

The speech of an older preschool bilingual sibling's influence and impact on the language development of a younger potential bilingual infant sibling

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(This research is an original work and has not been submitted for a higher degree to any other university or institution.

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Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

(Signed) _____

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List of abbreviations, acronyms and glossary

| | |
|-------|-------------------------------------|
| CVCV | Consonant-vowel-consonant-vowel |
| L1 | One's first/native language |
| L2 | One's second language |
| LASS | Language Acquisition Support System |
| OPOL | One-parent/person, one-language |
| PPVT | Peabody Picture Vocabulary Test |
| PVT-R | Picture Vocabulary Test – Revised |
| SES | Socioeconomic Status |

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From the lips of children and infants.....

Psalms 8:2 (New Heart English Bible)

Abstract

Although bilingual language development in an individual has been broadly studied, the phenomenon in between young bilingual siblings is relatively understudied and unknown. The proficiency of a bilingual depends on various factors such as birth order, parent's level of education, age of acquisition and environment. However, the greatest influence which is paramount to bilingual toddlers in early childhood becoming proficient speakers in both languages is due to the quantity and quality of input received. Whilst a sibling's presence is said to increase linguistic exposure, it remains unclear exactly how an older bilingual sibling's language use affects a younger sibling.

This thesis reports on a case study which investigates the language choice of two siblings simultaneously acquiring Japanese and English. Using audio recordings of naturalistic interactions during everyday activities, we examine the siblings' interactions to determine the triggers and nature of code switching to determine whether the older sibling is influencing the language choices of the younger sibling. Where, when and with whom the siblings use which language will also be discussed. Lastly, we also discuss how the siblings use their language to assert their position in the family.

1. Introduction

Many children around the world are exposed to more than one language and will grow up to be bilingual or multilingual (Grosjean, 2010; Ortega, 2009). In fact, it is estimated that more than half of the world's children are raised in bilingual or multilingual environments, and whilst a large volume of research has been carried out to study monolingual language development, language development in bilinguals is comparatively under researched (Bridges & Hoff, 2014; Place & Hoff, 2011).

According to Bloomfield (1933), a monolingual's language acquisition "is doubtless the greatest intellectual feat any one of us is ever required to perform" (p. 29). As to how a child acquires language, Chomsky (1965) compared language development to the acquisition of other natural abilities such as walking, claiming that we have an innate knowledge to learn language or a "Universal Grammar" that is present from birth. Pinker referred to this the "language instinct" (1994) according to which he believed that languages are not acquired through formal but rather through natural means. It could be said that acquiring two or more languages is all the more extraordinary, though simultaneous acquisition of languages is believed to be similar to monolingual language acquisition and due to an innate linguistic knowledge (Schwartz, 1993).

Monolinguals are thought to acquire the majority of their speech between the age of 18 months and four to five years of age (Myers-Scotton, 2006). This applies to all children whether they are raised in a culture where the mothers talk almost constantly to their children, which is common

in the West, or cultures where mothers do not regard or speak to their children as conversational partners such as the Australian Walpiri, Mexican Mayans or Inuit. In these cultures it is believed that children learn to talk from witnessing adult interaction (Hoff, 2006. p. 59).

The study of bilingual infants' language development is an emerging field and there is still much to be explored and understood (Ortega, 2009; Place & Hoff, 2016). Although the reason is still somewhat obscure, research into bilinguals' language and speech development shows a slight delay when compared to monolinguals; this is known as the *lead-lag issue* (Myers-Scotton, 2006; Oshima-Takane & Robbins, 2003). Bilinguals can lag 6 – 12 months behind in language development compared to their monolingual peers (Hoff & Ribot, 2017). In fact, monolinguals have shown greater language advancement in both vocabulary and grammar compared to their bilingual peers where measurements involve a single language ((Bialystok & Feng, 2009; Hoff, Core, Place, Rumiche, Senior, & Parra, 2012). However, when the bilinguals were compared on their total vocabulary scores across both languages the results were comparable to monolinguals (Bialystok & Feng, 2009; Hoff et al., 2012).

The degree of bilingualism attainable by any individual differs considerably and is influenced by multiple factors, which include environment, amount of input and age of acquisition (Li, 2000). Generally, it is thought to be impossible to equally master the use of two languages (Fishman, 2000). The **dominant societal language**, that is the language spoken within the broader community, will become the bilingual's strongest language or their language of choice (Baker & Prys Jones, 1998; Fishman, 2000; Thomas & Roberts, 2011). After the child begins attending

school and the influence of the parents diminishes somewhat, replaced by the stronger influence of friends and peers, the **dominant societal** language usually becomes the dominant language (Hoffman, 1985). However, this language dominance is not concrete but fluid, and quite possibly may change over time with the change of circumstances or experiences (Romaine, 1995). Children, when in day care or at school, often bring the **dominant societal language** into the home, and siblings are more likely to conduct their communication in mixed code (Aaronson & Jia, 2003).

It has further been confirmed that a bilingual's language development depends on the quantity and quality of the language input received (Hoff & Luz Rumiche, 2012; Ortega, 2009; Place & Hoff, 2016). Multiple studies have shown that the amount of input received in the minority language is of paramount importance and one of the main contributors to bilingual acquisition (Bridges & Hoff, 2014; De Houwer, 2011; Kavanagh, 2017). The amount of input is, therefore, considered to be a reliable indicator of how proficient the speaker will become in that language. Furthermore, in a study by Bridges & Hoff (2014), the input from a native speaker was found to have a more positive and effective influence on a child's bilingual development compared to non-native input. However, the study authors were unable to identify the reasons behind this difference (p. 14).

Several studies have produced arguments in favour of a sibling's influence on the language development of a younger child (see Bridges & Hoff, 2014; Brody, 2004; Dunn, 1992; Woollett, 1986). Despite the research carried out in recent years regarding child bilingualism and the impact of a sibling/s on a younger sibling's speech development many questions remain. The quality of the input the subject hears, the frequency of language mixing or intrasentential code-

switching involved, and the assessment of not only speech production, but also comprehension are just a few areas requiring further research. When, where and with whom do the siblings interact and which language do they choose? What are the triggers that instigate the choice of code? This study hopes to answer some of these presently unanswerable questions and add to the existing research in the field, showing how the speech of the older bilingual sibling may influence the younger sibling (Bridges & Hoff, 2014; Place & Hoff, 2011; 2016). It also aims to bridge a gap by providing an insight into bilingual sibling interactions in naturalistic settings, across continents and changing environments and the use of a minority language in a mainstream community.

Although a number of studies involving toddlers, infants and young children have examined the sibling relationship and its effect on language in both monolingual and bilingual development (see Bridges & Hoff, 2014; Mannle, 1986; Place & Hoff, 2011; 2016; Taylor, 2017; Taylor & Kan, 2018; Tomasello & Mannle, 1985) many questions remain. Duursma et al. (2007), for example, investigated the literacy and language environments of Spanish-English immigrants in the United States. They found that the language the siblings interacted in had a much more positive effect on their language proficiency than the parental language choice (Duursma et al., 2007; Paradis, 2018). That is, children who interacted in English with their siblings had a much higher proficiency in the language and it was of little relevance whether the parents spoke to the children in English or Spanish.

The focus in much of the research literature appears to be a case study of a caregiver and a child research subject where the linguist has studied and recorded their own child or children (see, for example, Caldas, 2006; Fantini, 1976; Hoffman, 1985; Leopold, 1939-1949). Most of these studies have examined the language acquisition of the eldest child and with little attention to subsequent children and the on the influence of the older sibling on the younger sibling's speech development and language acquisition (Bridges & Hoff, 2014; Taylor, 2017). Furthermore, there is little research examining siblings' interaction in a naturalistic setting (Cho, 2018; Yip & Matthews, 2007) and the nature of an older sibling's influence on a younger sibling. The research reported here hopes to provide a glimpse into the siblings' world.

1.1 About the researcher

Before I became an English language teacher I majored in Japanese as a foreign language and Japanese culture in my undergraduate degree at university and held a number of jobs in Japan which required communication in Japanese. Learning a language to some degree of fluency requires grit and determination and over the years I saw myself struggle with certain Japanese grammatical structures as Japanese grammar has nothing in common with English grammar. Even now, there is still so much to learn and my Japanese is far from perfect. The focus of this thesis was influenced by my personal circumstances as a mother of bilingual boys and it is with some envy that I have seen my boys acquire the Japanese language with ease. To be able to acquire two languages naturally and therefore be able to put their energies into other areas with no time needed to be devoted to their language learning is something that I could never have imagined.

Before my children were born, and due to my husband's limited English ability we made a conscious choice to embrace the one-parent, one-language (OPOL) model at home (Döpke, 1992). Although our main language of communication at home is Japanese it was of utmost importance to me that our children be able to communicate with my English-speaking family in Australia as well as know their bicultural heritage. Furthermore, after studying an MA in Applied Linguistics, I learned that the cognitive benefits of being bilingual far outweighed those of monolinguals, including the heightened social skills and flexible rationality or mindset in different situations it is said to offer (Bialystok, 2011; Bialystok, Craik, Grady, Chau, Gunji, & Pantev, 2005; Hakuta, 1990). I also felt that being bilingual would provide more opportunities for my children in the future due to the status of English as a *lingua franca* in an ever-increasingly globalized world, and provide them with greater choice in where they studied and worked.

Carrying out any kind of research on one's own children is a complex undertaking, as there is always the chance that the researcher will be biased when analysing data, compromising the results. I did my utmost throughout this study to remain objective and true to the data, regardless of the results.

As the world becomes increasingly globalised and seems somewhat smaller, Japanese companies and corporations now recognise the importance of English as a *lingua franca* for communication in global business dealings. Many employers now demand that their employees speak and study English for their professions. Students and workers also acknowledge the importance of the language to their careers, and studying English is compulsory for Japanese junior high school and

high school students for a period of six years. English is perhaps the most highly respected foreign language in Japan.

1. 2 Overview of the Study

As outlined in the previous section, the importance of sibling communication to the development of cognitive and language skills is well recognized (Brody, 2004; Taylor, 2017), but our understanding of sibling influence within a bilingual family context remains piecemeal (Bridges & Hoff, 2014; Place & Hoff, 2011; 2016). Having observed my older son's influence on the language choice of his younger brother, initiating conversations in a language of his choice, I decided to investigate this relationship in my thesis.

In this thesis, a longitudinal case study of two male siblings' language was examined in natural settings at home and kindergarten while they were carrying out everyday activities. This thesis will report on and discuss those results. It is hoped that it will contribute to our understanding of the influence of an older sibling on the language choice and development of the younger sibling.

Following this introduction (Chapter 1), the Literature review (Chapter 2) will cover some of the pertinent research investigating bilingualism in general, the importance of the sibling relationship in a family and the scaffolding an elder sibling provides to a younger sibling. It will also report upon the effect of birth order and socioeconomic status on language development, who potentially influences a bilingual's language development, and role relations within the bilingual family. There will also be an overview of code-switching and the different bilingual strategies bilingual families adopt.

The methodology chapter (Chapter 3) reports on the methods the study employed, the aims and objectives, the research questions, and the results of the testing of the boy's language. It further looks at the participants, recruitment and how the data was collected and analysed. It concludes with a profile of the study.

The results and discussion, Chapter 4, reports the results of the analysis of the data collected focusing on the siblings' language, exploring the influence and impact of the older sibling on the younger sibling's language development. In this chapter, we examine different instances of naturally occurring speech through using audio data recorded during everyday activities; meals, play and bath time. We then discuss the different ways the older sibling influences the younger through speech events such as reprimands, scaffolding and relaying information. We also discuss the limitations of the study and propose some questions for further research.

Finally, the Conclusion (Chapter 5) considers the results of the study and to what extent our research aims have been met.

2. Literature Review

2.1 Introduction

It is said that 80% -85% of the world's population will grow up with siblings and it is probable that this will be the longest lasting relationship that they will experience in their lifetime (Cicirelli, 1996; Conger & Kramer, 2010; Dunn, 1983). The arrival of a sibling changes a child's world and in particular its relationship with its parents. Now occupied with a baby, the parents have less time to focus on the older sibling who has enjoyed sole attention for their entire lifetime. The older child is now forced to share their parents' attention, and this is said to ultimately affect the child's long-term development and personality (Dunn, 1983).

As discussed in the introduction, the effect of the sibling relationship on language development has been examined and found to be influential and in the context of bilingual families, there is a suggestion that a sibling's influence could be greater than that of a parent (Duursma et al., 2007; Paradis, 2018).

Defining bilingualism is controversial as definitions of what it means to be bilingual are many and lack consensus (Hamers & Blanc, 2000). Definitions have ranged along a bilingual continuum from maximalist (high proficiency) proposed by Bloomfield (1933) who said that bilingualism "is the native control of two languages" (p. 56) to MacNamara's (1967) minimalist idea that speakers who know or recognise a few phrases in the language are bilingual.

With no consensus on a definition there are several parameters that are used to describe different types of bilinguals: simultaneous, consecutive, passive, balanced, unbalanced, late and early. The different types and their definitions are :

- Simultaneous – an individual who acquires two or more languages at the same time and usually from birth;
- Consecutive – an individual who acquires a second (or other) language after the first;
- Passive – an individual who understands a language through reading or listening but is unable to productively produce the language;
- Productive – an individual who not only understands two languages, but can also speak and write them;
- Semilingual/double-limited – an individual who has had inadequate and infrequent exposure to any of their languages. Therefore, they do not fully grasp any particular language, mixing different aspects including lexicons and grammars. As a result, they may not be able to express themselves fully in any particular language;
- Balanced – an individual who has an equal command of their languages or across different skills in their languages;
- Unbalanced – The opposite of a balanced bilingual. The individual will have a dominant language or stronger language with the other/s being weaker;
- Early – an individual who acquires a second language in their early development; and,
- Late – an individual who acquires a second (or other) language later in their development after they already have an established first language (see Wei, 2000 for a full description of types of bilinguals).

There is potentially a major difference in the level of proficiency and range of skills in bilingual individuals, for example, between simultaneous bilinguals who acquire their languages at the same time and early and late bilinguals; those that learn their L2 after they have acquired their L1. This study will focus on two simultaneous bilingual siblings who are acquiring both of their languages (English and Japanese) from birth.

Whilst the case of my family bilingualism is an educational linguistic choice, it can be a natural occurrence or an educational linguistic choice. For example, for families growing up in countries that have two or more official languages such as Belgium or Luxembourg, bilingualism or multilingualism is ubiquitous in society. However, there are also many families such as mine, who have different cultures and languages due to intermarriage and make a conscious choice to attempt to raise the children in a bilingual environment where only one of the languages is the mainstream language of the community and the other, that of one of the parents.

2.2 The importance of the sibling relationship

Psychologists, educators and researchers alike have acknowledged the crucial relationship between siblings (Brody, 2004; Taylor, 2017). There is no doubt that siblings share a unique bond and that in the lengthy time that they spend together the older sibling becomes a transmitter of not only skills and play but also cultural and linguistic knowledge (Dunn, 1983; Taylor, 2017). Dunn (1983) reported that one-year-old infants spent as much time with their sibling as with their mother, and by the age of four to six-years the siblings were found to spend over twice the amount of time together as with their parents (Dunn, 1983; McHale & Crouter, 1996). This further

reinforces the fact that language input from older siblings becomes a more influential factor for language acquisition than that of the parents or caregiver(s) (Paradis, 2018). Furthermore, in many non-English speaking cultures a sibling is often a caretaker to a younger child and their role often becomes more pivotal and influential than that of a parent (Dunn, 1983, p.794; Conger & Kramer, 2010).

Whether the sibling relationship is one of closeness or rivalry, from a young age, younger siblings imitate the older, with the older siblings becoming great contributors to their siblings' cognitive development (Barron-Hauwaert, 2011; Dunn, 1983; 1992). Siblings who share the same gender are more likely to imitate each other than siblings of different genders and younger siblings are also more likely to imitate their older sibling(s), rather than the other way around (Dunn, 1983). Their interactions and their relationship when they are young is said to not only influence their relationship later in life but to also determine who they will become; their personality and sense of self (Dunn, 1983; 1992).

2.3 Sibling scaffolding

Siblings have shown that they provide more support, or scaffolding to a younger sibling than peers. Azmitia and Hesser (1993) studied the differences in the amount and quality of scaffolding provided by siblings and older peers, designing an experiment where the children were required to build a model windmill. The experiment found that older siblings provided more support and scaffolding to the younger sibling, whereas older peers did not. That is, in this sibling scaffolding during play the older siblings would take on a kind of child-teaching role and provide the younger

sibling with more help, support, and information than their peers. They also answered the younger's questions more than a peer did. It was further found that the older siblings were better and more efficient teachers, providing more explanations, constructive feedback and giving the younger sibling more control in completing the task compared to older peers (Azmitia & Hesser, 1993 p. 430).

The role of language scaffolding has also been documented (Gregory, 2001; Obied, 2009) amongst both monolingual and bilingual children in a number of settings. Elder siblings contribute to the younger sibling's language development providing explanations for topics that are linguistically or cognitively beyond their capabilities. Young children often 'scaffold' the younger sibling's learning to "support a young child's learning, gradually removing pieces of the scaffold as the child gains confidence and competence" (Gregory, 2001. p. 303). If the younger sibling does not understand, the older sibling will not only provide explanations but will also rephrase utterances and translate words or content into the younger's dominant language when deemed necessary. The older siblings are also known to open conversations that the younger sibling is able to participate in, pointing out the important parts of the conversation and giving clarification where necessary (Howe, Petrakos, Rinaldi, & LeFebvre, 2005; Kibler, Palacios, Simpson-Baird, Bergey, & Yoder, 2016).

Scaffolding of language has also been called the "language acquisition support system" (LASS) as many (Bruner, 1986; Gregory, 2001) feel that the term "scaffolding" is too broad as it applies to other aspects of the sibling relationship, not only linguistic features. Despite this, the term

‘scaffolding’ continues to be used in regards to language and it is this term that will be used throughout this thesis.

Language scaffolding was also examined by Gregory (2001) who investigated the role of young siblings developing literacy within the family amongst several Bangladeshi and Anglo families living in East London. Whilst the participants were from different cultures, the focus was on literacy development in a monolingual setting. She noted that teaching and learning involves so much more than what is referred to and described by the term 'scaffolding'. She said that:

"Teaching and learning goes beyond definitions of either 'scaffolding' (unidirectional from a more to a less experienced person) or 'collaborative learning' (between peers in a formal classroom setting). Instead, we refer to the interaction between [the] children as *synergy*, a unique reciprocity whereby siblings act as adjuvants in each other's learning, i.e. older children 'teach' younger siblings and at the same time develop their own learning" (p. 309).

Gregory (2001) reports on this ‘synergy’ , co-construction or learning from each other in the following conversation. Two female siblings are reading a book when the following conversation takes place. We can see from this segment that sibling interaction goes beyond only the younger sibling gaining something from the older sibling and both are provided with an opportunity to learn. It becomes a kind of co-construction towards both parties’ cognitive and linguistic development. In line 5, Jahanara queries the use of the word ‘banned’ thereby asking Shahana

for clarification. In the ensuing conversation, Jahanara understands that her sister has made a lexical mistake with the word 'banned' and goes on to teach her the correct word 'bandage' or 'plaster' in line 9.

- | | | |
|----|-----------|--|
| 1 | Jahanara: | How did her mother help the fox? |
| 2 | Shahana: | . . . (Inaudible) |
| 3 | Jahanara: | Say it again. |
| 4 | Shahana: | She banded the fox neck leg. |
| 5 | Jahanara: | Banded? |
| 6 | Shahana: | The fox leg. |
| 7 | Jahanara: | How can she banned the fox leg? |
| 8 | Shahana: | Because she was a nurse. |
| 9 | Jahanara: | There is no such thing as banned as such. If I was the king, I would have banned the cigarette. You mean bandage or plaster? |
| 10 | Shahana: | Bandage. |

(Gregory, 2001. p. 313).

As the older siblings bring the language of school and society into the home, Obied (2009) proposed that scaffolding in the home should be strengthened by the family as a whole with the use of literacy practices. In her study of bilingual Portuguese-English siblings in Portugal, she documented the power and influence that siblings have to change the language practices of their home.

In fact, Woollett (1986) found that when mothers were present there was very little interaction between young siblings and the volume of interaction was greater when the mother left the room. This means that it will not only be the older child who has a direct impact on their younger sibling, but that they will also indirectly impact the sibling through their interactions with their mother. Infants are sensitive to the interactions of their siblings (Dunn, 1992; Woollett, 1986) with others and are able to express feelings that are generated from these interactions by hurt, affection or aggression from as young as 18-months of age. Furthermore, mothers tend to make more of an effort in having conversations with their older child and whilst this provides an opportunity for the younger sibling to receive more stimulation and perhaps improve their linguistic competence it can also lead to competition for the mother's attention and unwanted hostile behaviour between the siblings themselves (Woollett, 1986. p. 244).

The study by Mannle et al (1991) linguistic scaffolding and interactions between both monolingual mothers and siblings were examined. They concluded that while a mother provided linguistic scaffolding to continue a conversation with an infant or child, an elder preschool aged sibling was less likely to provide scaffolding for a younger sibling, which resulted in shorter conversations and conversation breakdowns. The reason for these breakdowns remains unknown, however, one could conclude that it may be that the older sibling themselves are unable to cognitively understand the linguistic limitations of the younger sibling. Furthermore, given their own communicative competence, it is probable that they do not know how to provide the linguistic support or change their language to that which the younger sibling requires.

Do siblings prefer their minority language or the majority language of the community? Do they follow their parent's discourse strategies or design their own linguistic landscapes? In fact, we know that siblings' bilingual interaction will not necessarily be in line with the parents' bilingual discourse strategies and in the majority of families it will be the children who decide which language they speak together (Caldas, 2006). Even if the parents disapprove of their children's linguistic decision little can be done to control their linguistic choice, particularly when the parents are not present (Barron-Hauwaert, 2011). As previously discussed, the older child generally interacts with the younger child in the dominant societal language and that the older child usually influences the language of choice for the sibling interaction (Bridges & Hoff, 2014; Kavanagh, 2017). This is particularly the case after the older child begins attending school and sibling interaction usually takes on the language of school and friends with whom most time is spent (Bridges & Hoff, 2014; Hoffman, 1985). The use of the societal language seems to be further impacted with the elder sibling's realisation that their minority language used at home has no standing or value in the greater community where they have begun to spend more time (Barron-Hauwaert, 2011; Bridges & Hoff, 2014; Kavanagh, 2017).

2.4 Birth order and language development in bilingual families

Birth order is also said to effect language development with elder born children showing greater abilities with their minority language than later born children (Oshima-Takane & Robbins, 2003). Although the reasons remain unconfirmed it could be that the child receives more one-on-one linguistic input from its parents or carer/s before the birth of a sibling. However, other studies (Oshima-Takane, Goodz, & Derevensky, 1996; Pine, 1995) have found that there is no significant

difference between the language acquisition of firstborn and later born siblings and some researchers even feel it to be more beneficial for the later born child as they have access to the minority language through both their parent/s and elder sibling/s. Oshima-Takane & Robbins (2003) also felt that the later born child's frequent exposure to 'overheard speech' between the elder sibling and parent/carer was advantageous for their linguistic development (p. 22). The presence of an elder sibling changes the linguistic environment and they note that in several studies later born children were found to acquire certain language features such as pronouns earlier than their older siblings (Akhtar, Jipson, & Callanan, 2001; Oshima-Takane, 1988; 1999; Oshima-Takane et al., 1996).

Bridges and Hoff (2014) questioned whether the older sibling's speech was the influencer of the younger infant's speech, or whether simply the presence and stimulation of the older sibling contributed to the language development of the younger bilingual child. Further investigation confirmed that toddlers with siblings have shown a greater advancement in their language progress, in both vocabulary and grammatical development compared to toddlers without siblings. This is because the elder sibling would bring the societal language into the home from school and preschool (Bridges & Hoff, 2014; Kibler et al., 2016).

An example of this is where Hoffman (1985) raised her trilingual children in England speaking her heritage language of German while her husband spoke his heritage language of Spanish. After the birth of their second child, she requested that their three-year-old daughter speak to their newborn son in German. She believed that this was a successful way to expose him to the

minority language through at least two interlocutors and as a result he was able to become a proficient German speaker with the children's German usage persisting until he started school. She noted that at this point, the children's language choice for their communication became English, the language of the community.

2.5 What influences a bilingual child's language development?

In a study about his children's language interaction, which spanned a number of years and took place in the U.S. and French Canada, Caldas (2006) showed that his children's language choice was in flux and could be changeable over time and geographical location. Whilst his three children preferred French when they were younger, by the time they were teenagers they all spoke together in only English, which was the **dominant societal language** where they lived. However, on their family visits to Quebec they would all speak more French, perhaps influenced by the **dominant societal language** that was French there. He concluded that although they were all able to speak French they generally chose not to and had chosen English as their preferred language of interaction (Caldas, 2006).

When there are close-in-age siblings, that is less than two years, the minority language is easier to maintain with the siblings spending a long time together with their caregiver carrying out the same or similar activities throughout the day in the minority language (Bank & Khan, 1997; Barron-Hauwaert, 2011; Gregory, 2001). It is also seen as beneficial as the younger sibling will not only hear language input from the carer but also the older sibling and also interaction between the other sibling and the caregiver (Barton & Tomasello, 1994; Oshima-Takane &

Robbins, 2003; Woollett, 1986). Wider gap siblings, that is children with three or more years between them, are likely to be involved in different activities throughout the day and even be in different locations, for example, at school and home. As the siblings are in a different phase of their language development, it was found that the younger child was required to keep up with the ever-changing conversation between the older sibling and its peers or parents/carer and that they were exposed to more sophisticated language between the two interlocutors (Bank & Khan, 1997; Barron-Hauwaert, 2011). Whilst a parent adjusted their language for the comprehension of the younger child, the older sibling was generally unable to do this using language that was too difficult for the younger sibling to understand (Mannle, Barton & Tomasello, 1991; Woollett, 1986).

This was also seen in another study by Vandell & Wilson (1987) where it was the monolingual mothers who provided more cues, design turn-taking and provide more linguistic scaffolding than siblings. It was also observed in this study that in comparison to infant-peers, siblings also provided more scaffolding, initiated more turn-taking and had longer interactions with their younger siblings than they had with their peers. Compared to their peers, the elder sibling was more likely to initiate an interaction with the younger sibling and the younger one was more inclined to respond to them. Whilst interactions between siblings lacked support in comparison to those with their mother they were still greater than the peer support provided and showed the value of siblings to social and cognitive development.

As mentioned earlier, first born children have also been found to perform better in the form of vocabulary comprehension and production than later born siblings, however, the effect of gender upon language production and comprehension was greater than that of birth order. That is, when the same age children were language tested girls outperformed boys regardless of the order in which they were born (Bergland, Eriksson, & Westerlund, 2005). The children who attended day-care also attained higher scores in language production and comprehension compared with those who were cared for by their family. This is perhaps due to the stimulation from many other peers and carers and also being in an environment where they would have more language input from numerous interlocutors (Bergland et al., 2005; Burman, Bitan, & Booth, 2008; Fenson, Dale, Reznick, Bates, Thai, & Pethick, 1994).

When they interact, do siblings prefer their minority language or the majority language of the society? Do they follow their parent's discourse strategies or design their own linguistic landscapes? In fact, we know that siblings' bilingual interaction will not necessarily be in line with the parents' bilingual discourse strategies. (Caldas, 2006). Even if the parents disapprove of their children's linguistic decision little can be done to control their linguistic choice, particularly when the parents are not present (Barron-Hauwaert, 2011). As previously discussed, the older child generally interacts with the younger child in the dominant societal language and that the older child usually influences the language of choice for the sibling interaction (Bridges & Hoff, 2014; Kavanagh, 2017). This is particularly the case after the older child begins attending school and sibling interaction usually takes on the language of school and friends with whom most time is spent (Bridges & Hoff, 2014; Hoffman, 1985). The use of the societal language seems to be further

impacted with the elder sibling's realisation that their heritage language has no standing or value in the greater community where they have begun to spend more time (Barron-Hauwaert, 2011; Bridges & Hoff, 2014; Kavanagh, 2017).

2.6 Socioeconomic status and parental educational background's effects on language development

A number of studies (see Duursma et al., 2007; Hoff, 2006) have also found that children from a higher socioeconomic background performed better, evidence by scores on language assessments compared to their peers who were from a lower SES (socioeconomic status). As members of the middle and upper classes generally have better educational opportunities and backgrounds it is thought that mothers with more education will pose more questions and in general use a more abundant vocabulary and initiate more conversations and talk with the child (Bergland et al., 2005; Duursma et al., 2007; Hoff, 2006). Low SES children have shown the highest risk for having a low proficiency in both of their languages (Dixon, Wu & Daraghmeh, 2012). Due to a lack of linguistic input these children of lower SES were often found to have poor language skills which has been referred to as the "language gap" (Kibler et al., 2016) or the "word gap" within the U.S. (Ensminger & Fothergill, 2003; Kibler et al., 2016; Sperry, Sperry, & Miller, 2018).

Hart and Risley (1995) are well known for their work on the "language gap" and have argued that children from lower socioeconomic families are exposed to as many as 30 million fewer words compared to other children (Hart & Risley, 1995). This claim has been greatly criticized (see Kibler et al., 2016; Sperry et al., 2018) and must be questioned, particularly when the Oxford English Dictionary only lists about 218,000 words in the English language with about 47,000 being listed

as obsolete. It has been confirmed however, that the educational background of the children's parents and the quality of language input they receive has a greater effect on the children's development than the family's socioeconomic status (Kibler et al., 2016; Rindermann & Baumeister, 2015).

2.7 The effect of role relations on sibling's linguistic landscape

In one of the few studies that has been carried out on 16-month to 30-month toddlers, Bridges and Hoff (2014) observed and followed the speech of Spanish-English siblings in the United States. They found that the older sibling's influence on a younger sibling's speech to be more significant than the younger child's influence upon sibling interaction. This is further argued by Fishman (2000) who believes that we must consider role-relations within the equation of the family that may play a large part in determining the siblings' linguistic landscape. Bilingual parents within bilingual households in the U.S. have also reported that older siblings prefer to use the dominant dominant societal language with their siblings, and therefore the use of their heritage language is diminished (Bridges & Hoff, 2014). While the reasons are not known why, it is suspected (Bridges & Hoff, 2014) that the older child may even be more proficient in English due to their schooling than their home language of Spanish and so English becomes their preferred language of use (Aaronson & Jia, 2003).

Role relations in a bilingual family were studied by Nilep (2009) where he observed and witnessed sibling interactions with role-relations taking place amongst three American English-Japanese bilingual siblings. It was seen that the bilingual siblings used their languages to promote their

position in the family in order to establish a social hierarchy. Whilst English was the **dominant societal language** associated with institutions and that of power, Japanese was their mother's language which she had instilled in the children since birth and insisted on using it within the household. The children's behaviour and the way they spoke and interacted with each other was used, probably unconsciously, by the siblings to maintain, create and affirm their place within the family and the society at large.

2.8 Code-switching

Code-switching is of utmost importance to this study, as it investigates the language choice of the siblings, when, where and with whom they choose to speak which language. Most importantly, which code do they prefer to talk to each other. Do they alternate their codes according to the domain, activity being undertaken or the interlocutors present? Code-switching is the use of more than one language in a conversational event in which the speakers will switch between what is generally the home or minority language and the **dominant societal language**. It can be found amongst people of all walks of life and in every situation imaginable. Although code-switching has been broadly studied (Toribio, 2001), it is riddled with questions and there is no official consensus in the literature as to its precise nature (Poplack, 2013; Yow, Tan, & Flynn, 2018). A speakers' code-switching will be influenced by many things such as the dominant language (Deuchar & Quay, 1999; Genesee, Nicoladis, & Paradis, 1995), speaker identity (Fishman, 2000), emotions (Pavlenko, 2004; 2006) and the interlocutors present (Halpin & Melzi, 2018; Paradis & Nicoladis, 2007).

The two languages form numerous facets of a bilingual's personality (Pavlenko, 2006; Song, 2019). Fluent bilinguals are more prone to code-switch than less fluent bilinguals so the degree of fluency in the two languages plays a major role (Bail, Morini, & Newman, 2015; Toribio, 2001). Bilingual speakers will choose when to code-switch, either consciously or subconsciously (Li, 2016), to what degree and for various reasons (Bail et al., 2015). Code-switching has been seen in both a positive and a negative light with researchers reporting it to show both advanced linguistic ability and confusion or poor language skills (Paradis, 2012; Toribio, 2001).

When people of two languages come together they will often use elements from both of their languages to communicate successfully. This is known as translanguaging and as Garcia (2009) states "Translanguaging is the act performed by bilinguals of accessing different linguistic features or various modes of what are described as autonomous languages, in order to maximize communicative potential (p. 140). The term "translanguaging" is often used in a learning-teaching context (Garcia & Wei, 2014) and therefore is appropriate in this study as the boys' learn and teach each other using their two languages.

Children's code-switching is currently rigorously investigated within the bilingualism field, however, many questions remain regarding where and why children choose to code switch (Ribot & Hoff, 2014). Sprott and Kemper (1987) found that three to six-year-olds were more likely to code-switch with other children rather than with an adult. Furthermore, infant code-switching and adult code-switching is seen to be different (Fishman, 2000) as one common reason for infant code-switching between the ages of two and six is often used to fill lexical gaps caused by

language deficiencies (Cantone, 2007; Deuchar & Quay, 1998; Greene, Peña, & Bedore, 2012; Halpin & Melzi, 2018).

Some studies have also shown (Cantone, 2007; Deuchar & Quay, 1998) that children as young as two have also been found to have adequate knowledge of grammatical features of their languages. And even at this young age, they are able to differentiate between their languages and switch codes appropriate for the topic, situation or their interlocutor (Genesee, Boivin, & Nicoladis, 1996; Yow et al., 2018). Code-switching has been found to be a positive factor in regards to language competency with the bilingual using their stronger language to aid the weaker one (Yip & Matthews, 2000; Yow et al., 2018). As the bilingual speaker becomes more proficient in their languages their mixing becomes more complex and takes on more adult-like properties. Adult speakers may adopt code-switching for identity, lexical borrowings of cultural words or specialist words related to their professions etc. (Ervin-Trip & Reyes, 2005; Halpin & Melzi, 2018; Toribio, 2001).

Another reason a young bilingual may choose to code-switch is due to the language use they hear within their environs (Ribot & Hoff, 2014). Children choose to use the language that they feel more familiar and comfortable with, even if this is not the language that they are being addressed in. The language they prefer, often depends upon their linguistic knowledge and skill (Greene et al., 2012) and is often the language to which they have greater exposure. For children who spend an extensive time outside the home this is often the dominant societal language rather than the heritage or minority language (Ribot & Hoff, 2014).

Code-switching is also known as language mixing or code mixing (Cantone, 2007; Davidiak, 2010) and these terms will be used interchangeably throughout this study. Whilst code-mixing can refer to intrasentential code-switching, or the mixing of codes within the grammar in an utterance, code-switching is a language switch at a relevant point (Myers-Scotton, 1998; Li, 2016). Two kinds of codeswitching or mixing can be seen throughout this study. The first is intrasentential code-switching which is any utterance which contains both English and Japanese. The second form of code-switching are those utterances whose code differs from the previous one spoken and these are known as intersentential code-switching. Whilst intrasentential code-switching was previously seen to be haphazard (Lance, 1975), it is now considered to be very systematic and follows the rules of both grammars involved (Davidiak, 2010; Toribio, 2001).

Within the literature little is known of children's code-switching and there is even a further lack of literature concerning bilingual siblings (Bridges & Hoff, 2014). When, how, and with whom bilingual siblings choose to code-switch is relatively unknown and what influence they bestow upon each other remains a mystery. Is their speech a random haphazard mix, or is there order in their language? If a sibling addresses the other in a language, what language will the other reply in? How are children influenced by their linguistic surroundings, and does this influence their language use to each other? With so many questions left unanswered the linguistic landscape of bilingual siblings is a field deserving of more research and the main reason I decided to undertake this project.

2.9 Bilingual strategies

- Each family has their own linguistic landscape for raising their children bilingually. There are six major strategies that families generally employ and of course these may change over time depending on the family's circumstances (Döpke, 1992).
- The one parent/person-one language (OPOL) approach where each parent only speaks their first language to the children. This is perhaps the most well-known and followed strategy but does not guarantee balanced input or that the child will become a balanced bilingual (Barron-Hauwaert, 2011; Yip & Matthews, 2007).
- The mixed language use strategy where families mix their languages often occurs in bilingual or multilingual countries such as Switzerland, Belgium, Wales and Singapore where language mixing is evident within society (Barron-Hauwaert, 2011).
- The minority language at home (ML@H) strategy is where the family speak the minority language at home which differs from the societal language outside.
- The lingua franca strategy is where both parents choose to speak in a common language as both of their first languages differ.
- The non-native strategy is when parents choose to speak to their children in a language which is not their first. For this strategy the parents need to have a high command of the language to be able to speak about any topic with their children.
- The time and place strategy is where the family will allocate a specific place or a regular time devoted to their language development (see Barron-Hauwaert, 2011 for more details regarding strategies).

Our family has chosen to adopt the OPOL approach and we try to follow the Grammont (Ronjat, 1913) method in which each language is represented by an individual speaker who tries never to switch languages. Whilst many parents including the author hope that this method will lead to their children becoming bilingual, they should understand that this is not always the outcome. As De Houwer (2007) found in a study of 2,000 children growing up in OPOL households in Belgium, a quarter of the subjects did not speak one of the languages their parents spoke. This was due to the amount of input the children received which is a primary factor in an individual becoming bilingual.

3. METHODOLOGY

3.1 Introduction

In the previous chapter I outlined the state of knowledge about childhood bilingual development with an emphasis on the impact of the sibling relationship on language. This study aims to add to our understanding of bilingual siblings' language development and in particular the influence of an older sibling on a younger sibling's language. In order to do this, we investigate the siblings' interactions, their choice of language and what determinants have influenced their language use and code-switching.

In order to examine the children's language use in depth, a case study approach was employed which Dörnyei (2007) finds to be an appropriate method to collect in-depth longitudinal data (p. 155). Flyvberg (Flyvberg, 2011) has also said that the strongest point of a case study is "depth—detail, richness and completeness" (p. 314). Case studies can be used to investigate anything from an individual or an institution, or a community, as long as the subject has 'clearly defined boundaries', it can be used as the study's focus (Dörnyei, 2007, p. 151).

Much of the literature on bilingual children's language development is case study research on the researcher's children (see for examples, De Houwer, 1990; Döpke, 1992; Leopold, 1939-1949; Ronjat, 1913; Yip & Matthews, 2007) instigated by a desire to closely examine child bilingual language use and development. In a similar way to these early researchers, I have observed my children's language development informally and was inspired to undertake a more rigorous analysis of their language use to further understand the influence of my older son Luca on my

younger son Noah's development. Studying my own children enables me to be observe and collect audio data in a broad range of communicative contexts and locations which provide optimal exposure to the siblings' language interaction.

However, there is a gap in the research where the relationship of siblings and language development is concerned, and researchers have been unable to precisely ascertain the influence of an older sibling on a younger sibling's language development (Kavanagh, 2017; Taylor, 2017). What language do they speak when a parent is not present? What language do they choose when they are interacting alone?

Parents often become participant observers when present rather than silent observers thereby influencing the children's language use and behaviour to align with the parents' wishes. Therefore, the people present and the interlocutors are known to influence the children's language choice. This language choice may or may not be a subconscious choice on the part of the children, however, and the presence of a parent may result in the collection of biased or tainted data (Barron-Hauwaert, 2011).

Collecting data through naturalistic audio recordings allows for the observation of genuine spontaneous speech and at the same time avoids what could be considered as fabricated data through the use of elicited production tasks. However, the sample may not contain the full range of language attained where no opportunity arose for the speakers to produce it in the interaction (Yip & Matthews, 2007) and perhaps the biggest disadvantage of this method is the 'Observer's

Paradox' where the very presence of the researcher affects the behavior of the subjects and therefore affects or taints the data (Labov, 1972). Another may be bias, that when analysing the data the researcher gives more credit to the siblings for knowledge that is not yet attained (Yip & Matthews, 2007). Being a case study focusing on a pair of siblings, the size of the study may also be considered insignificant to the greater field (Dörnyei, 2007; Yip & Matthews, 2007) and will not allow for any generalisations beyond the case.

3.2 Aims & objectives

The study aimed to:

- Examine the siblings' language choice in different social settings and in which particular communicative context.
- Assess and ascertain the choice determinants or factors that affected the occasion
- Collect data in a broad range of communicative contexts and cover a number of domains within natural settings in both Japan and Australia.
- Determine and understand which language is preferred for which topics in which domains of use.
- Investigate in which situation and at what frequency the siblings used code-switching and intrasentential code-switching in their communication.

3.3 Research questions

Through this study's research I aimed to answer several questions regarding the siblings in a bilingual context. The two research questions were:

RQ1. What is the influence of the older bilingual's language on the younger potentially bilingual's language development?

RQ2. What language do they speak to whom? And when do the bilingual siblings switch?

3.4 Participants

At the commencement of this case study the participants are two male siblings; Luca aged 5:23 months and Noah aged 3:0. They were carried to full term with no birthing complications and have shown no signs of developmental problems. They have also been screened for any possible hearing issues and also appear to show no signs of speech development problems. The boys are being raised in a bilingual Japanese-English household in Japan, where we, as the children's parents have largely adopted the OPOL approach. When using the OPOL at home we try to follow the Grammont method (Ronjat, 1913 – outlined above in the literature review), as closely as possible with each parent speaking only their language to the boys. However, there is some language mixing within our conversations usually when one of the boys do not understand concepts expressed in either language or unknown lexical items usually in English. It is important to note that the children in this study have both been exposed to my bilingual identity in a number of contexts: family, shopping, and business dealings. I am a high-functioning bilingual with a master's degree while my husband is mostly a monolingual Japanese high-school graduate. The *lingua franca* between my husband is Japanese. The people who were most present in this study were the parents; (mummy and daddy) the maternal English-speaking monolingual grandmother: Ma Weenie; the Japanese children at the kindergarten and their monolingual Japanese-speaking teachers.

Luca began kindergarten at the age of two years old and had previously been looked after by a monolingual Japanese babysitter for a few days a week a few months after his birth. Noah began kindergarten at two months old as I was already working fulltime. Both Luca and Noah are simultaneous bilinguals but are dominant in Japanese due to unbalanced exposure. The siblings' kindergarten is Japanese-speaking and they attend for up to 11 hours a day, as my husband and I work long hours. Therefore the number of hours that they are exposed to Japanese is far greater than that of English. They therefore both often show a preference for Japanese and often speak to me in Japanese. I sometimes ask them to repeat things in English but generally accept their mixed language as does their father. Therefore, this occasional mixed language use will influence the siblings' own linguistic background and it is most likely that this will become their linguistic landscape rather than a clean-cut separation of their two languages.

Both of the children were born in Japan and attend the kindergarten 5 - 6 days a week where only Japanese is spoken. The teachers and staff at the kindergarten have so far shown only positive attitudes towards the children's bilingualism which could be attributed to the fact that English is an highly respected and esteemed language within Japanese society (Yamamoto, 2001).

As a family, we do have various discourse rules, for example, we spend about two hours a week Skyping with family and friends in Australia in English and the boys are required to participate in the conversations in English. Moreover, if the boys choose to watch a movie or TV program that was originally in English, it is our house-rules that they must watch it in English rather than the

voiced-over Japanese version. We, as parents will also only read books to the children that are in our own native language.

The boys and I (without their father) also have the opportunity to return to Australia twice a year for about a month at a time which I believe is an imperative factor necessary for the children's language maintenance. On these visits we stay with my English-speaking monolingual mother and the children are exposed to an exclusively English environment. My mother also visits Japan for about a month every year and it is always after these visits to Japan and our trips home that I notice my older son's English syntax and lexicon improve significantly.

3.5 The Boys' Language Testing

In order to assess the two boys' bilingual abilities, the English Peabody Picture Vocabulary Test (PPVT) and the Japanese Picture Vocabulary Test – Revised (PVT-R) were administered on the 4th February, 2019 when Luca was 6;06 and Noah 3;07. The tests were administered by a speech pathologist at Shukutoku University in central Japan and results showed that the boys both performed a little below average in both languages compared to monolingual children. This is consistent with research that compares linguistic test scores of bilinguals to monolinguals (Hoff & Ribot, 2017; Myers-Scotton, 2006; Oshima-Takane & Robbins, 2003).

I felt that after a month-long visit to Australia (in February 2019) and being immersed in an English environment the boys' English had greatly increased. They seemed to be using English more and I felt they had a greater command of expressions and grammatical structures. The boys were once again tested on 24th March (Luca 6;07 and Noah 3;08), 2019 using the PPVT and PVT-R to

ascertain any improvement in their English due to their visit to Australia. However, no significant change was found and they still performed slightly lower than their monolingual counterparts. This may be because that whilst they may be using English more frequently on return to Japan after a visit to Australia, they are not necessarily using a greater or more extensive lexicon that would affect the results of the PPVT testing. We must remember that the PPVT test is only vocabulary based and is unable to capture other improvements that have occurred in the subject's speech, such as grammar.

Final testing of the boys' language was carried out on 5th August, 2019 when Luca was 6;11 and Noah 4;0. For the Japanese PVT-R test Luca's scores showed a natural progression of vocabulary improvement over six months scoring towards the top end of the "average" band. For the English PPVT he scored a "low average" which was an improvement on the first testing in February which resulted in a "moderately low score". Noah's tests were not so straightforward and the results were a little confusing. For the Japanese PVT-R test he scored in the "below average" band for the first two tests, however, in the final test he returned a score of "behind". For the English version he performed relatively the same over the six months with every test returning a score in the "moderately low score" band. Even though bilingual children usually perform slightly below the average of monolingual children (Hoff & Ribot, 2017; Myers-Scotton, 2006; Oshima-Takane & Robbins, 2003) Noah's scores remain questionable, particularly since they decreased for the final testing.

I think the Japanese PVT-R test and the English PPVT are fundamental tests in their own right. However, I feel that due to the different way the two tests are structured they cannot be used in comparison to one another. One thing I found that was strikingly difficult is in that the PPVT has a picture for every vocabulary item questioned whilst the PVT-R uses the same picture more than once for different vocabulary. For example, first the examiner asks the respondent to choose words like “bird”, “dog”, and “tricycle” from a set of pictures. They then ask them to choose which ones are “fly”, “bark” and “pedal” from the same set of pictures. Whilst during the first two tests Noah simply chose his answers, the third time around he replied “It’s not there!” Was he expecting there to be new pictures showing the bird flying (it was a standing bird) or the dog barking (it was a sitting dog with its mouth closed)? Or did he simply not make a choice because he thought he had already chosen the previous answers and exhausted his choice of pictures? I feel that these results need further investigation, particularly in comparison to other Japanese-English bilinguals.

3.6 Recruitment

Permission and approval for the study was received from their father who also explained the project to the boys. Luca understood and gave his consent, however, given his age, it is unlikely that the younger sibling, Noah understood. All adult participants in the study signed a consent form in line with the requirements of Macquarie University Human Research Ethics Committee (Human Sciences and Humanities). Due to privacy and ethical concerns recordings were restricted to audio, and no visual recordings were made. The data collection was approved by Macquarie University HREC Humanities and Social Sciences Committee and the approval letter

can be found in the appendices (Appendix 1). All recordings were done with the consent of the kindergarten Principal, teachers and parents/guardians of the children. Consent was also attained from all family and friends present in the recordings.

As the project involved my own children and was the recorded speech of children it was understood to be low-risk. For recruitment at the kindergarten a large eye-catching poster was exhibited in the entrance of the kindergarten advising the parents/guardians of the project. A letter was also sent home with each student advising the parents about the project and that recordings would be made at the kindergarten. All parents/guardians were given the opportunity to opt-out of the study and were advised that they could withdraw their participation at any time. However, steps were still taken to cover ethical concerns and guard the privacy of the children, particularly those at the kindergarten.

3.7 Methods

As the children are still both in kindergarten they generally only socialise with their family and are still often at home, providing many opportunities for data collection. In order to assess the boys' interaction outside the home and also to observe how they interact when they are with other children they were also recorded at their Japanese kindergarten.

The main method used was the collection and thematic analysis of naturalistic oral data that was audio recorded and collected in a range of settings. Some observations were also recorded in written form when audio was unavailable. As I observed and researched my own children it was

possible to obtain speech samples in various contexts and domains of use in both Japan and Australia. The audio recordings of interactions between the siblings were used to observe the range of their language use and the influence of the older sibling's language upon the younger sibling's bilingual language, usage and development (Hoff & Luz Rumiche, 2012). The audio recordings were collected weekly between August 2018 and May 2019. Data collection occurred during every day activities: playing games, watching TV, mealtimes, bath time, bedtime in the home, in the siblings' paternal and maternal grandparents' homes and their kindergarten.

3.8 Data collection

During times when I was present and the conversation and the siblings' language were not necessarily being audio recorded I noted features of interest in the boys' conversation, "on the spot" transcriptions were made and included as direct observational data. Extensive notes and a research diary were also kept. The data was audio recorded along with a written recording on an audio recording sheet as can be seen in table 1.

Table 1. Audio Recording Sheet

| Audio Recording Sheet | | | | | |
|-----------------------|------------|-------------|-------------------------------|----------------------|---------------------------|
| Date | Start Time | Finish Time | Activity | Location | Who was present? |
| 17/09/18 | 19:07 | 19:48 | Dinner | Home (Japan) | Daddy, mummy, Luca & Noah |
| 21/12/18 | 09:38 | 12:30 | Free play and Christmas party | Kindergarten (Japan) | Kindergarten kids |
| 11/01/19 | 20:04 | 21:03 | Dinner | Restaurant (Japan) | |

| | | | | | |
|----------|-------|------|-----------|---------------------------------|-------------------------------------|
| | | | | | Ma Weenie, mummy, Luca & Noah |
| 01/03/19 | 07:25 | 9:08 | Breakfast | Ma Weenie's Home (Australia) | Ma Weenie, Luca & Noah |

The audio recorders chosen for this project were Panasonic IC Recorders RR-XS460-K/ RR-XS460-W and RR-XS460-R. One was allocated for use at home in Australia and Japan and one was allocated to each of the boys for use at the kindergarten. One of the major challenges of the data collection was how to attach audio recorders to the boys at the kindergarten. A pouch was designed and made to attach to their clothes with safety pins. At first it was difficult for the boys to understand that they had to keep them attached to themselves and the younger sibling kept taking the recorder out of the pouch. In the end it was decided to attach it to the younger ones back so he could not remove it. Another problem was that several of the recordings finished after a few seconds as the boys, usually Noah, turned off the device. As the recorders have a simple on/off switch on the front of the device it was easy for them to turn it off if the attempt was made. I requested to the Principal that she make the recordings weekly for six months, however, the logistics were left up to her discretion. A total of 4 hours and 37 minutes was recorded at the kindergarten when the principal was available and present for the entire duration of recording.

3.9 Data analysis

Over the duration of the study, a large amount of data (59 hours and 22 minutes) was collected of the siblings' speech with family and friends necessitating a lengthy and challenging process of data reduction (Miles & Huberman, 1994). Every recording was listened to in detail to identify

recordings in which linguistic properties stood out and seemed worthy of analysis. The data reduction was carried out using the qualitative analysis software, NVIVO 12.5 (QSR, 2019). During this process the data were coded and nodes assigned according to the range of speech events. For example, a conversation at dinner in Australia with Luca asking a question would be broken down into the following nodes: Australia > Ma Weenie's house > Meals > Luca asks a question > English. See appendix 2 for a full representation of the different nodes or "speech events" whether a phrase, question or short conversation (Saville-Troike, 2003).

The data was then further analysed for patterns and trends and a hierarchy of language choice determinants was developed (see Appendix 3). These language choice determinants examined the "domain", "activity", "interlocutors", "timing" and "function" of the language being used by the boys. The domains were separated into two sections: "Japan" and "Australia". These were further separated into "home" and "kindergarten" in Japan, or "Ma Weenie's house" in Australia. The activity being undertaken was also investigated focusing on "meals", "play" and "bath". The interlocutors were also given consideration and these were "daddy", "mummy", "Ma Weenie" and "Luca". The timing was divided into "within one month of being in Australia" and "more than one month of being in Australia". Lastly, the function of the language was examined and assigned as "reprimanding", "questions" or "requests".

The nodes were ultimately broken down into English, Japanese and mixed-switched (utterances that contained both English and Japanese or where the siblings changed code in the middle of

speaking). Segments of the data were then transcribed to better analyse and assess the siblings' code-switching and language mixing and for reporting this thesis.

The transcriptions in this study have all been made following the transcription style of Eggins and Slade (1997), which can be found in Table 2. All data was collected and transcriptions were made by myself. The translations were then checked by a native Japanese speaker for errors and discrepancies.

Table 2. Summarized Transcription Key

| Symbol | Meaning |
|----------------------------|--|
| . | certainty, completion (typical falling tone) |
| no end of turn punctuation | implies non-termination (no final intonation) |
| , | parcelling of talk, breathing time |
| ? | uncertainty (rising tone, or wh-interrogative) |
| ! | “surprised intonation” |
| WORDS IN CAPITALS | emphatic stress and/or increased volume |
| “” | change in voice quality in reported speech |
| () | untranscribable talk |
| (words within parentheses) | transcriber’s guess |
| [words in square brackets] | non-verbal information |
| == | overlap (contiguity, simultaneity) |
| ... | short hesitation within a turn (less than three seconds) |
| [pause – 4 secs] | indication of inter-turn pause length |

| Symbol | Meaning |
|--------------------------------|----------------------|
| dash – then talk | false start/restart |
| {Japanese/English translation} | Japanese translation |

Note. All except the last item/line were taken from (Eggins & Slade, 1997).

To address concerns regarding privacy and ensure the anonymity of participants other than Luca, Noah and family members, the audio recordings used in this study were transcribed and aliases were attributed to all other participants. All data were stored on my password protected hard drive and Cloud database which was accessible solely by myself and my supervisors, Dr. Helen Slatyer and Dr. Mio Bryce of Macquarie University.

A summary of the data collection used in this thesis can be seen in Table 3. As the children always communicated with their father solely in Japanese the speech events recorded with only him were not analysed. However, they were recorded if other interlocutors were present in the conversation. Since most of the speech events occurred over meals and play this will be the focus of the data in this study. Other speech events included those that were recorded during activities such as getting dressed, in the car, cooking, Skype with Ma Weenie, bath time and bedtime.

Table 3. Summary of Data Collection

| Domain | Activity | Number of Speech Events (in English) | Hours Recorded |
|------------------|----------|--------------------------------------|--------------------|
| Australia - Home | Meals | 76 | 7 hours 22 minutes |
| | Play | 39 | |

| Domain | Activity | Number of Speech Events (in English) | Hours Recorded |
|----------------------|----------|--------------------------------------|---------------------|
| | Other | 2 | |
| Japan - Home | Meals | 82 | 47 hours 23 minutes |
| | Play | 64 | |
| | Other | 57 | |
| Japan - Kindergarten | Play | 3 | 4 hours 37 minutes |

4. Results and Discussion

4.1 Introduction

In the majority of “speech events” (Saville-Troike, 2003) collected within the data the siblings’ preferred language was Japanese and only occasionally did they choose to converse in English. The data revealed that the language chosen depended on a range of factors including the country where they were present (Japan or Australia); the activity undertaken (meals or play), the interlocutors present (mummy, daddy, or Ma Weenie) and the timing when the recordings were made; being recorded within one month or longer than a month from their visit to Australia.

In view of the large amount of data that has been collected (54 hours and 47 minutes of audio), a complete and detailed analysis of the whole data set would have been beyond the scope of this Masters by research project. I chose to focus on reprimands between the siblings, questions and requests and the language mixing during play and meals between the siblings. I observed that this was where most of the code-switching appeared and therefore indicated where most of Luca’s potential influence on Noah occurred. Due to Noah’s young age and stage of language development the recorded data did not contain a large number of conversations and a lot of the speech was directed at Noah by Luca. A lot of the recordings contained unintelligible chatter, songs and sounds which were excluded.

4.2 Language Choice Determinants

Children have been known from an early age to adjust their speech depending on their interlocutors (Ghimenton, Chevrot & Billiez, 2013; Lillo-Martin, Quandros, Chen Pichler & Fieldsteel, 2014). They are sensitive to the language patterns they hear and several sociolinguistic

studies (Fantini, 1976; Genesee et al., 1996) have found that toddlers as young as two-years-old will allocate their code to that of their interlocutor.

In this study it was observed that both siblings would align their language use with an understanding of the language abilities of their interlocutor. Therefore, when they spoke to daddy, a Japanese-only speaker, they would speak in Japanese and when they spoke with Ma Weenie, an English-only speaker the conversation would be completely in English. Over the years my mother has had to look after the boys on several occasions when I have been away on business. She has said that there was only once when Luca was about three that she couldn't understand what he wanted to say. This sole use of English was revealed in a number of conversations that were recorded without me being present. Examples of this can be seen in transcripts 1 – 3. The following conversations took place when visiting Australia when I was not present (see Appendix 4 for the entire conversation).

Transcript 1: Interlocutors 1¹

Domain: Australia; Ma Weenie's house (Luca 6;06 and Noah 3;07)

Interlocutors: Ma Weenie, Luca and Noah

Timing: In Australia

- | | | |
|---|-----------|-------------------------------|
| 1 | Noah | I want Weetbix. |
| 2 | Ma Weenie | Weetbix? With honey? |
| 3 | Noah | Mm. Nooo Weetbix. No Weetbix. |
| 4 | Ma Weenie | Sorry? |

¹ Each transcript identifies the domain, activity and date as well as interlocutors. Transcripts from the same conversation, do not repeat this information, but start with the relevant line.

- | | | |
|----|-----------|--|
| 5 | Noah | I want this one. |
| 6 | Ma Weenie | What are you having then?.....Ok, we're having hot cross buns. |
| 7 | Noah | I want this one....I want this one...I want to have this... |
| 8 | Ma Weenie | Honey and Weetbix? Ok. Are you having Weetbix Luca? |
| 9 | Luca | No. |
| 10 | Ma Weenie | What are you having? Hot cross buns? |
| 11 | Luca | Yes. |

(Breakfast, March 01 2019)

Later in this interaction Noah speaks to Luca in Japanese in line 57 and Luca translates in line 58 into English for Ma Weenie to understand. Whilst his translation was slightly incorrect it does show that he has the ability to and makes an effort to translate for other interlocutors who don't understand Japanese. This could also be seen as a form of scaffolding, with the elder sibling providing support with lexical deficiencies in the form of translation for the younger sibling to fulfil the communicative purpose of the interaction. We can also see that Luca continues to speak English even when his question in line 60 is directed at Noah. It is clear that being in Australia with a sole English speaker is a major influence on Luca's language choice, even when his speech is directed toward his Japanese dominant sibling.

Transcript 2: Interlocutors 2 (Luca 6;06 and Noah 3;07)

- | | | |
|----|-----------|--|
| 56 | Ma Weenie | You both had a big sleep which is good, isn't it? |
| 57 | Noah | Luca? <i>Noah-sa, me kayui.</i> {Noah's eye's itchy} |
| 58 | Luca | <i>Eehh?</i> {Really?} |

- [to Ma Weenie] ...Noah says his ear is itchy.
- 59 Ma Weenie Give it a kiss! [Kisses his ear]
- 60 Luca Is it still itchy Noah?
- 61 Ma Weenie Drink up your juice, love.

Since the boys are aware that Ma Weenie is an English-only speaker in transcript 3 they always speak to her in English. However, over the years of spending time with our family she does know a few Japanese words, one of which is *kampai* (cheers). The boys are also aware of this and *kampai* (cheers) remains Japanese throughout the conversation. This could be considered a form of Ma Weenie's polylingualism, that is, even though she does not speak Japanese she is aware of a few features of the language (Orman, 2013). The boys show an awareness of their interlocutors' understanding and mix their languages according to this mutual understanding of language. They therefore demonstrate that they have metalinguistic awareness.

Even though the majority of the conversation is in English, the boys can be seen mixing their languages when they speak together showing that their mental lexicons are continually switched on (Heredia & Altarriba, 2001). Despite their young age the boys are clearly able to distinguish between their two languages and make a decision when use of each language is appropriate (Suyal, 2002). This is witnessed in lines 70 and 74 where Luca aligns his English use to Ma Weenie and line 72 and 81 where he speaks in Japanese to Noah. Noah's use of English can also be seen in line 78 when he asks Ma Weenie a question.

Transcript 3: Interlocutors 3 (Luca 6;06 and Noah 3;07)

- 70 Luca *arigatou, kampai.* {Thanks, cheers!}Ma Weenie, do you want to do *kampai* {cheers} too?
- 71 Ma Weenie Yes, I'll do *kampai* {cheers} too.
- 72 Luca Ok, don't drink it yet, Noah! *nomanai de ne. dame dame dame! so ja nai to Ma Weenie to Luca-kun to Noah-kun no kampai nai yo* {Don't drink it! No, no, no! Or we all can't do cheers}
- 73 Ma Weenie Ok, let's do *kampai* {cheers} now!
- 74 Luca Ok! Noah....everyone...
- 75 Noah *kampai* {cheers!} [said together, all clinking their cups together]
- 76 Ma Weenie *kampai* {Cheers!} [said together]
- 77 Luca *kampai* {Cheers!} [said together] I have two.
- 78 Noah It's not ready is it?
- 79 Luca ... () ...four.
- 80 Ma Weenie Ok, c'mon Noah, are you ready? Hold your drink! *Kampai!* {Cheers!}
- 81 Luca *Noah, mou ikkai kampai* {Noah, one more cheers!}
- 82 Ma Weenie Not too hard.
- 83 Luca *Kampai!* {Cheers!} [said together]
- 84 Ma Weenie *Kampai!* {Cheers!}
- 85 Noah *Kampai!* {Cheers!}

Responding to interlocutors in the appropriate language can also be seen in the following conversation where Noah switches code at dinner from English in line 3 to Japanese in line 5 in accordance to his interlocutors.

Transcript 4: Interlocutors 4 (Noah 3;03)

Domain: Japan; home

Interlocutors: Noah, mummy and daddy

Timing: More than 1 month of being in Australia.

- | | | |
|---|-------|--|
| 1 | Noah | Mummy? |
| 2 | Mummy | Yes. |
| 3 | Noah | I want sauce. |
| 4 | Mummy | ... |
| 5 | Daddy | <i>Noah, doushita?</i> {What's wrong, Noah?} |
| 6 | Noah | <i>sousu hoshii.</i> {I want sauce} |

(Dinner, November 27, 2018)

4.3 Reprimands

In every bilingual or multilingual family, language is used by its speakers to establish a hierarchy or create role relations (Fishman, 2000; Nilep, 2009). Siblings also use language to create social norms amongst one another and their code-switching and code-mixing is employed to represent their role within the relationship (Cekaite & Björk-Willén, 2012; Nilep, 2009). Older siblings will often resort to using the minority language with their younger sibling to assert their seniority and precedence within the family. Nilep (2009) found that within an American-Japanese family the older sibling used code-switching to show her disapproval to younger siblings.

Furthermore, Hua (2010) also found a Chinese-American elder sibling used the honorific term of older brother (*gege*) in his heritage language of Chinese to refer to himself. He would switch languages with his sibling to affirm his senior position between them and within the family while the younger sibling continuously used English. This was also found to be the case with Howard's (2007) investigation of children in northern Thailand. Whilst not bilingual, they would constantly

refer to each other as older brother/sister or younger brother/sister to show their hierarchy within the relationship. Interestingly, the studies by Nilep (2009), Hua (2010) and Howard (2007) all involve children who were speakers of Asian languages where kinterms are used to encourage social dynamics. This linguistic choice reflects a speaker's cultural identity and assigns hierarchy to their language exchange (Jones, 2010).

In the majority of bilingual families parents are also known to reprimand their children and take an authoritative stance in their native tongue as this carries more weight within the family (Luykx, 2003; Pavlenko, 2004). Pavlenko (2004) further reiterated that children even have a more pleasant view of their mother if she speaks in the language that is not her own as she always gets angry in the minority language.

Reprimanding in the minority language was also evident in this study when it came to the older sibling reprimanding the younger. The data revealed that there were 23 instances of reprimanding between the siblings with Luca doing the reprimanding. 17 reprimands were in English, 4 in Japanese and 2 were a mix of English and Japanese. For the full data set of reprimands see Table 4. In the majority of interactions where reprimanding was present, Luca chose to code-switch to English in line 7 in speaking to Noah. A reason they choose to switch codes at this time of anger or frustration is perhaps due to it being the language with which they associate reprimands. This could be due to the extended time that they spend with me who is the parent that disciplines the children most of the time.

Transcript 5: Reprimands 1

Domain: Japan; home (Luca 6;00 & Noah 3;01)

Interlocutors: Luca & Noah

Timing: Within 1 month of being in Australia

- 1 Luca & Noah [Laughter]
- 2 Luca ()
- 3 Noah *kusai!* {Stinky!}
- 4 Luca & Noah [laughter]
- 5 Luca [squealing], *itai!* {Ouch!}
- 6 Noah [laughter]
- 7 Luca OK, no more. NO.

(Play, September 21, 2018)

Table 4. Reprimands – Luca Reprimanding Noah

| Activity | Speaker | Occurrence | Language | Interlocutors |
|--------------|---------|------------|------------------|---------------------------------|
| Australia | | | | |
| Meals | Luca | 1 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Luca | 6 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 1 | Japanese | |
| | | 1 | English/Japanese | |
| Other | Luca | 0 | English | |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Japan - Home | | | | |
| Meals | Luca | 1 | English | Mummy, Luca and Noah |
| | | 2 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Luca | 6 | English | |

| | | | | |
|----------------------|------|---|------------------|-----------------------------|
| | | 1 | Japanese | Mummy, daddy, Luca and Noah |
| | | 0 | English/Japanese | |
| Other | Luca | 2 | English | |
| | | 0 | Japanese | |
| | | 1 | English/Japanese | |
| Japan - Kindergarten | | | | |
| Play | Luca | 2 | English | Luca and Noah |
| | | 1 | Japanese | |
| | | 0 | English/Japanese | |

Reprimands in English were also witnessed at the kindergarten which was entirely a Japanese-speaking environment. In the following conversation line 5 shows an example of intrasentential code switching which seems to happen less than intersentential code switching. It is believed that it could actually be more difficult for a bilingual to process as it requires them to think quickly crossing their lexicons within the same sentence in a very short space of time (Bail et al, 2014). As the data was audio recordings and not video it is impossible to know exactly what Luca was referring to when reprimanding Noah. However, from the background sounds on the audio the conversation took place outside in the kindergarten's playground, and perhaps involved buckets and the building of something with sand.

Transcript 6: Reprimands 2

Domain: Japan; Kindergarten (Luca 6;01 & Noah 3;02)

Interlocutors: Noah & Luca

Timing: More than 1 month of being in Australia

1 Luca Noah, NO! NOAH!

- | | | |
|---|------|---------------------------|
| 2 | Noah | [squealing] |
| 3 | Luca | DON'T DO THAT! |
| 4 | Noah | [squealing] |
| 5 | Luca | JYA {Well then}, GET OUT! |

(Play, October 26, 2018)

Even though the majority of the boys' talk was in Japanese Luca usually switched to English for reprimanding Noah and for giving him strong instructions or telling him what to do as in bossing him around. This use of reprimanding in the minority language in all domains and in various activities could be seen as him using his language to assert his hierarchy and role of sibling-teacher to Noah (Nilep, 2009).

4.4 Giving Instructions

The data is littered with simple instructions such as "look at this" as can be seen in line 10 of transcript 7 in the following conversation, these instructions were generally given in Japanese. The data showed that there were a total of 21 instructions given to Noah by Luca. These instructions all took place during meals and play. 18 instances were in Japanese and 2 instances in English with one a mix of languages. The two instances that were English both took place in Japan, however; they were during meals which data reveals tends to be an English associated activity. Japanese was also used in all instances of the time (refer to more data in Table 5) for giving simple instructions at the kindergarten.

Table 5. Instructions – Luca Giving Noah Instructions

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------------------|---------|------------|------------------|---------------------------------|
| Australia | | | | |
| Meals | Luca | 0 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Luca | 0 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 1 | Japanese | |
| | | 0 | English/Japanese | |
| Other | Luca | 0 | English | |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Japan - Home | | | | |
| Meals | Luca | 2 | English | Mummy, Luca and Noah |
| | | 4 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Luca | 0 | English | Mummy, daddy, Luca and Noah |
| | | 11 | Japanese | |
| | | 1 | English/Japanese | |
| Other | Luca | 0 | English | |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Japan - Kindergarten | | | | |
| Play | Luca | 0 | English | Luca and Noah |
| | | 2 | Japanese | |
| | | 0 | English/Japanese | |

Transcript 7: Instructions

Domain: Japan; home (Luca 6;01 & Noah 3;02)

Interlocutors: Noah, Luca (Mummy and daddy were also present but not involved in the conversation)

Timing: More than 1 month of being in Australia

- 1 Luca *Noah, aita yo.* {Noah, it's open now}
- 2 Noah *aita! Ippai! Ippai da! ()* {It's open! So many, so many!}
- 3 Luca [sorting through duplo blocks] *ne, ookii machi tsukurou. Noah-kun to issyoni tsukurun da yo. Muzukashii yo, kore.* {Hey, let's make a big town. I'm gonna make it with you. It's difficult, this is.}
- 4 Noah () [As he flies an aeroplane around in his hand] *Vroom, Vroooooooooooooom, hikouki!* {Aeroplane!}
- 5 *Vroooooom, yatta! Hikouki! Bonzai (Banzai?) () li yo.* {Vroom, yay! Aeroplane! Yahoo! () {ok}}
- 6 Luca *ato ikko* {One more.}
- 7 Noah *ii yo* {ok}
- 8 Luca *a ita! Daijobu* {ah, ouch! It's ok.}
- 9 Noah ()
- 10 Luca *mite, kirakira ()* {Look at this, it's shining.}
- 11 Noah *mite mite, hikouki ga kitai (kita?).* {Look look, an aeroplane is coming!}

(Play, October 27, 2018)

Interestingly, Noah's onomatopoeia here for aeroplane were in English. As onomatopoeia are not used a great deal in English adult conversation I think it is unlikely that he learnt these from listening to natural conversation. There is a great possibility that he learnt most of them from watching English cartoons and reading English picture books with mummy.

4.5 Responding to and asking questions

Bilingual children will often respond to questions in their other language. Although unclear why, this is a form of code-switching that children choose to employ. Ribot and Hoff (2014) investigated whether children showed any asymmetries in their code-switching when responding to questions, that is, did they tend to code-switch more in one language than another. They found in their study of two-and-a-half year old Spanish-English bilinguals in Florida, that the children showed asymmetries in their responses. When addressed with a Spanish question most of the children replied in English, the dominant societal language.

There are several possibilities for children's language choice in their response. One may be due to the language that is dominant in their household. Another may be that they choose the dominant societal language which holds prestige where they live. Or they may choose the language in which they have greater proficiency (Ribot & Hoff, 2014). Another possibility is that their code-switching reflects the language dominance of their receptive skills against their expressive skills (Ribot & Hoff, 2014). That is, whilst they understand the question, they are lacking the skills or have lexis access difficulty when answering (Gibson, Oller, Jarmulowicz & Ethington, 2012; Miccio, Tabors, Paez, Hammer, & Wagstaff, 2005). A number of studies (Gibson et al., 2012; Gibson et al., 2012; Ribot & Hoff, 2014) have confirmed that bilinguals' receptive skills are greater than their expressive skills and this is referred to as the *receptive-expressive gap* (Gibson et al., 2012; Ribot & Hoff, 2014). The *receptive-expressive gap* is a normal phenomenon not only amongst bilinguals but also learners who are acquiring a second language (Keller, Troesch & Grob, 2015). It affects all levels of proficiency and in the most extreme case the

bilingual becomes a passive bilingual, that is whilst they understand the language they are unable to speak it (Ribot & Hoff, 2014). As a bilingual speaker myself, I would I would argue that it exists well into adulthood and is a continual phenomenon throughout an individual's bilingual journey.

As can be seen in Tables 6A and 6B, the data revealed that whilst the siblings asked and responded to questions in both English and Japanese they considered their interlocutors when responding. In the data collected in Australia during meals where mummy and monolingual Ma Weenie were present, Luca asked questions solely in English. Remembering that Noah is younger and less vocal with comprehensible language, the data showed much fewer instances of asking questions. However, questions asked in English outnumbered those in Japanese. The data also showed that both boys always responded in English to English questions. This was both during meals and play in Australia.

Table 6A. Asking Questions - Australia

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------|---------|------------|------------------|-------------------------------|
| Meals | Luca | 21 | English | Mummy, Ma Weenie, Luca & Noah |
| | | 0 | Japanese | |
| | | 1 | English/Japanese | |
| Meals | Noah | 6 | English | Mummy, Ma Weenie, Luca & Noah |
| | | 4 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Luca | 13 | English | Mummy, Ma Weenie, Luca & Noah |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Noah | 1 | English | |

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------|---------|------------|------------------|-------------------------------|
| | | 1 | Japanese | Mummy, Ma Weenie, Luca & Noah |
| | | 0 | English/Japanese | |
| Other | Luca | 0 | English | |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Other | Noah | 0 | English | Mummy, Ma Weenie, Luca & Noah |
| | | 1 | Japanese | |
| | | 0 | English/Japanese | |

Note. As the interlocutors for each speech event differed slightly the interlocutors listed are those that were present for the majority of the speech events.

This changed in Japan where both boys asked questions in both Japanese and English during meals. Even though their questions were directed at mummy, Japanese became the dominant language with Luca asking 16 questions in Japanese and 8 questions in English. Noah also asked 5 questions in Japanese against 2 questions in English. At least double or more of both of the boys' questions were in Japanese.

Table 6B. Asking Questions - Japan

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------|---------|------------|------------------|--------------------|
| Meals | Luca | 8 | English | Mummy, Luca & Noah |
| | | 16 | Japanese | |
| | | 0 | English/Japanese | |
| Meals | Noah | 2 | English | Mummy, Luca & Noah |
| | | 5 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Luca | 9 | English | |

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------|---------|------------|------------------|---------------------------|
| Play | Noah | 9 | Japanese | Mummy, daddy, Luca & Noah |
| | | 3 | English/Japanese | |
| | | 0 | English | Mummy, daddy, Luca & Noah |
| | | 1 | Japanese | |
| | | 0 | English/Japanese | |
| | | | | |
| Other | Luca | 4 | English | Mummy, daddy, Luca & Noah |
| | | 3 | Japanese | |
| | | 0 | English/Japanese | |
| Other | Noah | 1 | English | Mummy, daddy, Luca & Noah |
| | | 2 | Japanese | |
| | | 0 | English/Japanese | |

Note. As the interlocutors for each speech event differed slightly the interlocutors listed are those that were present for the majority of the speech events.

However, when they responded to English questions, both boys usually responded in English. In Australia (see table 7A) there were 12 instances of Luca responding to questions in English with no Japanese or mixed language use. Noah responded to English questions 4 times with 2 instances of Japanese and 2 mixed instances.

Table 7A. Responding to English Questions - Australia

| Activity | Speaker | Occurrence | Language | Interlocutors |
|------------------|---------|------------|------------------|---------------------------------|
| Australia | | | | |
| Meals | Luca | 5 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Meals | Noah | 2 | English | |

| Activity | Speaker | Occurrence | Language | Interlocutors |
|------------------|---------|------------|------------------|------------------------------------|
| Australia | | | | |
| | | 0 | Japanese | Mummy, Ma Weenie, Luca and Noah |
| | | 0 | English/Japanese | |
| Play | Luca | 5 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |
| Play | Noah | 2 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 2 | Japanese | |
| | | 2 | English/Japanese | |
| Other | Luca | 2 | English | Mummy, Ma Weenie, Luca and Noah |
| | | 0 | Japanese | |
| | | 0 | English/Japanese | |

Note. As the interlocutors for each speech event differed slightly the interlocutors listed are those that were present for the majority of the speech events.

In Japan (see table 7B) there were 48 instances of Luca responding to English questions in English across all activities. There were also 15 instances of him answering in Japanese and 3 instances of mixed language. Noah also responded to English questions in English 13 times with no Japanese and 2 instances of mixed language use. These instances also occurred across all activities. See tables 7A and 7B for the complete data set of the boys responding to English questions.

Table 7B. Responding to English Questions - Japan

| Activity | Speaker | Occurrence | Language | Interlocutors |
|---------------------|---------|------------|----------|----------------------|
| Japan - Home | | | | |
| Meals | Luca | 7 | English | Mummy, Luca and Noah |
| | | 1 | Japanese | |

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------|---------|------------|------------------|-----------------------------|
| | | 3 | English/Japanese | |
| Meals | Noah | 9 | English | Mummy, Luca and Noah |
| | | 0 | Japanese | |
| | | 1 | English/Japanese | |
| Play | Luca | 31 | English | Mummy, daddy, Luca and Noah |
| | | 10 | Japanese | |
| | | 3 | English/Japanese | |
| Play | Noah | 2 | English | Mummy, daddy, Luca and Noah |
| | | 0 | Japanese | |
| | | 1 | English/Japanese | |
| Other | Luca | 10 | English | Mummy, daddy, Luca and Noah |
| | | 4 | Japanese | |
| | | 0 | English/Japanese | |
| | | 2 | English | Mummy, daddy, Luca and Noah |
| Other | Noah | 0 | Japanese | |
| | | 1 | English/Japanese | |

Note. As the interlocutors for each speech event differed slightly the interlocutors listed are those that were present for the majority of the speech events.

We must ask why their responses were mainly in English as this data goes against the previously discussed *receptive-expressive gap* (see Gibson et al., 2012; Ribot & Hoff, 2014). Due to the extensive amount of time that they spend at their Japanese kindergarten, the amount of time for Japanese input exceeds that of English, and Japanese is definitely their dominant language. Whilst English was the dominant language in Australia, the data was skewed in Japan where their language often went against the societal language. This is definitely an area that is worthy of more investigation but was not the focus of this study.

There were also 23 instances of Luca asking Noah questions within the data. 15 of these instances were in Japanese and 8 in English which shows that when Luca asks Noah questions they are mostly in Japanese. Although most of this data was collected in Japan, Luca still preferred to ask in Japanese in Australia where 4 instances of questions were in Japanese and only 1 instance in English. This showed that when the boys are the only interlocutors in the conversation their talk was usually in Japanese.

4.6 Requests

Data collected in Australia revealed that all the requests the siblings made were in English except for when mummy was present and then some were made in Japanese. Luca made requests in English at meals 10 times whilst Noah's requests were a mix of both, 16 instances in English, 2 in Japanese and 1 a mixture of both languages (see Table 8 for the complete data set). Luca continued to make English requests during play whilst Noah's requests were a mixture of English and Japanese. In fact, data showed that Noah made more requests in Japanese than in English.

Table 8. Making Requests

| Activity | Speaker | Occurence | Language | Interlocutors |
|----------|---------|-----------|------------------|-------------------------------|
| Meals | Luca | 10 | English | Mummy, Ma Weenie, Luca & Noah |
| Meals | Noah | 16 | English | Mummy, Ma Weenie, Luca & Noah |
| | | 2 | Japanese | |
| | | 1 | English/Japanese | |
| Play | Luca | 2 | English | Mummy, Luca & Noah |
| Play | Noah | 1 | English | Mummy, Luca & Noah |

| Activity | Speaker | Occurrence | Language | Interlocutors |
|----------|---------|------------|------------------|---------------------------|
| | | 2 | Japanese | |
| Other | Luca | 0 | | |
| Other | Noah | 0 | | |
| Meals | Luca | 10 | English | Mummy, Luca & Noah |
| | | 4 | Japanese | |
| Meals | Noah | 25 | English | Mummy, Luca & Noah |
| | | 7 | Japanese | |
| | | 1 | English/Japanese | Mummy, Luca & Noah |
| Play | Luca | 4 | English | Mummy, daddy, Luca & Noah |
| | | 1 | Japanese | |
| Play | Noah | 5 | English | Mummy, daddy, Luca & Noah |
| | | 0 | Japanese | |
| Other | Luca | 3 | English | Mummy, daddy, Luca & Noah |
| | | 2 | Japanese | |
| Other | Noah | 6 | English | Mummy, daddy, Luca & Noah |
| | | 8 | Japanese | |

Note. As the interlocutors for each speech event differed slightly the interlocutors listed are those that were present for the majority of the speech events.

More requests were made in Japan. However, this is understandable as the data collection was more extensive than in Australia. Compared to other activities the richest data was collected at meal times. Here the data showed a clear distinction between language choice and activities with Luca and Noah using more English than Japanese during meal times. One probable reason for this English preference during meal times may be due to the fact that the boys usually eat dinner only with me. As my husband is often home late from work, he is often absent from the dinner table. It therefore becomes more of an English environment with me the only adult present

speaking in English, although the boys usually converse together, and with me, in Japanese. So, once again it is clear that their language choice becomes associated with the interlocutors present (Halpin & Melzi, 2018; Paradis & Nicoladis, 2007).

Whilst Luca continued this trend of making requests in English during playtime, data showed that Noah used both languages equally when making requests. Luca also preferred to make requests in English during other activities such as bath time, bedtime, and Skype and dinner whilst Noah continued to use English and Japanese equally.

4.7 Intrasentential code-switching (during play)

Play provides children with boundless opportunities to learn (Singer, Golinkoff & Hirsh-Pasek, 2006) regardless of whether they are monolingual or bilingual. It heightens their cognitive and social-emotional growth (Singer et al., 2006) promoting friendships, cooperative behavior and positive social attitudes (Scott & Panksepp, 2003. p. 549). Due to the extended period of time that siblings spend together, it is understandable that a lot of play will likely take place together. In bilingual sibling play, siblings learn from each other (Gregory, 2001) as the elder takes on a kind of teacher role (Azmitia & Hesser, 1993; Obied, 2009) that also incorporates both cultural socialization (Nilep, 2009; Hua 2010; Howard, 2007) and linguistic properties (de León, 2019; Pavlenko, 2004).

As previously discussed, bilingual children's language use is often associated with the domains and activities that they are engaging in and the codes of practice are oftentimes considered to

be predetermined by sociolinguistic contexts (de León, 2019; Paugh, 2012). However, de León (2019) found in her study of Mayan Tzotzil and Spanish speaking siblings in Mexico that these predetermined codes were crossed and that the children often went against the expected language use pattern. Mayan Tzotzil is the language of the home and the heritage community whilst Spanish is the dominant societal language. As in other postcolonialised societies, Tzotzil is not seen to be of value by the greater community. Despite this, the children usually align their language use to their parents' and they will also adjust their language for their Tzotzil only speaking younger siblings (de León, 2019). She further found that during play they did associate certain roles with specific languages, however, sometimes they didn't totally disassociate the languages; that is, they retained components of one language whilst speaking another. This can also be seen in transcript 8, in a conversation during ludic play between Luca and Noah.

Transcript 8: Example of Epenthesis

Domain: Japan; home (Luca 6;01 & Noah 3;02)

Interlocutors: Luca, Noah and mummy

Timing: More than 1 month of being in Australia

- | | | |
|---|-------|---|
| 1 | Luca | Noah, <u>su</u> top it. <u>Su</u> top it! |
| 2 | Noah | <i>iya da</i> {No!} |
| 3 | Luca | STUPID! |
| 4 | Noah | () |
| 5 | Mummy | [interrupts] Hey! Don't be calling anyone stupid please. You don't call anyone stupid. That's very, very naughty. |

(Play, October 14, 2018)

In line 1 Luca pronounces the first half of the word “sutop” as if it is *katakana* (a Japanese writing system or alphabet that is used for words borrowed from other languages), that is although he is reprimanding Noah in English the word “stop” contains epenthesis. In English “stop” is shorter, sharper and clearer whilst as Japanese is a consonant-vowel-consonant-vowel (CVCV) language and this word is pronounced “*sutoppu*”. Due to Japanese’s CVCV language status, Japanese speakers often produce unnecessary vowels, particularly in English. The epenthesis seen in line 1 emphasises the fact that with Luca’s language choice he has not completely separated both language systems. Even though he chooses English to reprimand Noah he somewhat continues to use Japanese phonology when speaking his English words. If this was completely Japanese he would have said ‘*sutoppu*’. However he only retains epenthesis for the first half of the word and the remainder changes to English phonology.

In line 2 below during play, Luca breaks into song. Although the words are not correct he sings “Hello, how are you?” to the tune of Adele’s “Hello”. As younger siblings and children often copy older children (Dunn, 1983) Noah begins to mimic Luca in the same way. Whilst the language around the song is in the dominant language of Japanese the song is in the minority language of English. Interestingly, the onomatopoeia are also in Japanese which contains a great amount of onomatopoeia (Shimizu, Doizaki & Sakamoto, 2014) compared to English and these are often used in conversation. The boys’ play is interrupted unconsciously by daddy who seemed to be talking to himself in line 7. However, in line 8 Luca responds to his talk by asking a question. Aware of the interlocutors’ languages this is an example of when the boys spoke to daddy in Japanese.

Transcript 9: Example of Mixing Languages

Domain: Japan; home (Luca 6;04 & Noah 3;05)

Interlocutors: Ma Weenie, mummy, daddy, Luca & Noah

Timing: More than 1 month of being in Australia

- | | | |
|---|-------|---|
| 1 | Noah | () [Both laughing] |
| 2 | Luca | Hello, how are you? Bu, bu {Beep, beep} |
| 3 | Noah | [Laughing] Hello, how are you? [Both laughing] |
| 4 | Luca | Hello, how are you? Bu, bu, bu, bu {Beep, beep, beep, beep} |
| 5 | Noah | Hello, how are you? Bu, bu {Beep, beep} |
| 6 | Luca | Hello, how are you? Bu, bu {Beep, beep} [Both laughing] |
| 7 | Daddy | () <i>yasui!</i> {It's so cheap!} [Looking at an electronics brochure] |
| 8 | Luca | <i>nani ga yasui?</i> {What's cheap?} |

(Play, January 2, 2018)

4.8 The role of an older sibling (for a younger sibling)

Throughout this study the data recorded at meals was the richest. It was when most code-switching occurred with a total of 158 English speech events. Whilst the boys showed that domains and activities did play a great part in their language choice with more English being used in Australia at meals than in Japan there was a certain amount of language mixing in both domains. There was a total of 76 English speech events in Australia and 82 in Japan even though the Japanese data set contained more than 40 more hours of audio recording.

In the following conversation, we can see an example of sibling scaffolding. As discussed earlier, siblings give more support and scaffolding to their younger siblings than peers (Azmitia & Hesser,

1993). This scaffolding encompasses not only language (Gregory, 2001; Obied, 2009) but also play and socialisation (de León, 2019; Kheirkhah & Cekaite, 2018) into their culture. Here, in line 8 Luca corrects Noah's language and teaches him the right way to say something. The conversation revolves around Captain Underpants, a children's animation superhero that they enjoy watching. This conversation could also be interpreted that Noah was just playing with his words and although Luca corrects him, he was already completely aware that he was making a joke.

Transcript 10: Sibling Linguistic Scaffolding

Domain: Australia; Ma Weenie's house (Luca 6;06 & Noah 3;07)

Interlocutors: Mummy, Ma Weenie, Luca & Noah

Timing: In Australia

- | | | |
|---|-----------|--|
| 1 | Noah | Chocolate underpants! |
| 2 | Mummy | I don't want to eat chocolate underpants. Yuck! |
| 3 | Noah | <i>oshiri</i> {Bottom}, on the pants! Bottom on the pants! |
| 4 | Ma Weenie | C'mon, eat your dinner. |
| 5 | Noah | Bottom on the pants! |
| 6 | Luca | What's "on the pants?" |
| 7 | Ma Weenie | I don't know. |
| 8 | Luca | Oh, not on the pants, underpants! Captain underpants! |

(Meals, February 27, 2019)

Furthermore, in transcript 11 from the conversation below, Luca's role of sibling-teacher continues to be seen. The English that occurs between the two boys is instigated by Noah. Noah responds to Luca's "thank you" in Japanese in line 8 with "you're welcome" in line 9. At first

because he receives no response from Luca in line 10 he says in line 11 “you’re welcome” again in an even louder voice. Finally, in line 11 he repeats what he says and gets a reply from Luca of “good manners”. Although it starts in Japanese it ends with Luca praising Noah for having “good manners” in English. This is something I have often said to the boys when they have been polite and used their “pleases” and “thank yous”. Here Luca asserts his position of being the elder sibling and takes on a kind of sibling-teacher role by praising Noah.

Transcript 11: Example of Sibling-teacher Role

Domain: Japan; home (Luca 6;04 & Noah 3;05)

Interlocutors: Mummy, Luca & Noah

Timing: More than 1 month of being in Australia

- | | | |
|----|-------|--|
| 1 | Noah | <i>Noah mo hoshii!</i> {I want some too!} |
| 2 | Luca | <i>zurui!</i> {Sneaky!} |
| 3 | Mummy | What would you like? Sausage? Egg? Toast? Argh! You said you didn’t want any. |
| 4 | Noah | <i>Hoshii no!</i> {I want some!} |
| 5 | Mummy | Ok. |
| 6 | Luca | <i>It yo</i> {It’s ok} Mummy, <i>pan kureta!</i> {Mummy, he gave me toast!} |
| 7 | Noah | <i>pan kureta mou, Luca ni. Luca ni pan ni kureta!</i> {I got (gave) toast, to Luca. I got (gave) toast to Luca} |
| 8 | Luca | <i>Noah-kun, arigatou.</i> {Thanks Noah} |
| 9 | Noah | You’re welcome. |
| 10 | Luca | ... |
| 11 | Noah | YOU’RE WELCOME. You’re welcome. |
| 12 | Luca | Good manners! |

(Meals, January 6, 2019)

The following conversation, transcript 12 took place in the bath with me. In line 2, I asked Noah what he wanted but I could not understand, so in line 4, I requested to Luca that he ask him. In line 5 Luca went on to ask Noah the same question. At times of relaying information to Noah, Luca often repeats exactly what I have said without switching code. He doesn't translate it to Japanese but relays the same information in English. I still do not understand why Luca understood what Noah wanted, and at times I rely on him to be an interpreter. As they spend more time in the bath together than with me it is possible that this kind of speech event has taken place before and therefore there is an understanding between the boys.

Transcript 12: Relaying Messages

Domain: Japan; home (Luca 5;11 & Noah 3;0) **Interlocutors:** Mummy, Luca & Noah

Timing: Within 1 month of being in Australia

- | | | |
|---|-------|--|
| 1 | Noah | <i>maze maze</i> {mix and mix} [Asking for something while swishing the water around in the bath] |
| 2 | Mummy | What? What do you want? This? [Holding a bath toy] |
| 3 | Noah | No |
| 4 | Mummy | Luca, can you ask Noah what he wants? |
| 5 | Luca | What do you want Noah? |
| 6 | Noah | <i>maze maze</i> {round and round} [continuing to swish the bath water around] |
| 7 | Luca | Oh! You want the caterpillar (one of their bath toys)! |
| 8 | Mummy | How did you understand that? |
| 9 | Luca | <i>datte, kono aida maze maze shiteta!</i> {Because the other day he was swishing the water around!} |

((Bathtime, August 30, 2018))

In this discussion of the results, we have identified a range of speech events which highlight the relationship between the siblings' activities, the interlocutors present and the choice of language. By examining the code-switches, we can also identify how role relations play out through language choice.

4.9 Significance

It is hoped that this study will make a contribution to the field of bilingualism and our understanding of an elder sibling's linguistic influence on a younger sibling. This study is significant as it shows sibling language in a range of naturalistic settings in different environments using both Japanese and English with several different interlocutors. Using the results of this study, it is hoped that code-switching among young children and bilingual sibling's language will be better understood, thereby contributing to our overall understanding of bilingual language use.

4.10 Limitations

Whilst this study helps to fill a gap in existing literature and adds to what we know about bilingual siblings, it does have some limitations. Firstly, the study was a case study which only involved two Japanese-English bilingual siblings and it may not be generalisable to the greater bilingual

population. Secondly, the domains in which the sample of speech was collected was not balanced and the data collected in Japan greatly outweighed the data collected in Australia.

Furthermore, it is more than likely that I did not take note of all of the speech events which took place during the recordings and data was missed. There were also things that I wanted to look for in the data in the final reporting, for example, how much time and how many speech events occurred with different interlocutors. However, due to the nature of the way I had coded this in NVivo it proved impossible.

It is important to remember that this is only a small sample of the siblings' speech and it does not contain a complete representation of their bilingual repertoire. Finally, given the age of the younger sibling the data may be considered limited as his speech is not extensive with limited expression and vocabulary.

5. Conclusions

This thesis has followed and examined the language of Japanese-English male bilingual siblings in a number of naturalistic settings in their mother's home country of Australia, and their home country of Japan. Employing a case study approach with a focus exclusively on the siblings, audio data was collected in different domains, performing different activities and with a number of interlocutors. Although the data collected is just a small sample of the siblings' language choice, it contributes to the already existing literature and offers a small glimpse into the bilingual siblings' linguistic world of code-switching. It would be interesting to see whether the language

choice of female siblings or mixed-sex siblings' data in a similar context follows the same patterns found here.

It is difficult to gauge just how much influence an older bilingual sibling's language use affects a younger sibling's speech development. In fact, whilst this thesis attempted to ascertain the influence of an older sibling on a younger bilingual siblings' speech development this remained unclear with the data collected. The data revealed more about language use between the siblings, rather than the influence on the younger's linguistic development.

We know that a sibling's presence in itself will affect a younger sibling's cognition as they have a playmate and receive more stimulation than being an only child (Brody, 2004; Taylor, 2017). Some (see Barton & Tomasello, 1994; Oshima-Takane & Robbins, 2003; Woollett, 1986) believe that having a sibling is beneficial to language development as they will have more language input than otherwise. However, the studies above look at monolingual children's language development. How much influence is yielded on a bilingual's language development is relatively unknown, difficult or maybe even impossible to measure.

This thesis highlights the sibling's language choices and shows a mixture of languages used in reprimanding, asking questions, making requests, giving instructions, and relaying messages. The data revealed there were certain times where Luca preferred to use English when addressing Noah. These included reprimands or giving strong instructions which shows that in the bilingual mind there is a strong association with an interlocutors' language and speech events. Due to the

extensive time spent with me and my reprimanding them in English, it is fair to say that this has influenced Luca's language choice and that perhaps there are more reprimands in English in their life than Japanese. I would say that this language use does impact on Noah's linguistic development, increasing the amount of input in the minority language and also influencing his receptive skills. It may also be interpreted by some as an indirect influence of the mother through the child (Woollet, 1986).

Luca also chose to use English when relaying messages to Noah, which can be seen in transcript 12. Rather than translate what was being asked or said to Noah in Japanese, he used the original English. Obviously, this repetition requires less thought and effort than performing a translation, however, it remains unknown why he made this linguistic choice and more investigation is necessary.

There was also evidence that the elder sibling provided scaffolding to the younger both correcting him and praising him in English. It could be considered that Luca chose this use of English because of the English-only speaking interlocutor Ma Weenie's presence. Or perhaps because it was during a meal which data showed to be an activity associated with English.

I believe that this study has shown that the older bilingual sibling's use of the minority language in the presence of the younger will affect his language use and encourage the use of the minority language. As young children are great mimics of older children, particularly siblings (Barron-

Hauwaert, 2011; Dunn, 1983; 1992), no matter how minimal their minority language use, I believe language choice for specific speech events will influence and impact on the younger sibling.

Whilst code-switching is usually associated with domains, activities and interlocutors (de León, 2016; references) the data reveal that there are exceptions. The bilingual siblings in this study sometimes didn't completely separate their codes, keeping aspects of both English and Japanese in their speech. Even with the same interlocutors present and performing the same activity the code chosen sometimes differed, and it remains unclear as to what were the triggers. This is an area that requires more detailed investigation.

Parents are known to scaffold their children's language but this study has also shown that this is where older siblings can play a key role. Older siblings show, as Luca did in this study, that they play an important role in scaffolding language; supporting and correcting the younger sibling. The examples of sibling speech throughout this thesis have given examples between the siblings of scaffolding, reprimanding, giving instructions, asking questions and simply speaking in the minority language. These are all influential factors in an older sibling's influencing the younger bilingual's speech development. Whilst the language and instances may be less and more subtle than a parent or guardian who chooses to speak their native language, the sibling's language is important and a prominent factor in the younger sibling's life, language and development.

This research has only touched the tip of the iceberg for the pair of siblings' in this study and even more so when it comes to siblings' language in general. As siblings' linguistic relationship continues to be in flux and go through phases throughout their development, I suspect the results of a study undertaken a different time in the children's development would yield different results. With the maturation of the boys, I think there would be less illegible chatter and more legible conversation yielding a potentially richer data set in the future. We can only speculate whether Luca will continue to use both codes when speaking to Noah and whether his language use will continue to have an influence and impact.

References

- Aaronson, D., & Jia, G. (2003). A longitudinal study of Chinese children and adolescents learning English in the United States. *Applied Psycholinguistics*, 24, 131-161. doi:10.1017/S0142716403000079
- Akhtar, N., Jipson, J., & Callanan, M. (2001). Learning words through overhearing. *Child Development*, 72(2), 416-430. doi:10.1111/1467-8624.00287
- Azmitia, M., & Hesser, J. (1993). Why siblings are important agents of cognitive development: A comparison of siblings and peers. *Child Development*, 64, 430-444.
- Bail, A., Morini, G., & Newman, R. (2015). Look at the gato! Code-switching in speech to toddlers. *Journal of Child Language*, 42(5), 1073-1101. doi:10.1017/S0305000914000695
- Baker, C., & Prys Jones, S. (1998). *Who is Bilingual? Defining Bilingualism*. In *Encyclopedia of Bilingualism and Bilingual Education*. Clevedon: Multilingual Matters.
- Bank, S. P., & Khan, M. D. (1997). *The Sibling Bond*. New York, NY: Harper Collins.
- Barron-Hauwaert, S. (2011). *Bilingual Siblings: Language Use in Families*. Bristol: Multilingual Matters.
- Barton, M. E., & Tomasello, M. (1994). The rest of the family: The role of fathers and siblings in early language development. In C. Gallaway & B. J. Richards (Eds.), *Input and interaction in language acquisition*. Cambridge: Cambridge University Press.
- Bergland, E., Eriksson, M., & Westerlund, M. (2005). Communicative skills in relation to gender, birth order, childcare and socioeconomic status in 18-month-old children. *Scandinavian Journal of Psychology*, 46, 485-491. doi:10.1111/j.1467-9450.2005.00480.x
- Bialystok, E. (2011). Reshaping the mind: The benefits of bilingualism. *Canadian Journal of Experimental Psychology*, 65(4), 229 –235. doi:10.1037/a0025406
- Bialystok, E., Craik, F. I. M., Grady, C., Chau, W., Ishii, R., Gunji, A., & Pantev, C. (2005). Effect of bilingualism on cognitive control in the Simon task: evidence from MEG. *NeuroImage*, 24, 40-49. doi:10.1016/j.neuroimage.2004.09.044
- Bialystok, E., & Feng, X. (2009). Language proficiency and executive control in proactive interference: Evidence from monolingual and bilingual children and adults. *Brain and Language*, 109, 93-100. doi:10.1016/j.bandl.2008.09.001
- Bloomfield, L. (1933). *Language*. New York: Henry Holt.
- Bridges, K., & Hoff, E. (2014). Older sibling influences on the language environment and language development of toddlers in bilingual homes. *Applied Psycholinguist*, 35(2), 225-241. doi:10.1017/S0142716412000379
- Brody, G. H. (2004). Siblings' direct and indirect contributions to child development. *Current Directions in Psychological Science*, 13(3), 124-126. doi:10.1111/j.0963-7214.2004.00289.x
- Bruner, J. (1986) *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.
- Burman, D. D., Bitan, T., & Booth, J. R. (2008). Sex differences in neural processing of language among children. *Neuropsychologia*, 46, 1349-1362. doi:10.1016/j.neuropsychologia.2007.12.021
- Caldas, S. (2006). *Raising Bilingual-Biliterate Children in Monolingual Cultures*. Clevedon: Multilingual Matters.

- Cantone, K. F. (2007). *Code-switching in bilingual children* (Vol. 37). Dordrecht, The Netherlands: Springer.
- Carhill-Poza, A. (2018). Silenced Partners: Language Learning and the Role of Bilingual Peers in *High School Teachers College Record*, 120, 1-28.
- Cekaite, A., & Björk-Willén, P. (2012). Peer group interactions in multilingual educational settings: Co-constructing social order and norms for language use. *International Journal of Bilingualism*, 17, 174–188. doi:10.1177/1367006912441417
- Cho, H. (2018). Korean–English bilingual sibling interactions and socialization. *Linguistics and Education*. doi:10.1016/j.linged.2018.03.004
- Chomsky, N. (1965). *Aspects of the Theory of Syntax*. Cambridge, Massachusetts: The MIT Press.
- Cicirelli, V. G. (1996). Sibling relationships in middle and old age. In G. H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 47-73). Westport, CT: Ablex.
- Conger, K. J., & Kramer, L. (2010). Introduction to the special section: Perspectives on sibling relationships: Advancing child development research. *Child Development Perspectives*, 4(2), 69-71. doi:10.1111/j.1750-8606.2010.00120.x
- Davidiak, E. (2010). One? ¿Dos? Drei! *A study of code switching in child trilingualism*. (Order No. 3409417). Available from ProQuest Dissertations & Theses Global. (619739355). Retrieved from <http://simsrad.net.ocs.mq.edu.au/login?url=https://search-proquest-com.simsrad.net.ocs.mq.edu.au/docview/619739355?accountid=12219>
- De Houwer, A. (2007). Parental language input patterns and children's bilingual use. *Applied Psycholinguistics*, 28, 411–424. doi:10.1017/S0142716407070221
- De Houwer, A. (2011). Language input environments and language development in bilingual acquisition. *Applied Linguistics Review*, 2, 221-239. doi:10.1515/9783110239331.221
- de León, L. (2019). Playing at being bilingual: Bilingual performances, stance, and language scaling in Mayan Tzotzil siblings' play. *Journal of Pragmatics*, 144, 92-108. doi:10.1016/j.pragma.2018.02.006
- Deuchar, M., & Quay, S. (1998). One vs. two systems in early bilingual syntax: Two versions of the question. *Bilingualism: Language and Cognition*, 1(3), 231-243.
- Deuchar, M., & Quay, S. (1999). Language choice in the earliest utterances: A case study with methodological implications. *Journal of Child Language*, 26, 461–475.
- Dixon, L.Q., Wu, S. & Daraghmeh, A. (2012). Profiles in bilingualism: Factors influencing kindergartener's language proficiency. *Early Childhood Education Journal*, 40(1), 25-34. doi:10.1007/s10643-011-0491-8
- Döpke, S. (1992). *One Parent One Language. An Interactional Approach*. Philadelphia: John Benjamin's Publishing Company.
- Dörnyei, Z. (2007). *Research Methods in Applied Linguistics*. Oxford: Oxford University Press.
- Dunn, J. (1983). Sibling relationships in early childhood. *Child Development*, 54(4), 787-811.
- Dunn, J. (1992). Siblings and development. *Current Directions in Psychological Science*, 1(1), 6-9. doi:10.1111/1467-8721.ep10767741
- Duursma, E., Romero-Contreras, S., Szuber, A. P., P, & Snow, C. (2007). The role of home literacy and language environment on bilinguals' English and Spanish vocabulary development. *Applied Psycholinguistics*, 28, 171–190. doi:10.1017/S0142716406070093
- Eggs, S., & Slade, D. (1997). *Analysing Casual Conversation*. London: Cassel.

- Ensminger, M. E., & Fothergill, K. (2003). A decade of measuring SES: What it tells us and where to go from here. In M. H. Bornstein & R. H. Bradley (Eds.), *Socioeconomic status, parenting, and child development*. Mahwah, NJ: Lawrence Erlbaum.
- Ervin-Tripp, S., & Reyes, I. (2005). Child codeswitching and adult content contrasts. *International Journal of Bilingualism*, 9(1), 85-102. doi:10.1177/13670069050090010601
- Fantini, A. (1976). *Language Acquisition of a Bilingual Child: a Sociolinguistic Perspective*. Vermont: The Experimental Press.
- Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1994). Variability in early communicative development. *Monographs of the society for research in child development*, 59(5), 174-185.
- Fishman, J. A. (2000). Who Speaks What Language to Whom and When? In L. Wei (Ed.), *The Bilingualism Reader* (pp. 89-106). London: Routledge.
- Flyvberg, B. (2011). Case study. In N. K. Denzin & Y. Lincoln, S (Eds.), *The sage handbook of qualitative research* (4th ed., pp. 301–316). Thousand Oaks, CA: SAGE Publications.
- García, Ofelia (2009). Education, multilingualism and translanguaging in the 21st century. In: Ajit Mohanty, Minati Panda, Robert Phillipson and Tove Skutnabb-Kangas (eds). *Multilingual Education for Social Justice: Globalising the local*. New Delhi: Orient Blackswan, pp. 128-145.
- García, O., & Wei, L. (2014). *Translanguaging: Language, Bilingualism and Education*. New York: Palgrave Macmillan.
- Genesee, F., Boivin, I., & Nicoladis, E. (1996). Talking with strangers: A study of bilingual children's communicative competence. *Applied Psycholinguistics*, 17, 427-442.
- Genesee, F., Nicoladis, E., & Paradis, J. (1995). Language differentiation in early bilingual development. *Journal of Child Language*, 22, 611-631.
- Ghimenton, A., Chevrot, J. & Billiez, J. (2013). Language choice adjustments in child production during dyadic and multiparty interactions: A quantitative approach to multilingual interactions. *Linguistics*, 51(2), 413-438. doi:10.1515/ling-2013-0016
- Gibson, T. A., Oller, D. K., Jarmulowicz, L., & Ethington, C. A. (2012). The receptive-expressive gap in the vocabulary of young second-language learners: Robustness and possible mechanisms. *Bilingualism: Language and Cognition*, 15, 102–116. doi:10.1017/S1366728910000490
- Gibson, T. A., Peña, E. D., & Bedore, L. M. (2012). The relation between language experience and receptive-expressive semantic gaps in bilingual children. *International Journal of Bilingual Education and Bilingualism*, 1–21. doi:10.1080/13670050.2012.743960
- Greene, K. J., Peña, E. D., & Bedore, L. M. (2012). Lexical choice and language selection in bilingual preschoolers. *Child Language Teaching and Therapy*, 29(1), 27-39. doi: 10.1177/0265659012459743
- Gregory, E. (2001). Sisters and brothers as language and literacy teachers: Synergy between siblings playing and working together. *Journal of Early Childhood Literacy*, 1(3), 301-322. doi:10.1177/14687984010013004
- Grosjean, F. (2010). *Bilingual: Life and Reality*. Cambridge, MA: Harvard University Press
- Hakuta, K. (1990). *Bilingualism and bilingual education: A research perspective. Focus No.1*. Washington, DC: National Clearinghouse for Bilingual Education.

- Halpin, E., & Melzi, G. (2018). Code-switching in the narratives of dual-language Latino preschoolers. *International Journal of Bilingual Education and Bilingualism*, 1-17. doi:10.1080/13670050.2018.1553928
- Hamers, J., & Blanc. M. (2000). *Bilinguality and bilingualism*. (2nd ed.). Cambridge: Cambridge University Press.
- Hart, B., & Risley, T. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore: Paul H. Brooks.
- Heredia, R., & Altarriba, J. (2001). Bilingual Language Mixing: Why Do Bilinguals Code-Switch? *Psychological Science*, 10(5), 164-168.
- Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review*, 26, 55-88. doi:10.1016/j.dr.2005.11.002
- Hoff, E., Core, C., Place, S., Rumiche, R., Senor, M., & Parra, M. (2012). Dual language exposure and early bilingual development. *Journal of Child Language*, 39, 1-27. doi:10.1017/S0305000910000759
- Hoff, E., & Luz Rumiche, R. (2012). Studying children in bilingual environments. In E. Hoff (Ed.), *Research Methods in Child Language: A Practical Guide* (pp. 300-316). Oxford, UK: 10.1002/9781444344035.
- Hoff, E., & Ribot, K.M. (2017). Language growth in monolingual and Spanish-English bilingual children from 2.5 to 5 years. *The Journal of Pediatrics*, 190, 241-245. doi:10.1016/j.peds.2017.06.071
- Hoffman, C. (1985). Language acquisition in two trilingual children. *Journal of Multilingual and Multicultural Development*, 6(6), 479-495. doi:10.1080/01434632.1985.9994222
- Howard, K. M. (2007). Kinterm useage and hierarchy in Thai children's peer groups. *Journal of Linguistic Anthropology*, 17(2), 204-230. doi:10.1525/jlin.2007.17.2.204
- Howe, N., Petrakos, H., Rinaldi, C. M., & LeFebvre, R. (2005). "This Is a bad dog, you know. . .": Constructing shared meanings during sibling pretend play. *Child Development*, 76(4), 783-794. doi:10.1111/j.1467-8624.2005.00877.x
- Hua, Z. (2010). Language socialization and interculturality: address terms in intergenerational talk in Chinese diasporic families. *Language and Intercultural Communication*, 10, 189-205. doi:10.1080/14708470903348531
- Jones, D. (2010). Human kinship, from conceptual structure to grammar. *Behavioral and brain sciences*, 33, 367-416. doi:10.1017/S0140525X10000890
- Kavanagh, B. (2017). Does having an older sibling support or hinder the development of bilingualism in younger siblings?: A case study of British and Japanese families. *Journal of International Cultural Studies*, 23, 209-224.
- Keller, K., Troesch, L.M., & Grob, A. (2015). A large receptive–expressive gap in bilingual children. *Frontiers in Psychology*, 6, Article 1284. doi:10.3389/fpsyg.2015.01284
- Kibler, A. K., Palacios, N., Simpson-Baird, A., Bergey, R., & Yoder, M. (2016). Bilingual Latin@ children's exposure to language and literacy practices through older siblings in immigrant families. *Linguistics and Education*, 35, 63-77. doi:10.1016/j.linged.2016.06.001
- Kheirkhah, M., & Cekaite, A. (2018). Siblings as language socialization agents in bilingual families. *International Multilingual Research Journal*, 12(4), 255–272. doi:10.1080/19313152.2016.1273738

- Labov, W. (1972). *Language in the Inner City*. Philadelphia: University of Pennsylvania Press.
- Lance, D. (1975). Spanish/English code-switching. In E. Hernández-Chávez, A. Cohen, & A. Beltramo (Eds.), *El lenguaje de los Chicanos* (pp. 138-153). Arlington, VA: Center for Applied Linguistics.
- Leopold, W. (1939-1949). *Speech Development of a Bilingual Child, I-IV*. Evanston-Chicago.
- Lillo-Martin, D., Quandros, R. M., Chen Pichler, D., & Fieldsteel, Z. (2014). Language choice in bimodal bilingual development. *Frontiers in Psychology*, 5. Article 1163. 1-15. doi: 10.3389/fpsyg.2014.01163
- Luykx, A. (2003). Weaving Languages Together: Family Language Policy and Gender Socialization in Bilingual Aymara Households. In R. Bayley & S. Schecter (Eds.), *Language Socialization in Bilingual and Multilingual Societies* (pp. 10–25). Clevedon: Multilingual Matters.
- MacNamara, W. (1967). How can one measure the extent of one person's bilingual proficiency? In L. G. Kelly (Ed.), *Description and Measurement of Bilingualism: An International Seminar, University of Moncton, June 6–14, 1967*. (80–98). Buffalo, NY: University of Toronto Press.
- Mannle, S. (1986). Pragmatics of sibling speech: An examination of conversations between preschool age children and their two-year-old siblings (*Language, Birth Order*). (Doctor of Philosophy), Emory University, Buffalo, New York.
- Mannle, S., Barton, M., & Tomasello, M. (1991). Two-year-olds' conversations with their mothers and preschool-aged siblings. *First Language*, 12, 57-71. doi:10.1177/014272379201203404
- McHale, S. M., & Crouter, A. C. (1996). The family contexts of children's sibling relationships. In G. H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 125-148). Norwood, NJ: Ablex.
- Miccio, A., Tabors, P., Paez, M., Hammer, C., & Wagstaff, D. (2005). *Vocabulary development in Spanish-speaking head start children of Puerto Rican descent*. In J. Cohen, K McAlister, K Rolsted & J. MacSwan (eds.), *ISB4: Proceedings of the 4th International Symposium on Bilingualism*, pp. 1614–1617. Somerville, MA: Cascadilla Press.
- Miles, M. B., & Huberman, A. B. (1994). *Qualitative Data Analysis*. Thousand oaks, California: Sage Publications.
- Myers-Scotton, C. (1993). *Duelling Languages: Grammatical Structure in Codeswitching*. Oxford : Oxford University Press.
- Myers-Scotton, C. (2006). *Multiple Voices: An Introduction to Bilingualism*. Malden, M.A: Blackwell Publishing.
- Nilep, C. (2009). Sibling interaction and symbolic capital: Toward a theory of political micro-economy. *Journal of Pragmatics*, 41, 1683-1692. doi:10.1016/j.pragma.2009.02.005
- Obied, V. M. (2009). How do siblings shape the language environment in bilingual families? *International Journal of Bilingual Education and Bilingualism*, 12(6), 705-720. doi: 10.1080/13670050802699485
- Orman, J. (2013). New lingualisms, same old codes. *Language Sciences*, 37. 90-98. doi:10.1016/j.langsci.2012.12.001
- Ortega, L. (2009). *Understanding Second Language Acquisition*. Oxon: Routledge.

- Oshima-Takane, Y. (1988). Children learn from speech not addressed to them: the case of personal pronouns. *Journal of Child Language*, 15, 95-108.
- Oshima-Takane, Y. (1999). The learning of first and second person pronouns in English. In R. Jackendoff, P. Bloom, & K. Wynn (Eds.), *Language, Logic, and Concept: Essays in Memory of John Macnamara* (pp. 373–409). Cambridge, MA: MIT Press.
- Oshima-Takane, Y., Goodz, E., & Derevensky, J. L. (1996). Birth order effects on early language development: Do secondborn children learn from overheard speech? *Child Development*, 67(2), 621-634. doi:10.1111/j.1467-8624.1996.tb01755.x
- Oshima-Takane, Y., & Robbins, M. (2003). Linguistic environment of secondborn children. *First Language*, 23(1), 21-40. doi:10.1177/0142723703023001002
- Paradis, J. (2012). Cross-Linguistic Influence and code-switching. In B. A. Goldstein (Ed.), *Bilingual Language Development & Disorders in Spanish-English Speakers* (pp. 73-91). Baltimore, MD: Paul H. Brookes Publishing Co.
- Paradis, J. (2018). *Children learning English as an L2 from diverse L1 backgrounds: Individual difference factors and long-term outcomes*. Paper presented at the Current Issues in Child Bilingual Development, Australian Hearing Hub, Macquarie University, Sydney.
- Paradis, J., & Nicoladis, E. (2007). The influence of dominance and sociolinguistic context on bilingual preschoolers' language choice. *International Journal of Bilingual Education and Bilingualism*, 1-22. doi: 10.2167/beb444.0
- Paugh, A. L. (2012). *Playing with Languages: Children and Change in a Caribbean Village*. New York: Berghahn.
- Pavlenko, A. (2004). 'Stop doing that, la Komu Skazala!': Language choice and emotions in parent—child communication. *Journal of Multilingual and Multicultural Developmental Psychology*, 25(2&3), 179-203. doi:10.1080/01434630408666528
- Pavlenko, A. (2006). *Bilingual Selves*. In *Bilingual Minds: Emotional Experience, Expression and Representation*. Clevedon, UK: Multilingual Matters.
- Pine, J. (1995). Variation in vocabulary development as a function of birth order. *Child Development*, 66(1), 272-281. doi:10.2307/1131205
- Pinker, S. (1994). *The Language Instinct*. New York: Perennial.
- Place, S., & Hoff, E. (2011). Properties of dual language exposure that influence 2-year-olds' bilingual proficiency. *Child Development*, 82(6), 1834-1849. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/22004372>. doi:10.1111/j.1467-8624.2011.01660.x
- Place, S., & Hoff, E. (2016). Effects and noneffects of input in bilingual environments on dual language skills in 2 ½-year-olds. *Bilingualism: Language and Cognition*, 19(5), 1023-1041. doi:10.1017/S1366728915000322
- Poplack, S. (2013). Introductory comments by the author. *Linguistics*, 51(Jubilee), 11-14. doi:10.1515/ling-2013-0039
- Ribot, K. M., & Hoff, E. (2014). “¿Cómo estas?” “I’m good.” Conversational code-switching is related to profiles of expressive and receptive proficiency in Spanish-English bilingual toddlers. *International Journal of Behavioral Development*, 38(4), 333-341. doi: 10.1177/0165025414533225

- Rindermann, H., & Baumeister, A. E. E. (2015). Parents' SES vs. parental educational behavior and children's development: A reanalysis of the Hart and Risley study. *Learning and Individual Differences*, 37, 133-138. doi:10.1016/j.lindif.2014.12.005
- Romaine, S. (1995). *Bilingualism* (Second Edition ed.). Oxford: Basil Blackwell.
- Ronjat, J. (1913). *Le developpement du langage observe chez un enfant bilingue*. Paris: Champion.
- Saville-Troike, M. (2003). *The Ethnography of Communication* (3rd ed.). Oxford, UK: Blackwell Publishing.
- Scott, E. & Panksepp, J. (2003). Rough-and-tumble play in human children. *Aggressive Behavior*, 29(6), 539-551. doi: 10.1002/ab.10062
- Shimizu, Y., Doizaki, R., & Sakamoto, M. (2014). A System to Estimate an Impression Conveyed by Onomatopoeia. *人工知能学会論文誌、(Jinkō Chinō Gakkai Ronbunshi)*, 29(1). Transactions of the Japanese Society for Artificial Intelligence, 41-52. doi:10.1527/tsai.29.41
- Schwartz, B. (1993). On explicit and negative data effecting and affecting competence and linguistic behavior. *Studies on Second Language Acquisition*, 15. 147-163. doi: 10.1017/S0272263100011931
- Singer, D. G., Golinkoff, R. M., & Hirsh-Pasek, K. (2006). Why play = Learning: A challenge for parents and educators. In D. G. Singer, R. M. Golinkoff, & K. Hirsh-Pasek (Eds.), *Play = Learning, How play motivates and enhances cognitive and social-emotional growth* (pp. 3-12). Oxford: Oxford University Press.
- Song, J. (2019). Language socialization and code-switching: a case study of a Korean–English bilingual child in a Korean transnational family. *International Journal of Bilingual Education and Bilingualism*, 22(2), 91-106. doi:10.1080/13670050.2016.1231165
- Sperry, D. E., Sperry, L. L., & Miller, P. J. (2018). Reexamining the verbal environments of children From different socioeconomic backgrounds. *Child Development*, 68(1), 1-16. doi: 10.1111/cdev.13072
- Sprott, R. A. & Kemper, S. (1987). The development of children's code-switching: A study of six bilingual children across two situations. *Working Papers of Language Development*, 2, 116-134.
- Suyal, C. R. (2002). *Bilingual first language acquisition: Code mixing in children who speak a minority language*. (MQ81483). Retrieved from <https://search-proquest-com.simsrad.net.ocs.mq.edu.au/docview/305512433/?pq-origsite=primo>
- Taylor, K. (2017). *The Impact of Older Siblings on Vocabulary Acquisition in Bilingual Children*. (Undergraduate Honors Thesis), University of Colorado, Boulder. (1454)
- Taylor, K., & Kan, P. F. (2018). The impact of older siblings on vocabulary learning in bilingual children. *International Journal of Bilingual Education and Bilingualism*, 1-18. doi:10.1080/13670050.2018.1518969
- Thomas, E. M., & Roberts, D. B. (2011). Exploring bilinguals' social use of language inside and out of the minority language classroom. *Language and Education*, 25(2), 89-108. doi:10.1080/09500782.2010.544743
- Tomasello, M., & Mannle, S. (1985). Pragmatics of sibling speech to one-year-olds. *Child Development*, 56(4), 911-917.

- Toribio, A. J. (2001). On the emergence of bilingual code-switching competence. *Bilingualism: Language and Cognition*, 4(3), 203-231. doi:10.1017/S1366728901000414
- Vandell, D. L., & Wilson, K. S. (1987). Infants' Interactions with Mother, Sibling, and Peer: Contrasts and Relations between Interaction Systems. *Child Development*, 58(1), 176-186.
- Wei, L. (2000). Dimensions of bilingualism. In W. Li (Ed.), *The Bilingualism Reader*. Oxon, UK: Routledge.
- Woollett, A. (1986). The influence of older siblings on the language environment of young children. *British Journal of Developmental Psychology*, 4, 235-245. doi:10.1111/j.2044-835X.1986.tb01015.x
- Yamamoto, M. (2001). *Language Use in Interlingual Families: A Japanese-English Sociolinguistic Study*. Clevedon: Multilingual Matters.
- Yip, V., & Matthews, S. (2000). Syntactic transfer in a Cantonese-English bilingual child. *Bilingualism: Language and Cognition*, 3(3), 193-208.
- Yip, V., & Matthews, S. (2007). *The bilingual child: early development and language contact*. Cambridge: Cambridge University Press.
- Yow, W. Q., Tan, J. S. H., & Flynn, S. (2018). Code-switching as a marker of linguistic competence in bilingual children. *Bilingualism: Language and Cognition*, 21(5), 1075-1090. doi:10.1017/S1366728917000335

Appendix 1 of this thesis has been removed as it may contain sensitive/confidential content

Appendix 2 Breakdown of Nodes

Luca & Noah.nvp - NVivo 12 Plus

File Home Import Create Explore Share

Paste Cut Copy Merge Clipboard Properties Open Memo Link Item Add To Set Create As Code Create As Cases Query Visualize Explore Code Auto Code Range Code Uncode Case Classification File Classification Detail View Sort By Undock Navigation View List View Find Workspace

Quick Access

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- Nodes

Data

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Codes

- Nodes
- Sentiment
- Relationships
- Relationship Types

Cases

- Cases
- Case Classifications

Notes

- Memos
- Framework Matrices
- Annotations
- See Also Links

Search

Maps

- Maps

Output

Nodes

| Name | Files | References | Created On | Created By | Modified On | Modified By |
|-------------------|-------|------------|------------------|------------|------------------|-------------|
| Australia | | 0 | 2019/05/22 20:43 | LL | 2019/05/22 20:43 | LL |
| Ma Weenie's House | | 0 | 2019/05/29 6:59 | LL | 2019/05/29 6:59 | LL |
| Japan | | 0 | 2019/05/22 20:43 | LL | 2019/05/22 20:43 | LL |
| Home | | 0 | 2019/05/25 20:46 | LL | 2019/05/25 20:46 | LL |
| Kindergarten | | 0 | 2019/05/22 20:05 | LL | 2019/05/22 20:05 | LL |

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Luca & Noah.nvp - NVivo 12 Plus

File Home Import Create Explore Share

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 - Case Classifications
- Notes
 - Memos
 - Framework Matrices
 - Annotations
 - See Also Links
- Search
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| Australia | | 0 | 0 2019/05/22 20:43 | LL | 2019/05/22 20:43 |
| Ma Weenie's House | | 0 | 0 2019/05/29 6:59 | LL | 2019/05/29 6:59 |
| Luca apologises | | 0 | 0 2019/05/26 16:12 | LL | 2019/07/09 13:42 |
| Meals | | 0 | 0 2019/06/08 8:55 | LL | 2019/06/08 8:55 |
| Play | | 0 | 0 2019/06/08 8:55 | LL | 2019/06/08 8:55 |
| Playing Games | | 0 | 0 2019/06/18 14:37 | LL | 2019/06/18 14:37 |
| Watching TV | | 0 | 0 2019/06/19 19:54 | LL | 2019/06/19 19:54 |
| Japan | | 0 | 0 2019/05/22 20:43 | LL | 2019/05/22 20:43 |
| Home | | 0 | 0 2019/05/25 20:46 | LL | 2019/05/25 20:46 |
| Bath time | | 0 | 0 2019/05/25 20:46 | LL | 2019/06/11 15:01 |
| Bedtime | | 0 | 0 2019/06/08 11:51 | LL | 2019/06/08 11:51 |
| Coming home | | 0 | 0 2019/06/18 18:33 | LL | 2019/06/18 18:33 |
| Cooking with Luca | | 0 | 0 2019/06/18 15:29 | LL | 2019/06/18 15:30 |
| Getting dressed | | 0 | 0 2019/06/11 20:43 | LL | 2019/06/11 20:43 |
| Meals | | 0 | 0 2019/05/25 20:46 | LL | 2019/06/08 8:54 |
| Play | | 0 | 0 2019/05/25 20:47 | LL | 2019/05/25 20:47 |
| Playing Games | | 0 | 0 2019/06/18 14:38 | LL | 2019/06/18 14:38 |
| Skype and dinner | | 0 | 0 2019/06/19 5:59 | LL | 2019/06/19 5:59 |
| Watch TV and talk | | 1 | 1 2019/06/11 20:23 | LL | 2019/06/11 20:45 |
| Kindergarten | | 0 | 0 2019/05/22 20:05 | LL | 2019/05/22 20:05 |

LL 394 Items



Luca & Noah.nvp - NVivo 12 Plus

File Home Import Create Explore Share

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Case Classification File Classification Detail View Sort By Undock Navigation View List View Find Workspace

Quick Access

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- Relationship Types

Cases

- Cases
- Case Classifications

Notes

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Search

Maps

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Search Project

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| Japan | | 0 | 0 2019/05/22 20:43 | LL | 2019/05/22 20:43 |
| Home | | 0 | 0 2019/05/25 20:46 | LL | 2019/05/25 20:46 |
| Bath time | | 0 | 0 2019/05/25 20:46 | LL | 2019/06/11 15:01 |
| Bedtime | | 0 | 0 2019/06/08 11:51 | LL | 2019/06/08 11:51 |
| Coming home | | 0 | 0 2019/06/18 18:33 | LL | 2019/06/18 18:33 |
| Cooking with Luca | | 0 | 0 2019/06/18 15:29 | LL | 2019/06/18 15:30 |
| Getting dressed | | 0 | 0 2019/06/11 20:43 | LL | 2019/06/11 20:43 |
| Meals | | 0 | 0 2019/05/25 20:46 | LL | 2019/06/08 8:54 |
| Luca and Noah mix languages | | 4 | 8 2019/06/08 21:11 | LL | 2019/06/23 13:03 |
| Luca apologises | | 0 | 0 2019/07/09 13:37 | LL | 2019/07/09 13:37 |
| Luca asks Noah questions | | 0 | 0 2019/06/08 12:25 | LL | 2019/06/11 17:04 |
| Luca asks questions | | 0 | 0 2019/06/09 18:34 | LL | 2019/06/11 17:03 |
| Luca complains | | 0 | 0 2019/06/18 15:47 | LL | 2019/06/18 15:47 |
| Luca gives Noah instructions | | 0 | 0 2019/06/11 17:14 | LL | 2019/06/18 13:45 |
| Luca makes requests | | 0 | 0 2019/06/09 18:33 | LL | 2019/06/11 17:03 |
| Luca relays information to Noah | | 2 | 2 2019/06/08 11:54 | LL | 2019/06/09 13:28 |
| Luca reprimands Noah | | 0 | 0 2019/06/09 12:46 | LL | 2019/06/09 12:46 |
| Luca responds to English | | 0 | 0 2019/06/11 20:57 | LL | 2019/06/11 21:01 |
| Luca responds to English questions | | 0 | 0 2019/06/18 13:19 | LL | 2019/06/18 13:19 |
| Luca speaks to Noah | | 0 | 0 2019/06/08 21:34 | LL | 2019/06/22 10:14 |
| Noah asks questions | | 0 | 0 2019/06/09 15:30 | LL | 2019/06/11 17:03 |
| Noah imitates Luca | | 0 | 0 2019/06/10 5:53 | LL | 2019/06/11 15:28 |
| Noah makes requests | | 0 | 0 2019/06/09 15:29 | LL | 2019/06/11 15:28 |
| Noah responds to English | | 0 | 0 2019/06/16 17:23 | LL | 2019/06/16 17:23 |
| Noah responds to English questions | | 0 | 0 2019/06/18 15:21 | LL | 2019/06/18 15:21 |
| Play | | 0 | 0 2019/05/25 20:47 | LL | 2019/05/25 20:47 |
| Playing Games | | 0 | 0 2019/06/18 14:38 | LL | 2019/06/18 14:38 |
| Skype and dinner | | 0 | 0 2019/06/19 5:59 | LL | 2019/06/19 5:59 |
| Watch TV and talk | | 1 | 1 2019/06/11 20:23 | LL | 2019/06/11 20:45 |
| Kindergarten | | 0 | 0 2019/05/22 20:05 | LL | 2019/05/22 20:05 |

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Luca & Noah.nvp - NVivo 12 Plus

File Home Import Create Explore Share

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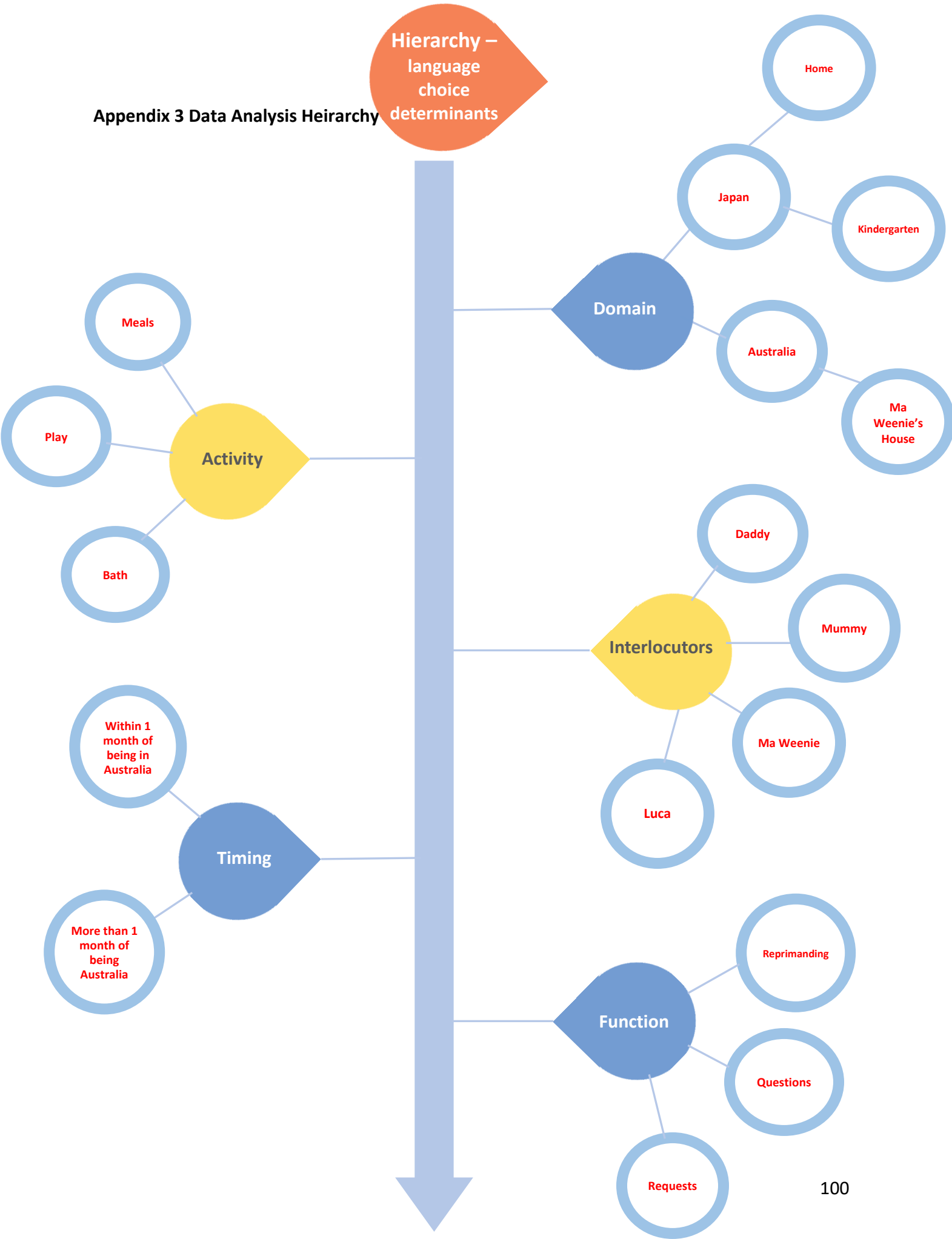
- Quick Access
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- Data
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 - File Classifications
 - Externals
- Codes
 - Nodes
 - Sentiment
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- Notes
 - Memos
 - Framework Matrices
 - Annotations
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- Search
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 - Maps
- Output

Nodes

| Name | Files | References | Created On | Created By | Modified On |
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| Japan | | 0 | 2019/05/22 20:43 | LL | 2019/05/22 20:43 |
| Home | | 0 | 2019/05/25 20:46 | LL | 2019/05/25 20:46 |
| Bath time | | 0 | 2019/05/25 20:46 | LL | 2019/06/11 15:01 |
| Bedtime | | 0 | 2019/06/08 11:51 | LL | 2019/06/08 11:51 |
| Coming home | | 0 | 2019/06/18 18:33 | LL | 2019/06/18 18:33 |
| Cooking with Luca | | 0 | 2019/06/18 15:29 | LL | 2019/06/18 15:30 |
| Getting dressed | | 0 | 2019/06/11 20:43 | LL | 2019/06/11 20:43 |
| Meals | | 0 | 2019/05/25 20:46 | LL | 2019/06/08 8:54 |
| Luca and Noah mix languages | | 4 | 2019/06/08 21:11 | LL | 2019/06/23 13:03 |
| Luca apologises | | 0 | 2019/07/09 13:37 | LL | 2019/07/09 13:37 |
| Luca asks Noah questions | | 0 | 2019/06/08 12:25 | LL | 2019/06/11 17:04 |
| Luca asks questions | | 0 | 2019/06/09 18:34 | LL | 2019/06/11 17:03 |
| Luca complains | | 0 | 2019/06/18 15:47 | LL | 2019/06/18 15:47 |
| Luca gives Noah instructions | | 0 | 2019/06/11 17:14 | LL | 2019/06/18 13:45 |
| Luca makes requests | | 0 | 2019/06/09 18:33 | LL | 2019/06/11 17:03 |
| Luca relays information to Noah | | 2 | 2019/06/08 11:54 | LL | 2019/06/09 13:28 |
| Luca reprimands Noah | | 0 | 2019/06/09 12:46 | LL | 2019/06/09 12:46 |
| Luca responds to English | | 0 | 2019/06/11 20:57 | LL | 2019/06/11 21:01 |
| Luca responds to English questions | | 0 | 2019/06/18 13:19 | LL | 2019/06/18 13:19 |
| In English | | 8 | 2019/06/18 13:19 | LL | 2019/07/07 18:31 |
| In Japanese | | 1 | 2019/06/18 13:19 | LL | 2019/06/21 6:48 |
| Mixes_Switches | | 3 | 2019/06/18 13:20 | LL | 2019/06/21 6:43 |
| Luca speaks to Noah | | 0 | 2019/06/08 21:34 | LL | 2019/06/22 10:14 |
| Noah asks questions | | 0 | 2019/06/09 15:30 | LL | 2019/06/11 17:03 |
| Noah imitates Luca | | 0 | 2019/06/10 5:53 | LL | 2019/06/11 15:28 |
| Noah makes requests | | 0 | 2019/06/09 15:29 | LL | 2019/06/11 15:28 |
| Noah responds to English | | 0 | 2019/06/16 17:23 | LL | 2019/06/16 17:23 |
| Noah responds to English questions | | 0 | 2019/06/18 15:21 | LL | 2019/06/18 15:21 |
| In English | | 6 | 2019/06/18 15:21 | LL | 2019/07/09 13:35 |
| In Japanese | | 0 | 2019/06/18 15:22 | LL | 2019/06/19 5:42 |
| Mixes_Switches | | 1 | 2019/06/18 15:22 | LL | 2019/06/18 15:22 |
| Play | | 0 | 2019/05/25 20:47 | LL | 2019/05/25 20:47 |
| Playing Games | | 0 | 2019/06/18 14:38 | LL | 2019/06/18 14:38 |
| Sleep and dinner | | 0 | 2019/06/10 5:50 | LL | 2019/06/10 5:50 |

LL 394 Items

Appendix 3 Data Analysis Heirarchy



Appendix 4 Conversation Transcripts

Conversation at breakfast on March 01 2019

Domain: Australia

Interlocutors: Ma Weenie, Luca and Noah

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|----|-----------|--|
| 1 | Noah | I want Weetbix. |
| 2 | Ma Weenie | Weetbix? With honey? |
| 3 | Noah | Mm. Nooo Weetbix. No Weetbix. |
| 4 | Ma Weenie | Sorry? |
| 5 | Noah | I want this one. |
| 6 | Ma Weenie | What are you having then?.....Ok, we're having hot cross buns. |
| 7 | Noah | I want this one....I want this one...I want to have this... |
| 8 | Ma Weenie | Honey and Weetbix? Ok. Are you having Weetbix Luca? |
| 9 | Luca | No. |
| 10 | Ma Weenie | What are you having? Hot cross buns? |
| 11 | Luca | Yes. |
| 12 | Ma Weenie | Ok, can you get the...um... (Luca interrupting) |
| 13 | Luca | I want three! |
| 14 | Ma Weenie | Ok, well see how you go with it. You can have as much as you want. See how we go! Put the pencil up. |
| 15 | Luca | Ma Weenie and mine could share one. |
| 16 | Ma Weenie | Share one what, darling? |
| 17 | Luca | Croissants, we've got two...(Ma Weenie interrupts) ... |
| 18 | Ma Weenie | Yes, we can. |
| 19 | Luca | ...that's why. |
| 20 | Ma Weenie | Ok, put the pencils up. |
| 21 | Luca | I'll give you this. |
| 22 | Ma Weenie | Your juice and your yakult is on the table. |
| 23 | Luca | Look, Ma Weenie. There's more... ()... on this one. Look! |
| 24 | Ma Weenie | Is there? |
| 25 | Luca | Yeah. |
| 26 | Ma Weenie | Ah, yes. It's a bit longer. The colouring on the pencil is longer than the other one. |
| 27 | Luca | Then, I'll give you this. This is the longer one. |

| | | |
|----|-----------|--|
| 28 | Ma Weenie | Ok. |
| 29 | Luca | With mummy to share. |
| 30 | Ma Weenie | Ok. |
| 31 | Luca | It's very good. When you do it like this it doesn't...this is a pencil but you can erase it with this. |
| 32 | Ma Weenie | With the eraser? Erase the writing. |
| 33 | Luca | Yeah, with this. |
| 34 | Ma Weenie | You can, if you make an error. Good, isn't it? |
| 35 | Luca | I love this ones! |
| 36 | Ma Weenie | Have your juice and your yakult, please. |
| 37 | Luca | Can we do that game? |
| 38 | Ma Weenie | Yes, I said we'd do the game today. We're having breakfast right now. Ok? |
| 39 | Luca | You said it yesterday. |
| 40 | Ma Weenie | Yes. |
| 41 | Luca | Did you say that yesterday? |
| 42 | Ma Weenie | Yes. |
| 43 | Luca | Or the next yesterday? |
| 44 | Ma Weenie | No, not next yesterday. The day before yesterday. |
| 45 | Luca | The day before the next day... |
| 46 | Ma Weenie | When you were playing with...mummy... |
| 47 | Luca | Was I asleep? |
| 48 | Ma Weenie | No, can you turn around and eat please? |
| 49 | Luca | ...un...I want jam and butter. |
| 50 | Ma Weenie | Well, not jam on hot cross buns...butter. We have it with butter! |
| 51 | Luca | Ok, butter. I'll have those pancakes or something. |
| 52 | Ma Weenie | Well, you can have one of those after your hot cross bun if you'd still like something. |
| 53 | Luca | Nooo! ...laughing... I didn't say no. |
| 54 | Ma Weenie | Have you had your juice? |
| 55 | Luca | Not yet. |
| 56 | Ma Weenie | You both had a big sleep which is good, isn't it? |
| 57 | Noah | Luca? <i>Noah-sa, me kayui.</i> {Noah's eye's itchy.} |
| 58 | Luca | <i>Eeee?</i> {Really?} (to Ma Weenie) ...Noah says his ear is itchy. |

| | | |
|----|-----------|--|
| 59 | Ma Weenie | Give it a kiss! (Kisses his ear) |
| 60 | Luca | Is it still itchy Noah? |
| 61 | Ma Weenie | Drink up your juice, love. |
| 62 | Noah | What's this? |
| 63 | Ma Weenie | Don't play with it, darling. It'll get spilt. |
| 64 | Luca | Wee...don...dididi...pfff. (Luca playing at the table) |
| 65 | Ma Weenie | Don't do that please. C'mon. Don't spill it please. |
| 66 | Luca | ...blind...blind...Don't blind me.... |
| 67 | Noah | <i>ne</i> {Hey.} |
| 68 | Luca | <i>yamete, yamete</i> {Stop it! Stop it!} |
| 69 | Noah | <i>ne</i> , {hey.} ...don't by see yor |
| 70 | Luca | <i>arigatou, kampai</i> . Thanks, cheers!Ma Weenie, do you want to do <i>kampai</i> {cheers} too? |
| 71 | Ma Weenie | Yes, I'll do <i>kampai</i> {cheers} too. |
| 72 | Luca | Ok, don't drink it yet, Noah! <i>nomanai de ne. dame dame dame! sojanai to Ma Weenie to Luca-kun to Noah-kun no kampai nai yo</i> {Don't drink it! No, no, no! Or we all can't do cheers.} |
| 73 | Ma Weenie | Ok, let's do <i>kampai</i> {cheers} now! |
| 74 | Luca | Ok! Noah....everyone... |
| 75 | Noah | <i>kampai</i> (said together) {cheers!} (All clinking their cups together) |
| 76 | Ma Weenie | <i>kampai</i> {Cheers!} (said together) |
| 77 | Luca | <i>kampai</i> (said together) I have two. |
| 78 | Noah | It's not ready is it? |
| 79 | Luca | ...() ...four. |
| 80 | Ma Weenie | Ok, c'mon Noah, are you ready? Hold your drink! <i>Kampai!</i> {Cheers!} |
| 81 | Luca | <i>Noah, mou ikkai kampai</i> Noah, one more <i>kampai</i> {Cheers} |
| 82 | Ma Weenie | Not too hard. |
| 83 | Luca | <i>Kampai!</i> {Cheers!} (said together) |
| 84 | Ma Weenie | <i>Kampai!</i> {Cheers!} |
| 85 | Noah | <i>Kampai!</i> {Cheers!} |
| 86 | Noah | whoo whooo (blowing in his cup) |
| 87 | Ma Weenie | Don't be playing. Here you go! |
| 88 | Noah | No this. |

| | | |
|----|-----------|---|
| 89 | Ma Weenie | Well eat that and then you can have something else. |
| 90 | Noah | I want weetbix. |
| 91 | Ma Weenie | Ok, well we're having this first. |