

## ABSTRACT

ALLEN, MICHELE ANN. *Over the River and Through the Woods, To My Little Frog's We Go: Narrative Production in Bilingual Children's Two Languages.* (Under the direction of Dr. Agnes Bolonyai.)

Despite extensive and ever-growing research on the development of narrative production among children (Berman and Slobin 1994), investigations of narrative construction in bilingual, as opposed to monolingual, children remain relatively scant. In order to fully understand the language faculty of the mind, it is important to examine properties of discourse-pragmatic competence in both monolingual and bilingual children. Thus, the goal of this study is to compare oral narrative construction of Hungarian-English bilinguals with those of their English and Hungarian monolingual peers. How do bilingual children's narratives compare to those of monolinguals? What is the significance of (intra- and inter-speaker) variation in each version of narratives produced by the bilinguals? Of particular interest in our study is the expression of coherence and cohesion in terms of the macro-structure components of narratives (Berman and Slobin 1994; Akinci and Kern 2001).

Ten subjects—six bilingual children, two monolingual Hungarian, and two monolingual English-speaking children—in the age range from 6 to 9 participated in the study. Each child was asked to tell the story from the picture book 'Frog where are you?' by Mercer Mayer (1969). Bilingual subjects narrated the story first in Hungarian (weaker L1) and then in English (dominant L2). Audio-recordings of narratives were transcribed and coded for four macro-structure narrative components (Akinci, Jisa and Kern 1994;

Berman and Slobin 1994) and the linguistic features used to express them. Data were then further analyzed using both non-parametric quantitative and qualitative methods.

The analysis revealed no significant quantitative differences with respect to the use of macro-structure components among the three groups of subjects, suggesting that the development of global narrative structure in bilingual acquisition is largely similar to that in monolingual acquisition; suggesting also that narrative competence exists independently from linguistic proficiency. At the same time, it is also evident that there is variation in the types of structures used to express certain narrative components among the bilingual children's Hungarian and English narratives. These findings suggest that language dominance and variation in discourse-narrative competence may account for more considerable differences found in the use of micro-narrative/linguistic structures. The discussion concludes by considering the implications of the findings for bilingual acquisition.

**OVER THE RIVER AND THROUGH THE WOODS,  
TO MY LITTLE FROGS WE GO:  
NARRATIVE PRODUCTION IN BILINGUAL  
CHILDREN'S TWO LANGUAGES**

by

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## **DEDICATION**

First and Foremost, to my Lord and Savior, Jesus Christ  
For giving me life abundant and placing a love within my heart  
for others that informs and inspires each task that I undertake.

Without Him none of this would have been possible.

### To My Family

For your *endless* encouragement and support  
of me in each and every endeavor. Your love has inspired  
me in the pursuit of all my dreams and I credit you  
for helping me make them a reality.

## **BIOGRAPHY**

Michele Allen is a native of Western North Carolina and is the daughter of Steve and Nadine Allen. She is a 2005 graduate of Wake Forest University, where she earned a B.A. degree in Communication with a minor in Film Studies. She began the English M.A. program in the fall of 2005 at North Carolina State University. In her time at NCSU she has served as a Graduate Teaching Assistant for the Film Studies Program where she enjoyed the creative freedom to blend her ambitions as a documentary filmmaker with her academic interests in Sociolinguistics. After the completion of her M.A degree in May 2007, she has aspirations to seek employment in the field of Cultural and Regional Historical Preservation while continuing to pursue filmmaking. She hopes to one day reflect on her time at NCSU as a period of academic preparation and immense personal growth.

## ACKNOWLEDGEMENTS

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Many thanks are also in order for Neal Hutcheson. His vision and portfolio of documentary work initially drew me to the Linguistics Program at NC State. I count it an immeasurable privilege and blessing to have had the opportunity to work with him, learn from him and be inspired by his work. I will carry these experiences with me as I continue to pursue a career as a documentarian.

### I WOULD ALSO LIKE TO THANK:

...my Mother, my first teacher, for always believing, always loving, and never letting me forget that when you dream, you should DREAM BIG!

...my Father, for showing me the success that true determination can bring. You will always be a hero to me. I love you!

...my Sister, from sharing a bed when we were kids to sharing the beauty and wonder of each chapter of our lives as it unfolds. Wherever we are, we are never too far.

...my Mamaw, for all my spunk and zeal for life! Because of you I will always try to keep on 'givin' it toady'!

...my Grandma, a faithful and strong woman who has inspired me to use the gifts and talents I've been given for the Lord.

...Galen Biggs, a man who has brightened my life in so many ways. Thank you for all your strength, prayers, and your presence in my life!

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## CHAPTER ONE: AN INTRODUCTION

Tell me a story, and I can tell you much more. According to previous research in the field of language acquisition, more specifically, narrative development, the ways in which people structure their stories reflects the “underlying narrative structure which it is argued form the foundations guiding the production and comprehension of narrative texts” (Akinci, Jisa, and Kern 1994). These findings tell us that there is a grammar of narrative, “story grammars” as they are referenced in the literature. For the purposes of this study, the use of “story” refers to oral narratives. Oral narratives can tell us a great deal about cognitive and narrative development of young speakers. Specifically, the presence of cohesion and coherence in narratives aid comprehension and recall.

Coherence is defined in the present study as “narrative content” and cohesion is defined as “the linguistic devices used in the expression of [narrative] content” (Akinci, Jisa and Kern 1984). Much attention has been paid to monolingual narrative development while the field of bilingual narrative development has received disproportionately less coverage in the literature. This is surprising, considering that bilingual children provide a unique window into the linguistic systems accessible to them. Examining the ways in which the bilingual speaker draws upon those linguistic resources in the production of oral narratives can provide insight for the study of bilingual development. Of particular interest are bilingual immigrant children in an L2 dominant environment. At issue in the present study is the presence of coherence and cohesion in the oral narratives of

Hungarian-English bilinguals and their monolingual peers. What differences can be noted in each version of the narratives produced by the bilinguals and how do these narratives compare to those of their monolingual peers? Do bilinguals tell the same story in each of their two languages; that is, do their narratives have the same macro-narrative components (i.e. plot onset, unfolding, and resolution) in each telling? Further *how* do they tell stories in each of their two languages; that is, are the same linguistic structures used for storytelling in each of their two languages? How do their narratives compare to those of monolinguals of comparable age with regard to linguistic structures and narrative components?

To answer these questions, six Hungarian-English bilingual participants, two monolingual Hungarian, and two monolingual English participants were asked to orally narrate a wordless picture-book used in many previous studies of child language acquisition; “Frog, Where Are You?” by Mercer Mayer (Berman and Slobin, 1994). Transcripts of the narrations were coded for macro-narrative components and the linguistic features used to express them. Results were analyzed using both non-parametric quantitative and qualitative measures. In lieu of formal hypotheses, three research questions were established and appear in Table 1, below<sup>1</sup>.

Previous studies of Turkish-French bilinguals as well as Spanish-Hebrew bilinguals indicate that “narrative structure has universal, or at least language-independent properties” (Kupersmitt and Berman, 2001; Akinci, Jisa and Kern, 2001). In

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<sup>1</sup> Detailed discussion of each research questions and means of address follows in the Purpose section of Chapter two.

light of these findings, no significant differences are expected among any of the narratives with regard to the presence of macro-narrative components.

Significant differences are expected among the linguistic features used to express the macro-narrative components. The expectation of differences in linguistic structures is supported by previous research in child bilingualism, which evidences the notion of narrative competence as a competence existing apart from proficiency with language (Kupersmitt and Berman, 2001). Offering a slightly different yet harmonious explanation, De Houwer's Separate Development Hypothesis for simultaneous bilingualism states that young bilinguals have two separate grammatical systems at work in the production of their two languages. DeHouwer argued that "simultaneously bilingual children develop the grammatical structures in each of their two languages based on the language specific input" (De Houwer 1994; Dopke 1996). Her hypothesis was based on "empirical evidence from her own study of an English-Dutch bilingual child between the ages of 2;7 and 3;4" (De Houwer 1994; Dopke 1996). Therefore, the Hungarian-English bilinguals may be expressing the same macro-narrative components across their two languages, while using linguistic structures specific to one of their two languages (Myers-Scotton 2006). If the stated hypotheses are supported by the current data set analyzed here, the notion that narrative competence is an inherent linguistic ability and is not tied to proficiency with one language would be supported.

The following literature review surveys relevant previous research, which informs the current study. Methodological practices are detailed in the following section providing information on the study participants, the design of the research, data

collection, limitations of the present study, and modes of analyses. Research findings are reported and interpreted in the Results and Discussion section. Finally, conclusions from the research, implications, and future research considerations are discussed.

## **CHAPTER TWO: RELEVANT LITERATURE, PARTICIPANTS, AND METHODOLOGY**

### **LITERATURE REVIEW**

Narrative development is a field of inquiry that can be approached from a variety of disciplines and methodological vantages. It is best understood by exploring its defining features, the linguistic forms which characterize its development, and what age-related differences can be generalized from its expression. Bilingual populations have been largely ignored and unrecognized as valuable sources of data in comparison to the consideration given their monolingual counterparts. This may be explained in part by considering that investigating bilingual narrative development has been a relatively recent undertaking in the research tradition of language acquisition studies. Study of bilingual populations offers insight into the development of linguistic and cognitive skills from a perspective that is inaccessible from monolingual research as bilinguals provide a window into the co-existence of two language systems, and perhaps a third and separate linguistic system; a grammar of bilingualism (Akinci, Jisa, and Kern 1994). Researchers of both mono- and bilingual populations have employed Mercer Mayer's wordless picture book, "Frog, Where Are You," to elicit narratives from study participants. Berman and Slobin (1994), collaborated to edit a comprehensive volume detailing the many studies which have used "Frog, Where are You" in developmental studies across five languages. Of particular utility, this volume includes descriptions of the developmental linguistic forms evidenced in narrative studies from English, German,

Spanish, Hebrew, and Turkish. This volume served the present study as a consummate reference source, lending direction to the research process and clarification on many occasions (Berman and Slobin 1994). The present study will further the research tradition found in this volume and expand its crosslinguistic coverage to Hungarian-English bilinguals.

Generally, telling a cohesive story involves the relation of sequential events to one another. Even young children are often thought of as “natural-born-storytellers,” familiarized with storytelling conventions through their early interaction with fables, story-songs, and nursery rhymes. However, in a study involving Hebrew speakers ranging in age from preschool to adult, Ruth Berman discovered that the ability to relate the sequential wordless pictures as a connected whole is acquired by the age of seven, and rarely earlier. Using “Frog, Where are You?” oral narratives were elicited from the subjects and analyzed with respect to “text length, number of references to plot-advancing events and of plot summations, types of connectivity markers, and use of verb tense” (Berman 1998). The results revealed that three, four, and even some five-year old children describe the pictures as isolated events without relating them to pictures/events that precede or follow after. This study discovered a major developmental marker around the age of seven, beyond which, children consistently related the pictures in the book as an unfolding narrative. The findings support previous research on cognitive maturation and narrative competence (Berman and Slobin 1994). Other studies support the

understanding that children within this age-range typically exhibit a similar level of cognitive development (Kupersmitt and Berman 2001).

Kupersmitt and Berman 2001 used Mayer's "frogstory" to learn more about the effects of second language (L2: Hebrew) immersion on the maintenance of first language (L1: Spanish) through analysis of their narrative competencies in both languages. This study investigated to what degree knowledge of linguistic structures developed "in tandem with the ability to use the language, in this case, in the discourse-embedded context of telling a story" (Kupersmitt and Berman 2001).

Additionally, they were interested in comparing language maintenance and shift across various age ranges. Their predictions were informed by findings of previous cross-linguistic studies of narrative among children. Kupersmitt and Berman anticipated that as the Spanish-Hebrew bilingual children increase in age in a Hebrew (L2) dominant environment, their narrative competency with Spanish will become increasingly impaired and this will be evidenced in shorter lengths of their Spanish narratives as compared to their Hebrew narratives. Interestingly, their expectations that narrative text length in Spanish (L1) would decrease with age while narrative text lengths in the dominant Hebrew (L2) would increase with age were not confirmed by their data analysis. In fact, the converse was true. Spanish texts by school-age children were on average longer than were their Hebrew narratives. For the purposes of their study, text length was quantified by number of clauses. They attributed the results from this portion of their study to methodological design, citing that they requested that participants narrate the first 12

pages in one language and then switch to the other language for the remaining 12 pages. Perhaps there are more elaborative events occurring in either of the portions of text, making it difficult if not impossible to reach meaningful conclusions regarding the trends witnessed in Kupersmitt and Berman (2001). The present analysis considers alternative explanations of such findings, including interlocutor effects as well as symbolic values carried by each language. An analysis of text length has been included as a part of this investigation in the interest of providing further consideration of its representativeness of narrative development.

Other researchers interested in exploring the development of narrative abilities have turned to the theory of story grammars (Mandler 1978). As grammar functions linguistically to govern the structure and well-formedness of language, story grammars refer to the structures that are present in a well-formed story. Story grammar has been found to be an effective schema for understanding the comprehension and production of narratives (Rumelhart 1980). As Akinici, Jisa, and Kern (1984) describe:

“Story grammars...propose representation of underlying narrative structure which it is argued form the cognitive foundations guiding the production and comprehension of narrative texts.”

Research has supported enhanced retention and recall of stories which include the components of setting, beginning, rising action, end of action, and resolution (Berman and Slobin 1994). Other studies, such as Thorndyke (1977), have given support to story grammars by testing participant's recall of narratives containing canonical vs. non-canonical plot-progression. Participant's recall for canonical plot-progression was better



than for non-canonical plot-progression (Akink, Jisa, and Kern 1984). Thorndyke's findings imply that canonical plot progression may be an extra-linguistic component on narrative competence. This research also highlights that the investigation of narrative abilities among children (and as the case may be, bilingual children), is a worthwhile endeavor that holds much promise in furthering an understanding of cognitive development as expressed through narrative production.

Studies of elicited oral narratives involving bilingual children have not always sought to investigate the interaction between narrative cohesion and coherence, as does the present study. Still, knowledge of the methodological format, research goals and findings helps to paint a more complete picture of the narrative abilities of bilinguals. Dorit Kaufman (1984) conducted a study of involving 30 bilingual children ranging in age from 6-13. The study's aim was to investigate "attrition processes among Israeli immigrants in the United States" (Kaufman 1994). Her study sample involved 2<sup>nd</sup> generation immigrants whose parents desired for their children to eventually become balanced bilinguals with a firmly established sense of cultural affiliation to their L1. Kaufman focused her analysis around the processes of L1 attrition as evidenced in tense marking, lexical specificity, and names referents. The findings echoed those of many studies of L1 attrition and report that as the children's development progresses, the impact of their L2 saturated domains begins to erode their "native language skills" (Kaufman 1994). This is evidenced through production of L1 narratives that display restricted lexical and structural command which in turn impact "narrative structure,

complexity and rhetorical style” (Kaufman 1994). Kaufman urges that continued research needs to be undertaken in order to improve and augment current understandings of L1 attrition through narrative development (Kaufman 1994). Kaufman’s discussion of language-specific narrative formation and the disintegration of those capacities in the linguistic repertoire of a bilingual undergoing L1 attrition provide support and explanation for trends witnessed in the present study.

Akinci, Jisa, and Kern (1994) address two specific aspects of narrative development among Turkish-French bilinguals: cohesion and coherence. Though they are related concepts, they are distinguished by the following definition:

“...cohesion refers to the linguistic devices used in the expression of content, while coherence refers to the structure of narrative content” (Hickmann 1995:201; Akinci, Jisa, and Kern 1984).

Though both coherence and cohesion have a place in narratives, scholars have debated their degree of relation. Some research supports that in order to have coherence, cohesion must also be present, while other findings suggest that coherence may be achieved in the absence of, or despite fragmentation of, the other (Akinci, Jisa, and Kern 1994). In the Jisa and Kern (1995) research with French monolingual children rendered results that supported the relation of cohesion and coherence by citing, “that the acquisition of narrative structure and the acquisition of syntactic competence are inextricably related.” In an effort to “separate narrative structure and the expression of narrative structure,” or in other words, to tease out the separate concepts of cohesion and coherence, Akinci, Jisa and Kern (1994) conducted a study with Turkish-French bilingual children at the ages of

five, seven, and ten. Investigating narrative development in bilinguals allowed the researchers to compare and contrast the participant's use of narrative structures across two languages. A control group of monolingual French participants provided a base of comparison. The study used the wordless picture book, "Frog, Where are You?" to elicit oral narratives that were then evaluated for the encoding of four macro-narrative components and the linguistic structures that are used to express the macro-components. The macro-narrative components used in their study were adapted following the methodological procedures of previous studies (Berman 1988; Berman and Slobin 1994). These studies conceived of narrative structure consisting of three components: onset, unfolding, and resolution of the plot (Berman 1988; Berman and Slobin 1994). To these three components, Akinici et. al added a fourth component termed "encapsulations," and define it as, "summarizing (prospective or retrospective) of the ongoing search" (Akinici, Jisa, and Kern 1994).

No significant differences were found between the bilingual's French and Turkish texts with regard to encoding of macro-structures. No significant differences were noted between macro-components encoded in the five and seven-year-old's narratives, while the ten-year old monolinguals exhibited a significantly increased number of encoded macro-components (unfolding of and resolution of the plot, in particular). The component termed, "unfolding of the plot" is characterized by multiple mentions of a boy trying to recover his missing frog. The boy's recovery of his missing frog or one substituting for his frog, thus characterizes the component termed "Resolution of the

plot,” in the context of the frogstory. Through analysis, the delay in the encoding of Component 3 among bilingual participants was found not to be attributable to a deficiency of linguistic means needed to encode it; rather, it is attributed to “a delay in macro-component development” (Akinici, Jisa, and Kern 1994). In short, any differences found between the bilingual and monolingual participants were not related to linguistic abilities or “narrative competence,” but instead attributed to the different levels of exposure to “literacy related activities” and a low percentage of literacy among the bilingual’s parents as compared to those of the French monolinguals. This study of Turkish-French bilinguals contributes significantly to the body of research on narrative development in bilingual children.

It is important to consider why the methodologies of Akinici et. al and indeed the present study were been patterned on the conceptualization of narrative structure presented by Berman and Slobin (1994) as opposed to that of Labov and Waletzky (1967). Among other aims, the former were interested in minimizing the effect of the Observer’s Paradox, the interference of an interviewer attempting to capture natural speech data in the context of face-to-face interaction. To obviate this problem, Labov and Waletzky found it most effective to elicit narratives of personal experience, asking their participants to tell stories about themselves, often about events involving risk, threat of death, or other highly emotional subjects. This yielded the desired result of relatively unselfconscious speech samples. The framework presented in their 1967 study posits that narratives have “a general structure that includes abstract, orientation, complicating

action, evaluation, resolution, and coda” (Labov and Waletzky 1967). While their framework has proven useful for subsequent studies of narrative, it does not offer the most effective structural conceptualization for narratives elicited from wordless picture books, which are not analogous to narratives of personal experience for obvious reasons. On some accounts Labov and Waletzky’s framework appears to separately consider components that are conflated in Berman and Slobin’s (1994) narrative framework (“abstract” and “orientation” vs. “onset of the plot”), and on other accounts the appended version of Berman and Slobin’s framework used here separately considers components which are conflated by Labov and Waletzky’s framework (“encapsulations” and “interpretation” vs. “evaluation”) (Labov Online 2007; Berman and Slobin 1994). What may appear to be differences in name only, are in reality rooted in a mismatch between the way we tell our own stories as opposed to the way we narrate pictures that represent someone else’s story. The choice of Berman and Slobin’s narrative framework for the methodological design of the present study then, is not a matter of discrediting the work of Labov and Waletzky (1967), but is rather a matter of appropriateness for a differential data set. It should also be noted that different data sets present new and interesting trends that necessitate the reconceptualization of even the most suitable frameworks. Akinci et al (1994) added a fourth component termed Encapsulations, and the present study adds the consideration of a fifth component termed Interpretation.

The present analysis seeks to test the claims of Akinci et al (1994) and evaluate their validity in light of our findings. To that end, the present study builds on their

research foundations and is patterned on its methodology. The present study also seeks to investigate three research questions, which were adapted from those explored in Akinci et al (1994). The present study seeks not simply to replicate the conventions, but to build upon them by extending the scope of the research in the following ways:

- 1- Broadening the context from Turkish-French bilinguals to Hungarian-English bilinguals
- 2- Addition of a fifth narrative Macro-component
- 3- Augmentation of linguistic structure classifications for expression of macro-components where necessitated
- 4- Comparison with monolingual control groups for both Hungarian and English

## **PURPOSE**

Based on the literature reviewed above the purpose of this study is to separately consider cohesion and coherence vis-a-vis narrative structure and the linguistic structures which express narrative structure in oral narratives from Hungarian-English bilinguals and control groups of Hungarian and English monolingual children age seven to nine. In order to do this, the present study will consider the following research questions:

**Table 1. Research Questions and Means of Address**

<b>Research Questions and Means of Address</b>	
Research Question 1	How similar are the BLH and BLE narrations? What narrative components are present in each narration and which do the texts share in common? Which components do they not share?  RQ1 will be addressed by quantitative analysis.
Research Question 2	How does BLE compare to MLE control? How does BLH compare to MLH control? Briefly, how do the Hungarian and English narratives produced by the bilingual participants compare to their respective monolingual control?  RQ2 will be addressed by quantitative analysis.
Research Question 3	How do the linguistic structures expressing the macro-components compare across groups? Compare and contrast the linguistic structures that encode the macro-components.  RQ3 will be addressed by qualitative analysis.

Research question one compares the bilingual's narratives in each language: Hungarian and English. Evaluating the differences and similarities between their two narrative productions allows for a more complete and accurate understanding of the participant's narrative competence by using their own texts as a baseline for comparison. Similarities between the narrative components used across the bilingual's narrations would evidence that telling a well-formed story is a competence that is not tied to proficiency with either language in particular. Research question one is addressed by quantitative analysis, comparing the presence and frequency of narrative components between the bilingual's Hungarian and English narrative production.

Research question two compares the bilingual's English and Hungarian narratives to those of their respective monolingual age mates. Comparison with monolingual controls will allow for the detection of significant similarities or differences among the

narrative components encoded by each group. The anticipated absence of significant differences among narrative components between groups would support the assumption that telling a well-formed story is a competence not tied to proficiency with one either language in particular. Research question two is addressed by quantitative analysis, comparing the presence and frequency of narrative components between bilingual and monolingual narratives.

Research question three compares the linguistic structures expressing the macro-components compared across groups. How do the monolingual and bilingual texts vary with regard to the kinds of linguistic structures used? Significant differences among the linguistics structures used to express macro-narrative components across groups would support the notion that bilinguals and monolinguals may appear to tell the same story (i.e., include the same components in the narrative), but may do so by employing different linguistic structures. Research question three is addressed by qualitative modes of analysis.

By investigating these questions this study will expand on the growing body of research in the field of bilingual narrative development and make an effort to fill the gap that exists between the disparate knowledge of monolingual as opposed to bilingual narrative development.

## **METHODOLOGY**

As previously mentioned, the methodological design of this study was adapted from the previous research of Akinci, Jisa, and Kern (1994) and their work with Turkish-



French bilinguals. It also follows in the tradition of other research conducted using “Frog, Where Are You?” as an elicitation model for the recording and transcription of oral narratives. Comparisons of frequency and type of structures encoding and expressing narrative components of cohesion and coherence are examined in this cross-sectional/synchronic study using a mixed methodology of both qualitative and quantitative analyses.

### ***ABBREVIATIONS***

In the interest of clarity and brevity, the following abbreviations will be used throughout the analysis.

*The following were used to code groups of texts for simplifying analysis:*

Bilingual Hungarian = **BLH**

Bilingual English = **BLE**

Monolingual Hungarian = **MLH**

Monolingual English = **MLE**

### *Abbreviations for Research Questions*

Research Question One: **RQ1**

Research Question Two: **RQ2**

Research Question Three: **RQ3**

### ***BILINGUAL PARTICIPANTS***

The study involved the participation of six Hungarian-English bilingual children, one male and five females. The children ranged in age from seven to nine at the time of

data collection. The bilingual participants were the children of native Hungarian speakers who were also bilingual in English. Four of the six children were U.S. born and the remaining two arrived in the U.S. before age two.

Hungarian is the primary language of the home; however, all were exposed to English prior to age two. There are limited opportunities to participate in a larger Hungarian-speaking community, and as such the families were participants in a predominantly English-speaking social network. The reality is that the Hungarian-English bilingual children were afforded few opportunities to use their Hungarian language skills outside the home. The families emphasized the importance of preserving their mother-tongue with their children and made a special effort to maintain a largely Hungarian-monolingual domain in the home. They reinforced these values by establishing Hungarian as the primary language in the home, addressing their children mainly in Hungarian, educating their children with basic Hungarian literacy skills, and by instilling in their children a strong sense of cultural awareness and identification.

The parents envisioned that their children would become balanced “bi-cultural, full bilinguals” and to ensure this they made an effort to create spaces where their children could participate in English-speaking environments and engage in practices geared toward “assimilation and success in the dominant culture” (Bolonyai email).

With the exception of one child, the bilingual participants all attended English-medium day cares or preschools prior to enrollment in public elementary schools. Parents described their children at the time of the study as “English-dominant.” English

was the preferred language of the bilingual children in conversations with other children, siblings, and even their Hungarian-speaking peers. As the children matured, the parents reported a general relaxation of the “Hungarian-only home language policy” (Bolonyai email). With this change, code-switching and the use of monolingual English became more accepted practices in the home.

### ***MONOLINGUAL PARTICIPANTS***

The two Hungarian monolingual participants were both female. They were ages six and nine at the time of data collection. Data collection took place in their home country of Hungary. Neither spoke any English.

The two English monolingual participants were both female. Their ages were eight and nine at the time of data collection. Both girls were native residents of the state of North Carolina and attended public school.

**Table 2: Summary Statistics of Mean Age of Participants**

	<b>Monolingual Hungarian</b>	<b>Monolingual English</b>	<b>Bilingual</b>
<b>Mean Age</b>	7;5	8;5	8;3

*(Average age represented in years; months at time of data collection)*

### ***PROCEDURE***

Study participants were contacted and their participation was requested by personal contact with the primary investigators. Because the participants were under 18 years of age, both consent and assent forms were issued to the participants and their parents. Parents consented and children gave assent in compliance with human subject

protection standards. Dr. Agnes Bolonyai administered the data collection with the Hungarian-English bilingual participants as well as the Hungarian monolingual participants. I administered the data collection with the English monolingual participants. All narration sessions took place within the home environment and were audio taped. Parents of the bilingual and monolingual Hungarian children conducted the narration sessions; they listened as the child narrated the picture book. Parents were present for the data collection with the monolingual English participants. However, the researcher (I) guided the narration session.

All participants were assigned pseudonyms to protect their privacy. Recordings were translated, transcribed, and coded for macro-narrative components and linguistic structures. Count data of each macro-narrative structure were entered into a database. Linguistic structures were content-analyzed using established qualitative methods. All data were stored on a password-protected computer. All audiotapes and transcripts were stored in a secure location. All data were analyzed using SPSS 12.0 for quantitative analyses; content analyses were conducted using standard word processing software.

### ***MEASURES***

The primary tool used for eliciting the oral narratives from the participants was Mercer Mayer's, "Frog, Where Are You?" This wordless picture book was originally written as a children's book, but was soon adopted as a valid instrument for use in cross-linguistic studies (Berman and Slobin, 1994). The book features the story of a boy, his dog, and his

frog. The frog is discovered to be missing and a search ensues. The boy and his dog travel into the woods to search for the frog and have encounters with various animals and insects along the way. Finally, they end up in a pond and discover the missing frog, or a substitute frog, perched behind a log with other frogs. The boy retrieves a frog and says goodbye. (See appendix I for illustrations of “Frog, Where Are You?” (Mayer 1969)).

Berman and Slobin (1994) found that certain macro-narrative components were encoded as part of the story across all five languages they surveyed (Onset of the Plot, Unfolding of the Plot, and Resolution of the Plot). As such, Akinci, Jisa, and Kern (1984) coded the narratives of their study participants for the three components set forth by Berman and Slobin, while adding a fourth component of their own: Encapsulations. As stated above, the present study adds a fifth macro-component for consideration: Interpretation. The table 3 below details the five macro-narrative components that were coded in the present study.

**Table 3: Macro-Narrative Components of the Frog Story**

<b>COMPONENT 1: ONSET OF THE PLOT</b>
<b>Explicit mention must be made of the boy's noticing that the frog is missing.</b> Example: "When the boy and the dog woke up, they looked so surprised to see that the frog was not in the jar." (BLE-A)
<b>COMPONENT 2: UNFOLDING OF THE PLOT</b>
<b>Explicit mention must be made of the search for the frog at least three times</b> 1- "The dog barked and the little boy called the little frog." 2- "The owl chased after the boy and then he climbed up some rocks and still yelled for the frog." 3- "And the little boy was calling the frog." *Note: mentions of the initiation of the search taking place in the bedroom scene are valid, though the majority need to occur throughout the story in order to count. "The initial search inside the bedroom constitutes a secondary or "local" goal, while the sustained search outdoors in the forest and beyond constitutes a major, global-level goal which needs to be identified as the motivating basis for the story as a whole. The causal network model underlying Trabasso and Rodkin's analysis in Chapter IIB characterizes a "goal-play hierarchy" such that there is a higher-order goal (to find the frog) which motivates subordinate goals (to search in particular locations) and then gets reinstated to meet "yet another inferred, higher order goal" (to get back his pet). Berman and Slobin 1994:46
<b>COMPONENT 3: RESOLUTION OF THE PLOT</b>
<b>The frog taken home at the end of the story must be explicitly described as being the same or as substituting for the frog that the boy lost in the beginning of the story.</b> Example: "And they found the two frogs and one was his frog and one was a lady."
<b>COMPONENT 4: ENCAPSULATIONS</b>
<b>Summarizing (prospective or retrospective) of the ongoing search</b> Example: "now the little boy pursues his search" "they looked for her everywhere" <i>Note: examples for component four were taken from Akinci and Kern, pg. 194.</i>
<b>COMPONENT 5: INTERPRETATION</b>
<b>Characterized by inferences (i.e. concerning familial relationship among the frogs), elaboration and evaluation, as well as attribution of mental and internal states to characters.</b> Example: "'One evening, when [he] opened the door, the window, <b>because so that there be a little fresh air</b> , the frog crawled out of the bottle, and crawled out the window.'"

Source: Adapted from Berman and Slobin 1994:46 and Akinci, Jisa, and Kern in Verhoeven and Stromqvist 2001: 194

Akinci, Jisa, and Kern (1994) found certain linguistic structures to be prevalent in the encoding of narrative components in their study with Turkish-French bilinguals. Where applicable in the current data set, those criteria were adopted as expressing narrative components. However, for some components their linguistic structural criteria were not compatible with the means of narrative expression found in the present study. The linguistic structures found to encode the narrative components for the data of Hungarian-English bilinguals and their monolingual peers are described in the following table. This table is used as a measure for comparison of linguistic structures across the data sets.

**Table 4: Linguistic Structures Expressing Narrative Components**

<b>Component 1:</b> <b>Onset of the Plot</b>	<b>Juxtaposition/Coordination:</b> “the boy looking in the jar, the boy realizing that the frog disappeared.” Ex. “ <i>When the boy when the boy and the dog woke up, they went to see the frog. But when they looked into the jar, he was gone.</i> ” (BLE-K) <sup>2</sup>
	<b>Subordination:</b> Distinct from J/C with the use of a subordinated complement clause with “that”. Ex. “ <i>When the boy and the dog woke up, they looked so surprised to see that the frog was not in the jar.</i> ” (BLE-A)
	<b>Mental Verbs/Verbs of Noticing:</b> This refers to the narrator attributing a mental state to the dog (and/or) the boy upon discovery that the frog is missing. Ex. “‘ <i>When the boy and the dog got up, [they] didn’t find the frog in the bottle.</i> ’ ‘ <i>The boy didn’t like this.</i> ’” (BLH-A) <sup>3</sup>
<b>Component 2:</b> <b>Unfolding of the Plot</b>	<b>Pursuit Verbs:</b> Explicit mention of the search ensuing by use of direct speech Ex. “ <i>The boy looked at a hole in the ground and called, ‘Frog, where are you?’</i> ” (BLE-A)
	<b>Indirect Voicing:</b> Implicit mention of the search ensuing, usually characterized by action verbs. Ex. “‘‘Then he goes away calling him, and the bees come out of the beehive.’’’ (BLE-L)
<b>Component 3:</b> <b>Resolution of the Plot</b>	<b>Possessive NPs:</b> Indication of initial possession through use of possessive noun phrases i.e. “his” and/or “theirs”. Ex. “ <i>There is his frog and his girlfriend.</i> ” (BLE-A)
	<b>Anaphoric/Deictic Forms</b> Ex. “ <i>And then the boy and the dog looked on the other side of the log and found their frog and his wife.</i> ” (BLE-E)
	<b>‘Expanded phrase length alternatives’,</b> indicates recognition of the frog as the same at the beginning of the story. Ex. “ <i>Then [they] saw two frogs there, and [they] recognized that one of them is the frog that ran away.</i> ”
<b>Component 4:</b> <b>Encapsulations</b>	<b>Locative Expressions:</b> Use of the locative expressions, i.e., ‘everywhere’, indicating that the search has been exhausted. Ex. ‘ <i>[they] were looking everywhere where, but [they] didn’t find the frog.</i> ’ (BLH-A)
	<b>Lexical items:</b> Inclusion of lexical items that offer summative evaluation and/or punctuate action. Ex. “ <i>Then they look everywhere, and but they can’t find it.</i> ” (BLE-L)
<b>Component 5:</b> <b>Interpretation</b>	<b>Possessive NPs</b> indicating kinship (among the frogs) Ex. ‘ <i>There is his frog and his girlfriend. And their babies.</i> ’ (BLE-L)
	<b>Affective Adjectives/Verbs of Cognition:</b> Attributing a mental/internal state to characters Ex. ‘ <i>He thought the frog was in the log as frogs like damp.</i> ’ (BLE-A)
	<b>Voicing:</b> Instances of performative, direct speech Ex. “ <i>And the little boy and the dog and the frog say ‘bye-bye’ to the mommy-frog, the daddy-frog, the baby frog, the baby-frog.</i> ” (BLE-N)
	<b>Evaluative/Elaborative Lexical Items:</b> ‘ <i>One evening, when [he] opened the door, the window, because so that there be a little fresh air, the frog crawled out of the bottle, and crawled out the window.</i> ’ (BLH-E)

<sup>2</sup> Abbreviations following the excerpts indicate the text group and individual speaker, i.e. BLE-A, would identify that the excerpt was from the bilingual-English transcript belonging to Andrea.

<sup>3</sup> Juxtaposition/Coordination are mutually exclusive, while Mental Verbs/Verbs of Noticing can co-occur with either of the former.



## CHAPTER THREE: RESULTS AND DISCUSSION

### RESULTS/DISCUSSION

#### *RESEARCH QUESTION 1 RESULTS: BLE vs. BLH*

To compare the macro-narrative structures present in the English and Hungarian texts produced by the bilinguals, their narratives were coded for either the presence or absence of the given component and the results appear in the table below. The numbers represent the number of speakers that encoded the component per component by group.

**Table 5. Components Encoded by Participant Groups BLE vs. BLH:**  
*Hungarian-English bilinguals making explicit mention of the five components in their English and Hungarian texts.*

	<b>BLE N=6</b>	<b>BLH N=6</b>
Component 1: Onset of the Plot	<b>6/6</b>	<b>5/6</b>
Component 2: Unfolding of the Plot	<b>5/6</b>	<b>5/6</b>
Component 3: Resolution of the Plot	<b>6/6</b>	<b>5/6</b>
Component 4: Encapsulations	<b>2/6</b>	<b>3/6</b>
Component 5: Interpretation	<b>5/6</b>	<b>6/6</b>

The BLH and BLE components were analyzed nonparametrically to compare two related samples using Wilcoxon matched pair signed rank test (W). No significant differences (all  $p > .05$ ) between the number of times each component was noted between the Hungarian and English version of the stories among the six bilingual children.

#### *RESEARCH QUESTION 1 DISCUSSION: BLE vs. BLH*

Comparing the BLE and BLH, there were no significant differences (all  $p > .05$ ) between the number of times each component was noted among the Hungarian and English

version of the stories of the six bilingual children. It is important to note that the fewest encodings in both the English and Hungarian texts occurred with Component 4: Encapsulations. Generally across this analysis, frequency of encapsulating utterances was relatively low. Encapsulations offer retrospective and/or prospective summarizations. This component was included following the conventions of Akinci, Jisa, and Kern (1994) and may have been more prevalent among their data sets.

The results of RQ1 tell us that the bilinguals were telling the same story, that is, they were encoding the same narrative components in their English telling of the story as they were in their Hungarian version of the story. This confirms the hypothesized expectations for RQ1. The fact that no significant differences were found among the presence of macro-narrative components between their Hungarian and English versions suggests that, for the bilingual, narrative ability (or, the practice of language) is not necessarily tied to knowledge of the linguistic structures (or, proficiency) with one language. This echoes the findings of previous studies of bilingual narrative development which conceive of narrative ability as an extra-linguistic capacity of the speaker (Berman and Slobin 1994; Kupersmitt and Berman 2001).

#### *RESEARCH QUESTION 2 RESULTS: BLE vs. MLE; BLH vs. MLH*

##### **BLE vs. MLE**

To compare the macro-narrative structures present in the English narratives of bilinguals

as compared to those encoded in the English narratives of monolinguals, their respective texts were coded for either the presence or absence of the given component and the results appear in the table below.

**Table 6. Narrative components in English texts of Hungarian-English bilinguals and English monolinguals.**

	<b>BLE N=6</b>	<b>MLE N=2</b>
Component 1: Onset of the Plot	<b>6/6</b> (100%)	<b>2/2</b> (100%)
Component 2: Unfolding of the Plot	<b>5/6</b> (83%)	<b>2/2</b> (100%)
Component 3: Resolution of the Plot	<b>6/6</b> (100%)	<b>2/2</b> (100%)
Component 4: Encapsulations	<b>2/6</b> (33%)	<b>1/2</b> (50%)
Component 5: Interpretation	<b>5/6</b> (83%)	<b>2/2</b> (100%)

*(Percentage of participants per group making explicit mention of the five components.)*

The frequency of BLE and MLE components were analyzed nonparametrically to compare two independent samples using Wilcoxon Mann-Whitney test (U). There were no significant differences between the bilingual and monolingual English versions of the narratives.

### **BLH vs. MLH**

To compare the macro-narrative structures present in the Hungarian narratives of the bilinguals as compared to those encoded in the Hungarian narratives of the monolinguals, their respective texts were coded for either the presence or absence of the given component and the results appear in the table below.

**Table 7. Narrative components in Hungarian texts of Hungarian-English bilinguals and Hungarian monolinguals.**

	<b>BLH N=6</b>	<b>MLH N=2</b>
Component 1: Onset of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 2: Unfolding of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 3: Resolution of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 4: Encapsulations	<b>3/6 (50%)</b>	<b>2/2 (100%)</b>
Component 5: Interpretation	<b>6/6 (100%)</b>	<b>2/2 (100%)</b>

*(Percentage of participants per groups making explicit mention of the five components.)*

The frequency of BLH and MLH components were analyzed nonparametrically to compare two independent samples using Wilcoxon Mann-Whitney test (U). There were no significant differences between the bilingual and monolingual English versions of the narration.

#### *RESEARCH QUESTION 2 DISCUSSION: BLE vs. MLE; BLH vs. MLH*

##### **BLE vs. MLE**

The results of the analysis of RQ2, comparing the bilingual's English narrations with those of their monolingual English control revealed that there was no significant difference concerning the narrative components encoded by each. The importance of this finding is that it tells us that the bilinguals have the same level of mastery of narrative structure as their English monolingual age-mates. The story components are the same across groups, confirming the hypothesis for this sub-portion of RQ2. It is also important to consider that the Hungarian-English bilinguals were English dominant at the time of data collection and this may further explain the result of no significant differences among

the narrative components between the BLE and MLE narratives. This result also supports the notion of narrative ability as a general capacity of the speaker, not tied to knowledge of the linguistic structures of a specific language as the bilinguals had differential knowledge of the linguistic structures of Hungarian (Berman and Slobin 1994; Kupersmitt and Berman 2001).

### **BLH vs. MLH**

The results of the analysis of RQ2, comparing the bilingual's Hungarian narrations with those of their monolingual Hungarian control, revealed that there was no significant difference concerning the narrative components encoded by each. The importance of this finding is that it tells us that the bilinguals have the same level of mastery of narrative structure as their Hungarian monolingual age-mates. The story components are the same across groups, confirming the hypothesis for this sub-portion of RQ2. This result also supports the notion of narrative ability as a universal capacity of the speaker, not tied to knowledge of the linguistic structures of a specific language (Berman and Slobin 1994; Kupersmitt and Berman 2001).

### **RQ2: DISCUSSION OF ENCAPSULATIONS**

Despite the fact that no significant differences were present between the macro-components encoded by the BLE vs. MLE or the BLH vs. MLH, it is important to consider the component that varied slightly in the different versions of the narratives. Overall, the encoding of encapsulations was relatively low among both the MLE and

BLE narratives. By percentage, the BLH encoded encapsulations less than the MLH, suggesting that summarizing, either prospectively or retrospectively may be a feature more frequently found in Hungarian than English. The relatively lower frequency of encapsulations in both the BLE and BLH narratives may be explained by the influence of their English dominance as affecting their use of Hungarian.

### **RESEARCH QUESTION 3**

Unlike the preceding aims of Research Questions 1 and 2, Research question 3 compares linguistic structural choices used to encode the macro-narrative components across groups of bilingual and monolingual speakers. Previous research informs the expectation that significant differences will exist among the linguistic structures utilized by the English-Hungarian bilinguals and their monolingual peers as the actual structures are more language-specific than the narrative components they encode (Kupersmitt and Berman 2001; Akinci et al 1994).

### **RQ3 RESULTS: BLH vs. BLE**

#### *COMPONENT 1: ONSET OF THE PLOT*

Three linguistic structures were witnessed in the data encoding the Onset of the Plot. The following table represents the frequency of each linguistic structure in the BLE texts as compared to the BLH texts.

**Table 8. Component 1 (BLE vs. BLH): Onset of the Plot/Missing Frog**

<b>Participant Group</b>	<b>C1: Juxtaposition/Coordination</b>	<b>C1: Subordination</b>	<b>C1: Mental Verbs/Verbs of Noticing</b>
BLE	<b>83.34%</b> (5/6)	<b>16.67%</b> (1/6)	<b>16.67%</b> (1/6)
BLH	<b>100%</b> (6/6)	---	<b>16.67%</b> (1/6)

*(Percentages indicate specific type out of total instances of mention per group.)*

Juxtaposition/Coordination is the preferred structure across groups. Instances of Subordination are the most rare, occurring once in BLE narrations. State of mind is also relatively seldom used, occurring once in each group of texts. No significant differences were witnessed with regard to the linguistic structures used to encode the Onset of the Plot across the BLE and BLH narratives. These results do not confirm the hypothesis that different linguistic structures would be used in the encoding of onset of the plot. While significant differences do not occur in this subset of the data, it is important to interpret more subtle trends given the small sample size. Subordination is a more structurally complex linguistic form than juxtaposition/coordination. As such, the occurrence of subordination in the BLE narratives may be best understood as reflecting a higher, though very slight, degree of facility with the use of more complex forms in their dominant language.

#### *COMPONENT 2: UNFOLDING OF THE PLOT*

Two linguistic structures were witnessed in the data encoding the Unfolding of the Plot: Direct Speech and Indirect Voicing. The following table represents the frequency of each linguistic structure in the BLE texts as compared to the BLH texts.

**Table 9. Component 2 (BLE vs. BLH): Unfolding of the Plot**

<b>Participant Group</b>	<b>Direct Speech</b>	<b>Indirect Voicing</b>
BLE	<b>21.43%</b> (6/28)	<b>78.57%</b> (22/28)
BLH	<b>20%</b> (5/25)	<b>80%</b> (20/25)

*(Percentages indicate specific type out of total instances of mention per group.)*

Indirect Voicing is the preferred linguistic structure across the BLE and BLH narratives.

The frequency of each structure was surprisingly similar and thus, no significant differences were witnessed between the frequencies of the occurrence of each linguistic structure.

### *COMPONENT 3: RESOLUTION OF THE PLOT*

In the context of the frog-story, the resolution occurs when the boy recovers his frog (or a frog substituting for the missing frog). Two linguistic structures were witnessed in the data encoding the Resolution of the Plot: Possessive Noun Phrases and Anaphoric Expressions. As implied by the name, Possessive Noun Phrases are employed to identify the boy as the possessor of the missing frog.<sup>4</sup> Anaphoric expressions derive their meaning by referencing a previously mentioned word or phrase (M & W Online). These expressions are used to encode the resolution of the plot by referencing the frog at the end of the story as the initial frog belonging to the boy, or as substituting for the missing frog thus relating the events of the narrative as constituting a collective whole and not simply a series of isolated events.<sup>5</sup> The following table represents the frequency of each linguistic structure in the BLE texts as compared to the BLH texts.

<sup>4</sup> See Appendix III for examples of Possessive Noun Phrases as witnessed in the data.

<sup>5</sup> See Appendix III for examples of Anaphoric Expressions as witnessed in the data.



**Table 10. Component 3 (BLE vs. BLH): Resolution of the Plot**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Anaphoric Expressions</b>
BLE	<b>50%</b> (4/8)	<b>50%</b> (4/8)
BLH	<b>50%</b> (5/10)	<b>50%</b> (5/10)

(Percentages indicate specific type out of total instances of mention per group.)

Though the BLH have slightly higher overall instances of encodings, Possessive Noun Phrases and Anaphoric Expressions occur in equal proportion across the bilingual's BLE and BLH narrations. No significant differences were found across the BLE and BLH groups. These results do not confirm the expectations of the hypothesis which anticipated that in each of the bilingual's two languages, they would use one of the possible linguistic expressions with a significantly higher frequency. Instead, they appear to show no preference for the use of either Possessive Noun Phrases or Anaphoric Expressions to encode the boy recovering his frog.

#### *COMPONENT 4: ENCAPSULATIONS*

Locative Expressions and Summative Expressions were the two main linguistic structures used to encode Encapsulations in the data. Locative Expressions are grammatical cases which denote that something is of or belonging to a location and were most often evidenced in the data by the use of the lexical item, "everywhere," as in "they had looked for the frog *everywhere*, but still could not find him." Summative Expressions also conveyed the summation of some part of the search most frequently by use of expanded

phrase length alternatives, for example, “*Then, then the little boy said to hush to the dog, cause he was gonna look over the log and they did.*” (MLE-K).<sup>6</sup>

**Table 11. Component 4 (BLE vs. BLH): Encapsulations**

<b>Participant Group</b>	<b>Locative Expressions</b>	<b>Summative Expressions</b>
BLE	<b>66.67%</b> (2/3)	<b>33.33%</b> (1/3)
BLH	<b>14.28%</b> (1/7)	<b>85.71%</b> (6/7)

*(Percentages indicate specific type out of total instances of mention per group.)*

The BLE narrations contained less than half as many instances of encoding Component 4, than the BLH. Furthermore, Locative Expressions were the preferred linguistic structure among the BLE narratives whereas Summative Expressions were the preferred linguistic structure among the BLH narrations. These results indicate a significant difference in the linguistic structures preferred by the bilinguals in their English narratives and their Hungarian narratives to summarize events of the plot and thereby confirm the hypothesized expectations for RQ3.

As defined for the purposes of this study each of the two linguistic alternatives for encoding Encapsulations connote differential levels of elaboration. Locative expressions were in general more brief and non-elaborative, whereas Summative Expressions offered a relatively higher degree of elaboration and explanation of plot events. Therefore, the statistical results may indicate that despite the fact that Hungarian is the weaker of the bilingual’s two languages, the children not only choose to use a more elaborative

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<sup>6</sup> See Appendix III for further examples of Summative Expressions encoding Encapsulations.

linguistic means to encode summarizations in their Hungarian versions, they also encode summarizations more frequently in Hungarian than in their dominant English. This finding may be explained by the fact that as the language of the home, Hungarian carries with it a higher capacity for elaboration inasmuch as elaboration can be tied to emotional involvement in the narrative. Another factor that must be considered is that the bilingual children were either narrating to their mothers (who reinforce the value of the use of Hungarian), or to a Hungarian speaking researcher (Dr. Agnes Bolonyai). In both of these cases, the salience of the positive values associated with the use of Hungarian are present and may in some way influence the children's selection of linguistic structure, and whether they choose to make summarizations, (and thereby elaborate), at all.

#### *COMPONENT 5: INTERPRETATION*

Four distinct linguistic structures were observed to encode Interpretation in the narratives. Possessive Noun Phrases were used interpretively to relate different character's (i.e. the boy, the frog, the bees, etc.) and thereby elaborate on plot action by referencing ownership. Affective Adjectives/Verbs of Cognition were used to attribute mental and internal processes to characters in the story. Voicing was characterized by instances of performative, direct speech in which the narrator spoke for a character or addressed a real or imagined audience with some point of analysis or elaboration on the impact of plot events for the characters. Elaborative/Evaluative lexical items were most often contained

in expanded phrases which draw conclusions or add inferential detail to the story.<sup>7</sup> The bilingual participants, in both their BLH and BLE narratives, constituted the only groups to encode Component 5 using all four linguistic alternatives.

**Table 12. Component 5 (BLE vs. BLH) : Interpretation**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Affective Adj./Verbs of Cognition</b>	<b>Voicing</b>	<b>Evaluative/Elaborative Lexical Items</b>
BLE	<b>24.14%</b> (7/29)	<b>34.48%</b> (10/29)	<b>3.45%</b> (1/29)	<b>34.48%</b> (10/29)
BLH	<b>8.7%</b> (4/46)	<b>39.13%</b> (18/46)	<b>21.74%</b> (10/46)	<b>30.43%</b> (14/46)

*(Percentages indicate specific type out of total instances of mention per group.)*

The bilinguals encoded Interpretation more often in their Hungarian narrations of the frogstory (BLH), than in their English narrations (BLE). Voicing was the least common linguistic alternative among the BLE narrations, whereas Possessive Noun Phrases were the least common linguistic alternative among the BLH narrations. Affective Adjectives/Verbs of Cognition and Evaluative/Elaborative Lexical Items occur in roughly equal frequency among the BLE and BLH groups. These results confirm the hypothesis for RQ3, that the bilinguals use different linguistic structures with significantly differential frequencies to encode Interpretation in their oral narrative. Even more provocative than support for the hypothesis for this subset of the data is the finding that

<sup>7</sup> For additional explanation of linguistic structures encoding Interpretation, see Table 11.

the bilinguals are more frequently interpretive in Hungarian than in English. What implications do these results hold for our understanding of the narrative capacity of bilinguals in an L2 dominant environment? The following section contains additional consideration of the study's results.

### RQ3 DISCUSSION: BLH VS. BLE

Analysis of Component 1 revealed no significant difference among the linguistic structures. It should be noted that the BLE narratives had the only instance of Subordination. Considering that the command of Subordination as opposed to Juxtaposition/Coordination requires a higher degree of linguistic sophistication, this may point to the bilingual's facility with English as it is the dominant language of their school and community. Any interpretation must, however, be tempered with an acknowledgment that both the BLE and BLH narrations included an equal frequency of Mental Verbs/Verbs of Noticing for Component 1, which in itself is an example of elaboration occurring in both of the bilingual's languages. Also, it is interesting to note that the BLE and BLH groups of narrations had the same number of instances encoding the Onset of the Plot, yet this may be explained by the need to only establish the Onset of the Plot one time per narration.

No significant differences were witnessed among the BLE and BLH narrations in Components two and three. This result can be interpreted to support the claim that the Hungarian-English bilingual participants are balanced bilinguals, at least in the context of these two components.

The analysis of Component 4 reveals that the bilinguals exhibit an enhanced capacity using Summative Expressions in their Hungarian narratives, while conversely exhibiting an enhanced capacity for the use of Locative Expressions in English to encode summarizations. For the purposes of this study, locative expressions were generally shorter in phrase length than were summative expressions, which were on average quite long in phrase length and involved a more elaborative type of summarization. This is a key finding which may indicate that while Hungarian has few contexts of use outside the home for these young bilinguals, it is still the language used to more effectively convey elaboration. This ease of elaboration with regard to offering Encapsulations (or summarizations) in Hungarian may index the structural impact on the linguistic systems of the bilingual by virtue of its symbolic value of as the primary language of the home. A critique of this explanation may contest the validity of this explanation, citing that the narration task occurred in the home with the mother as interlocutor, thus placing the child in an unnatural position to use their language skills were there interlocutor not also a source of reinforcement and encouragement toward the effective and regular use of Hungarian.

Analysis of Component 5 provides the most conclusive results as to the advantages of bilingualism. As stated above, the BLH and BLE narrations were the only groups to utilize each of the four linguistic structural alternatives for encoding Interpretations in their texts. Further discussion of this will follow in discussion of

subsequent sections. The most striking difference noticed between the BLE and BLH narration sets was the privileging of Possessive Noun Phrases over Voicing in the BLE versions, while exhibiting the opposite trend in the BLH versions. Much like the preference of using longer Summative Expressions to encode Encapsulations, perhaps the same forces are at work here and can provide some explanation. As with the use of Summative Expressions compared to Locative Expressions, Voicing represents a higher degree of involvement and elaboration than do short inclusions of Possessive Noun Phrases as it often involves the narrator situating themselves in the context of the story and assuming the role/voice of a particular character. The more frequent presence of Voicing in the BLH may support the notion of Hungarian as a more expressive language for the bilinguals, despite it being their weaker language.<sup>8</sup> This claim is further supported considering that the number of instances of Interpretation was significantly higher in the BLH narrations as compared the BLE narrations. On the whole, the narrations of bilinguals in both English and Hungarian exhibited a significantly higher frequency of instances of Interpretation as compared to the monolingual subsets of the data. This finding has significant implications for the linguistic and cognitive advantages of bilingualism by evidencing bilingual's enhanced capacities for drawing inferences and adding extra-narrative detail more often than monolinguals of comparable age and developmental range.

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<sup>8</sup> The use of "weaker" here references the imbalance in available contexts of use for the bilingual's Hungarian language compared to those of English. It also references the bilingual parent's categorization of their children as English-dominant at the time of data collection.

### RQ3 RESULTS: BLE vs. MLE

#### *COMPONENT 1: ONSET OF THE PLOT*

Three linguistic structures were witnessed in the data encoding the Onset of the Plot. The following table represents the frequency of each linguistic structure in the BLE texts as compared to the MLE texts.

**Table 13. RQ3 (BLE vs. MLE): Component 1: Onset of the Plot/Missing Frog**

<b>Participant Group</b>	<b>C1: Juxtaposition/Coordination</b>	<b>C1: Subordination</b>	<b>C1: Mental Verbs/Verbs of Noticing</b>
BLE	<b>83.34%</b> (5/6)	<b>16.67%</b> (1/6)	<b>16.67%</b> (1/6)
MLE	<b>100%</b> (2/2)	---	<b>50%</b> (1/2)

*(Percentages indicate specific type out of total instances of mention per group.)*

Juxtaposition/Coordination is the preferred structure across groups. Instances of Subordination are the most rare, occurring once in BLE narrations. State of mind is also relatively scant, occurring once in each group of texts. No significant differences were witnessed with regard to the linguistic structures used to encode the Onset of the Plot across the BLE and MLE narratives.

#### *COMPONENT 2: UNFOLDING OF THE PLOT*

Two linguistic structures were witnessed in the data encoding the Unfolding of the Plot: Direct Speech and Indirect Voicing. The following table represents the frequency of each linguistic structure in the BLE texts as compared to the MLE texts.



**Table 14. RQ3 (BLE vs. MLE): Component 2: Unfolding of the Plot**

<b>Participant Group</b>	<b>Direct Speech</b>	<b>Indirect Voicing</b>
BLE	<b>21.43%</b> (6/28)	<b>78.57%</b> (22/28)
MLE	<b>10%</b> (1/10)	<b>90%</b> (9/10)

*(Percentages indicate specific type out of total instances of mention per group.)*

Though indirect Voicing is the preferred linguistic structure across the BLE and BLH narratives, a slight, insignificant difference can be noticed between the prevalence of Direct Speech occurring more frequently among the BLE texts than the MLE texts. This observation must be tempered by awareness of the disparate sample sizes of the respective groups. No significant differences were witnessed between the frequencies of the occurrence of each linguistic structure.

#### *COMPONENT 3: RESOLUTION OF THE PLOT*

Two linguistic structures were witnessed in the data encoding the Resolution of the Plot: Possessive Noun Phrases and Anaphoric Expressions. The following table represents the frequency of each linguistic structure in the BLE texts as compared to the MLE texts.

**Table 15. RQ3 (BLE vs. MLE) Component 3: Resolution of the Plot**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Anaphoric Expressions</b>
BLE	<b>50%</b> (4/8)	<b>50%</b> (4/8)
MLE	<b>33.33%</b> (1/3)	<b>66.67%</b> (2/3)

*(Percentages indicate specific type out of total instances of mention per group.)*

BLE texts use the two linguistic structures in equal frequency unlike the MLE texts,

which favor the use of Anaphoric Expressions 2:1. It is also important to note that the MLE control group was the only group to exhibit a slight preference for Anaphoric Expressions. Again, it must be remembered that the small sample size of the MLE control group most likely accounts for the variation in utterance number and frequency.

*COMPONENT 4: ENCAPSULATIONS*

Locative Expressions and Summative Expressions were the two linguistics structures used to encode Encapsulations in the data. The frequency results for Encapsulations were difficult to draw conclusions for as no clear trends emerged.

**Table 16. RQ3 (BLE vs. MLE): Component 4: Encapsulations**

<b>Participant Group</b>	<b>Locative Expressions</b>	<b>Summative Expressions</b>
BLE	<b>66.67%</b> (2/3)	<b>33.33%</b> (1/3)
MLE	<b>33.33%</b> (1/3)	<b>66.67%</b> (2/3)

*(Percentages indicate specific type out of total instances of mention per group.)*

The BLE and MLE groups had three instances of encoding per group, which is interesting, considering that for BLE, n=6 and for MLE, n=2. Locative Expressions were the preferred linguistic structure for encoding Encapsulations among the BLE narratives, and conversely Summative Expressions were the preferred structures among the MLE group. Though Encapsulations were present among the present Hungarian-English data set, they were employed with substantially different frequency.

*COMPONENT 5: INTERPRETATION*

Four distinct linguistic structures were observed to encode Interpretation in the narratives. A comparison of these two groups reveals that while the BLE narratives utilize all four linguistic possibilities, the MLE control group only uses two of the four, excluding Voicing and Evaluative/Elaborative Lexical Items.

**Table 17. RQ3 (BLE vs. MLE): Component 5: Interpretation**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Affective Adj./Verbs of Cognition</b>	<b>Voicing</b>	<b>Evaluative/Elaborative Lexical Items</b>
BLE	<b>24.14%</b> (7/29)	<b>34.48%</b> (10/29)	<b>3.45%</b> (1/29)	<b>34.48%</b> (10/29)
MLE	<b>20%</b> (1/5)	<b>80%</b> (4/5)	---	---

*(Percentages indicate specific type out of total instances of mention per group.)*

With regard to the two linguistic components shared in common between these two groups, both appear to exhibit some preference toward Affective Adj./Verbs of Cognition over Possessive Noun Phrases. With the exception of one instance of Voicing, the other preferred linguistic structure for the BLE narratives is Evaluative/Elaborative Lexical Items; evidenced by its occurrence in equal frequency with Affective Adj./ Verbs of Cognition and the two groups constituting 20 of the total 29 instances of BLE encoding Interpretation.

RQ3 DISCUSSION: BLE vs. MLE

Both groups show a strong preference for encoding the Onset of the Plot using Juxtaposition/Coordination. Out of six instances of Component one, there was only one

instance of the use of Subordination. Mental Verbs/Verbs of Noticing<sup>9</sup> occurred equally between these two groups. This is a deceptive comparison considering that for BLE, n=6 and for MLE, n=2. Perhaps if the monolingual sample size were increased to n=6, we might find that Mental Verbs/Verbs of Noticing would be encoded with higher frequency among this group. Analysis of Component 2 reveals no significant difference with regard to the frequency of instances encoding Unfolding of the Plot between the MLE and BLE groups. Indirect voicing appears as the most favored linguistic structure for Component two. Finding no significant differences tells us that the bilingual's use of English in this context has become closely assimilated with the monolingual's use of English. Certainly there are instances of direct speech, however it is more common for both groups to use search verbs and thereby use indirect voicing.

From a qualitative perspective, it is difficult to discern whether or not there is a significant difference among the BLE and MLE narrations for Component 3. For all groups beside the MLE narrative, there is no indication of preference of either structural alternative. The most likely explanation for this difference is that it is due to the small sample size of the MLE group (n=2), and that, given a larger sample size (at least n=6), the percentages would even out revealing no significant difference.<sup>10</sup>

Analysis of Component 4 proved to be quite interesting. Despite disparate groups sizes, the MLE and BLE groups each had three instances of Encapsulations. Their

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<sup>9</sup> See Appendix II for examples of Mental Verbs/Verbs of Noticing from the data.

<sup>10</sup> Small sample size must be considered as a potential factor influencing results from each subset of the analysis.

frequencies were inversely related with the BLE group preferring Locative Expressions 2:1, and the MLE group preferring Summative Expressions 2:1. Again, it is very difficult and perhaps methodologically inappropriate to extrapolate conclusions from such small data sets. Nonetheless, an interpretation of the present data points to a slightly higher degree of elaborative capacity with English among the monolinguals with regard to Encapsulations. Locative Expressions were most often coded as the use of a comparably shorter phrase length than Summative Expressions. In light of the small sample size and the insignificant nature of the variance, we cannot claim that significant differences were found between the BLE and MLE encoding of Encapsulations. Contrastively, because of the small sample size it is important to consider subtle variations and interpret their importance to the aim of the study. While it appears that monolingual English participants are more likely to encode summarizations, when the Hungarian-English bilinguals do summarize plot events they do so using the more elaborative structural alternative with higher frequency than the English monolinguals. Possible explanations for this include for this trend include considerations of degree of familiarity between narrator-audience as well as degree of elaboration associated with each language. For example, the bilinguals in this study may feel less of a need to make summative remarks given the greater degree of familiarity between parent and child, whereas the monolingual English children may have felt the need to be more explicit and thereby encode more summarizations as they narrated the frog-story to me, an acquaintance with

whom they were relatively unfamiliar. This would explain the higher frequency of MLE encodings of Encapsulations. As a final consideration, Hungarian is generally characterized as a less elaborative language than English which may explain why proportionally the bilinguals have fewer occurrences of Encapsulations.

The analyses of Component 5 among the BLE and MLE texts exhibit some very interesting and explicit trends. As previously discussed, the bilingual narratives were the only texts to utilize all four of the possible structures for encoding Interpretation. Despite that difference, the frequency of Possessive Noun Phrases was relatively similar between the two groups. Rather than highlighting the implications in the context of comparison between these two subsets of data, the trends among the bilingual data for Component 5 necessitate interpretation with regard to bilingual vs. monolingual narrative behaviors and a larger level; not strictly between the English narrations of these two groups. Further discussion will follow in subsequent sections.

### RQ3 RESULTS: BLH vs. MLH

How do the linguistic structures expressing the macro-components compare across groups? Compare and contrast the linguistic structures that encode the macro-components.

#### *COMPONENT 1: ONSET OF THE PLOT*

Three linguistic structures were evidenced in the data encoding the Onset of the Plot.

The following table represents the frequency of each linguistic structure in the BLH texts as compared to the MLH texts.

**Table 18. RQ3 (BLH vs. MLH): Component 1: Onset of the Plot/Missing Frog**

<b>Participant Group</b>	<b>C1: Juxtaposition/Coordination</b>	<b>C1: Subordination</b>	<b>C1: Mental Verbs/Verbs of Noticing</b>
BLH	<b>100%</b> (6/6)	---	<b>16.67%</b> (1/6)
MLH	<b>50%</b> (1/2)	<b>50%</b> (1/2)	---

*(Percentages indicate specific type out of total instances of mention per group.)*

Juxtaposition/Coordination is the preferred linguistic structure across groups. Instances of Subordination and Mental Verbs/Verbs of Noticing are the most rare, occurring once in each group of texts. No significant differences were witnessed with regard to the linguistic structures used to encode the Onset of the Plot across the BLH and MLH narratives. This result does not support the hypothesis for RQ3 which anticipated significant differences among the linguistic structures used to encode each narrative component.

*COMPONENT 2: UNFOLDING OF THE PLOT*

Two linguistic structures were witnessed in the data encoding the Unfolding of the Plot: Direct Speech and Indirect Voicing. The following table represents the frequency of each linguistic structure in the BLH texts as compared to the BLH texts.

**Table 19. RQ3 (BLH vs. MLH): Component 2: Unfolding of the Plot**

<b>Participant Group</b>	<b>Direct Speech</b>	<b>Indirect Voicing</b>
BLH	<b>20%</b> (5/25)	<b>80%</b> (20/25)
MLH	---	<b>100%</b> (5/5)

*(Percentages indicate specific type out of total instances of mention per group.)*

Indirect Voicing is the preferred linguistic structure across the BLE and BLH narratives. The MLH texts were the only group to contain no instances of Direct Speech for encoding the Unfolding of the Plot. Direct Speech is the less complex of the two possible structures, and the omission of its occurrence among the MLH narratives may indicate some slight developmental advancement for the Hungarian monolinguals. Still, it must be borne in mind that the small sample size of the monolingual control groups obscures generalization. No significant differences were witnessed between the frequencies of the occurrence of each linguistic structure. These results do not support the hypothesis for RQ3.

*COMPONENT 3: RESOLUTION OF THE PLOT*

Two linguistic structures were witnessed in the data encoding the Resolution of the Plot: Possessive Noun Phrases and Anaphoric/Deictic Expressions. The following table represents the frequency of each linguistic structure in the BLH texts as compared to the MLH texts.

**Table 20. RQ3 (BLH vs. MLH): Component 3: Resolution of the Plot**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Anaphoric/Deictic Expressions</b>
BLH	<b>50%</b> (5/10)	<b>50%</b> (5/10)
MLH	<b>50%</b> (1/2)	<b>50%</b> (1/2)

*(Percentages indicate specific type out of total instances of mention per group.)*

The MLH and BLH groups encoded the Resolution of the Plot with an equal distribution in frequency of linguistic structures. No preference was shown toward either linguistic



structure for Component 3 and thus, no significant differences were found between the groups. These results do not support the hypothesized expectations for RQ3.

*COMPONENT 4: ENCAPSULATIONS*

Locative Expressions and Summative Expressions were the two linguistics structures used to encode Encapsulations in the data. The frequency results for Encapsulations were difficult to draw conclusions for as no clear trends emerged.

**Table 21. RQ3 (BLH vs. MLH): Component 4: Encapsulations**

<b>Participant Group</b>	<b>Locative Expressions</b>	<b>Summative Expressions</b>
BLH	<b>14.28%</b> (1/7)	<b>85.71%</b> (6/7)
MLH	<b>50%</b> (2/4)	<b>50%</b> (2/4)

*(Percentages indicate specific type out of total instances of mention per group.)*

The MLH narratives were the only group to show no preference among the two linguistic structures found to encode Encapsulations. The BLH narratives showed a distinct preference toward Summative Expressions to encode Component 4. The variance between these two groups yielded a conclusion of no significant differences are present.

*COMPONENT 5: INTERPRETATION*

Four distinct linguistic structures were observed to encode Interpretation in the narratives.

A comparison of these two groups reveals that while the BLH narratives utilize all four linguistic possibilities, the MLE control group only uses two of the four, excluding Voicing and Evaluative/Elaborative Lexical Items.

**Table 22. RQ3 (BLH vs. MLH): Component 5: Interpretation**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Affective Adj./Verbs of Cognition</b>	<b>Voicing</b>	<b>Evaluative/Elaborative Lexical Items</b>
BLH	<b>8.7%</b> (4/46)	<b>39.13%</b> (18/46)	<b>21.74%</b> (10/46)	<b>30.43%</b> (14/46)
MLH	<b>50%</b> (2/4)	<b>50%</b> (2/4)	---	---

*(Percentages indicate specific type out of total instances of mention per group.)*

The MLE narratives show no preference between Possessive Noun Phrases and Affective Adjectives/Verbs of Cognition, using the two structural alternatives with equal frequency. The MLH narratives preference Evaluative/Elaborative Lexical Items as their most frequent structural choice for encoding Interpretation. Possessive Noun Phrases and Voicing were the least preferred structures among the BLH narrations. Even considering the small sample size, a rough approximation of the difference in ratio of instances per group shows that the BLH encode Interpretation with a much higher frequency than do their monolingual (MLH) counterparts.

#### RQ3 DISCUSSION: BLH vs. MLH

The BLH group had one instance of Mental Verbs/Verbs of Noticing encoding Component one, whereas Mental Verbs/Verbs of Noticing was absent in the MLH narratives. The slight differences present between these two groups resulted in a conclusion that no significant differences were present between the MLH and BLH narratives with regard to Components one through four. The variance that does exist can be attributed to the small sample size of the monolingual control (n=2).

The analyses of Component five among the BLH and MLH texts exhibit some very explicit trends. As previously discussed, the bilingual narratives were the only texts to utilize all four of the possible structures for encoding Interpretation. The MLH narratives used both Possessive Noun Phrases and Affective Adjectives/Verbs of Cognition with equal frequency. Interestingly, the BLH narratives expressed a trend of moving away from the use of Possessive Noun Phrases toward using a wider variety of linguistic structures to encode Interpretation. Rather than highlighting the implications in the context of comparison between these two subsets of data, the trends among the bilingual data for Component 5 necessitate interpretation with regard to bilingual vs. monolingual narrative behaviors and a larger level, not strictly between the English narrations of these two groups.

## CHAPTER FOUR: CONCLUSIONS AND IMPLICATIONS

Of all the macro-narrative components, the analysis of Component five yields the most provocative and definitive findings with distinct implications for bilingualism. The Hungarian-English bilinguals employed the widest variety of linguistic structures, exhibiting all four possible structures for encoding Interpretation across both their English and Hungarian narratives, while both monolingual groups only employed two out of the four possible linguistic alternatives. Thus, the bilinguals in the present study appear distinct in the following ways. They have the ability to survive in a variety of socio-cultural and linguistic environments, such as the different domains of home, school, and community. As such, they are often forced to call upon a wide variety of interpretive strategies to navigate the changing demands of their everyday worlds. From the data, we also gather that bilinguals exhibit a higher aptitude for evaluative judgments and interpretive claims, offering a wider variety of explanations for events they encounter in life, or, in this case, events they conjecture about from the discourse-embedded story-world. Perhaps the desire to understand and be understood leads bilinguals to a heightened awareness of the world around them and encourages them to more regularly engage in active interpretation than their monolingual peers.

Differences in the types of linguistic structures used to express the five macro-narrative components were not as significant as anticipated by the hypothesis. Slight

differences do occur, most substantially with regard to Interpretation. Generally, no significant differences were witnessed in the linguistic structures used in the expression of macro-components for components one through four. The findings from analysis of Component 5 support the hypothesis that the greatest differences among the study's subsets are found in the structures used to express macro-narrative components. While all groups expressed component 5 the bilingual Hungarian texts did so with the greatest variety of linguistic structures. These findings support the previous conclusions from studies of child bilingualism regarding the cognitive advantages of bilingualism (Peal and Lambert 1962; Cromdal 1999). A common finding among them has been that the benefits of bilingualism usually become quantifiably evident by late childhood. Similarly, the bilingual participants in this study are among the seven-to-nine year age range.

The findings of this study contribute to the body of research regarding narrative development among young bilinguals. Hungarian-English bilinguals may tell the same story in Hungarian as they do in English, yet they do so using different variations and frequencies of linguistic structural alternatives. These findings also support the notion of the relationship and distinction between narrative cohesion and coherence (Akinici, Jisa, and Kern 2001).

## CHAPTER FIVE: LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

### *RESEARCH LIMITATIONS*

Reconsidering the coding methodology may account for the slight decrease in encoding of Onset and Unfolding of the plot (components 2 and 3) among the BLE and BLH texts. For Unfolding of the Plot to be counted (component 2), a sustained search for the frog must be present in several separate utterances. Though each text was considered in context, generally “verbs, characterized as having a high degree of “control” on the part of the subject” such as ‘search’ and ‘call’ were counted as explicit (Akinci, Jisa, and Kern (1984). For the purposes of the present analysis, “shouting” and “looking out” were also counted as explicit as they imply intentionality in the continuation of the search. Critique of these conventions may be warranted and should be addressed in future studies. Methodological variance can also account for some of the differences present between the encoding of components in the BLH and BLE narrations. The story book was left with the children and their parents before data collection and, as such, some preliminary review of the story may have occurred. Further, the slight, statistically non-significant, higher frequency of encoded components in the BLE narratives may indicate that the bilingual children may have conceived of this exercise as a school-related task, and as such found more facility with the English conventions of story-telling which they experience in their English medium schooling.

Given the small size of the data collection sample, limitations must be accounted

for. The very small sample size not only limits generalizability, it also limits the statistical power of the study to detect significant differences between the BLH and BLE versions, as well as between the BLE-MLE and BLH-MLH relationships. As stated in the hypothesis, non-significant differences were expected among the frequency of macro-narrative components for all subsets of the study sample. Therefore, those expectations are supported by the conclusions drawn from the analysis of research questions 1 and 2. Significant differences were expected among the linguistic structures used to express the macro-narrative components and this hypothesis was supported by the data analysis of RQ3.

#### *DIRECTION FOR FUTURE RESEARCH*

Future research should endeavor to investigate narrative competence among bilingual populations with increased sample size to increase generalizability and control for variability due to error and random chance. In future studies, all participants should be drawn from the same school system to control for educational opportunity and quality of instruction. All narration sessions should occur in one location (school, community facility, or home), and narration sessions should be conducted using a standard protocol controlling for the amount of time the child is exposed to the story-book before the oral narration begins and for audience composition. As much as possible, the children in the sample should have experienced similar degrees of exposure to literacy-related activities

and should be equally familiar with story-telling conventions. Future studies of narrative development involving young bilinguals can only expand on the field's present body of knowledge and increase the validity of previous research. Studies of narrative development provide a window into the **linguistic processes** at work in the mind of the bilingual that is otherwise inaccessible from similar studies with monolinguals. To neglect opportunities for such investigation would be to ignore invaluable resources and limit the advance of linguistic knowledge both broadly and specifically.



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## Appendix

## Appendix I: Tables

**Table 1. Research Questions and Means of Address**

<b>Research Questions and Means of Address</b>	
Research Question 1	How similar are the BLH and BLE narrations? What narrative components are present in each narration and which do the texts share in common? Which components do they not share?  RQ1 will be addressed by quantitative analysis.
Research Question 2	How does BLE compare to MLE control? How does BLH compare to MLH control? Briefly, how do the Hungarian and English narratives produced by the bilingual participants compare to their respective monolingual control?  RQ2 will be addressed by quantitative analysis.
Research Question 3	How do the linguistic structures expressing the macro-components compare across groups? Compare and contrast the linguistic structures that encode the macro-components.  RQ3 will be addressed by qualitative analysis.

**Table 2: Summary Statistics of Mean Age of Participants**

	<b>Monolingual Hungarian</b>	<b>Monolingual English</b>	<b>Bilingual</b>
<b>Mean Age</b>	7;5	8;5	8;3

*(Average age represented in years; months at time of data collection)*

**Table 3: Macro-Narrative Components of the Frog Story**

<b>COMPONENT 1: ONSET OF THE PLOT</b>
<b>Explicit mention must be made of the boy's noticing that the frog is missing.</b> Example: "When the boy and the dog woke up, they looked so surprised to see that the frog was not in the jar." (BLE-A)
<b>COMPONENT 2: UNFOLDING OF THE PLOT</b>
<b>Explicit mention must be made of the search for the frog at least three times</b> 4- "The dog barked and the little boy called the little frog." 5- "The owl chased after the boy and then he climbed up some rocks and still yelled for the frog." 6- "And the little boy was calling the frog." *Note: mentions of the initiation of the search taking place in the bedroom scene are valid, though the majority need to occur throughout the story in order to count. "The initial search inside the bedroom constitutes a secondary or "local" goal, while the sustained search outdoors in the forest and beyond constitutes a major, global-level goal which needs to be identified as the motivating basis for the story as a whole. The causal network model underlying Trabasso and Rodkin's analysis in Chapter IIB characterizes a "goal-play hierarchy" such that there is a higher-order goal (to find the frog) which motivates subordinate goals (to search in particular locations) and then gets reinstated to meet "yet another inferred, higher order goal" (to get back his pet). Berman and Slobin 1994:46
<b>COMPONENT 3: RESOLUTION OF THE PLOT</b>
<b>The frog taken home at the end of the story must be explicitly described as being the same or as substituting for the frog that the boy lost in the beginning of the story.</b> Example: "And they found the two frogs and one was his frog and one was a lady."
<b>COMPONENT 4: ENCAPSULATIONS</b>
<b>Summarizing (prospective or retrospective) of the ongoing search</b> Example: "now the little boy pursues his search" "they looked for her everywhere" <i>Note: examples for component four were taken from Akinci and Kern, pg. 194.</i>
<b>COMPONENT 5: INTERPRETATION</b>
<b>Characterized by inferences (i.e. concerning familial relationship among the frogs), elaboration and evaluation, as well as attribution of mental and internal states to characters.</b> Example: 'One evening, when [he] opened the door, the window, <b>because so that there be a little fresh air</b> , the frog crawled out of the bottle, and crawled out the window.'

Source: Adapted from Berman and Slobin 1994:46 and Akinci, Jisa, and Kern in Verhoeven and Stromqvist 2001: 194

**Table 4: Linguistic Structures Expressing Narrative Components**

<b>Component 1: Onset of the Plot</b>	<b>Juxtaposition/Coordination:</b> “the boy looking in the jar, the boy realizing that the frog disappeared.” Ex. “ <i>When the boy when the boy and the dog woke up, they went to see the frog. But when they looked into the jar, he was gone.</i> ” (BLE-K) <sup>11</sup>
	<b>Subordination:</b> Distinct from J/C with the use of a subordinated complement clause with “that”. Ex. “ <i>When the boy and the dog woke up, they looked so surprised to see that the frog was not in the jar.</i> ” (BLE-A)
	<b>Mental Verbs/Verbs of Noticing:</b> This refers to the narrator attributing a mental state to the dog (and/or) the boy upon discovery that the frog is missing. Ex. “‘ <i>When the boy and the dog got up, [they] didn’t find the frog in the bottle.</i> ’ ‘ <i>The boy didn’t like this.</i> ’ (BLH-A) <sup>12</sup>
<b>Component 2: Unfolding of the Plot</b>	<b>Pursuit Verbs:</b> Explicit mention of the search ensuing by use of direct speech Ex. “ <i>The boy looked at a hole in the ground and called, ‘Frog, where are you?’</i> ” (BLE-A)
	<b>Indirect Voicing:</b> Implicit mention of the search ensuing, usually characterized by action verbs. Ex. “‘ <i>Then he goes away calling him, and the bees come out of the beehive.</i> ’”(BLE-L)
<b>Component 3: Resolution of the Plot</b>	<b>Possessive NPs:</b> Indication of initial possession through use of possessive noun phrases i.e. “his” and/or “theirs”. Ex. “ <i>There is his frog and his girlfriend.</i> ” (BLE-A)
	<b>Anaphoric/Deictic Forms</b> Ex. “ <i>And then the boy and the dog looked on the other side of the log and found their frog and his wife.</i> ” (BLE-E)
	<b>‘Expanded phrase length alternatives’,</b> indicates recognition of the frog as the same at the beginning of the story. Ex. “ <i>Then [they] saw two frogs there, and [they] recognized that one of them is the frog that ran away.</i> ”
<b>Component 4: Encapsulations</b>	<b>Locative Expressions:</b> Use of the locative expressions, i.e., ‘everywhere’, indicating that the search has been exhausted. Ex. ‘ <i>[they] were looking everywhere where, but [they] didn’t find the frog.</i> ’ (BLH-A)
	<b>Lexical items:</b> Inclusion of lexical items that offer summative evaluation and/or punctuate action. Ex. “ <i>Then they look everywhere, and but they can’t find it.</i> ”(BLE-L)
<b>Component 5: Interpretation</b>	<b>Possessive NPs</b> indicating kinship (among the frogs) Ex. ‘ <i>There is his frog and his girlfriend. And their babies.</i> ’ (BLE-L)
	<b>Affective Adjectives/Verbs of Cognition:</b> Attributing a mental/internal state to characters Ex. ‘ <i>He thought the frog was in the log as frogs like damp.</i> ’ (BLE-A)
	<b>Voicing:</b> Instances of performative, direct speech Ex. “ <i>And the little boy and the dog and the frog say ‘bye-bye’ to the mommy-frog, the daddy-frog, the baby frog, the baby-frog.</i> ” (BLE-N)
	<b>Evaluative/Elaborative Lexical Items:</b> ‘ <i>One evening, when [he] opened the door, the window, because so that there be a little fresh air, the frog crawled out of the bottle, and crawled out the window.</i> ’ (BLH-E)

<sup>11</sup> Abbreviations following the excerpts indicate the text group and individual speaker, i.e. BLE-A, would identify that the excerpt was from the bilingual-English transcript belonging to Andrea.

<sup>12</sup> Juxtaposition/Coordination are mutually exclusive, while Mental Verbs/Verbs of Noticing can co-occur with either of the former.

**Table 5. Components Encoded by Participant Groups BLE vs. BLH**

*Hungarian-English bilinguals making explicit mention of the five components in their English and Hungarian texts.*

	<b>BLE N=6</b>	<b>BLH N=6</b>
Component 1: Onset of the Plot	<b>6/6</b>	<b>5/6</b>
Component 2: Unfolding of the Plot	<b>5/6</b>	<b>5/6</b>
Component 3: Resolution of the Plot	<b>6/6</b>	<b>5/6</b>
Component 4: Encapsulations	<b>2/6</b>	<b>3/6</b>
Component 5: Interpretation	<b>5/6</b>	<b>6/6</b>

**Table 6. Narrative components in English texts of Hungarian-English bilinguals and English monolinguals.**

*Percentage of participants per group making explicit mention of the five components.*

	<b>BLE N=6</b>	<b>MLE N=2</b>
Component 1: Onset of the Plot	<b>6/6 (100%)</b>	<b>2/2 (100%)</b>
Component 2: Unfolding of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 3: Resolution of the Plot	<b>6/6 (100%)</b>	<b>2/2 (100%)</b>
Component 4: Encapsulations	<b>2/6 (33%)</b>	<b>1/2 (50%)</b>
Component 5: Interpretation	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>

**Table 7. Narrative components in Hungarian texts of Hungarian-English bilinguals and Hungarian monolinguals.**

*Percentage of participants per groups making explicit mention of the five components.*

	<b>BLH N=6</b>	<b>MLH N=2</b>
Component 1: Onset of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 2: Unfolding of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 3: Resolution of the Plot	<b>5/6 (83%)</b>	<b>2/2 (100%)</b>
Component 4: Encapsulations	<b>3/6 (50%)</b>	<b>2/2 (100%)</b>
Component 5: Interpretation	<b>6/6 (100%)</b>	<b>2/2 (100%)</b>

**Table 8: Component 1 (BLE vs. BLH): Onset of the Plot/Missing Frog**

<b>Participant Group</b>	<b>C1: Juxtaposition/ Coordination</b>	<b>C1: Subordination</b>	<b>C1: Mental Verbs/Verbs of Noticing</b>
BLE	<b>83.34%</b> (5/6)	<b>16.67%</b> (1/6)	<b>16.67%</b> (1/6)
BLH	<b>100%</b> (6/6)	---	<b>16.67%</b> (1/6)

**Table 9. Component 2 (BLE vs. BLH): Unfolding of the Plot**

<b>Participant Group</b>	<b>Direct Speech</b>	<b>Indirect Voicing</b>
BLE	<b>21.43%</b> (6/28)	<b>78.57%</b> (22/28)
BLH	<b>20%</b> (5/25)	<b>80%</b> (20/25)

*(Percentages indicate specific type out of total instances of mention per group.)*

**Table 10. Component 3 (BLE vs. BLH): Resolution of the Plot**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Anaphoric Expressions</b>
BLE	<b>50%</b> (4/8)	<b>50%</b> (4/8)
BLH	<b>50%</b> (5/10)	<b>50%</b> (5/10)

*(Percentages indicate specific type out of total instances of mention per group.)*

**Table 11. Component 4 (BLE vs. BLH): Encapsulations**

<b>Participant Group</b>	<b>Locative Expressions</b>	<b>Summative Expressions</b>
BLE	<b>66.67%</b> (2/3)	<b>33.33%</b> (1/3)
BLH	<b>14.28%</b> (1/7)	<b>85.71%</b> (6/7)

*(Percentages indicate specific type out of total instances of mention per group.)*



Table 12. Component 5 (BLE vs. BLH): Interpretation

Participant Group	Possessive Noun Phrases	Affective Adj./Verbs of Cognition	Voicing	Evaluative/Elaborative Lexical Items
BLE	<b>24.14%</b> (7/29)	<b>34.48%</b> (10/29)	<b>3.45%</b> (1/29)	<b>34.48%</b> (10/29)
BLH	<b>8.7%</b> (4/46)	<b>39.13%</b> (18/46)	<b>21.74%</b> (10/46)	<b>30.43%</b> (14/46)

(Percentages indicate specific type out of total instances of mention per group.)

Table 13. Component 1 (BLE vs. MLE): Onset of the Plot/Missing Frog

Participant Group	C1: Juxtaposition/Coordination	C1: Subordination	C1: Mental Verbs/Verbs of Noticing
BLE	<b>83.34%</b> (5/6)	<b>16.67%</b> (1/6)	<b>16.67%</b> (1/6)
MLE	<b>100%</b> (2/2)	---	<b>50%</b> (1/2)

(Percentages indicate specific type out of total instances of mention per group.)

Table 14. Component 2 (BLE vs. MLE): Unfolding of the Plot

Participant Group	Direct Speech	Indirect Voicing
BLE	<b>21.43%</b> (6/28)	<b>78.57%</b> (22/28)
MLE	<b>10%</b> (1/10)	<b>90%</b> (9/10)

(Percentages indicate specific type out of total instances of mention per group.)

Table 15. Component 3 (BLE vs. MLE): Resolution of the Plot

Participant Group	Possessive Noun Phrases	Anaphoric Expressions
BLE	<b>50%</b> (4/8)	<b>50%</b> (4/8)
MLE	<b>33.33%</b> (1/3)	<b>66.67%</b> (2/3)

(Percentages indicate specific type out of total instances of mention per group.)

Table 16. Component 4 (BLE vs. MLE): Encapsulations

Participant Group	Locative Expressions	Summative Expressions
BLE	<b>66.67%</b> (2/3)	<b>33.33%</b> (1/3)
MLE	<b>33.33%</b> (1/3)	<b>66.67%</b> (2/3)

(Percentages indicate specific type out of total instances of mention per group.)

Table 17. Component 5 (BLE vs. MLE): Interpretation

Participant Group	Possessive Noun Phrases	Affective Adj./Verbs of Cognition	Voicing	Evaluative/Elaborative Lexical Items
BLE	<b>24.14%</b> (7/29)	<b>34.48%</b> (10/29)	<b>3.45%</b> (1/29)	<b>34.48%</b> (10/29)
MLE	<b>20%</b> (1/5)	<b>80%</b> (4/5)	---	---

(Percentages indicate specific type out of total instances of mention per group.)

Table 18. RQ3 (BLH vs. MLH): Onset of the Plot/Missing Frog

Participant Group	C1: Juxtaposition/Coordination	C1: Subordination	C1: Mental Verbs/Verbs of Noticing
BLH	<b>100%</b> (6/6)	---	<b>16.67%</b> (1/6)
MLH	<b>50%</b> (1/2)	<b>50%</b> (1/2)	---

(Percentages indicate specific type out of total instances of mention per group.)

Table 19. RQ3 (BLH vs. MLH): Unfolding of the Plot

Participant Group	Direct Speech	Indirect Voicing
BLH	<b>20%</b> (5/25)	<b>80%</b> (20/25)
MLH	---	<b>100%</b> (5/5)

(Percentages indicate specific type out of total instances of mention per group.)

Table 20. RQ3 (BLH vs. MLH): Resolution of the Plot

Participant Group	Possessive Noun Phrases	Anaphoric/Deictic Expressions
BLH	<b>50%</b> (5/10)	<b>50%</b> (5/10)
MLH	<b>50%</b> (1/2)	<b>50%</b> (1/2)

(Percentages indicate specific type out of total instances of mention per group.)

**Table 21. RQ3 (BLH vs. MLH): Encapsulations**

<b>Participant Group</b>	<b>Locative Expressions</b>	<b>Summative Expressions</b>
BLH	<b>14.28%</b> (1/7)	<b>85.71%</b> (6/7)
MLH	<b>50%</b> (2/4)	<b>50%</b> (2/4)

*(Percentages indicate specific type out of total instances of mention per group.)*

**Table 22. RQ3 (BLH vs. MLH): Component 5: Interpretation**

<b>Participant Group</b>	<b>Possessive Noun Phrases</b>	<b>Affective Adj./Verbs of Cognition</b>	<b>Voicing</b>	<b>Evaluative/Elaborative Lexical Items</b>
BLH	<b>8.7%</b> (4/46)	<b>39.13%</b> (18/46)	<b>21.74%</b> (10/46)	<b>30.43%</b> (14/46)
MLH	<b>50%</b> (2/4)	<b>50%</b> (2/4)	---	---

*(Percentages indicate specific type out of total instances of mention per group.)*

## Appendix II: Footnotes

<sup>1</sup> Detailed discussion of each research questions and means of address follows in the Purpose section of Chapter two.

<sup>2</sup> Abbreviations following the excerpts indicate the text group and individual speaker, i.e. BLE-A, would identify that the excerpt was from the bilingual-English transcript belonging to Andrea.

<sup>3</sup> Juxtaposition/Coordination are mutually exclusive, while Mental Verbs/Verbs of Noticing can co-occur with either of the former.

<sup>4</sup> See Appendix III for examples of Possessive Noun Phrases as witnessed in the data.

<sup>5</sup> See Appendix III for examples of Anaphoric Expressions as witnessed in the data.

<sup>6</sup> See Appendix III for further examples of Summative Expressions encoding Encapsulations.

<sup>7</sup> For additional explanation of linguistic structures encoding Interpretation, see Table 11. For examples of Interpretation from the data, see Appendix III.

<sup>8</sup> The use of “weaker” here references the imbalance in available contexts of use for the bilingual’s Hungarian language compared to those of English. It also references the bilingual parent’s categorization of their children as English-dominant at the time of data collection.

<sup>9</sup> See Appendix II for examples of Mental Verbs/Verbs of Noticing from the data.

<sup>10</sup> Small sample size must be considered as a potential factor influencing results from each subset of the analysis.