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One? ¿Dos? Drei! A study of code switching in child trilingualism

Elena Davidiak
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ONE? ¿DOS? DREI!

A STUDY OF CODE SWITCHING IN CHILD TRILINGUALISM

by

Elena Davidiak

An Abstract

Of a thesis submitted in partial fulfillment
of the requirements for the Doctor of
Philosophy degree in Spanish
in the Graduate College of
The University of Iowa

May 2010

Thesis Supervisors: Associate Professor Mercedes Niño-Murcia
Assistant Professor Jason Rothman

ABSTRACT

This longitudinal study focuses on the language production of two siblings, aged 6 and 9 at the beginning of the data collection period, who have been brought up in a bilingual family in New York. The parents of the two girls are native speakers of German and Spanish, respectively, and English for them is the language of education and the larger community. The study specifically examines the phenomenon of code switching, or transitioning between languages, either within one sentence or within one speech situation. I examine the extent to which these switches are caused by deficiencies in vocabulary in a specific language, and seek to identify other possible causes for such transitions. The data collected mainly through recording and transcription of the children's speech within the family home allowed me to identify a number of sociopragmatic functions most commonly fulfilled by producing mixed utterances, such as referring to a specific person, including or excluding someone from the conversation, changing the interlocutor or the topic or explaining or insisting on a certain idea. Lexical need was also an important cause of code switching, although it did not prevail over the other categories. The distribution in the amount and function of code switches turned out to be in a dynamic state, with both quantitative and qualitative changes observed throughout the study period. The age difference between the children and the relationship between the younger and elder sibling were additional factors which influenced their language choice. I conclude that code switching, especially in the case of child speech, should be considered a fluid and multifaceted phenomenon which represents the speaker's role in the conversation and reflects multiple social and pragmatic functions; while elements of two (or more) languages are often combined for purely lexical reasons, this is only one aspect of trilingual code switching, which allows the speaker, consciously or not, to explore the three languages as ways of establishing his or her personality and looking at reality both within and outside the means of each particular language.

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The University of Iowa
Iowa City, Iowa

CERTIFICATE OF APPROVAL

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PH.D. THESIS

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To my grandmother

Words want to be free.
Author Unknown

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ABSTRACT

This longitudinal study focuses on the language production of two siblings, aged 6 and 9 at the beginning of the data collection period, who have been brought up in a bilingual family in New York. The parents of the two girls are native speakers of German and Spanish, respectively, and English for them is the language of education and the larger community. The study specifically examines the phenomenon of code switching, or transitioning between languages, either within one sentence or within one speech situation. I examine the extent to which these switches are caused by deficiencies in vocabulary in a specific language, and seek to identify other possible causes for such transitions. The data collected mainly through recording and transcription of the children's speech within the family home allowed me to identify a number of sociopragmatic functions most commonly fulfilled by producing mixed utterances, such as referring to a specific person, including or excluding someone from the conversation, changing the interlocutor or the topic or explaining or insisting on a certain idea. Lexical need was also an important cause of code switching, although it did not prevail over the other categories. The distribution in the amount and function of code switches turned out to be in a dynamic state, with both quantitative and qualitative changes observed throughout the study period. The age difference between the children and the relationship between the younger and elder sibling were additional factors which influenced their language choice. I conclude that code switching, especially in the case of child speech, should be considered a fluid and multifaceted phenomenon which represents the speaker's role in the conversation and reflects multiple social and pragmatic functions; while elements of two (or more) languages are often combined for purely lexical reasons, this is only one aspect of trilingual code switching, which allows the speaker, consciously or not, to explore the three languages as ways of establishing his or her personality and looking at reality both within and outside the means of each particular language.

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CHAPTER 1

INTRODUCTION

This concise introduction chapter serves as a roadmap of sorts to the dissertation. To that end, it sets the context for the present study within the current relevant theoretical literature; it also defines the research problem and the research proposal, as well as the research questions which will be addressed in this study. To facilitate the reading of the dissertation, the introduction also provides a brief discussion of the terminology which will be used throughout the text.

1.1 General Introduction

In today's world, the ever-increasing mobility of the population brings about a sense of greater cultural, national and local diversity, which in turn promotes language contact, and as a result, brings unprecedented attention to multilingualism as a social phenomenon (cf. Cruz-Ferreira 2006; Niño-Murcia and Rothman 2008 and works cited within). Multinational and multicultural families around the globe are also becoming ever more numerous (Cruz-Ferreira 2006, Tokuhama-Espinoza 2000, 2001). Children growing up in such families are often exposed to more than one language through their parents, and in many cases these heritage languages are supported, to a greater or lesser extent, by at least a subset of their primary linguistic data received from the environment. Multilingual/multicultural exposure has long been the norm in some societies; however, in others it is has only begun to be formally recognized and thus to receive the attention it deserves. The multilingual family has unique qualities and multifarious needs, which have only recently been addressed in the literature in a broad sense (Barron-Haumwaert 2004; Cruz-Ferreira 2006; Niño-Murcia and Rothman 2008; Tokuhama-Espinoza 2000, 2001, inter alia).

A child's ability to communicate in a number of languages represents a complex and multifaceted phenomenon not only because it involves the naturalistic acquisition of more than one grammatical system, but also because language learning and use do not occur in a vacuum. Since languages are inextricably tied to cultural, often idiosyncratic phenomena, their native use involves learning the socio-pragmatic distribution of behavior it represents. This project deals with a specific type of multilingualism, namely, child trilingualism, where exactly three languages are interfaced either simultaneously or at a phase where development is occurring in all three of them.

Multilingualism, including trilingualism, can be viewed in different ways; some earlier sources, such as Bloomfeld (1933), accept as true multilinguals only people who have a completely native-like level in all languages. However, the more widely accepted view of trilingualism qualifies multilingual speakers, children and adults alike, as individuals who have some level of ability on a gradient scale from passive/receptive understanding capabilities to the so-called idealized balanced multilingual. Under such an approach, effective and appropriate communication in each of the languages, whether or not said performances correspond to age-appropriate monolingual patterns, serves as the deterministic variable, delimiting and determining functional multilingualism (e.g. Cruz-Ferreira, 2006; Tokuhama-Espinoza, 2001, 2003). This broader definition, therefore, encompasses different forms of trilingualism. That is, trilingualism can adequately apply to the case of adults learning two foreign languages naturalistically or in a classroom setting simultaneously or successively, early childhood bilinguals who attempt mastery of a third language as older children or adults, as well as children who grow up exposed to three languages from birth or from a very early age. Conversely, the former, more restrictive definition accepts only the lastr as true trilingualism, and only in the most ideal scenario of outcomes for such a group. This project deals specifically with the situation where children are acquiring three languages from a very young age.

1.2 Problem Statement

In a situation where more than one language is consistently and abundantly available to a speaker, bi/multilingualism occurs as a consequence of this environmental factor. In such a case, there is likely to be some kind of interaction among these languages for grammatically qualitative and quantative reasons related to the environmental input, but especially because language use shared across all three is not in free variation, but constrained by the speaker's use of them in different social situations of his/her life.

For the purposes of this project, I concentrate on the phenomenon of code switching in trilingual children. Code switching (see e.g. Poplack, 1980; Sankoff and Poplack, 1981; Zentella, 1997; Bullock and Toribio, 2009, pp. 2-5 and work cited within) is a usually felicitous and structurally constrained combination of two (or more) languages and may occur either within one sentence ("intrasentential" code switching, see (1-2) below) or from one sentence to another within discourse ("intersentential" code switching, as in (3):

(1)
But I used to eat the *bofe,* the brain. And they stopped selling it because, *tenían, este,   lung*   had-3PPL, this
 le encontraron que tenía worms.   (Poplack, 1980: 597   "they had, well,   pron-DAT found-3PPL that (it) had
they found out it had worms"
(2)
Yo anduve *in a state of shock* por dos días (Pfaff, 1979, in Muysken 2000: 5)
 I walked   for two days
"I was in a state of shock for two days"

(3)
You know what? *Le va a tocar hacerlo solo*. I'm not doing that. (Personal data)
  Pron-DAT go-3PSG to have do-INF- pronACC alone
            "you will have to do it on your own"

Code switching (also spelled "codeswitching," as in Myers-Scotton, 1993a,b, or "code-switching", as in Auer, 1998) is frequently labeled as "code mixing" or "language

mixing." For the purposes of this project, I will treat code switching and code mixing as interchangeable terms, as in Poplack (1980), although some researchers suggest that there exist some differences between the two[1] and thus maintain a strict terminological separation.

The phenomenon of code switching has received significant attention in the literature on bilingualism, with the focus mostly on intrasentential switches; however, there is a lack of in-depth research on trilingual language mixes, which is also the case for trilingual data in a general sense (Rothman in press). According to the existing studies, mixes that involve a combination of all three languages are rare; trilingual speakers usually combine elements of two languages out of the three they have at their disposal (Edwards, 1994; Hoffman, 2001; Klein, 1995). Nevertheless, it is clear from observation alone that there is no privilege for a specific subset of the three languages, which is to say, codeswitching in trilingualism, while usually only combining two languages, still in a broad sense happens with any and all possible combinations of the three. Cruz-Ferreira (1999) and others state that language mixes seem to "constitute a strategy for learning" (p. 20) and indicate a wider range of communication devices rather than a lack of bilingual synonyms at the lexical level or parasitic cross-linguistic contamination of the grammatical systems during the development of any of the three languages of significant exposure in childhood. The early mixing of languages during the developmental ages for language is viewed more as a bootstrapping learning tool than mechanical transfer. Later on, assuming some level of competence in the languages in question, code switching might represent a sociolinguistically more complex

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[1] Meisel (1995) argues that "*Language-Mixing*" generally refers to all instances where features of the two languages are combined within a clause or across clausal boundaries, while "*Code-Switching*" is a specific subtype of mixing relating to the bilingual"s pragmatic competence-e.g. the ability to select the language according to the interlocutor, the context, topic of conversation, etc. without violating specific syntactic constraints. Muysken (2000) chose to use the term "*Code Mixing*" for "all cases where lexical items and grammatical features of two languages appear in one sentence", and the term "*Code-switching*" for a "rapid succession of several languages in a single speech event" (1), although this distinction is not quite clear. Finally, another phenomenon that may be labeled as "mixing" is the combination of morphemes within one word, such as "flipear" or "dropear", which will be discussed in Section 3.1.1

phenomenon, where more variables are deterministic factors, such as linguistic identity, enactment and negotiation, as well as the influence of the communicative audience, to name just a few. All the aforementioned suggests that multilingual children have extensive knowledge of language principles, which they apply in a wide variety of combinations. Hoffman (2001) shares Cruz-Ferreira's view of code switching as a communication strategy: "For bilinguals or trilinguals it is normal to move between different languages when talking with each other, and code switching is an essential strategy for them" (p. 11). Therefore, learners are not treated as unsuccessful monolinguals in each language, but rather as people who possess and manipulate more than one grammatical system; elements from these systems come into contact on a regular basis, and the speakers combine them in ways congruent with each language, but also reflecting unique properties specific to the code-switching situation. Accordingly, children can be viewed as active explorers of the languages they speak.

Hamers and Blanc (2000) present a functional approach to language behavior, stating that language production is rooted in the "social interaction with significant others" (p.15); thus, each language is used as required by specific social and cognitive functions which in turn are projected into actual utterances through a mapping of function onto linguistic form. For a multilingual child, the languages may be in a state of equilibrium, or in a state of changing relations, at the individual, interpersonal and societal levels. Any change in the mapping of form and function or in the social value of a particular language will lead to changes in language behavior. Therefore, multilingualism is expected to be a dynamic phenomenon, representing not a state but a process. This notion is supported in general by the vast majority of available empirical research (see e.g. Cenoz, 2003; Cruz-Ferreira, 2006; Edwards, 2004; Ervin-Tripp and Guo, 1992, in Ervin-Tripp and Reyes, 2005; Hakuta, 1994; Hoffman, 2001; Wong-Fillmore, 1991)

Language choices in trilingual children entail many linguistic issues different from both one-language competence and bilingualism, and should thus be treated as such. As a result, a study on trilingual code switching, in addition to contributing to the ample literature on code switching in general, should provide implications for the emergent study of child trilingualism, in terms of a more descriptive and explanatorily adequate theory-of-mind, the mental architecture of language design in general, the separation of linguistic systems in the mind of children who have more than one, the role and form of the language faculty and much more. However, here I will deal most directly with sociolinguistic factors relating to of the study of trilingual code-switching in childhood in order to inform the reader of what is known of parent and child linguistic strategies, the negotiation of language territory, and defining the children's multilingual identity. Language is inextricably linked to culture and represents a unique way of analyzing and interpreting the surrounding objects and events (Auer 1998, Cruz-Ferreira 2006, Grosjean, 1985, Hamers and Blanc, 2000, Rothman and Rell, 2006, Tokuhama-Espinoza, 2001); therefore, I will take the position that speaking multiple languages since early childhood must also be a dramatically different way to approach real-life situations and requires a distinct level of understanding.

1.3 Research Proposal

This study deals with language negotiation in a trilingual setting. It will be centered on the language choices of two trilingual siblings who are acquiring one language from each of the parents and one from the environment. Such families represent cases of "additive triligualism" (Cenoz, 2003), where a third language (the language of the environment) is acquired after the first two which develop simultaneously. In this particular case, this third language, introduced at a young age, but chronologically later than the first two, is English, the majority language of the larger society in which the family lives; thus, it has much support at micro and macro levels from a greater number

of sources than the parents alone, even with the help that the extended family and friends could supply. In light of this fact, it must be acknowledged that the children were not completely isolated from English from the first months of their life. Moreover, as is the case in all such situations where siblings are involved, we cannot assume that the younger child was not more exposed to the external society language (the L3) much earlier than the first despite what is reported by the parents. The first child's language production during early childhood (before attending daycare or kindergarten) is likely to be influenced principally by the speech of the parents and of other adult caretakers (nanny, grandparents), but with the second child the elder sibling can have as much – or even more – influence on the speech of the younger one, considering the amount of time siblings spend together. At a minimum the elder child is exposed to English systematically in school before the younger child and it is likely that the patterns of inter-sibling communication, despite parental intervention to the contrary, necessarily result in earlier exposure to the majority language of the society. In some cases, siblings also adopt specific patterns of communication, one acting as a type of mediator or translator for another, as will be discussed below. Nevertheless and despite the impossibility of strictly controlling for these input confounds, for many linguistic and sociolinguistic reasons studying child L3 acquisition in contexts like the present one is enlightening for reasons I highlight throughout this dissertation.

Specifically, I analyze the code switching patterns of the children in order to identify the factors behind them, based on the available data. The data may not necessarily provide clear-cut answers for the questions below, but at the same time it offers novel information that has not yet been taken into account. Although such a small number of participants does not allow for meaningful generalizations past the case of these two children's linguistic behavior, the fact that they are siblings and thus are raised in relatively similar conditions may allow us to hypothesize the extent to which language choices can be attributed to external factors rather than internal personal traits.

1.4 Research Questions

The main goal of the study is to investigate the social and pragmatic implications for switching between languages, either within one sentence or between sentences in one speech situation, in the speech of trilingual children within one family. Its main questions are:

1. Does the amount and the range of code switches increase with the amount of language experience?

I. Are there more and more varied switches in the speech of the elder child?

II. Does either child show an increase or decrease in the amount and range of switches throughout the study?

2. What are the main social functions of code switches present in the speech of the children? Do they account for the majority of switches, or is code-switching caused mostly by deficiencies in vocabulary?

1.5 Terminology

The terminology associated with the acquisition of two or more languages has been used quite variably. *Bilingualism* is the term usually used for an individual's ability to communicate in two languages[2]. Very often, trilingual competence has been referred to as *bilingualism*, because for some researchers this term is not strictly limited to two languages but rather refers to more than one language. The term *multilingualism*, on the other hand, expresses the idea that multiple languages are involved. Strictly speaking, however, both bilingualism and trilingualism are subtypes of multilingualism because each involves more than one language, two in the case of bilingualism and three in the case of trilingualism. It is reasonable to propose that trilingualism involves greater

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[2] Hamers and Blanc (2000) distinguish between *bilingualism* ("the state of a linguistic community where two languages are in contact and can be used within the same interaction" (p.6)) and *bilinguality* ("the psychological state of an individual who has access to more than one linguistic code as a means of social communication" (p. 6)). The latter is what is mostly referred to as "Bilingualism" in the present paper.

complexity as compared to the two-language situation (both in terms of the mental constitution of grammatical knowledge and of sociolinguistic competence) and that delays in developmental sequence might obtain due to the fact that it combines three independent language systems (see Sorace and Serratrice, 2009). As a consequence, it presents a greater variety of combinations between these languages for the purpose of interference and language mixing and embodies more costly processing needs (see Serratrice et al, 2009). In the same vein, trilingualism also involves a greater diversity of factors and contexts in which the languages are acquired, as compared to two-language situations.

According to Hoffman (2001), "no authoritative definition of trilingualism has been attempted – perhaps it has not even been considered important to have one." (p. 2). This term can refer to a number of situations where a person has some proficiency in three languages; one's grasp of each language may range from basic comprehension to native-like production; there may be a firmly established area of use for each language (defined by Hoffman (2001) as *recurrent trilingualism*, or one or two of them may be gradually retreating since they are no longer needed (*transient trilingualism*, Hoffman 2001). The order of acquisition can also differ from all three languages being acquired simultaneously to one being planted in a bilingual situation to a monolingual being exposed to two new languages simultaneously. In this project I adopt the definition of trilingualism as recurrent; in the case of my research participants it is also simultaneous or almost simultaneous, as the two children are exposed to two languages through the parents and a third one through the language community in which they live from birth.

In this Introduction, I have stated the objectives of this study and the specific research questions which it addresses. In the following chapters, I elaborate more on the existing literature on this subject, as well as the choice of participants and the research design and methodology used in the gathering and processing of data.

CHAPTER 2

REVIEW OF LITERATURE: TRILINGUALISM

This chapter provides an overview of the literature on trilingualism, with a primary focus on the most common patterns of three-language use in adults and in children. Such patterns vary in terms of the order and level of acquisition of each language, their functions, and the factors which positively or negatively affect trilingual competence, as well as the skills and abilities proper of trilingual speakers.

2.1 Types of Trilingual Settings

An individual's availability to any combinatorial grouping of languages can arise from a variety of circumstances. According to Edwards (1994), "in most instances, multilingualism arises, and is maintained, through contact and necessity" [3] (p. 39). A combination of three languages exists where both a source of input in each language and a need for communication in each of them are present. Instances of trilingualism can be subdivided across a continuum of four interrelated variables: (a) the age of the speakers at the time of the onset of first significant exposure, (b) the input they receive (type, modality and quantity), (c) assessed proficiency in each language, and (d) the order of acquisition of the languages. These four variables are not mutually independent per se, but can be. For example, the age of onset might correlate closely to input whereby child acquirers can be expected to receive more "naturalistic input" in general than adult-onset multilingual acquirers, but such tendencies are far from absolute. Moreover, within each variable, as in

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[3] Here I put aside the fact that, similar to the ability to communicate in more than one language found in bilinguals, most people identified as monolinguals are competent speakers of multiple dialects/registers of their native language that represent unique although very similar mental grammars (Cook, 2003; Rothman, 2008; Bullock and Toribio, 2009). This type of monolingual multilingualism is largely accepted and acknowledged, even in generative approaches to mental linguistic representation as described in Chomsky (2000). Herein, when I refer to multilingualism, I am referring to the most obvious of cases where three unique languages, as opposed to dialects of one, which make up the language pairings of the multilingual grammars.

the case of all instances of language acquisition, there are multiple layers of inherent variation across individual learners, which one can expect in a more polarized and perhaps deterministic sense when three languages are involved. It should be noted that the possible manifestations of these four variables coupled with the non-monolithic nature of their sub-internal factors logically result in a multitude of different possibilities that would all describe (various types of) trilingual learners, and such situations can be subdivided according to the age of the speakers, the type and amount of input they receive and their resulting proficiency in each language, as well as the order of acquisition.

Hoffman (2001, p.3) suggests the following classification:

I. Trilingual children brought up with two home languages which are different from the one spoken in the wider community;

II. Children who grow up in a bilingual community and whose home language (either that of one or both parents) is different from the community languages;

III. Third language learners, that is, bilinguals who acquire a third language in the school context;

IV. Bilinguals who have become trilingual through immigration;

V. Members of trilingual communities.

Another distinction made by Hoffman is between transient trilingualism and recurrent trilingualism. Transient trilingualism occurs when one of the three languages gradually becomes functionally less important than the other two and is eventually forgotten, attrited to a greater or lesser extent or never completely acquired, so that the speaker actually becomes a bilingual or monolingual with a trilingual background. This is quite common, especially in childhood trilingualism, in the cases in which one of the languages gradually loses functional importance as the child grows up and gradually loses contact with linguistic input and/or contact with a heritage language community. This can be seen, for example, in the cases when monolingual relatives who speak this language die or when they move away from the household, or when the family moves to

a different country (Ervin-Tripp and Guo, 1992, in Ervin-Tripp and Reyes, 2005; Hakuta, 1994; Wong-Fillmore, 1991). However, what is mostly discussed in the literature is "recurrent trilingualism," in which each of the three languages has its own functions and relates to a specific domain, and thus each one is preserved and developed by the individual to a greater or lesser extent. It should be noted, however, that the three languages are unlikely to be equally developed in every area of communication. One or even two of the three, although firmly established, is likely to be used less than the other two or the most dominant one, as shown in Hoffman (2001) and Cruz-Ferreira (1999). Since education is most likely to take place in only the societal majority language it is to be expected that one of the three languages will ultimately come to dominate the other two. According to Fishman et al (1971), an equal distribution among two languages in bilingual speakers is quite rare:

> Bilinguals who are equally fluent in both languages (as measured by their facility and correctness overall) are rarely equally fluent in both languages about all possible topics; this phenomenon is invariably a reflection of the fact that societal allocation of functions is normally imbalanced and in complementary distribution rather than redundant.
> (Fishman et al, 1971, in MacSwan, 1999: 30)

The same statement can also be applied to trilingual acquisition; however, a three-language situation is likely to present even more diversity in the level and area of usage, as well as the time of acquisition. Cenoz (2003) states: "Third language acquisition presents more temporal diversity than second language acquisition" (p. 72). The three languages may be acquired consecutively (Lx>Ly>Lz); two languages may be acquired simultaneously before the third one (Lx/Ly>Lz), as in the case of the children in the present study; or after the first one (Lx>Ly/Lz). There is also a possibility, however rare, that all three languages may be acquired at the same time (Lx/Ly/Lz). In reference to the classification of the types of trilingualism, it is necessary to say that the division lines between them are flexible rather than rigid. As stated by Hoffman (2001), "it is not

possible to discern clear cut-off points between the infant, the child and the older trilingual, or between simultaneous and subsequent trilingualism, or between natural acquisition and acquisition as a result of structured learning" (p. 9). Therefore, these classifications should be considered as long as they facilitate the studying of trilingualism, but not to such an extent that they become immutable frameworks forcing the researcher to encapsulate each specific instance of trilingualism within one of them.

The general argument presented and often challenged in most works on trilingualism is that third language learners possess specific abilities for language acquisition and use as compared to second-language learners. It is suggested in most studies on trilingualism that when the circumstances are generally positive in promoting and maintaining all of the languages known to a third language learner, bilingualism can be an important factor in developing L3 proficiency. Most research in this area is represented by studies of L3 acquisition through schooling and therefore is not relevant to the present project. Thus, only a brief summary of their findings, which suggest that, at least in adults, L3 acquisition differs considerably from the acquisition of both the L1 and L2, suffices.

The specific abilities and competences that seem to be enhanced by existing bilingual experience are pragmatic competence (Safont Jorda, 2003), metalinguistic awareness (Bialystok, 1991, in Hoffman, 2001), and language processing capabilities (Cenoz, 2003, Sanz, 2000). Hoffman (2001) states that in the case of trilinguals, "the experience of three different languages also results in further enhanced awareness of the analysis and control components of processing to enable the speaker to make the right choices and respond in linguistically and communicatively adequate ways" (p. 14). Trilinguals' choices are potentially more numerous; therefore, more instances of grammatically odd and/or pragmatically inappropriate usage can be expected. But generally, L3 learners do not show more erroneous usage than L2 learners. This means

that they have a wide range of mediating social and psychological factors which restrict their choice.

2.2 Trilingualism, Monolingualism and Bilingualism

As rightly pointed out by Romaine (1984), " it   would   certainly   be   odd   to encounter a book with the title "Monolingualism". However, it is precisely a monolingual perspective which modern linguistic theory takes as its starting point in dealing with basic analytical problems such as the construction of grammars and the nature of competence" (p. 1). This perspective allows for a type of default setting which bilingual or monolingual competence may be compared to, but it is by no means the only way of evaluating the performance of a bilingual or trilingual speaker. Rothman and Niño-Murcia (2008) discuss the possibility of measuring multilingual success or failure towards the production of multilingual speakers in each corresponding language. They argue against using monolingualism as the ultimate "benchmark" for assessing multilingual production, stating that bilingual competence cannot be perceived as equal to a sum of two monolingual systems, since both the conditions in which the languages are learned and their functions are bound to be different even in the unlikely situation that the amount and type of exposure to each language are relatively similar, although the mechanisms (i.e. learning strategies, inborn language faculty and processing capacities) that underlie each speaker's bilingual acquisition are one and the same. Besides, while from a particular perspective it might be reasonable to expect monolingual grammatical competence to be more or less uniform for each speaker exposed to a particular dialect, independent of the context where it is acquired, the end-state of each language in bilingual acquisition varies greatly across speakers in a holistic sense and within the same speakers across different grammatical properties (see Montrul 2008 for discussion). Grosjean (1985) also considers a bilingual speaker to be more than the sum of two monolinguals, stating that that the bilingual has also developed unique language

competence, similar to the findings of the studies quoted in the above section. Extending this statement to the trilingual situation, trilingualism should not be treated as either a sum total of three monolingual systems nor as similar a priori to a bilingual situation with the advent of yet another language, because it represents even greater implicit variation in linguistic and social context and in the level of variability among the learners (cf. Cruz-Ferreira, 2006; Rothman and Niño-Murcia 2008).

2.3 Factors that Influence Trilingual Competence

Trilingual situations arise due to a variety of factors, and these may be critical for the level of competence in each language. Below is a discussion of some such factors most often described in the literature on trilingual acquisition.

2.3.1 Favorable Conditions for L3 Acquisition

According to Cenoz (2003), third language acquisition involves a diversity of factors, such as the context in which each of the languages was acquired, the age of acquisition and the area of use of each language. Depending on these factors, bilingualism may or may not facilitate L3 acquisition. Specifically, within the study of child additive trilingualism, the majority of recent studies have taken place in Spain, in classroom settings where Spanish-Catalan and Spanish-Basque bilinguals are acquiring English as a foreign language. Among these are the studies by Sagasta Errasti (2003), and the ones mentioned in 2.1, Safont Jorda (2003) and Sanz (2000), which indicate a wider range of communicative and writing strategies used by bilinguals as compared to monolinguals, as well as their better progress in English. This conclusion has been confirmed by Cenoz and Valencia (1995).

Notably, all of these studies were conducted within a relatively limited territory where the sociopolitical situation and the advent of societal bilingualism are very

different from the type of trilingualism that I examine in the empirical study portion of this dissertation. That is, in Spain in both the Basque Country and in Catalonia, and despite the fact that Basque and Catalan are minority languages within Spain, both Catalan and Basque are decidedly prestigious languages with high social and functional capital, and are often the languages of instruction. This is an unusual situation, too, because in most multilingual communities the language of instruction is the greater society's majority language. It is noteworthy that the Spanish studies all state the importance of bilingualism and its positive effects on third language development. The results of these studies confirm the role played by the status of the minority language in promoting the successful acquisition of a third language. Extending Romaine's statement that "bilingualism cannot be understood except in relation to a social context" (1984, p. xiii), the same can be stated about trilingualism, except that the social context which allows for or leads to the subsequent or simultaneous acquisition of three languages is, again, more complex than that of a bilingual due to the presence of three language groups, each of which exerts a certain type of influence upon the speaker.

Literacy in both the majority and minority languages is also perceived by many as a factor in determining any advantage of trilingual learners over bilinguals. However, literacy cannot be taken to be the one decisive factor in language proficiency; one can be illiterate but fluent in a language, and the opposite may also be true. MacSwan (1999) considers the incorporation of literacy as an aspect of communicative language proficiency to be particularly problematic. MacSwan argues that any definition of language proficiency that suggests literacy to be a "normal" part of language development is troublesome because language acquisition is different from literacy acquisition in a fundamental way. Child language acquisition, both monolingual and bilingual, occurs without overt instruction in supportive social contexts. Literacy acquisition, however, ". . . is dependent upon direct or tactic instruction, practice, and considerable effort, like success in other academic environments" (p. 17). MacSwan

concludes that if literacy is taken as a crucial aspect of language proficiency, it would mean that members of cultures and societies with no writing systems have relatively low language proficiency whether they are monolingual or bilingual, in contrast to the highly proficient members of Western cultures. MacSwan's preoccupation is duly noted and very pertinent for the implication he points out; however, it may be simplistic. Recent generative work looking at the acquisition of child Brazilian Portuguese (Pires and Rothman, 2009) as compared to European Portuguese using the same empirical measures (Pires, Rothman and Santos, 2009) has shown that some properties of standard Brazilian Portuguese, namely inflected infinitives, in which educated monolingual adults demonstrate full competence (e.g. Pires 2006; Quicoli 1996; Rothman and Iverson, 2007) is not acquired until the age of 13 in the case of Brazilian Portuguese whereas European Portuguese speakers demonstrate this knowledge by the age of 6. Pires and Rothman (2009), testing the latent predictions of diachronic proposals, argue that inflected infinitives are no longer actually part of Brazilian Portuguese vernacular dialects (see Pires (2006) and works cited within) and maintain that children do acquire inflected infinitives in Brazilian Portuguese as part of their native grammar, but come to have full competence of them via the literacy process in which they acquire standard Brazilian Portuguese that clearly maintains them. However, standard Brazilian Portuguese is not the native dialect of the vast majority of speakers. That European Portuguese children acquire these forms early is merely a reflection of the input at their disposal, which instantiates inflected infinitives in every dialect of European Portuguese. These studies are relevant since what they show is that some properties that cannot be teased apart later in educated learners may not be acquired as part of their naturalistic L1 process. So, even under the generative conceptualization of how languages are acquired, effects on grammatical competence stemming from literacy and educational effects are not incompatible with how languages are acquired. Hamers and Blanc (2000) argue that literacy in a language will induce changes in the individual's language competence,

because processing a written text calls for the ability to use decontextualized language to a greater extent than processing spoken language and because the array of topics covered in written forms of communication is greater than the topics usually present in spoken language. Moreover, Rothman (2007) found that in Brazilian Portuguese, certain language properties may only be acquired through formal education. While the findings of this study are specific to a phenomenon not found in Spanish, German or English, its general implications are important to the design of this study, and special attention will be paid to the children's level of literacy and the parents' attempts at introducing the children to more complex/abstract notions in their respective languages.

2.3.2 Language Transfer

"Language transfer" is a label used to describe the transfer of linguistic properties from a previously acquired language into one that is in the process of being acquired; in a trilingual setting, it can refer to the transfer of features from either of the two languages into the third one (Cabrelli et al., 2008; Flynn et al., 2004; Rothman and Cabrelli-Amaro, 2010). Language transfer is often viewed as a learning strategy in trilingualism studies (Baker, 2001; Bialystok, 2001; Hoffman, 2001; Riccardelli, 1992, in Cenoz, 2003; Sanz, 2000). This view can be applied to both child and adult trlingualism; even considering that there may be significant differences, the study of adult transfer may provide ground for the study of child transfer. It is important to note here that the use of the word "transfer" is understood differently in a paradigmatic sense. From a functionalist perspective, which is descriptive by its very nature, transfer is understood, as in Baker (2001), for example, as descriptive properties and linguistic behaviors, and thus transfer can be spoken about in terms of "learning strategies". Conversely, in formal linguistic acquisition, transfer is not envisaged as a learning strategy, which would make little sense since transfer is not described in descriptive, surface terms, but is instead understood as referring to the formal properties, that is, morphosyntactic or phonological function

features from a previously acquired language that give rise to both a mental linguistic system and result in the surface realizations of linguistic output. Notwithstanding, viewing transfer in functionalist terms, Clyne (1997), who studied the linguistic behavior of bilingual immigrants to Australia acquiring English as the language of the host country, considers transfer to be one learning strategy that bilinguals have as an advantage. Three families participated in the study. In two cases, L1 and L2 were quite closely related (Dutch/German and Italian/Spanish), and in the third case, L1 and L2 differed considerably (Hungarian/German). In all cases, English served as the *lingua franca*, the language of communication in the new environment. Among the tendencies observed by Clyne was the transfer of a linguistic property which was shared by the speakers' L1 and L2 into the third language, particularly in the case of initial Dutch/German bilingualism. This tendency is similar to bilingual transfer, but is more complex, because in a trilingual setting such a property is synthesized from two languages before being applied to the third one (English). Another issue observed by Clyne was the transfer of English lexical items into other languages; these items served as a bridge not only between English and the speaker's L1 or L2, but also between the L2 and L3. Clyne also commented on the fact that the participants of the study gradually started to use English more frequently and that one of the remaining two languages was used much less than the other. This confirms the statements by Hoffman (2001) that one of the three languages tends to be used less than the other two.

Clyne's study is important in that it presents language transfer and combinations of two languages as strategies for learning, as tools for language exploration, rather than describing them as a failure to use target forms correctly and, therefore, as failed attempts at monolingual functioning in the target language. It also states the importance of language authority in linguistic choices. Whether L1 and/or L2 are perceived as stigmatized variants and reduced to communication with monolingual family members, or whether they are firmly established in the community alongside the dominant

languages and each have special functions, is crucial in the distribution of the languages. Individual family atmosphere is also influential in language maintenance or language loss, but it is still an open question whether family views and values can compete with community views and values in promoting or stigmatizing a specific language or languages. The questions of language authority and family speech patterns are also extremely important in child language acquisition (Barron-Haumwaert, 2004; Cruz-Ferreira, 2006; Lanza, 1992; Rothman and Niño-Murcia, 2008; Tokuhama-Espinoza, 2000) and will be further discussed below in the section on child trilingualism.

The general implication of the existing research on trilingual speakers is that trilingual language competence means wider experience in language learning; trilinguals are thus characterized as "expert" language learners. Klein (1995) proposes that bilingual learners of L3 have a higher rate of acquisition, and that all learning processes develop faster in L3 learning. Klein therefore states that there is a difference in acquisition rate, "but not in route" between L2 and L3 learners. Klein's study is quite unique for its time, being truly generative and thus describing acquisition at the level of morphosyntax as opposed to the lexicon or language use alone. However, it also presents the oversimplification of many issues that could not be properly addressed at the time. Rate of convergence in L3 learners may be more rapid and this may have more to do with metalinguistic awareness and language learning experience than anything else, along the lines of the observation that adults learn language faster than children at the outset (Long 1990). However, there are now three competing models of the L3 initial state, The Cumulative Enhancement model (Flynn et al. 2004); the L2 status factor (Bardel and Falk, 2007) and the Typological Primacy Model (Rothman in press). All of these, in fact, predict the route to be quite difference and make verifiable predictions as to how this should surface. Also, we should keep in mind that Klein's study also deals with adult third language acquisition; child trilingualism may or may not share increased rate, depending on the order of acquisition. In simultaneous bilingualism and trilingualism, the

age of first utterances is usually considerably later than in monolingual children (Tokuhama-Espinoza, 2003), likely because the child needs to deconstruct more than one grammar and corresponding lexical system, while in additive child trilingualism, the third language catches up with the other two at an increased rate (Cruz-Ferreira, 2006; Mantero and Herpe, 2007). Besides comparing the rate of acquisition, many recent studies go further by stating, contrary to Klein, that the difference between the acquisition of the L2 and the L3 is not only in speed but the manner of learning: L3 learners formulate wider grammars which initially include ungrammatical sentences but allow them to progress with greater speed. According to Hoffman (2001), the differences between bilinguals and trilinguals are not merely quantitative. The ability to manipulate three language systems implies specific abilities. Hoffman mentions "the ability to distinguish between three codes, assign linguistic items to distinct linguistic systems, and work out their relative distance from each other suggests specific competencies − which, to be confirmed, need to be investigated" (p. 15). Thus, L3 learners are expected to use a wider variety of compensatory strategies, be more sensitive in terms of pragmatic competence and possess more macro-level devices than second language learners. As stated by Cenoz (2003), "Bilinguals use a wider range of linguistic and mnemonic strategies and are more flexible in their use than monolinguals." Therefore, there must be both quantitative *and* qualitative differences between L2 and L3 learning, the rate and route depending on the specific circumstances.

Child trilingualism has been investigated in a number of studies. Notwithstanding, there are still more questions than answers in this area. Long-term studies are few and, according to Hoffman (2001), "none of them is comparable in scope and depth to well-known bilingual ones" (p. 5), and therefore, there is little information on the development of child trilinguals. The earliest studies of children acquiring more than one language were produced by linguist parents who recorded and analyzed their children's speech (Leopold, 1939-1949; Ronjat, 1913). These serve as a kind of prototype for later studies

both in bilingualism and trilingualism, and in fact most longitudinal studies on child trilingualism also involve a parent studying his/her children's linguistic development. (Cruz-Ferreira, 2006; Fantini, 1985; Tokuhama-Espinoza, 2003) These are the studies that follow the children's linguistic development into adolescence and adulthood. Tokuhama-Espinoza (2003) is one of the existing studies whose participants are now adults and about to have their own children; it shows a case of successful acquisition of three languages that continue to be used on an active basis; however, more long-term studies are needed in order to investigate whether trilingualism tends to change into bilingualism or monolingualism with a trilingual background, or whether, under favorable conditions, a passive and/or active knowledge of each language remains throughout the individual's lifespan.

2.4 Sample Longitudinal Study of Child Trilingualism

One author who has studied the production of trilingual children over an extended period of time is Cruz-Ferreira (1999, 2006). What makes this study a good transition to the following section, which deals with the phenomenon of code switching, is the fact that she examines, among other aspects, the code switching patterns in the children's speech. What we have considered so far have been primarily lexical or syntactic switches; Cruz-Ferreira mainly works on phonological mixes. Still, her data contain numerous examples of mixed utterances which can be analyzed in terms of structure and lexical elements; she also provides insights into the questions of language negotiation and distribution and the role of switches in the children's general linguistic development.

This study concentrates on the phonological level, namely the mixes involving prosodic patterns. Transfer of prosodic patterns is typical of the speech of both second and third language learners. Cruz-Ferreira sought to determine whether this type of transfer could be characterized as a negative or positive sign in the process of third language acquisition. She argues that prosodic mixes do not indicate that trilinguals have

limited competence in each language, but rather, that mixes indicate quite the opposite: trilinguals' profound knowledge of the meanings attached to prosodic patterns.

Cruz-Ferreira suggests the following terminology for the definition of prosodic mixes: the term "mix" is "any intrusion, that is, any instance where an utterance is not a clear example of one language only" (p. 5). She also uses the terms *host language* and *guest language* to indicate the cases where one feature of one language is used to perform a function in another language. There was no need to describe situations with one host and two guest languages because the subjects used mixes that involved only two languages at a time. It was assumed that trilinguals do not favor trilingual mixes; however, Cruz-Ferreira comments that this question needs further investigation.

The three children described in the study were primary bilinguals in Swedish and Portuguese who had acquired English as the language of schooling. Starting at the babbling stage of their L1s, the children used the rhythmical and intonation patterns typical of Swedish and Portuguese. This suggests that before they had started to acquire English, they presumably had a good command of the prosodic structure of both of their native languages. They sometimes mixed Swedish and Portuguese prosodic patterns, but the majority of multilingual mixes started to appear in their speech after they were introduced to English. The study analyzed two intonational devices of English: the high-fall and the fall-rise. The high fall occurs in Portuguese, but with a different meaning, and the fall-rise is nonexistent in Portuguese. Considering the stress patterns, the nucleus mobility within the tone group was analyzed; it is typical of English and does not exist in Portuguese (that is, in Portuguese the nucleus within a tone group is fixed, based on the structure of the sentence and not on the intention of the speakers or their wish to stress a particular element). In all three cases, transfer of English patterns into Portuguese was observed. In many cases, the Portuguese utterances were fashioned in a way that accommodated the English intonation. On the whole, the children had a systematic pattern of prosodic usage in Portuguese, with specific patterns, Portuguese or English,

assigned to specific meanings. Another important observation was that the children started mixing more Swedish into Portuguese and Portuguese into Swedish after they started to mix English into both these languages. The children's mixes remained exclusively at the level of prosody, the level of language that was acquired first, before and at the one-word stage.

Cruz-Ferreira states that it is necessary to keep in mind three facts about prosodic mixes in multilingual acquisition strategies: (a) Prosody is important in language acquisition and needs to be acquired, just like any other aspect of language; (b) mixes are a normal sign of the development of multilingual competence; and (c) despite the fact that studies on child multilingualism usually concentrate on mixed utterances, bilingual speech is not mixed by definition, and on many occasions can be mix-free in each language. Therefore, prosodic mixes are an active learning strategy and cannot be attributed to a lack of bilingual synonyms, but rather to an interaction between a number social and discourse factors.

The importance of this study is that it touches upon a number of code switching aspects which are extremely important in the study of mixed trilingual speech: the question whether switches signal limited competence or, on the contrary, successful acquisition; the presence or absence of three-language mixes in trilinguals' speech; the causes behind code switching in trilingual siblings; as well as a number of methodological issues in the collection and analysis of longitudinal speech data from children. All of these issued, alongside other important aspects of child code switching, will be analyzed in the following chapter.

2.5 Summary

In this chapter I have discussed the data provided by the literature available from the existing research on trilingualism, including data regarding trilingual competence in children and its implications and limitations. I stated that child trilingualism shares

multiple traits with child bilingualism, but presents more variety both in the level of competence in each language and in the amount and types of possible language combinations.

CHAPTER 3

REVIEW OF LITERATURE 2: CODE SWITCHING

In this chapter, I move on to the particular aspect of trilingual production I will focus on, namely the phenomenon of code switching. This phenomenon has been studied from the structural and sociopragmatic point of view, in both adult and child speakers and in a variety of language combinations. In the second half of the chapter, I focus on code switching in the speech of multilingual children and review the findings of the literature on child trilingualism that are relevant to the present study. This chapter concludes with a discussion of some methodological issues in sociolinguistic research that are relevant for the design and execution of the current study.

3.1 Defining Code Switching

Code switching (CS) is a complex linguistic process common in multilingual speech. Code switching involves the combination of at least two languages and, as stated earlier, can occur either intersententially (between sentences in a given speech act, when each of the sentences is produced entirely in one of the two languages, as in (4)) or intrasententially (within the syntactic realization of same sentence or sentence fragment, within one clause (usually some type of lexical insertion) or between clauses of multi-clausal sentence, as in (5)):

(4)
Es que ya es muy vieja para este tipo de cosas. She is seventy-one, you know.
be-SPSG that already be-SPSG very old for this kind of things
"it's that she is already too old for this kind of things"

(5)
Si le vas a pedir a piece of advice *a tu* advisor…
If 3Pron-DAT go-2PSG to ask   to your
"if you are going to ask your advisor for a piece of advice"

The former type of code switching has also been labeled *classic* (Myers-Scotton, 1993a) or *alternational* (Muysken, 2000), and the latter *insertional* (Muysken, 2000) – although *intersentential* and *intrasentential* (or *inter-sentential* and *intra-sentential* (Poplack, 1980) are the most widely accepted terms.

Grosjean (1985, also in Lüdi, 2003) calls this mixed form of language behavior a *bilingual mode* of speaking. According to Grosjean's model, bilinguals' ways of expressing themselves are represented along a continuum going from a monolingual mode to a bilingual mode. The closer they get to the *bilingual pole* via a context or situation, the more likely they are to activate both languages they have at their disposal and therefore to produce a mixed utterance.

The phenomenon of code switching can be studied from different perspectives; at a minimum there are a number of fundamental aspects to this phenomenon, which of course are not at all mutually exclusive variables: (a) its social implications and the environmental factors that conspire at the macro (societal, environmental) and the micro (or individual, familial) levels, (b) its grammatical properties, which can be explored at these two levels as well, and (c) the psycholinguistic approach which investigates the cognitive mechanisms behind trilingual production. These approaches combined may provide a complete analysis of CS; however, in reality any existing study will more or less limited to one of the above aspects, which in themselves are complex and can be analyzed from a number of viewpoints. This study deals primarily with the sociopragmatic dimension of code switching. Nevertheless, a brief overview of the structural aspects is necessary in order to better understand the nature and origins of code switching and thus properly contextualize what this dissertation endeavors to examine in more depth at the sociolinguistic level.

3.1.1   Structural Approaches to Code Switching

The syntactic structure of mixed utterances has received considerable attention in linguistic research. All the literature reviewed above applies to intrasentential switches, since in the case of intersentential code switching each sentence is produced fully in one language and therefore it is logical to expect that only the syntactic rules of that specific language apply to it. When considering intrasentential switches, the first question to ask is whether a combination of two languages is random or grammatically constrained and, in the latter case, whether these constraints come from either of the languages or are specific of code switching proper. Researchers have dismissed code switching as a random and/or deviant process of language production both within formal linguistic approaches (see Bullock and Toribio (2008) and literature reviewed therein) and the sociolinguistic literature (see Poplack (2000) and literature reviewed therein), demonstrating that code-switching occurs under highly specific linguistic regulations, is highly constrained and conforms not only to universal restrictions of linguistic well-formedness, but also to the language-specific constraints of each of the languages that comprise the language combinations. (Labov, 1972, Lance, 1975, Weinreich, 1953/1968, in Poplack, 2000). For example, the data on code switching shows that speakers do not usually produce utterances with monolingually ungrammatical sentence fragments nor are they able to indiscriminately switch between the languages, suggesting that there exist independent universal principles to felicitous code-switching (MacSwan 2000, Toribio 1996).

Early hypotheses include proscribing certain switch sites, such as between nouns and verbs or between conjunctions and their conjuncts (Gumperz, 1967/1982, in Poplack, 2000). Another attempt at systematizing the data on code switching came from Poplack (1978/81, 1980), where the following conclusion was drawn: "The order of sentence constituents immediately adjacent to and on both sides of the switch point must be grammatical with respect to both languages involved simultaneously" (Sankoff and

Poplack 1981: 5). According to Poplack, the sentence fragments in each language need to be internally consistent with the morphological and syntactic rules of the source language. This provides ground for the first restriction on code switching proposed by Poplack:

A. The *Equivalence Constraint*. The switch must come at a point in the sentence where it does not violate the grammar of either language. Therefore, Spanish/English switches such as "*la casa *pink*" are ungrammatical because the postposition of the adjective, while grammatical in Spanish, does not exist in English (see Demonte, 2008 for a recent explanation within formal syntax that explains the difference between available syntactic positions of adjectival placement and their semantic corollaries on the basis of whether or not the language has covert or overt nominal movement). It is possible however to have the Spanish/English switch "Quiero *oranges*" or "I painted *la casita*" because both English and Spanish share the construction in which the object follows the verb.

Poplack also proposed a second constraint on code-switching:

B. the *Free Morpheme Constraint*. According to this constraint, switches are restricted when they require combining morphology of two or more languages, that is, when a lexical word is combined with morphosyntactic elements. For this kind of combination to occur, the word has to be phonologically adapted to, the language supplying the functional morphology. Thus an English/Spanish switch "*smash*ear*" is impossible because "smash" is distinctively English in sound (although the addition of an epithetic [e] to break the illicit word initial onset could make it possible). But "flip*ear*" is possible because the phonotactic conditions of Spanish allow for such a phonological word to be possible and thus felicitously adapted by adding the inflectional infinitival morphology to the English stem.

Poplack developed these two constraints in the basis of Engish-Spanish data gathered from Puerto Rican speakers; however, their validity has been challenged in a

number of studies which present mixed utterances with other language combinations; Bentahila and Davies (1983) and Di Sciullo et al. (1986) challenged the Equivalence Constraint on the basis of both absence of CS in Poplack's data where it could be expected and its inconsistency with their own data. Bentahila and Davies proposed that the restrictions always respected in CS are based on subcategorization, not word order equivalence. Di Sciullo et al. suggested an alternative constraint on the basis of Italian-French-English and Hindi-English code switching data, the Government Constraint, which bars code switching between a lexical head, such as a verb, and the highest constituent this head governs, such as the determiner in the verb's noun phrase. This constraint, in turn, was dismissed by Belazi et al. (1994) as incompatible with their data, and replaced by the Functional Head Constraint, which prohibits code switching between a functional head, e.g. Determiner, Quantifier or Complementizer, and the complement (noun phrase, verb phrase, etc.) that this functional head f-selects. Again, later sources (Bhatt, 1995; Halmari, 1997) analyzed and presented data which do not support the application of this constraint. However, what all these approaches have in common is the idea that code switching is not equal to a random combination of language elements but occurs within specific boundaries proper of the languages at play. According to Poplack (2000), it is also important to keep in mind that code switching is not equal to lexical borrowing, although both are manifestations of language contact. Loan words, while conserving their initial etymology, assume the phonological and often the syntactic features of the loan language; they are also widespread through the community and shared by the majority of speakers, while code switching patterns are more instantaneous and unique. Also, the mere length of the language element can help to distinguish between a true switch and a borrowing: "The difference would simply be the size and type of element inserted, e.g. noun in borrowing vs. noun phrase in code switching" (Muysken, 1995, p. 180). There also exist spontaneous insertions of unassimilated loan words from one language into another, often called *nonce borrowings* (Poplack et al.,

1998). These, in contrast to lexical borrowings, are speaker-specific and maintain most of their original phonology. The methodological issue with this distinction would be to draw the line between one-word switches that can be considered true switches and those that can be labeled as *nonce borrowings*, since one would also expect that a switch into another language would also mean a phonological switch into that language. Nonce borrowing is therefore somewhat closer to code switching; for this reason some researchers, such as Myers-Scotton (1993a) state that nonce borrowings and code switching fall along a continuum of contact forms between two (or more) languages..

Another important question that has received significant attention in research is whether one of the two languages which constitute the combination has some type of structural dominance over the other one. There are two conflicting points of view on this issue in current literature. Myers-Scotton (1993, 2002), and Jake et al (2005) introduce the notions of *matrix language* and *embedded language* within the so-called Matrix Language Frame model. Within this model, the two participating languages are in an asymmetrical relationship, one being the *matrix language* (ML) and the other one being embedded in it (EL – the *embedded language*). Again, since intersentential CS involves only full sentences in each language, this model deals exclusively with intrasentential CS. Specifically, Myers-Scotton (1993a) suggests the notion of *congruence* within the Matrix Language Frame, stating that in mixed utterances, the Matrix Language provides the word order of the sentence (the Morpheme Order Principle) and the grammatical frame of the clause (the System Morpheme Principle), while the Embedded Language provides the content morphemes, as long as these are sufficiently *congruent* with their Matrix Language counterparts at the various levels of the mental lexicon. However, the notion of congruence and what makes it sufficient to allow mixing still remains unclear and needs further development. Partly in order to clarify this, Myers-Scotton has developed a number of subsidiary principles which would help to explain this process, as well as justify the counter-examples to the two original principles. The Embedded Language

Island Principle allows for EL morphemes in *islands* consisting purely of EL words, and the Double Morphology Principle permits the use of an EL system morpheme is it is equivalent to its ML counterpart.

While the combination of these principles may be too complex and descriptive, the MLF model remains one of the stronger theoretical developments for CS, although in many cases the researchers do not use the actual terminology when describing one of the participating languages as the foundation of the utterance and the other one as constructed upon this foundation (see, for instance, the terms *host language* and *guest language* used by Cruz-Ferreira (2007), in 2.4 above). However, other authors, such as MacSwan (2005), reject the assertion that the MLF model (and the *matrix language* concept in particular) is necessary for any successful analysis of code switching data and argue that the empirical predictions of the MLF are inconsistent with the facts of code switching, recommending that research on code switching depart from CS-specific constraints like the MLF model and begin to analyze language contact phenomena in terms of the general constructs of linguistic theory, with no code switching-specific mechanisms permitted (the Null Theory). The main drawback of the Null Theory is likely the fact that it presents more of a point of view than an actual structural framework which would apply to CS; also, the absence of CS-specific principles and constraints and the application of just the language-specific one makes CS seem like a peripheral phenomenon, rather than a legitimate and widespread speech process. Yet other researchers, such as Bhatt (1997), have suggested that CS is indeed governed by grammatical constraints, but these are ranked by manner of the Optimality Theory, thus accounting for the possible variations in CS utterances. Paradis's (1987, 2004) Activation Hypothesis suggests that a type of activation threshold can be raised in a language to avoid interference and in case of code switching is lowered in each language thus accounting for mixing, specifically, "in the case of extremely frequently used items, such as closed-class grammatical morphemes, the threshold may be so low as to show no

fluctuation because of the strong frequency effect" (Paradis 2004:224). This suggests, however, that CS will invariably happen with all closed class items, which is extremely over-generalized. Besides, Paradis's hypothesis makes no mention of social, personal or societal factors or the typological proximity between the languages. These factors, however, are present in Muysken (2000), who proposes a set of CS strategies: *alternation* (complete switch from one language to another, in both structure and lexicon), *insertion* (of words and phrases from one language into a structure generated by the grammatical system of the other one), and *congruent lexicalization* (in typologically similar languages, where the structure allows for a lexical switch at any point in the sentence). Muysken also relates these three strategies to the sociopragmatic aspect of CS, stating that alternation is typical in stable bilingual communities, insertion is common in former colonies where the speakers are more familiar with the substrate language, and congruent lexicalization is often observed in communities where large groups of speakers are equally fluent in two related languages. This distribution, again, may seem like an oversimplification of what actually happens in bilingual groups, but the attempt to provide link between the two aspects of CS still deserves attention. A somewhat similar attempt was made by Chan (2009), who suggests that there may be more than one way of combining elements from the two languages. If the two languages have more than one rule for a specific construction, the bilingual speaker has access to more than one structurally appropriate option for creating a mixed utterance, the choice often being "functionally motivated by sociolinguistic, pragmatic, or processing factors" (Chan 2009:198), thus allowing for a variety of constructions in different bilingual situations. This syntactic/pragmatic interface presented by Chan brings us directly to the next section which deals specifically with the other side of the CS process. Ultimately, it is important to restate that although there are conflicting accounts on the structure of mixed utterances, all these accounts still maintain that code switching is not free and random but structured and constrained and does not violate the structure of either language at play,

or, as Poplack (1980:586) put it, "switches will tend to occur at points in discourse where juxtaposition of L1 and L2 elements does not violate a syntactic rule of either language".

3.1.2   Social and Pragmatic Aspects of Code Switching

The following section deals with issues most relevant to this study: the social and pragmatic factors that motivate a trilingual speaker to produce mixed utterances. These have been discussed from different angles and at different times, thus the concept of code switching has developed gradually from being viewed as a sign of deficient acquisition in each language to being valued as a sign of language development and possibly even a sign of expressive and pragmatic abilities beyond those of monolingual speakers.

3.1.2.1 Code Switching as a Coping Strategy

MacSwan (1999) states that code switching may be perceived as a coping strategy for dealing with certain communicative deficiencies in one or both languages involved. In earlier studies, these perceived deficiencies were referred to as *semililgualism* (Cummins and Miramonte, 1989, in MacSwan, 1999). *Semilingualism* was considered to be a state in which a bilingual may lack linguistic competence for some or all languages in his or her repertoire. This was often taken as the reason for the low academic achievement of many multilingual children (Milroy and Muysken, 1995, Tokuhama-Espinoza, 2003). This term was applied exclusively to ethnic minorities and never to the speakers of the mainstream language (Wei, 2000), and therefore had clear nationalistic overtones; however, it was a common view until about the 1980s when it received massive criticism (Martin-Jones and Romaine, 1985; Poplack 1980;) for both the faulty terminology (implying that the speaker has less than one language at his/her disposal, when in fact it is two language systems that differed from either of the monolingual equivalents) and the stigmatized view it imposed on the speakers of minority languages**.** According to

MacSwan, "If teachers believe that code switching relates to an inherent disability in children which might be remedied with sufficient instruction, then the children's perceptions of their own "natural abilities" as severely limited, conveyed by classroom teachers, will impact upon their success in school." (p. 249). The lower academic level of the children in question was more likely attributable to a general lower social and educational level of the families from immigrant communities and other socioeconomic factors. The 1997 study by Valadez, MacSwan and Martínez which assessed the performance of three low-achieving children showed that they possessed a grammar that was virtually indistinguishable from the default grammar of the control group, providing evidence that code switching in these cases can be attributed to something other than a so-called grammatical incompleteness. This provides evidence for the fact that code switching in these cases can be attributed to something other than an incomplete grammar.

Poplack (1980), on the basis of her study of mixed utterances in the speech of English-Spanish bilinguals, was among the first to proclaim that this phenomenon is not a sign of language deficiencies, but rather signals normal development in a bilingual child: "Code switching, then, rather than representing deviant behavior, is actually a suggestive indicator of degree of bilingual competence" (p. 73). MacSwan (1999) shares this point of view, stating that "code switchers have the same grammatical competence as monolinguals for the language they use" (p. 22), and therefore, in cases when they mix elements of two languages, this can not be attributed to an undeveloped system in either of them, nor is it caused by interlinguistic confusion (Goodz, 1989[4]). Wei (1998) makes a similar statement adding the issue of cultural identity expressed in each particular

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[4] Still, it is important to keep in mind that, even though code switching itself does not mean that there are competence differences between the languages, one cannot assume that such differences are nonexistent, nor that code switching always implies more or less balanced acquisition. For instance, heritage speakers are a group that typically code switches a lot, however, much research has shown competence differences between the heritage language and the majority language in such speakers, see for example Montrul (2008) and Polinsky (2007).

language: "code-switching, far from being caused by an insufficient competence in one of the two languages, and besides expressing a double cultural identity works as a communicative strategy used for a variety of purposes, related either to the negotiation of the language of interaction or to the organization of conversational activities" (p. 207). Bilingual children develop separate language systems from the beginning and are able to use the developing languages in ways appropriate to the context (Genesee, 1989). The current studies in child multilingualism, such as Cruz-Ferreira (2006), show that, given the opportunity for successful intellectual and linguistic development, multilingual children equal, if not exceed, their monolingual peers in academic achievement.

Another question is whether code switches are caused by lexical deficiencies. This may seem like a plausible explanation; even if bilingual speakers possess fully-fledged grammatical systems in each language, they may lack certain lexical units they need for expressing their ideas. However, studies dated as early as 1960's and 1970's (Clyne, 1967; Hasselmo, 1970, in Lipski, 1978; Lance, 1975,) show that code switching cannot be accounted for by a lack of lexical availability alone. Cruz-Ferreira (2006) and Rothman and Niño-Murcia (2008), among others, present data on trilingual siblings which show that the switches between languages were not necessarily caused by a lack of available synonyms in the children's vocabulary; in fact, the children in Rothman and Niño-Murcia's study often used the appropriate terms from two languages interchangeably within the same context. What still remains open is the question of whether these switches are caused by some type of language distribution where the children tend to assign the term in a specific language to a specific context or interlocutor.

Finally, it is important to mention that although code switching per se is not a sign of a lack of fluency, it may in some cases be a sign of a decrease in competence, namely language attrition. Seliger (1996) states that mixing "can be considered a precursor sign of primary language attrition when mixing begins to occur in contexts that are not

motivated by external factors such as interlocutor, topic, or cultural environment" (p. 613). Bolonyai (1998, 2009) found changes in both the amount and structure of code switching as her child participants gradually become English-dominant and their use of Hungarian decreased. They started to produce more intransentential switches than intersentential ones, and the grammatical structure of these utterances became increasingly English-based (c.f. *matrix language* above). Visits to Hungary, however, provoked a temporary reversal of these processes along with the temporary reversal of the process of language attrition.

3.1.2.2 Discourse Type Motivation on Code Switching

Among the earlier studies of code switching are the studies by Blom and Gumperz (1972), Genishi (1977:4), Gumperz and Hymes (1972). Gumperz and Hymes, followed by Genishi, suggest that there are *situational* and *metaphorical* code switches. A situational switch, as implied by the term, involves a change in the discursive context, while a metaphorical code switch involves a change in topical emphasis or in speakers' intentions or roles they choose to take up in a particular conversation while the situation itself remains the same. Gumperz views code switching as a discourse strategy:

> Detailed observation of verbal strategies revealed that an individual's choice of speech style has symbolic value and interpretive consequences that cannot be explained simply by correlating the incidence of linguistic variants with independently determined social and contextual categories (Gumperz, 1982, in MacSwan 199, p. 38)

According to Scotton and Ury (1977), there are three main social factors behind code switching: identity, power, and transaction. The language of choice is selected based on these. A somewhat similar view is shared by Myers-Scotton (1999, 2004) in her Markedness Model. According to this model, speakers have a sense of markedness in linguistic choice for any situation/discourse type, and choose the language on the basis of

their relationship to the situation and its participants. Myers-Scotton also proposes a Negotiation Principle as the basis of all code switches:

> *The Negotiation principle*
> Choose the form of your conversation contribution such that it indexes the set of rights and obligations [the PRO set] which you wish to be in force between speaker and addressee for the current exchange. (Myers-Scotton, 1993, in MacSwan, 1999, p. 39)

According to this principle, people seek to establish particular social relationships through their choice of languages within the discourse or the speech act. In the case of bilingual children, their contact with the mainstream language usually occurs at school age, with the start of formal education, so that the parent languages are marked as "home languages" or "inside languages", whereas the language of education immediately becomes opposed to them as the "outside language" (Ervin-Tripp and Reyes, 2005, also similar to the division between *we-code* and *they-code* proposed by Gumperz, 1982b). The child then needs to balance these languages according to the speech situation, which should be considered on an individual basis:

> Although speakers may systematically differentiate the codes in conversational practice, it is not possible to make a priori assumptions about which code carries the putative "we" functions and which the putative "you" functions. This can only be decided by looking at the functions which the codes serve, which may vary from situation to situation and cannot be treated as given. (Sebba and Wotton, 1988, in Ervin-Tripp and Reyes, 2005, p. 97)

Another important factor in code switching strategies is the language negotiation between the speakers. It would be unfair to attribute the choice of language exclusively to the speaker, ignoring the influence of the other interlocutor(s) and the amount of switches that is taken to be the norm within a certain circle. Lüdi (2003) states that "interaction takes place in a social environment only partially controlled by the affected person" (p. 181). The reactions of the interlocutors and the general value attributed to each language, as well as the nature of the linguistic group the conversation takes place in, all influence the amount and type of switches produced. Lüdi provides an example of a mixed

German/French interaction in a semi-formal environment, where one of the interlocutors was fluent in German and learning French, and the other one was a native speaker of French and fluent in German. The conversation includes a number of switches between German and French, which usually occurred intrasententially, when the less proficient speaker did not know the appropriate word in French or when the phenomenon she referred to was expressed more succinctly in German. The second speaker either followed her in using the German expression, or offered a recast, or just encouraged her to move on stating that she understood what was being said. Lüdi attributes the high level of mixing in this situation to the type of the conversation (after-school practice session) as well as to the fact that the conversation took place in Switzerland where most of the population speaks more than one of the state languages and views mixes as the communicative norm rather than an exception. This shows that in an analysis of a sample of mixed speech, not only the nature of the conversation but also the relationship between the speakers should be taken into account, as well as the general attitude towards each of the languages and towards language mixing in this population group and in the society as a whole.

Heller (1982) discusses the negotiation of language choice in Montreal, where the existence of a bilingual community brings about a complex interplay of languages and identities; using a language or a combination of languages in an interaction is never just a question of language proper, that is, one's ability to express him or herself in English or French, but rather a way to establish one's identity or respond to the presumed identity of the interlocutor, which is not always as explicit as in the example in (6) but is almost invariably present to a greater or lesser extent.

(6)
I stopped in a garage… and struggled to explain that my wipers were *congélé* and I wanted to make them *fonctionner*. He listened in mild amusement and then said: "You don't have to speak French to me, Madame. I'm not a separatist."

Language negotiation involves the seeking of implicit and explicit strategies needed to obtain the kind of information that seems necessary for the participants to be able to hold a conversation. Below is a sample of language negotiation (Heller, 1982: 112) which took place in a hospital setting between a bilingual clerk and a patient, where the only cues available to them were auditory (the interaction took place over the telephone).

(7)
Clerk: Central Booking, may I help you?
Patient: Qui, allô?
Clerk: Bureau de rendez-vous, est-ce que je peux vous aider?
Patient: [French]
Clerk: [French]
Patient: [French]
Clerk: [French]
Patient: Êtes-vouz française ou anglaise (Are you French or English?)
Clerk: N'importe, j'suis ni l'une, ni l'autre… (It doesn't matter; I'm neither one nor the other…)
Patient: Mais… (But…)
Clerk: Ça ne fait rien (It does not matter)
Patient [French] [Conversation continues in French]

The negotiation of language implies how one wants to be addressed and, ultimately, treated. The linguistic variable here is the choice of English over French or French over English, and the underlying social, or extralinguistic, variable is that of national identity and/or social status. Such negotiation is based on knowledge about ethnic groups, the relationships and boundaries between them, as well as status differences. This negotiation is ever-changing and ongoing, signaling constant social and political changes.

The above examples all come from adults' utterances; however, the concept of language negotiation can be applied to child speech as well from early on. As stated by Vygotsky (1978), children, both in and outside a bilingual situation, are influenced by the same factors as adults and adapt to other surrounding them by way of "social" speech. Nicoladis and Genesee (1997) affirm that situational code switching is natural for young

bilingual children, based on pragmatic differentiation and the way they perceive their surroundings. Such findings were also presented by production data from young bilingual children in Foster-Meloni (1978), Saunders (1988), Lanza (1992) and others. The child's home language may be either the language of the relatively powerless social group (Hispanics in the United States) or (in fewer cases today) the language of the powerful minority (white US Americans in Puerto Rico), and the children are sensitive to the societal prestige of the language from early on and make use of it in play and other types of peer interaction (Ervin-Tripp and Reyes, 2005; Shenk, 2008. Zentella,1997). Miccio and Hammer (2006, in Miccio and Hammer, 2009), for instance, observed how children who spoke Spanish fluently at home would be unwilling to reply in Spanish to a Spanish-speaking examiner at school. Within the frame of this project, and due to the age of the participants, one can expect not so much the effects of sociopolitical change, as the effect of social and interpersonal relationships. However, even young children may be quite sensitive to the power relationship between languages (see Khattab, 2007, 2009). Children are also sensitive to the amount of switching produced by their interlocutors and adapt their own speech by increasing or decreasing the rate of code switching as early as preschool age (Comeau et al, 2003). In fact, their sociolinguistic competence likely develops at the same time as their grammatical competence, evolving at the same time as actual language production (see, for example, Andersen 1990, Hymes 1974, among others).

Social roles undoubtedly play a decisive role in language switches and mixes; however, this approach does not take into account the individual factor in code switching which makes it hard to predict the amount and level of code switching in each particular situation on the basis of the expected social stratification alone. The personal factor is also very influential; the longitudinal studies of family multilingualism (presented in Tokuhama-Espinoza 2001, 2003, Cruz-Ferreira 2006, each summing up the speech data from three siblings) comment on the fact that even children brought up in one family and

therefore in seemingly equal conditions have different patterns of language use, largely dependent on their personality and communicative style. Thus, the markedness/unmarkedness of each individual language in a bilingual or trilingual situation should be assessed under the influence of both social considerations and personal factors. This closely resembles another concept discussed in reference to code switching, the concept of *footing*. According to Cromdal and Aronsson (2000), footing is "conversationalists' alignment toward people, topics and actions" (p. 435); it is a form of taking ground in conversation on the basis of the type of position assumed in interaction, the reactions to the interlocutor's utterances and actions and the role assigned to self and to others. Cromdal and Aronsson's study of mixed utterances produced by schoolchildren revealed changes in footing, both clear-cut and subtle, that are signaled through switches. Alfonzetti (1998) also defines code switching as "the purely discourse-related use of the two varieties as a contextualization cue which indexes certain changes in footing or conversational structure" (p. 178). Certain theories, however, suggest that there are other mechanisms behind code switching which lie outside purely discourse strategies and influences, such as the triggering hypothesis discussed below.

3.1.2.3. Triggers

The triggering hypothesis, developed by Clyne in a series of publications (Clyne 1967, 1972, 1977, 1980, 2003), states that cognates can "trigger" code switching (or *"transversions"*, in Clyne's terms) in their immediate surroundings, either preceding or following them. Such trigger words include the following groups:

- Lexical transfers (lexical items which belong to one language but also form part of the speaker's lexicon in another language, such as names of certain foods)
- Bilingual homophones
- Proper nouns.

Such words, according to Clyne, cause the speakers to perceive the language they introduce as the language of conversation and to carry on in this language. Clyne also describes cases of *transversion* caused by prosodic and syntactic factors, although they lie outside the scope of this discussion. The triggers, depending on their position in reference to the switch, are classified by Clyne as "consequential" (the switch follows the trigger word), "anticipational" (the code switch precedes the trigger word), and a third type which is a combination of these two, with the switch inserted between two trigger words.

The hypothesis does not predict a 100-% change of code switching next to a possible trigger word, but rather suggests that the presence of such words increases the probability of code switching, depending also on the position the trigger holds within a sentence and the way it is pronounced; no influence is assigned to the structural relationship between the trigger word and the adjoining sentence elements, thus making it a strictly surface phenomenon. Since triggering is perceived as based on the overlap of conceptual meaning between the words in the two languages, false cognates are not expected to act as triggers. True triggers would include words that have slight morphological and phonological differences, such as "family" in English and "familia" in Spanish.

The triggering hypothesis was discussed and tested in a number of studies by researchers other than Clyne, such as Broersma and de Boot (2006), who largely confirm Clyne's statement that trigger words may in some cases lead to a code switch, but state that the reasons behind code switching are far more complex than what Clyne describes and will be different in each individual situation.

Getting back to discourse strategies and social motivation for code switching, it is important to consider the influence that becomes apparent before any others in child language acquisition and which is especially important in the specific case of child

multilingualism: the influence of the child's immediate surroundings at home, namely the role of the parents and siblings.

3.1.2.4 Adult and Sibling Influence

When parents choose to raise their children as multilinguals, the most commonly accepted strategy is "One parent – one language". Within this approach, first discussed by Grammont (Ronjat, 1913), each parent addresses the child exclusively or almost exclusively in one language. Bilingual children may become sensitive to the One Parent - One Language strategy as early as 2 years of age and choose the appropriate language with each parent (Köppe and Meisel, 1995). In child multilingualism, the parents undoubtedly play a major role in language negotiation. Barron-Haumwaert (2004) refers to "parental acceptance" in early multilingualism and claims that in this area of research it is extremely important to report not only on the child's production, but also the child-directed speech of the parents as well as siblings and caretakers. In bilingual families, where the parents share a language, they can be more or less likely to code-switch, and this will affect the children's code switching patterns. Parents may either encourage code switching as a communication strategy (Goodz, 1989, in Barron-Haumwaert, 2004), or discourage it as a sign of "broken" languages (Lanza 1992, in Barron-Haumwaert, 2004). Mishima (1999, in Barron-Haumwaert, 2004), also found that children are aware of the parents' language competence from early on, and are more likely to code-switch with the parent who speaks both languages than with the monolingual parent.

Lanza (1992, 1997b) proposes five ways that a parent may react to a child mixing, as schematized in Figure 2 below taken from Lanza (1997b):

Figure 3.1: Parental reaction to child mixing

Monolingual situation	Bilingual situation
_____	_____
Minimal Grasp*Expressed Guess*Adult Repetition* Move-On Strategy*Code Switching	

Among the five strategies, Minimal Grasp is characteristic of a monolingual situation, when the parent signals that he or she does not understand the utterance, forcing the child to say the same thing in another language. A parent making an Expressed Guess shows some understanding of the utterance but questions it in order to receive a confKarention or clarification. Adult Repetition is a recast of the child language in another language, in the hope that the child will be able to produce it the next time. The Move-On Strategy comes into play when a child says something in one language and the parent understands, but replies in the other language. Finally, a bilingual parent may choose to Code-Switch back to the child, allowing a change in the language of communication. These strategies may change over time, with age and the parents' adjustment to the language situation in the family, as well as depending on the particular situation (monolingual surroundings, bilingual surroundings, presence or absence of native speakers of each language and/or people unable to communicate in one of the languages). Overall, parents tend to choose the strategies that require less time and effort, since it is usually not possible to stop for explicit language instruction each time a switch or borrowing occurs (Juan-Garau and Pérez-Vidal, 2001); however, this also depends on the parents' personality and beliefs about language and the degree to which this parent perceives his/her language as threatened and therefore in need of explicit enforcement (Lanza, 1992; Juan-Garau and Pérez-Vidal, 2001). Finally, parents themselves usually model some amount of switches for the children even when they are strongly committed to maintaining the family

languages separate at all times (Goodz, 1989, also see Rothman and Niño-Murcia 2008 for discussion and examples).

Another factor worth mentioning here is the role of siblings. Cruz-Ferreira (2006), Fantini (1985), Grosjean (1982), Rothman and Niño-Murcia (2008), and Tokuhama-Espinoza (2000), all comment on the fact that only the eldest child in a multiple-child family starts to speak in a type of model/ideal environment where the parents can truly control and monitor the distribution of languages. The elder children are the children who at some point know the parents' language(s) best. But they are also the ones who introduce the mainstream language into the household and to their younger siblings at earlier ages than those at which they themselves were exposed to it; thus, the second and third child in each family has as much – or more - exposure to their siblings' speech as to the parents' speech, which often has a strong effect on their own language progress. The fact that the older children bring the societal, majority language into the home also has consequences for the distribution of the parents' language choice, since the latter now have to deal with the older child's language use on a continuum of the strategies highlighted in figure 2 above. Furthermore, sibling interaction is where parental control over language use within the household weakens significantly, since the children will not always interact in their presence; this makes language distribution among the children more complex and less predictable (Valdés, 2003). For instance, the eldest daughter in Tokuhama-Espinoza's study chose to act as a "mediator" for her somewhat more introverted younger brother and immediately "translated" all he tried to say into the "correct" language, which left him in a passive position for a long period of time. A certain role distribution, where one child takes on a more active role and the other one(s) remain(s) more of an onlooker is common in many families; however, in a monolingual family the effect of such distribution on language production and even competence is not so strong as in a trilingual family, in which it also means a distribution of language roles among the siblings. Language use may even have a correlation with gender; Rothman and

Niño-Murcia (2008) observed how Italian, the father's language, was the one used most frequently and naturally among the three boys, possibly reflecting a masculine role; Spanish, the mother's language, was often used for comforting each other, thus assuming a motherly-type attitude.

<p style="text-align: center;">3.2 Code Switching in a Combination of Three Languages</p>

Code switching is a common speech strategy for bilinguals and trilinguals alike, the difference being the number of possible combinations. Technically, trilinguals' monolingual, bilingual and trilingual speech modes are capable of producing a total of seven combinations, each of which would include one, two or three of the languages they have at their disposal (for instance, in the case of English, Spanish and German, the possible combinations would be: English; Spanish; German; English-Spanish; Spanish-German; German-English; English, Spanish and German together). However, most of the sources that comment on the possible language combinations state that in all types of trilingualism, these mixes usually involve only two of the three languages at a time (Edwards, 1994; Hoffman, 2001; Klein, 1995; Rothman and Niño-Murcia, 2007). This indicates that not more than two languages systems are usually used for communication simultaneously. Still, Hoffman suggests that there is evidence of possible combinations of three language in the cases in which child trilinguals may be only aware of their use of two languages while still mixing in the elements of a third one, into both, and therefore, combinations of all three languages are possible in child trilingualism when two of the languages are not perceived as separate by the child, as compared to the third one. An example is the speech of a 2.9 year-old child who started an explanation in a mixture of English and German and then switched to Spanish (Hoffman, 1992, in Hoffman, 2001). However, it is hard to tell from this example whether in this case two of the three languages were actually perceived as one or not. Even in child trilinguals, three-language mixes are generally rare; indeed they are almost nonexistent, according to Cruz-Ferreira

(1999). Among the few examples in child speech I have come across in literature there are the following examples:

(8)
j'ai trouvé – *i **gefunden diese**!*
I have found (Fr) I (Eng) found these (Gm)
'I have found – I have found these' (Schlyter 1990:114)

(9)
daddy *ma* big ***l'eau***
daddy (Eng) has (Pl) big water (Fr)
'daddy has a lot of water' (Doyle 2009)

In adult trilingualism, three-language mixes have not been studied as closely, but so far a general tendency to avoid them has been observed. As stated by Clyne (1986), trilinguals tend to behave more like bilinguals, or "double bilinguals," that is, with two or three sets of bilingual language combinations. Following Hoffman's proposal, one could say that again, there may exist instances of three-language mixes that the speaker is unaware of. Specifically, participants who by default use a bilingual mix in certain situations (for instance, the speakers of Spanglish in the Latin American communities within the United States who use Spanglish with members of the same ethnic group, see Zentella 1997) and who at the same time have access to another language through schooling may use elements of the three languages in what they perceive as a bilingual mix. However, in this case what has originally come across as a mix of two languages brought about by migration and cultural and linguistic contact is now much more than just a consistent pattern of code switching. According to Rothman and Rell (2005), Spanglish can be classified as a rule-governed language with a full-fledged structure; the existence of regional varieties of Spanglish, each with a specific lexicon and phonological system, serves as evidence in favor of this idea. Therefore, the existence and function of trilingual mixes per se is a separate issue. Contexts that require a combination of three languages either within an utterance or even within discourse are not readily encountered through mere observation, so there should be a greater variety of

experimental settings and designs in order to question the proposal that trilinguals tend to produce two-language rather than three-language mixes.

As mentioned before, child trilingualism has not been studied as extensively as child bilingualism; however, many studies in child bilingualism provide important insights into the matter. Children's early dual language (under 2-3 years of age) is discussed in Taeschner (1983) Barrow-Hauwaert (2004) and Jisa (2000), among others. According to these sources, early mixed utterances consist of 2 or 3 words. Most early mixes consist of lexical items, naming things or events from the child's surroundings:

> (10)
> Das *petit* tiger - French/German, 2;1 (Meisel, 1994, in Barrow-Hauwaert, 2004, p.11)
>   little
> *"the little tiger"*
>
> (11)
> *Mer* paper – English/Norwegian, 2;0 (Lanza, 1992, in Barrow-Hauwaert, 2004, p.11)
> more
> *"more paper"*
>
> (12)
> Balloon *vermel* – Catalan/English, 2;3 (Juan-Garau, 2001, in Barrow-Hauwaert, 2004)
>   red
> *"red balloon"*

This early code switching is usually unconscious and unintentional, because the children possess only so many labels for things in the environment and take advantage or whatever communicative means available to them. There are also overlaps between languages among the similar-sounding words, such as *mer*/more. Other empirical studies based on language samples produced by young English-Spanish bilinguals (McClure, 1981; Zentella, 1997) also report that younger children mostly use lexical-item code switching. Such insertion of lexical items from one language into an utterance in another is often labeled as *nonce borrowing* (Ervin-Tripp and Reyes, 2005, see also the

discussion of Poplack's use of this term above) and, unlike later mixes, is caused primarily by assumed lexical gaps. As the child grows older, the code switching patterns become more adult-like, which requires a fully-developed grammatical system and sufficient lexical knowledge in each language and also allows for a wide variety of stylistic purposes and situational demands. Köppe and Meisel (1995) also comment on the fact that intersentential switches are common from early on, because they are structurally less complex and also because they are mostly caused by clear-cut situational shifts, such as interlocutor change (*situational switches*). Meanwhile, intrasentential switches become more numerous later on, after 3-4 years of age, because they have to do with more complex concepts, such as topic shift (*metaphorical switches*), and also because combining elements of two languages in a structurally sound sentence require syntactic knowledge which is not available earlier. Below are some examples of older children's intrasentential code switching, from Barrow-Hauwaert, 2004:

(13)
Go like this *et après* foot's clean…. – French/English, 3;8 (Jisa, 2000)
            and then
"go like this and then foot's clean"

(14)
Sann ogg ny *diaper* – English/Norwegian, 2;3 (Lanza, 1992)
 like that and new
"like that and new diaper"

(15)
Et puis Patti *hat sein Arm gebrochen* – French/German, 3;7 (Meisel, 1994)
and then Patti have-3PSG his arm broken
"and then Patti has broken his arm"

Language choice is a rather complicated issue for a child growing up bilingual. A young child may not even realize that not everyone around him/her speaks the same languages, or that they in fact speak more than one language at all. Later on, however, the same child will face the issue of choosing the right language with each person. (Köppe and Meisel, 1995) state: "Note that, in the course of the child's language development,

the factor "interlocutor" may become increasingly complex: especially with bilingual interlocutors, the child has to find out whether the interlocutor expects to be addressed in only one language, or whether he accepts the use of both languages" (p.279). Children seem to cope with this task quite well from a young age (Goodz, 1989; Lanvers, 2001; Lanza, 1992, Miccio and Scheffner Hammer, 2009). Specifically, Quay (1995), Genesee, Nicoladis and Paradis (1995) and Genesee (2002) found that French-English bilinguals as young as 2 years of age already have the ability to use each language appropriately and adjust it depending on who their interlocutor is, which forms part of their communicative competence. Children may also adjust their level of mixing to their interlocutor's (Comeau et al., 2003). According to Genesee (2002), "true bilingual competence entails the ability to adapt one's language use on-line in accordance with relevant characteristics of the situation, including the preferred or more proficient language of one's interlocutor" (p.174). Rothman and Niño-Murcia (2008) found a similar trend for child trilinguals who from as young as the age of 3 seemed to know who they could and should use Spanish, Italian and English with. Moreover, they found that the three brothers were very aware of the separation of codes they speak and of the fact that they were indeed unique languages. In fact, the oldest child could even direct his siblings as to what language their interlocutors spoke and thus what code they should use with them, to which the younger siblings responded appropriately in their subsequent language use. In terms of the interlocutor's proficiency, there may even exist a type of threshold which the interlocutor has to pass in order to be perceived as fluent, even though the child still knows him or her to be a non-native speaker. Cruz-Ferreira (2006) and Rothman and Niño-Murcia (2008) comment on the fact that the trilingual child is extremely sensitive to the speaker's level and may often evaluate, consciously or unconsciously, whether it is good enough for communication in the target language. This may have to do with ease of communication, but also with language identity in the sense that the child chooses to accept the interlocutor into the circle of people who use this language. I do not mean to suggest that

the children judge the linguistic skills of their interlocutors per se, but seem to be keyed into their level of competence and adjust their speech to accommodate if not facilitate communication by switching to the speakers' perceived better language since they themselves can navigate the interlocutor's native language (equally) well. Finally, older children may also notice that certain concepts can be expressed more accurately/appropriately in one language than in another and use code switching for this reason (Zentella 1997).

3.3 Issues in Data Collection and Analysis

The last stage before proceeding to the actual data for this study is to review the practical issues and recommendations for carrying out a longitudinal study based on extemporaneous production data and the specific characteristics and limitations of such described in the literature. The section below offers a review of the sources most relevant to data collection and data analysis in a sociolinguistic study such as the present one. Specifically, it addresses the main stages in collecting longitudinal data in a speech study, transcription methods and the general suggestions for an objective and meaningful analysis of such data.

3.3.1 Data Collection

Data collection is a structured process, which begins with a general idea that is gradually developed into a detailed plan. Kvale (1996) presents seven stages of interview investigation (p. 88), which can also be applied to participant observation:

1. *Thematizing* (describe the purpose of the study and the topic – what is being studied and why?)

2. *Designing* (plan the study before beginning the interview process)

3. *Interviewing* (the actual interviews with the subjects)

4. *Transcribing* (Prepare the interview material for further analysis)

5. *Analyzing* (decide which methods should be used in analyzing the data)

6. *Verifying* (review the reliability and validity of the findings)

7. *Reporting* (Communicate the finding in the appropriate form)

Kvale also comments on the temporal dimension of a longitudinal study. It is important to keep in mind the final report from the beginning of data collection. A good interview is largely interpreted while it takes place; the shorter the interviewer's questions and the longer the participant's answers, the better. Kvale recommends making an interview guide to refer to, consisting of the main questions and possible transitions between them. When applied to observation, these principles translate into promoting more participation on the part of the subjects, planning certain cues that may be used in guiding the session and working with the data starting from the earlier sessions. These were taken into account whenever possible when collecting the data for the interview and specifically in the parent interviews, as can be seen from the interview excerpts in tAppendix C.

Audio and video recording has clear advantages in the study of speech (Zentella, 1990; Ervin-Tripp, 2000; Johnstone, 2000; Kendall, 2008): it allows going back to the data, although with only a limited evaluation (only sound/only where the camera was pointed at); in some cases, recording allows the researcher to not be present and therefore avoid the *observer's paradox* (changes in the participants' behavior caused by their awareness of the fact that they are being watched/recorded) and allow for freer communication. To overcome the drawbacks of using an audio or video recorder (technical problems, low quality of recording) it is recommended to test the equipment before the actual recording session, eliminate most background noise if possible and have people stay in place unless they have clip-on microphones. Within the present study, with young children as main participants, and with the natural background noise of the home, it was virtually impossible to have them stay in place, so it was necessary to use good

quality recording devices and pay extra attention to their positioning. Both video and audio recordings were produced, but with a preference for audio since it allowed for movement around the house during the sessions and produced less distractions.

3.3.2. Transcribing and Analyzing Data

Speech transcripts are the main source of data for this study, therefore producing quality transcripts are of primary importance for a meaningful analysis of speech data. Below is a discussion of relevant issues in transcription and analysis of such data.

3.3.2.1 Transcripts

Farnell and Graham (1998) recommend consulting with native speakers in both transcription and analysis, because they may provide additional meaning to discourse cues, otherwise not apparent to the researcher. Shieffelin (1990, in Farnell and Graham, 1998), states that working with a native speaker who had not participated in the study not only helped her to check the reliability of her transcriptions, but also provided a type of reliability check in the form of additional contextual and cultural data. For the purposes of this study, I did not have to recur to native speakers of Spanish or English, but did have to consult a native German speaker for comments on some isolated utterances, with the parents' permission. I also elicited the parents' judgment on some phrases, either to confirm what was being said or to see if their intuitions about the situation coincided with mine. Contextual knowledge is also extremely important in analyzing speech samples. Cameron (2001) comments on the fact that a certain level of contextual knowledge is needed to even "hear" the material well (decipher place names, people's names, local expressions, etc.). As I became increasingly familiar with the participant family, I also gathered information on their circle of relatives and acquaintances, places they frequented, and so on, since the recording period lasted a considerable time.

An important issue in transcribing data is that if more than one speaker is present, the reader should be able to see what each participant said, even in cases when they speak simultaneously. For this purpose, the transcriber may allot each speaker a line, or divide their utterances by graphic symbols, such as "//" or "=" (Cameron, 2000). Wray, Trott and Bloomer (1998) also suggest spelling out the specifics of the conversation (make a list of the speakers, comment on the turn-taking sequences, interruptions, pauses, "latching" (one person speaking immediately after another), people talking at once, unintelligible speech, unusual pronunciation, emphasis, etc.). Then, there is the question of how to represent the nonverbal elements of a monologue or conversation. In some cases physical movements are an integral part of a transcript and need to be clearly represented; for such cases, Farnell and Graham (1998) describe a variety of graphic techniques (a sketch of a human figure in different positions, etc.). However, for the sake of a project such as this a verbal commentary referring to a certain movement or action may be sufficient in order to provide the context for certain utterances which otherwise would not be quite clear to the reader or be misleading. Section 4.4 contains the list of notations used for transcribing, as well as sample transcripts.

Overall, there are a number of ways to transcribe data, which is not very surprising because discourse types differ as well as the objects of study. It is important to note that the transcribing stage is in fact the first stage of analyzing and interpreting data (Cameron 2000). Wray, Trott and Bloomer (1998) also make a similar comment: the researcher should not wait to get all of the data in order to decide how to work with it and what can come out of it; data collection should be designed in such a way that it yields the necessary information as it goes. To ease the process of data collection, the researcher should make sure he or she is getting the right type of information and has time to transcribe what is recorded; if a questionnaire is used, one needs to make sure one can work with the answers he or she is likely to get. Overall, when planning and carrying out data collection, it is important to know what the predictions of the study should be like: if

A is the same as B, larger or smaller than B, etc. The data for the present study was analyzed with reference to the research questions posed at the beginning of this dissertation, although there were also certain aspects of the data collection and analysis I had not anticipated before.

<u>3.3.2.2 Data Processing</u>

Johnstone (2000) claims that at the interpretation stage, researchers are almost inevitably biased towards the results they hope for, so clear-cut criteria are needed for what may actually serve as evidence in favor of the initial hypothesis. In other social sciences, such as sociology or educational research, the criteria of evidence are clearly defined. Johnstone introduces the terms *validity* (evidence has to be accurate and relevant) and *reliability* (the same procedure, if repeated, will yield the same results). Therefore, one should try applying the procedure in different settings and at different times to test its reliability. *Diversity of method* (Kirk and Miller, 1986, p. 30, in Johnstone, 2000) is also important: using more than one form of evidence and more than one procedure. This should help to avoid getting inadequate evidence.

Erikson (1986, p. 140, in Johnstone, 2000) names five types of *evidentiary inadequacy*:

1. Inadequate amounts of evidence
2. Inadequate variety in kinds of evidence
3. Faulty interpretative status of evidence (the researcher misunderstands what is happening or what it means)
4. Inadequate disconfirming evidence (the researcher does not have data that might disconfirm his or her assertions, or does not have evidence that such data were systematically sought)
5. Inadequate discrepant case analysis (not enough attention has been paid to apparent exceptions)

Erikson suggests: in order to have a fuller picture, alter the focus of the observation from one session to another; make notes and use machine recordings in order to preserve data and be able to get back to it; try various kinds of participation (from a silent observer to and active interlocutor), look for "discrepant" cases (someone who does things differently than others), and also, avoid making unwarranted generalizations, which suggestions I tried to follow as best I could.

The final stage of a study is the write-up. Wolcott (1998) suggests starting the written part on par with the field work, just like the data analysis. It is best to prepare a first draft when field work is still in progress. This way, one can get a better view of the results and fill in what is missing in the data while it is still possible. If a full draft is too hard to produce at this stage, the researcher should try to think in chapters and detailed outlines. Also, it is easier to begin writing about a relatively easy aspect, such as the descriptive part, without offering interpretations yet. For the purposes of this project, transcribing had in fact to take place simultaneously with data collection, since there was such a massive amount of it to be done, and also since it was easier to comment on the extralinguistic factors soon after producing each recording, especially for the audio-only ones. However, the quantitative aspect of the data could only be analyzed after data collection was complete.

3.3.2.3 Stimulated Recall

Stimulated Recall is a method described, among others, by Gass and Mackey (2000). It is an introspective method which requires participants' feedback on their (verbal) behavior on the basis of a representation of a certain speech excerpt (through a video or audio recording or a transcription). Its main goal is to discover the cognitive processes not apparent though just observation. This approach has mainly been criticized on its reliability and validity; also, stimulated recall has to be conducted after a

reasonable time after the speech event took place, to make sure the participant can still recall it in some detail. To improve the results obtained through stimulated recall and thus be able to use it as a meaningful tool in investigation, Gass and Mackey (2000) suggest the following:

- Before data collection, develop a detailed protocol, in which one specifies the type and amount of detail one is are looking for; make specific instructions for the participants and model the procedures for them. It is also important to allow ample time for the interview.

- During the analysis stage, to make the data more objective, involve third-party raters; train them in the categories which you are using as labels for your target items.

Due to the age of the main participants of this study, it was not very likely that they would be willing or able to provide comments on their own production. However, the technique of stimulated recall sometimes proved useful when working with the speech samples produced by the parents; they could provide comments on their speech patterns and say how typical or atypical a specific exchange is, in order to get a fuller picture of the family's usual linguistic patterns. Their comments would naturally still be quite subjective/personal, but sometimes offered new and unexpected approaches to the data.

The instruments for the qualitative study of language have been created and discussed for a while, starting with Gumperz and Hymes (1972), Hymes (1974), Gumperz (1982), Kvale (1996). They agree on the fact that there is no fixed set of rules available for qualitative interviewing. The qualitative interview is often called *unstructured* or *nonstandardized* (Kvale, 1996, p. 13); thus, most decisions have to be made on the spot. In order to be objective, the researcher needs to be true to the object investigated, let the situation speak for itself, so to say.

The present study combines qualitative and quantitative data in a methodology which will be explained and illustrated in the following chapter; I will also comment on

the specific issues in data collection and analysis, both expected and unexpected, which arose during the year-long study and subsequent work on the data.

3.4 Summary

In this chapter I proceed to the issue of code switching, defining it as a structured phenomenon which reflects the structure of each language and should be perceived as a sign of attaining a certain level proficiency in these languages rather than a sign of faulty or incomplete acquisition. I specifically discuss the subject of code switching in children, including the social and discourse-based factors behind it and its increasingly complex structure which becomes apparent as the child's speech develops. Then I move on to the existing research on code switching in child trilingualism, concluding that it can be perceived both as unified and variable, being largely influenced by personal factors and at the same time generally following the same route from more basic to more complex and varied, functioning as a tool for communication and the exploration of language. I concluded the chapter with a discussion of the methodological issues most relevant in the collection and analysis of data for this study.

CHAPTER 4

RESEARCH DESIGN AND METHOODOLOGY

In this chapter, I introduce the participants of my study, their social and linguistic backgrounds and their current language situation. I then move on to the specific methodology employed in the present study and the way the children's production is recorded, classified and analyzed, providing sample transcripts and explaining the treatment of qualitative and quantitative data, including the coding system and the principles of data classification.

4.1. The Family

The study focuses on the language production of two trilingual girls, aged 6.3 and 9.10, respectively, at the beginning of the 12-month data collection period. They are growing up within the same language setting, being exposed on a regular basis to Spanish and German through the parents and some select speakers and to English through the larger community. Since the girls also interact with each other on a regular basis, their range of contact is wider than that of an only child living in the same type of environment: the interactions between each of the children and each of the parents, the parents and children together, and the children speaking to each other all occur in the three-language context. Working with siblings also in a way allows one to observe the extent to which the child's personality influences her linguistic behavior. All the names used in the study have been changed to maintain subject anonymity.

4.1.1. Demographic Data

I initially met my participants via an announcement on Craigslist where I offered babysitting services to a trilingual family with at least 2 children in exchange for a

permission to do weekly recording in the family home. After getting in touch with the girls' parents, I went to their house to meet the family and discuss the details of the study. I told the parents that I was interested in examining the way the children perceived and used the three languages; I did not specifically mention code switching as the main point of interest to me since I did not want to make the girls and especially the parents self-conscious about switching between languages, which could cause them to change their usual manner of speaking. I informed the family that I had received permission from the Human Subjects Office and that I had the consent forms for them to sign, and also the assent form for the elder daughter, and that the data would be kept confidential and their real names would not be revealed. After considering my proposal, the parents said that they were willing to accept it, and I started my weekly visits the following week.

The family lives in Ardsley, a village in Westchester County of New York State, populated mostly by middle-class and upper-middle class families; in 2000, the median income per household was $105,293, and the median income for a family was $116,239, with only 0.4% of families and 1.3% of the population below the poverty line, according to the United States Census data. The girls' parents are both working professionals with university education. The father, Dirk, is a native speaker of German (coming from the northern part of Germany), and the mother, Anna, is a native speaker of Peninsular Spanish, each born and raised in their respective country. Dirk works full time as a New York City software consultant, and Anna has a part-time job at a local school. Anna is also fluent in German, and she and Dirk speak either German or English to each other. They have lived in the United States for almost 10 years, and their two daughters, 9-year-old Karen and 6-year-old Sophia, were both born here. They attended an English-language daycare between 2 and 5 years of age, and have had a number of English-speaking babysitters. Both now go to a monolingual English school.

4.1.2. Language Exposure

The parents try to use the "One Parent - One Language" (Döpke, 1992) method most of the time, although they admit that often they do not use their native languages with the children as much as they had hoped to. In fact, the parents themselves often code-switch when speaking with each other and with the children, Dirk between German and English and Anna among German, English and Spanish. An exception to this tendency is the weekly language time when they specifically focus on doing activities in their native languages and also try to provide some classroom-like instruction for their daughters in these languages.

The girls' exposure to German and Spanish largely comes from the parents, since no one from the extended family lives in the United States; still, the grandparents on each side visited the family once for about 3 weeks each during the year of data collection. There are also certain activities outside the home that are associated with each of the languages. For Spanish, there is a weekly Spanish-language play group at school, and the girls also occasionally (once or twice a month) spend 2-3 hours with a Spanish-speaking (Peruvian) babysitter.

Overall, the situation with Spanish is both more and less complex than that with German for a number of reasons. First, Spanish language input seems to be more readily available to the children since a large percentage of the population is Spanish-speaking. In Ardsley, the percentage of the Spanish-speaking population is relatively low (according to the United Stated Census data of 2000, the village had a Hispanic/Latino population of 4.6 %.), but Spanish is still present in the community, unlike German. At the same time, Spanish in the United States is a language of lower social prestige than German and even younger children are extremely sensitive to this fact (Reyes, 2004: Shenk, 2007; Toribio, 2000; Valdés Fallis, 1976, Zentella 1997). Specifically, mixing Spanish with English, the mainstream language, is often viewed as stigmatized (Bayley and Zapata, 1993; Zentella, 1997). Karen and Sophia are likely less exposed to such

stigmatization than children from working-class Latino families, since their parents are European professionals and this by itself puts them in a more prestigious position. Anna specifically pointed out to me that in her experience, she and Dirk often were regarded by neighbors, coworkers and other parents as interesting and sophisticated just because of being Spanish and German. Still, Karen and Sophia may be aware that a person is sometimes viewed negatively because of language and origin. During the data collection, I did not hear or manage to elicit specific comments from the children on such topics, either during or outside of the recording sessions, so I may only allow their possible exposure to such judgments based on the environment. Finally, there is a contrast between the European variety of Spanish spoken by the mother and maternal grandparents and the various Latin American varieties spoken by other people in and outside their home. The babysitter is Peruvian, and the families who participate in the Spanish play group come mainly from Mexico and Central America (Honduras and El Salvador), except one family from Argentina. However, one statement holds true for both German and Spanish: the girls' daily life in the United States takes place outside of communities where these languages are spoken. Although Spanish is common in the state of New York and specifically in Westchester County, Ardsley is not a Spanish-dominant or bilingual community, and the use of English by far prevails over the use of Spanish in all public places. Therefore, the girls do not receive a lot of out-of-home exposure to either German or Spanish which could provide them with experience on the different oral styles and registers (see Lowie, 1945). It should also be noted that even within a predominantly Spanish-speaking community (a German-speaking one would be much less likely) they would receive language input quite different from the input in the majority language, and the areas of usage of the home-community languages would still be limited to specific areas of daily life, which is typical of heritage speakers whose language experience and therefore linguistic performance is by default different from that of their monolingual peers (see Rothman 2008).

Karen, Sophia and their parents regularly travel to Germany and Spain (usually about 1.5 months a year in each respective country) and, according to the parents, the girls do quite well there in terms of language use. However, they did not leave the United States during the 12 months of data collection. They also watch videos and play interactive computer games in German and Spanish and listen to books. At the start of data collection, Karen could read in English, German and Spanish, and Sophia was learning to read in English at school, and on the basis of that was also beginning to read in German and Spanish at home. At the beginning of the data collection period, the parents used to spend some time each weekend working on the children's reading skills, each with one of the girls and using his or her respective native language, alternating every week. After the first two months of recording, they chose to alter the structure of the language periods and do 15-minute daily sessions instead of the longer ones once a week. According to the parents, the girls mostly speak English to each other, but also have periods of preference for German or Spanish, usually during or after some memorable events related to that language, such as a visit by a native speaker they liked or a trip to Spain or Germany.

Between the two girls, Karen was the child who initially received a type of model language exposure guided almost exclusively by the parents, as is typical of elder siblings; at the same time, she was the first to bring the mainstream language (English) to the household, so that her younger sister was introduced to it from early on (see Fantini, 1986; Grosjean, 1982; Rothman and Niño-Murcia, 2008). However, she did not act as a mediator or translator for Sophia at any time, most likely due to her reserved and somewhat shy personality. Sophia received and continues to receive German and Spanish input from her parents, but, as they themselves admit, in a less consistent manner than Karen did; however, at the same time, she appeared to be the more outspoken child and more willing to experiment with language.

The parents' attitude towards multilingualism is highly positive; however, they also mentioned that they found the task of maintaining the home languages a strenuous one and they commented on its challenges. Their attitudes and opinions on trilingualism were further explained and clarified in the recorded interviews and will be discussed in more detail in Chapter 5. Overall, this is a tightly knit family where parent – child relationships are very strong and the children's needs and development, both linguistic and otherwise, are highly prioritized.

4.1.3. Observation Samples

At the beginning of the data collection period, the family agreed to the observation and recording of one of the language periods, which allowed me to start getting acquainted with the parents' ways of addressing language issues, namely eliciting their native language from the girls and their reaction to their code switching as well as the girls' reactions and attitudes towards using each language. The language sessions were designed by the parents as times that would be dedicated entirely to Spanish or German and took place on a weekend at their home. Each parent stayed in a room with one of the girls for about 45 minutes doing a variety of activities in the target language, and then they changed places. The activities varied somewhat depending on the child. With Sophia, the parents spent most of the time playing with puppets and drawing and discussing pictures; there was some basic reading and writing but they did not insist on it if she chose to do something else. With Karen, the parents chose more classroom-like activities: reading stories and answering questions about them, doing a crossword puzzle and a few basic math problems and writing on a chalkboard.

While the modalities of the activities were different for the two girls, which makes it impossible to compare their performance, this period of observation made it clear that the parents tried their best to incorporate their respective languages into the

family routine; it also allowed me to observe each parent's interaction with each of the girls in the target language. It was obvious from the observation that the girls had a very high comprehension level in each of the languages, and were able to respond in the target language appropriately most of the time. In Karen's case, however, there was a considerable gap between comprehension and production. She was not always willing to reply to the parent in the target language, unless explicitly urged to do so; the example in (16) shows how she obviously understood the father's utterance, but his use of German was not enough for her to pick it up (the languages of the conversation, English and German, are coded E and G, respectively):

(16)
FAT G:als ich Kind war, hatte ich keine solche Stifte in der Schule oder
   when I was little we did not have such pens at school, or
   Bleistifte, ich hatte Füllfeder, und da musste man Tintenpatronen
   hineinlegen.
   pencils, I had an ink pen, and we had to bring an inkpot to use with it

KAR E: was it, like=
FAT G: =und ich hatte immer-ich hatte immer blaue Finger, das war ganz
   and I always-I always had blue fingers, that was quite
  schrecklich=
  nasty
KAR E: =was it, like, ink with a feather?

FAT G: na ja, also, das waren keine Feder, aber man sagte Feder dazu, nicht?
   well, actually, those were not feathers, but we called them feathers,
   right?

When Karen did answer in German or Spanish, her speech was quite fluent, with few hesitation pauses, although somewhat limited in terms of the range of vocabulary as compared to her speech in English. She seemed to be at more or less the same level in Spanish and German, but was more willing to speak German, probably because it is the language usually spoken when the whole family is together, since Anna and Dirk are both fluent in German but Dirk does not speak Spanish except for a few basic phrases. Anna commented that Karen sometimes had periods of active use of Spanish in the next few

hours after the Spanish play group and that in Spain she received a lot of compliments on her language level. Anna also complained that she could not usually hear how good Karen's Spanish performance could be if she really tried to speak it, because she knew she could use English with her parents.

Sophia, from the start of the recording, appeared to be much more verbal than her sister. She was usually quite willing to pick up the language used by the parent and, like her sister, spoke fluently and with very few hesitation pauses, but with somewhat limited vocabulary as compared to her English utterances, as seen, for example, in the following exchange:

(17)
MOT S: ¿quieres contarme la historia?
      do you want to tell me the story
SOF E: this is the seal. old brown seal. just one jolly old brown seal. he lives in
      this teeny little cave by the sea.
MOT S: en español, por favor
      in Spanish, please
 SOF S: era un…
      it was a
MOT S: una foca
      a seal
SOF S: era una foca y era de color marrón. Y tenía una casa en el mar.
      it was a seal and it was brown   and it had a house in the sea

Sophia also had some reading and writing skills in all three languages from the beginning of the study. Like her sister, she was also more or less balanced in Spanish and German, and was also equally willing to use them in conversation.

4.1.4 Parental Speech

In terms of abiding by the "one parent-one language" pattern, there are some differences between the two parents. Anna is somewhat more willing to code-switch into English or German when prompted by the children, while Dirk most often uses the strategies of Minimal Grasp (apparent lack of understanding of what has been said in the non-target language) and Expressed Guess (question about what has been said aimed at

eliciting an answer in the target language) (see also Section 2.4.2.4). Overall, Dirk is generally more inclined to re-establish the use of German and rarely picks up the children's switches into English. In a way, this may contradict the findings by Juan-Garau and Pérez-Vidal (2001) and Lanza (1992) who state that it is often the parent whose language is in the minority (e.g. not shared by anyone else in the family) tends to enforce his or her language more, since both Dirk and Anna speak German, but only Anna speaks Spanish. However, this may look different in the larger context; Spanish is also supported in the community, while German remains almost exclusively a home language for the girls. It seems to me, however, that this has to do mainly with the personality of each parent. Dirk is generally the stricter parent who establishes more rules and makes sure they are followed, enforcing proper behavior, while Anna is more relaxed and spontaneous.

Both girls produce a variety of switches, mostly either English-Spanish or English-German, with occasional German-Spanish combinations. Both are at an age where they are capable of using switches both to accommodate other speakers and to indicate a turn in the conversation.

4.2 Theoretical Assumptions

The main underlying assumption based on the literature discussed in Chapter 3 is that code switching, rather than a compensatory strategy making up for a lack of competence in each language, is a sign of language development. Code switching does not necessarily imply equal competence in each language, however, it becomes more varied and complex as the child's knowledge of the languages progresses (Cook-Gumperz and Szymanski, 1999; Ervin-Tripp and Reyes, 2005; Genesee, 2002; Ruiz, 1984, inter alia). Therefore, the number and range of switches should both increase with age; thus, the elder child should produce code switches in larger numbers and of more

types than the younger child, and there should also be some positive dynamics in both girls' production during the year of data collection.

In order to establish the frequency and dynamics of code switching in the girls' speech, the data samples were analyzed in terms of the types of switches present. These were classified by their primary function within the conversation, and their respective numbers compared throughout the study period. There were, naturally, dubious cases that were hard to place, as well as cases which caused doubt as to whether they were true switches; these, as well as the data classification principles, will be discussed in more detail in the following sections.

4.3 Study Design

Below is a summary of the way speech data was treated with the purpose of tackling the research questions at the base of the study. These include the specific types of data addressed and the way it was classified and analyzed.

4.3.1. Data Types

Data was collected in two ways: recordings and transcriptions of the actual speech samples collected weekly for 12 months, focusing on the number and types of switches produced by the girls, and recorded (and then transcribed) interviews with each of the parents at the beginning and at the end of a 12-month period.

4.3.1.1. Interviews with the Parents

There were two interviews with the parents about the children's patterns of language use, at the beginning and at the end of the data collection period. Portions of these interviews were transcribed and are presented in Appendix C. The interviews were conducted in a semi-structured manner, where I had a list of questions which I planned to

cover, but also allowed enough flexibility to follow the parents' train of thought and let them take up other themes and topics they found relevant to the subject of the interview. The first interview addressed the (perceived) parental strategies and the child's level in each language. Informal observation or recall may be misleading, especially when certain values are attributed to language use and mixing (Gumperz, 1982); therefore, rather than eliciting quite objective information, this part was aimed at learning about the general linguistic image of the family and the parents' attitudes towards multilingualism, as well as at tracing back the children's initial exposure to each language. I chose for presentation the parts of the first interview which illustrate the recurrent themes which both parents commented on as important or relevant, as well as those which turned to be provocative or conflicting. A second interview with the parents took place towards the end of the observation period, concerning the dynamics of the children's language use and language status and general insights into their language use. I planned the script for the second interview on the basis of the previously recorded data, in order to identify factors not taken into account at the beginning. I hoped to see what topics would carry over from the first interview and whether they would now be seen in a different light, and also to what extent the parents' perceptions would reflect my own observations of the girls' language performance during the previous 12 months; finally, I hoped to elicit information on any external events that may have affected it and that I had not been aware of.

The recorded interviews with the parents on their choices on language use in the family and on their views on multilingualism may not always reflect their actual language strategies, but still provide important observations of the children's linguistic behavior, as well as insight into the parents' general attitude to learning multiple languages, which undoubtedly affects the children's perception of their ability to communicate in a variety of languages.

4.3.1.2. Observation and Recording of Speech

Recorded material is the main source of data for this project. It is also the most reliable data type for sociolinguistic studies of this kind (Ervin-Tripp and Reyes, 2005; Genesee, Nicoladis and Paradis, 1995; Gumperz and Berenz, 1993; Quay, 1995, inter alia). Recording took place in the form of weekly sessions, 30 minutes in duration, for 12 months. The recording sessions were conducted in the family's home, during routine interaction among the members of the family, as well as between the children alone. The first type of data was expected to provide observations of typical language choices each family member would make under day-to-day circumstances, as well as the parents' speech patterns, and to enable me to observe language mixes that may be taken in and therefore perceived as appropriate by the children, thus licensing mixes in the speech of the latter. The second type of data was collected with the goal of observing the children's exchanges in a less controlled environment, where certain language choices were not imposed on them by a parent or another speaker, either a peer or an adult. Such data was most representative of the children's normal interaction with each other (see Ervin-Tripp 2000, 2005). This second type of recording was produced by the parents in my absence. Recording sessions in the two types of settings were alternated: whole-family interactions every other week and interactions among the two children (with minor interruptions which were likely to occur due to the family's travel or personal and health-related reasons) also recorded every other week. The equipment for each recording session initially consisted of a video camera complemented by a digital voice recorder with an attached microphone. Video recordings were more helpful in identifying the speakers at each particular moment, as well as providing the context for their utterances, but the girls never quite got used to its presence; the voice recorder was compact and less distracting and therefore could be placed close to the participants; it also provided better-quality sound and allowed for more flexibility in downloading and transcribing sound files. During some sessions done in my presence using the video camera was inconvenient or

inappropriate (e.g., when there was someone else in the home), so only the voice recorder could be used. For the recordings done in my absence, when the girls were playing on their own, also only the voice recorder was used because it was easier to manipulate and non-obstructive. Thus, the voice recorder soon became the main data collection tool and sound files constitute the vast majority of data. I feel that I had to sacrifice the availability of visual clues available from video files in order to preserve the natural flow of interaction and make it easier for the participants. All recording were produced in the family's home in order to preserve the physical setting in which most interaction in Spanish and German or mixed interaction normally took place (see Jørgensen, 1998). The whole-family interactions took place in the living room and were usually centered on either a game or a craft, followed by free conversation; we also sometimes watched parts of cartoons or movies and discussed them or read and discussed excerpts from books or comic books. The participants always included both children, both parents and me; on 3 occasions, either the paternal of the maternal grandparents were also present. The recordings were almost always produced at the same time and the same day of the week (Thursday afternoons), except some instances when the family was unavailable at that time; then the recording session would be moved to the weekend (Saturday or Sunday afternoon), and would resume the following week at regular schedule.

I was present during the whole-family recording sessions, trying to participate in the situation in a way that would be most natural in order for the conversation to continue normally, taking the role of active participant, e.g. participating in the game and making the relevant comments, and taking part in the conversations. According to Milroy (1980), a successful participant observer should pass oneself off as a member of the group under observation, leaving behind all qualities and values not shared by this group. In this study it was possible to integrate into the family environment to an extent that allowed for naturalistic expression, especially since I had offered to help the parents with babysitting and would sometimes take care of the girls the way their usual babysitter did. Within the

first month of recording the girls felt completely at ease with me, apparently perceiving me as a combination of family acquaintance/caretaker, albeit carrying strange devices much of the time. The babysitting sessions were always separate from the recording sessions; they were much fewer in number and longer in time and took place at random times, mostly Saturday or Sunday nights when the parents went out to visit friends or go to the cinema or theater.

Ervin-Tripp and Reyes (2005), Genesee (2002), Reyes (2004), Romaine (1984), and Zentella (1982) all comment that when observing children, certain topics seem to provoke most natural speech samples, such as personal likes and preferences and relationships with peers, so these were brought up often. I also deliberately switched among the three languages more than I usually do in order to make the children aware that I understand and speak all three; however, I did not try to specifically elicit any particular language from the children. With the parents, I mostly used each one's respective native language, but also spoke English frequently when I felt that my limited knowledge of German was not sufficient, or to address both parents at the same time. I was absent during the child-only sessions, in order to avoid limiting their language choice; the parents were in charge of the equipment during these sessions.

The parents had access to the recorded data and received copies of every recording I kept for data analysis. I would also sometimes go over a particular section with them, either to get some help understanding a particular word or utterance, especially for German, since I am not as familiar with the German colloquial style as I am with the same register in English or Spanish, or at times also to elicit judgments on their own production and/or the children's behavior (see Shieffelin (1990, in Farnell and Graham, 1998)). Mostly, their observations coincided with mine, although there were also comments that showed more biased self-perception. Overall, their observation was that they as a family were somewhat far from the ideal language model they had envisioned for themselves, although they also noticed that in some instances the girls,

surprisingly, showed deeper understanding/greater proficiency than could be expected in the less-than-perfect conditions of real everyday life.

4.4 Transcription and Analysis

The methods used in the transcription of speech data are summarized below. The second part of this subsection presents the principles of data classification and analysis applied in this study.

I reviewed only the last 15 minutes of each 30-minute recording session, assuming that the participants would need time to adjust to my presence and/or the presence of the recording device and settle back into their normal speech mode. I transcribed the segments which contained switches, also supplying the translations for the Spanish and German utterances, and coded the switches by their function. I also consulted with the parents when necessary concerning a few cases of unclear speech or unfamiliar words. The languages used in each utterance were coded in the following way:

Table 4.1: Language cues

Symbol	Meaning	Example
E:	English	KAR E: I just want water. plain water.
S:	Spanish	SOF S: yo quiero un perro *I want a dog*
G:	German	KAR G: vier und zwanzig war es gestern, und es ist fünf und zwanzig jetzt *it was the twenty-fourth yesterday, and now it is the twenty-fifth*

In the case of intrasentential switches, both/all languages will be indicated in the order they are used:

(18)
SOF E:/S: because there were : : pescadores y no tenían eso :
                    fishermen and they did not have this

Data was transcribed using the code proposed in Gumperz and Berenz (1993). Below is the list of symbols which are included in this code. A data sample is also presented to illustrate the way the transcripts were put together.

Table 4.2: Non-lexical symbols: Transcription Notation (Gumperz and Berenz, 1993)

Symbol	Meaning
*	Accent; normal prominence
**	Extra prominence
~	Fluctuating intonation over one word
?	Rising intonation at end of intonation contour
/	Falling intonation at end of intonation contour
,	Holding intonation at end of intonation contour
//	Turn-final intonation
-	Truncation (e.g., what ti- what time is it/)
::	Lengthened segments (e.g., wha::t)
..	Pauses of less than .5 second
...	Pauses greater than .5 second (unless precisely timed)
<3>	Precise units of time (= 3 second pause)
( )	Unintelligible speech
(they)	A good guess at an unclear word
(" ")	Regularization (e.g., i'm gonna ("going to") come soon/)
# #	Extratextual information needs to be included within the text (e.g., R: did you ask E #surname# to come?)
[ ]	Nonlexical phenomena which interrupts the lexical stretch (e.g., text[laugh] text/)
{[ ]}	Nonlexical phenomena which overlays the lexical stretch (e.g., {[laugh] text/} text/)
=	To indicate overlap and latching of speakers' utterances (e.g. L: so you understand = the requirements = G: = yeah, I under = stand them/

Recorded data were analyzed for patterns of language distribution, in order to identify the extralinguistic variables behind language switches (cf. *footing –* contextualization, shifts in mood, topic, role of the speaker and interlocutor, etc.). Specifically, the instances of code switching were grouped according to their primary function within the conversation. I have discussed the distinction between situational and metaphorical switches in Chapter 2; a more specific classification would include certain function types, such as emphasizing, quoting, protesting or narrating, which have been brought up in numerous sources, such as Fantini (1985), Genesee et al (2004), and Grim (2008), McClure (1981), Titone (1987), although they are not always analyzed in great detail. The exact classification of switches by their social functions used in this study was developed largely on the basis of Huerta-Macías and Quintero (1997), Reyes (2004), and Valdés Fallis (1976). The initial classifications (Huerta-Macías and Quintero (1997), pp. 76-78, Reyes, 2004, pp. 84-85, and Valdés Fallis, (1976), p. 58) can be found in the Appendix D. I created a classification of the code switching types by combining the three, and also removed some of the categories and added others during the first stage of the data collection period, according to the recurrent patterns in the participants' speech. The final classification used in the treatment of data is as follows:

1. Change of interlocutor

KAR (to Sophia) E: Hey, I wanted that one
KAR (to the mother) S: yo quería ese
                    I wanted this one
KAR S: yo lo quería
        I wanted it

2. Representation of speech: CS employed to represent someone's speech

SOF S: mira, mira
FAT G: na ja, du Glückskind
        oh well you lucky child
SOF G: Glückskind
        lucky child

3. Turn accommodation: following a switch produced by the interlocutor

FAT G:/E: hier hast du es alles richtig getan, jetzt bekommst du ein lustiges
smiley-face
       here you have done everything correctly, now you get a happy
KAR G:/E: na ja, thank you for talking English
     well, well

4. Topic shift: CS occurring due to a change of topic in conversation.

SOF E:/S: first there were : there were : pescadores y no tenían eso :
                   fishermen and they did not have this
SOF E: don't take my favorite pillow

5. Insistence (non-command): CS indicating a child's persistence in a specific

idea.

SOF E:/S: you : you brauchst zwei Nase
          need two nose
FAT G: zwei **Nasen?..
      two noses
SOF E: yes, two noses

6. Emphasis (command): CS used to put emphasis on a specific command.

MOT S: Hay que escribirlo dos veces
     you need to write it twice
MOT E: You must add these two

7. Clarification: CS giving more information to clarify an idea or message.

FAT G: was passiert dir heute? Hast du was gegessen?
     what is going on with you today? have you eaten something?
SOF G: sieh jetzt
     see now
SOF E: you know, in science class : : I drank coffee without milk
SOF E: i drank coffee with no sugar and ***no milk

8. Person specification: CS occurring when referring to another person during the

conversation.

SOF S: quiero una flor
     I want a flower
MOT S: eh… voy a dibujar una flor morada
       I am going to draw a purple flower
SOF S:/E: morada. Maia's favorite color.

9. Question shift: CS indicating a switch in language when the children had a

question.

FAT G: du hast ein full house
       you have a
KAR E: ich habe… what kind of full house?
       I have

10. Preformulations: used when a specific concept has been internalized in a

specific language (mostly holds for numerical/math concepts):

SOF G: zuerst ich
      me first
SOF E: two ones, four six and=

11. Lexical need. A switch brought about by a lack of expressive means in a

particular language:

FAT G: verstehst du jetzt, was es ist?
      do you understand now what it is?
FAT G: sich wundern
      to wonder
KAR E: when you wonder

As such, Type 11 does not represent a social function. It is present in the data for the sake of evaluating to what extent gaps in vocabulary, rather than personal and interpersonal variables, can account for the amount of code switches preset in the data.

12. Other: instances in which the function of the CS could not be identified.

FAT G: vier mal vier ist sechzehn, und=
      four times four is sixteen, and
SOF G:/S: =sechs tata seis seis tititin tin
      six   six six

Although this is a much wider range of functions than the division between situational and metaphorical switches discussed above, most of them share some features with either the first or the second type. For instance, Type 1 can be considered an instance of a situational switch, and Type 5 - of a metaphorical switch.

In order to get the patterns of the switches, it was necessary to classify the switches according to their social function and calculate the distribution of each instance

within the total. To illustrate this, I present a sample transcript below accompanied by a summary of the different types of switches it contains. This sample consists of two excerpts from the same day of recording which contain part of the code switches for that day. The switches are marked in bold and the type of switch is labeled in square brackets:

(19)
Excerpt 1
Languages: German, English
Situation: Karen, Sophia and Father are looking at the children's drawings

FAT G: ist es der vierundzwanzigste heute?
     is it the twenty-fourth today
KAR G: vierundzwanzig war es gestern, und es ist fünfundzwanzig jetzt
     it was the twenty-fourth yesterday, and now it is the twenty-fifth
FAT G: ja, und Karen hat hatte heute viel Glück beim spielen gehabt
     yes, and Karen has been very lucky
FAT G: weisst du, was Glück ist?
     do you know what lucky is?
KAR   no-ho
FATG: na ja, wenn ich heute viel-wenn ich heute=
     well, if I have a lot today   if today I
KAR E: =lucky? [question shift]
FAT G:=genau, wenn ich heute viel Geld gefunden habe, bin ich glücklich
     exactly, if I have found a lot of money, then I am lucky
FAT G: sieh mal, Sophia hat was gemalt
     look, Sophia has drawn something
SOF G: das Radio
     the radio
SOF E: the radio is alive [clarification]
FAT G: das radio ist lebendig?
     the radio is alive
FAT G: wieso?
     how come?
SOF E: because it's a robot [clarification]
FAT G: das mus ich ausschreiben, das Radio ist lebending weil es ein Roboter ist
     I have to write this down, the radio is alive because it is a robot
FAT G: und was ist das hier?
     and what is this here?
FAT G: ist es ein Baby?
     is it a baby?
SOF G:/E: nein, ein Babyghost. because it looks like it. [clarification]
     no, a baby ghost
FAT G: ach so, ein Babygespenst im Rucksack
     oh well, a baby ghost in a backpack

SOF G: mit Gespenstmama
   with a ghost mom
FAT G: na ja. Und hier haben wir was lustiges, was neues
   well well. and here we have something cool, something new
FAT G: was ist es?
   what is it?
SOF E: a girl listening to the radio and this is a radio [clarification]
VAT G: aber das ist ein Videorecorder
   but this is a video camera
SOF G:/E: sie ist filming and jumproping [clarification]
   she is

Excerpt 2
Languages: Spanish, English
Situation: Karen, Sophia and Mother with a picture book

SOF S: mira, un perro
   look, a dog
SOF S: es un perro
   it is a dog
MOT S: realmente aquí dice "gato"
   it actualy says "cat" here
SOF E: why? [laugh] [question shift]
MOT S: parece un gato
   it looks like a cat
MOT S: y estas son abejas
   and these are bees
MOT S: ¿sabes por qué el chico tiene miedo de las abejas?
   do you know why the boy is afraid of bees
SOF E: yes, because… no, no, I thought you did not like it when a mosquito sucked your blood [clarification]
MOT S: si, pero no son mosquitos, son abejas, las que hacen la miel
   yes, but these are not mosquitoes, they are bees, they make honey
MOT S: y aquí tenemos un perro
   and here we have a dog
MOT S: al chico sí le gusta el perro
   the boy does like the dog
SOF E: because there are Dalmatians that are very cute, and I always wanted a   puppy [clarification]
MOT S: dilo en español
   say it in Spanish
SOF S: yo quiero un perro
   I want a dog
MOT S: ¿dónde está el perro? ¿fuera de la casa o dentro de la casa?
   where is the dog? outside the house or inside the house?
KAR S: dentro

     inside
MOT S: no, Karen; dentro es cuando está en la casa; mira dónde está
     no, Karen; inside is when it is in the house; look where it is
MOT S: eso es fuera
     this is outside

The total number of switches present in each sample was summarized in a table in the following way:

Table 4.3: Sample code switching summary

Child	Total switches
Karen	8
Sophia	10

The types of switches were also classified by function, individually for each child; again, below are the examples example based on the sample transcript.

Table 4.4: Sample code switching distribution (Karen)

Change of interlocutor	
Representation	1
Accommodation	
Topic shift	
Insistence	
Command	
Clarification	6
Person specification	
Question shift	1
Preformulations	
Lexical need	
Other	

Table 4.5: Sample code switching distribution (Sophia)

Change of interlocutor	
Representation	
Accommodation	
Topic shift	1
Insistence	1
Command	
Clarification	7
Person specification	
Question shift	1
Preformulations	
Lexical need	
Other	

After the data collection was completed, the information received from all recording sections was also summarized across the study period for each of the girls. These summary tables, as well as the specifics of each type of data and the tendencies observed, are reported in the following chapter.

One important issue in the analysis of code switches is the issue of distinguishing true switches from borrowings. As discussed above (Section 3.1.1), switches are more spontaneous and varied than borrowings, which are usually shared by a group of speakers. Furthermore, borrowings, unlike switches, acquire the structural and phonological features of the base language. The size of the element in question is also indicative of its nature. Zentella (1990) calls one-word lexical borrowings *crutching,* since they are not true switches but insertions of a lexical item often more readily available to the speaker within a semantic field. Ervin-Tripp (2005) writes that such inserted items are often of high frequency in the children's surroundings or have unique semantics in the source language. I believe that in our particular case these include such items as types or specific brands of foods, names of books/cartoons and characters from them, names of people and places, among others. In order to exclude such possible borrowings, Reyes (2004) completely eliminated one-word switches from her data. In

this study, however, I chose to avoid such drastic elimination and instead considered such phrases on a case-by-case basis (as in Auer 1995), omitting those one-word insertions, mostly nouns, which I considered to be pure borrowings. Finally, these lexical insertions were expected to be able to act as triggers (2.4.2.3) for a subsequent switch into the language they come from, but in this case the actual segment produced in a particular language would be more than one word in length. Triggered switches were also initially included in the classification of code switching by type; however, after the end of the data collection period it turned out that the instances that could safely be identified as triggered code switches were too sparse to analyze in terms of their dynamics; the few instances that could fall in this category will therefore be discussed separately.

4.5 Summary

This chapter provides an overview of the methodology employed for this study of code switches produced by two trilingual siblings during 12 months of recording. The methodology was designed taking into account the literature on the study of speech production summed up in Section 3.3, as well as code switching literature. Specifically, the data consists of recordings made in the family home at weekly intervals during a year-long period. The data as then transcribed and analyzed in terms of frequency and type of code switches. The switches I encountered in the recorded data were classified into 12 groups according to the underlying social functions, and the data for each respective type was monitored throughout the period of study in order to observe the prevailing types and the dynamics in their number and distribution. Production data was complemented by data from two semi-structured interviews with the parents, at the beginning and at the end of the 12-month period, which provided insight into the parental strategies and the additional types of language exposure available to the children.

CHAPTER 5

RESULTS AND DISCUSSION

In the first section of this chapter I present the two types of data obtained from the participants. First, I sum up the relevant information obtained from the parent interviews which helps us to understand the family's attitude towards multilingualism and the parents' motivation for the maintenance of the home languages which affects the girls' perception and production. Then I discuss the results of the study in terms of the dynamics and distribution of code switching data types across the study period and the comparisons and contrasts between the two children's performance. Finally, I proceed to analyze the implications these results have for the study, referring back to my initial research questions and discussing any new issues that arose during data collection and analysis.

5.1 Interviews with the Parents

The two semi-formal interviews with each of the parents took place at the beginning and the end of the data collection period. These were aimed at discovering the parents' views and beliefs on language use and language development, and specifically, on trilingualism and the use of home languages, as well as the speech strategies they believed they used with the children in order to maintain and encourage the use of Spanish and German at home. Selected parts of the interview were transcribed, and the transcript, which covers about 50% of the total length of the interview, can be found in Appendix C.

The excerpts I selected for discussion in this chapter are those that represent recurrent themes in the conversation, topics that both parents felt strongly about or those on which their positions differed considerably. Some themes also carried over from the

first to the second interview, as can be seen from the discussion below. Other selected excerpts also appear in the discussion of the children's data when they complement my findings or offer an alternative point of view.

The interviews also helped to complement my understanding of the family, their beliefs and linguistic priorities, as well as provided valuable information on their lifestyle, family relationships and family background, all of which were important in understanding the social and personal motivation behind code switching. Finally, I hoped to elicit some additional comments from the parents that would point out certain aspects of language use that I had not taken into account before the beginning of data collection. I did indeed receive such comments which uncovered the parents' areas of concern about the girls' progress, as well as their understanding of the social/cultural aspect of language; Dirk and Anna also showed surprisingly deep insight into the more abstract issues of language acquisition.

The language issue seems to be a very emotional topic for the parents. They want the children to be fluent in German and Spanish, and at the same time express a lot of concern regarding their own language strategies and the children's language choices. Their ultimate goal is for the girls to reach a level at which they can receive formal instruction in either of the two home languages; in fact, Dirk and Anna plan to send their daughters to study in Europe for a year or more when they get into high school.

5.1.1 Setting the Scene: Parent Interview 1

The first interviews with the parents were carried out during the first month of data collection. Each of the parents was interviewed individually, although the other one was present at the house at the moment and available for questions or comments if a need to clarify some type of information arose. The two sessions, one with each parent, took place about two weeks apart, based on the parents' availability. The first interview

provided information on the family's background and parenting styles, as well as the parents' language strategies, as much as can be inferred from their own recollections.

Among the first issues to be addressed was the way the parents chose to speak to their children and the reasons for such choices. The parents stated that they tried to keep to the One Parent – One Language strategy as much as they could, but found it increasingly difficult because of the almost-all-English environment they worked in and because of the children speaking back in English much of the time, as noted by the mother:

> (20)
> **MOT** Sometimes I get lazy and I start to speak English, because most of the time they answer English back. I think there is a balance of two languages now. Honestly, probably now English becomes more dominant simply because Sophia uses more English… now I have two kids talking back to me. There were periods when I spoke *much* more Spanish with the girls,

As a result, Anna and Dirk each used both English and their respective native language at home. This is confirmed by the observation data. Between the two, Dirk seemed to be somewhat more insistent in speaking and being spoken to in German, while Anna allowed and used more English; however, both actively used both English and their respective native languages with the children, and Anna occasionally (and only for short instances) used German as well in Dirk's presence.

As for the specific objectives of language use, when discussing language distribution, the father said (it was also confirmed by the recorded data) that English was often used for commands and similar utterances aimed to produce an immediate effect:

> (21)
> **FAT** The issue with a parent is that you need to communicate certain things to your children. You need to make sure they understand. And unfortunately these are the situations that create a habit, you know. There are situations when you need to get a message across, and make sure that things happen fast. So I would say that English has become that language. And then the problem is, outside of these situations, I try to switch back to German, usually what happens is I start in English, and then I catch myself and go back to German.

(22)
FAT I would say, when I need to create some sort of order in the house [laughs] you know, typically I'd say English. And then I will think, oh, they will associate all these negative things with English, which is ironic because German has this image for a guttural language, so that is quite strange.

Meanwhile, German and Spanish were used for less immediate purposes, to refer to emotions or more remote situations, as well as things in the house and issues that do not have to do with work/school, thus remaining in the sphere of the in-home or relationship-building languages.

It should be noted that the situation was different during the periods devoted exclusively to honing the girls' language skills, referred to by the parents as language lessons or language sessions; at these times, the parents specifically focused on using their native languages. There still was some English present, but much less than at other times. These sessions first took place on weekends and then were changed for shorter periods on weekdays.

The parents made some specific comments about their strategies and approaches both during and outside of these sessions:

(23)
FAT You see, Anna does more writing, for me it is not that important; in my lessons I have… I am more interested in how they speak it. You know, because if they can't speak it, it's tricky for them to do anything else. Although with Karen, there are some exercises that I do. A little bit if training there, but it is more, can you understand, can you speak it?

(24)
MOT But on a day-to-day basis, I guess I *try* to encourage them to speak Spanish, I say "Say that in Spanish", or "Do you remember what that is in Spanish", or "we were speaking about…" Karen was asking what months were in German, and I said *Monate*, and *Meses* in Spanish.

According to the parents, there had been some considerable shifts in their language strategies since their first daughter was born. They had started out with the idea of raising her trilingually, and had tried to speak mostly Spanish and German, to her, respectively. When she was two, she began to attend an English-speaking preschool. At

that time, she still had not started speaking, and that worried the parents to such an extent that they almost gave up the idea of multiple languages, fearing that her language development might become impaired:

> (25)
> **FAT** When I saw that Karen was not developing as fast as other kids – unfortunately, you always start comparing – we had this one boy who with one year already could you know – was very articulate and knew many multisyllable words - that is when we got a little concerned, oh my gosh, I was really scared that she would not even get the English properly, you know, so that also maybe made us soften up towards English.

Karen actually started speaking soon after that, combining words from all three languages, and quickly learned to distinguish between the three, so those fears turned out to be ungrounded. Then the parents tried to re-establish their languages, and even tried to offer recasts of her English utterances, but gave it up later on:

> (26)
> **MOT** I used to do that with my first daughter when she was little; I used to repeat all the sentences she said in English, I used to repeat in Spanish. But I… It was just very strenuous – it kind of stopped everything.

Overall, the early shift towards more English at a certain point probably did influence Karen's language use by establishing a pattern different from the One Parent – One Language one and bringing more English and therefore less Spanish and German into her daily communication with the parents.

Sophia started speaking after one year of age, and has generally been the more verbal child of the two, and also the one more willing to pick up language cues. According to the parents, if she had been born first, they would not have been so concerned about creating a trilingual situation since they would have seen from early on that three-language proficiency was in fact attainable and that the home languages would not prevent the children from acquiring English:

> (27)
> **FAT** Going back, I would not really care, I would be - not be worried about that. Knowing what I know now, I think I would not be as scared as I was back then.

This is not to say, however, that Karen is a less successful language learner than her sister. Already at the first sessions she showed a very high level of comprehension and was able to deduce meaning from the context, was very good at following native speakers' utterances and could understand, if not reproduce, complex structures and abstract notions. According to the parents, the previous summer they had enrolled her in a German school during all the regular classes for two weeks and she did surprisingly well, used German all the time and got on well with the teacher and other children; in fact, the teacher was very impressed by her knowledge of the language. However, she was always more reluctant to speak Spanish and German at home, except in some situations that somehow stirred her curiosity/emotions (like a play she participated in at the Spanish club), so it was harder to evaluate her linguistic abilities, except during the language sessions:

> (28)
> **FAT** So whenever I talk to Karen, that last German lesson we had, and I asked her, well do you understand that, do you understand that word? And I was surprised that she actually understands. You know, that surprises me.

Overall, it seemed that the girls' comprehension level was much higher than their production level, and the relatively small amount of Spanish and German they used outside of the language time was due more to the established family patterns where English served as a type of *lingua franca* for pending requests and complaints than to their inability to express themselves in these languages.

> (29)
> **MOT** I know that they understand a **whole lot more than they speak. And that's my hope, that if we just keep doing it at some point they will become interested, and then we can start practicing. They need to talk more – I don't know if you have a tip on how to make them talk, that would be great – I can't get them to talk more than they do.

> (30)
> **MOT** And you know, last summer, my cousin came to visit and we did the Spanish lessons every day. And Sophia - I saw it then, I knew it in Karen already but I saw it in Sophia – when we did the workbooks, when we wrote things down,

she was fine. She had the structure already, all she needs is to use it more and practice.

Both Anna and Dirk mentioned what they considered the girls' main weaknesses in German and Spanish. Dirk concentrated more on the structural level, naming typical examples of English transfer, such as the lack of sentence frame construction in German, while Anna (not very surprisingly, taking into account her background in music) mentioned the fact that their intonation in Spanish was often non-native-like, although they pronounced individual sounds well (see Cruz-Ferreira, 2007, on the transfer of prosodic patterns). Both parents commented on the children's lower fluency compared to English and on the fact that their vocabulary was more limited, which is also clear from the recorded samples. At the same time, as mentioned above, the girls showed an understanding of many lower-frequency words which they did not actively use.

Both parents also mentioned that the conditions in which the two girls had been brought up were different. As mentioned in 2.4.2.3 above, it is possible with the first child to create the ideal/desired conditions for the firstborn where the parents have the decisive role in language choices, at least during the first years of the child's life. With a second child, the elder sibling has as much, or even more influence than the parents, including linguistic influence. Both parents brought this up when speaking about Sophia:

(31)
MOT She is very quick, she gets it right away, she is eager. And she has the verbalness. But at the same time I feel that she does not have the same amount of exposure that Karen had, so maybe she does not understand as much as Karen does. You know what I'm saying? And it's not the age, it's more the exposure. […]And sometimes I think we *should* concentrate on Sophia, because she would pick it up right away.

(32)
FAT With Sophia, it was all a question of time, because I'm afraid Sophia got less German exposure than Karen, yeah, I do read to her, but gosh, I also think it is this first child phenomenon, when you try to do everything right with the first child, and then the *second* one kind of rolls along. Although I try to catch myself, it's not like Sophia is neglected. I do read to her in German. But I think it is also because Sophia has an older sibling? She kind of started talking at a much earlier

stage, she just started talking, yapping away in English, and how do you react to this child? So it's tough.

All this said, it is quite clear that Anna and Dirk managed to raise both children as active bilinguals who are capable of both high-level comprehension and successful production and are sensitive to the different aspects of the language. Dirk and Anna stated that their main idea was to give the children a stable base upon which they could develop greater fluency:

> (33)
> **MOT** Well. I think we should continue doing what we are doing. I would like to do more grammar with Karen and more studying with Sophia once she gets older. […] I am hoping that when they are teenagers, that we will be able to send them to Spain or Germany for a year or so. Just as an exchange student, have them, you know, get to know the Spanish culture, the German culture… […] And then, after a year in Spain, I'm sure they would be just fine.

> (34)
> **FAT** And in terms of their language future, I have no huge aspirations that they read and write perfectly and know German grammar, you know, which is complex, you know, without mistakes. However, I think that should they ever decide to study it, in Germany or Spain, they will not have any difficulty.

Between the two parents, Anna was the one who spoke a lot about the social and identity-related aspect of language acquisition. She mentioned that acquiring a language, especially at a native or native-like level, also means sharing the culture of this language, and emphasized how she tried to get the children acquainted with and interested in the Spanish culture. She believed that she had been mostly successful in that up to the moment, but also stated that the girls would probably never associate themselves with her own country of origin:

> (35)
> **MOT** It is so much more important to have roots, to know where you come from. Because when they are adults they can go anywhere they want, but it is such a nice feeling knowing that you come from somewhere. OK, they will not be Spanish like I was. They will see where their mom comes from, and learn about things, but I will not expect them to be Spanish, it's just unrealistic.

Finally, one interesting comment that Dirk made about Karen deserves special mention:

(36)

> **FAT** But there is also one thing that I notice, that English is helping her. The better she knows English, the easier it is for her to understand German, because you know, the German she knows, she knows very well, considering that she is not exposed to German all the time. I think they are building up the structure of language, the building blocks, so to speak.

It is quite curious that Dirk intuitively came to the idea that different languages are based on the same structural principles, and that proficiency in one language can actually lead to greater proficiency in another one through structural bootstrapping.

Overall, the first interview showed that both Dirk and Anna took their children's language acquisition potential very seriously and had always tried their best to provide them with high-quality input. Considering the amount of time and thought they devoted to this issue, the resources available to them for travel and language instruction outside of the home, regular contacts with extended family and the fact that the area they live in has a wide range of educational resources available, this family can be considered almost a model environment for raising children trilingually; therefore, the challenges they face on a daily basis do not depend as much on social status/financial situation as on more subtle factors of language dominance and distribution, as well as personal factors, which I will discuss in the following sections.

5.1.2 Parent Interview 2: Changes in Parental Expectations

The main goal of the second (exit) interview was to gather the parents' impressions of the children's language use during the year of data collection, which may have coincided with my own observations or not, and to discuss any important events that had taken place during that time. Thus, the second interview was supposed to provide me with insight on the general dynamics in the family's linguistic patterns, as well as in the parents' impressions and expectations of the girls' language progress.

The one point of disagreement between the parents was whether they should recur to a tutor who would specifically come to work with the girls. The language of choice would be German as the language least spoken in their surroundings, with Spanish a possible option later on. Anna was largely in favor of such an idea while Dirk was somewhat more hesitant, saying that this would be too little to produce any serious improvement and not worth the trouble of bringing an otherwise unknown person into the home. At that time they had not reached an agreement yet, and to my knowledge they have not looked for a tutor so far.

(44)
MOT I think that some kind of formal teacher, not me, teaching them would be good. But the key is, how do I motivate them? That's what I'm struggling with right now.

(45)
FAT About having someone else, from outside the family, to come in and teach them… well, you know, you have to be consequent with what you are doing. And I am not so sure about it. We once talked about having a German teacher come in maybe once a week. But you know, it is always such a short glimpse.

In terms of their own way of providing the girls with language input and encouraging them to speak German and Spanish, the parents' impressions were somewhat mixed. Anna commented that her expectations had not been quite fulfilled, and that she felt that they as parents had let things slide in terms of inculcating their languages and were usually not doing as much as they technically could:

(46)
MOT I am always hoping that they would do more, and I am always told that when the kids learn a second language in immersion they don't speak for a very long time, and then they start speaking, and I am waiting for that to happen.

(47)
MOT I am a little frustrated actually, I always thought that they will talk more, that they will be more proactive. I always have a hard time figuring out how I can motivate them to speak more Spanish, but without pushing them. And I go between trying to get them to do something and just letting it go; we do books,

comics, crossword puzzles, and sometimes I just leave it at that, but it feels so little, and then I go back to trying to do more in Spanish.

Dirk also mentioned the challenges they faced, and admitted to code switching between German and English much of the time. He also stated that Anna had a harder time balancing the languages since she was the one who spoke all three and had to switch between using German with him and Spanish with the children, not to mention the constant presence of English through work and school.

(48)
FAT […] I mean the problem is, as you know, we are here in the States and English is the kids' first language. When they come home from school they are in an English mode. Now, if Anna and I were to speak one language only, I think it would be much easier to keep alive that one language, if we were both German, or Austrian or Swiss. […] But see, she has to speak Spanish and I German, and that's more challenging. And since Anna also speaks German, German is the second most used language at home, and then Spanish, but there is more Spanish around, so it helps a little bit. There is also this thing with Anna, she speaks German but it is not her language, and her day is all in English, so she will come home and tell me how her day was in English, and I will speak German back, and we will switch between the two all the time. And sometimes I will talk English as well.

(49)
MOT In terms of talking to them, I think that Dirk is a little bit more natural with them than I am, with just sliding into German and then back again. Me, because I switch between all three languages, I lose patience. And then I just head for the language that's easier at that moment, and he can be more consistent, it seems to me.

One comment that carried over from the first interview and is shared by most sources on child multilingualism (see 2.4.2.3) was the fact that the parents can create an ideal language situation for bilingual acquisition when the child is young and they can completely control the situation, but as the child grows older peer influence becomes stronger than parental influence, and for younger children the influence of elder siblings is ever-present.

(50)
FAT I think the key is just to grow the habit, and I think with Karen, because she was the first one, we just were much more motivated, but then when Sophia came

those two girls started interacting but in English, and that reinforced the local language. So it's really hard.

Anna also came up with the fact that language is learned differently at different periods of life and that child language acquisition is fundamentally different from the way adults study a foreign language (see Bley-Vroman 1989, 1990; Clahsen and Hong 1995, Klein 1993, and others):

> (51)
> **MOT** I think that when they are babies you can actually make it happen that they have two languages instead of one. Of course to them it is one language, but it is actually two. It is when they get to this age that it's tricky because they do not pick it up at the same way; they are not ready for the formal learning of language yet. I also think as you get older you have more ability to sort out the different parts of the language in your own head. And then of course, when you are twenty years old, other issues come in… Then it's a totally different thing, it's a very formal and abstract, and it's hard, and a lot of work, and so on.

Overall, both parents (but especially Anna) appeared more concerned about the girls' prospective fluency than during the first interview and admitted to being somewhat disappointed with the amount of Spanish and German their daughters used, attributing this to a lack of social motivation, which in turn caused insufficient experience with language, oral or written, and therefore more limited access to spoken and written resources. In this sense, their situation may be quite typical of a minority language family, even one enthusiastic about raising their children bilingually and with a good enough financial situation to afford travel and learning resources. For instance, Khattab (2007) reports very similar observations in a family where the parents struggled to resist the attrition of Arabic under the influence of English. Besides, also similar to Khattab's findings, Dirk and Anna themselves produced mixed and English-only utterances more than they admitted, with the exception of the times devoted specifically to Spanish and German. However, both still stated that they had high hopes for the girls to grow up multilingual and, most important, multicultural, so that they would share with their parents not just their native languages but the identity they represent.

(53)

MOT And all I am hoping for is that they will see the advantage of having three languages, that they'll see me as a model, so that when they get a little older they might be inspired by me because their mom did three languages. It could also be the other way around [laughs], that they feel frustration because their mom knew all these languages and they are not learning it quick enough, that could also happen. So I don't want them to feel pushed too much. So I really don't know the answer to what to do, to be honest.

(54)

FAT I am still talking German to them and Anna is still talking Spanish, whether or not we get it from them. It is clear that the girls will obviously never reach the level of their peers in their respective country, but for me that's not really the important point; the important point is that first of all they have a connection to their respective culture, because they are that too. I want them to feel at home in Spain and in Germany. And obviously, language is your culture. My hope is, if they constantly hear it at least from us, they will – if they would want to – study eventually in Germany or Spain one day – they would have an easy time, because… you know… of course they would probably have to take language courses to boost their knowledge, but at least they would have an advantage, a base.

In conclusion, the second interview, besides reiterating on what had previously been mentioned, brought out new points to my attention. As the girls grow older, the need for social support for the minority languages becomes more apparent; the contrast between parental expectations and the girls' performance also becomes stronger with time, although, as will be seen from actual data, their concern is not always justified. Finally, the second interview provided additional support for the importance of the personal factor in naturalistic trilingualism and confirmed my observation that the active/passive role reversal between the siblings was possible, depending on each child's age, learning style and language experience.

5.2 Issues in the Recording and Processing of Data

This section sums up the issues I had to deal with when recording and transcribing data. These include the use of recording devices and avoiding the observer's paradox.

Initially, both girls seemed affected by my presence and especially by the presence of the recorder and each of them acted quite unlike her usual self, according to the parents' comments and in comparison to what I could observe from later samples. Karen tended to keep quiet and would hardly talk, and Sophia, on the contrary, would be much more fussy and noisy than usual and would say anything that came into her mind, no matter what was going on, in order to be in the center of attention and get everyone to laugh/comment on her behavior. The solution to this was to discard the data from the first month of recording. By the second month, I had blended in with the family to an extent which allowed me to not be seen as a stranger; it also helped that I had babysat the girls twice by the beginning of the second month, so my presence was not limited to recording their speech. Also, in order to diminish the influence of the observer's paradox, I eventually refrained from using the video camera which attracted too much attention, and used only the digital recorder which was not so intrusive. I had first expected that without the camera it would be hard to identify the speakers (see Zentella, 1990; Ervin-Tripp, 2000), but this was actually not a problem since everyone had a very distinct voice and manner of speaking. The disadvantage of this was the fact that for the samples recorded by the parents in my absence, I could not directly identify the extralinguistic elements of the conversation; these had to be inferred from what was being said. This, however, seemed like a lesser evil compared to making the parents go through the trouble of setting up, pointing and re-pointing the video camera, and the influence the latter had on the children's behavior.

Other than that, there were no major problems in obtaining and dealing with the recorded data for this study; since the recordings were usually made indoors, there was little or no outside noise and the circle of participants was limited and well established, so I could hear their utterances well and would easily identify the speakers.

<u>5.3 Family Dynamics and Language-Related Events</u>

This section deals with the changes in the girls' exposure to Spanish and German during the recording period as well as the presence of any people and visits to any places that would significantly increase their need to use these languages. It should be noted that overall, there were no significant changes in the family life during the year of data collection, such as the birth of another child, or a change of home or school.

5.3.1. Additional Language Exposure

While Spanish and German still came mainly from family members, Anna's and Dirk's parents and other relatives occasionally visit them, and the girls' use of the respective language increases considerably during these periods; this can be seem in the recorded data since during the 12 months of data collection grandparents on both sides came to stay with the family. Dirk and Anna also try to travel to Europe with the girls once or twice every year, which seems to give a boost to the girls' language skills:

> (55)
> **MOT** […]they had a lot of contact with the culture, and they know what's going on in Spain, you know, what stores to go to, what TV stuff is going on, you know, in general. We also went to Germany, so they had a change to practice their German. They went to school there. In Spain, we took them to a camp for about one week where they got a chance to practice their Spanish with other kids.

However, during the year of data collection the family did not get a chance to go to Europe, which would have likely been the most significant language- and culture-related event of the year, so the effect of that kind of language exposure was absent from the data.

They did, however, have contact with the extended family from both sides since both the maternal and the paternal grandparents visited them during the year of recording. I had a chance to do some recording in their presence, and the family also recorded some

of the interactions between each pair of grandparents and the children for me as part of the weekly data collection sessions.

5.3.1.1 The Grandparents

Dirk's parents were the first to visit; they came shortly before Christmas and stayed for about three weeks, mostly spending time at the house, so the children had very intense contact with them - sometimes all day long, since the girls did not go to school and the parents had to work most of that time. Dirk's parents understand some English but have trouble speaking it, which largely limited the language of communication to German. This was apparently clear to the girls; they used German with the grandparents almost exclusively, the exceptions being the times when they did not know a particular word. The same also occurred during telephone conversations before and after the grandparents' visit:

> (56)
> FAT G: ist das Oma?
>   *is that Grandma?*
> KAR E: hello, this is Karen
> KAR G: ich wollte dir danken fur das Geschenk
>   *I wanted to thank you for the gift*

Anna's parents also came to stay with their children and grandchildren for two weeks, around Easter. They also had close contact with the girls, although somewhat less than Dirk's parents, because they did more sightseeing on their own during their visit. There are also much more proficient in English which, as Anna had mentioned in the first interview, made them less consistent in speaking Spanish to the children. They have, in fact, lived in the United States, spending three years here when Anna and her siblings were in middle school, and they easily switch to English in conversation. Therefore, they not only bring additional Spanish input to the children but also provide examples of mixed speech as normal and acceptable in everyday conversations.

5.3.1.2 Spanish-Language Group and Choir

Besides the exposure that comes from the parents, the girls also received Spanish input from the weekly Spanish play group where they did a variety of culture-related activities. The group was mixed, consisting of children whose parents spoke both Peninsular Spanish and a number of Latin American varieties (mostly Mexican, Central American and Colombian); according to the parents, the girls seemed to be comfortable with understanding the different varieties, but followed the mother's dialect in their speech, with the exception of some colloquial expressions they picked up from other children. It should be mentioned, however, that outside the structured activities (singing or acting out skits) the children mostly spoke English to each other and the Spanish input came mostly from other parents.

Anna and Dirk mentions that they had also attempted to introduce the girls to a more formal language environment at few times; when Karen was 6, they enrolled her into weekend German and Spanish classes for about five months. However, they found it very strenuous for everyone. Also, since Karen did not really know the other children in the group because they all lived very far from her and from each other, they did not get along very well, and Karen had low motivation for going to the lessons. And at the time of data collection, with two children in school, Dirk and Anna found it even harder to fit in additional language classes:

(57)
MOT Another idea would be to enroll them in the Spanish and German schools again. But them we would not have any free time. It would all be about language. They have other activities during the week that I could take away, but it would be too hard for everyone.

The Spanish play group is the most consistent source of Spanish input the girls receive outside of home; most activities take place on weekend afternoons, and Karen and Sophia attend them at least once a week most of the weeks. According to the parents' comments, the children tended to use English among themselves and often in response to

the instructors, who were all proficient in Spanish and would code-switch a lot. About half way through the recording period, a new instructor was assigned to the group who introduced a variety of activities. The most important addition to the group routine was the choir; the instructor spent about an hour each week practicing singing with the children who attended these practice sessions. According to the parents, both Karen and Sophia did quite well in the choir and seemed to enjoy it a lot; they were even selected to perform at the Christmas concert prepared by the group. This was a big event from them and likely provided added motivation for Spanish use; the effect was strongest on Karen who, according to Anna, used much more Spanish for a few days following the concert.

5.3.1.3 Reading, Video and Games

The parents usually read to the girls in Spanish and German respectively at bedtime; however, both girls were also good readers in both languages towards the end of the recording period. Karen is an avid reader and although she may be reluctant to pick up a book in German or Spanish, she will later get absorbed in it and will be able to comment on its contents. Sophia also has good reading skills, but her attention span is much shorter and she gets distracted soon; she needs someone around to direct her back to the book and be ready to discuss the characters and illustrations.

Children's films and cartoons are also a source of language input, albeit not as regular as books; the children enjoy them, as they do any kind of films and cartoons; the influence this has on their language may not be very obvious, but apparently it does add to their receptive knowledge because sometimes they show understanding of items they could not have picked up from their parents. Dirk commented on the fact that the girls were sensitive to the native-like quality of input and tended to be very particular about the language they hear being authentic:

(58)

FAT Well yes, although there are certain funny… I mean, Sophia always likes humor, you know, so there are some funny German books that she has and she loves listening to them. When I read to her, she loves that. But I think Karen was like that as well. But she is also very particular about that, when I translate a book in English, you know, simultaneously reading it in German, she knows exactly which books are in German and English [laughs].

RES So, does she want the German books to be in German and the English books to be in English?

FAT Well, yes, if it's a German book, it's fine for me to read it in German, we have, for instance, "Janosch," it's a story about a bear and a tiger, it's a funny book which she looks forward to. Or a very simple book, "Bobo," which is she can follow, you know, so it helps also, if the level is too difficult; I mean she understands but there are certain words she does not know. But we also have books where you have sentences and there are certain words that you need to fill in, describe these pictures. Karen used to like these too, but she has overgrown them, for her it would be too simple now. Now she likes comic books, "Asterix," for instance. And it also helps, the movies help. Even though "Asterix" is French [laughs], but for them it is in German. For them it's something that's European, that's something they don't get here in the States, so that's an advantage. And it's funny, you know, it has its own type of humor, I would say European humor, and they like that as well.

This specific comment, besides providing insight into the girls' language input, confirms my observations that the girls have a keen sense of what is natural in each language and that each one describes real-life events and phenomena somewhat differently, reflecting not just the purely technical means at its disposal but the underlying assumptions and way of thinking.

5.4 Summing Up the Data on CS Types

In this section, I discuss the validity of my data and its implications in reference to the initially posed questions, as well as any new aspects uncovered during data collection and analysis. Specifically, I present the amount and distribution of each code switching type across the data collection period, as well as certain types of code switches that could not be easily places within an existing category.

5.4.1. Data Reliability Check

In order to check the reliability of data treatment, namely the classification of code switching categories, I worked with two secondary raters, one of them a native speaker of Spanish fluent in English, and the other one a native speaker of English who was also fluent in German. The raters were presented with the data on Spanish-English and Spanish-German switches, respectively, from 12 recording sessions selected for secondary rating across the data collection period, 2-3 weeks apart (1, 4, 8, 20, 24, 28, 32, 36, 40, 44, 48, and 54), and were asked to label them according to the classification presented in Section 4.4. I provided the raters with the full transcripts for each session, the target code switching instances marked in bold and numbered, in order to provide them with the context for each one. After combining their results, I calculated the overall correlation between my results and the rater's results for each category, with data from both girls combined in one list within each category, producing the following figures:

Table 5.1: Inter-Rater Data Reliability

CS category	Secondary rater correlation (German)	Secondary rater correlation (Spanish)	**Secondary rater correlation (average)**
Change of interlocutor	0.82	0.90	**0.86**
Representation	0.85	0.91	**0.88**
Accommodation	0.79	0.89	**0.84**
Topic shift	0.80	0.94	**0.87**
Insistence	0.82	0.87	**0.85**
Command	0.81	0.86	**0.84**
Clarification	0.92	0.94	**0.93**
Person specification	0.87	0.93	**0.90**
Question shift	0.85	0.84	**0.85**
Preformulations	0.97	0.90	**0.94**
Lexical need	0.91	0.93	**0.92**
Other	0.70	0.75	**0.73**

The average correlation over the 12 categories is 0.87, which is above 0.80 and therefore confirms the validity of data treatment. The results also show that the category with the lowest correlation, below 0.80, was the category of *other*, which is hardest to define of all. The raters tended to place the cases that were difficult for them to identify into this category and therefore it included more entries than in my classification, while the other ones mostly included fewer instances than in my classification. In the other categories, there was some variation among the two raters, but almost always above the required level, except for *accomodation* for the first rater which was 0.79. The congruence index is overall higher for the second rater than for the first one, showing that while the classification is workable, the personal factor is still influential in evaluating the speech situations in question.

5.4.2. General Dynamics in the Amount of Switches

Overall, the transcribed data used in this study were collected over 54 30-minute sessions, and the last 25 minutes of each recording were transcribed and analyzed in terms of instances of code switching, attributing a specific reason of function for each one. Below are the tables summarizing the code switching distribution by function for each session throughout the data collection period.

Table 5.2: Total number of switches (Karen)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Change of interlocutor			1				1					1				2			3	
Representation		1				1							1						1	
Accommodation	1							1				1				1	1			
Topic shift	2					3					2				1	1				3
Insistence	6					1	1				5				7					4
Command																3				1
Clarification		6		2	2			1				5				7				
Person specification										1					1					2
Question shift																		1		
Preformulations		1		1	1			1	2				1	1	1					3
Lexial need			1			1					2	3					1	1		
Other		1	1		2			3				2		3				1		

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Change of interlocutor				1			1				2					2	
Representation						1						1	1			1	
Accommodation			1					1					1				2
Topic shift	1	2						3		4	1		3	3			3
Insistence					6			3				1			1		
Command				1								2					1
Clarification	3				4			5		1							
Person specification							1				1				1		
Question shift															1		
Preformulations				2	2	2				4	3			2		1	
Lexial need	1		1		1				1			1				1	1
Other													2	1	3		

	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Change of interlocutor					3			1		1	1	1			1	1	1
Representation				1			1					2			1		
Accommodation			1			1			2				1			1	
Topic shift		2				4		2			3	8			2		
Insistence				1	2	3			5		8		4			5	3
Command		1					2										1
Clarification																	
Person specification						1									1		
Question shift									1								
Preformulations	1	2			2	2	3	3			1	2	2		1	1	1
Lexial need	2		2			1			1		3		2		1		1
Other			2				4	2			1	1					4

Table 5.3: Total number of switches (Sophia)

Session #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Change of interlocutor			1			1	1	2			1	1				2			3	
Representation	1		1					1		2			3				2			
Accommodation	5			3						1	1		1			1				
Topic shift	5	1		1	1	1	1	1			1	1	1	2	3		1		1	1
Insistence	1	2	1	1	1	1	1	2		2	1	1	1	1	1	1		1	1	
Command																				
Clarification		5		11	11		10		8	6	5	8	7	2	3	7			1	
Person specification					1										1			1		
Question shift		1		1	1	1			1			1	1	1				1		
Preformulations				5	5	1	1			3	2	5	4	1		1		1		1
Lexial need		1		2	2				3				2		1	1	2			1
Other								1		1					1					1

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Change of interlocutor		1	1					1			2			1	1		
Representation	3			1	1		1			1	1	1					
Accommodation	1			3		2			1				3			1	
Topic shift	1	1	4	1	1			2	1	1			1	1		1	
Insistence		1	1	1	1	1	1	1	2	3	1		1	1	1	1	1
Command																	
Clarification	8		5	5					7	10	12		11	12	12		5
Person specification					1			1		1					1		
Question shift		2						1		1		1		1	1	2	
Preformulations		4			3	4	1		1		1				3		2
Lexial need	1			2	3					1	1	1	2		4	4	5
Other								1	1		2						

	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Change of interlocutor				1			1				1		2		1		
Representation	1			1						1				1			
Accommodation			1	1			1			1			1			1	
Topic shift	1	1	1	2	2	1	3	1	1	1			1	1	1		1
Insistence	1	1	1	1	1	1			1	1	1	1	1	1	1	2	1
Command																	
Clarification	8	7		9	8	9	12	7	6	5	6	6	6	8	4	4	4
Person specification					1							1					
Question shift		2		1		1	1	2	1	1		1			1		
Preformulations		4			3		1	1		2	3	1	1	1	1	1	
Lexial need	1	5	3			3	2		2		2	3	1	1	2	2	2
Other			2					1									3

Before proceeding to the results, it is important to mention that the quantitative measures applied to the data are only relatively reliable, since the recordings cover only a small fraction of the girls' actual linguistic production. Thus, the quantitative analysis applies only to the actual speech samples but cannot be generalized to the children's total language output during the period of data collection. However, this type of data collection was the only accessible type for such a lengthy study, and I tried to reduce the chance factor as well as I could by transcribing excerpts of equal length taken at equal intervals (see 4.4), and by avoiding any unusual circumstances as much as possible.

Finally, it should be mentioned that while a primary function was identifiable in most cases of code switching (similar to *functional code switching* in Auer 1995), there were also numerous instances where it was impossible to come up with specific reasons behind individual switches, as has often been pointed out in CS studies from a discourse analytical point of view, e.g. Myers-Scotton 1993b, Auer 1984, Wei 1998, Heller 1988a.

Below I provide a discussion of the quantitative aspect of the data collected during the 12 months. The first figure illustrates the dynamics of the girls' code switching patterns during the 12 months of recording. The information in this figure partially overrides the initial proposition that the number of switches would increase with time. Also, the switches proved to be less numerous in the speech of the elder sister, contrary to what had been expected.

Figure 5.1: Total number of switches across the data collection period
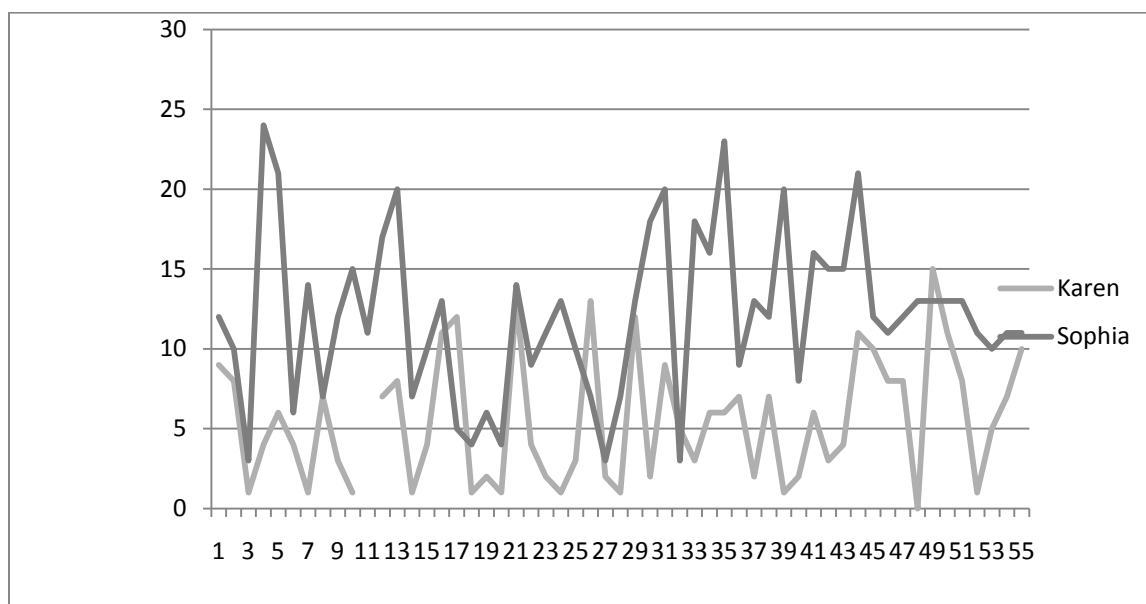
At this point in the study it is clear from observation as well as from the parents' comments that the personality of each child is far more influential in this type of study than originally expected, and it is impossible to draw general conclusions without taking it into account. Karen has always been less verbal and more conservative in her speech than her sister, and from this perspective it is logical that it was Sophia who, despite being the younger child, produced the greater number of switches. However, the fact that Karen, unlike Sophia, does show an increase in the amount of switches towards the end of the data collection period suggests that she may be entering a period where more experimentation with mixed utterances will take place, while Sophia, who had been the more outspoken child, may be on the verge of a linguistic plateau, where she was hesitant to venture beyond the structures and lexical items she was familiar and comfortable with and less open to the active exploration of the three languages than before. This role distribution between the sisters in terms of more active or more passive use of the home languages was also the first thing both parents mentioned in the first interview. The parents actually went even further, stating that the children's initiative

towards the use of Spanish and German had gradually become the opposite from what was observed at the beginning. Both commented that towards the end of the data collection period Karen was much more willing to speak both Spanish and German than her sister and that they were often surprised by Karen's proficiency and her level of understanding:

(37)
MOT Karen is definitely talking more, she is more proactive.

(38)
MOT Karen used German and Spanish consciously when her grandparents are here, so she voluntarily speaks to them in their language. And Sophia uses words, and she understands a lot of it, but I think we need to do more with her.

(39)
FAT […] Recently I spoke to Karen again in German and I noticed that she made more effort. And it is clear to me that Karen is the one who can… I mean, she **speaks German. Sophia - I am still waiting for her to [snaps his fingers] click. And I think it will come at some point but… but right now, I mean… she is very insecure. Karen just speaks, she does not care really, because obviously her grammar is not perfect, but Sophia, you know, she struggles, I think.

As for the reason behind such a dramatic change, the parents blamed Sophia's insecurity with German and Spanish on the smaller amount of input she got as compared to Karen, as was also mentioned in the first interview, as well as a lack of social motivation for the use of home languages since she happens to have no Spanish-dominant or German-dominant friends:

(40)
MOT When we do activities in the languages, I notice that Karen understands everything and Sophia does, on and off. And I noticed that actually, the reason I guess that Karen understands a lot is because when she was smaller I was much more active speaking Spanish than with Sophia.

(41)
MOT Sophia is at the age when, if her friend was speaking Spanish, she would speak Spanish. You know, what parents do is not so important right now; it is what friends do that is important. So if I could find a Spanish friend for her that she can have fun with, then she would start picking up Spanish, I am sure.

The importance of peers who speak the home languages is only part of the general problem with the lack of availability of Spanish and German input from someone other than the parents. Both Anna and Dirk made it clear that they would really appreciate the presence of some person or persons from outside the family who would consistently use the home languages with the girls. Such presence was not always to be found, especially with German. Spanish, they said, was more readily available, although it was still somewhat limited:

> (42)
> **MOT** I think that the more I read about these things, the more I understand that it is important for the parents to be supported, so that they could always keep talking in Spanish, or German, or whatever language they are going to focus on. So I feel that to keep up speaking Spanish, they need to listen to it more. With Spanish, there are a lot of Spanish-speaking people around but we do not always get around each other. That's why we go to the play group at the church every week. But definitely I think that we should do more than we do.

> (43)
> **FAT** Yes, if you have a support network, that's easier. For Spanish, there is the church group that does the celebrations and other things, and at least they see that there are other children that speak it. Although there are other varieties there, not European Spanish, but they still understand it and can relate to it. And in terms of German, unfortunately there is no such equivalent. There are Germans here, not as many as Hispanics, if we had any sort of a community that would be easier.

Both Anna and Dirk acknowledge, however, that the girls' level of understanding of Spanish and German by far exceeded their production in these languages; on numerous occasions they had witnessed how their receptive knowledge was much greater than expected:

> (52)
> **RES And do you think that they understand a lot more than they say?**
> **FAT** Yeah, that is clear. Sometimes, of course, when I read to them, I get a feeling, well, now this is very abstract, and then I always have to double-check, did you understand that? [..] I think their passive is much larger than their active use, and much larger also than we realize. Sometimes I will say to myself, wow, she actually understood that. Either because I have said that in the past, or because of the movies, or books, I don't know. It's somewhere there.

I should say, however, that the parents' reaction to the changes in the girls' language performance may be overly dramatized. Looking specifically at the amount of code switches they produced (Figure 5.1 above), we can see that although it both have their highs and lows during the data collection period, they have very similar results at the end of the data collection period. What is clear, however, is that the distribution of code switches is not merely predictable based on birth order and does not develop in a strictly linear order. Still, age is an important factor in the sense that, as was also mentioned by the parents, both girls are going through a developmental period where peer speech is immensely important and priority is given to socialization outside of the home, making English the preferred language.

5.4.3. Code Switching Distribution by Function

The other important aspect of the data is the number and the distribution of each type of switches across the data collection period. The individual results are summarized below for each of the sisters.

5.4.3.1. Total Number of Each CS Type

The tables below contain the numbers for all occurrences when particular functions of code switches were identifiable in the speech of each child throughout the period of recording. The data is presented by CS type and the children's production of each type is compared.

Figure 5.2: Total number of switches across the data collection period
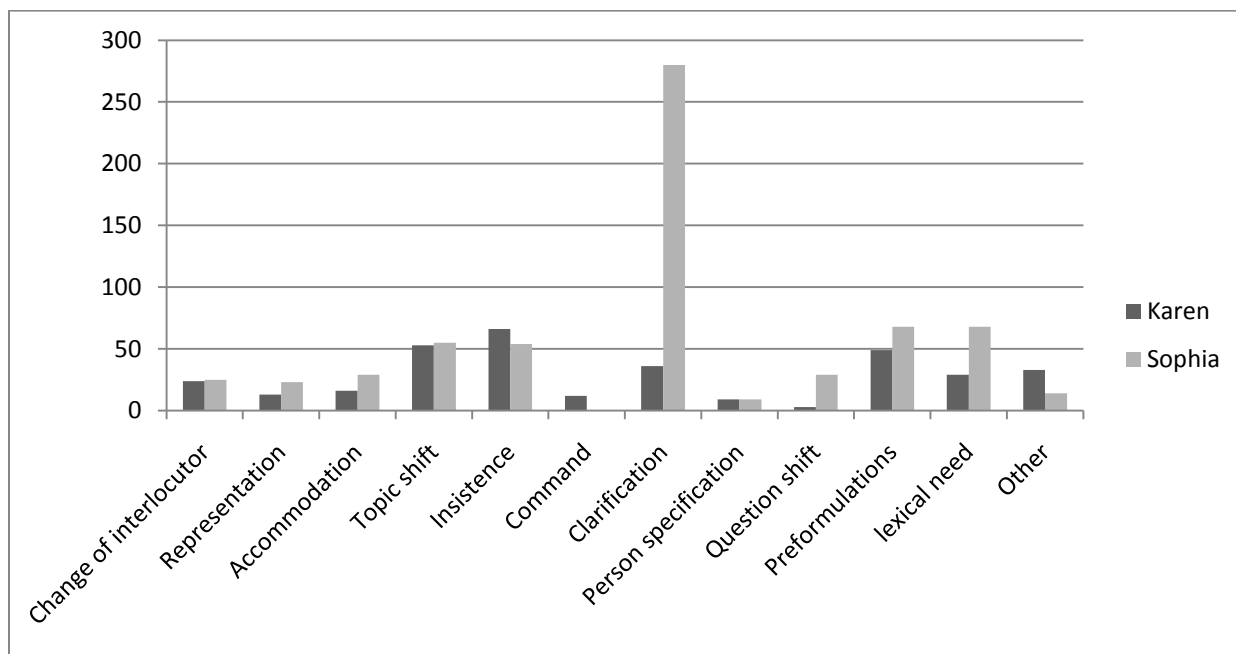
This table clearly shows that the girls had a preference for certain types of switches and that these preferences differed between the two. Karen mostly used switches for insistence, followed closely by topic shift and preformulation. For Sophia, the number of clarifications far exceeded the other types, followed by preformulation and lexical need, and commands were nonexistent in her transcripts. In a way, these illustrate the girls' typical speech patterns, which in turn represent their personalities and the treatment of the three languages they have at their disposal. Karen was generally inclined to stick to her own ideas and would often repeat the idea in another language to make her point:

(59)
KAR S: no quiero leerlo en voz alta
    I don't want to read this out loud
KAR E: I want to read it in my head

She was also the one who made wide use of English expressions and idioms, often inserting them in her speech, especially when speaking to Sophia:

(60)
FAT G: dreimal vier ist…
   four times four is…
SOF G: fünf [laugh]
   five
KAR G: na ja
   yeah, right
KAR E: come on, laugh your little heart out
(61)
MOT S: vamos, cuéntame.
   Come on, tell me
KAR E: but I don't want to
SOF S: yo sí quiero
   I do want to
KAR S/E: aha, claro que sí…you are a damn good sport Sophia
   of course you do

Sophia would also use preformulations a lot, mostly things she learned at school:

(62)
SOF S: se escribe con "A"
   you spell it with "A"
SOF E: A,B,C,D,E,F,G…

As expected, the switches produced by the children were mostly caused by factors other than lexical need which is not the dominant category for either child. Sophia would recur to English more than Karen for lexical need, but this probably occurred because she was more willing to pick up the parents' languages and only refer to English for a specific word, while Karen was hesitant to even start an utterance in German or Spanish if she was unsure she had the lexical means to finish it:

(63)
SOF S: es un parachute
   it is a
SOF E: I don't know this in Spanish [lexical need]
MOT S: paracaídas
   parachute

(64)
KAR S: vamos a ver
   let's see
KAR E: Mom, the ones in circles are the things I don't know

Sophia was not only more likely to borrow words from another language when she could not think of a particular term; in the example below she even justifies the need for this before Karen who wants to avoid the switch:

 (65)
KAR S: y aquí hay una luna. No sé si es una luna llena o… o….
       and here is a moon. I don't know if it's a full moon or… or…
SOF E: If you don't know a word you can say it in English
KAR E: come on, I want to say in Spanish

However, even for Sophia lexical need was far from being the most dominant category of switches, therefore most of the cases of code switching cannot be attributed mostly or exclusively to gaps in vocabulary.

5.4.4. Individual Dynamics for Each Code Switching Category

This section provides the data on each specific type of switches identified in the girls' production. The number of code switching instances was subdivided by type; their dynamics throughout the recording period are discussed separately for each child before comparing the general tendencies in the speech of the two in terms of CS frequency and preference for certain types of switches.

5.4.4.1 Change of Interlocutor

Code switching to signal a change of interlocutor was rather consistent in the data, ranging from 0 to 3 instances per recording session for both girls, as seen from the Table. The interlocutors the girls referred to was usually limited to them, when speaking to each other, the parents and me, but also included the grandparents when they were present for the recording sessions during their 2-week-long visits sessions (once for Anna's parents and twice for Dirk's parents).

Figure 5.3: Change of interlocutor
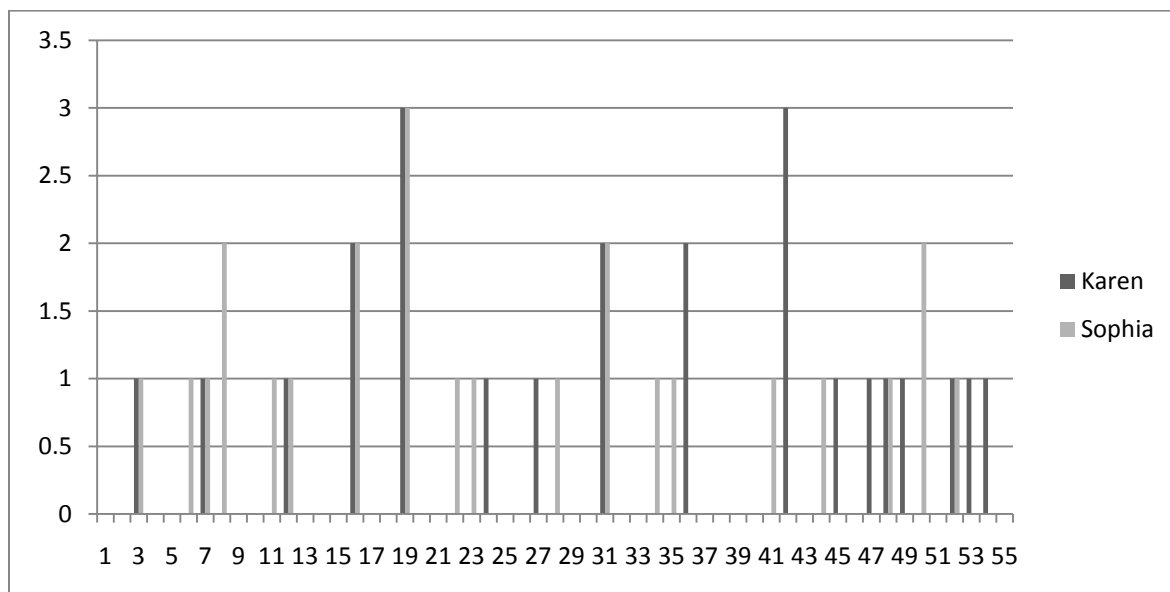
Looking specifically at Karen's data, I noticed that she was much more consistent in using Spanish and German with people outside her nuclear family than with her parents. For instance, in the following examples she responded in English to her mother's question in Spanish, but in a situation when I asked an identical question she replied in Spanish, and in (68) also picked up on my use of German:

    (66)
    MOT S: Karen, ven a comer ya, deja eso ahí
                    come and eat now, leave that there
    MOT S: ¿qué estás haciendo?
                what are you doing
    KAR E: oh nothing, just finishing my book

    (67)
    RES S: ¿qué estás haciendo Karen?
                what are you doing Karen
    KAR S: mira este juego
            look at this game

    (68)
    RES G: Ah die kleine kluge Sophia
                oh little clever Sophia

KAR G: nee, sie ist ein Dummkopf
she is a dumb head

This may be due in part to the parents' frequent switching to and from English, but is apparently not the sole reason, since I would also switch between the languages. Moreover, I was clearly less proficient in German than in English or Spanish, and much less so than either Dirk or Anna, but Karen would still occasionally respond to me in German. This probably has to do with her assumption that English was the *lingua franca* of the family, the language used for communicating needs and requests in the most complete form. As far as the other two home languages, she would more willingly experiment with them when talking to people outside the nuclear family since she did not have to be as explicit or exact with them and did not depend on the clarity of her communication with them as much. There may also be a certain element of being on stage, performing in the other language in order to impress others with her abilities the way she would enjoy performing in her dance or music class, according to the parents, and since her family already knew what she could and could not say there was no need to perform in from of them. The opposite seemed to occur with Sophia: she was happily switching to and from German and Spanish when speaking to her parents, and, in most cases, grandparents (as in (69), speaking to the grandmother), even when these conversations occurred in my presence, but usually resorted to English when speaking directly with me:

(69)
GRM G: tschüss Sophia
SOF G: tschüss Oma
   bye Grandma
SOF E (to MOT): **don't, don't, don't cut the chicken**

(70)
RES S: tengo una sorpresa, pero te la doy después
   *I have a surprise but I will give it to you later*
SOF E: you can tell me now

Otherwise, the number of her switches related to the change of interlocutor was somewhat similar to that of Karen.

5.4.4.2. Representation

Representation, or code switching in imitation of someone's words, was also consistently present in the dada, although not in large numbers, which could be expected considering their age where the repetition of adult utterances is no longer common. Following the table, I provide examples of this type of code switching to illustrate my approach to placing instances of switches within this category.

Figure 5.4: Representation
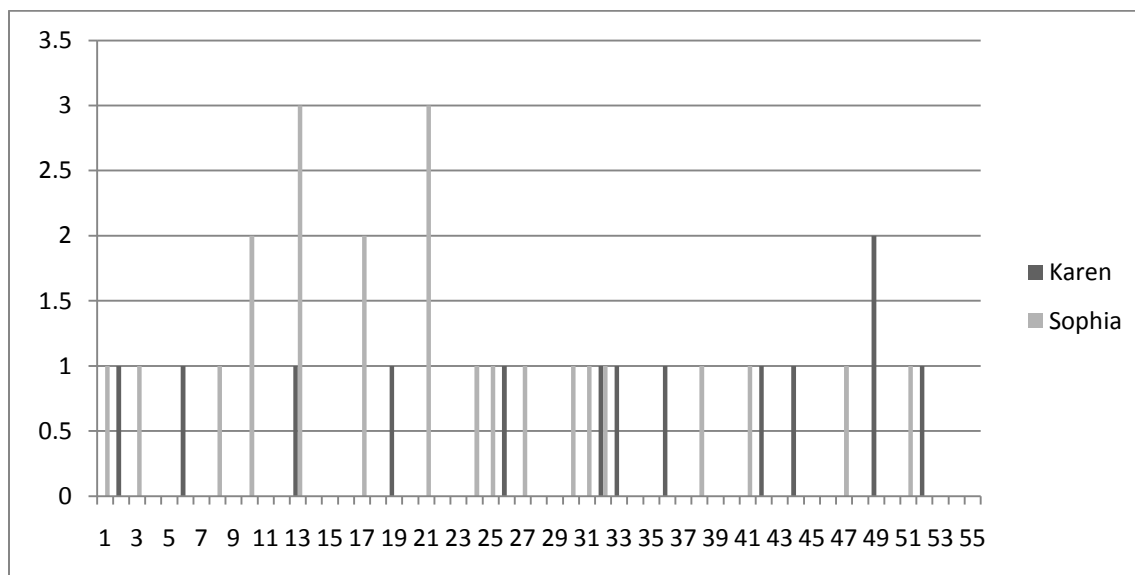
Sophia used representation more often than Karen, and notably she would repeat not only after the parents, but also after Karen; sometimes this was caused by a need for information, such as in the exchange below:

(71)
SOF E: what does it say here Karen?

KAR S: zanahoria
carrot
SOF S: mami, dice "zanahoria"
mom, it says "carrot"

In other cases, the repetition after Karen had no apparent practical function and was probably was a sign of seeking authority from elders, including her elder sister; this, in turn, confirms the observations mentioned in 3.1.2 that the younger child's speech is strongly influenced by that of the elder sibling(s).

5.4.4.3 Accommodation

The language accommodation of the previous speaker's turn was often caused by a parent's recast or request for information:

(72)
SOF E: it's raining in their home
MOT S: ¿qué está pasando?
what is going on?
SOF S: lloviendo en la casa
raining in their home

(73)
KAR G:/E: und, ich meine, und **usually…**
and, I mean, and
FAT G: und meistens
and usually
KAR G: und meistens der Briefträger kommt bald
and usually the postman comes soon

The parents offered these recasts or clarification requests frequently, but they were not always followed by a switch, and the other option the parents often chose was to move on signaling that the sentence was clear, or to pick up the switch and continue in English. Between the two girls, Sophia was somewhat more receptive to the recasts and produced more switches of this type, as shown in the figure below.

Figure 5.5: Accommodation
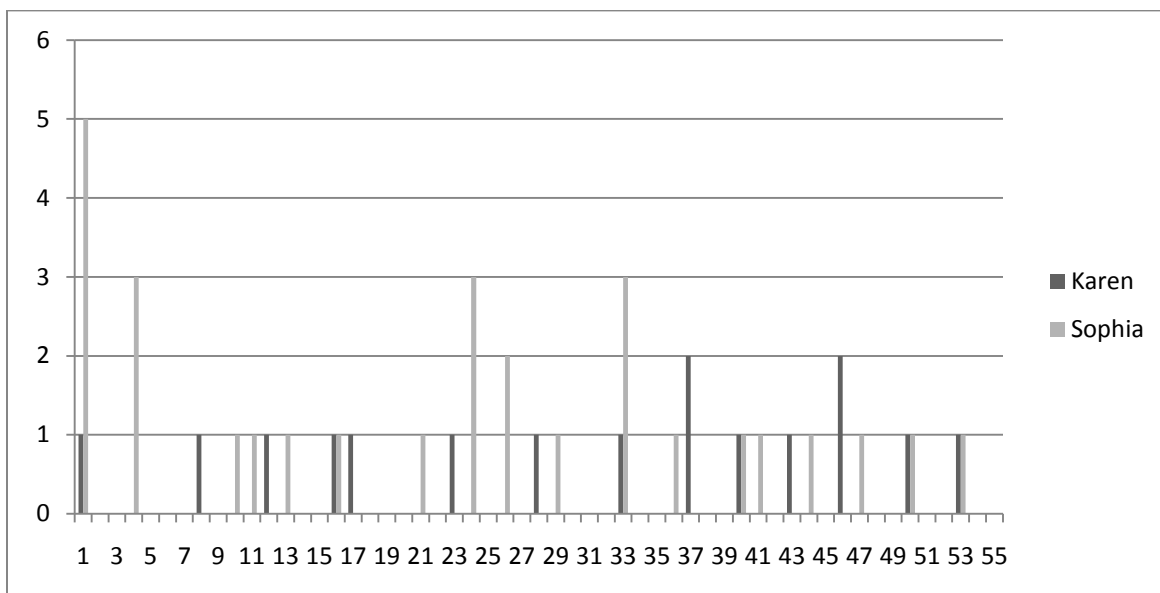
5.4.4.4 Topic Shift

Topic shift occurred often in the speech of both girls, although towards the end of the study period its relative frequency increased in the case of Karen and decreased in Sophia's case. Curiously, a change in topic sometimes involved a type of double shift with a return to the topic in the original language:
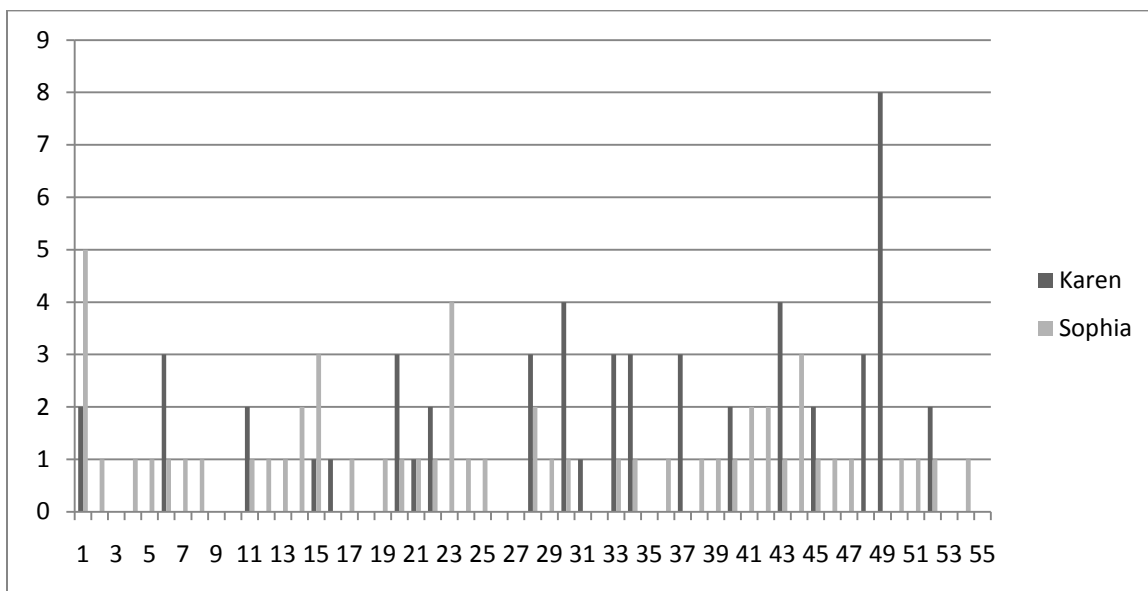
> (74)
> SOF S: el pequeño… el pequeño osito vivía en su casa…
>   *the little... the little bear lived in his house*
> **SOF E: I am really really hot**
> SOF S: vivía con su mamá y papá…
>   *he lived with his mom and dad*

Figure 5.6: Topic shift

5.4.4.5 Insistence

As mentioned above, insistence was quite common for Karen, who was very particular about making her point; it was less so for Sophia, but she did produce it now and then, such as in the exchange below:

> (75)
> FAT G: den Grossvater rufen wir dann später an. was ist der Nummer, eins-fünf-neun?
> *We'll call Grandpa later then. What is the number? One-five-nine…*
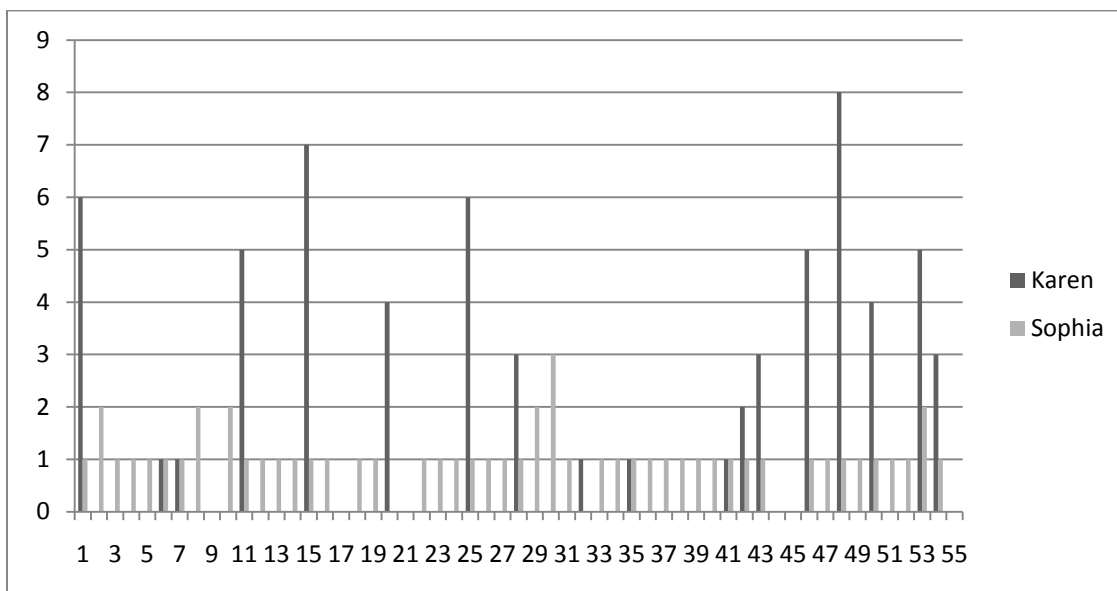> SOF G: eins-fünf-neun-drei
> FAT G: drei? Ist es nicht vier?
> *three? isn't it four?*
> **SOF E: that was three, three**

Figure 5.7: Insistence

5.4.4.6. Command

Switches with the function of a command were used occasionally by Karen during the recording period, therefore, I included them in the data; however, they were nonexistent in Sophia's recorded data, as shown in the figure below.

Figure 5.8: Command
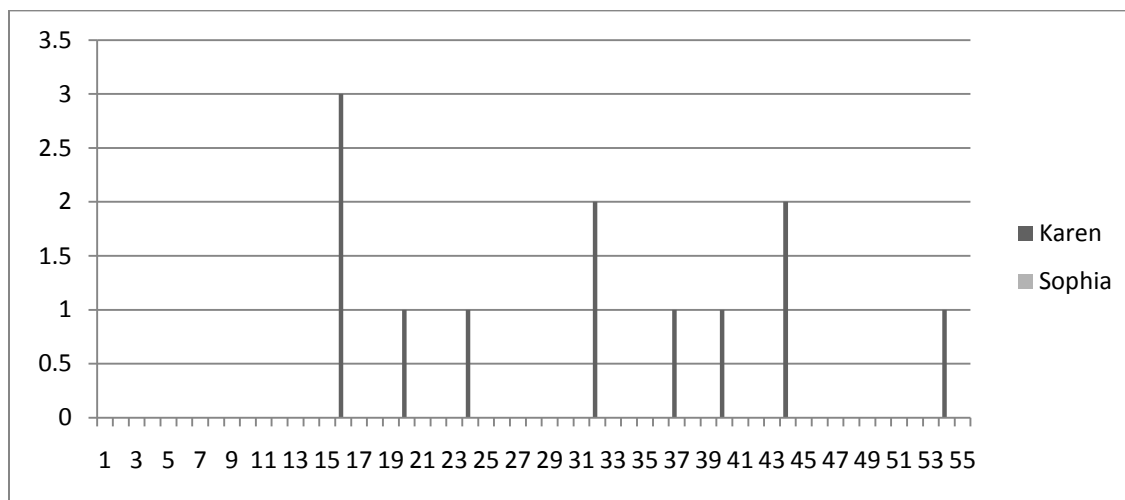
5.4.4.7 Clarification

Clarification was observed quite commonly in Sophia's speech, and somewhat less so in Karen's, its use declining towards the end of the data collection period. It seems that both girls, and especially Sophia, often reacted to parents' questions about their previous utterances in German or English with an explanation in English, either because they were more used to explaining concepts in English at school or because they felt they could formulate ideas better in English due to a wider vocabulary and larger experience talking about abstract notions. Curiously, they would also often take the parents' clarifications requests about something they had not heard well as requests for a translation/reformulation in English:
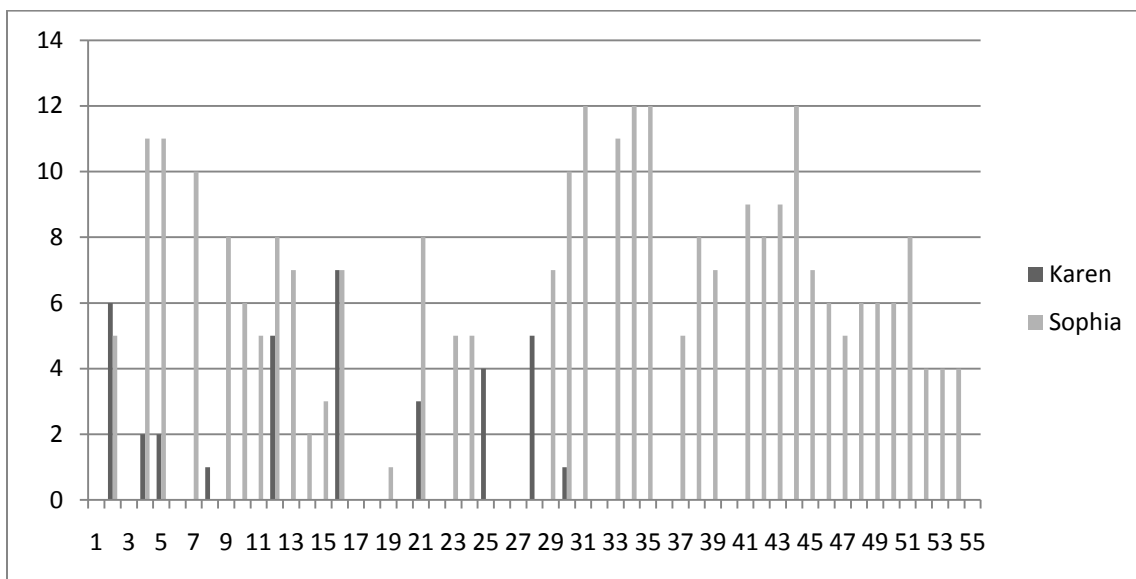
(76)
SOF S: y en su cumpleaños ellos [mumbles unintelligibly]
        and on his birthday they
MOT S: ¿que decías?
        what were you saying?
SOF E: that they were giving presents to the bear

Figure 5.9: Clarification

5.4.4.8 Person Specification

As seen from the tables below, person specification occurred in the speech of both sisters, albeit with a relatively low frequency (usually not more than once per recording session and not in all of them). This function is rather clear-cut; the switch would usually be into English, since the people the girls would normally refer to were people from their English-speaking surroundings, such as teachers and school friends; however, Karen also switched from English into German when referring to her paternal grandmother:
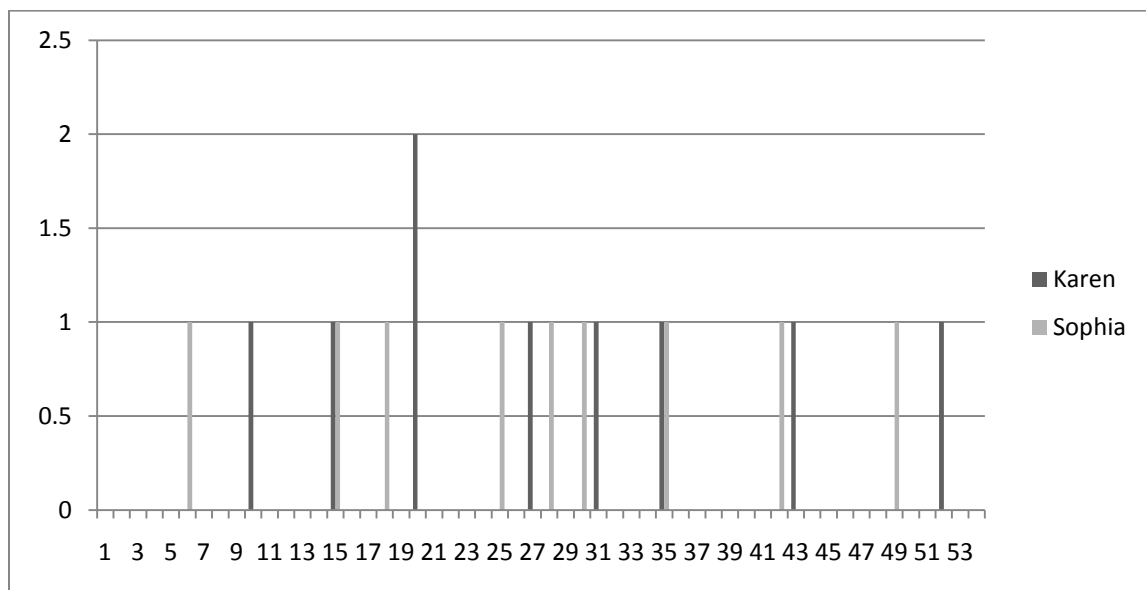
> (77)
> KAR (to FAT) E: I did these already in the summer
> **KAR G: mit Oma**
>   *with Grandma*

Figure 5.10: Person specification


5.4.4.9 Question Shift

Sophia produced quite a number of question shifts; this may be partly attributed to her manner of speech; she was (and is) very fond of asking questions. Again, the switch would usually be into English and possibly influenced by her being accustomed to ask for explanations in English outside of home. For Karen, only three instances of question shift were observed; notably, one of them was directed at Sophia's German utterance:

> (78)
> SOF G: die Leute kennen ihn
> *people know him*
> **KAR E: What people?**

Figure 5.11: Question shift
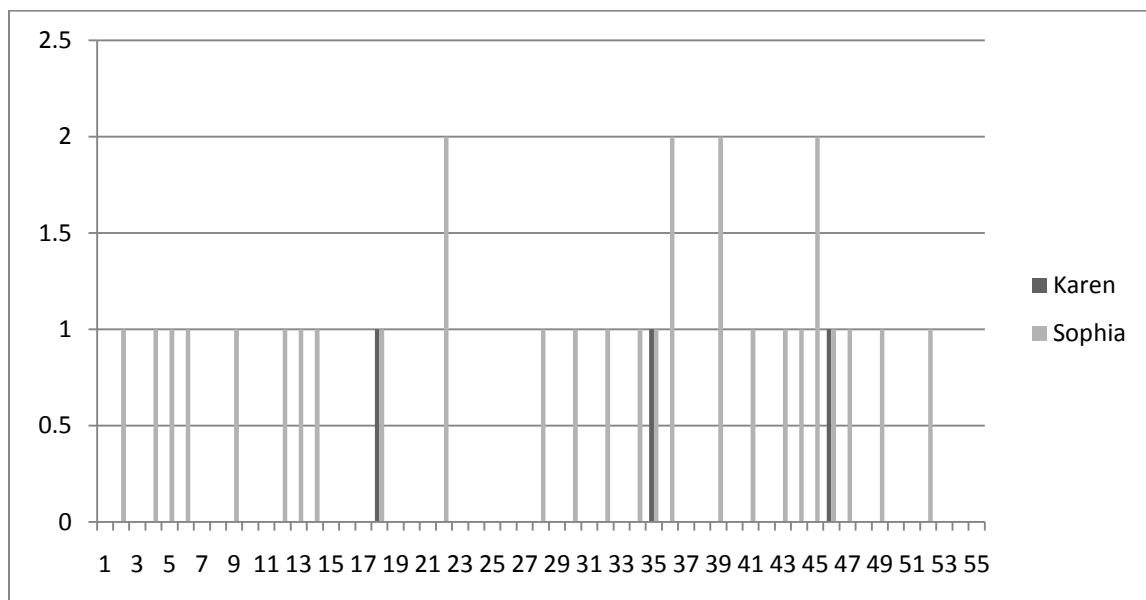
5.4.4.10 Preformulations

Set expressions in one language inserted into another were quite frequently produced by both Karen and Sophia, although in Karen's case, again, their frequency dropped towards the end of the study. As may have been expected, the vast majority of these set expressions were in English, since this is the language of education and socialization for both girls, although there were instances of such expressions in German or Spanish as well, probably the ones they often heard from the parents:

> (79)
> SOF S: el papá es dormido
>   the dad BE(COP-characteristic)-SPSG sleeping
>   *the dad is sleeping*
> MOT S: se dice "el papá está dormido"
>   the dad BE(COP-state)-SPSG sleeping
>   *one should say "the dad is sleeping"*
> **SOF E: what was that again?**
>
> (80)
> SOF E: I'll tell you a story

SOF S: érase una vez un…
  once upon a time there was a…
(81)
FAT G: wann hast du es mit Oma gemacht?
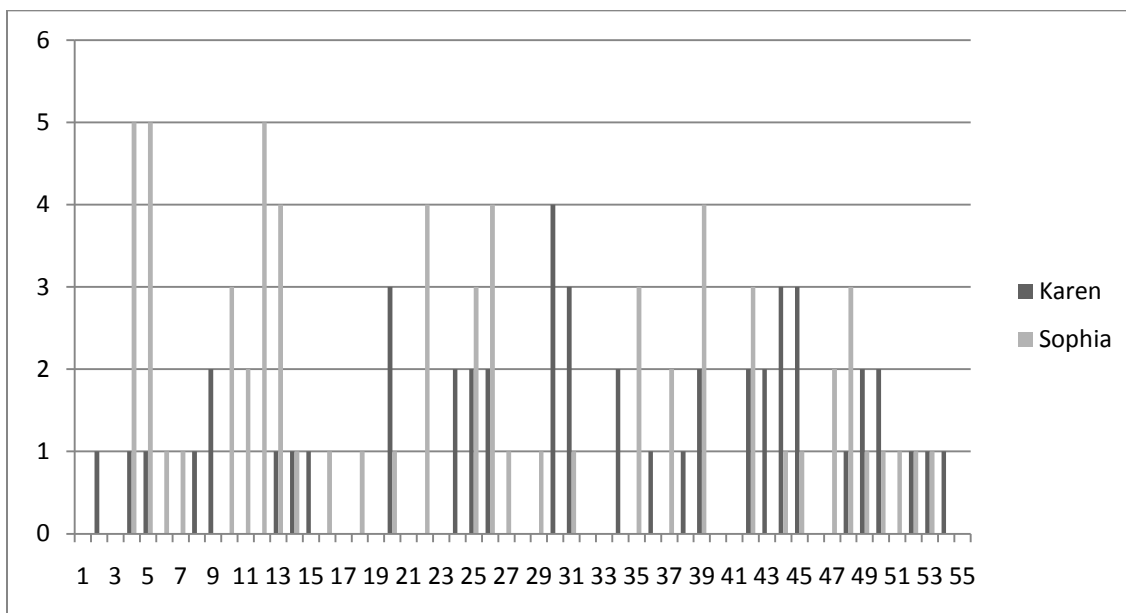 *when did you do it with Grandma*
KAR E: When she was here
KAR G: ich glaube, ja
  I think, yes

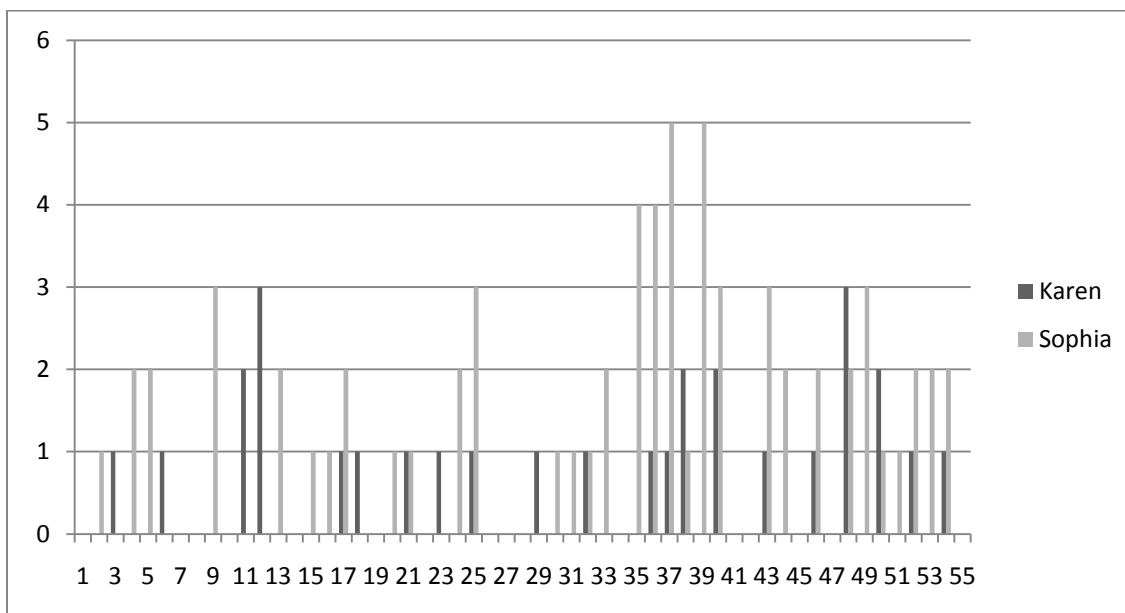Below is a summary of the girls' use of preformulations.

Figure 5.12: Preformulations

5.4.4.11 Lexical Need

See Section 4.4.2.1 for a discussion of the switches caused by a lexical need. In sum, this category was used by both girls, by Sophia much more than by Karen; however, for neither of them it was the dominant CS category.
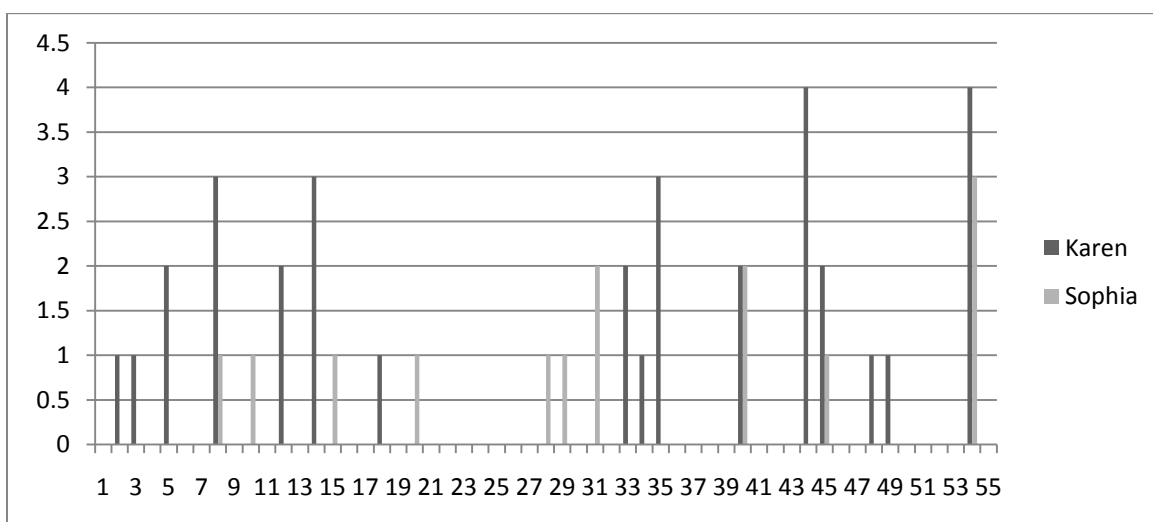
Figure 5.13: Lexical need (Karen)

5.4.4.12 Other

This category contains the instances of code switching which cannot be placed within the current classification system. These varied from session to session, and while they were not very numerous, some of them may be of interest.

Figure 5.14 Other

Among these, there are a few utterances that do not exactly illustrate code switching patterns but rather are cases when the children show unusual or erroneous mapping of sound and meaning due to transfer:

(82)
MOT E: vamos a ver eso… cómo se escribe…
      let's see… how do you spell this….
KAR S: "I" [i:]
MOT S: ¿segura?
    are you sure
KAR E: I said "E" [i:]
MOT E: you said "I" [ai]

In a way, these can be understood as unintended switches caused by the use of homophones. They somewhat resemble triggers in the sense that they do not have a particular function in the conversation but have a purely phonetic nature. As for true triggers, I did not observe enough clear-cut examples to place in a separate category; in fact, there were only two instances, both produced by Sophia within the same conversation:

(83)
SOF S: Quiero agua. No, quiero Kool-Aid
     I want water   no, I want
SOF E: Where is my glass?
…
SOF E: remember that movie about the purple guy in the trash can?
MOT S: ¿Ecoloco?[5]
SOF S: Sí
    yes

Therefore, while triggering did appear in one of the girls' speech samples, it did not have a significant influence of the frequency of code switching.

Curiously, there is another type of data which, while also based on pronunciation differences, adds to the point of language being person-related and identity-related.

---

[5] Mexican cartoon character

Sophia likes to engage in accent play where she will speak, say, English with German accent to her father, as in the following example in (80):

> (84)
> SOF E: (with a German accent): what are you talking about? Are you talking about me?
> FAT G: Ja, ich spreche genau daran, wie ich mit dir Deutsche bücher lese
> *yes, I was just speaking about how you and I read German books*
> SOF E: (with a German accent): yes, yes, we read all those German books

Such imitations are not even limited to the three home languages:

> (85)
> SOF G:/E: Ich bin **French**
> *I am*
> [Sala'mi kolokala'ni kolapoli'pa]*...*
> (all nonsense words stressed on the last syllable)

While this type of expression cannot be labeled as code switching, it clearly involves a mix of two languages used to signal a situation where these come into contact or are somehow related to the same person(s). It also confirms Khattab's (2009) observation that although such children develop native-like pronunciation in the majority language, they are still aware of their parents' non-native accent and able to reproduce it as an accommodation strategy.

There were other instances of switches that did not quite fit into the proposed categories. One of these cases will be discussed in more detail in the next section, as I found it representative of the way the children manipulate and experiment with the three languages.

5.4.5. Summing up the CS distribution

Overall, an analysis of Sophia's speech showed a clear preference for Type 7 switches (clarification) throughout the data collection period, with the other types lagging behind in frequency. Karen showed a preference for insistence, as well as topic shift and preformulation. In terms of numbers, Sophia produced overall a much larger number of

switches than her sister; however, towards the end of the data collection period there was a lesser number of code switching observed in her speech. Karen was more or less consistent in her use of switches throughout the period of study, even with a slight increase towards the end. Whether this can be attributed to the fact that Karen has a more developed structure in German or Spanish than Sophia or the fact that she has more experience using them and is more secure about her fluency is still unclear from the available data.

The next point worth mentioning is the direction of the switches, which is mostly from German or Spanish into English, in situations where the girls initiated the turn in the conversation, called attention to something of introduced a new theme, as well as when they had to explain a more complex/abstract notion. This is partially similar to what was observed by Grim (2008), who examined the speech of 4-year-old Benjamin living in an English-speaking community with a French-speaking mother. For Benjamin, English was the preferred language for expressing feelings and emotions. Grim also found that English was the language of choice in situations where Benjamin chose to establish his leadership or shift the direction of the conversation, taking the lead (Grim, 2008, p. 203):

(86)

Marie: Quoi? Les tickets? [What? The tickets?]

Benjamin: Yeah.

Marie: Voilá

Benjamin: This is in the… ***I am the boss!

This tendency is also similar to what was observed by Khattab (2007) in her study of two Arabic-English bilingual siblings who produced mixed English-Arabic utterances during sessions where Arabic was the primary language of interaction, but used English only in the English-language sessions. Overall, for Sophia and Karen, English seemed to be the unmarked choice, the neutral language used for most everyday functions, while both Spanish and German were languages of a marked character, carrying more

emotional load, used for specific references, word play and generally to attract attention. Going from Spanish or German back to English meant sliding into a type of comfort zone, where the girls felt more at ease. Consequently, the vast majority of switches occurred in the presence of other speakers (one or both of the parents and/or myself); as mentioned earlier, there were very few instances where the girls used German or Spanish while playing on their own. Moreover, English is clearly the language of communication between the girls even when they are speaking to someone else in one of the home languages:

(87)
SOF Gm: [to FAT] fertig
                ready
 Eng: [to KAR] I'll go without you, without you!

Still, the girls' use of German and Spanish was not always prompted by the parents or other adults; they did sometimes willingly experiment with them, especially towards the end of the year. To conclude this section, I would like to mention one more curious case of code switching that cannot be placed within the classification assumed at the beginning of the study and therefore fell into the category of "other," and that was more noticeable towards the end of the data collection period. One such instance is presented in the example below:

(88)
Participants: SOF (Sophia), KAR (Karen), MOT (mother), FAT (father)
Languages: English, German, Spanish
Situation: In the car in the way to Karen's dance class

SOF E/G: OK, we are in the car. Ich und Karen sind in die Car. In die Auto. Karen hast ballet.
                                          me and Karen are in the   in the car.
have-2PSG ballet
Und ich muss auf die Toilette gehen. I mean, Klo. Und ich bin Sophia. Ich bin in
and I need to go to the toilet.   bathroom   and I am   I am at
Stop-and-Shop.
 …

S: Y aquí esta Karen. Ella también está en el carro. Tiene baile hoy. Yo quiero ir al
and here is Karen she is also in the car she has dance today I want to go to the
baño. OK.
bathroom
…
E: Hello. I am sorry I am speaking this language, but we are in the car. And I need to go to the bathroom. And we are in the car because Karen has dance class.
…
KAR E:/G:/S Hey-hey, hallo, hola
                hello hello

Such utterances apparently have no communicative purpose such as accommodating the interlocutor of the topic of conversation; playing with words in the three languages in this case constitutes both the means and the goal of the utterance. The girls are apparently aware of the presence of the recorder and want to entertain themselves recording the same things in the three languages. The meaning of this is two-fold; it is clear that, first, this is aimed at gaining recognition since the parents (and me, as they could easily infer from our interactions) encourage their use of Spanish and German. But it also allows them to embrace the fact that they actually can express themselves in the three languages, albeit with different degrees of ease/fluency. It should be noted that the parents hardly said anything during this session and the girls kept each other company in conversation, so the switches were completely their own initiative. The whole exchange carried on in this fashion, and while it is apparently childish, it is impressive how language comes across as a creative instrument and a tool for self-expression.

5.5 Summary

In this chapter, I have presented the data collected from the participants during the 12 months of the study. I have introduced the relevant information provided by the parents in the first interview as a way to better represent the family's linguistic profile and language-related values, and have discussed the parents' insight into the girls' language use and comprehension. Then, I have presented the code switching data

collected during the recording sessions and discussed the number of code switches throughout the data collection period, comparing the two sisters' production. I conclude that although the age factor should be taken into account, birth order in this case does not account for the differences in CS production. There also are notable changes in each girl's CS patterns throughout the study, but while Karen shows an increase in code switching towards the end of the 12 months, Sophia shows a slight decline. Finally, I have discussed the children's individual preferences in terms of code switches and concluded that the preference for certain types of code switches can be related to each child' personality rather than their proficiency in German and Spanish, including the range of vocabulary.

CHAPTER 6

CONCLUSIONS

6.1 Implications of the Study

In this study, I examined the patterns of code switching in the speech of two trilingual siblings exposed to German and Spanish through the parents, grandparents and some acquaintances outside the family and to English through schooling and the larger community. My goal was to examine the dynamics of code switching throughout the year of data collection and the way the speech of the 9/10-year-old girl differed from the speech of her 6/7-year-old sister as well as to observe what other code switching functions besides a need to fill a gap in vocabulary prevailed in their speech and thus to analyze the extent to which code switching was caused by lexical need in each particular language.

The age issue turned out to be less straightforward than I had thought. In terms of age, the answer to the second research question is two-fold; the frequency of code switching in the recorded data is considerably higher for the 6/7-year-old Sophia than for the 9/10-year-old Karen, which, as I have mentioned earlier, can be attributed to their personality rather than the age factor. However, it is Karen who shows a clear positive dynamics in the number and variety of switches towards the end of the data collection period. In this particular case, age does not seem to be the defining factor in the amount of code switching, and the personal factor proved to be much more influential than originally expected. Besides, the year-long observation of the sisters' interactions with each other and with the parents showed that their patterns of language use and specifically code switching patterns are variable rather than stable; apparently, the questions or language authority and language identity themselves are not permanently engraved into the child's mind nor do they have linear development; the child's position as an active/passive, conservative or creative user of a language is in constant change,

and the siblings' linguistic roles within the family as the instructor/instructed, vocal or quiet may change within a few months. Moreover, I believe that such changes are normal in children growing up in such surroundings as described in this study. A steep increase in the use of a particular tongue or a quiet stage where more language is absorbed and processed than produced, as well as developmental plateaus are perceived as normal in second language acquisition, but in the case of bilingualism from birth followed by early introduction of a third language, represented here through Spanish, German and English, these also mean a transition to a different stage of language learning, which in turn is inextricably linked to exploring the links to the corresponding cultural and social aspects and establishing oneself as a part of a language group with its own role distribution.

The speech samples collected during the study show that the instances of code switches produced by the girls can be attributed to a variety of causes. Lexical need (the need to make up for deficiencies in vocabulary in a particular language) was one of such causes and was consistently observed in the speech of both girls throughout the data collection period; however, this is only one of the code switching functions and does not occur more frequently than the other ones; moreover, when the other instances of code switches are subdivided by function, lexical need is not the dominant category in the speech of either child. Therefore, while lexical need is undoubtedly a common phenomenon in the children's mixed utterances, it is not the sole cause of code switching but only one in the list of possible causes. The other instances of code switching can be attributed to specific communicative functions, such as conveying a turn of conversation or a change in the number and role of participants. Therefore, social and personal factors rather than lexical factors account for the majority of mixed utterances. Similar to the findings by Andersen (1990, 1996), Hoyle (1998) and others who showed that English-speaking children distinguished roles by attributing specific characteristics to how different people spoke and employed registers associated with adult activities in their play with peers, this study showed a person-based and function-based distribution in a

variety of speech situation, with the difference that, in our case, it is the distribution of three languages the children use within the family home.

Overall, although most language socialization studies originally focused on monolingual production, their findings can also be applied to bilingualism and multilingualism, such as the trilingual situation in this study. Halmari and Smith (1994) and Kwan-Terry (1992) found that children used English to represent imaginary characters during play but produced the accompanying commentaries in their first language (Cantonese and Finnish, respectively). Kwan-Terry attributes this to English being associated with "the world at large" (p. 47). Halmari and Smith state that such code switching may also signal a shift between two "sub-registers" during play: the "in-character play" and the "negotiation of play" (p. 431). These two sub-registers might be applied to the present data, although they both would also roughly correspond to a number of functions included in the analysis, for instance, *person specification* would be one of the functions included within "in-character play", and *insistence* or *command* would be a type of "negotiation of play".

Language socialization research studies (Ochs 1988, 1996; Ochs and Schieffelin, 1990 and others) also suggest that through interaction with more experienced speakers (older peers and adults) children acquire the cultural and linguistic associations behind language use which are necessary for full participation in daily activities. Such associations may include social status, class, ethnicity, gender and the perception of language itself, which in this case the girls expressed by their use of home languages as well as their discussions about them. This last point came up quite unexpectedly for me; it turned out that the girls themselves often made comments on the use of English and Spanish, especially with the respective parent – native speaker of this language:

(89)
FAT G: perfekt, Sophia, und du sagst dass Deutsch schwer ist
       perfect, Sophia, and you say that German is hard
KAR E: it is

SOF E: for you [laugh]
KAR E: this is easy but other words are hard

(90)
MOT S: OK vamos a hablar el español
         let's speak Spanish
SOF S:/E: español [whispers] **the best language in the world** [laugh]
        Spanish

These samples show that although the girls perceive the two home languages as an integral part of their lives and are used to them, they still see their use as somewhat imposed by the parents rather than taken for granted, like the use of English; the comments themselves are in English, which functions as the default language for discussions as well as the language usually used between the girls, which is clear from the recordings of their speech when they were playing on their own. The latter recordings allowed for a glimpse of their behavior in the absence or limited, non-interfering presence of adults. They also allowed me to observe the differences in their speech habits, which were very noticeable and can be attributed both to the age difference and to their personality. Karen was usually protective of her sister, but at the same time somewhat condescending, often making ironic comments about Sophia's impulsive ways. Sophia would generally try to imitate Karen in games and activities, but often lost patience because she was unable to keep up with her. On the whole, their interaction is a curious mix of childlike and adult-like conversations and behavior and a type of can't-stand-to-be-around-you-can't-stand-to-be-away-from-you attitude in which the language aspect is only one of many.

Sibling/peer interaction provides a context not only for linguistic learning but also for cultural exploration and socialization. Younger children may imitate adults or elder peers, "more competent partners" (Goodwin 1990, p. 12). But this interaction goes beyond imitation and towards an active exploration of power dynamics, social rules and cultural identities (Aronsson and Thorell 1999, de León 2002, Rinstedt and Aronsson 2002 and others). In absence of an adult, children can create a type of alternative reality

where they hold the position of authority (Reynolds 2002). Thus, an exploration of their interactions allows for an analysis of the way they see the adults and of their general idea of the world (Schieffelin 1990). For multilingual children of any age, the languages also form part of this world and represent different aspects of reality; therefore, code switching, far from being a purely lexical tool, is an indispensable aspect of growing up trilingual and helps the children to establish their own place within the multiple cultures and the ways of referring to reality these languages represent.

6.2 Limitations of the Study

The main limitation of the study is the small number of participants, which makes it impossible to draw general conclusions; all general statements made in this study refer only to this particular family during this particular period. This study can provide insight into further study of the topic rather than general statements about the patterns in trilingual code switching in children. The personality factor also makes the data rather subjective, much more than I had originally expected: even with two participants raised within the same household I have seen that individual data differs greatly due to the differences in personality. Another issue with data collection is that, although it is a longitudinal study covering a considerable period of time, the data recorded for transcription and analysis represents only a fraction of what the children produce on a daily basis, and therefore cannot always be considered a faithful representation of their speech patterns, since atypical utterances which do not usually occur in their speech may have been present during a specific recording session. All this said, these limitations are hard to overcome if a longitudinal study such as this is attempted; on my part, I do not see how much longer data samples could be analyzed; this would be more realistic for a short-term study.

6.3 Suggestions for Further Research

A larger number of participants would be necessary in order to analyze the influence of the personal factor and the extent to which general conclusions may be drawn on the distribution of code switching functions in certain situations. Also, consequent recording of the same children and a consistent analysis of their speech in the years following the data collection period would allow for a follow up on their progress and for an evaluation of the extent to which their language use at ages 6 and 9 differs from their later production in terms of the number and functions of code switches.

APPENDIX A

INITIAL LETTER TO THE PARENTS

Dear parents,

I am a PhD. student seeking a family with more than one child where each of the parents speaks a language other than English at home. The study involves weekly sessions of recording/note-taking and two interviews with the parents. I have the permission from my university to work with human participants and the consent forms. Compensation is available. Please feel free to contact me by telephone or e-mail if you have any questions or concerns.

APPENDIX B

INFORMED CONSENT AND ASSENT DOCUMENTS

1. INFORMED CONSENT DOCUMENT

Project Title: Code-switching in child trilingualism
Research Team: Elena Davidiak, MA

You are the parent/guardian of a child under 18 years old who is being invited to be in this study. You will be asked to read and sign this document to give permission for your child to participate in this research study.

You will also be asked to sign this document as consent for your participation in the study.

This consent form describes the research study to help you decide if you want to participate. This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research subject.
- If you have any questions about or do not understand something in this form, you should ask the researcher for more information.
- You should discuss your participation with anyone you choose such as family or friends.
- Do not agree to participate in this study unless the researcher has answered your questions and you decide that you want to be part of this study.

WHAT IS THE PURPOSE OF THIS STUDY?

This is a research study. We are inviting you and your child to participate in this research study because your child is exposed to three languages through daily interactions.

The purpose of this research study is to study the language use of trilingual children and the motivation behind language switches and mixing of languages.

HOW MANY PEOPLE WILL PARTICIPATE?

4 people will take part in this study at the University of Iowa.

HOW LONG WILL I BE IN THIS STUDY?

If you agree to take part in this study, we would like you and your children to participate in weekly 30-minutes recording sessions for a period of up to 12 months and in two interviews.

WHAT WILL HAPPEN DURING THIS STUDY?

We will ask you to participate in an interview at the beginning and the end of the recording period. We will ask about the language exposure of your children and the dynamics of their language use. The interviews will be recorded and later transcribed. You will be free to skip any questions you are not willing to answer.

We will also ask you to participate in weekly recording sessions for a period of up to six months. The recording sessions will take place at your house. During each session, we will use an audio recording device during your interactions with your child. Sometimes you will need to do the recordings in my absence. You will have a chance to go through the data after each day and delete any instances that you do not want me to include in my data.

Audio/Video Recording or Photographs

One aspect of this study involves making audio and video recordings of you and your child. The recordings will help me to evaluate the ways you use languages with your child and the way she uses them. Only I and my dissertation directors will have access to the data. I may keep the recordings for further research, but all excerpts that may contain personal information will be deleted; you will have a chance to evaluate the data and ask me to destroy any parts that you would not like me to keep. I will also change all the names in the study.

We will keep your name, phone number, and information about your participation in this study on file so that we may contact you about future studies we may conduct. Agreeing to be in this study does not mean that you must participate in any future studies. You will be asked to give a separate consent to be in any future studies.

WHAT ARE THE RISKS OF THIS STUDY?

There are no foreseeable risks from being in this study.

WHAT ARE THE BENEFITS OF THIS STUDY?

You and your child will not benefit personally. However we hope that others may benefit in the future from what we learn as a result of this study, in that we will know more about the needs and developmental patterns of a trilingual child.

WILL IT COST ME ANYTHING TO BE IN THIS STUDY?

You will not have any costs for being in this research study.

WILL I BE PAID FOR PARTICIPATING?

You will receive compensation for being in this research study in the form of babysitting services when needed. The estimated frequency of babysitting sessions is 3-4 hours once a week or every two weeks.

WHO IS FUNDING THIS STUDY?

The University and the researcher are receiving no payments from other agencies, organizations, or companies to conduct this research study.

WHAT ABOUT CONFIDENTIALITY?

I will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.
- federal government regulatory agencies,
- auditing departments of the University of Iowa, and
- the University of Iowa Institutional Review Board (a committee that reviews and approves research studies)

When I write about this study I will do so in such a way that you and your child cannot be directly identified. I will keep all data obtained from the study confidential; only my dissertation directors and dissertation committee will have access to it. I will also change your names in the text of my dissertation and will not reveal your real names or any other personal information to anyone. I will store the video and audio files of the study in a locked office, and the electronic files (transcriptions) on my personal computer, which is also password-protected.

IS BEING IN THIS STUDY VOLUNTARY?

Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. If you decide not to be in this study, or if you stop participating at any time, you won't be penalized or lose any benefits for which you otherwise qualify.

What if I Decide to Drop Out of the Study?

I ask that you notify me if you decide to end your participation in the study before the completion of the study procedures.

WHAT IF I HAVE QUESTIONS?

We encourage you to ask questions. If you have any questions about the research study itself, please contact: Elena Davidiak, (319) 541-0689. If you experience a research-related injury, please contact: Elena Davidiak, (319) 541-0689.

If you have questions, concerns, or complaints about your rights as a research subject or about research related injury, please contact the Human Subjects Office, 340 College of Medicine Administration Building, The University of Iowa, Iowa City, Iowa, 52242, (319) 335-6564, or e-mail irb@uiowa.edu. General information about being a research subject can be found by clicking "Info for Public" on the Human Subjects Office web site, http://research.uiowa.edu/hso. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

This Informed Consent Document is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by signing this Informed Consent Document. Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Adult Subject's Name (printed):
_____

Do not sign this form if today's date is on or after June 15, 2008.

_____   _____
(Signature of Adult Subject)   (Date)

Adult Subject's Name (printed):

_____

_____   _____
(Signature of Adult Subject)   (Date)

Parent/Guardian or Legally Authorized Representative's Name and Relationship to Subject:

Child Subject's Name (printed):

_____

_____   _____
(Parent/Guardian Name - printed)   (Relationship to Subject - printed)

Do not sign this form if today's date is on or after June 15, 2008.

_____   _____
(Signature of Parent/Guardian or   (Date)
Legally Authorized Representative)

Statement of Person Who Obtained Consent

I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative. It is my opinion that the subject understands the risks, benefits, and procedures involved with participation in this research study.

_____   _____
(Signature of Person who Obtained Consent)   (Date)

2. ASSENT DOCUMENT (for children older than 7)

Project Title: Code-switching in child trilingualism
Investigator(s): Elena Davidiak, MA

We are doing a research study. A research study is a special way to find out about something. We are trying to find out how children who speak three languages talk to other people.

If you decide that you want to be in this study, this is what will happen. I will come each week for half an hour and record how you and your parents speak to each other. Sometimes I will give the recorder to your parents and ask them to use it for half an hour.

There will be no things that might hurt or upset you if you are in this study.

We don't know if being in this research study will help you. But we hope to learn something that will help other people some day.

When we are done with the study, we will write a report about what we found out. We won't use your name in the report.

You don't have to be in this study. It's up to you. If you say okay now, but you change your mind later, that's okay too. All you have to do is tell us.

If you want to be in this study, please sign or print your name.

I, _____, want to be in this research study.
      (Child's name)

_____   _____
     (Sign or print your name here)   (Date)

APPENDIX C

PARENT INTERVIEWS

Parent Interview 1

1. Mother

RES What languages do you speak to your children?

MOT I speak Spanish and English and a **little bit of German. Mostly Spanish and English.

RES And why did you choose to speak to them in this way?

MOT Because I am from Spain… and I get lazy when I talk. Sometimes I get lazy and I start to speak English, because most of the time they answer English back.

RES But your goal is to speak Spanish with them?

Yes, my goal is to speak Spanish, and we do Spanish lessons together, and we celebrate the Spanish traditions.

RES Do you use specific language strategies with your children?

MOT […] I used to do that with my first daughter when she was little; I used to repeat all the sentences she said in English, I used to repeat in Spanish. But I… It was just very strenuous – it kind of stopped everything. So I stopped doing that, unfortunately. But what we do, we try to read to them every night, we have the lessons once a week, and lately we've had a lot of Spanish play group, so we've done all the activities where they meet other kids that speak Spanish. But on a day-to-day basis, I guess I *try* to encourage them to speak Spanish, I say "Say that in Spanish", or "Do you remember what that is in Spanish", or "we were speaking about… Karen was asking what months were in German, and I said 'Monate' and 'Meses' in Spanish.

RES And you also go to Spain, right?

MOT Yes, this summer we were in Europe for seven… almost eight weeks, which was very nice and they had a lot of contact with the culture, and they know what's going on in Spain, you know, what stores to go to, what TV stuff is going on, you know, in general. We also went to Austria, so they had a change to practice their German. They went to school there. In Spain, we took them to a camp for about one week where they go a chance to practice their Spanish with other kids. So yeah, we try to go and do more language stuff with them.

RES Have there been any big changes in the family in language patterns?

With my first daughter I was very… I used much more Spanish than I do now. I really tried to stay with the Spanish […] And my younger daughter has been watching Spanish videos as well, but not as much as we used to. It's gotten less. And the same thing with the German videos.
[…]

RES Was there a big difference in the conditions between Karen and Sophia, Karen being the first one? And maybe the personal differences are there as well.

MOT Yes, you are right. We were much more *consecuentes*…consequent? What do you say in English? We really tried to do it when Karen was a baby. And I think in the beginning it was kind of on and off, and then in took off, and we were very… you know, we really tried to stick to it. Then when we moved… then Sophia was born, and I was speaking Spanish, and obviously she did not answer me back, but I was speaking Spanish to her. And then we moved here, and it kind of… because the move was a big change for the family, it kind of… it just kind of fell. And then we bought this house and moved to this house, and then we started doing Spanish lessons again. We just picked up again. And the German lessons. That picked up again, so that helped. They are not speaking *more* just because we do the lessons. But they know that this is a priority.

And the thing is, Sophia is learning the alphabet now. And she does it like this! She is very quick, she gets it right away, she is eager. And she has the verbalness. But at the same time I feel that she does not have the same amount of exposure that Karen had, so maybe she does not understand as much as Karen does. You know what I'm saying? And it's not the age, it's more the exposure. […]And sometimes I think we **should concentrate on Sophia, because she would pick it up right away. And you know, last summer my cousin came to visit and we did the Spanish lessons every day. And Sophia - I saw it then, I knew it in Karen already but I saw it in Sophia – when we did the workbooks, when we wrote things down, she was fine. She had the structure already, all she needs is to use it more and practice.

They need to talk more – I don't know, if you have a tip on how to make them talk, that would be great – I can't get them to talk more than they do. I know that they understand a *whole* lot more than they speak. And that's my hope, that if we just keep doing it at some point they will become interested, and then we can start practicing. Another idea would be to enroll them in the Spanish and German schools again. But then we would not have any free time. It would all be about language. They have other activities during the week that I could take away, but I would be too hard for everyone.

RES How do you see their language future? Do you have any hopes or predictions for that?

MOT Well. I think we should continue doing what we are doing. I would like to do more grammar with Karen and more studying with Sophia once she gets older. You know, it's

difficult, because on the one side I am ambitious – of course, I want them to speak all the languages perfect, and read perfect and write perfect – you know, have everything. But realistically, because I have moved around between countries as a child, I think that the most important thing is that they feel at home somewhere, and at this point I think **that is the priority, rather than having them learn all these fantastic languages. Because I learned German when I was 19, and I am proud of my German, and I had to work at it. You can do it, you do not have to do it from childhood. What I'm giving them is a base, and I am hoping that when they are teenagers, that we will be able to send them to Spain or Germany for a year or so. Just as an exchange student, have them, you know, get to know the Spanish culture, the German culture… if we can afford it… and have them explore their own interest in a culture. And then, after a year in Spain, I'm sure they would be just fine. […] It is so much more important to have roots, to know where you come from. Because when they are adults they can go anywhere they want, but it is such a nice feeling knowing that you come from somewhere. OK, they will not be Spanish like I was. They will see where their mom comes from, and learn about things, but I will not expect them to be Spanish, it's just unrealistic.

It would be very disappointing if they decide that they don't want to do anything, that they don't want to develop it. That would be disappointing. But I prefer my kids, when they grow up, to know that they are accepted and loved, rather than, "Oh, my mom was pushing me to become something", you know what I'm saying?

2. Father

RES Do you mostly use German with the children, or is there some type of balance between the languages?

FAT I think there is a balance of two languages now. Honestly, probably now English becomes more dominant simply because Sophia uses more English… now I have two kids talking back to me. There were periods when I spoke **much more German with the girls.

[…]The issue with the parent is that you need to communicate certain things to your children. You need to make sure they understand. And unfortunately these are the situations that create a habit, you know. There are situations when you need to get a message across, and make sure that things happen fast. So I would say that English has become that language. And then the problem is, outside of these situations, I try to switch back to German, usually what happens is I start in English, and then I catch myself and go back to German.

RES Would you say there are specific topics for which you use more English or German?

FAT I would say, when I need to create some sort of order in the house [laughs] you know, typically I'd say English. And then I will think, oh, they will associate all these

negative things with English, which is ironic because German has this image for a guttural language, so that is quite strange.

When would I switch to German? Yeah, I think when I try to motivate them, say, come on, do this. Gosh, it is hard to say; I wish I had a sort of a camera so I could go back and count, because now it is hard to me to objectively say, OK, that is the situation when I speak more English.

[…]

RES Do they have exposure to German that does not come from you?

FAT […] Videos, games - I would not say that they replace language, but they help. The kids can catch the melody of the language, and some words. So whenever I talk to Karen, that last German lesson we had, and I asked her, well do you understand that, do you understand that word? And I was surprised that she actually understands. You know, that surprises me. Well, of course when my parents were here, of course they had to speak German. Also, since we are here in New York, we have been to Europe on a yearly basis, and we will try to keep that up. Apart from that, we do have friends that speak German, but that is on a very rare occasion.

RES Have there been any big changes in the family's language patterns?

FAT I think the first occasion was when Karen started talking back, when she started going to an English-speaking kindergarten, which was a big change. That actually changed our whole interaction with her, because now she talks back in English, and now also Sophia, so we have to reinforce the other languages.

And you also need to keep in mind: when we came to the United States, Anna and I spoke German a hundred percent of the time. Even though she spoke English, but it was all German. And now, I would say that Anna speaks seventy or eighty percent of the time English. I think it's first of all because she hears English all the time; she is in the swing of things at work, so it is easier to articulate herself in English. And I try to speak back in German, so it's a battle in two fields, keeping up German with the kids and also with Anna and she can also say it's not her language, so she has her reasons too.

RES Do you notice anything specific in the way the girls speak German?

FAT You can say that aside from the fact that their German is not as fluent obviously because German children hear it all the time, there is also the structure of the sentences. I can always say that for German. So it's very apparent that when they speak German they translate. Karen will say, "Kann ich nehmen eine Blume?"[6] And there are the articles too, because there is no logical system in them. And I keep telling her that the verbs – well, I

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[6] The grammatical sentence in German is:

Kann ich eine Blume nehmen?
Can   I   a   flower   take
Can I take a flower?

don't call them verbs, I say they are action words – that they come at the end in German. But she needs time to actually catch it.

But there is also one thing that I notice, that English is helping her. The better she knows English, the easier it is for her to understand German, because you know, the German she knows, she knows very well, considering that she is not exposed to German all the time. I think they are building up the structure of language, the building blocks, so to speak.

RES How do you see their language future? Do you have any hopes or predictions for that?

FAT Well, I think that if we stay here in the States, English will be the dominant language. But in the other languages, hopefully with time their understanding will be better, their German, as far as German is concerned, and their Spanish too, will improve. Maybe with an accent, they will have an accent, although now I do not hear an American accent. I think they will never be perceived, you know, "Oh, she is American". People will realize there is something different in them. And in terms of their language future, I have no huge aspirations that they read and write perfectly and know German grammar, you know, which is complex, you know, without mistakes. However, I think that should they ever decide to study it, in Germany or Spain, they will not have any difficulty. […]

Now, if we were ever to go back to Europe, we would definitely go to Spain or a German-speaking country, and gosh, that would be tough. We would probably speak continuously English at home, but I know for sure, that would be a thing that I would want to spare them - German school, because they would be automatically put, you know, in a class with extra German, and there, that is bad. Here it is not really stigmatized, but in Germany, if you are there, it really closes all the doors for you for good education, and of course we would like them to have good education. So I do not really know what we would do in that case, probably we would get some extra help. But it is not an issue for now.

RES Would you like to add something or comment on something else?

FAT I think if I would go back, I think I would… When I saw that Karen was not developing as fast as other kids – unfortunately, you always start comparing – we had this one boy who with one year already could you know – was very articulate and knew many multisyllable words - that is when we got a little concerned, oh my gosh, I was really scared that she would not even get the English properly, you know, so that also maybe made us soften up towards English. Going back, I would not really care, I would be - not be worried about that. Knowing what I know now, I think I would not be as scared as I was back then.

RES Did you do things differently with Sophia, on the basis of your experience with Karen?

FAT With Sophia, it was all a question of time, because I'm afraid Sophia got less German exposure than Karen, yeah, I do read to her, but gosh, I also think it is this first child phenomenon, when you try to do everything right with the first child, and then the **second one kind of rolls along. Although I try to catch myself, it's not like Sophia is neglected. I do read to her in German. But I think it is also because Sophia has an older sibling? She kind of started talking at a much earlier stage, she just started talking, yapping away in English, and how do you react to this child? So it's tough. I think the tough part is also that they talk back in a certain language.

Parent Interview 2

1. **Mother**

RES So, when we go back to the older samples, do you think you do anything differently than you did then?

MOT I think we do a little less. I think that the more I read about these things, the more I understand that it is important for the parents to be supported, so that they could always keep talking in Spanish, or German, or whatever language they are going to focus on. So I feel that to keep up speaking Spanish, they need to listen to it more. With Spanish, there are a lot of Spanish-speaking people around but we do not always get around each other. That's why we go to the play group at the church every week. But definitely I think that we should do more than we do. We should also try to write a little bit more than we do, play more games than we do. And the formal training is nice, but I would probably do less of formal training. I don't want to take away the fun of it.

[…]

MOT When we do activities in the languages, I notice that Karen understands everything and Sophia does, on and off. And I noticed that actually, the reason I guess that Karen understands a lot is because when she was smaller I was much more active speaking Spanish than with Sophia.

RES Do you notice anything different in how they speak, compared to this time last year?

MOT Karen is definitely talking more, she is more proactive. Sophia is at the age when, if her fried was speaking Spanish, she would speak Spanish. You know, what parents do is not so important right now; it is what friends do that is important. So if I could find a Spanish friend for her that she can have fun with, then she would start picking up Spanish, I am sure.

RES And have there been any trips, or events, or visits during this time that you think could have influenced their language use? I know your parents came, and Dirk's as well. Did this bring in any changes?

MOT Karen used German and Spanish consciously when her grandparents are here, so she voluntarily speaks to them in their language. And Sophia used words, and she understands a lot of it, but I think we need to do more with her.

RES Is this more or less what you expected would happen, language-wise?

MOT I am always hoping that they would do more, and I am always told that the kids learn a second language in immersion they don't speak for a very long time, and then they start speaking, and I am waiting for that to happen.

RES And you have this type of experience, you moved to the United States for a few years when you were a child…

MOT Yes, and my mother said that we kept very quiet for a long time, and then we started talking a lot. I was eleven when I came.

[…]

MOT I think that when they are babies you can actually make it happen that they have two languages instead of one. Of course to them it is one language, but it is actually two. It is when they get to this age that it's tricky because they do not pick it up at the same way; they are not ready for the formal learning of language yet. I also think as you get older you have more ability to sort out the different parts of the language in your own head. And then of course, when you are twenty years old, other issues come in… Then it's a totally different thing, it's a very formal and abstract, and it's hard, and a lot of work, and so on.

RES Do you have any other comments, or any conclusions you could draw at this point?

MOT I am a little frustrated actually, I always thought that they will talk more, that they will be more proactive. I always have a hard time figuring out how I can motivate them to speak more Spanish, but without pushing them. And I go between trying to get them to do something and just letting it go; we do books, comics, crossword puzzles, and sometimes I just leave it at that, but it feels so little, and then I go back to trying to do more in Spanish. What I think I need, for me to be able to speak Spanish all the time with the kids, I need more support. I don't know how this support would look like, but I think that is the key, to keep the parents comfortable with just continuing their language.

RES And do you think Dirk and you do something differently, that your approaches complement each other?

MOT In terms of talking to them, I think that Dirk is a little bit more natural with them than I am, with just sliding into German and then back again. Me, because I switch between all three languages, I lose patience. And then I just head for the language that's easier at that moment, and he can be more consistent, it seems to me. […] And all I am hoping for is that they will see the advantage of having three languages, that they'll see me as a model, so that when they get a little older they might be inspired by me because their mom did three languages. It could also be the other way around [laughs], that they feel frustration because their mom knew all these languages and they are not learning it quick enough, that could also happen. So I don't want them to feel pushed too much. So I really don't know the answer to what to do, to be honest. I think that some kind of formal teacher, not me, teaching them would be good. But the key is, how do I motivate them? That's what I'm struggling with right now.

2. **Father**

RES We have just heard one of our earlier recordings, one of the "language times" you did with the children. Would you say there is anything new now, anything you do differently that you used to?

FAT Honestly not really, but since… well, I mean I am still talking German to them, and switch to English and then try to correct myself and go back to German. And I remind myself also… But – I noticed just recently that… Recently I spoke to Karen again in German and I noticed that she made more effort. And it is clear to me that Karen is the one who can… I mean, she **speaks German. Sophia - I am still waiting for her to [snaps his fingers] click. And I think it will come at some point but… but right now, I mean… she is very insecure. Karen just speaks, she does not care really, because obviously her grammar is not perfect, but Sophia, you know, she struggles, I think.

RES And I know you mentioned that lately Karen started speaking more in German, and in Spanish also. Which is – at the beginning you said that Sophia was more ready to pick up, but now it is almost as if she is the one who keeps quiet.

FAT Well yes, although there are certain funny… I mean, Sophia always likes humor, you know, so there are some funny German books that she has and she loves listening to them. When I read to her, she loves that. But I think Karen was like that as well. But she is also very particular about that, when I translate a book in English, you know, simultaneously reading it in German, she knows exactly which books are in German and English [laughs].

RES So, does she want the German books to be in German and the English books to be in English?

FAT Well, yes, if it's a German book, it's fine for me to read it in German, we have, for instance, "Janosch", it's a story about a bear and a tiger, it's a funny book which she looks forward to. Or a very simple book, "Bobo", which is she can follow, you know, so it helps also, if the level is too difficult; I mean she understands but there are certain

words she does not know. But we also have books where you have sentences and there are certain words that you need to fill in, describe these pictures. Karen used to like these too, but she has overgrown them, for her it would be too simple now. Now she likes comic books, "Asterix", for instance. And it also helps, the movies help. Even though "Asterix" is French [laughs], but for them it is in German. For them it's something that's European, that's something they don't get here in the States, so that's an advantage. And it's funny, you know, it has its own type of humor, I would say European humor, and they like that as well.

RES Do you still do the "language period"?

FAT No. We failed at that [chuckles]. But we will start again.

[…]

RES If you had a chance to go back, would you do something differently this time?

FAT Not really, I mean the problem is, as you know, we are here in the States and English is the kids' first language. When they come home from school they are in an English mode. Now, if Anna and I were to speak one language only, I think it would be much easier to keep alive that one language, if we were both German, or Austrian or Swiss. […] But see, she has to speak Spanish and I German, and that's more challenging. And since Anna also speaks German, German is the second most used language at home, and then Spanish, but there is more Spanish around, so it helps a little bit. There is also this thing with Anna, she speaks German but it is not her language, and her day is all in English, so she will come home and tell me how her day was in English, and I will speak German back, and we will switch between the two all the time. And sometimes I will talk English as well.

[…]

RES Well. Do you have any other comments or ideas, anything you would like to mention or comment on?

FAT Well, I think it's easier if you… I mean, another challenge that Anna does not have as much and that I have is that I am alone.

RES Yes, she mentioned it too, that there are some language that are harder to keep up than Spanish. And that German is one of them.

FAT Yes, if you have a support network, that's easier. For Spanish, there is the church group that does the celebrations and other things, and at least they see that there are other children that speak it. Although there are other varieties there, not European Spanish, but they still understand it and can relate to it. And in terms of German, unfortunately there is no such equivalent. There are Germans here, not as many as Hispanics, if we had any sort of a community that would be easier.

[…]

FAT About having someone else, from outside the family, to come in and teach them… well, you know, you have to be consequent with what you are doing. And I am not so sure about it. We once talked about having a German teacher come in maybe once a week. But you know, it is always such a short glimpse. Then again, it is better than nothing, you know. Its just… I think the key is just to grow the habit, and I think with Karen, because she was the first one, we just were much more motivated, but then when Sophia came those two girls started interacting but in English, and that reinforced the local language. So it's really hard. In the end, maybe Anna is right, I don't know. […] But regardless, I am still talking German to them and Anna is still talking Spanish, whether or not we get it from them. It is clear that the girls will obviously never reach the level of their peers in their respective country, but for me that's not really the important point, the important point is that first of all they have a connection to their respective culture, because they are that too. I want them to feel at home in Spain and in Germany. And obviously, language is your culture. My hope is, if they constantly hear it at least from us, they will – if they would want to – study eventually in Germany or Spain one day – they would have an easy time, because… you know… of course they would probably have to take language courses to boost their knowledge, but at least they would have an advantage, a base.

RES And do you think that they understand a lot more than they say?

FAT Yeah, that is clear. Sometimes, of course, when I read to them, I get a feeling, well, now this is very abstract, and then I always have to double-check, did you understand that? But also, when I read in English, they don't know certain terms. When I help Karen with her homework, which by the way is another thing, to deal with homework you have to present things in English, and then the kids are used to you being in a teacher-type role in that language, so… But that aside, definitely, I think their passive is much larger than their active use, and much larger also than we realize. Sometimes I will say to myself, wow, she actually understood that. Either because I have said that in the past, or because of the movies, or books, I don't know. It's somewhere there.

APPENDIX D

CLASSIFICIATIONS OF CODE SWITCHING BY FUNCTION

Table D1. Principal code-switching patterns (Valdés Fallis, 1976, p. 58 – Table 2)

Pattern	Definition
1. Situational switches	Relating to social role of speakers
2. Contextual switches	Situation, topic, etc., are linked to the other language
3. Triggered switches	Switches due to the preceding or following item
4. Switching of isolated items	Lexical need?
5. Identity markers	Stress in-group membership
6. Preformulations	Linguistic routines
7. Discourse markers	*But, and, of course*, etc.
8. Metaphorical switches	Obvious stylistic device – used for emphasis or contrast
9. Proper nouns	
10. Quotations and paraphrases	(May be contextual or noncontextual)
11. Sequential responses	Speakers use language last used (following suit)
12. Symmetrical switches	Blend and proportion of language alternation is made to resemble that of the speakers

2. Functions of code switching (Huerta-Macías and Quintero, 1992, pp. 76-78).

Elaboration
Elaboration occurred when additional information/details on a topic were added in the alternate language.

(1)

<…>

T: Maybe you'd like to make a book. This is my mother with grey hair, porque está poco vieja (because she's a little old). This is my sister, poco gorda, poquito, poquito. Ella no vive aquí por eso no va a saber esto (a bit fat, a little bit, a little bit. She doesn't live here so she's not going to know about this), but she's a little fat.

Emphasis

Emphasis occurred when the teacher stressed or underscored a point in the alternate language, Spanish. This switch was also accompanied by a change in voice intonation which exhibited a higher pitch level.

(2)

<…>

T: Each of you will get a cup. Now, se necesita poner todo en esta cara, van a hacer dos, en alguno quiero poner éste o éste o éste, pero no necesita poner todo, es demasiado (you don't need to put everything on this face, you're going to make two, on one I want to put this and this or that on, but you don't need to put everything on, it's too much), just put enough for the monster face

Addressee specification

Addressee specification occurred when the teacher switched languages as she addressed, or directed her speech, to a different listener. In these cases she switched to Spanish as she turned, made eye-contact and addressed the parents after speaking to the children.

(3)

<…>

T: Today we're going to talk about jobs, and working… Mamás, han tenido trabajo antes de casamento? (Mothers. Did you have a job before you get married) ?..cuál trabajo recuerda? (what job do you remember?)

Ms.E: Yo en Juarez duré cinco años desde los trece hasta los diez y ocho años hasta que me casé (I lasted 5 years from the time I was 13 until I was 18 when I got married).

<…>

Clarification

Clarification occurred when the teacher switched to Spanish as she repeated or paraphrased something she had just said in English.

(4)

<…>

But let's pretend, a imaginar (to imagine), let's pretend, vamos a imaginar (let's imagine) today is our birthday, vamos a imaginar que hoy es cumpleaños (let's imagine today's a birthday).. . We're going to make a present vamos a hacer un regalo para esta persona (we're going to make a gift for this person).

3. Types of code switches, based on their social functions (Reyes, 2004, pp. 84-85)

1. Representation of speech: CS employed to represent talk.

t: all right I'm calm I'm calm … a lo mejor están diciendo están chulos

2. Imitation quotation: CS involving imitation and change in tone of voice to play a particular character.

t: y luego le hace si

{[robot voice] i'm hungry}

3. Turn accommodation: CS occurring between speakers' turns.

Claudia: t: y luego se va salir a las cuatro y media from school

Jimena: t: de la project school?

Claudia: t: summer school she don't need to go to summer school

4. Topic shift: CS occurring due to a change of topic in conversation.

t: we finished all the books … thank you mira mis calzones se me andan cayendo

5. Situation switch (on/off topic in academic work): CS marking a switch between science talk and non-science talk.

t: mira mira los magnets … what was he saying during recess

6. Insistence (non-command): CS indicating a child's persistence in a specific idea. The child usually repeated the same utterance in both languages.

t: a ver . . . let me see

7. Emphasis (command): CS used to put emphasis on a specific command.

t: loud léelo loud!

8. Clarification or persuasion: CS giving more information to clarify an idea or message.

t: andale pues esa cosa we don't need this no more

9. Person specification: CS occurring when children referred to another person during their conversation.

t: you should ask A#given name# si quiere comer nieve después de la escuela

10. Question shift: CS indicating a switch in language when children had a question.

t: let me see cómo le hiciste?

11. Discourse marker: Discourse markers are linguistic elements that do not necessarily add to the content of the utterance but act as markers of the context in which the utterance is taking place (Escalera, 2002).

t: okay así ira

12. Other: This last category was used to code instances in which the function of the CS could not be identified.

t: a mí me gusta big teeth

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