SPEECH GENRE AND TEMPORAL CONCEPTUAL METAPHOR USE IN THE DISCOURSE OF SPEAKERS WITH AUTISM SPECTRUM DISORDERS (ASDs)

by

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ABSTRACT

The thesis explores how temporal spoken text and metaphors of time are used in semi-structured conversational discourse by speakers with Autism Spectrum Disorders. The focus on time, its structure (through genre) and metaphoric representation, is a potentially revealing line of research for better understanding communication difficulties as well as patterns of conceptualization in ASD. Metaphors, in general, are difficult for people with ASD (Happé, 1993, 1995). Time in this context is an interesting concept to examine as it is largely expressed using metaphor (Lakoff & Johnson, 1999). The thesis also provides an opportunity to explore how temporal metaphors, as ingrained concepts of nature, are used by individuals who traditionally struggle with figurative metaphor. Individuals with ASD use temporal metaphors and the findings here may not only serve as a contribution to our knowledge about ASD, but also to the understanding of semantics and philosophy of time.
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LIST OF ABBREVIATIONS

Transcription Conventions

RES: = Researcher

CHI: = Child (Research Participant)
ACKNOWLEDGEMENTS

Time is a valuable commodity. Thank you Dr. Jessica de Villiers and Dr. Barbara Dancygier for being generous with your time while supervising this thesis.
CHAPTER 1 - INTRODUCTION

This thesis investigates how temporal spoken text and metaphors of time are produced and understood in the discourse of people with Autism Spectrum Disorders (ASDs). The approach taken integrates speech genre analysis (Martin & Plum, 1997; Halliday & Hasan, 1989; Eggins & Slade, 1997; Plum, 2004) from the Systemic Functional Tradition in Linguistics with an analysis of conceptual approaches to metaphor from Cognitive Linguistics (Lee 2001; Lakoff & Johnson 1999; Evans 2003) in a complementary way. Speech genre analysis proposes that speakers organize and structure texts in predictable stages to achieve an overall purpose. Conceptual metaphor is the process of understanding one conceptual domain in terms of another domain. In the thesis, I identify and examine stretches of temporally sequenced events in a corpus of 9 semi-structured conversational texts produced by children and adolescents diagnosed with ASD.

Of particular interest in the examination is the marked use of speech genre types in the discourse of ASD. Contextually appropriate discourse is particularly difficult for speakers with ASD. While the discourse of individuals with ASD typically does not conform to expected patterns, problems with the contextual use and variation of language are equally detrimental to social success but are also not well-understood in ASD. There are numerous theories of ASD; however, few deal with the difficulties in communication. deVilliers and Szatmari (2004) found that individuals with ASD have difficulties with chronological organization in the quantity of information and linearity of serial events. Speech genre analysis is an appropriate approach to examining the discourse of speakers with ASD as it looks at the structure of text in a functional way. Specifically, speech
genre theory is sensitive to a configuration of contextual factors, including the nature of
the text, the participants and their relationship to one another, and the role language plays
in the experience. In this thesis, speech genre types and their associated generic structure
will provide a means to better understand how individuals with ASD structure time and
temporal concepts in conversational texts. In this thesis, the term genre refers to speech
genre.

Also of interest is the conceptualization of time among individuals with ASD, as
temporal concepts are largely communicated using conceptual metaphor (Lakoff &
Johnson, 1999). Conceptual metaphor is used when one conceptual domain is understood
in terms of another conceptual domain. Meaning is achieved in conceptual metaphor by
recognizing a set of systematic correspondences between the two domains. Time is
unconsciously conceptualized and so deeply entrenched in our cognitive system that
typical speakers often do not realize that they are using conceptual metaphor. Classic
examples include spending, saving, or measuring time. The TIME IS MONEY
conceptual metaphor, among other conceptual metaphors of time, are relatively stable,
are not arbitrary, and are widespread throughout cultures (Lakoff & Johnson, 1999, 134).
In this thesis, unless otherwise noted, the term metaphor refers to conceptual metaphor.

It is widely reported that even the most verbally able individuals with ASD fail to
understand nonliteral speech (Happé, 1993, 1995). The problems that people with ASD
experience in such metaphoric language use can significantly encumber communication
and social success. Yet, despite a growing literature on problems with metaphor and other
figurative language use in ASD, these difficulties are still not well-understood. The
analysis of conceptual metaphors, metonymies, and senses of time is appropriate to
approach temporal texts produced by speakers with ASD as these individuals must have an understanding of conceptual metaphors of time and temporal concepts. This thesis aims to investigate the degree to which individual use and comprehend conceptual metaphors of time. The findings may not only serve as a contribution to the knowledge of the disorder, but may also comment on the degree of the conventionality of temporal metaphor and contribute to the philosophy of time.

The thesis analyzes nine spoken texts produced by children and adolescents diagnosed with ASD. It applies two approaches: Systemic Functional Discourse Analysis and Cognitive Linguistics. First, a speech genre analysis of stretches of spoken discourse that involve temporally sequenced events is undertaken to examine the extent to which the research participants under investigation predictably engage in discourse based on contextual factors. Following this speech genre analysis, stretches of temporally sequenced events are examined for the use of temporal conceptual metaphors. The result is a well-articulated evaluation of the use of speech genre and conceptual metaphor types in 9 conversational texts of speakers with ASD.

The speech genre analysis follows a framework developed by Eggins and Slade (1997) who found ten types of speech genres used in casual conversations. Of these ten types, they label four types as storytelling genres. The four types of storytelling genres are Narrative, Anecdotes, Recounts, and Exemplum. Building on Eggins and Slade’s work, further subcategorization of the Recount speech genre into Specific Recounts and General Recounts was made. (Specific Recounts involve a Record of Events that is unique and non-repetitive while General Recounts involve a Record of Events that is habitual or that occurs on a recurring basis.) An emergent speech genre type that uses
external temporal conjunctions but does not adhere to any of the speech genres described by Eggins and Slade (1997) is *Procedure* (Plum, 2004). Following Plum, Procedure is incorporated in the classification.

To approach temporal metaphors produced by speakers with ASD, Lakoff and Johnson’s (1999) conceptual metaphors of time and Evans’ (2003) senses of time are applied. In the analysis of temporal conceptual metaphors, Lakoff and Johnson (1999) were followed and the approach to the analysis of the lexical item, “time” followed Evans (2003). Lakoff and Johnson’s conceptual metaphors of time have been described in *Philosophy in the Flesh* (1999). Although time as a concept is chiefly metaphorical, it is realized in many ways by different conceptual metaphors. The selected conceptual metaphors of time used for analysis of metaphor are: 1) Time Orientation metaphor; 2) Moving Time metaphor; 3) Moving Observer metaphor; 4) Event-for-Time metonymy; 5) Distance-Time metonymy; 6) Time as a Resource metaphor; and 7) Time as Money metaphor.

In all stretches of temporally sequential texts from the 9 transcripts, all instances were noted where the word “time” or units of time (i.e. “tomorrow”, “two minutes”, “June the fifth”, “1985”, etc.) were uttered. These uses of time were categorized according to Lakoff and Johnson’s conceptual metaphors using Lakoff & Johnson’s (1999) criteria. Where the lexical item “time” explicitly appeared, these instances were categorized according to Evans’ (2003) distinct senses of time:

1. Duration Sense
2. Moment Sense
3. Instance Sense
4. Event Sense
5. Matrix Sense
6. Agentive Sense
7. Measurement-system Sense

The analysis of speech genre in the nine texts found that the individuals with ASD used certain speech genre types and not others. They also used some speech genre types more frequently than others. The Recount genre (Specific and General) was used the most. The thesis examines closely the speech genre types used and considers the frequency of particular stages in the genres. Some children appeared to have stronger conversational ability marked by longer generic stages and longer turns. These speakers did use a greater variety of generic stages but appeared to favour a particular generic stage.

The analysis of conceptual metaphor, metonymies, and senses of time showed that individuals with ASD appeared to use some metaphors more often than others. As with genres, some individuals appeared to be more able than others to use temporal metaphors, metonymies and senses of time marked by a more varied and a greater quantity of these expressions. The speakers that appeared to be more competent with temporal expressions showed unconventional uses related to the specificity of conceptual metaphors, metonymies, and senses of time.

Following the speech genre and metaphor analyses, the results of the two investigations are compared and discussed. Both approaches to analyzing the same 9 texts showed a relationship where the research participants with the most conversational engagement also used the greatest variety of speech genre types and the most temporal conceptual metaphors. The findings in this thesis are important because speech genre analysis and the analysis of conceptual metaphors are appropriate to examine the pragmatic language use of time and temporal concepts that occur in the conversations of
individuals with ASD. Individuals with ASD struggle with pragmatic and figurative
language use and few studies examine the conversational difficulties of individuals with
ASD. This thesis will serve as a contribution to the knowledge of the conversational
difficulties of the disorder and comment on the degree of the conventionality of temporal
conceptual metaphors that occur in spoken discourse.

Chapter 1 has introduced the thesis that will examine the use of speech genres and
temporal conceptual metaphors, metonymies, and senses of time in spoken texts
produced by speakers with ASD. Chapter 2, Background, describes ASD, speech genre
analysis, and Cognitive Linguistics. The second chapter also identifies the source of the
data used in this thesis. Chapter 3, Methods, outlines cohesion analysis, speech genre
analysis, and the analysis of temporal conceptual metaphors, metonymies, and senses of
time used to approach the data. Chapter 4, Speech Genre Analysis, describes the use of
speech genre that occur in each of the 9 texts. Patterns that occur in the use of speech
genres are also identified across the 9 texts. Chapter 5, Metaphor Analysis, describes the
use of temporal conceptual metaphors, metonymies, and senses of time that occur in the
same 9 texts. Patterns of temporal metaphors, metonymies, and senses of time that occur
across the 9 texts are then identified and discussed. Chapter 5, Conclusion, discusses
observations and findings that emerged from both the analysis of speech genre and the
analysis of temporal conceptual metaphors, metonymies, and senses of time.
CHAPTER 2 – BACKGROUND

1. Autism Spectrum Disorders

Autism Spectrum Disorder (ASD) is an umbrella term for a spectrum of neurocognitive disorders, including autism, high-functioning autism (HFA), Asperger’s Syndrome (AS) and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS) that is characterized by severe impairments in communication and social reciprocity. It is well known that communication in ASD is associated with difficulties in pragmatics, including the production and interpretation of figurative metaphor (Happe, 1995). Since time and temporal concepts are virtually impossible to conceptualize without conceptual metaphor (Lakoff & Johnson, 1999, 139), an investigation of the use of temporal concepts by speakers with ASD may help to better understand the nature of the disorder. People with ASD are also known to have difficulty using discourse in contextually appropriate ways, including problems with relevance (Happe, 1993), organization (de Villiers & Szatmari, 2004) and cohesion (Fine, 1994). An analysis of temporally sequenced stretches of discourse using a contextually sensitive descriptive approach such as functional speech genre analysis may also inform our understanding of the difficulties with language associated with ASD.

2. Data

Data for this thesis came from a follow-up study of children diagnosed with ASD at Chedoke-McMaster Hospital in Hamilton, Ontario. Audio recordings of semi-structured conversations between a research technician and 9 research participants diagnosed with ASD were collected and transcribed prior to the analysis undertaken in the present research. For the present examination, temporal stretches of discourse were isolated from
the 9 transcripts of semi-structured conversational texts. For a full description of the data collection procedures see de Villiers et al. 2007.

3. Speech Genre

In the early 20th century, genre study was limited to comparing the differences among texts in the disciplines of rhetoric and literature. In 1953, Bakhtin claimed that texts (both spoken and written) were heterogeneous in nature and suggested that a broader perspective was necessary in communication to account for similarities among texts. For example, Bakhtin noted the fact that utterances involve a finalization of a turn that can be sensed by participants in a conversation. Bakhtin explained that each text can be extremely varied, for example, daily dialogue as opposed to business documents; but, their forms are in fact combinations of speech genres:

Each separate utterance is individual, of course, but each sphere in which language is used develops its own relative stable types of these utterances. This we may call speech genres (1986, 60).

In the Systemic Functional Tradition, Halliday provides a similar account on the nature of texts using the concept of register: "... every text is in some sense like other texts; and for any given text there will be some that it resembles more closely" (Halliday & Hasan, 1989, 42).

Register analysis claims that participants can predict textual features based on 3 situational variables: the nature of the text, the participants and their relationship to one another, and the role language plays in the experience. These variables are used to account for contextual aspects of text. Speech genre theory extends upon these variables and attempts to understand why the text was produced; speech genre analysis considers the cultural purposes of text both in content and form. It claims that texts are composed
of stages that are culturally imperative. The generic structure of a text is composed of a sequence of intermediate stages that serve a final goal. For example, Hasan (Halliday & Hasan, 1989) compared conversational transactions at a fruit stand. Hasan notes that these “service encounter” texts were generic to the extent that they are made up of obligatory stages in the following order— Sales Request (SR), Sales Compliance (SC), Sale (S), Purchase (P), and Purchase Closure (PC):

SR= Can I have ten oranges and a kilo of bananas please?
SC= Yes, anything else?
    No thanks.
S= That’ll be dollar forty.
P= Two dollars.
PC= Sixty, eighty, two dollars. Thank you.

Example 2.1 – Service Encounter (Halliday & Hasan, 1989, 59)

According to Hasan, a successful transaction at a fruit stand of the Service Encounter genre type requires a SR, SC, S, P, and PC in serial order.

The use of speech genre analysis is a revealing way to describe discourse in this thesis as it provides a means to examine how individuals with ASD structure time and temporal concepts in spoken text. Speech genre analysis enables a discussion about pragmatic language use; this thesis is therefore able to examine the degree to which text produced by speakers with ASD conforms to culturally accepted norms in content and form.

4. Cognitive Linguistics

The thesis uses Lakoff and Johnson (1999) and Evans’ (2003) cognitive approaches to time. Both stem from the discipline of Cognitive Linguistics. Cognitive Linguistics assumes that linguistic expression is associated with specific construal (Lee, 2001, 2). It assumes that thought operates at a level below cognitive awareness (Lakoff &
Johnson, 1980, 10) and that although there may be formal rules that govern language use, these rules are rooted in cognition.

Lakoff and Johnson's approach to time uses the concept of conceptual metaphor. Conceptual metaphor allows us to think about a phenomenon in different ways (Lee, 2001, 6). For example, "I spend too much time at the mall," uses the conceptual metaphor TIME IS MONEY, while, “time passes quickly at the mall," uses the conceptual metaphor TIME IS MOTION\(^1\). Both linguistic expressions of conceptual metaphor present different construal of the same phenomenon using a source and target domain. In the case of TIME IS MONEY, “money” is the source and “time” is the target. The source domain is relatively more experientially concrete while the target is more abstract; therefore, our conception of money (more concrete) helps us structure our experience of time (more abstract).

Conceptual metaphors differ from figurative metaphors in their conventionality. Linguistic expressions of conceptual metaphors of time are so deeply entrenched in thought and conventionalized to the point that they may no longer be recognized as metaphorical expressions. Although figurative metaphors may be based on conceptual metaphors, they require a higher level of cognitive function. Figurative metaphors are more literary and often less clear but richer in meaning (Kövecses, 2002, 45). The distinction between conceptual metaphors and figurative metaphors is relevant to this thesis as individuals with ASD are known to struggle with non-literal language. These difficulties are most obvious with expressions using figurative metaphors. Since individuals with ASD do conceptualize time and temporal events, they must use conceptual metaphors of time. This thesis will examine the degree to which individuals

\(^1\) Or PASSAGE OF TIME IS MOTION
with ASD use and comprehend temporal metaphors as temporal discourse cannot exist without conceptual metaphor.

Evans' senses of time approaches time and temporal concepts from a framework that classifies a range of distinct lexical concepts for time. This approach considers instances where lexical concepts are paired with the lexeme "time". Although Evans' approach differs from the analysis of time using conceptual metaphors, the investigation of the ways in which individuals with ASD use the lexeme "time" is an interesting area of investigation. Analyzing spoken discourse using both cognitive approaches to time will reveal the ways in which these speakers use and comprehend temporal concepts.
CHAPTER 3 – METHODS

This thesis examines semi-structured conversational texts of nine speakers diagnosed with ASD using a combined approach of cohesion and genre analysis from Systemic Functional Linguistics (Halliday, 2004) and analysis of metaphor from Cognitive Linguistics (Lakoff & Johnson, 1999). The focus of analysis is on temporal discourse, both in generic structures and linguistic expressions of metaphor. This combined approach is appropriate for several reasons. First, temporal patterns in the discourse of speakers with ASD are underdescribed in both cognitive linguistic and functional linguistic literature. Both approaches use microanalytic techniques to uncover patterns that would otherwise go unobserved. Both approaches are descriptive of discourses situated in context. Moreover, by using functional cohesion analysis, I was able to extract, in a systematic way, stretches of temporally sequenced events from the nine original transcripts that served as the data for the cognitive linguistic analysis of metaphor. The results of the genre and metaphor analyses of different speakers' texts were also compared. Thus, the two theoretical descriptive approaches were applied in complementary ways.

A. Cohesion Analysis

Before beginning the analyses of temporal genres and metaphors in the nine texts, temporal stretches in the semi-structured conversations had to be identified. To isolate these, stretches of text were first identified with temporally sequenced events using Halliday and Hasan’s (1976) cohesive subtypes. Cohesion can be defined as meaning relations within text (Halliday & Hasan, 1976, 29) and instances of cohesion are realized
where the interpretation of one element in discourse is dependent upon another (Halliday & Hasan, 1976, 4). Cohesion concerns the way in which the meaning of the elements is interpreted. “Where the interpretation of any item in the discourse requires making reference to some other item in the discourse, there is cohesion” (Halliday & Hasan, 1976, 11). For example:

1a. *John* is nice.
1b. *He* likes to help people.

Example 3.1 - Cohesive tie

In example 3.1, both *John* and *he* refer to the same entity; or, restated, the proper name *John* and the personal pronoun *he*, form a *cohesive tie*.

In Halliday and Hasan’s framework (1976), cohesion in text can be realized by reference (as in example 3.1), substitution, ellipsis, conjunction, or lexical collocation. Relevant to temporally sequenced events are *temporal conjunctions*, a subtype of Halliday and Hasan’s conjunction group. Halliday and Hasan (1976) differentiate instances of *internal temporal relations* from *external temporal relations* (263). The former express successivity in the communication process while the latter concern successivity in the events talked about (Halliday & Hassan, 1976, 263):

Internal temporal relation:
First, I will talk about the car’s engine, and then I will discuss its colour.
After, I conclude with comments about its manufacturer.

External temporal relation:
First, John opened the car door then sat in the seat. Next, he started the engine then backed out of the garage.

Example 3.2 - Internal and external temporal relations.

In this thesis, external conjunctions of the temporal type were used to locate and extract stretches of temporal discourse (see Appendix 1) because they are a feature that identifies the temporal sequencing of events as “There is always some feature of which
we can say, ‘This is typically associated with this or that use of language’” (Halliday & Hasan, 1989, 40). External temporal conjunctions are typically associated, but not exclusive, to texts that communicate events as they happen(ed). Below, Table 3.1 provides a summary of external conjunctive relations of the temporal type:

Table 3.1 is a list of external conjunctive relations of the temporal type. Table 3.1 has been removed due to copyright restrictions. Please see Halliday & Hasan, 1976, 266.

Table 3.1 – External conjunctive relations of the temporal type (Halliday & Hasan, 1976, 266)

Table 3.1 identifies the external conjunctive relations of the temporal time that were used to extract stretches of temporal text from 9 conversational transcripts. The use of these conjunctions identifies stretches of texts that describe sequential events. These texts form the data that was used for the analysis of speech genres and conceptual metaphors.
B. Speech Genre Analysis

In Chapter 4, a full speech genre analysis was conducted of the stretches of text extracted from the 9 transcripts and they were grouped according to a framework developed by Eggins and Slade (1997). Eggins and Slade (1997) found ten types of genre used in casual conversations. Of these 10 types, they label 4 types as storytelling genre. They are Narrative, Anecdotes, Recounts, and Exemplum. Table 3.2 summarizes their generic structure. The present paper classifies the stretches of text from the 9 transcripts of speakers with ASD according to Eggins and Slade's 4 storytelling genre types.

<table>
<thead>
<tr>
<th>Genre (Types)</th>
<th>Generic structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative</td>
<td>(Abstract) ^ (Orientation) ^ Complication ^ Evaluation ^ Resolution ^ (Coda)</td>
</tr>
<tr>
<td>Anecdote</td>
<td>(Abstract) ^ (Orientation) ^ Remarkable Event ^ Reaction ^ (Coda)</td>
</tr>
<tr>
<td>Exemplum</td>
<td>(Abstract) ^ (Orientation) ^ Incident ^ Interpretation ^ (Coda)</td>
</tr>
<tr>
<td>Recount</td>
<td>(Abstract) ^ (Orientation) ^ Record of Events ^ (Coda)</td>
</tr>
</tbody>
</table>

Table 3.2 – Storytelling genres and their structure (Eggins & Slade, 1997)

Martin notes these storytelling genres are based on narrative clauses that share basic generic stages at their beginnings and ends (1992, 564). Table 3.3 provides a description of the stages in generic structure.
3.3 - Description of generic stages used in storytelling genres

<table>
<thead>
<tr>
<th>Generic Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>Establishes the point of the text and signals that a story is about to be told</td>
</tr>
<tr>
<td>Orientation</td>
<td>Orients listeners to what is to follow in terms of people, actions, time and place</td>
</tr>
<tr>
<td>Complication</td>
<td>Temporally orders actions leading to a crisis</td>
</tr>
<tr>
<td>Remarkable Event</td>
<td>Temporally orders actions outlining a remarkable event which the narrator wants to share her reaction to</td>
</tr>
<tr>
<td>Reaction</td>
<td>The evaluation of the events establishes the significance of the story</td>
</tr>
<tr>
<td>Incident</td>
<td>Outlines temporally sequenced events in order to elucidate interpretative comments or moral judgement</td>
</tr>
<tr>
<td>Interpretation</td>
<td>A moral interpretation or judgement of incident is relayed</td>
</tr>
<tr>
<td>Record of Events</td>
<td>Provides a sequence of events with ongoing appraisal</td>
</tr>
<tr>
<td>Resolution</td>
<td>Actions resolve crisis</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Evaluates or presents appraisal</td>
</tr>
<tr>
<td>Coda</td>
<td>Makes point about text as a whole Returns text to present</td>
</tr>
</tbody>
</table>

Table 3.3 – Description of generic stages used in storytelling genres

In Table 3.3, the shared stages in generic structure are Abstract, Orientation and Coda and are identified as optional with parentheses; the remaining generic stages are obligatory to the genre type. For example, a Narrative must contain a Complication stage, followed by an Evaluation and a Resolution stage; it may or may not contain an Abstract, Orientation, or Coda. The Abstract stage provides thematic information for the stretch of discourse and the Orientation stage describes the setting while the Coda may complete the stretch of discourse by glossing the entire sequence.

Descriptions of the storytelling genre types follow: Narratives have a Complication, Evaluation, and Resolution because these texts build in tension and excitement to reach a crisis that is then resolved. Anecdotes are texts that are similar to narrative as they also focus on crisis. Anecdotes contain a Remarkable Event; a sequence of events builds towards a crisis but unlike Narratives, the crisis is not resolved.
Alternatively, the string of events is told to highlight event(s) that are bizarre or unusual for the purpose of sharing a reaction to these events. Exemplums are texts that have a prescriptive nature and suggest how the world should or should not be. Exemplums contain an Incident, a set of temporally sequenced events that are told in order to focus on the significance of these events (rather than their problematic nature). The Interpretation stage of the Exemplum text relates the story to the larger context of culture and a moral point of some kinds is then made. Finally, Recounts are about a temporal sequence experienced by the narrator. In these texts, the Record of Events tells how one event leads to another; the goal is simply to relay succession of events. I further subcategorize the Recount genre into Specific Recounts and General Recounts. I define Specific Recounts to involve a Record of Events that is unique and non-repetitive while General Recounts involve a Record of Events that is habitual or that occurs on a recurring basis.

An additional genre type emerged that used external temporal conjunctions but did not adhere to any of the genres described by Eggins and Slade (1997). I found this genre type to be Procedure (Plum, 2004). Procedures are texts that involve temporally sequenced events or steps in a How To stage that outlines the means to achieve a desired state or result. A recipe is a classical example of a Procedure text. Table 3.4 details the generic structure of Procedure.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Generic structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure</td>
<td>(Abstract) ^ Orientation ^ How To ^ (Coda)</td>
</tr>
</tbody>
</table>

Table 3.4 – Generic structure of Procedure (Plum, 2004)

The 6 genre types, including my 2 subtypes of Recount genre, are used for the analysis of temporally sequenced text from conversations of speakers with ASD. Table
3.5 generalizes the generic structure of these genre types used to code spoken discourse in this project.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Generic structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative</td>
<td>(Abstract) ^ (Orientation) ^ Complication ^ Evaluation ^ Resolution ^ (Coda)</td>
</tr>
<tr>
<td>Anecdote</td>
<td>(Abstract) ^ (Orientation) ^ Remarkable Event ^ Reaction ^ (Coda)</td>
</tr>
<tr>
<td>Exemplum</td>
<td>(Abstract) ^ (Orientation) ^ Incident ^ Interpretation ^ (Coda)</td>
</tr>
<tr>
<td>Specific Recount</td>
<td>(Abstract) ^ (Orientation) ^ Specific Record of Events ^ (Coda)</td>
</tr>
<tr>
<td>General Recount</td>
<td>(Abstract) ^ (Orientation) ^ General Record of Events ^ (Coda)</td>
</tr>
<tr>
<td>Procedure</td>
<td>(Abstract) ^ Orientation ^ How To ^ (Coda)</td>
</tr>
</tbody>
</table>

Table 3.5 – Genre types and associated generic structure used for analysis

As in Eggins and Slade (1997), the stages in the six genre types include optional stages in parentheses and required stages without parentheses. Evaluation is an additional optional stage that may occur throughout the generic structure in the 6 genre types at any point. The purpose of Evaluation is to sustain the story and establish its contextual significance (Eggins & Slade, 1997, 238). Analyzing conversational texts produced by speakers with ASD using speech genre and their associated generic stages will provide insight into how these individual produce temporal discourse.

C. Conceptual Metaphor Analysis

In Chapter 5, an analysis of metaphors in the Cognitive Linguistics tradition was performed on each of the temporal stretches identified with the cohesion analysis. Both Lakoff and Johnson’s conceptual metaphors of time and Evans’ senses of time were used, with Evans’ approach being applied where further semantic specification for the lexeme “time” helped to show unconventional uses of the lexeme “time”.
Lakoff and Johnson’s Conceptual Metaphors of Time (1999)

This approach to the analysis of metaphors of time in discourse is developed from Lakoff and Johnson’s *Philosophy in the Flesh* (1999). Lakoff and Johnson (1999) describe a variety of conceptual metaphors of time and *metonymies* for time. Metonymy, similar to metaphor, is defined as using one entity to refer to another (Lakoff & Johnson, 1980, 35.) For example, “the rock concert was long,” uses the Event-for-Time metonymy where the event, “the rock concert,” stands metonymically for a specific period of time. This approach to analyzing temporal discourse classifies metaphors and metonymies according to the following categories described by Lakoff & Johnson (1999):

A. Time Orientation metaphor
B. Moving Time metaphor
C. Moving Observer metaphor
D. Event-for-Time metonymy
E. Distance-for-Time metonymy
F. Time as a Resource metaphor
G. Time as Money metaphor

The following outlines and provides examples of these metaphors and metonymies:

**Time Orientation Metaphor**

The Time Orientation metaphor is the most basic metaphor. Its construal situates an observer who is at the present who faces the future. Lakoff and Johnson provide the following examples:

That’s all *behind* us now.
We’re looking *ahead* to the future.
He has a great future *in front of* him.

(1999, 140)
Moving Time Metaphor

In this metaphor, Lakoff and Johnson (1999) describe time using a lone, stationary observer who faces a fixed direction. An indefinite sequence of objects (times) move past the observer from front to back and these objects are also conceptualized as having fronts that face their direction of motion (Lakoff & Johnson, 1999, 141). The motion of the objects (time) moving past the observer represents the “passage” of time.

The Moving Time metaphor can be combined with the Time Orientation metaphor to create the following composite mapping:

<table>
<thead>
<tr>
<th>The location of the observer</th>
<th>The present</th>
</tr>
</thead>
<tbody>
<tr>
<td>The space in front of the observer</td>
<td>The future</td>
</tr>
<tr>
<td>The space behind the observer</td>
<td>The past</td>
</tr>
<tr>
<td>Objects</td>
<td>Times</td>
</tr>
<tr>
<td>The motion of objects past the observer</td>
<td>The “passage” of time</td>
</tr>
</tbody>
</table>

(Lakoff & Johnson, 1999, 142)

Here are some examples of the Moving Time metaphor:

- The deadline is *approaching*.
- The time for action *has arrived*.
- The summer just *zoomed by*.
- The time for end-of-summer sales has passed
- In the weeks *following* next Tuesday, there will be very little to do.

(Moving Observer Metaphor

The Moving Observer metaphor differs from the Moving Time metaphor because the observer is no longer fixed in one location. Alternatively, the locations (times) are fixed on a path upon which the observer moves. The motion of the observer represents the “passage” of time while the distance moved by the observer represents the amount of time “passed.”

(Lakoff & Johnson, 1999, 143)
When we combine the Moving Observer metaphor with the Time Orientation metaphor, we have the following composite mapping:

<table>
<thead>
<tr>
<th>Location Mapping</th>
<th>Time Mapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>The location of the observer</td>
<td>The present</td>
</tr>
<tr>
<td>The space in front of the observer</td>
<td>The future</td>
</tr>
<tr>
<td>The space behind the observer</td>
<td>The past</td>
</tr>
<tr>
<td>Locations on the observer’s path of motion</td>
<td>Times</td>
</tr>
<tr>
<td>The motion of the observer</td>
<td>The “passage” of time</td>
</tr>
<tr>
<td>The distance moved by the observer</td>
<td>The amount of time “passed”</td>
</tr>
</tbody>
</table>

(Lakoff & Johnson, 1999, 146)

Lakoff & Johnson provide the following examples:

- There’s going to be trouble down the road.
- His visit to Russia extended over many years.
- She arrived on time.
- We’re coming up on Christmas.
- We passed the deadline.

(1999, 146)

Event-for-Time Metonymy

The Event-for-Time metonymy can co-occur with other metaphors of time. Through metaphor, temporal moments are represented as locations, substances, or motion and events are bounded and realized with respect to these temporal moments. For example, in the sentence, “The rock concert is approaching,” the event (rock concert) metonymically stands for the time (duration) of the concert.

Distance-for-Time Metonymy

Distance can also stand metonymically for time as in “I slept for fifty miles while she drove” (Lakoff & Johnson, 1999, 152). In this example, the time it took to drive “fifty miles” is the amount of time the speaker slept.

Time as a Resource Metaphor

The Time as a Resource metaphor is a characteristic way of conceptualizing time in Western culture (Lakoff & Johnson, 1999, 161). This metaphor maps information from
a resource domain (source) onto the time domain (target). Lakoff & Johnson describe this mapping:

<table>
<thead>
<tr>
<th>The resource</th>
<th>→ Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>The user of the resource</td>
<td>→ The agent (the user of time)</td>
</tr>
<tr>
<td>The purpose that requires the resource</td>
<td>→ The purpose that requires time</td>
</tr>
<tr>
<td>The value of the resource</td>
<td>→ The value of the time</td>
</tr>
<tr>
<td>The value of the purpose</td>
<td>→ The value of the purpose</td>
</tr>
</tbody>
</table>

(1999, 162-3)

Linguistic expressions of this metaphor include:

You've *used up* all of your time.
The job *took up* three hours.
He *used* his time efficiently.

**Time as Money**

Money is a type of resource; therefore, the Time as Money metaphor is similar to the Time as a Resource metaphor. They are constituents of the same system. In the Time as Money metaphor, words like “budget,” “spend,” “invest,” “profit,” and “loss” prompt for this metaphor. This mapping is as follows:

<table>
<thead>
<tr>
<th>Money</th>
<th>→ Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>The user of the money</td>
<td>→ The user of time (the agent)</td>
</tr>
<tr>
<td>The purpose that requires the money</td>
<td>→ The purpose that requires time</td>
</tr>
<tr>
<td>The value of the money</td>
<td>→ The value of the time</td>
</tr>
<tr>
<td>The value of the purpose</td>
<td>→ The value of the purpose</td>
</tr>
</tbody>
</table>

(Lakoff & Johnson, 1999, 163-4)

Lakoff and Johnson provide the following linguistic expressions of this metaphor:

I have to budget my time.
I spent too much time on that.
I’ve invested a lot of time on this project.

(1999, 164)

The above 7 types of conceptual metaphors form the framework for the analysis of temporal metaphors in this thesis.

This cognitive approach to the analysis of time is developed by Evans (2003). Evans presents a framework that determines a range of distinct lexical concepts for time. This approach considers instances where lexical concepts are paired with the lexeme “time”. It suggests that there are 8 distinct senses of time:

1. The Duration Sense
2. The Moment Sense
3. The Instance Sense
4. The Event Sense
5. The Matrix Sense
6. The Agentive Sense
7. The Measurement-system Sense
8. The Commodity Sense

I outline and provide examples for each of Evans’ senses of time that will analyze the use of the lexeme “time” in the conversational texts produced by speakers with ASD.

The Duration Sense

The Duration Sense is a lexical concept that constitutes an interval bounded by two “boundary” events. There is an onset and an offset that creates a temporal interval. The duration sense can be elaborated in terms of physical length, quality of experience, and temporal compression and protracted duration. Evans (2003) provides the following examples:

The relationship lasted a long/short time.
During their ill-fated marriage they fought a lot/some/much of the time.
He returned to Germany for good in 1857, moving for a time to Berlin.
Time flies (by) when you’re having fun.
Time crawls (by) when you’re bored.

(110-115)
Moment Sense

The Moment Sense prompts for a conceptualisation of a discrete of punctual point or moment without reference to its duration. Evans provides the following examples:

The time for a decision has arrived / come.
Doctors had warned that Daniel, five, of Sinfin, Derby, could die at any time.
What size was she the time of change?
What time is it?

(2003, 123)

Instance Sense

The Instance Sense prompts for a reading in which an instance of a particular event, activity, process or state is being referenced. Evans provides the following examples:

Devine improved for the fourth time this winter when he reached 64.40 meters at a meeting in Melbourne.
This time, it was a bit more serious because I got a registered letter.
He did it 50 times in a row.
Once it was clear that the room could not be held, he would order its evacuation, men leaving two at a time by the far window.

(2003, 131)

Event Sense

The Event Sense prompts for a conceptualisation in which a specific event is referenced. An event constitutes an occurrence of some type, characterized by certain features or characteristics which mark the occurrence as is by being temporally discreet. This sense references an experiential point in an event-sequence (event embedded in ongoing experience/event-sequences). The following linguistic expressions are examples of the Event Sense of time:

The young woman’s time [=labour] approached.
The man had every caution given him not a minute before to be careful with the gun, but his time was coming as his poor shipmates say and with that they console themselves.
The barman called time.  

(Evans, 2003, 135)

**Matrix Sense**

In the Matrix Sense, “time” prompts an entity that is unbounded. Evans provides the following examples:

- Time flows/runs/goes on forever.
- Time has no end.
- Those mountains have stood for all time.
- Nothing can outlast time.  

(Evans, 2003, 142)

**Agentive Sense**

The Agentive Sense prompts time as an entity that serves to bring about change.

Here are some examples:

- Time, the subtle thief of youth.
- Time has aged me.
- Time has left its scars
- Time has yellowed the pages
- Time transformed her
- Time reveals all

(Evans, 2003, 159)

**Measurement-System Sense**

In the Measurement-System Sense, physical symbols can be used to represent or measure time. The temporal measurements arise due to the correlation between periodic behaviour in the external world and our experience of duration. Evans provides the following examples:

- Clock—serves to divide day into hours, minutes, seconds...
- In quick time (dance), 108 paces, or 270 feet, are taken in a minute; and in slow time, seventy-five paces, or 187 feet...
- To play music out of time.
- In the 1850s Railway time was introduced as standard.
- We get paid double time on public holidays

(2003, 169)
Commodity Sense

The Commodity Sense prompts time as an entity that is valuable. It therefore can be exchanged, traded, acquired, and possessed:

Remember that time is money.
Time has become a scarce commodity. Everyone wants more of it.
They are selling time-shares on the Costa Blanca.
The psychiatrist charges a lot for her time.
A few techniques to create more time in your day.

(Evans, 2003, 177)

Following Evans, the above 8 senses of time form the framework to analyze the use of the lexeme “time” in conversational texts produced by speakers with ASD. This chapter has described the methods used in this thesis. Cohesion analysis was used to isolate stretches of temporal text from 9 conversational transcripts produced by speakers with ASD. Speech genre analysis and conceptual metaphor analysis was used to describe observations in each of the 9 texts and the patterns across all 9 texts.
CHAPTER 4 – SPEECH GENRE ANALYSIS

In this chapter I examine generic structure in temporal discourse in semi-structured conversations involving speakers with Autism Spectrum Disorders (ASDs). My approach uses genre analysis (Eggins & Slade, 1997; Plum, 2004; Martin, 1997) from functional discourse analysis to examine a corpus of nine texts. The chapter examines how speakers with ASD produce, structure, and comprehend temporally sequenced events in spoken text. Genre analysis from the discipline of discourse analysis is used to classify stretches of spoken text that involve sequences of events. This chapter proceeds in two parts. Part 1 describes each speaker’s use of genre in the 9 individual texts. Part 2 extends upon this description by analyzing patterns of genre use across the 9 texts.

To identify speakers’ use of genre, stretches of spoken text that involve sequences of events were isolated from 9 transcripts of transcribed conversations based on the speakers’ use of Halliday & Hasan’s (1976) external conjunctive relations of the temporal type. These stretches of text were classified into 6 genre types that follow the work of Eggins and Slade (1997) and Plum (2004). Table 1.1 identifies the 6 genre types used for analysis in this chapter and their generic structure. Appendix 1 presents the full set of extracted data coded for genre types and generic stages.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Generic structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative</td>
<td>(Abstract) ^ (Orientation) ^ Complication ^ Evaluation ^ Resolution ^ (Coda)</td>
</tr>
<tr>
<td>Anecdote</td>
<td>(Abstract) ^ (Orientation) ^ Remarkable Event ^ Reaction ^ (Coda)</td>
</tr>
<tr>
<td>Exemplum</td>
<td>(Abstract) ^ (Orientation) ^ Incident ^ Interpretation ^ (Coda)</td>
</tr>
<tr>
<td>Specific Recount</td>
<td>(Abstract) ^ (Orientation) ^ Specific Record of Events ^ (Coda)</td>
</tr>
<tr>
<td>General Recount</td>
<td>(Abstract) ^ (Orientation) ^ General Record of Events ^ (Coda)</td>
</tr>
<tr>
<td>Procedure</td>
<td>(Abstract) ^ Orientation ^ How To ^ (Coda)</td>
</tr>
</tbody>
</table>

Table 4.1 – Genre types used for analysis
PART 1: Individual Text Analysis

This section begins the analysis of genre by describing the individual speaker's use of genre in the 9 texts. In these texts, both the researcher (RES) and the child (CHI) contribute to the generic structure of the text because turn-taking is a characteristic of conversational discourse.

Text 1

Text 1 contains 2 stretches of temporally sequenced text. The first was a General Recount and the second was a Specific Recount. The General Recount text proceeds through an Orientation stage followed by a Record of Events:

RES: what do you do when you go home from school Will?
CHI: ah -: I play games.

Example 4.1 – General Recount 1, transcript 1, lines 79-80

As can be seen from Example 1.1, the General Recount identified is not produced entirely by the research participant. Rather, the researcher utters the Orientation as a question and the child utters the Record of Events in response to the researcher's question. The participant that contributes each generic stage is identified because conversational texts, especially clinical texts, involve a semi-structured turn-taking pattern where both participants share the construction of the genre. The child’s Record of Events involves a single event and the researcher solicits it.

The Specific Recount proceeds through the generic stages of Orientation^ Record of Events^ Orientation^ Record of Events^ Record of Events^ Orientation^ Record of Events:

RES: so do you like pizza Will?
CHI: mmm.
Example 4.2 – Specific Recount 1, transcript 1, Lines 138-150

The second text’s sequence repeats the Orientation→ Record of Events sequence 3 times with an additional Record of Events between the second and third sequence. In this, each Orientation stage following the initial Orientation functions to re-establish the temporal setting when supper was eaten. In both the General Recount and Specific Recount, all Orientation stages were uttered by the researcher in the form of questions. The Records of Events represent the child’s responses to these questions.

In the 2 stretches of text, the researcher utters all 4 of the Orientation stages. The child only utters solicited Records of Events and each describes a single event. A turn-taking pattern is observed where the researcher poses a question and the child answers it. It appears that the child requires structure from the researcher’s questions to sustain turn-taking in the conversation. Table 4.2 summarizes the genres types and generic stages that speakers in text 1 use.
Table 4.2 – Summary of genre types and generic stages used by speakers in text 1

Text 2

Text 2 contains a single General Recount (see Appendix 1). This text uses only Orientation and Record of Events stages in its generic structure with the exception of an evaluative comment that also serves as a Coda uttered by the researcher. The General Recount contains 3 Orientations, 3 Record of Events, and a Coda. Two of the 3 Orientations were uttered by the researcher and the remaining Orientation was uttered by the child and solicited by the researcher. All 3 Records of Events were uttered by the child and solicited by the researcher. The generic structure of the text repeats the Orientation^Record of Events sequence 3 times. The participants’ turn-taking followed a pattern where the researcher posed a question and the child answered the question. The conversation relies heavily on this turn-taking pattern to sustain conversation as all of the
child’s responses were solicited by the researcher. Table 4.3 summarizes the genre type and generic stages that speakers in text 2 use.

<table>
<thead>
<tr>
<th>Transcript Number</th>
<th>Narrative</th>
<th>Anecdote</th>
<th>Exemplum</th>
<th>Specific Recount</th>
<th>General Recount</th>
<th>Procedure</th>
<th>Abstract</th>
<th>Abstract by Child Solicited (S)/Unsolicited (U)</th>
<th>Orientation</th>
<th>Orientation by Child Solicited (S)/Unsolicited (U)</th>
<th>Record of Events</th>
<th>Record of Events by Child Solicited (S)/Unsolicited (U)</th>
<th>How To</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>S</td>
<td>3</td>
<td>S</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4.3 – Summary of genre types and generic stages used by speakers in text 2

Text 3

Text 3 contains a Specific Recount and 3 General Recounts. The Specific Recount is particularly interesting because it contains a Reaction stage that is normally found in Anecdotes. It appears that the child and researcher have a misunderstanding in the conversation’s genre (see Example 4.3). The Specific Recount is also discontinuously realized.

The Specific Recount proceeds through the following genre stages:

- Abstract^  
- Orientation^  
- Evaluation^  
- Record of Events^
In the Specific Recount, the child engages in a Recount while the researcher appears to engage in an Anecdote. Table 4.4 compares the generic structure of an Anecdote with the generic structure of a Specific Recount.

<table>
<thead>
<tr>
<th>Genre</th>
<th>Generic structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anecdote</td>
<td>(Abstract) ^ (Orientation) ^ Remarkable Event ^ Reaction ^ (Coda)</td>
</tr>
<tr>
<td>Specific Recount</td>
<td>(Abstract) ^ (Orientation) ^ Specific Record of Events ^ (Coda)</td>
</tr>
</tbody>
</table>

Table 4.4 – Generic structure of the Anecdote and the Specific Recount

In Chapter 3, *Methods*, it is noted that the beginnings and endings of genre types may use some of the same generic stages. Both the Anecdote and Specific Recount may begin with Abstracts and Orientations and they may conclude with Codas. These shared stages and the nature of the Remarkable Event and Specific Record of Events stages in both genre types appear to cause the confusion between the participants.

The researcher begins the Specific Recount with an Abstract. The child then utters an Orientation that is solicited by the researcher. The researcher evaluates and then asks a question. The child responds to the researcher’s question with a Record of Events. This Record of Events is solicited and it describes 6 events in serial order. The researcher
appears to mistake the child’s Record of Events for a Remarkable Event and interrupts
the child with a Reaction, “wow.” The researcher then attempts to reorient the
conversation with a question; however, the child answers this question with a polar
response and returns to continue his Record of Events:

Example 4.3 – Excerpt from Specific Recount 1, transcript 3, lines 26-36

The misinterpretation of genre types may be better understood by considering the
context of situation. In this text, what is happening ideationally is a casual conversation
between a researcher and a child. Both participants appear to understand that the
conversation genre belongs to a storytelling genre type. The level of specificity of
language appears to be the source of confusion. The child retells events with great detail;
for example, the naming of each music album. This child’s use of detail is more typical of
a Remarkable Event stage found in the Anecdote genre type. The researcher appears to
draw this conclusion based on the child’s use of detail. Typically in a Recount,
information in a Record of Events would be kept more general compared to a
Remarkable Event in an Anecdote. Compare the level of specificity and detail in the following invented examples:

**Recount:**
Yesterday night I made macaroni and cheese. After dinner, I watched some T.V.

**Example 4.4 – Typical Record of Events stage in a Recount**

**Anecdote:**
Yesterday night I made macaroni and cheese. I took a cup of dry macaroni and put it in a pot. Then I went over to the sink, and when I held the pot under the faucet and tuned on the hot water tap, smelly brown water came out of the tap! Yuck!

**Example 4.5 – Typical Remarkable Event and Reaction Stages in an Anecdote**

In the Remarkable Event stage, information is typically retold with more detail compared to the Record of Events stage. Overly specific information when relating text to context would hint to the audience that that the detailed retelling of events is intentional. In a Recount or an Anecdote, audiences may not establish the text’s genre type until after the optional elements have been uttered because both may begin with the same optional elements. The child uses high level of detail in the Record of Events and the researcher believes that the child is retelling a Remarkable Event. This example suggests that speakers with ASD may have difficulty with the coordination of contextual information producing utterances in conversations that can mislead audiences.

In the Specific Recount, the child continues in an extended Record of Events following the researcher’s Reaction and (re)Orientation. The child’s Record of Events describes 12 events in serial order. The researcher attempts to reorient the child during his Record of Events 4 times, but the child always returns to his Record of Events. These attempts to reorient, including the child’s return to a Record of Events, are shaded in

Example 4.6:
RECORD OF EVENTS

RES: what did you see in Toronto?
CHI: <I> [>] 
RES: <or in> [<>] Toronto?
CHI: first I went to Kingsbury.
CHI: and visited my aunt Eddy and Judy Winston
CHI: on on Tuesday and Wednesday Judy Winston and J we
both went to the airport to pick up Sophie.
CHI: (a)n(d) Sophie introduced us to a band called the
Wallflowers with Jacob Dillon in it.
RES: oh where does the band play?
CHI: from America.
RES: oh from America.
CHI: Sophie and I went to Recordman.
CHI: and at Recordman Recordman we found a Stan Rogers
tape called Poetic Justice [!] with two radio players called
Harris and the major and the sisters.
CHI: um J Sophie found a Sophie found a thing that wasn't
Tom Waits wasn't the Wake it wasn't Rick Wakefield but it was the
Wallflowers # called bringing down the horse.
CHI: it was the only Wallflowers album they ever recorded.

ANECDOTE

RES: wow.

REACTION

RES: have you heard about them before?
RES: this group?
CHI: no!
RES: no?
CHI: uh the so; then we went to an antique shop
CHI: and then back to Vinyl Records.
CHI: when I flipped through the the letter b in the Bowie
[!] section I found Changes [!] One Bowie.
CHI: and then in the Cohen [!] section I rifled through
till I was stopped dead by the blue raincoat staring out from the
new Jennifer Warnes album called Famous Blue Raincoat.
CHI: and I got it on LP and cassette.
CHI: and then we and then we went home to and then and
then we fou home and then we drove back to Kingsbury and
Kingsbury.
CHI: and listened to it on the way -: ay there.
CHI: and at Kingsbury I ate some lasagna and butterscotch
icecream.
CHI: and we went outside at night and played in the snow
um <and> [>].
RES: <do you> [<>] .
CHI: the next day I we I went to the bookshop.
CHI: and got the English version of the Judith Reicer book
Alexander And The terrible Horrible No Good Very Bad Day <which>
loved [>] .

ORIENTATION

RES: <excuse me Will> [<>] .
RES: did you have cousins there to play with too?
CHI: no :]
RES: no just <adults eh hm> [>].
The shaded areas in the above example show a rigid adherence to the Record of Events stage of the Recount genre. The Specific Recount in Text 3 includes 7 Orientations, 6 Records of Events, a Reaction, 3 Evaluations, and a Coda. Six of the 7 Orientations and all the Records of Events were uttered by the child. Of these 6 Orientations, 5 were solicited by the researcher while only 1 of the 6 Record of Events was solicited by the researcher. The ratio 5:1 of unsolicited Record of Events to
unsolicited Orientations points again to preferred or rigid use of the Record of Events
generic stages in genre. In the Specific Recount, the researcher uttered the Reaction, and
2 of the 3 Evaluations. The child uttered a single Evaluation and it was solicited by the
researcher.

Text 3 also contains 3 General Recounts. The first General Recount proceeds
through Orientation^ Record of Events^ Orientation^ Evaluation/Coda. All stages are
uttered by the researcher. The second General Recount proceeds through Abstract^
Orientation^ Evaluation^ Orientation^ Record of Events^ Orientation^ Record of Events^
Evaluation/Coda. The Abstract is uttered by the child and solicited by the researcher.
Two of the 3 Orientation stages were uttered by the child and solicited by the researcher
and both Records of Events were uttered by the child without solicitation. The first
Record of Events describes a single event while the second Record of Events describes 2
events in serial order. Both the Evaluation and the Evaluation/Coda are uttered by the
researcher.

The third General Recount proceeds through Orientation^ Record of Events^
Evaluation^ Record of Events^ Coda. Two Records of Events are uttered by the child and
are solicited by the researcher. Both Records of Events describe 2 events in serial order.
The Orientation, Evaluation, and Coda are uttered by the researcher.

Text 3 contains 13 Orientations (4 by the researcher and 9 by the child). Seven of
the child’s Orientations are solicited by the researcher. The child utters 10 Records of
Events, 8 of which are unsolicited. The researcher utters a single Reaction, all Codas (4)
and 6 of the 7 Evaluations. (The child’s Evaluation is solicited by the researcher.)
Interestingly, in this text, the child engages in Records of Events that often describe
multiple events in serial order. Table 4.5 summarizes the genre types and generic stages that the speakers in text 3 use.

<table>
<thead>
<tr>
<th>Transcript Number</th>
<th>Narrative</th>
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<th>How To by Child Solicited (S)/Unsolicited (U)</th>
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Table 4.5 – Summary of genre types and generic stages used by speakers in text 3

**Text 4**

Text 4 contains a General Recount, and a Procedure. The General Recount proceeds through Orientation^ Record of Events^ Evaluation. The researcher utters the Orientation in the form of a question. The child responds with a Record of Events that describes a single event. The child then utters an unsolicited Evaluation.

The Procedure describes how to make Kraft Dinner. The Procedure proceeds through Abstract^ Orientation^ Record of Events^ Coda. It follows the Procedure genre described by Eggins and Slade perfectly because it uses all mandatory and optional stages of the Procedure genre type. The researcher utters the Abstract in the form of a question:
“Do you do any cooking at home Will?” The researcher then orients. The child utters a How To stage that involves 3 steps. The child provides an unsolicited Coda.

Text 4 contains 2 stretches of spoken discourse that use temporally sequenced events. The researcher uses a single Abstract. The speakers use 2 Orientations; both speakers utter a single Orientation. The child’s Orientation is unsolicited. The child utters a single Record of Events and a single How To stage that are both solicited by the researcher. The child utters a single unsolicited Evaluation. In text 4, the child demonstrates competency in using the Procedure genre type in addition to the General Recount genre type. The child is also able utter an unsolicited Coda and evaluates without solicitation once. Table 4.6 summarizes the genre types and generic stages that the speakers in text 4 use.

| Transcript Number | Narrative | Anecdote | Exemplum | Specific Recount | General Recount | Procedure | Abstract | Orientation | Orientation by Child Solicited (S)/Unsolicited (U) | Record of Events | How To by Child Solicited (S)/Unsolicited (U) | How To | Remarkable Event by Child Solicited (S)/Unsolicited (U) | Remarkable Event | Reaction by Child Solicited (S)/Unsolicited (U) | Coda by Child Solicited (S)/Unsolicited (U) | Evaluation by Child Solicited (S)/Unsolicited (U) | Evaluation |
|-------------------|-----------|----------|----------|-----------------|-----------------|-----------|----------|-------------|-----------------------------------------------|----------------|-----------------------------------------------|---------|------------------------------------------------|------------------|-----------------------------------------------|---------------------|-----------------------------------------------|
| 4                 | 0         | 0        | 0        | 0               | 1               | 1         | 1        | 0           | 1 (S) (1 (S)/Unsolicited (U))                   | 1 (S)          | 1 (S)                                            | 1       | 1 (S)                                            | 0 (S)               | 0 (S)                                          | 0 (S)               | 1 (Unsolicited (U))                                 | 1 (Unsolicited (U)) |

Table 4.6 – Summary of genre types and generic stages used by speakers in text 4
Text 5

Text 5 contains a Specific Recount and a Procedure. The Specific Recount proceeds through Orientation^ Record of Events^ Record of Events^ Evaluation/Coda. The researcher utters the Orientation, the first Record of Events, and the Evaluation/Coda. The child utters the second Record of Events and it is solicited by the researcher. The child’s Record of Events describes a single event. The Procedure from Text 5 proceeds through Abstract^ Orientation^ Evaluation^ How to^ Evaluation^ Evaluation/Coda. The child utters the Abstract that is solicited by the researcher. The researcher utters the Orientation and the child follows with an unsolicited Evaluation. The child then utters a How To solicited by the researcher and then evaluates without solicitation. The How To describes 3 steps. Finally, the researcher utters the Evaluation/Coda.

Text 5 contains a single solicited Abstract uttered by the child, 2 Orientations uttered by the researcher, 2 Record of Events (one solicited and uttered by the child and the other uttered by the researcher), a solicited How To uttered by the child, 2 Codas uttered by the researcher, and 4 Evaluations. Two of the evaluations are unsolicited and are uttered by the child and 2 are uttered by the researcher. The child’s utterances are all solicited by the researcher with the exception of 2 unsolicited Evaluations. Table 4.7 summarizes the genre types and generic stages that the speakers in text 5 use.
Text 6

Text 6 contains a General Recount and 2 Procedures. The General Recount proceeds through an Orientation^ Record of Events. The researcher solicits both stages and they are uttered by the child. The child’s Record of Events describes 2 events in serial order. Both Procedures proceed through Orientation^ How To^ Evaluation/Coda. In both cases, the child utters all elements. All stages in the Procedures are unsolicited except for the Orientation in the first Procedure. Both How To stages describe 2 steps in serial order.

Text 6 contains 3 Orientations, one uttered by the researcher, and 2 uttered by the child. Of the 2 Orientations produced by the child, one is solicited by the researcher and the other is not. The text also contains 2 How To stages, 2 Codas, and an Evaluation.
These stages are all unsolicited and uttered by the child. Table 4.8 summarizes the genre types and generic stages that the speakers in text 5 use.

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<tr>
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<th>Narrative</th>
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<th>Exemplum</th>
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<th>General Recount</th>
<th>Procedure</th>
<th>Abstract</th>
<th>Orientation</th>
<th>How To</th>
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<th>Record of Events by Child Solicited (S)/Unsolicited (U)</th>
<th>Remarkable Event by Child Solicited (S)/Unsolicited (U)</th>
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Table 4.8 – Summary of genre types and generic stages used by speakers in text 6

**Text 7**

Text 7 contains 4 General Recounts. The first proceeds through Abstract^ Orientation^ Evaluation^ Record of Events^ Orientation^ Record of Events^ Record of Events^ Record of Events^ Orientation^ Evaluation/Coda. The child in this text demonstrates advanced use of generic stages of the General Recount. The Abstract is solicited by the researcher and uttered by the child. The first Record of Events describes a single event. The Orientation and first Record of Events, produced by the child, are unsolicited. The researcher reorients the conversation and solicits a second Record of Events from the child. The second Record of Events describes 5 events in serial order.
The second, third, and fourth Records of Events in the first General Recount are interesting because the fourth Record of Events is discontinuously realized from the second Record of Events, while the third Record of Events refers to a different temporal setting:

<table>
<thead>
<tr>
<th>RECORD OF EVENTS (2)</th>
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<tbody>
<tr>
<td>CHI: well we take the um four+forty+five bus.</td>
</tr>
<tr>
<td>CHI: um -: and that is those um tho.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECORD OF EVENTS (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHI: well it's not Funtrack.</td>
</tr>
<tr>
<td>CHI: it used to be Funtrack.</td>
</tr>
<tr>
<td>CHI: it's Trentway &lt;now&gt; [&gt;.</td>
</tr>
<tr>
<td>RES: &lt;mmhm&gt; [&lt;] mmhm?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECORD OF EVENTS (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHI: and um # and we take the we take the four+forty+five bus.</td>
</tr>
<tr>
<td>CHI: then um it goes to all these little towns before it stops at um in Hamilton.</td>
</tr>
</tbody>
</table>

Example 1.7 – General Recount 1, transcript 7, lines 30-37

The child discusses the bus ride he generally takes to work in the second Record of Events, then shifts to the third Record of Events where he describes the before and after facts of the bus’ name/type. In the fourth Record of Events, the child returns to continue the second Record of Events by repeating it and then proceeds through additional events in serial order. That is, the child suspends the temporal sequences in the second Record of Events, shifts to another temporal sequence (the third Record of Events) and then continues the second Record of Events in the fourth Record of Events. The third and fourth Records of Events both describe 2 events in serial order. The final Orientation is an unsolicited list of towns (possibly in serial order) uttered by the child with an Evaluation/Coda uttered by the researcher.

The second General Recount in Text 7 has a simple structure of Orientation^ Record of Events. The Orientation is uttered by the researcher and the Record of Events is solicited by the researcher and uttered by the child. This Record of Events describes 2
events in serial order. The third and fourth General Recounts in Text 7 followed a similar simple generic structure. The third General Recount proceeds through Orientation^ Record of Events^ Evaluation^ Record of Events. The Orientation is uttered by the researcher and both Records of Events are uttered by the child. The first Record of Events is solicited by the researcher and describes a single event while the second Record of Events is unsolicited and describes 2 events in serial order. The first and second Records of Events are discontinuously realized and they are separated by a brief Evaluation uttered by the researcher.

The child utters the entire fourth General Recount. The generic structure proceeds through Orientation^ Record of Events^ Orientation^ Record of Events. The initial Orientation is solicited by the researcher while the remaining stages are unsolicited. Both Records of Events are a result of a discontinuously realized single Record of Events and the Orientation that separates them functions to further specify the situation under which the first Record of Events occurs. Here the child describes his physical activity, reorients the situation, and then continues describing the serial events in his workout:

```
CHI: <well> [<>] we u I used to do that for sportsnight.
CHI: I I don't very much now.
CHI: but I do one # but um on Sundays I go to uh my fitness classes.
CHI: and I do lifting lifting one up.

CHI: well those those weight things.
CHI: except they're not the big sort of weights.
CHI: because I tried to lift those.
CHI: <and couldn't do that> [% chuckling].
CHI: so it's more of the machine sort of weights.
RES: uhhuh?

CHI: you do the.
CHI: excuse me.
CHI: <xxx> [<>].
RES: <0 [=! chuckles]> [<>].
CHI: um # I do um.
CHI: what else do I do?
```
CHI: I do this um # the ones where you go like this.
RES: oh right.
CHI: then you # you do that.
RES: yeah.
CHI: I do um something with # that.
CHI: I do #.

Example 4.8 – General Recount 4, transcript 7, lines 148-169

Text 7 contains 7 Orientations; 3 are unsolicited and uttered by the child while 4 are uttered by the researcher. Text 7 also contains 9 Records of Events all uttered by the child; 4 Records of Events are solicited by the researcher while 5 are not. Several of the Record of Events stages describe multiple events in serial order. The researcher utters a Coda and 3 Evaluations. The child in Text 7 is flexible with generic structure because he is able to divide Records of Events with an optional stage (an Orientation). He is also able and to produce discontinuously realized spoken discourse. Table 4.9 summarizes the genre types and generic stages that the speakers in text 7 use.
Table 4.9 – Summary of genre types and generic stages used by speakers in text 7

Text 8

Text 8 contains 2 Specific Recounts, a General Recount, and a Procedure. The 2 Specific Recounts are simple in generic structure; they proceed through Orientation^Record of Events. In the first Specific Recount, the child utters both the Orientation and the Record of Events. In the Record of Events, the researcher attempts to solicit a How To with the questions, “How does it get filled up?” but the child responds with a Record of Events that contains a single event. If the child had responded to the researcher’s question with a How To, the text would be classified as a Procedure rather than a Specific Recount.
RES: <and> [<] you were telling me about a cement truck before.
CHI: mm --: yes!
CHI: it had a wet heavy load.
RES: a wet heavy load --: .
CHI: of concrete.
RES: from what?
CHI: for the m for for the mighty mixer.
CHI: that xxx.
RES: how does it get filled up?
CHI: just go xxx.

Example 4.9 – Recount 1, transcript 8, lines 9-18

In the second Specific Recount, the researcher asks the child “what does it make?” In this question, “it” refers to wet cement mix when it dries. Instead of responding to the researcher’s question, again, the child utters a Record of Events that describes a single event:

RES: and what does it make?
CHI: um # and it turns that way instead of coming this way. it=truck
CHI: that's because they are many machines in the construction site.
RES: there are many which?
CHI: them there are many machines in the construction site.

Example 4.10 – Recount 2, transcript 8, lines 38-42

The child violates the conventions of generic stages in both Specific Recounts because he neglects the solicited question and responds with Records of Events. In example, 4.10, the researcher solicits a Record of Events and the child responds with a Record of Events; however, the child’s Record of Events does not answer the researcher’s question.

The General Recount proceeds through Orientation^ Record of Events^ Orientation^ Record of Events. The child utters the Orientation that is solicited by the researcher. An interesting aspect of the Orientation is that it contains what Hasan (Halliday and Hasan, 1989) term a probe. In Hasan’s analysis of sales encounters, if a person were to enter into a store and “hang about” the vendor may attempt to provoke a
Sales Request (SR). The vendor could attempt to do so by asking “Can I help you?” or “Are you alright?” (Halliday & Hasan, 1989, 66). Hasan explains, “It [a probe] consists of some device that is calculated to bring about the kind of behaviour on the part of some(one) participant…” (Halliday & Hasan, 1989, 66).

In the General Recount the child asks the researcher “what what did Sophia do?” This question functions as a probe that attempts to solicit a question from the researcher. It appears that the child knows that the researcher will not be able to answer this question and will respond accordingly with another question. The researcher responds with the anticipated question in the following example:

```
| ORIENTATION |
| RES: what's a dog <game> [>]?
| CHI: I have [<] so much I have so much fun.
| RES: what's a dog game like?
| CHI: it's it's xxx trying to get the other dogs out.
| RES: oh who do you play with?
| CHI: um -: sometime I play with Sophia
| CHI: what what did Sophia?
| CHI: well # what did she do?
| CHI: what did she do to me?
| RES: I don't know.
| RES: did she do something to you?
| CHI: yes.
```

```
| RECORD OF EVENTS |
| CHI: now she was stuck in in between maybe she got stuck in between. |
| ORIENTATION |
| RES: in between what?
| CHI: in between # the trees.
| RES: oh in between the trees?
| RES: <where in> [>]?
```

```
| RECORD OF EVENTS |
| CHI: now Sophia was gotten stuck in between # on a summer day. |
```

Example 4.11 – General Recount 1, transcript 8, line 119-136

The child appears so determined to probe for a specific question that he probes the researcher with 3 consecutive questions. When the researcher responds to the probe with the question, “Did she do something to you?” the child begins a Record of Events. The researcher then attempts to clarify the setting by soliciting the child to reorient. The child
responds and continues with an unsolicited Record of Events. Both of the child’s Records of Events in the General Recount describe a single event.

In total, Text 8 contains 5 Orientations; the researcher utters 2 Orientations while the child utters 3 Orientations. The child’s Orientations are solicited by the researcher. This text also contains 5 Records of Events that are all uttered by the child; 4 are solicited by the researcher while 1 is not. The majority of the conversation follows an Orientation^ Record of Events pattern. The child violates the genre initiated by the researcher and utters a Record of Events where another generic stage would typically be used or responds with a Record of Events that does not answer the researcher’s question. The child also probes the researcher 2 times in this text. In the first probe, the child attempts to probe the researcher by repeating the same question 3 times. In the second probe, the child is successful at probing the researcher with his first attempt. Table 4.10 summarizes the genre types and generic stages that the speakers in text 8 use.
Table 4.10 — Summary of genre types and generic stages used by speakers in text 8

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<th>Coda by Child Solicited (S)/Unsolicited (U)</th>
<th>Reaction by Child Solicited (S)/Unsolicited (U)</th>
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PART 2: Analysis of All Transcripts

In Part 1, stretches of text that use temporal events were categorized according to 6 genre types. The generic structure of each stretch was described and patterns were observed within individual texts. In this section, patterns across the 9 text are observed and discussed.

In the 9 texts, speakers use Specific Recounts, General Recounts, and Procedures but do not use Narratives, Anecdotes, or Exemplums. In total, the speakers use 5 Specific Recounts, 12 General Recounts, and 5 Procedures. General Recounts are the most frequently used genre type in the 9 texts. Table 4.11 details these findings.

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<td>Total</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>12</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.11 – Summary of genre types used by speakers in 9 texts

The generic stages that speakers use in the 9 texts correspond with the genre types found in the texts (see Appendix 2). There is an exception where a Reaction stage appears within a Specific Recount. Table 1.12 shows that the speakers (researcher and research participants) use Orientations most frequently (39 times), followed by Records of Events (37 times) and Evaluations (17 times). Although Orientations are an optional stage among the 6 genre types, speakers use Orientations more than other mandatory stages.
The speakers in the 9 texts use Records of Events frequently as it is a mandatory stage of the Recount genres but less often than Orientations. The Recount genres include both General Recounts and Specific Recounts. Together, these genre types were used the most by the speakers in the texts. Speakers also use Evaluations frequently. Evaluations are another optional stage found in all 6 of the genre types. Speakers use Reactions the least among the generic stages. A single Reaction appears in the 9 texts. This observation is not surprising as no Anecdotes are found in the 9 texts. Appendix 2 summarizes all genre types and generic stages used by speakers in the 9 texts.

```
<table>
<thead>
<tr>
<th>Generic Stage</th>
<th>Number of Times Used by Speakers</th>
<th>Number of Times Used by Researcher</th>
<th>Number of Times used by Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>5</td>
<td>3</td>
<td>2 (2S)</td>
</tr>
<tr>
<td>Orientation</td>
<td>39</td>
<td>20</td>
<td>19 (13S 6U)</td>
</tr>
<tr>
<td>Record of Events</td>
<td>37</td>
<td>4</td>
<td>33 (19S 14U)</td>
</tr>
<tr>
<td>How To</td>
<td>4</td>
<td>0</td>
<td>4 (2S 2U)</td>
</tr>
<tr>
<td>Remarkable Event</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reaction</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Coda</td>
<td>11</td>
<td>8</td>
<td>3 (3U)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>17</td>
<td>12</td>
<td>5 (1S 4U)</td>
</tr>
</tbody>
</table>
```

Table 4.12 – Summary of generic stages used by speakers in 9 texts

The child uses Records of Events the most frequently (33 times), followed by Orientations (19 times) and Evaluations (5 times). The child uses 33 Records of Events while the researcher uses 4 Records of Events. This finding may be explained by the semi-structured nature of the conversational texts. The researcher orients Recount genres and solicits Records of Events from the child; therefore, 19 of the child’s total 33 Records of Events are solicited by the researcher. Yet a remaining 14 Records of Events uttered by the child are not solicited and these warrant further examination. They can, perhaps,
be better understood from the analysis of individual texts. Earlier observations suggest that children with ASD have a tendency to use Records of Events in several ways. On 4 occasions in text 3, the child ignores or responds to Orientations that interrupt a Records of Events, but then returns to the Record of Events without solicitation. It can also be observed that the children sometimes respond using Records of Events from the Recount genre when other stages and genres are solicited by the researcher. This happens, for example, in text 8, when the researcher solicits a Procedure and the child responds using a Specific Recount. The children’s use of probes to cause the researcher to solicit Records of Events is a third observation that supports that children prefer to use Records of Events of the Recount genres. The use of probes is found twice in text 9. The first probe appears in a General Recount while the second probe appears in a Procedure. Although the second probe is found in a Procedure, the utterances that follow the probe appear to describe a Record of Events. These three observations suggest that children with ASD may have a preference for using Records of Events in spoken discourse.

The children use a total of 19 Orientation in the 9 texts. Those who use the most Orientations are the speakers in texts 3, 7, and 8. The child in text 3 uses 9 Orientations and the children in text 7 and 8 each use 3 Orientations. In each of the remaining texts (1, 2, 4, 5, 6, and 9) research participants use 2 or less Orientation stages. Still a further distinction should be made between those who produce solicited and unsolicited Orientations. The children who use unsolicited Orientation stages are found in texts 3, 6, and 7 (producing 2, 1 and 3 instances respectively). As noted earlier, speakers use Orientation stages to establish what is to follow in terms of people, actions, times and places in text; therefore, it can be suggested that children who use unsolicited
Orientations may have stronger conversational abilities. Another observation helps confirm that the children in texts 3, 6, and 7 who use unsolicited Orientations have stronger conversational abilities. These children are the only speakers with ASD among the 9 texts who describe multiple events in serial order while engaged in Record of Events stages.

Evaluations, the third most used generic stage by the children, may serve as another indication of conversational abilities. Evaluations offer appraisal and serve as running commentary between generic stages. The research participants in texts 3, 4, 5, and 6 use Evaluations. Those in texts 1, 2, 7, 8 and 9 do not. Of the Evaluations, only the children in texts 3, 4, 5 and 6 offer unsolicited Evaluations. (Child 3 utters a solicited Evaluation, child 5 utters 2 unsolicited Evaluations, and children 4 and 6 each utter a single unsolicited Evaluation.) One observation that can be made is that the children in texts 3 and 6 are the ones who use both unsolicited Orientations and Evaluations. This may suggest that they have a greater command over optional stages in generic structure.

The research participants in the texts use Abstracts the least among all the generic stages examined. Abstracts establish the point of the text and signals that a story is about to be told. The children use Abstracts only twice, and both times these stages were solicited by the researcher.

In contrast, the extensive use of Records of Events by the children points to their significant contributions to the Recount genres and a relative ease in this genre. As discussed in Chapter 3, Methods, the Recount genres were subdivided into 2 sub-types; Specific Recounts and General Recounts. Including both types, 17 Recounts are identified in the 9 texts: 12 General Recounts and 5 Specific Recounts. Together, these 17
instances of Recount genres form the majority of the genre types of the stretches of discourse uttered by the speakers in the 9 texts. Thus patterning in the Recount genres emerges as an interesting area for description.

Several patterns can be observed related to Recount genre use. The children in texts 3 and 7 appear to have greater conversational ability. This is suggested by longer dialogue between turns Child 3 utters 130 lines within 60 turns. This child utters an average of 2.17 lines per turn. Child 7 utters 61 lines within 19 turns. This child utters an average of 3.21 lines per turn. These averages can be compared to less conversationally engaged children who utter a single line per turn. The research participants in texts 3 and 7 are the only ones to use both unsolicited Orientations and Records of Events. They are also among the children who describe multiple events in serial order when engaged in Records of Events. The children in texts 3 and 7 also produce Records of Events that were discontinuously realized. The analysis of unsolicited generic stages is interesting because it demonstrates that usually where they occur, the child has consistent strength to utter them across multiple generic stages. Children 4, 5, 6, and 8 also use unsolicited generic stages but they are infrequent.

Texts 1, 5, and 9, do not contain any Orientations produced by research participants. The child in text 1 only uses 3 solicited Records of Events. In text 5 the child only uses a single solicited Record of Events and 2 unsolicited Evaluations. The child in text 9 does not use any genre types or generic stages. This pattern provides further evidence that weak conversational ability among the children may result in solicited stages and it is consistent across multiple generic stages. It is also important to note the possibility that weaker conversational abilities result in closer adherence to
mandatory stages of generic structure. The child in text 5 does use 2 unsolicited
Evaluations, however this is an exception.

Some of the children who are weaker conversationalists appear to have coping
techniques. Such techniques are evident in Texts 1, 2, and 8. In Text 1, the child provides
solicited answers to questions posed by the researcher that mirror the researcher (and
appear coincidental):

| ORIENTATION |
| RES: so do you like pizza Will? |
| CHI: mmhm. |
| RECORD OF EVENTS |
| RES: I had pizza last night for supper. |
| ORIENTATION |
| RES: what did you have for supper last night? |
| CHI: I had pizza too. |
| RES: did you? |
| CHI: yeah. |
| RES: oh -: |
| RECORD OF EVENTS |
| RES: and the night before I had pork chops. |
| ORIENTATION |
| RES: can you remember what you had the night before? |
| CHI: pork chops too. |
| RECORD OF EVENTS |
| RES: you had pork chops too. |
| RES: hm. |

Example 4.12 – Recount 1, transcript 1, lines 138-150

Also in Text 1, the child provides a solicited response that might be considered too
general as answer to fully address the researcher’s question:

| ORIENTATION |
| RES: what do you do when you go home from school Will? |
| CHI: ah -: I play games. |

Example 4.13 – General Recount 1, transcript 1, lines 79-80

In Text 2, the child uses minimal and polar responses that do not advance the
conversation:
RES: so what do you do on the weekends Will?
CHI: nothing.
RES: do you have a worker that comes?
CHI: nope.
RES: and spends some time with you?
CHI: yes.
RES: hm what's his name?
CHI: Tom.
RES: and what do you do with Tom
CHI: go out with him.
RES: mmhm?
RES: what do you do when you're out?
CHI: play golf.
RES: golf?
CHI: yes.

Example 4.14 – General Recount 1, transcript 2, lines 219-233

In Text 8, the child uses the elaborate technique of probing the researcher to solicit specific questions while demonstrating difficulties in other areas of the conversation.

Another pattern is the unvaried use of conjunctions of the temporal type. In the 9 texts, the children largely link temporal events in sequence by using the conjunctive (not coordinatating) and and the temporal simple conjunction of the sequential type (and) then.

It is true that these are among the most common ways that people generally communicate temporally sequenced events. However, in Texts 3 and 7, there are stretches of discourse where the conjunctions are unvaried and almost exclusive to “and” and “(and) then”, reflecting a pattern of serial ordered relations that may be characteristic in ASD (de Villiers & Szatmari, 2004):

CHI: excuse me and excuse me and then we went home.
CHI: and I went outside again.
CHI: and I took a bath.
CHI: and then [!] I went to sleep.
CHI: and then I went to bed.
CHI: and turned off the light.
CHI: the next morning I packed my suitcase up.
and we went back to Toronto.

Example 4.15 – Excerpt from Recount 1, transcript 3, lines 64-71

23. CHI: we go on the van first.
24. CHI: and then and then we then we work # then we work um something like uh nine+thirty to nine+thirty to twelve [!].
25. CHI: then we have lunch at twelve at that.
26. CHI: then we start back at work at one o'clock.
27. CHI: and then we go right all the way through to four+thirty.
28. RES: oh -: .

Example 4.16 – Excerpt from Recount 1, transcript 7, lines 23-28

Inflexible use of conjunctions in Text 7 only occurs once while it is a consistent pattern throughout Text 3. Excerpts that follow a rigid pattern of question by the researcher and response by the child (Texts 1 and 2) did not contain any conjunctions uttered by the child because turn-taking proceeded through a question from the researcher and response from the child. That is, responses tended to be without elaboration. The researcher typically led the conversations in all texts by soliciting responses; however, this varies in degree and is less prevalent in texts where the child engages in extended discourse. The children with the less strong conversational abilities used little or no temporal conjunctions.

Interestingly, children with stronger conversational abilities (Texts 3 and 7) are both children who present patterns of inflexible temporal conjunction use in their Recounts. Further discourse produced by speakers with ASD who are able to sustain longer turns and are engaged in extended Records of Events is needed to determine if inflexible temporal conjunction use is a characteristic of speakers with ASD.

A final pattern concerning temporal discourse that describes sequences of events in the future emerged. In these “Future Projections”, the children use external conjunctive relations of the temporal type to sequence unrealized events in serial order.
Projections are not included in the genre analysis, but because of their temporal dimension, the stretches are used in Chapter 5, *Metaphor*. 
CONCLUSION

Genre analysis provides insight into how individuals with ASD use the contextual configuration of relevant situational information in producing spoken text. This chapter used genre analysis to approach the investigation of how individuals with ASD produce temporal texts that involve sequences of events. Specifically, the analysis of temporal stretches of text found that the research participants used the Record of Events generic stage the most frequently, followed by Orientations. These research participants may favour the Records of Events stage in temporal texts: evidence suggests that children ignore or respond to interruptions during Records of Events and then continue on with the Record of Events. Also, children with ASD may use the Record of Events stage when other genre types are solicited by the researcher. Furthermore, individuals with ASD may also probe for questions that solicit Records of Events.

This chapter identified conversational difficulties found in the spoken discourse of individuals with ASD that are illuminated with genre analysis. The level of detail used when engaging in Records of Events can be responsible for confusion between a speaker and audience. Individuals with ASD may ignore context in some cases, (for example in the use of a Recount when a Procedure is solicited); however, it is also apparent that speakers with ASD do use genre, but in different ways. The speakers looked at in this thesis largely engage in Recounts and for the most part have a mastery of the Record of Events generic stage. Those who are most competent and use both unsolicited Orientations and Records of Events (the children in texts 3 and 7) appear to be the children with stronger conversational abilities. These children engage in longer turns and use discontinuously realized Records of Events. These same children were among the
research participants who described multiple events in serial order when engaged in Records of Events. Probing also provides further evidence that context is important to speakers with ASD. The mechanism seeks to establish a specific contextual configuration so that the individual may utter spoken discourse in context. Individuals with weaker conversational abilities appear to rely on their interlocutor's probes to establish specific contexts. It may be that speakers with ASD have more knowledge of context than they are able to make use of in conversation.

This project applied an established genre framework to discourses of speakers with ASD. While the use of an established descriptive framework was warranted, indeed necessary in a field with recognized, replicable methodologies, it does not focus on speakers' individual variation. A study replicating these findings in a larger group of speakers with ASD would provide more conclusive findings and could also be used to investigate the possibility that speakers with ASD may have their own varieties that may involve specific generic structures.
CHAPTER 5 – METAPHOR ANALYSIS

This chapter examines the use of metaphors of time, metonymies of time, and senses of time in stretches of temporal discourse found in 9 semi-structured conversational texts produced by speakers with Autism Spectrum Disorders (ASDs). The chapter proceeds in two parts. Part 1 describes the use of metaphors, metonymies, and senses of time in each individual text. Patterns within each text are identified. Part 2 extends upon the observations from part 1 by examining patterns in the use of metaphors, metonymies, and senses of time across the 9 texts. Utterances that use units of time found within stretches of temporal discourse are identified. These utterances are then analyzed for the use of temporal metaphors, metonymies and sense of time. The methods for analysis and their theoretical frameworks are previously outlined in Chapter 3, Methods.

Metaphors and metonymies of time are classified according to Lakoff and Johnson’s (1999) framework. The categories selected from Lakoff and Johnson (1999) are:

- Time Orientation metaphor
- Moving Observer metaphor
- Moving Time metaphor
- Event-for-Time metonymy
- Distance-for-Time metonymy
- Time-for-Distance metonymy
- Time is a Resource metaphor
- Time is Money metaphor

Where the lexeme “time” appears, it is classified according to Evans’ (2003) senses of time. Evans’ (2003) senses of time are:

- Duration Sense
- Moment Sense
- Instance Sense
- Event Sense
- Matrix Sense
Agentive Sense
Measurement-system Sense
Commodity Sense

In this chapter, utterances produced by both the child and researcher are discussed. It is important to note that although these speakers’ utterances are compared in form and number, they are not produced equally due partly to the semi-structured nature of these conversational texts.
PART 1: Individual Text Analysis

Text 1

There are 6 utterances in text 1 that use temporal units. The researcher utters 5 of these 6 utterances. The child utters a single solicited response that uses a single temporal unit. All utterances use the Time Orientation metaphor where the future is construed as the space in front of the observer, the present is the observer’s current location, and the past is the space behind the observer. This metaphor is prompted by the prepositions “last” and “before” and the lexeme “tonight.” These lexical items motivate spatial deixis where locations establish meaning in relation to each other. Table 5.1 shows this data. The temporal units are in bold and lexemes that prompt for temporal metaphors and metonymies are italicized.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>RES</td>
<td>I had pizza last night for supper.</td>
</tr>
<tr>
<td>141</td>
<td>RES</td>
<td>what did you have for supper last night?</td>
</tr>
<tr>
<td>146</td>
<td>RES</td>
<td>and the night before I had pork chops.</td>
</tr>
<tr>
<td>147</td>
<td>RES</td>
<td>can you remember what you had the night before?</td>
</tr>
<tr>
<td>151</td>
<td>RES</td>
<td>what are you having tonight # for supper?</td>
</tr>
<tr>
<td>153</td>
<td>CHI</td>
<td>I'm having rice for supper tonight.</td>
</tr>
</tbody>
</table>

Table 5.1 – Lines 140, 141, 146, 147, 151, and 153 from text 1

In text 1, the researcher asks the child what he had for supper last night, the night before last, and what he will have tonight for supper. The first of these questions establishes the temporal setting in the past (line 141). The researcher then reorients the temporal setting by moving further into the past (line 147). The researcher’s final question shifts the temporal setting ahead into the future (line 151). The child’s responses indicate that the child comprehends the Time Orientation metaphor. In addition, the child also comprehends the shifts in temporal setting prescribed by the researcher’s questions.
The child uses spatial deixis to form temporal relations when the researcher shifts
the temporal setting. In line 141, the researcher asks, “what did you have for supper last
night?” The child replies, “I had pizza too.” Later in line 147, the researcher asks, “can
you remember what you had the night before?” Here the researcher is implicitly asking
the child what he had for supper the night before last. The child replies “pork chops too.”
The child’s responses suggest that the child first comprehends the initial shift into the
past (“last night”). With reference to this point, the child is able to use this information to
answer the researcher’s next question that shifts the setting one night further into the past
to “the night before.” Line 147 further demonstrates that the child is able to comprehend
questions with temporal units in a pragmatic way. Literally, the researcher’s question
“can you remember what you had the night before?” solicits a polar yes/no response;
however, the child correctly assumes that the researcher is inquiring about what the child
actually ate for dinner and not if the child is able to remember what he ate.

In one instance, the child utters a response that includes the temporal unit
“tonight.” “Tonight” is the only unit of time uttered by the child in text 1. The temporal
unit, “tonight”, is a bounded event in the sense that it uses deixis to reference a specific
period of time. There are two possible reasons for the child’s limited use of temporal
units. First, the child provides minimal non-elaborative and polar responses to the
researcher’s questions. The conversation therefore follows a turn-taking pattern where
the researcher poses questions and the child answers these questions. Second, the
conversational turn-taking pattern and the child’s limited use of temporal units indicates
that the child may be more able to comprehend temporal metaphors compared to his
ability to produce temporal metaphors. Although these two reasons may explain the lack
of temporal units uttered by the child, the child does demonstrate that he is able to comprehend the researcher's utterances that use temporal units in a pragmatic way.

Table 5.2 summarizes the types of metaphors and metonymies that the speakers use in text 1. The number corresponding to each metaphor or metonymy represents the number of utterances that use that type of metaphor or metonymy.

<table>
<thead>
<tr>
<th>Text Number</th>
<th>Total Number of Utterances</th>
<th>Ignored Utterances</th>
<th>Utterances by Researcher</th>
<th>Utterances by Child Solicited (S)/Unsolicited (U)</th>
<th>Total Number of Temporal Units</th>
<th>Time Orientation Metaphor by Child</th>
<th>Moving Observer Metaphor</th>
<th>Time for-Time Metonymy by Child</th>
<th>Time for-Distance Metonymy by Child</th>
<th>Time is a Resource Metaphor</th>
<th>Time is Money</th>
<th>Evans' Sense of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5.2 – Summary of metaphors and metonymies used in text 1

**Text 2**

Text 2 contains 7 utterances that use 10 temporal units. The child utters 2 unsolicited lines that use 3 temporal units and the researcher utters 5 lines that use 7 temporal units. Lines 1, 3, 4, 6, and 8 use the Time Orientation and the Moving Observer metaphors. The Time Orientation metaphor is prompted by the lexemes "today" and "tomorrow." As seen in text 1, lexical items such as "today" and "tomorrow" motivate spatial deixis where temporal locations become relative to one another. The Moving Observer metaphor is prompted indirectly by an intermediate metaphor. Lakoff and Johnson describe this intermediate metaphor as one where numbers are points on a line.
These numerical values prompt for the Moving Observer metaphor because “the numbers pick out points on a line that metaphorically represent instants of time” (Lakoff & Johnson, 1999, 155). When we combine the Time Orientation metaphor with the Moving Observer metaphor, we arrive at a composite mapping where locations on the observer’s path of motion (numbers on a line) represent times.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RES</td>
<td>today is June the sixth.</td>
</tr>
<tr>
<td>3</td>
<td>CHI</td>
<td>&lt;fifth&gt; [&lt;]</td>
</tr>
<tr>
<td>4</td>
<td>RES</td>
<td>is it the fifth?</td>
</tr>
<tr>
<td>6</td>
<td>CHI</td>
<td>tomorrow’s the sixth.</td>
</tr>
<tr>
<td>8</td>
<td>RES</td>
<td>today is June the fifth.</td>
</tr>
</tbody>
</table>

Table 5.3 - Lines 1, 3, 4, 6, and 8 from text 2

Lines 1 through 8 reflect the researcher mistaking the date as “June the sixth.” The child corrects the researcher by stating that it is June 5th. Lines 1 through 3 indicate that the child and researcher have different frames (or versions) of the Time Orientation metaphor:

1. RES: today is June the sixth.
2. RES: and <I> [<].
3. CHI: <fifth> [<]

Figures 5.1 and 5.2 compare the researcher’s initial frame of the Time Orientation and Moving Observer metaphors with the child’s frame of the same metaphors.

←-----5-------6--------7-----→
June: past present future
Figure 5.1 - Researcher’s frame of the Time Orientation and Moving Observer metaphors

←-----4-------5--------6-----→
June: past present future
Figure 5.2 - Child’s frame of the Time Orientation and the Moving Observer metaphors
In Figure 5.1, the researcher construes the present date as “June the sixth.” The space behind the researcher (the past) includes June the 5th, 4th, 3rd... and the space ahead of the researcher (the future) includes June the 7th, 8th, 9th... The child’s frame construes the values of these points differently. The child construes the present as June the “fifth”, the past as June 4th, 3rd, 2nd..., and the future is June 6th, 7th, 8th... Both speakers’ frames depend on spatial deixis whereby their present location provides contextual information that determines the values of the spaces ahead and behind the speakers. The fact that the child is able to correct the researcher demonstrates three competencies. First, the child is able to construe his own frame of the composite mapping as shown in Figure 5.2. Second, the child is able to access the researcher’s frame of the composite mapping as shown in Figure 5.1. Third, the child is able to compare both frames and conclude that the researcher has assigned incorrect dates, or values, to the points of his composite mapping. The child’s process of prompting two frames and comparing them occurs in lines 1 through 3.

Lines 4 through 8 reflect a process where the researcher adopts the child’s frame of the composite mapping:

4. RES: is it the fifth?  
5. CHI: yes.  
6. CHI: tomorrow’s the sixth.  
7. RES: oh okay.  
8. RES: today is June the fifth.

In line 6, the child makes a significant contribution. The child provides the researcher with an additional access point to the child’s frame of his composite metaphor. In line 4, the researcher asks “is it the fifth?” The child responds “yes” and then states “tomorrow’s the sixth.” The child’s utterances appear to serve two purposes. First, the child attempts to convince the researcher that it is June the fifth by negotiating spatial
deixis. Second, the child elaborates by providing additional information that serves as an access point for the researcher to the child’s frame. In line 8, the researcher adopts the child’s frame and agrees that “today is June the fifth.”

Line 219 is uttered by the researcher and also uses the Time Orientation and the Moving Observer metaphors to create a composite mapping. The preposition “on” in the utterance “so what do you do on the weekends Will?” prompts for a composite mapping because the locations on the observer’s path of motion represent times. Furthermore, the plural temporal unit, “weekends” elicits multiple points upon the observer’s path of motion. Some examples of these points are marked with a “*” in Figure 5.3.

```
* * *
<-----------------------------|-----------------------------|------------------------------>
past week                      present week                        next week
M T W T F S S     M T W T F S S     M T W T F S S
Figure 5.3 - Construal of “weekends” from line 219 of text 2
```

The researcher’s question, “so what do you do on the weekends Will?” asks the child to generalize the weekends along the child’s path of motion. Restated, the researcher is inquiring about the habitual activities that the child does on the weekends. Among these locations are the points included in Figure 5.3; however, the researcher’s question may prompt for other weekends that extend further into both the future and past.

The child replies with the minimal and evasive response “nothing”:

```
219. RES:  so what do you do on the weekends Will?
220. CHI:  nothing.
221. RES:  do you have a worker that comes?
222. CHI:  nope.
223. RES:  and spends some time with you?
224. CHI:  yes.
```

The researcher rephrases the question twice before the child provides an appropriate answer. The child’s initial response to the researcher’s question in line 219 suggests that the child may experience difficulty with temporal construal that prompt for
a generic understanding of temporal points. General terms, like “weekends” found in line 219, require a more global cognitive approach to process the temporal construal. They require the child to elicit all weekends and then select general events that occur on the majority of the weekends. Although, the child is able to entertain two specific frames as show in lines 1-8 of this text, he may experience difficulty with generalizations that elicit a multitude of unspecified points.

“Time” is the final temporal unit used in line 223 of text 2. The researcher asks “and spends some time with you?” According to Lakoff & Johnson, the verb “to spend” and the quantifier “some” coupled with the lexeme “time” prompts for the Time is Money metaphor. It is based on the Resource Schema where a purpose requires an amount of a resource (Lakoff & Johnson, 1999,162). In the Time as Money metaphor, “spends” prompts for a purpose that requires money. When mapped onto the time domain, this purpose is one that requires time. This metaphor had achieved a level of conventionality whereby it has been lexicalized as a literal expression in English. Alternatively, following Evans’ (2003) the lexeme “time” in this case prompts for the Commodity Sense of time. This sense construes time as a valuable commodity. The child comprehends the Time is Money metaphor (Lakoff & Johnson, 1999) or the Commodity Sense (Evans, 2003) of time and replies with the minimal, polar response “yes.”

The utterances in text 2 provide insight into this child’s comprehension and use of temporal metaphors. In lines 1 through 8, the child contributes utterances that are unsolicited and he elaborates upon these voluntary utterances. These lines use the most basic metaphors of time that include the Time Orientation and Moving Observer metaphors to create composite mappings. The child’s voluntary and elaborative
utterances suggest that the child is competent with these metaphors of time. Again, in line 219, the same metaphors of time are used; however, they construe time in a generalized way. The child appears to have difficulty when these metaphors elicit an indefinite number of temporal points and requires the child to generalize. Line 223 uses the Time is Money metaphor or the Commodity Sense of time. The child appears to comprehend this metaphor/sense of time but responds with a non-elaborative, polar response. The child’s minimal, polar response to this metaphor/sense of time may suggest that he has a stronger ability to comprehend this metaphor than to produce it. Table 5.4 summarize the metaphors, metonymies, and senses of time that the speakers use in text 2.

<table>
<thead>
<tr>
<th>Text Number</th>
<th>Total Number of Utterances</th>
<th>Ignored Utterances</th>
<th>Utterances by Researcher</th>
<th>Total Number of Temporal Units</th>
<th>Temporal Units by Child</th>
<th>Time Orientation Metaphor</th>
<th>Moving Observer Metaphor</th>
<th>Moving Time Metaphor</th>
<th>Event-for-Time Metonymy</th>
<th>Distance-for-Time Metonymy</th>
<th>Time-for-Distance Metonymy</th>
<th>Time is a Resource Metaphor</th>
<th>Time is Money</th>
<th>Evans’ Sense of Time</th>
<th>Time is Money by Child</th>
<th>Evans’ Sense of Time by Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Text 3

There are 26 utterances that use 35 temporal units in text 3. The child utters 16 lines; 12 of these lines are unsolicited by the researcher and 4 are solicited. The researcher utters 10 lines that use temporal units.

The child utters lines 45, 70, and 115 (see Table 5.5). These utterances use the Time Orientation metaphor. In these lines, the adjective “next” that precedes each temporal unit prompts for the Time Orientation metaphor as it situates the present at the observer's current position with the future located ahead of the observer. These expressions motivate spatial deixis. In the following tables, temporal units are in bold while lexemes that prompt for metaphors and metonymies of time are italicized.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>CHI</td>
<td>the next day I we I went to the bookshop.</td>
</tr>
<tr>
<td>70</td>
<td>CHI</td>
<td>the next morning I packed my suitcase up.</td>
</tr>
<tr>
<td>115</td>
<td>CHI</td>
<td>and the next morning when I woke up I had some bread</td>
</tr>
</tbody>
</table>

Table 5.5- Lines 45, 70, and 115 from text 3

Lines 21, 43, 127, 176, 177, 205, 206, 209, 210, and 222 also use the Time Orientation metaphor.
<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>CHI</td>
<td>on on <strong>Tuesday</strong> and <strong>Wednesday</strong> Judy Winston and J we both went</td>
</tr>
<tr>
<td>43</td>
<td>CHI</td>
<td>and we went outside at <strong>night</strong> and played in the snow um &lt;and&gt; [&gt;]</td>
</tr>
<tr>
<td>127</td>
<td>CHI</td>
<td>&lt;they're coming&gt; [&gt;] an(d) visit and visiting me in the <strong>summer in July</strong> [!] .</td>
</tr>
<tr>
<td>176</td>
<td>RES</td>
<td>tell me about your uh you do something on <strong>Saturday's</strong> usually.</td>
</tr>
<tr>
<td>177</td>
<td>RES</td>
<td>what do you usually do on <strong>Saturdays</strong>?</td>
</tr>
<tr>
<td>205</td>
<td>CHI</td>
<td>and had a Nielsen LP which is called The Point released in <strong>1985</strong> like like our vide like our video The Point which was a which was replaced at the video box.</td>
</tr>
<tr>
<td>206</td>
<td>CHI</td>
<td>and by and one and once my mother and I got it in um <strong>July</strong> and <strong>August</strong> # bought it in <strong>June</strong> and <strong>August</strong>.</td>
</tr>
<tr>
<td>209</td>
<td>CHI</td>
<td>but the video was not released in <strong>1985</strong>.</td>
</tr>
<tr>
<td>210</td>
<td>CHI</td>
<td>it was uh released before the LP in <strong>1984</strong> -- #: ## uh</td>
</tr>
<tr>
<td>222</td>
<td>RES</td>
<td>tell me what your favourite -: thing is to do in the <strong>summer time</strong>.</td>
</tr>
</tbody>
</table>

Table 5.6 - Lines 21, 43, 127, 176, 177, 205, 206, 209, 210, and 222 from text 3

The utterances in Table 2.6 combine the Time Orientation metaphor with the Moving Observer metaphor to form composite mappings. Both the Time Orientation metaphor and the Moving Observer metaphors are prompted by the prepositions “in,” “at,” or, “on” that precede the temporal units. These prepositions prompt for a construal where the observer arrives at temporal points along a path of motion. The child utters 7 of the 11 lines that use the Time Orientation and Moving Observer metaphors while the researcher utters 3 lines. Lines 176 and 177 uttered by the researcher require a generalized construal of time similar to line 219 in text 2. The researcher repeats the question twice before the child provides an appropriate response in line 178. This observation suggests that the child in text 3, like the child in text 2, may experience difficulties with utterances that elicit multiple temporal points and require the child to generalize across these points.
In line 222, the researcher uses the lexeme “summer time.” Although this unit of time is underdefined, the child replies to the researcher’s question with an elaborative response.

The child utters line 82 and the researcher utters line 107. Both lines 82 and 107 use the Time Orientation metaphor plus additional metaphors.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>82</td>
<td>CHI</td>
<td>my father went there with my father and I went there once before grade # went there once before grade five started.</td>
</tr>
<tr>
<td>107</td>
<td>RES</td>
<td>did you sleep during the car trip?</td>
</tr>
</tbody>
</table>

Table 5.7 – Lines 82 and 107 from text 3

In line 107, the researcher uses the Time Orientation and Moving Observer metaphors. These metaphors are prompted by the mapping where the motion of the observer (car trip) is understood as the “passage of time” (Lakoff & Johnson, 1999, 146). This expression also uses the Event-for-Time metonymy where the “car trip” also stands for an amount of time during which the observer could sleep. The child appears to comprehend the researcher’s question and replies to it with a minimal, polar response.

Line 82, uttered by the child uses the Time Orientation metaphor. The Time Orientation metaphor is prompted by the preposition “before.” The preposition suggests a temporal point located in the past. Line 82 also uses the Event-for-Time metonymy. The event, when “grade five started,” references a temporal moment. In addition to these metaphors and this metonymy, the child’s utterance expresses Evans’ Instance Sense of time. Recall that the Instance Sense “prompts for a reading in which an instance of a particular event, activity, or state is being referenced…” (Evans, 131). The lexeme “once” prompts the Instance Sense because it is implicitly understood as “one time.” The child is therefore not only able to construe the Instance Sense of time, but also is able to
articulate a contextually appropriate form of this sense of time. Line 206 shown in Table 2.6 also uses the lexeme "once."

Lines 94, 96, 105, and 191 use the Time Orientation and Moving Observer metaphors. In addition to these metaphors, the utterances also use the Event-for-Time metonymy and the Distance-for-Time metonymy.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>RES</td>
<td>was it a long drive?</td>
</tr>
<tr>
<td>96</td>
<td>CHI</td>
<td>it was a long drive.</td>
</tr>
<tr>
<td>105</td>
<td>CHI</td>
<td>and the car trip was long [!] .</td>
</tr>
<tr>
<td>191</td>
<td>RES</td>
<td>hm how long have you been doing that?</td>
</tr>
</tbody>
</table>

Table 5.8 – Lines 94, 96, 105, and 191 from text 3

In these utterances, the events, "drive," "trip," and "horseback riding" (the pronoun "that" in line 191 refers to "horseback riding" found in line 182) metonymically stand for stretches of time during which these events occurred. In all cases, "long" modifies the event and prompts the Distance-for-Time metonymy. These metonymies presuppose the Time Orientation and the Moving Observer metaphors as the events are construed in terms of physical distance along the observer’s path of motion.

The child’s utterance in line 96 is in response to the researcher’s question in line 94. The child utters line 105 as a continuing turn and an elaborative statement. In line 192, the child comprehends and responds to the researcher’s question from line 191:

191. RES:   hm how long have you been doing that?
192. CHI:   I have been doing it for twel(ve) I have d I have done it for twelve rides -- .

In line 192, the child combines the Time Orientation metaphor with the Moving Observer metaphor. The child’s utterance also uses the Event-for-Time metonymy where a single ride stands for a specific amount of time. The child construes the length of time he has participated in the activity of horseback in terms of 12 occasions of horseback riding.
These 12 occasions of horseback riding are located in the past and they exist as points along the child’s temporal path. These points prompt for Time Orientation and the Moving Observer metaphors. Figure 5.4 shows this construal.

```
<table>
<thead>
<tr>
<th>*1</th>
<th>*2</th>
<th>*3</th>
<th>*4</th>
<th>*5</th>
<th>*6</th>
<th>*7</th>
<th>*8</th>
<th>*9</th>
<th>*10</th>
<th>*11</th>
<th>*12</th>
</tr>
</thead>
<tbody>
<tr>
<td>past</td>
<td>present</td>
<td>future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

*denotes “a ride”

Figure 5.4 – “Twelve rides” construal of time in line 192 of text 3

“Twelve rides” expresses a length of time in an unconventional way. A typical speaker would likely describe the same experience using the term “twelve times.” The lexeme “time” in this context would be considered an example of Evans’ Instance Sense of time. Line 192 suggests that the child chooses to construe time using the Event-for-Time metonymy, in terms of a sequence events, as opposed to simply the number of times the same event reoccurred. The child’s construal suggests that the “twelve rides” are heterogeneous where as a typical speaker’s response would use “twelve times” that construes the rides as a set of homogeneous events. This observation is closely related to the children’s difficulties with generalizations seen already in texts 2 and earlier in text 3. Generalizations require a construal where each instance is construed as a reoccurrence of the same event. It is possible that speakers with ASD do not view these events as reoccurrences; rather, they are construed as discreet and dissimilar events. The child’s response in line 192 does not clearly answer the researcher’s question from line 191. It can be inferred that the child has been going horseback riding for 12 weeks when lines 176 through 178 are taken into account:

176. RES: tell me about your uh you do something on Saturday's usually.
177. RES: what do you usually do on Saturdays?
178. CHI: I go horseback riding.
Although lines 176 to 178 establish that the child usually goes horseback riding on Saturdays, the length of time the child has been horseback riding remain uncertain.

Line 139 and line 144 again use metonymy and the Time Orientation/Moving Observer composite mapping. The researcher uses the Time-for-Distance metonymy. These metaphors and this metonymy are prompted by the proposition “from” or the verb “to drive” coupled with the temporal unit “half an hour”:

139. RES: when you were there you were only about a half an hour from a farm where I yu I grew up.
140. CHI: what farm is that?
141. RES: well that’s where my mom and dad owned a farm.
142. RES: and I lived when I was a little girl.
143. CHI: yes [!] .
144. RES: and my mom used to drive a half an hour.
145. RES: and teach in Kingsbury.
146. RES: she taught highschool.
147. CHI: <did she> [>] ?

The Time-for-Distance metonymy reverses the source and target domains of the Distance-for-Time metonymy where “time duration can stand metonymically for distance” (Lakoff and Johnson, 1999, 152). Lakoff and Johnson explain “half an hour, the time it takes to travel the distance, stands for the distance” (1999, 152). In line 139 and 144, the researcher uses time to metonymically stand for a distance travelled. The child appears to comprehend these metaphors as he prompts the researcher to elaborate in line 140 and 147.

Lines 98, 101, 103, and 170 use the Time as a Resource metaphor. Line 170, uttered by the researcher, is a classic example of the Time is a Resource metaphor:

170. RES: and we need to do about # three or four more minutes.

The adjective “more” prompts for the Resource Schema where a purpose requires an amount of a resource (Lakoff & Johnson, 1999, 161). In the Time is a Resource
metaphor, the purpose that requires the resource is mapped onto the time domain where it becomes a purpose that requires time. The child appears to comprehend this metaphor as he responds, “yes Doris” in line 174.

Lines 98, 101, and 103 also use the Time is a Resource metaphor along with other metaphors and metonymies. The researcher asks a question in line 98 and the child responds to this question in line 101. The child repeats his utterance from line 101 in line 103:

98. RES: how long did it take you Will?
99. RES: <just about> [>].
100. CHI: <it> [<].
101. CHI: it took it took wo it took five hundred and sixty four minutes.
102. RES: did it really?
103. CHI: it took five hundred and sixty four minutes.

Lines 98, 101, and 103 prompt for the Time is a Resource metaphor because they use the verb “to take.” This verb uses multiple elements and scenarios from the Resource Schema. Specifically, time is a resource and the child is the user of this resource. The purpose is a trip and it requires (“takes”) an amount of the time resource. The child must “use up” an amount of time to make this trip. The result is a portion of time that has been used/taken away and is no longer available to the child. Line 98 uses the Time Orientation metaphor, the Moving Observer metaphor, and the Distance-for-Time metonymy in addition to the Time is a Resource metaphor. “Long” prompts for the Distance-for-Time metonymy while “it” refers to a drive and prompts for the Time Orientation and the Moving Observer metaphors. Line 101 uses the Time Orientation metaphor and the Moving Observer metaphor again prompted by “it” in addition to the Time is a Resource Metaphor.
Lines 101 and 103 uttered by the child use temporal units in an unconventional way. The child uses “five hundred and sixty four minutes” to describe the amount of time a trip takes. This construal divides the trip into 564 increments of one minute. We would expect a typical speaker to use larger increments of time; for example, a speaker may use “9 hours and 24 minutes” or alternatively approximate the time of the trip as “9 and a half hours.” Yet again, the child’s discourse points to possible difficulties with generalization.

A pattern emerges from the child’s utterances in lines 101, 103, and 192. Although lines 101, 103, and 192 are construed using different metaphors and senses of time, they demonstrate the child in text 3 has the tendency to divided units of time or events that metonymically stand for time into smaller than usual increments. In lines 101 and 103 the child construes 9 hours and 24 minutes as “five hundred and sixty four minutes.” In line 192, the child construes a length of time in terms of 12 rides. It appears that the child has the tendency to construe continuous experiences or larger units in term of smaller increments.

A second observation points to a discrepancy between the construals presented in lines 82 and 192. In line 192, the child uses “rides” as opposed to the typical Instance Sense construal that would use the lexeme “time.” In lines 82 and 206, the child not only uses the Instance Sense, but also uses it in a contextually appropriate way. The child must comprehend Evans’ Instance Sense of time because he uses the variant “once” in lines 82 and 206 but avoids its use in line 192. I also note that in both cases, the construals that involve the Instance Sense of time are preceded by false starts. It is possible that the child in text 3 comprehends Evans’ Instance Sense but may experience difficulties in articulating the sense using the actual lexical item “time.” A possible
explanation is the fact that the child’s construal of “rides” suggests a heterogeneous sequence of events. This construal of time is unlike Evans’ Instance Sense of time that motivates a homogeneous understanding of events.

In general, the spoken discourse produced by the child in text 3 demonstrates an extensive ability to comprehend and articulate multiple construals of time. They include Lakoff and Johnson’s Time Orientation, Moving Observer, and Time is a Resource Metaphors. Also the child is also able to understand and use the Event-for-Time Metonymy, the Distance-Time Metonymy, and the Instance Sense of time. In the case of the Instance Sense of time, the child does not explicitly use the lexeme “time.” In addition to the child’s strength in the use of these temporal expressions in spoken discourse, the child is also able to engage in extended conversation using unsolicited, elaborative, and continuing turns that involve temporal units; however, there remain several instances where the child still provides minimal or polar responses in response to utterances that contain temporal units. Table 5.9 provides a summary of the metaphors, metonymies, and senses of time used in text 3. The child’s utterances that use the variant “once” of the Instance Sense of time are included in the Table 5.9.
Table 5.9 – Summary of metaphors and metonymies used in text 3

Text 4

Text 4 contains 10 temporal units found in 7 utterances. The child utters 5 lines; 4 of these 5 lines are unsolicited while a single line is solicited by the researcher. The researcher utters 2 lines that use temporal units in text 4.

Lines 134, 151, and 153 contain 4 temporal units and use the Time Orientation metaphor. In line 134, the child’s utterance construes “last year and the year before” as increments along a linear path located in the past. This utterance is elaborative and relies on spatial deixis. The child’s construal of time in line 134 divides the period of the past 2 years into one-year increments. The construal of time is unconventional as it would be more typical to state “last two years” as opposed to “last year and the year before.” Like the example in line 192 in text 3, this construal of time suggests that “last year and the year before” are heterogeneous periods of time. The more typical expression “two years” construes the period as homogeneous. In the following tables, temporal units are in bold and lexemes that prompt for metaphors and metonymies are italicized.
but she hasn't visit me last year and the year before.

and I'm w it's something for me to look forward to.

for everyone to look forward to eh?

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>134</td>
<td>CHI</td>
<td>but she hasn't visit me last year and the year before.</td>
</tr>
<tr>
<td>151</td>
<td>CHI</td>
<td>and I'm w it's something for me to look forward to.</td>
</tr>
<tr>
<td>153</td>
<td>RES</td>
<td>for everyone to look forward to eh?</td>
</tr>
</tbody>
</table>

Table 5.10 – Lines 134, 151, 153 from text 4

The child utters line 151 and the researcher repeats the same information in line 153. In line 151, the child construes time using the Time Orientation metaphor because he talks about a point ahead of him as “something for me to look forward to” in the future. Line 151 is elaborative and is produced by the child without solicitation. The researcher mirrors the child’s construal in line 153.

Line 140 and line 144 use a composite mapping that combines the Time Orientation metaphor with the Moving Observer metaphor.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>CHI</td>
<td>&lt;she's&gt; [&lt;?] visiting me at Christmas.</td>
</tr>
<tr>
<td>144</td>
<td>RES</td>
<td>is she coming Christmas day?</td>
</tr>
</tbody>
</table>

Table 5.11 – Lines 140 and 144 from text 4

The child utters line 140 and the preposition “at” that precedes the temporal unit “Christmas” prompts for the composite mapping. In line 144, the researcher utters “is she coming Christmas day?” The conversational nature of this spoken text allows the researcher to skip the preposition “on” that would likely precede the temporal unit “Christmas day.” In line 144, the “implied” preposition prompts for the Time Orientation and Moving Observer metaphors. The child appears to comprehend the researcher’s question in line 144 and replies with an elaborative response in line 145:

144. RES: is she coming Christmas day?
145. CHI: she's spending the night s spending nights there.

Line 145 uses the Time is Money metaphor. This metaphor is prompted by the verb “to spend.” “She,” (the child’s cousin) is visiting the child during Christmas and therefore will be spending time with the child. Two observations provide insight into the child’s
unconventional construal of time in this utterance. First, the child is overly general stating that “she’s spending... nights there.” Although this may be true, typically we would expect a speaker to quantify the number of nights during which the cousin will visit. Typical speakers would use this conventionalized expression of time in an incremental way; however, the child does not do this. The utterance involves a false start that may suggest difficulty in producing the Time is Money metaphor. Second, the child uses the pronoun “there” to express where his cousin will spend her time. Typically, if someone were to visit over Christmas, we would use the proximal pronoun “here” as opposed to the distal pronoun “there.” In this expression, the child appears to have difficulties with dietic reference. These difficulties with both spatial deixis and the Time is Money metaphor may be rooted in the lexicalized expression associated with “spending” time. This expression requires contextual information for it to be used appropriately. Although we observed that the child in text 2 was able to comprehend an expression that uses the verb “to spend” with concepts of time, this is the first occasion where a child attempts to produce this kind of metaphorical expression. Moreover, the response the child provides in line 145 does not answer the researcher’s question in line 144.

The final temporal unit is found in line 190. The child utters, “but first you have to wait till the wa # for the water to boil [!]” This utterance combines the Time Orientation metaphor with the Moving Time metaphor. The point where “the water boils” is construed as being ahead of the observer. The observer remains stationary and waits for the point to pass the observer. This utterance is not solicited by the researcher.

In text 4, the child demonstrates the ability to use and comprehend a variety of metaphors. The child is able to use and comprehend the most basic metaphors of time.
They include the Time Orientation, the Moving Observer, and the Moving Time metaphors. In addition, the child uses the Time is Money metaphor; however, it is construed in an unconventional way. The child is too general in expressing the time his cousin will spend visiting him and demonstrates difficulty with deixis. Table 5.12 summarizes the temporal metaphors and metonymies the speakers use in text 4.

<table>
<thead>
<tr>
<th>Text Number</th>
<th>Total Number of Utterances</th>
<th>Utterances by Researcher</th>
<th>Utterances by Child Solicited (S)/Unsolicited (U)</th>
<th>Total Number of Temporal Units</th>
<th>Temporal Units by Child</th>
<th>Time Orientation Metaphor by Child</th>
<th>Moving Observer Metaphor by Child</th>
<th>Moving Time Metaphor by Child</th>
<th>Time for Time Metaonomy by Child</th>
<th>Time for Distance Metaonomy by Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>1 S</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5.12 - Summary of metaphors and metonymies used in text 4

Text 5

In text 5, the researcher utters 2 lines that use temporal units. These temporal units are found in lines 9 and 16. Line 9 uses the temporal unit “night” in a question. The adjective “last” that precedes “night” prompts for the Time Orientation Metaphor as it locates the past as the space behind the observer. “Last night” becomes a point behind the observer. The researcher uses a check, “didn’t I?” The child comprehends and replies to the researcher’s question and check with a polar “yeah” in line 10.
<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>RES</td>
<td>I talked to you on the telephone last night too didn't I?</td>
</tr>
<tr>
<td>16</td>
<td>RES</td>
<td>that sounds like quite a long drive.</td>
</tr>
</tbody>
</table>

Table 5.13 – Lines 9 and 16 from text 5

The second utterance uses the temporal unit “long drive.” The utterance prompts for a construal that uses the Event-for-Time metonymy where the “drive” metonymically represents a length of time. This length of time is modified by the preceding adjective “long” that prompts for the Distance-for-Time metonymy. The “long” distance travelled during the ride metonymically stands for an extended duration of time. This utterance also uses the Time Orientation and Moving Observer metaphors because the distance travelled by the observer is an amount of time that has passed. Line 16 is followed by a continuing line uttered by the researcher. It cannot be determined if the child comprehends this metaphor.

The child does not utter any temporal units in text 5. The child demonstrates that he comprehends the construal of time in line 9 that uses the Time Orientation metaphor. Although the child elaborates and provides unsolicited utterances, the child replies with minimal responses to questions that contain temporal units posed by the researcher. Table 5.13 summarizes the metaphors and metonymies speakers use in text 5.
Table 5.14 - Summary of metaphors and metonymies used in text 5

<table>
<thead>
<tr>
<th>Text Number</th>
<th>Total Number of Utterances</th>
<th>Ignored Utterances</th>
<th>Utterances by Researcher</th>
<th>Utterances by Child Solicited (S)/Unsolicited (U)</th>
<th>Total Number of Temporal Units</th>
<th>Temporal Units by Child</th>
<th>Time Orientation Metaphor by Child</th>
<th>Moving Time Metaphor by Child</th>
<th>Moving Observer Metaphor by Child</th>
<th>Event-for-Time Metonymy by Child</th>
<th>Distance-for-Time Metonymy by Child</th>
<th>Time is a Resource Metaphor by Child</th>
<th>Time is Money</th>
<th>Time is a Sense of Time</th>
<th>Evans' Sense of Time by Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
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</tr>
</tbody>
</table>

Text 6
does not contain any utterances that used temporal units.

Text 7

Text 7 contains 23 utterances. Six of these 23 utterances are ignored. Lines 20 and 22 are ignored because they use the idiomatic expression “quite a trip.” Lines 30 and 36 are ignored because they use the term “four+forty+five bus” where time modifies the bus. Also, lines 121 and 148 are ignored because they use the contraction “sportsnight.” The remaining 17 utterances contain 22 temporal units. The child utters 11 of the 17 lines; 2 lines are solicited by the researcher while 9 are not. The researcher utters 6 lines.

Line 12 is uttered by the researcher and uses the temporal unit “now.” This lexeme prompts for the Time Orientation metaphor because it situates the researcher and the child at a point on the observer’s path that is the present time. The lexeme “now” also motivates spatial deixis. The child comprehends this construal of time as he provides a polar response, “yes.” The child then elaborates:
12. RES: and are you working now?
13. CHI: um -: yes.

Lines 14, 25, 26, 71, 72, 74, 76, 113, 114, 115, 120, and 150 (12 utterances) prompt for the Time Orientation and the Moving Observer metaphors. The child utters 9 of these 12 utterances. The researcher utters 3 lines. These utterances use temporal units that are preceded or followed by prepositions. The prepositions function to orient the observer either “on,” “at,” “in,” or “after” the temporal unit that is located along the observer’s path. The following table summarizes the utterances that prompt for the Time Orientation and Moving Observer metaphors. In the following tables, the temporal units are in bold and prepositions are italicized.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>CHI</td>
<td>I work at um on <strong>Tuesdays</strong> and <strong>Thursdays</strong> at at um Mailboxes.</td>
</tr>
<tr>
<td>25</td>
<td>CHI</td>
<td>then we have lunch at <strong>twelve</strong> at that.</td>
</tr>
<tr>
<td>26</td>
<td>CHI</td>
<td>then we start back at work at <strong>one o'clock</strong>.</td>
</tr>
<tr>
<td>71</td>
<td>RES</td>
<td>what time do you leave here <strong>in the morning</strong>?</td>
</tr>
<tr>
<td>72</td>
<td>CHI</td>
<td>um - it's usually <strong>after eight</strong>.</td>
</tr>
<tr>
<td>74</td>
<td>CHI</td>
<td><strong>between eight+fifteen</strong> and <strong>eight+thirty</strong> we usually leave.</td>
</tr>
<tr>
<td>76</td>
<td>CHI</td>
<td>and we get uh to Mailboxes at <strong>nine+thirty</strong>.</td>
</tr>
<tr>
<td>113</td>
<td>RES</td>
<td>so what do you usually do in the <strong>evenings</strong> when you get back here?</td>
</tr>
<tr>
<td>114</td>
<td>RES</td>
<td>what do you do <strong>after supper</strong>?</td>
</tr>
<tr>
<td>115</td>
<td>CHI</td>
<td>well <strong>Tuesdays</strong> after working we have to do a workout</td>
</tr>
<tr>
<td>120</td>
<td>CHI</td>
<td>and on <strong>thurs</strong> well # well on <strong>Thursdays</strong> I used to go to um to</td>
</tr>
<tr>
<td>150</td>
<td>CHI</td>
<td>but I do one # but um on <strong>Sundays</strong> I go to uh my fitness</td>
</tr>
</tbody>
</table>

Table 5.16 – Lines 14, 25, 26, 71, 72, 74, 76, 113, 114, 115, 120, and 150 from text 7

Lines 71, 114, and 115 that use the preposition “after” are cases of the Moving Observer metaphor because of a prior preposition that precedes these utterances. For example, in line 71, the researcher asks, “What time do you leave here in the morning?” The child responds in line 72, “um-: it’s usually after eight.” The child’s response uses the Moving Observer metaphor because “in” from line 72 contextual establishes the same construal in line 73.
In lines 24, 27, and 53, the speaker construes time using the Time Orientation metaphor, the Moving Observer metaphor, and the Distance-for-Time metonymy.

<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Utterance</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>CHI</td>
<td>and then and then we then we work # then we work um something like uh nine+thirty to nine+thirty to twelve [!].</td>
</tr>
<tr>
<td>27</td>
<td>CHI</td>
<td>and then we go right all the way through to four+thirty.</td>
</tr>
<tr>
<td>53</td>
<td>RES</td>
<td>that makes quite a long day doesn't it?</td>
</tr>
</tbody>
</table>

Table 5.17 – Lines 24, 27, and 53 from text 7

In line 24, the child utters “and then and then we then we work # then we work um something like uh nine+thirty to nine+thirty to twelve [!]” The child construes himself as an observer upon a temporal path and faces forward as described by the Time Orientation metaphor. The child travels from the point “nine+thirty” to “twelve” and the distance that the child travels between these points metonymically represent a length of time. Line 27 is also uttered by the child and prompts for the same construal. The child states, “and then we go right all the way through to four+thirty.” This utterance construes the passing of time as movement along a temporal path and the distance travelled metonymically represents a length of time. The temporal unit “day” is modified by the adjective “long” in line 53. Again, in this expression the speaker metonymically uses distance to stand for a length of time.

In lines 29 and 71, the researcher uses the lexeme “time.” According to Evans (2003), both utterances use the Moment Sense of time where a discrete punctual point is conceptualized without reference to its duration. The child appears to comprehend both cases of the Moment Sense as the child provides elaborative responses:

29. RES: and what time does that get you back here?
30. CHI: well we take the um four+fifty+five bus.
31. CHI: um -- and that is those um tho.
32. CHI: well it's not Funtrack.
71. RES: what time do you leave here in the morning?
72. CHI: um -: it's usually after eight.
73. RES: uhhuh?
74. CHI: between eight+fifteen and eight+thirty we usually leave.
75. RES: mmhm.
76. CHI: and we get uh to Mailboxes at nine+thirty.

A particularly interesting observation that differentiates this child from others is this child's ability to generalize using metaphor, metonymies, and senses of time. In this text, many of the utterances that contain metaphors, metonymies and senses of time discuss events that occur on a regular basis. Line 113 and line 114, however, do point out a recurring difficulty that the children with ASD appear to have with generalizations. In line 113, the researcher asks, “so what do you usually do in the evenings when you get back here?” The child does not respond and the researcher rephrases the question as “what do you do after supper?” This pattern of rephrasing questions that involve generalization was also observed in lines 176 and 177 in text 3 and lines 219 through 223 in text 2. Nonetheless, the child in this text produces and comprehends a variety of temporal metaphors and metonymies in text 7. They include the Time Orientation metaphor, the Moving Observer metaphor, and the Distance-for-Time metonymy. The child is particularly competent with the composite mapping that combines the Time Orientation and Moving Observer metaphors. These metaphors were used together in all of the child’s utterances. The child appears to comprehend Evans’ Moment Sense of time. He provides elaborative and extended responses to questions posed by the researcher. Table 5.18 provides a summary of the metaphors, metonymies, and senses of time the speakers use in text 7.
Table 5.18 - Summary of metaphors and metonymies used in text 7

Text 8

Text 8 contains 4 utterances that use temporal units. Line 58 is ignored because the child utters the temporal unit “midnight” that appears to be part of the proper name “midnight express.” Of the remaining 3 utterances, the child utters a single solicited line while the researcher utters 2 lines.

The child uses 2 temporal units in line 136 and the researcher utters a single temporal unit in line 137. In both lines 136 and 137, the speakers use the temporal unit “a summer day.” In both lines, this unit is preceded by the preposition “on.” This proposition construes “a summer day” as a temporal point upon an observer’s path and prompts for the Time Orientation and Moving Observer metaphors:

136. CHI: now Christina was gotten stuck in between # on a summer day.
137. RES: on a summer day.

In line 136, the child appears to have difficulty expressing when Christina was “stuck in between.” First, the child uses the lexeme “now” which uses the Time Orientation
metaphor to express the current temporal moment; however, the child then uses both the past-tense form of the verb “to be” and the verb phrase “get stuck” in the form “gotten stuck.” The child struggles with spatial deixis as the lexemes “now” and the past-tense clash instead of establishing relative temporal meaning. The child’s utterance appears to be unsolicited, elaborative, and continuing in turn. The researcher’s utterance in line 137 appears to repeats the child’s words, “on a summer day,” to acknowledge the child’s statement.

Line 62 contains the temporal unit, “during that train ride” and is a question uttered by the researcher:

62. RES: I guess you would sleep during that train ride eh?
63. CHI: yes I would.

This question construes a hypothetical situation because of the conjunction “if” uttered by the child in line 58 and the verb “will” in the form “would” in line 62 that expresses the conditional. This utterance uses the Time Orientation metaphor because the situation is unrealized and located in the future. The Time Orientation metaphor is coupled with the Moving Observer metaphor to create a composite mapping where the distance travelled by the researcher represents an amount of time that passes. Line 62 also uses the Event-for-Time metonymy as the train ride stands metonymically for an amount of time that that the child could sleep. The child comprehends the researcher’s question and responds “yes I would,” in the following line. This response is not elaborative.

In text 8, the child is able to use and comprehend both the Time Orientation and Moving Observer metaphors. The child also appears to comprehend and use the Event-for-Time metonymy. The child does produce solicited and unsolicited utterances in text
Table 5.19 - Summary of metaphors and metonymies used in text 8.

<table>
<thead>
<tr>
<th>Text Number</th>
<th>Utterances by Researcher</th>
<th>Utterances by Child Solicited (S) / Unsolicited (U)</th>
<th>Utterances by Child</th>
<th>Total Number of Temporal Units</th>
<th>Temporal Units by Child</th>
<th>Temporal Units by Child Solicited (S) / Unsolicited (U)</th>
<th>Temporal Units by Researcher</th>
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</tr>
</tbody>
</table>

Note: Table 5.19 summarizes the metaphors and metonymies the speakers use in text 8. However, the child uses limited temporal units and struggles with spatial deixis in this text.
Text 9

Text 9 contains a single temporal unit uttered by the researcher in line 254:

254. RES: what do you do after school?
255. CHI: supper.
256. RES: supper?
257. RES: yeah?

This utterance uses the Time Orientation metaphor and the Event-for-Time metonymy. The researcher’s utterances prior to line 254 construes “after school” as a temporal stretch of time located in the future. The Event-for-Time metonymy is prompted because the utterance uses the event of children finishing school to represent a specific temporal moment. Line 254 therefore motivates spatial deixis where a temporal relationship is established between the point that the child finishes school and the events that occur after this point. In this line, the researcher asks a question that requires the child to generalize about what he usually does after school. Although the child responds stating “supper,” this response is peculiar. Supper is typically located much further in the evening in relation to the time a child finishes school. Typical speakers would likely describe events that occur on a regular basis closer to the point when school finishes. A possible explanation for the child’s response is that supper is the consistent event that reoccurs. It is possible that the child may recall the events that occur after school on a daily basis but is unable to generalize across the days. Supper is an event that is consistent and occurs everyday after school. It is also possible the child participates in preparing supper (shopping, cooking, etc.). Similar problems with generalizations were observed in texts 2 and 3. The child’s response is minimal and he does not elaborate.

The conversational turn-taking follows a question-response pattern, with questions posed by the researcher. The child provides minimal responses, does not
Table 5.20 - Summary of metaphors and metonymies used in text 9.

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 6 |
| Evans' Sense of Time by Child | Evans' Sense of Time by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child | Time is Money by Child |

The metaphors and metonymies the speakers use in text 9 include:

- Time is Money
- Time is a Resource
- Distance for Time
- Event for Time
- Moving Time
- Moving Observer
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is a Resource Metaphor
- Time is Money Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy
- Distance-for-time Metonymy
- Time is Money Metaphor
- Time is a Resource Metaphor
- Time Orientation Metaphor
- Time-for-distance Metonymy

Table 5.20 provides a summary of the metaphors and metonymies used in text 9.
PART 2: Analysis of All Texts

This section summarizes the use of temporal metaphors, temporal metonymies, and senses of time produced by speakers across all 9 texts. General and specific patterns in the use of these devices are identified and discussed. Texts 1 through 9 contain 76 utterances that use temporal units. Seven of these 76 utterances are ignored. Of the remaining 69 lines, the child utters 35 lines that use 52 temporal units; 8 of the child’s utterances are solicited while 27 are not. The researcher utters 34 lines that use 38 temporal units. Table 5.22 summarizes the utterances that use temporal units in texts 1 through 9. For a case-by-case analysis of each instance of metaphor, metonymy, or sense of time, refer to Appendix 2.

Four general observations are made from Table 5.22. First, the majority of temporal units uttered by both the researcher and the child construe time using Lakoff and Johnson’s (1999) Time Orientation metaphor and Moving Observer metaphor. The Time Orientation metaphor occurs in 65 of the total 69 utterances. Thirty-four of the 65 utterances that use the Time Orientation metaphor are uttered by the child. Forty-eight of the 69 total utterances use the Moving Observer metaphor. The child uses the Moving Observer metaphor 27 times. According to Lakoff and Johnson (1999) another basic metaphor of time is the Moving Time metaphor; however, the speakers in texts 1 through 9 seldom use the Moving Time metaphor. The child uses the Moving Time metaphor once in text 4. In general, the child used more of each metaphor type than the researcher. In total there are 114 times that the Time Orientation metaphor, Moving Observer metaphor or the Moving Time metaphor occur. Table 5.21 summarizes these observations. Table 5.22 suggests that in general the children with ASD comprehend and
use the Time Orientation and Moving Observer metaphors most frequently among the three most basic temporal metaphors types.

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Total Utterances</th>
<th>Time Orientation Metaphor</th>
<th>Moving Observer Metaphor</th>
<th>Moving Time Metaphor</th>
</tr>
</thead>
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<td>Child</td>
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<td>34</td>
<td>27</td>
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<tr>
<td>Researcher</td>
<td>34</td>
<td>31</td>
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<tr>
<td>Total</td>
<td>69</td>
<td>65</td>
<td>48</td>
<td>1</td>
</tr>
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</table>

Table 5.21 – Number of utterances that use basic metaphors of time in texts 1 through 9
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<th>5</th>
<th>6</th>
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<td>Total Number of Utterances</td>
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<td>34</td>
<td>27</td>
<td>11</td>
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<td>12</td>
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<tr>
<td>Utterances by Child Solicited (S) / Unsolicited (U)</td>
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<td>10</td>
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<td>Time is Money by Child</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Evans' Sense of Time</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Evans' Sense of Time by Child</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
A second general observation indicates that the speakers in texts 1 through 9 produced a fewer number of utterances that use metonymies of time. The Event-for-Time metonymy occurs in 10 of the total 69 utterances; the child utters 4 of these 10 lines. Eight of the total 69 utterances use the Distance-for-Time metonymy; the child utters 3 of these 8 lines. Two utterances use the Time-Distance-Metonymy and none of these lines are uttered by the child. In total, the researcher utters more lines that use each type of metonymy than the child. In total, 20 utterances use one or more types of metonymy.

Table 5.23 summarizes these observations.

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Total Utterances</th>
<th>Event-for-Time Metonymy</th>
<th>Distance-for-Time Metonymy</th>
<th>Time-for-Distance Metonymy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>35</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Researcher</td>
<td>34</td>
<td>6</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>10</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 5.23 - Number of utterances that use metonymies of time in texts 1 through 9

A third general observation indicates that speakers produce utterances that use even fewer of Lakoff and Johnson's (1999) other metaphors of time. These metaphors are the Time is a Resource Metaphor and the Time is Money metaphor. Four of the total 69 utterances use the Time is a Resource metaphor; 2 of these lines are uttered by the child. Two of the total 69 utterances use the Time is Money metaphor; the child utters 1 of these lines. In general, the child uses as many or fewer of these metaphors of time compared to the researcher. In total, the Time is a Resource or the Time is Money metaphor occur in 6 lines of text. Table 5.24 summarizes these observations.
A final general observation shows that the speakers in texts 1 through 9 use Evans’ senses of time the least among the expressions examined. Six of the 69 total utterances use one of Evans’ senses of time; the researcher utters 4 of these lines while the child utters 2 lines. Table 5.25 summarizes these observations.

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Total Utterances</th>
<th>Time is a Resource</th>
<th>Time is Money Metaphor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>35</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Researcher</td>
<td>34</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 5.24 - Number of utterances that use other basic metaphors of time in texts 1 through 9

General findings of the use of temporal metaphors and metonymies in spoken discourse suggest that the speakers examined use the Time Orientation metaphor and the Moving Observer metaphor the most frequently among the most general metaphors of time. In the 9 texts, the child uses the Time Orientation metaphor, the Moving Observer metaphor and the Moving Time metaphor in utterances more frequently than the researcher. Closer examination indicates that although general temporal metaphors are overall used more often by the child than the researcher, it is not the case when each child is examined on an individual text basis. The children in texts 3, 4, and 7 are the only speakers that use the Time Orientation metaphor and the Moving Observer metaphor as often as or more often than the researcher. The remaining children (in texts 1, 2, 5, 6, 8, and 9) use these metaphors less often in utterances than the researcher. The child in text 4
is the only child that uses the Moving Time metaphor. All speakers examined use the Time Orientation metaphor and the Moving Observer metaphor.

Preliminary findings suggest that both the researcher and child use less temporal metonymies in utterances than they use general temporal metaphors. Closer examination indicates that temporal metonymies only occur in texts 3, 5, 7, 8, and 9; however, the children in texts 3 and 7 are the only children who use temporal metonymies in their utterances. Child 3 uses the Event-for-Time metonymy 4 times and the Distance-for-Time metonymy twice. Child 7 uses the Distance-for-Time metonymy once. In the remaining texts where metonymies of time appear, they are uttered by the researcher.

Speakers in texts 1 through 9 use the Time is a Resource metaphor and the Time is Money metaphor even less than they use temporal metonymies. These lexicalized metaphors occur in texts 2, 3, and 4. Texts 3 and 4 are the only texts where the child uses the Time is a Resource metaphor or the Time is Money metaphor. Although the children appear to comprehend the Time is a Resource metaphor when uttered by the researcher, the cases where the children express these metaphors appear to be unconventional. A possible reason for this observation is that both the Time is a Resource and Time as Money metaphors have achieved a level of literalness where they have become lexicalized expression. Lexicalized expression use is subject to contextual conventions and children with ASD do not use the Time as a Resource and Time as Money metaphors in contextually appropriate ways. The child in text 3 uses the Time is a Resource metaphor twice and is overly specific with the amount of time a trip took. The child in text 4 uses the Time is Money metaphor once and underspecifies the number of night his cousin will spend visiting him.
Finally, Evans’ senses of time occur the least among the types of expressions examined. Evans’ senses of time are used within utterances in texts 2, 3, and 7. The child in text 3 is the only child among the 9 children that uses Evans’ sense of time. Moreover, recall that this child does not use the lexeme “time,” rather, the child uses the term “once” that is a variant of Evans’ Instance Sense of time. Therefore, throughout the texts examined, none of the children actually use the lexeme “time” in spoken discourse.

Overall, a pattern emerges where children in texts 3, 4, and 7 use the most and the greatest variety of metaphors, metonymies, and senses of time. The children that are most competent with the basic metaphors of time appear to be the same children who use temporal metonymies, the Time is a Resource/Time is Money metaphor, and Evans’ senses of time. The remaining children utter very limited or no utterances that use expression other than the Time Orientation and Moving Observer metaphors.

Several more specific findings emerge from the analysis of the 9 texts. These findings suggest 4 patterns: the children in these texts demonstrate a greater ability to interpret as opposed to produce metaphors, metonymies, and senses of time; some children experience difficulty with generalization, unspecific construal, or construal that prompt for multiple reference points; time and temporal events are construed and expressed by the children in smaller than typical units; and where typical speakers would likely use the lexeme “time” and senses of time the child construes time and senses of time in unconventional ways.

First, the majority of children are more able to interpret metaphors, metonymies, and senses of time compared to their ability to produce these same expressions. Table 5.22 suggests that the children with ASD are more likely to produce the most general
temporal metaphors more often than the researcher; however, we find upon closer observation that this is not the case. A few children do use the most general metaphors of time more often than the researcher but the majority of children do not. The total score for general metaphors of time is being driven by a few children who frequently use them.

The conversational abilities of children may be a large determinate of temporal metaphor use by children with ASD. The imbalance between the production and interpretation of temporal expressions among the majority of the children in the 9 texts may be caused by the fact that children with less strong conversational abilities require more structured conversations. These more structured conversations entail a turn-taking pattern where the researcher asks questions and the child responds to these questions. Chapter 4, *Genre* notes this reoccurring turn-taking pattern. In addition to more structured conversations, children with less strong conversational abilities sometimes provide minimal and non-elaborative responses that consequently are unlikely to include expressions that contain either temporal metaphors or units of time. In the majority of the texts, the researcher uses more temporal expressions and the child appears to understand the researcher’s expressions. This fact raises the possibility that the children with ASD in the 9 texts are more likely to comprehend temporal metaphors than they are able to use them. It may, of course, be the case that the ‘terseness’ noted (minimal responsiveness) affords fewer opportunities for production. The question warrants further consideration.

It is possible that difficulties with temporal metaphor use may be rooted in the children’s inability to articulate more complicated construals of time. Several children demonstrated difficulties with temporal specificity and generalizations in terms of
temporal points prompted in spoken discourse. In text 2, the child is asked a question and he provides an unlikely response:

219. RES: so what do you do on the weekends Will?
220. CHI: nothing.

The child uses a minimal response and does not answer the researcher’s question. The researcher rephrases the question two additional times before the child provides an appropriate response:

221. RES: do you have a worker that comes?
222. CHI: nope.
223. RES: and spends some time with you?
224. CHI: yes.

Line 219 uses the temporal unit, “weekends,” that prompts for multiple points upon the observer’s path. Although we cannot determine the degree to which the child comprehends this metaphor, again, it appears that metaphors that involve generalized or unspecific events pose problems with individuals with ASD. These construals of time elicit a number of temporal points and require the child to generalize across these points.

Lines 176 through 178 in text 3 provide another example:

176. RES: tell me about your uh you do something on Saturday's usually.
177. RES: what do you usually do on Saturdays?
178. CHI: I go horseback riding.

In line 178, the child answers the researcher’s question; however, before doing so, the question has to be rephrased. The researcher uses the temporal unit, “Saturdays,” that again prompt for multiple points upon the observer’s path. The need for the researcher to rephrase the question may indicate that the child has processing difficulties. The need to rephrase a generalized question in the context of generalizations comes up again in text 7:

113. RES: so what do you usually do in the evenings when you get back here?
114. RES: what do you do after supper?
Text 9 provides a final example of the children's difficulties with questions that generalize and elicit multiple temporal points:

254. RES: what do you do after school?
255. CHI: supper.

Although the child responds to the researcher's question with a correct answer, the child's response is unconventional. Cases where children with ASD are required to generalize seem to pose difficulties as they require a homogeneous perspective of time and events. It is possible that children with ASD may elicit multiple temporal points but it is the task that requires them to see similarities and generalize across these points that is the source of difficulty. The child in text 7 appears to be significantly more capable at generalizing compared to the other children. He appears to be the only child that is more able to generalize in his utterances; however, he still requires the researcher to rephrase a question.

In text 3, the child is asked to generalize again; however, the child demonstrates difficulty in a different way, providing a more specific answer than that requested by the researcher:

222. RES: tell me what your favourite -- thing is to do in the summer time.
223. CHI: I I go on vacation to Prince Edward Island.
224. CHI: an(d) when Kathy is away in Mon(t)real I go camping.
225. CHI: and and after I go camping I pack up my suitcase...

Although the child answers the researcher's question that uses the temporal unit "summer time," it appears that the child replies referencing a specific occurrence and not a general one. Again, this example suggests that the child prefers a heterogeneous construal of
events as opposed to a homogenous one. Moreover, the child uses a false start which may again indicate processing difficulties.

This chapter has shown that children with ASD demonstrate competence with some of the most basic metaphors of time; however, when these metaphors elicit multiple temporal points or motivate a homogeneous construal of time, the children with ASD appear to struggle with these expressions. Discoursal patterns coinciding include minimal and non-elaborative responses, false starts, and the need for the question to be rephrased.

A second pattern that concerns temporal specificity emerged among the texts analyzed. Several children showed the tendency to construe time and temporal events in smaller than typical units. This observation somewhat differs from the previous pattern. In this pattern, the children show competence is expressing time but construe time in overly specific units. Three examples are provided. Minutes are used as opposed to hours and a two-year period may be divided into 2 single-year segments. Text 3 provides the first example:

98. RES: how long did it take you Will?
99. RES: <just about> [>] .
100. CHI: <it> [<] .
101. CHI: it took it took wo it took five hundred and sixty four minutes.
102. RES: did it really?
103. CHI: it took five hundred and sixty four minutes.

In lines 98 through 103, “it” refers to a (car) drive. We would expect typical speakers to be more general and to describe the length of time using hours, not minutes. Note that the child’s response begins with a false start.

A second example shows that in text 4 the child construes a length of time using smaller than typical units:
In lines 131 through 135, "she" refers to the child's little cousin. The child describes the period of time that his cousin has not visited Toronto in terms of 2 1-year increments. We would expect typical speakers to simply state that Ingrid has not been to Toronto in the past 2 years.

A third example in text 3 shows that a child construes a length of time in terms of a series of shorter events as opposed to a longer continuous event:

In lines 191 through 194, "that" and "it" refers to the activity of horseback riding. The child does not answer the researcher's question. Instead of stating a length of time that he has done the activity, the child expresses the number of times as a sequence of the same event. The length of time is therefore construed in terms of a series of smaller temporal events as opposed to a single, continuous duration of time. Note again that the child begins his response with a false start.

The above examples from texts 3 and 4 provide further evidence that children with ASD experience difficulties with temporal specificity. These difficulties are apparent where utterances prompt for multiple temporal points in terms of generalizations and where utterances prompt for events or ongoing events where smaller units can be used. Again, the observations in texts 3 and 4 suggest that the child uses a heterogeneous construal of time. Two 1-year increments heterogeneously differentiate one year for the
other whereas the more typical expression "two years" construes the period of time as homogeneous. Twelve rides also construes the 12 events as heterogeneous entities while the more typical "12 times" expression assumes an ongoing homogeneous recurrence of the same event. The majority of these findings are observed in texts 3, 4, and 7 where children demonstrate the ability to use a greater variety of temporal metaphors, metonymies, and sense of time.

The data examined suggest that children with ASD may construe and communicate time differently. Where typical speakers would likely use the lexeme "time" and senses of time, the child construed time and senses of time in unconventional ways. There is comprehension of the researcher's utterances that used the Commodity, Duration, and Moment Senses of time; however, the Instance Sense is the only sense of time used by child 3 in the 9 texts. Child 3 uses the lexeme "once" on two occasions that prompt for the Instance Sense of time. "Once" is a contextually appropriate variant of the Instance Sense and is therefore construed as "one time" in text 3:

82. CHI: my father went there w an my father and I went there once before grade # went there once before grade five started.

206. CHI: and by and one and once my mother and I got it in um July and August # bought it in June and August.

Yet none of the children used the lexeme "time" itself, and in several instances, time is construed unconventionally. In text 4, we see that the child construed the length of time he has being going horseback riding as "twelve rides":

192. CHI: I have been doing it for twel(ve) I have d I have done it for twelve rides :-:

This construal uses 12 consecutive events to describe a length of time. It is unusual as we would expect typical speakers to use the Instance Sense of time. For example, "I have
done it twelve times.” How individuals with ASD use senses of time warrants further investigation as these two examples show both competency and difficulties with the Instance Sense of time. Further analysis of texts where speakers with ASD use the lexeme “time” would provide more evidence for patterns in the use of senses of time.
CONCLUSION

This chapter has identified that speakers with ASD do comprehend and produce temporal metaphors, temporal metonymies, and senses of time. The analysis found that in general, the children in the 9 texts use the Time Orientation and Moving Observer metaphors the most often. Metonymies of time and the less basic metaphors of time are used less by the children with ASD. Children with ASD used Evans’ senses of time the least. In addition to these general observations, it was identified that the majority of children with ASD used fewer temporal metaphors, metonymies, and senses of time than the researcher. Upon closer examination, it was found that children in text 3, 4, and 7, are exceptions who used the Time Orientation and Moving Observer metaphors more frequently than the researcher.

The children in text 1, 3, 4, and 7 are in fact the only children who used other metaphors, metonymies, and sense of time, besides the Time Orientation metaphor and the Moving Observer metaphor. Moreover, patterns are identified among speakers that suggest difficulty with time in generalizing events. Generalizations prompt for multiple temporal points and motivate homogeneous construals of events and time. Other specific patterns that were identified include difficulties with specificity in terms of temporal units and difficulties with senses of time and the lexeme "time." The most obvious examples of these patterns are found in texts 3, 4, and 7.

The children with ASD in texts 3, 4, and 7 are the children that used the greatest variety of metaphors, metonymies, and senses of time; yet, these children are among the ones that demonstrated the greatest difficulties with generalizations, specificity, and the lexeme "time." Children responded to generalizations or questions that required
construals involving multiple temporal points with responses that were unlikely or that used false starts. They required the question to be restated or replied with utterances that did not answer the question. Lengths of time were observed to be construed in smaller than usual units. The lexeme “time” was never used and where the lexeme “time” would typically be expected, the child replaced “time” with a series of events. The child did comprehend the researcher’s utterances that used senses of time and also used the lexeme, “once.” These observations suggest that children with ASD have the tendency to express heterogeneous construals of time and struggle with expressions that motivate homogeneous construals. Further analysis of the lexeme “time” with a specific focus on temporal cycles and recurrence may provide interesting and more conclusive findings that would help better understand how individuals with ASD use the lexeme “time.”

The fact that the research participants did not use the lexeme “time” suggests that Evans’ approach to time has limited applications in the context of the discourse of individuals with ASD. This limit provides further insight into the analysis of time as the research participants were able to express time and temporality without using the lexeme. This observation suggests that conceptual metaphor, in general, may be a more effective way to discuss the cognitive aspects of time. Although Evans’ framework enables a discussion in this thesis, it precedes the theory of conceptual metaphor in the context of speakers with ASD.

Throughout texts 1 through 9, many of the child’s utterances demonstrate unusual temporal construals that we would not expect in typical conversations. These utterances violate or ignore contextual factors and protocol of conversational discourse. Unusual utterances among the children examined were largely found to be uttered by the children
who used the greatest variety of metaphors, metonymies, and senses of time. Context and
genre establish the generally accepted conventions of conversation. A definite
relationship exists between the expressions analyzed and story telling genres. A variety of
general and specific observations concerning temporal expressions are noted in this
chapter.
CHAPTER 6 – CONCLUSION

This thesis examined temporal discourse produced by 9 speakers with ASD from two linguistic disciplines in a complementary way. First, using speech genre analysis, this thesis explored the ways in which individuals with ASD structured stretches of texts that involve sequences of events. These stretches of text were described following a framework from Eggins and Slade (1997) and Plum (2004) and patterns in the use of speech genre types and generic stages were identified across all 9 texts. Second, these same stretches of text were examined for temporal conceptual metaphors, metonymies and senses of time following Lakoff and Johnson (1999) and Evans (2003). The speakers' uses of conceptual metaphors, metonymies, and senses of time were described and patterns in the linguistic expressions of these devices were identified across the 9 texts.

The examination of semi-structured conversational texts is an interesting line of inquiry as individuals with ASD struggle with contextually appropriate discourse in conversation (de Villiers et al., 2006). The “storytelling genres” (Eggins & Slade, 1997) in such texts also place relatively high demands on semantic and episodic memory (Asp & de Villiers, forthcoming). Thus the data was well-suited to this inquiry. The speech genre analysis was found to be an effective means of better understanding the ways in which these individuals contextually use and vary language in spoken discourse. Time and temporal concepts were another engaging area to examine as these concepts are largely communicated using conceptual metaphor. It is widely acknowledged, individuals with ASD struggle the interpretation and use of figurative metaphor, tending to interpret metaphors in an overly literal way. By combining these two approaches, it was found that
the individuals with ASD investigated have problems with temporal specificity in the context of storytelling conversations.

Speech genre analysis of the stretches of temporal texts found that children with ASD engaged exclusively in Specific Recounts, General Recounts, and Procedures. The research participants did not use Narratives, Anecdotes, or Exemplums as speech genre types in the stretches extracted from the 9 texts. Among the generic stages of the speech genre types, children used Records of Events the most, followed by Orientations, and Evaluations. A pattern also emerged where children with ASD appeared to have a tendency to use Records of Events. This finding was based on the observation that a large number of Records of Events were found, that children ignored utterances that interrupted Records of Events, they returned to Records of Events if they were interrupted, and they provided Records of Events when other generic stages were solicited.

The research participants in texts 3 and 7 appeared to have stronger conversational abilities marked by longer dialogue between turns and the ability to use a variety of unsolicited generic stages. These same children were the participants who also described multiple events in serial order and produced discontinuously realized Records of Events. Interestingly, although the participants from texts 3 and 7 may have had stronger conversational abilities, they were inflexible with temporal conjunction use. They largely sequenced events using “then” or “and (then).” In contrast, the participants in texts 1, 5, and 9 showed weaker conversational abilities marked by fewer or no unsolicited and optional generic stages. Children in texts 2 and 8 also had weaker conversational abilities. They exhibited what may have been coping techniques that
included mirroring the researcher's responses, using minimal responses, and probing for specific questions.

The analysis of temporal conceptual metaphors, metonymies, and senses of time found several general patterns. The research participants with ASD used the Time Orientation and Moving Observer metaphors the most frequently. They used metonymies of time, the Time is a Resource metaphor, and the Time is Money metaphor less frequently and Evans' senses of time the least. The research participants in texts 3, 4, and 7 used the most and the greatest variety of temporal conceptual metaphors, metonymies, and senses of time. The remaining participants used the Time Orientation metaphor and the Moving Observer metaphor, but very few or none of the other conceptual metaphors, metonymies, or senses of time.

Other patterns in the use of conceptual metaphors, metonymies, and senses of time suggest that some children with ASD were more able to interpret the above temporal expressions as opposed to producing them. The research participants appeared to be more able to comprehend some temporal conceptual metaphors uttered by the researcher, but lacked the resources to use these same metaphors in contextually appropriate ways. A number of expressions of conceptual metaphors, metonymies, and senses of time uttered by the children demonstrated an attempt to use the expression but difficulties with specificity resulted in utterances that were unexpected or unconventional. Some children further experienced difficulties with generalizations, unspecific construals of time, or construals that prompted for multiple temporal points. The research participants also expressed time in smaller than typical units, tended to construe events heterogeneously, and where the lexeme "time" would normally occur, expressed the lexical item in
unconventional ways. The most obvious examples were found in texts 3, 4, and 7, where children were the most able at using conceptual metaphors, metonymies, and senses of time.

Although time is typically expressed using figurative and conceptual metaphors, individuals who struggle with figurative expressions showed general competency with some conceptual metaphors of time; specifically, these conceptual metaphors were the Time Orientation and Moving Observer metaphors. Conceptual metaphors differ from figurative metaphors in their intensity of conventionality. Individuals with ASD are knows to have difficulties with figurative expressions but the findings of this thesis indicate that the research participants interpreted and produced linguistic expressions that used conventional (conceptual) metaphors of time.

Overall, patterns from the two analytic approaches employed suggest interesting possibilities. Specifically, a relationship was found between stronger conversational ability and a stronger ability to use speech genre, conceptual metaphors, metonymies, and senses of time. In addition, unconventional patterns in the use of speech genre, metaphors, metonymies, and senses of time seemed to occur among the most conversationally able speakers with ASD. It appears that there is a relationship between conversational success and conceptual metaphor use in ASD and further studies in this area are warranted. The findings also suggest that unconventional use of speech genre types and metaphor are not necessarily indicative of conversational ability in ASD. Further studies would be needed to explore this hypothesis.

The children in texts 3 and 7 were the children that used the most and the greatest variety of generic stages and speech genre types in the stretches of texts extracted from
the 9 transcripts. Children in texts 3, 4, and 7 used the most and greatest variety of temporal metaphors, metonymies, and sense of time in the same in the same 9 texts. These observations suggest that speakers who are more able to use speech genre types and stages may also be more able to use temporal conceptual metaphors, metonymies, and senses of time.

Both the analyses show specific difficulties with speech genre use and conceptual metaphor use. Speech genre analysis revealed that although the children in texts 3 and 7 had stronger conversational abilities marked by their varied use of generic stages, longer turns, and the ability to produce discontinuously realized Records of Events and Records of Events that described multiple events in serial order, their use of temporal conjunctions was unvaried. They largely sequenced events in serial order using “then” and “and (then).” The child in text 3 was overly specific with his description of events, causing the researcher to mistake the child’s Recount for an Anecdote. This child also provided many obvious examples where he either ignored utterances by the researcher that interrupted Records of Events or responded to the researcher’s utterances and then returned to the Record of Events. It may be that individuals with ASD who are more conversationally able favour the Recount genre. The unvaried use of conjunctions, the specific description of events, and the tendency to return to Records of Events are all unconventional conversational qualities that support and may even encourage children with ASD to use the Record of Events stage of the Recount genre.

Metaphor analysis revealed that these same children were among the most apparent to construe time and temporal events in unconventional ways. Child 3 was overly specific and described 9 hours and 24 minutes as “five hundred and sixty four
minutes.” This child also described the fact that he had gone horseback riding 12 times as “twelve rides,” an example that suggests the child may replace the more conventional expression using the lexeme “time” with the lexeme “ride.” Furthermore, as discussed, “twelve rides” suggests a heterogeneous construal of temporal events where each ride may be different, whereas “12 times” would suggest 12 occasions of the same event. Both the children in texts 3 and 7 appeared to have difficulties with generalizations. Questions that solicited multiple temporal points and then required the child to generalize, (e.g. “What do you usually do in the evenings?”), were ignored by the child or needed to be rephrased by the researcher.

A recurring pattern that was apparent among the most conversationally engaged children with ASD was the inappropriate use of detail. From speech genre analysis, difficulties with specificity appeared in the detailed description of events. From conceptual metaphor analysis, this same difficulty appeared in the use of smaller temporal units, generalized events, and the recurrence of similar events. It is likely that the less conversationally engaged individuals with ASD may experience these same difficulties; however, these patterns may be more difficult to detect because of the ways these individuals participate in conversation. Speech genre analysis showed that the less conversationally engaged individuals required more structure from the researcher, did not elaborate, and tended to use minimal and polar responses.

Individuals with ASD who were less conversationally engaged appeared, at times, to compensate for their difficulties. As just noted, speech genre analysis showed that these individuals participated in a turn-taking pattern where the researcher would ask a question and the child would respond to the question. On occasion, the child did not
respond to questions, provided unlikely answers, or copied the researcher’s responses. The speech genre analysis also showed that the less conversationally engaged children appeared not to elaborate and one child used probes to solicit specific questions from the researcher. The analysis of conceptual metaphor showed that these same children used fewer conceptual metaphors, metonymies, and senses of time and largely used only the Time Orientation metaphor and the Moving Observer metaphor. Again, the limited use of metaphors can be linked back to patterns found from speech genre analysis. These individuals often provided responses to questions that were minimal and unelaborative; therefore, limited use of metaphor, metonymies, and senses of time could be expected.

All the research participants showed unconventional patterns in their use of storytelling speech genres, conceptual metaphors, metonymies, and senses of time. The more conversationally engaged individuals showed specific difficulties with both speech genre and conceptual metaphor that related to specificity of time and temporal events in different ways. The less conversationally engaged individuals also showed difficulties and sometimes techniques that helped compensate for their difficulties with speech genre and conceptual metaphor. Conversational specificity is highly dependent on context and in this thesis specificity in relation to speech genre and conceptual metaphors of time was identified as a particular area of difficulty for individuals with ASD. Although individuals with ASD may experience difficulties with speech genre, they do appear use genre and generic stages in conversation, but in unconventional ways. This finding suggests that speakers with ASD do rely on context and attempt to make shared and meaningful contributions in conversational discourse.
Individuals with ASD also used metaphors, metonymies, and senses of time in unconventional ways. Difficulties with conceptual metaphors are rooted in specificity. The fact that the speakers with ASD used temporal conceptual metaphors, metonymies, and senses of time indicates that they attempted to make shared temporal contributions in spoken discourse. Their success in using some conceptual metaphors also serves as a contribution to the philosophy of time, since metaphor use, especially in spoken discourse, is particularly sensitive to context.

People with ASD who struggle with figurative metaphor comprehend and produce some conceptual metaphors, metonymies, and senses of time. Most interestingly, the research participants showed competency with some of the most conventionalized metaphors of time. Conceptual metaphors explored in this thesis are among the most conventionalized temporal metaphors. As figurative metaphors are extensions of conceptual metaphors, temporal metaphors exist on a continuum that ranges from conventional (conceptual) metaphors to poetic (figurative) metaphors. Individuals with ASD must reach a point on the continuum of the conventionality of metaphors where they begin to struggle with metaphorical expression. The tendency for individuals to use a limited number of conceptual metaphors in this thesis provides evidence that individuals with ASD begin to show difficulties with figurative language somewhere at the conceptual level. The point at which these difficulties begin to appear warrants further investigation.
WORKS CITED


APPENDIX 1

Temporal Stretches Extracted from 9 Transcripts
TEMPORAL STRETCHES: TRANSCRIPT 1

GENERAL RECOUNT 1

79. RES: what do you do when you go home from school Will?
80. CHI: ah -: I play games.

SPECIFIC RECOUNT 1

138. RES: so do you like pizza Will?
139. CHI: mmhm.
140. RES: I had pizza last night for supper.
141. RES: what did you have for supper last night?
142. CHI: I had pizza too.
143. RES: did you?
144. CHI: yeah.
145. RES: oh -: .
146. RES: and the night before I had pork chops.
147. RES: can you remember what you had the night before?
148. CHI: pork chops too.
149. RES: you had pork chops too.
150. RES: hm.

FUTURE PROJECTION 1

151. RES: what are you having tonight # for supper?
152. RES: do you know?
153. CHI: I'm having rice for supper tonight.
154. RES: oh what do you eat with the rice?
155. CHI: turkey.
156. RES: turkey and rice.
157. RES: that sounds delicious.
158. RES: mmhm.
TEMPORAL STRETCHES: TRANSCRIPT 2

FUTURE PROJECTION 1
1. RES: today is June the sixth.
2. RES: and <I>[>].
3. CHI: <fifth>[<].
4. RES: is it the fifth?
5. CHI: yes.
6. CHI: tomorrow's the sixth.
7. RES: oh okay.
8. RES: today is June the fifth.

GENERAL RECOUNT 1

219. RES: so what do you do on the weekends Will?
220. CHI: nothing.
221. RES: do you have a worker that comes?
222. CHI: nope.
223. RES: and spends some time with you?
224. CHI: yes.
225. RES: hm what's his name?
226. CHI: Tom.
227. RES: and what do you do with Tom?
228. CHI: go out with him.
229. RES: mmm?
230. RES: what do you do when you're out?
231. CHI: play golf.
232. RES: golf?
233. CHI: yes.
234. RES: oh that's exciting.
235. CHI: yes.
TEMPORAL STRETCHES: TRANSCRIPT 3

SPECIFIC RECOUNT 1 - DISCONTINUOUSLY REALIZED

5. RES: I hear you went on a holiday recently.
6. CHI: I [>].

7. RES: <where did you go?> [<]
8. CHI: I went to Toronto and Kingsbury.

9. RES: wow.
10. RES: I like your accent.
11. CHI: yes.
12. CHI: yes.
13. CHI: you love my accent.
14. CHI: I do you do.
15. RES: mmhm.

16. RES: what did you see in Toronto?
17. CHI: <I> [>] .
18. RES: <or in> [<] Toronto?
19. CHI: first I went to Kingsbury.
20. CHI: and visited my aunt Eddy and Judy Winston.
21. CHI: on Tuesday and Wednesday Judy Winston and J we both went to the airport to pick up Sophie.
22. CHI: (a)n(d) Sophie introduced us to a band called the Wallflowers with Jacob Dillon in it.
23. RES: oh where does the band play?
24. CHI: from America.
25. RES: oh from America.
26. CHI: Sophie and I went to Recordman.
27. CHI: and at Recordman Recordman we found a Stan Rogers tape called Poetic Justice [!] with two radio players called Harris and the major and the sisters.
28. CHI: um J Sophie found a Sophie found a thing that wasn't Tom Waits wasn't the Wake it wasn't Rick Wakefield but it was the Wallflowers # called bringing down the horse.
29. CHI: it was the only Wallflowers album they ever recorded.

ANECDOTE

30. RES: wow.

31. RES: had you heard about them before?
32. RES: this group?
33. CHI: no!
34. RES: no?

35. CHI: uh the so then we went to an antique shop.
36. CHI: and then back to Vinyl Records.
37. CHI: when I flipped through the the letter b in the Bowie [!] section I found Changes [!] One Bowie.
38. CHI: and then in the Cohen [!] section I rifled through till I was stopped dead by the blue raincoat staring out from the new Jennifer Warnes album called Famous Blue Raincoat.
39. CHI: and I got it on LP and cassette.
40. CHI: and then we and then we went home to and then and then we fou home and then we drove back to Kingsbury and Kingsbury.
41. CHI: and listened to it on the way -: ay there.
42. CHI: and at Kingsbury I ate some lasagna and butterscotch icecream.
43. CHI: and we went outside at night and played in the snow um <and> [>].
44. RES: <do you> [<].
45. CHI: the next day I we I went to the bookshop.
46. CHI: and got the English version of the Judith Beoris book Alexander And The Terrible Horrible No Good Very Bad Day <which I loved> [>].

**ORIENTATION**

47. RES: <excuse me Will> [<].
48. RES: did you have cousins there to play with too?
49. CHI: no -: !
50. RES: no just <adults eh hm> [>] ?

**RECORD OF EVENTS**

51. CHI: <it's in> [<] then I went to Billy and Nancy's dairy farm.
52. CHI: <and> [>].

**ORIENTATION**

53. RES: <how many uh> [<] cows would they have on that dairy farm?
54. CHI: they had a lot [!] .
55. RES: like about twenty or fifty or what would you think?
56. CHI: t twenty two.
57. RES: twenty two?
58. CHI: <yeah> [>].
59. RES: <and w> [<] what what colours were they?
60. RES: were they Holstiens black and white ones or were.
61. CHI: they were black and white Holstiens.
62. RES: were they?
63. RES: uhhuh.

**RECORD OF EVENTS**

64. CHI: excuse me and excuse me and then we went home.
65. CHI: and I went outside again.
66. CHI: and I took a bath.
67. CHI: and then [!] I went to sleep.
68. CHI: and then I went to bed.
69. CHI: and turned off the light.
70. CHI: the next morning I packed my suitcase up.
71. CHI: and we went back to Toronto.
72. CHI: but my father was gone.
73. CHI: I sat down and read -: .
74. CHI: and suddenly my father went my father came back.
75. CHI: he walked me over to the Sam’s on Yonge street.
76. CHI: and Bloor street -: .
77. CHI: and I.

**ORIENTATION**

78. RES: what's that place Will?
79. CHI: it's a it's a new Sam's <where> [>] they have used LP's.
80. RES: <where> [<].

**RECORD OF EVENTS**

81. CHI: but I am sorry they did not have any Jessy [!] Winchester LPs there.
82. CHI: my father went there w an my father and I went there once before grade five started.
83. CHI: and we found two new ones Learn to Love It and Talk Memphis For Me.
84. CHI: and then as we went to the Sam's on Bloor street I found Jessy Winchester's first album and then album and his eighth one called Touch On The Rainy Side and we payed a tape of Mendelson Joe called Born To Cuddle so we payed for them.
85. CHI: and then we walked over to Vanhouts.
86. CHI: and I ate a nanaimo bar and drank some water.
87. CHI: and a taxi picked us up.
88. CHI: and a taxi came and took us back and took us home to Toronto.
89. CHI: and we paid for them.
90. RES: how did you get to Toronto?
91. RES: did you fly or did you go by car?
92. CHI: we went by car.
93. RES: yeah?
94. RES: was it a long drive?
95. RES: it must have been.
96. CHI: it was a long drive.
97. RES: mmhm.
98. CHI: how long did it take you Will?
99. RES: just about.
100. CHI: it took it took five hundred and sixty four minutes.
101. CHI: it took five hundred and sixty four minutes.
102. RES: did it really?
103. CHI: it took five hundred and sixty four minutes.
104. CHI: enough to make me sweat.
105. CHI: and the car trip was long.
106. RES: mmhm.
107. RES: did you sleep during the car trip?
108. CHI: no.
109. RES: no?
110. CHI: I was awake during the trip.
111. RES: mmhm?
112. CHI: and I slept and I slept and I slept on a mattress at home.
113. RES: mmhm?
114. CHI: after the mattress in my grandmother and grandfather's apartment.
115. CHI: and the next morning when I woke up I had some bread and peanut butter for breakfast.
116. CHI: and then.
117. CHI: and then.
118. CHI: and then.
119. CHI: and departed for home.
120. CHI: and I cried about leaving Toronto.
121. RES: did you?
122. CHI: yes.
123. RES: I suppose it was sad leaving your grandparents eh?
124. CHI: yes it was sad --.

... (CONTINUED 34 LINES LATER)

158. RES: so you had a pretty good trip.
159. CHI: <yes -: > [>] .
160. RES: <sounds like> [<] .
161. RES: yeah.

FUTURE PROJECTION 1

125. RES: do they come and visit you here too?
126. CHI: yes.
127. CHI: <they're coming> [>] an(d) visit and visiting me in the summer in July [!] .
128. RES: <oh that's nice> [<] .
129. RES: oh that'll be nice.
130. CHI: in Ju.
131. CHI: yes.

[Note: in Future Projection 1 they = grandparents]

GENERAL RECOUNT 1

132. RES: do you know when you were at Kingsbury Will.
133. CHI: where?
134. RES: you remember when you were at Kingsbury?
135. CHI: what?
136. RES: when you visited Kingsbury.
137. RES: do you remember that s that town?
138. CHI: yes.
139. RES: when you were there you were only about a half an hour from a farm where I yu I grew up.
140. CHI: what farm is that?
141. RES: well that's where my mom and dad owned a farm.
142. RES: and I lived when I was a little girl.
143. CHI: yes [!] .
144. RES: and my mom used to drive a half an hour.
145. RES: and teach in Kingsbury.
146. RES: she taught highschool.

147. CHI: <did she> [>] ?
148. RES: <do you know> [<] do you know do you know what subject she taught?
149. CHI: what [!] did she teach?
150. RES: she taught --: mathematics # to highschool students.
151. CHI: my t my t my tea my teacher teaches geography [!] .
152. RES: does she?
153. CHI: geography from Canada -: .
154. RES: mmhm?
155. RES: it's interesting to learn about your own country in geography isn't it?
156. CHI: yes :-.
157. RES: mmhm :-.

FUTURE PROJECTION 2
166. CHI: oh f oh f oh Doris please Doris please stop the tape.
167. CHI: and ah and rewind it to play.
168. CHI: and let's re record our voice.
169. RES: well we have been recording our voice.
170. RES: and we need to do about # three or four more minutes.
171. RES: and then I'll stop and rewind.
172. RES: and you can hear yourself.
173. RES: okay?
174. CHI: yes Doris.
175. CHI: I can.

GENERAL RECOUNT 2
176. RES: tell me about your uh you do something on Saturday's usually.
177. RES: what do you usually do on Saturdays?
178. CHI: I go horseback riding.
179. RES: where's that Will?
180. CHI: it's in North York at Kingsway.
181. RES: mmhm?
182. RES: that's a long ways to go to go horseback riding eh?
183. CHI: yeah :-.
184. RES: mm.
185. CHI: yes.
186. RES: is it outside or inside?
187. CHI: it's indoors!
188. RES: wow.
189. CHI: sometimes I ride out [:] .
190. RES: mmhm?
191. RES: hm how long have you been doing that?
192. CHI: I have been doing it for twel(ve) I have d I have done it for twelve rides :-.
193. RES: twelve rides oh.
194. CHI: yes :-.
195. RES: do your mom and dad ride horseback too?
196. CHI: no [:] .
197. RES: no.
198. CHI: no.
199. CHI: my friend Craig Holly takes me.
200. RES: um.
201. RES: does he live in Dundas?
202. CHI: ye yes.
203. CHI: he wen he lives in Burlington.
RECORD OF EVENTS
204. CHI: he went to school in Toronto.

ORIENTATION
205. CHI: and had a Nielsen LP which is called The Point released in 1985 like our vide like our video The Point which was a which was replaced at the video box.

RECORD OF EVENTS
206. CHI: and by and one and once my mother and I got it in um July and August # bought it in June and August.
207. CHI: but.
208. CHI: August um.
209. CHI: but the video was not released in 1985.
210. CHI: it was uh released before the LP in 1984 -- #: uh 1984 and 1989 --:

EVALUATION/CODA
211. RES: you know so much about music Will.
212. CHI: I d(o) <I do> [>] Doris.
213. RES: <you do> [<].
214. RES: <you know so much> [>] .

GENERAL RECOUNT 3

ORIENTATION
222. RES: tell me what your favourite -: thing is to do in the summer time.

RECORD OF EVENTS
223. CHI: I I go on vacation to Prince Edward Island.
224. CHI: and(d) when Kathy is away in Toronto I go camping.
225. CHI: and and after I go camping I pack up my suitcase again.
226. CHI: and d and leave for Toronto.

EVALUATION
227. RES: that sounds like fun.
228. CHI: yes.

RECORD OF EVENTS
229. CHI: I'll (h)afta I'll (h)afta pick up Esther and X.
230. CHI: and then go to the two Sam's # the first on Yonge and the other one uh Bloor.
231. CHI: um uh we find a lot of great treasures -: there um.

CODA
232. RES: I can imagine.
233. CHI: yeah.
234. CHI: you can imagine that Doris!
TEMPORAL STRETCHES: TRANSCRIPT 4

FUTURE PROJECTION 1

20. RES: and what are gonna ha going to have for lunch?
22. CHI: I'm gonna actually not really.
24. CHI: and I'm gonna pretend it's James.
25. RES: oh.
26. CHI: <and eat him> [% chuckles].
27. RES: hm.
28. RES: <why's> [>] that?
29. CHI: [because] [<>] because James's not nice to me.
30. CHI: and I'll pretend my dessert is Walter.
31. CHI: and I eat Walt.
32. CHI: and eat him.
33. CHI: (be)cause Walter isn't nice to me either.

GENERAL RECOUNT 1

108. RES: so what do you do when you go to Bowen+Island?
109. CHI: play with Ingrid.
110. RES: mmmhm.
111. CHI: she's our favourite cou she's our favourite little cousin.

FUTURE PROJECTION 2

131. RES: how does she like Toronto?
132. CHI: she likes it <wonderbar> [!].
133. RES: mmmhm?
134. CHI: but she hasn't visit me last year and the year before.
135. RES: um.
136. CHI: it's <a shame> [>].
137. RES: <so you have> [<>].
138. RES: mmmhm.
139. RES: so you have a <brother xx> [>].
140. CHI: <she's> [<>] visiting me at Christmas.
141. RES: that'll be exciting won't <it> [>]? 
142. CHI: <mmmhm> [<>].
143. RES: mmmhm.
144. RES: is she coming Christmas day?
145. CHI: she's spending the night's spending nights there.
146. RES: mmmhm.
147. RES: and your aunt and uncle as well?
148. CHI: yeah.
149. RES: mmmhm.
150. CHI: Uncle Jake and Aunt Melissa.
151. CHI: and I'm w it's something for me to look forward to.
152. RES: that's right.
153. RES: for everyone to look forward to eh?
154. CHI: mmhm.

[Note: in Future Projection 2 she = Ingrid]

PROCEDURE 1

179. RES: do you do any cooking at home # <Will> [>]?  
180. CHI: <um yeah> [<].

ORIENTATION
181. RES: what do you cook?  
182. CHI: I did un cooking for xx batch Kraft+Dinner and oatmeal.

HOW TO
183. RES: can you tell me how to make Kraft+Dinner?  
184. RES: how'd you <do it> [>]?  
185. CHI: <you just> [>] add ch cheese and.
186. RES: mmhm?  
187. CHI: an(d) cheese.  
188. CHI: then you boil it in the pot.  
189. RES: mmhm?  
190. CHI: but first you have to wait till the wa # for the water to boil [!] .  

CODA
191. CHI: that's all.  
192. CHI: y how you make Kraft+Dinner.
TEMPORAL STRETCHES: TRANSCRIPT 5

SPECIFIC RECOUNT 1

9. RES: I talked to you on the telephone last night too didn't I?
10. CHI: yeah.
11. RES: mmhm.

12. RES: you and your mom had just gone for a drive.
13. RES: where did you go?
14. CHI: well we were just came back I we were back from my cousin's house # up in Woodbridge.
15. RES: mm.
16. RES: that sounds like quite a long drive.

PROCEDURE 1

163. RES: and do you have a favourite food?
164. CHI: yes.
165. RES: what?
166. CHI: uh cheese pizza and pineapple pudding.
167. RES: oh right I remember you telling me about the pineapple pudding before.
168. CHI: yeah.
169. RES: mm.

170. RES: do you ever make cheese pizza?
171. CHI: well yes.

172. CHI: but my mom doesn't my parents don't like cheese.
173. CHI: well my dad likes his cheese on his pizza.
174. RES: mmmhh?

175. RES: how do you make the cheese pizza?
176. CHI: well we sprinkle a bit of mozzarella.
177. CHI: and then we put on the toppings.
178. CHI: two layers of cheese.

179. CHI: but sometimes cheese taste awful don't you think?
180. RES: tastes awful?
181. CHI: yeah.
182. CHI: because it shows if you if it doesn't go in the fridge it might taste sour.
183. RES: yeah.
184. RES: or a bit mouldy?
185. CHI: yeah.
186. RES: hm.

187. RES: but it's pretty good when it's fresh isn't it?
188. CHI: yeah.
189. RES: mmhm.
190. RES: I especially like it on pizzas.
191. CHI: mmhm.
192. CHI: me too.
193. RES: mmm.
GENERAL RECOUNT 1

147. RES: what do you do for groceries and food and that?
148. RES: is there a store nearby?
149. RES: do you have to go by boat?

RECORD OF EVENTS

150. CHI: well we have to get off the boat.
151. CHI: and uh travel to the store <in> [>] town.
152. RES: <mmhm> [<]?
153. CHI: IGA.
154. RES: mmhm?

PROCEDURE 1

165. RES: and what do you do outside at the cottage?
166. CHI: well # well at the cottage we we # we have we have this we have this lumbermill up here which is used for s a tiny shed lumbershed or lumbermill called.
167. CHI: and there's this there's this mo this all these tools and lots of skinny wood and things stored in here.
168. CHI: there was also this motor.
169. CHI: there was also this motor a plug and san and some sandstone wheels to sharpen the axes.
170. RES: mmhm.

HOW TO

171. CHI: plus if you get like a rectang a skinny rectangled piece of wood.
172. CHI: and put the end on the end of the sandstone wheel.
173. CHI: it it it smoothly sands right through it leaving a smooth end.
174. RES: mmhm?
175. CHI: I think when I get up there you can go sand sand sand sand sand.

EVALUATION/CODA

176. CHI: makes a perfect fancy stick.
177. RES: does it?

PROCEDURE 2

178. CHI: and uh # I shar I can sh I'd get an axe and uh sh kind of sharpen it.
179. CHI: there's sparks flying in the air.
180. CHI: but I know but I've learned to sharpen.
181. CHI: and know how to handle it.
182. RES: uhhuh?
183. CHI: I know how to handle the sand # grinder machine.
184. CHI: plus the axes.

HOW TO

185. CHI: plus I pu push get the body of the axe.
186. CHI: and put it along the sand # stone to like kind of clean it to take the rust off.
187. CHI: and it revealed printing saying that it was made in Sweden.

**EVALUATION/CODA**

188. CHI: they make good steel there.
189. RES: mmhmn.
TEMPORAL STRETCHES: TRANSCRIPT 7

GENERAL RECOUNT 1

12. RES: and are you working now?
13. CHI: um -: yes.

ABSTRACT

14. CHI: I work at um on Tuesdays and Thursdays at at um Mailboxes.
15. CHI: and that's um in Stratford
16. RES: uhhuh?
17. RES: so you travel from here to there?
18. CHI: yes.
19. RES: oh really?

ORIENTATION

20. RES: <that's> [>] quite a trip.
21. CHI: <yeah> [<].
22. CHI: uh ye yeah it is quite a trip.

EVALUATION

23. CHI: we go on the van first.
24. CHI: and then and then we then we work # then we work um something like uh nine+thirty to nine+thirty to twelve [!].
25. CHI: then we have lunch at twelve at that.
26. CHI: then we start back at work at one o'clock.
27. CHI: and then we go right all the way through to four+thirty.
28. RES: oh -: .

RECORD OF EVENTS

29. RES: and what time does that get you back here?
30. CHI: well we take the um four+forty+five bus.
31. CHI: um -: and that is those um tho.

RECORD OF EVENTS

32. CHI: well it's not Funtrack.
33. CHI: it used to be Funtrack.
34. CHI: it's Trentway <now> [>].
35. RES: <mmhm> [<] mmhm?

RECORD OF EVENTS

36. CHI: and um # and we take the we take the four+forty+five bus.
37. CHI: then um it goes to all these little towns before it stops at um in Hamilton.

ORIENTATION

38. CHI: <like> [>] um what is it?
39. RES: <oh -: > [<].
40. CHI: uh Beamsville Vineland um # um that Foodland.
41. CHI: not Foodland.
42. RES: Port Perry <maybe> [>]? 
43. CHI: <yeah> [<]. 
44. CHI: well w yes yes.
45. CHI: Port Perry um and Foodland.
46. CHI: yeah.
47. CHI: that's what it's called.
48. CHI: it's a little town near.
49. CHI: it's near it's at sc a Scugog.
50. CHI: we stop by there too.
51. RES: mmhm?
52. RES: mmhm. **EVALUATION/CODA**
53. RES: that makes quite a long day doesn't it?
54. CHI: it does.
55. CHI: yeah.

**GENERAL RECOUNT 2**

71. RES: what time do you leave here in the morning? **ORIENTATION**
72. CHI: um -: it's usually after eight. **RECORD OF EVENTS**
73. RES: uhhuh?
74. CHI: between eight+fifteen and eight+thirty we usually leave.
75. RES: mmhm.
76. CHI: and we get uh to Mailboxes at nine+thirty.
77. RES: uhhuh.

**GENERAL RECOUNT 3**

113. RES: so what do you usually do in the evenings when you get back here? **ORIENTATION**
114. RES: what do you do after supper? **RECORD OF EVENTS**
115. CHI: well Tuesdays after working we have to do a workout downstairs. **RECORD OF EVENTS**
116. CHI: and you have to lift weights.
117. CHI: 0 [=! chuckles]. **EVALUATION**
118. RES: oh goodness.
119. CHI: yeah right. **RECORD OF EVENTS**
120. CHI: and on thurs well # well on Thursdays I used to go to um to um. **RECORD OF EVENTS**
121. CHI: what was it a s sports+night in um in Grimsby.
122. CHI: I don't now.
123. CHI: uh I I do bowling now.

**GENERAL RECOUNT 4**

144. RES: <do you> [<>] do you do you take part in other sports Will? **ORIENTATION**
145. CHI: uh -: .
146. RES: are there any other sports that you do? **RECORD OF EVENTS**
147. RES: baseball or <soccer -: > [>].
148. CHI: <well> [<>] we u I used to do that for sportsnight. **RECORD OF EVENTS**
149. CHI: I I don't very much now.
150. CHI: but I do one # but um on Sundays I go to uh my fitness classes.
151. CHI: and I do lifting lifting one up.
ORIENTATION

152. CHI: well those those weight things.
153. CHI: except they're not the big sort of weights.
154. CHI: because I tried to lift those.
155. CHI: <and couldn't do that> [% chuckling].
156. CHI: so it's more of the machine sort of weights.
157. RES: uhhuh?

RECORD OF EVENTS

158. CHI: you do the.
159. CHI: excuse me.
160. CHI: <xxx> [>].
161. RES: <0 [=! chuckles]> [<].
162. CHI: um # I do um.
163. CHI: what else do I do?
164. CHI: I do this um # the ones where you go like this.
165. RES: oh right.
166. CHI: then you # you do that.
167. RES: yeah.
168. CHI: I do um something with # that.
169. CHI: I do #.
TEMPORAL STRETCHES: TRANSCRIPT 8

SPECIFIC RECOUNT 1

9. RES:  <and> [>] you were telling me about a cement truck before.
10. CHI:  mm -- yes!
11. CHI:  it had a wet heavy load.
12. RES:  a wet heavy load --.
14. RES:  from what?
15. CHI:  for the m for for the mighty mixer.
16. CHI:  that xxx.
17. RES:  how does it get filled up?
18. CHI:  just go xxx.

FUTURE PROJECTION 1

24. RES:  and then what would it do?
25. CHI:  it would move along.
26. RES:  where would it move along to?
27. CHI:  the construction site.
28. RES:  the construction site.
29. RES:  and what would it do there?
30. CHI:  pour cement.
31. RES:  pour cement?
32. CHI:  yes.
33. CHI:  and then it hardens.
34. RES:  and when it hardens what happens?
35. CHI:  then it dries [!!].
36. RES:  it dries.
37. RES:  uhhuh.

[Note: in Future Projection 1 it = cement truck]

SPECIFIC RECOUNT 2

38. RES:  and what does it make?
39. CHI:  um # and it turns that way instead of coming this way.
        it=truck
40. CHI:  that's because they are many machines in the construction
        site.
41. RES:  there are many which?
42. CHI:  then there are many machines in the construction site.

[Note: in Specific Recount 2 it = cement]
FUTURE PROJECTION 2

58. CHI: what happens if you go on the midnight express?
59. RES: I don't know.
60. RES: what happens?
61. CHI: when you get when um # the uh y and then you wake up at the whistle <when you get on> [?].
62. RES: I guess you would sleep during that train ride eh?
63. CHI: yes I would.
64. RES: I see.
65. RES: and the whistle would w wake you up you mean?

FUTURE PROJECTION 3

103. CHI: what happens uh when uh the train crash?
104. RES: what do you think happens?
105. CHI: then the men will die.
106. CHI: then they will make them [?] go to the hospital.
107. RES: well they would if they were ill uh sick wouldn't they?
108. RES: or if they were injured.
109. CHI: if they were inj they were injured # wouldn't they?
110. RES: mmmhm.

GENERAL RECOUNT 1

119. RES: what's a dog <game> [?>]
120. CHI: I have [<] so much I have so much fun.
121. RES: what's a dog game like?
122. CHI: it's it's xxx trying to get the other dogs out.
123. RES: oh who do you play with?
124. CHI: um -: sometime I play with Sophia
125. CHI: what what did Sophia do?
126. CHI: well # what did she do?
127. CHI: what did she do to me?
128. RES: I don't know.

129. RES: did she do something to you?
130. CHI: yes.
131. CHI: now she was stuck in in between in between maybe she got stuck in between.

132. RES: in between what?
133. CHI: in between # the trees.
134. RES: oh in between the trees?
135. RES: <where in> [>]

136. CHI: now Sophia was gotten stuck in between # on a summer day.
137. RES: on a summer day.
FUTURE PROJECTION 4

157. CHI: what would scratch you.
158. CHI: wouldn't that be terrible?
159. RES: mmhm.
160. CHI: awful!
161. CHI: stink.
162. CHI: and then you hate lions.
163. CHI: <stink hairy> [?].
164. CHI: cause she's stinky.
165. CHI: and then <I li I -: leave> [?].

FUTURE PROJECTION 5

263. CHI: um -: what do you [!] do # if you're stuck in between in -:
    # what happens if you're what happens if you're feeling a little down -:
264. RES: if you're feeling a little down?
265. RES: hm.
266. CHI: your head will get red.
267. CHI: then you'll scream.

PROCEDURE 1

328. RES: that is a turntable.
329. RES: how do you work it? 

330. CHI: do it like that.
331. RES: oh I see.
332. CHI: to get to the outside.
333. RES: um.
334. CHI: so you go on the to to get on the turntray table.
335. RES: get on the turntable.
336. CHI: say "look out you don't fall".
337. RES: look out you don't fall.
338. CHI: s l ## he's going on the table.
339. CHI: what happens if you go on the turntable.
340. RES: you turn around.
FUTURE PROJECTION 1

252. RES: <um> [<] what are you gonna do when <you go> [>] home today?
253. CHI: <0 [=! throat noises]> [<].
254. RES: what do you do after school?
255. CHI: supper.
256. RES: supper?
257. RES: yeah?
APPENDIX 2

Summary of Genre Types and Generic Stages Used in 9 Texts
<table>
<thead>
<tr>
<th>Category</th>
<th>Transcript Number</th>
<th>Narrative</th>
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<td>Future Projection</td>
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APPENDIX 3

Utterances that Use Units of Time Extracted from 9 Texts
Text 1

140. RES: I had pizza last night for supper.
141. RES: what did you have for supper last night?
146. RES: and the night before I had pork chops.
147. RES: can you remember what you had the night before?
151. RES: what are you having tonight # for supper?
153. CHI: I'm having rice for supper tonight.

Text 2

1. RES: today is June the sixth.
3. CHI: <fifth> [<>].
4. RES: is it the fifth?
6. CHI: tomorrow's the sixth.
8. RES: today is June the fifth.
219. RES: so what do you do on the weekends Will?
223. RES: and spends some time with you?

Text 3

21. CHI: on on Tuesday and Wednesday Judy Winston and J we both went to the airport to pick up Sophie.
43. CHI: and we went outside at night and played in the snow um <and> [<>].
45. CHI: the next day I we I went to the bookshop.
70. CHI: the next morning I packed my suitcase up.
82. CHI: my father went there w an my father and I went there once before grade # went there once before grade five started.
94. RES: was it a long drive?
96. CHI: it was a long drive.
98. RES: how long did it take you Will? (it = the drive)
101. CHI: it took it took wo it took five hundred and sixty four minutes. (it=the drive)
103. CHI: it took *five hundred and sixty four minutes*.
105. CHI: and the car *trip was long* [] .
107. RES: did you sleep *during the car trip*?
115. CHI: and the next *morning* when I woke up I had some bread
127. CHI: <they're coming> [] an(d) visit and visiting me in the *summer* in *July* [] .
139. RES: when you were there you were only about a *half an hour* from a farm where I yu I grew up
144. RES: and my mom used to drive a *half an hour*.
170. RES: and we need to do about *three or four more minutes*.
176. RES: tell me about your uh you do something on *Saturday's* usually.
177. RES: what do you usually do on *Saturdays*?
191. RES: hm how *long* have you been doing that?
192. CHI: I have been doing it for twel(ve) I have d I have done it for *twelve rides* -:
205. CHI: and had a Nielsen LP which is called The Point released in *1985* like like our vide like our video The Point which was a which was replaced at the video box.
206. CHI: and by and one and *once* my mother and I got it in um *July* and *August* # bought it in *June* and *August*.
209. CHI: but the video was not released in *1985*.
210. CHI: it was uh released before the LP in *1984* -: ## uh 1984 and 1989 -: .
222. RES: tell me what your favourite -: thing is to do in the *summer time*.

**Text 4**

134. CHI: but she hasn't visit me last *year* and the *year* before.
140. CHI: <she's> [<] visiting me at *Christmas*.
144. RES: is she coming *Christmas day*?
145. CHI: she's spending the *night* s spending nights there.
151. CHI: and I'm w it's something for me to *look forward to*.
153. RES: for everyone to *look forward to* eh?
190. CHI: but first you have to **wait till** the wa # for the water to boil [!].

**Text 5**

9. RES: I talked to you on the telephone last **night** too didn't I?
16. RES: that sounds like quite a **long drive**.

**Text 6**

[none]

**Text 7**

12. RES: and are you working **now**?
14. CHI: I work at um on **Tuesdays** and **Thursdays** at at um Mailboxes.
20. RES: <that's> [>] **quite a trip**.
22. CHI: uh ye yeah it is **quite a trip**.
24. CHI: and then and then we then we work # then we work um something like uh **nine+thirty** to **nine+thirty** to **twelve** [!].
25. CHI: then we have lunch at **twelve** at that.
26. CHI: then we start back at work at **one o'clock**.
27. CHI: and then we go right all the way through to **four+thirty**.
29. RES: and what **time** does that get you back here?
30. CHI: well we take the um **four+fifty+five** bus.
36. CHI: and um # and we take the we take the **fo**
53. RES: that makes quite a long day doesn't it?
71. RES: what time do you leave here in the morning?
72. CHI: um -- it's usually after eight.
74. CHI: between eight+fifteen and eight+thirty we usually leave.
76. CHI: and we get uh to Mailboxes at nine+thirty.
113. RES: so what do you usually do in the evenings when you get back here?
114. RES: what do you do after supper?
115. CHI: well Tuesdays after working we have to do a workout downstairs.
120. CHI: and on thurs well # well on Thursdays I used to go to um to um.
121. CHI: what was it a s sports+night in um in Grimsby.
148. CHI: <well> [<>] we u I used to do that for sportsnight.
150. CHI: but I do one # but um on Sundays I go to uh my fitness classes.

Text 8

58. CHI: what happens if you go on the the midnight express?
62. RES: I guess you would sleep during that train ride eh?
136. CHI: now Christina was gotten stuck in between # on a summer day.
137. RES: on a summer day.

Text 9

254. RES: what do you do after school?
APPENDIX 4

Analysis of Metaphors, Metonymies, and Senses of Time of Utterances that Use Temporal Units
I'm having rice for supper tonight. What are you having tonight for supper? Can you remember what you had the night before? And the night before I had pork chops. What did you have for supper last night? I had pizza last night for supper.
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<td>today is June the fifth.</td>
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**Utterance**

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**Text**

**Speaker**

**Utterance**

**Solicited (S) / Unsolicited (U)**

**Number of Temporal Units**

**Ignored Utterance**

**Time Orientation Metaphor**

**Moving Observer Metaphor**

**Moving Time Metaphor**

**Event-for-Time Metonymy**

**Distance-for-Time Metonymy**

**Time-for-Distance Metonymy**

**Time is a Resource Metaphor**

**Time is Money Metaphor**

**Evans's Sense of Time**

**Evans' Sense of Time**
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<tr>
<td>9</td>
<td>between eight+fifteen and eight+thirty we usually leave.</td>
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<tr>
<td>10</td>
<td>um - it's usually after eight.</td>
</tr>
<tr>
<td>11</td>
<td>what time do you leave here in the morning?</td>
</tr>
<tr>
<td>12</td>
<td>that makes quite a long day doesn't it?</td>
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<tr>
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<td>and um - and we take the we take the four+forty+five bus.</td>
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<td>then we go right all the way through to four+thirty.</td>
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<td>then, we start back at work at one o'clock.</td>
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<td>then we have lunch at twelve that.</td>
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<td>and then we work um something like nine+thirty to nine+thirty to twelve.</td>
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<td>and then we work um something like nine+thirty to nine+thirty to twelve.</td>
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### Evans's Sense of Time

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- Moment
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Line Number</td>
<td>Speaker</td>
<td>Utterance</td>
<td>Solicited (S) / Unsolicited (U)</td>
<td>Number of Temporal Units</td>
<td>Ignored Utterance</td>
<td>Time Orientation Metaphor</td>
</tr>
<tr>
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<tr>
<td>8</td>
<td>RES</td>
<td>now Christina was gotten stuck in between # on a summer day!</td>
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<tr>
<td>136</td>
<td>RES</td>
<td>I guess you would sleep during that train ride eh?</td>
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<tr>
<td>58</td>
<td>CHI</td>
<td>what happens if you go on the midnight express?</td>
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on a summer day.
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<th>Evans' Sense of Time of Time</th>
<th>Time is Money</th>
<th>Time is a Resource</th>
<th>Time-for-Distance</th>
<th>Distance-for-Time</th>
<th>Ignored Utterance</th>
<th>Time Orientation</th>
<th>Moving Observer</th>
<th>Moving Time</th>
<th>Metaphor</th>
<th>Metonymy</th>
<th>Number of Temporal Units</th>
<th>Solicited (S) / Unsolicited (U)</th>
<th>Speaker</th>
<th>Line Number</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>what do you do after sc...</td>
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