

1 She's doing a nice job getting it off of there [TE].

E There XX.

E We don't crumple it up too much [TE].

C What [Q]?

E Don't crumple it up too much, or she won't be able to put it back on [A].

E Is she clean [Q]?

C Um, she/'s I think, um>

C Would somebody hand me a wipe [Q]?

C Thank you, but, um [TM]>

1 Oh, actually, I have just the thing [TE].

C Ok [SA].

C %Uhoh!

E Oh, is she losing cotton from her diaper [Q]?

C Yes [A].

1 You have the last one, Jane [TE]. {referring to wipes}

C What [Q]?

1 That's the last one [A].

1 You may see [TE]. {shows child empty container}

C %Awww.

1 Well, at least you can wash your hands and wash your baby [TE].

E You want to wipe her [Q]?

C What [RQ]?

C Well, she has soap on her bottom [TE].

E I think it will be fine when it dries [TE].

C Would you hold her legs [Q]?

E Sure [A].

E I think that's hard on her head though [TE].

C What [Q]?

E Well, you're tipping her up on her head [A]!

1 There [SA].

C She/'s really poopy [TE].

C Is/n't she [Q]?

1 %Mhm.

1 You're doing a nice job cleaning her up [TE].

C She did/n't go (up this) up her back this time [TE]. {1:15:03}

1 That's good [TM].

C That is^

1 She has a baby brother, that's why she's very familiar [TE].

C Those are tub toy/s [TI].

E There, that looks good [TM].
1 Trash is right over there by your boots, Jane [TE].
C I know, but then I wo/n't have it anymore [TE].
1 Oh, you want to keep it [Q]?
C Yeah [A].
1 You can keep it [TE].
C Where can I put it so I XX [Q]?
1 I'll hold it for you [A].
E Are you trying to put the diaper back on [Q]?
C Yeah [A].
C I do/n't know how I/'m go/ing to do this [TE].
E I think we might want to take this apart right here [TE].
E Either that, or we can stick her leg right back through it [TE].
E Cool, look [TM]!
E That's perfect [TM].
E This is the front, right, with the pretty stuff on it [Q]?
C Now she/'s clean as a XX [TE].
1 You need to help Alise put her back on now [TE].
C Do you need help [Q]?
E What do you need to do first [Q]?
C (We) we need to put it on a certain way [A].
E Ok [A].
C Sorry [TM].
E Oh, that's ok [TM].
E I think this side should go first because this side has the tape [TE].
C This side.
E And then maybe this side [TM].
C Yup [SA].
1 There [SA].
1 Well done, you two [TM]!
E Fresh as a daisy, %huh [Q]?
C Yup, fresh as a %day_doo [A].
1 Well, it's almost time for us to pack it up [TI].
1 Have you had a nice time [Q]?
C %Whoops!
C She pee/ed again [TE].
1 Oh, dear [SA].
1 Have you had a nice time, Jane [Q]?
C Yes, but [A]^
E I really appreciate your help [TE].
E It was fun playing with you [TE].
C Would you give me a wipe please [Q]?
C Would you help me put it back together when I/'m ready [Q]? {1:17:02}
C Would you [Q]?
1 Would I do what [Q]?
C Help me put it back together please <> when it/'s <> ready [A].

1 <Yes>, <yes> [SA].
= transcribed to 1:17:10, when the interview ended; due to the other activity taking up approximately 18 minutes, the conversational part of the interview lasted 59:02.

Appendix B
IRB Approval

MEMORANDUM

TO: Alise Ranalli

FROM: Gayle Jones
              Assistant to the Institutional Review Board for the Protection of Human Subjects
              (IRB)

SUBJECT: "Characteristics of Young Children's Longest Utterances," #2011-07-03

DATE: July 19, 2011

The above referenced project was approved by the University of Maine's Institutional
Review Board for the Protection of Human Subjects (IRB) in an expedited review. The approval
period is 7/8/2011 through 7/7/2012. A continuing review of this project must be conducted by
the IRB before the end of the approval period. Although you will receive a request for this
information approximately 6-8 weeks before that date, it is your responsibility to submit the
information in sufficient time to allow for review before the approval period expires.

Enclosed is an approved, stamped copy of the informed consent document for this
project. The approval for this informed consent expires on 7/7/2012. **This approved, stamped
copy must be duplicated and used when enrolling subjects during the approval period.**

Please remember that each subject must be given a copy of the informed consent
document. Any unanticipated problems or harm to the subject must be reported to the IRB
immediately. Any proposed changes to the research must be approved by the IRB **prior** to
implementation. Any significant new findings must be reported to the subject.

If you have questions, please contact me at 1-1498. Thank you.

pc: Allan Smith

Informed Consent Form

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Informed Consent Form

Characteristics of Young Children's Longest Utterances

</div>

You are invited to participate in a research project being conducted by Alise Ranalli, a student at the University of Maine, and Dr. Allan B. Smith, an Associate Professor at the University of Maine. Our purpose is to examine the speech of young children.

What Will You Be Asked to Do?

If you decide to participate, you will have a typical verbal interaction with your child and the researcher for approximately an hour. This will preferably take place in Dunn Hall at the University of Maine in Orono, but alternative arrangements to meet in your home can be made if necessary. You will be both audio and video recorded during this interaction.

Risks

Except for the contribution of your time, there are no foreseeable risks to participating.

Benefits

While there is no direct benefit to you or your child from participating, the results are expected to help us to understand more about how children develop language.

Confidentiality

Your names will not be attached to any of the data. The audio and video recordings will be kept at the Department of Communication Sciences and Disorders in Dr. Smith's locked office or on a secure, password protected hard drive; no one other than the two above-named researchers will have access to them. These recordings will be destroyed within a year of their creation. Any publications that result from the project would not contain your names, although they may contain transcripts of your conversation with your child, either in part or in entirety. These transcripts may be kept indefinitely, but they will not contain your names, and there will be no key to link your names to the transcripts.

Voluntary

Your participation is voluntary. You may choose to discontinue participation at any time.

Contact Information

If you have questions, please contact me at 385-7525 or alise.ranalli@umit.maine.edu . You may also reach Dr. Smith, at 581-2036 or allan.b.smith@umit.maine.edu,. If you have any questions about your rights as a research participant, please contact Gayle Jones, Assistant to the University of Maine's Protection of Human Subjects Review Board, at 581-1498 or gayle.jones@umit.maine.edu.

Your signature will indicate that you have read and understand the above information. You will receive a copy of this form.

UMaine Institutional Review Board
Approved for Use Through:

JUL 07 2012

_____   _____
Signature   Date

Author's Biography

Alise. R. Ranalli was born in Machias, Maine on September 18, 1990. She grew up in Big Lake Township, Maine on a small farm. She was homeschooled by her parents until she came to the University of Maine in 2008. Alise is currently majoring in Communication Sciences and Disorders and minoring in Childhood Development and Family Relations. She has received the Maine State Society Scholarship and the Barking Scholarship and is a member of Phi Beta Kappa and Phi Kappa Phi. Upon her expected graduation in May, 2012, Alise plans to return to The University of Maine as a Trustee Tuition Scholar to complete her Master's degree in Communication Sciences and Disorders.