Early Bilingualism: A Case Study of Changes in Code-Switching

by

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Abstract

In order to understand how the use of code-switching amongst bilingual children is affected by changes in sociolinguistic environment and interlocutor, data was collected from the speech of an early bilingual (male, age 4) before and after he moved from an EFL environment (Japan) to an English dominant environment (the UK).

バイリンガルの子供たちの間でのコード・スイッチングの使用は社会言語学的環境と対話の変化に影響されているかどうかを調査します。データは幼児バイリンガル（男性、年齢4歳）の音声から採取しました。データは、EFL環境（日本）で生活していた時に採取したものと英語支配環境（UK）に移動した後にデータを収集しました。

Key Words：　code-switching, bilingualism, multilingualism, matrix language

1. Introduction

Speaking more than one language is the norm across the world (Crystal; 2010) and speakers of three or more languages are not at all rare, especially if competence in different varieties or dialects is also taken into consideration (Gardner-Chloros, 2009: 16). However, most language teaching focuses on the native speaker, ignoring the specific characteristics of language use by L2 users (V. Cook, 2008) and many people from nations with an established, dominant language do not consider the acquisition of a second language as part of everyday life (Myers-Scotton, 2005), despite the fact that we are increasingly aware of immigration and globalization that have brought together different people and their different languages (Blommaert, 2010).

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Given that much modern research rejects both the native speaker as the target of language teaching and the exclusive use of the L2 in the classroom (Auerbach, 1993; la Campa & Nassaji, 2009; Storch & Aldosari, 2010), it seems better to also focus on the characteristics of language use by bilingual users (V. Cook, 2008). One such characteristic of bilingual speech that has received a lot of attention is code-switching (V. Cook, 2008; Myers-Scotton, 2005), and understanding the sociolinguistic and cognitive factors that affect code-switching may provide insight into how such abilities can be nurtured.

1.1 What can code-switching tell us?

In this article, I will try to answer the research questions of how does increased exposure to English affect a bilingual child's code-switching and whether that code-switching has any utility. I will also attempt to understand why and how he uses code-switching in his everyday language against the backdrop of his sociolinguistic awareness and identity in order to determine if encouraging code-switching can have a positive impact. To do this I will selectively look at only discernible instances of code-switching and their preceding and proceeding utterances, following an event sampling approach. But why code-switching?

Hulstijin (2012) suggests that studying oral production gives a better insight into how bilingual a person is, so if we accept code-switching as a natural consequence of bilingualism, then code-switching may also provide useful insights into how teachers can modify their teaching to accommodate a bilingual-speaker model instead of the traditional monolingual native speaker model. Thus, if we are to reframe language proficiency in ways that relate to bilingual speech, we must understand how changes in code-switching as an aspect of bilingual speech relates to language acquisition through changing sociolinguistic factors.

Several studies have found that cross-linguistic influence can have a positive impact on language acquisition (Hayashi & Murphy, 2012; Kroll, Dussias, Bogulski, & Valdes Kroff, 2012), so the encouragement of code-switching may also have a positive effect. Therefore, the hypothesis of this report is that discouraging code-switching and enforcing a one-language-only rule may have a negative impact. This differs from previous research that suggested code-switching resulted from a lack of proficiency (see Heredia & Altarriba, 2001) in that code-switching is viewed as a tool for communication and language acquisition.

In order to test this hypothesis, I will examine the code-switching of a young male bilingual as he moves from an EFL environment to an ESL environment in an English-dominant country. There are several reasons for studying child bilingualism (Dahl, Rice, Steffensen & Amundsen, 2010; Myers-Scotton, 2005), but perhaps the most pertinent to this report is the ease and speed with which a young child can acquire the state of bilingualism (Comeau, Genesee, & Lapaquette, 2003; De Houwer, 2005; Myers-Scotton, 2005), allowing us to examine code-switching over a shorter period of time than for an adult in a naturalistic setting.

1.2 Previous studies

The study of bilingualism in children has been around for some time with De Houwer (2005) citing Ronjat (1913) as one of the first publications dealing with the topic, but it was not until the mid 1980s to late 1990s that a large number of studies started to appear and De Houwer (2005) lists at least 72 empirical studies alone from 1985 to 2002. However, of these studies, only one focused on Japanese/English bilingual children and this focused on the development of negation and aspect rather than code-switching (see Mishina-Mori, 2002).

Amongst studies that touch upon English/Japanese code-switching, Azuma (2000) has taken a generative approach to code-switching in data collected from adults and did not apply the Matrix Language Frame model as I do here (see Section 2 for further discussion). Nishimura (1992; 1997) demonstrated that code-switching does occur between languages with different word orders, such as English and Japanese, but her main focus was on how language choice varied according to interlocutor amongst second generation Japanese-Canadian adults. Kanno (2003) also touches upon code-switching, but only as a tool to negotiate the identities of English/Japanese bilinguals.

Kasuya (1998) recorded examples of code-switching amongst English/Japanese bilingual children between the ages of 2 and 5, but the focus of the study was on the effect of parental input on bilingual acquisition and the discourse strategies employed by Japanese-speaking parents to encourage their children to speak Japanese in an English-dominant setting. Thus, while there is an abundance of studies that focus on bilingual children, very few studies cover the subject of English/Japanese code-switching using the Matrix Language Frame model. This report will also attempt to address this perceived gap in the literature.

2. Bilinguals and Multilinguals

Increasingly, the term *bilingual* has also come to include trilingual or multilingual individuals and both Grosjean (1998) and Bullock & Toribio (2009: 7) define a bilingual as someone falling along a multilingual range running across a continuum of linguistic abilities and communicative strategies. Typically, the three systems of language that are used to define the boundaries of this continuum are phonology, morphology, and syntax & lexicon (Gardner-Chloros, 2009; Grosjean, 1998; Myers-Scotton,

2005).

The common belief that bilingual speakers are equally proficient in both languages and can converse on any topic with any interlocutor, suggesting that a bilingual is two monolinguals in one, is generally considered unrealistic (Bullock & Toribio, 2009; Grosjean, 1998). Therefore, how to define who is bilingual is somewhat difficult given the fact that L2 speakers usually lack the balance between morphology, phonology, syntax & lexicon that L1 speakers typically possess (Myers-Scotton, 2005: 39). Thus, from a theoretical perspective, bilinguals are usually placed on a gradient of ability amongst the three systems of language, following Grosjean's (1998) definition, but, phonology is usually the most neglected of the three, and native-like pronunciation is usually not a minimum requirement for someone to be labeled a bilingual (Myers-Scotton, 2005: 37-39). Of the other systems, lexicon is the area where least proficiency is expected, while morphology and syntax are the areas where most proficiency is expected for someone to be labeled a bilingual (Myers-Scotton, 2005: 39-40), meaning that while the theoretical boundaries of bilingualism are very broad, a practical definition needs to be more restrictive.

Thus, Myers-Scotton (2005: 44) gives a more practical meaning and defines bilingualism as the ability to use two or more languages sufficiently to carry on a limited casual conversation. This would also include at least some language learners who have been neglected often in studies of bilingualism and code-switching (Gardner-Chloros, 2009: 17). However, problems remain with such a definition as any such evaluation must take into account both grammatical competence and communicative competence (Myers-Scotton, 2005: 40-41).

Of the few bilinguals to speak more than one

language with native-like abilities, most have been raised as bilinguals from infancy onwards (Myers-Scotton, 2005: 36). Such individuals are often called *early bilinguals* (See for example Genesee, 1989; 1995).

2.1 Code-Switching

A normal feature of bilingual speech is code-switching. Bilinguals have two modes for using language, such that when in bilingual mode they speak either language, while in monolingual mode they use two languages simultaneously by code-switching during the course of speech (V. Cook, 2008: 175; Grosjean, 1989; 1998). In order to examine the code-switching data that forms the focus of this report, we must define what is meant by *code-switching*.

2.1.1 Definitions of Codes and Code-Switching

To define the term *code-switching* we need to first define the meaning of *code*. Myers-Scotton (2005: 17) defines a *code* as any linguistic variety used as a way of speaking, such as a language, dialect, style or register. Gardner-Chloros (2009: 11) notes that *code* is considered a neutral umbrella term for language. However, such a definition is not actually a very straightforward answer, but as Myers-Scotton puts it: "Sorry to make things complicated, but that's the way they are" (2005: 17).

Myers-Scotton (2005: 241) defines *classic code-switching* as including elements from two or more languages or varieties in the same clause. This differs slightly from the most general definition of code-switching as the use of two languages in the same conversation (Myers-Scotton, 2005: 239). Within this wider general definition, there are two main types of switching, *inter-sentential switching*, where switching occurs at sentence boundaries (1), and *intra-sentential switching*, where switching occurs within sentence boundaries (2) (Bullock & Toribio, 2009: 3; Myers-Scotton, 2005).

(1) "*Kotoba no chigatteru hito wa gurupu mo chigatte imasu.* Because people will Japanese most of the time in talking to people who speak English...*"
(People with different languages are in different groups. Because people will speak Japanese most of the time in talking to people who speak English...)
(Kite, 2001)

(2) "Well, *watashi wa* variety *no culture toka wo* I like to learn*"
(Well, as for me I like to learn a variety of culture and so on.)
(Kite, 2001)

Tag-switching may also occur in bilingual speech, where a formulaic expression or word from Language A is inserted into Language B (3) (Bullock & Toribio, 2009: 4).

(3) "Les autres pourraient [sic] parler francais comme lui, *ya know.*"
(The others could talk like him, you know.)
Example of French-English tag-switching
(Bullock & Toribio, 2009)

2.1.2 Social Attitudes to Code-Switching

While linguists consider code-switching to be an index of bilingual proficiency, the general public may view it as "indicative of language degeneration" (Bullock & Toribio, 2009: 1). Gardner-Chloros (2009) notes that bilingual individuals often think that code-switching is a lazy option to be disapproved of, even though bilinguals both consciously and unconsciously code-switch themselves. The common prescriptive understanding of grammar, as a set of statements on how speakers should correctly use a language, leads to a negative view of code-switching amongst the public; however, linguists taking a descriptive approach to how grammar is actually used see code-switching as a "reflection of social constructs and

of the cognitive mechanisms that control language switching" (Bullock & Toribio, 2009: 1).

However, determining the attitude of a child towards code-switching is somewhat difficult, but it is possible to find a degree of deliberate code-switching in child bilinguals with some examples showing some reason or intent behind the code-switching, such as group membership or audience specification, and most code-switched utterances fall somewhere on a "scale of deliberateness" with the patterns that the child is exposed to as well as conversational skills and cognitive factors being important factors (Gardner-Chloros, 2009: 145). The impact of these factors is in turn related to how children acquire language or languages, which is discussed below.

2.2 Language Development in Bilingual Children

Speaking two or more languages is the norm for over half the children in the world (Peccei, 2006: 36) and, as discussed earlier, the age at which acquisition starts may have an effect upon how well a language is acquired with early acquisition often being associated with native or native-like pronunciation (Bongaerts, van Summeren, Planken, & Schills, 1997; De Houwer, 2005; DeKeyser & Larson-Hall, 2005; Flege, 1999: 101-104; Peccei, 2006: 37).

Genesee (1993) has argued that early bilinguals should develop in a similar fashion to those learning their first or only language, and given such similarities between monolingual and bilingual acquisition in children, linguistics has since moved to studying the language system involved and comparing the acquisition of different languages (Peccei, 2006). One result of such cross-linguistic study is the finding that English-speaking children favour the learning of nouns, while Japanese children favour the learning of verbs and that this seems to be as a result of the languages themselves; ellipsis in Japanese most commonly drops nouns,

while ellipsis in English most commonly omits verbs (Clancy, 1985; Oshima-Takane, 2006; Peccei, 2006). O'Grady (2005) notes that learning the difference between nouns and verbs is one of the most fundamental and important contrasts in languages, so such cross-linguistic differences may prove useful in understanding the code-switching data presented in this report.

2.3 Parental Code-Switching and Other Motivations

Each parent conveys through his or her own discourse practices and strategies how much of each language an early bilingual should produce as well as how much code-switching is acceptable or not, and such children pick up the norms of the society where they live (Gardner-Chloros, 2009: 155; Lanza, 2004: 248-270). In an attempt to address the effect of parental code-switching, Comeau, Genesee and Lapaquette (2003) examined the code-switching of children as they conversed with bilingual adults who deliberately manipulated their own rates of mixing; it was found that the almost all the children easily matched the adults on a turn-by-turn basis, which corresponds with other studies that have found that children are significantly affected by the amount of code-switching exhibited by parents and other interlocutors, even when it resulted in increased switching to the child's weaker language (Comeau et al., 2003; Gardner-Chloros, 2009: 155).

The matching of an interlocutor's code-switching may be very similar to Gumperz's (1982) notion of we-codes and they-codes, where the child is matching the interlocutor in an attempt to reduce the social distance between them and many studies have found code-switching to be addressee or function specific (Ervin-Tripp & Reyes, 2005; Gardner-Chloros, 2009: 157). Accommodation theory also suggests that speakers tend to accommodate their speech to persons they like or whom they wish to be liked by (Myers-Scotton, 2005: 133-134) and Kasuya (1998) found that

parental input had a significant effect upon the language choices of English/Japanese bilingual children. Thus, the code-switching and the amount of code-switching examined in this study might be expected to be influenced by the specific interlocutor or interlocutors, as well as being employed for a specific function.

3. Methodology

3.1 Karl, His Family and Their Context

The subject of this qualitative research, "Karl" (a pseudonym), is a young male aged between four years four months (4:4) and four years seven months (4:7) when recordings were made. Karl's mother is a native speaker of Japanese while his father is a native speaker of English and from birth Karl has been brought up with both languages with the parents reporting that they follow a one-person-one-language approach (see Barron-Hauwaert, 2004) as much as possible. Both parents are proficient in each other's native language and they report a high level of code-switching within the home.

Karl has spent most of his life living in Japan and the dominant language in his surroundings has been Japanese for the majority of that time. Both of Karl's parents work, so Karl has attended a Japanese daycare facility from the age of one, where the dominant language again is Japanese. Both Karl's parents report that he has some proficiency in English, but that Japanese is his native language. In addition to the reports of both parents, there is some evidence of Karl code-switching from an early age with staff at the daycare facility complaining about Karl's "mixing" of English and Japanese and his refusal to learn his numbers in Japanese and continued use of English.

In February 2012, Karl and his father went to stay in the UK with Karl's paternal grandparents for a period of several months and the recordings span from a short period before the move across the three months following their arrival. During this time, Karl attended an English-language dominant playgroup four mornings a week. In addition to interacting with English-speaking children of the same age, Karl spent a large amount of time with his paternal grandmother. Karl's grandmother is a retired nursery teacher, who is a native speaker of English and reports little or no proficiency in any other language.

Both Karl's father and grandmother gave informed written consent to the recordings and Karl's mother gave informed written consent on behalf of Karl. Karl was introduced to the recording equipment at the beginning of the study and allowed to play with it, recording his own voice and the voices of others and listening to those recordings. As noted elsewhere, if Karl showed any signs of not wishing to participate in a recording session, he was assumed to have withdrawn his consent for that particular session and that session was abandoned.

3.2 Research Design and Data Collection

The aim of this research is to examine the language use of an early bilingual as he moves from an EFL environment to an ESL environment. The underlying assumptions of this study are that code-switching is a useful bilingual resource and that intra-sentential code-switching requires more skill and ability than inter-sentential code-switching. Thus, Karl's code-switching was expected to increase in complexity with increasing language exposure and increasing acquisition over a period of a few months.

In order to test this hypothesis, the study takes an event sampling approach in specifically selecting code-switching data, but a large amount of data was still generated from frequent recordings, requiring quantitative analysis to reliably determine any trends in the selected data over time (Dörnyei,

2007). In order to analyze these trends within the low-interference category of code-switching type, and place these within a wider context, a qualitative perspective was taken to analyze the high-interference category of the functionality of those instances of code-switching (Dörnyei, 2007). The resultant mixed methods approach enables a quicker interpretation of a large raw data set and allows a multi-level analysis of a complex issue by combining numeric trends with interpretations of the nature of that data (Dörnyei, 2007).

3.2.1 Audio Recordings

Several recordings were made in Japan before Karl moved to the UK. After his arrival in the UK, recordings were made over a period of 3 months. These recordings were in naturalistic settings and recorded play sessions including interactions between Karl and his father and between Karl and his grandmother. Karl's father or his grandmother made the actual recordings after having received instruction in how to operate the recording equipment. Each recorded play session lasted for approximately one hour and recordings were made once a week; alternating one session with Karl's father and one session with Karl's grandmother. In addition to recordings, field notes were taken by Karl's father and grandmother to record any relevant observations.

Recordings were planned on a weekly basis for several months, but on several occasions it was not possible to make a recording as Karl's grandmother was unavailable or Karl himself became uncooperative during the recording and was thus assumed to have withdrawn consent on those occasions. Thus, all data that was available and consensual was transcribed. In total, 12 hours and 54 minutes of raw data were recorded excluding sessions where Karl's consent was assumed to be withdrawn. As noted above, in order to more easily analyze this large amount of data in the time available an event sampling approach (Dörnyei,

2007) was taken to transcription.

3.2.2 Transcription

Each recording was transcribed selectively with only discernible instances of code-switching and their preceding and proceeding utterances transcribed, following an event sampling approach (Dörnyei, 2007). English glosses of Japanese utterances were recorded in the transcription by the present author (an English native speaker) and checked by a Japanese native speaker fluent in English. The term, "discernible instances of code-switching" is taken to mean instances where the use of two languages, (i.e. Japanese and English), is perceptible within an interaction on the recording. Any utterances that were not easily understood were ignored (see Ross (2010) regarding problems of transcription).

Throughout this report, the letters K, F and G refer to Karl [K], his father [F], and his grandmother [G], respectively.

4. Data Findings

In this section, I will present my findings from the data. An overview of these findings will be given first, before they are presented within the three types of code-switching evident along a timeline, and then presented in their context, categorized according to the interlocutor.
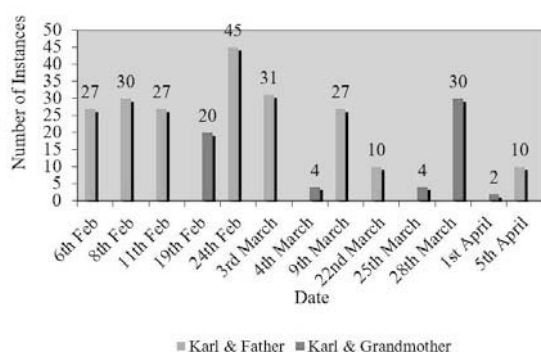
4.1 Overview of Code-Switching Recorded

The transcript data was analyzed for the types of code-switching present and whether each utterance could be described as inter-sentential, intra-sentential or tag switching. Of the 385 instances of discernible code-switching, 268 instances (69.6%) could be classified as inter-sentential, 95 instances (24.6%) could be classified as intra-sentential, and 22 instances (5.7%) could be classified as tag-switching. Of the 268 code-switches classified as inter-sentential, only 25 instances (9.3%) involved

a switch from Japanese to English, while 243 instances (90.7%) involved a switch from English to Japanese. Of the code-switching instances classified as intra-sentential, Japanese was identified as the matrix language in 87 instances (91.5%), while English was identified as the matrix language in only 1 instance (1.1%). Of the remaining 7 instances (7.4%), it was unclear which language was the matrix language. Of the 22 instances of tag-switching, 14 instances (63.4%) involved a Japanese tag, while 8 instances (36.4%) involved an English tag.

4.2 Inter-Sentential Switching

Graph 1: Inter-Sentential Switches by Participant

4.2.1 G-K Interactions

As can be seen from Graph 1, inter-sentential code-switching varied substantially in [K] interactions with [G]. Initially, [K] used a moderate to high level of such switching, but such usage was greatly reduced in later interactions. The session on the 28th of March would seem to be an exception that requires further analysis as he returned to limited use of such switching shortly thereafter. Thus, the trend for inter-sentential switching during interactions with his grandmother was downward, but this was not quite the same for his interactions with his [F].
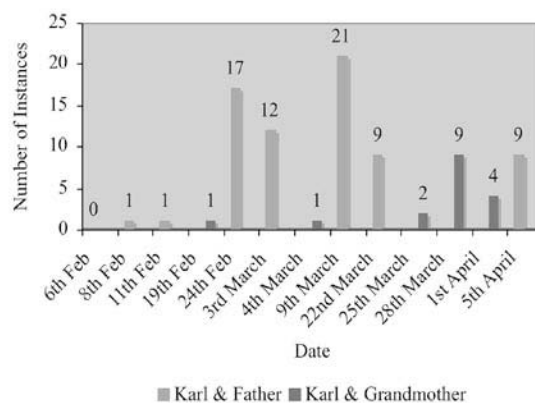
4.2.2 F-K Interactions

In contrast, [K]'s interactions with [F] involved a

lot more switching to Japanese even in the new English-dominant setting and [F] even switched into Japanese himself during sessions. Thus, until the 22nd of March, [K] displayed higher levels of inter-sentential switching in his interactions with [F] that were reasonably consistent as can be seen from Graph 1 above.

However, on the 22nd of March and the 5th of April, the amount of inter-sentential code-switching dropped to less than half of the levels seen previously as shown in Graph 1. The levels were still higher than in his interactions with his grandmother on the 25th of March and the 1st of April, as shown in Graph 1.

4.3 Intra-Sentential Switching

Graph 2: Intra-Sentential Switches by Participant

It can be seen from Graph 2 that the amount of intra-sentential switching in [K]'s speech changes dramatically after moving to the UK, with only two examples recorded in the data collected in Japan.

4.3.1 G-K Interactions

The transcript data from the 19th and 24th of February shows that there was initially an obvious difference between conversations involving [K] and [G] and those involving [K] and [F] (see Graph 2). From [K]'s arrival in the UK until the 25th of March, [K] used very little in the way of intra-
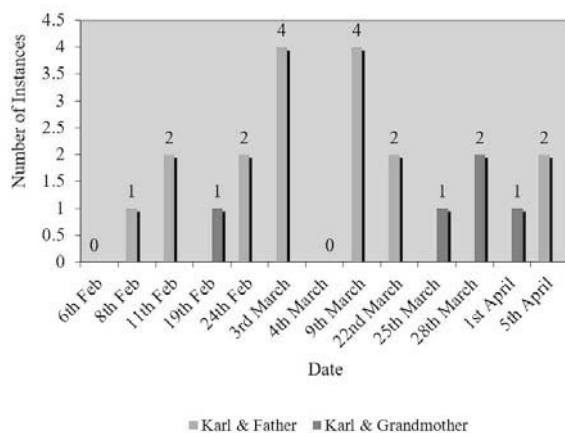
sentential switching with his grandmother. The 28th of March would again appear to be an exception, where he used much more switching as noted for inter-sentential switching. [K]'s use of intra-sentential switching was thus noticeably different to his use of such switching with [F].

4.3.2 [F]-[K] Interactions

As can be seen in Graph 2, [K] used intra-sentential code-switching much more in an English-dominant environment with [F] than with [G], with relatively frequent use from the 24th of February until the 9th of March. This usage reduces somewhat by the 5th of April, but is still higher than in Japan and seems to possibly attain a consistent level of usage on the 22nd of March and the 5th of April.

4.4 Analysis of Tag-Switching within the Data

Graph 3: Tag Switches by Participant

■ Karl & Father ■ Karl & Grandmother

Tag-switching was evident in the data, but as can be seen from Table 1 and Graph 3, the amount of tag-switching was very small compared to the amounts of inter-sentential and intra-sentential switching respectively. This shares similarities with data analyzed by Poplack (1982) that suggests that tag-switching tends to be favoured by bilinguals who are significantly more proficient in one of their languages.

Within the recorded utterances in the data that involve tag-switches, [K] appears to use only 8 English tags, principally the word 'please', and only 14 Japanese tags, principally 'datte' (a Japanese discourse marker) and 'hora' (another Japanese discourse marker similar to 'look'). Although these switches follow a similar pattern to that of inter-sentential switching, with reduced frequency during interactions with [K]'s grandmother; given the infrequency of tag-switching within the data set, the significance of such switching within an analysis of [K]'s language use must be questioned. Further questioning and analysis of these data and the data on inter-sentential and intra-sentential switching are provided in the next section.

Section 5. Discussion of Findings

5.1 Prohibitions on Language Use

From the date of [K]'s arrival in the UK, his exposure to English increases dramatically with daily contact with English native speakers of a similar age as well as adults, and he would appear to be fully aware of this. The data for his interactions with his Grandmother [G] show that his initial attempts at communication using inter-sentential switches to Japanese (shown in italics) are not understood as the following extract shows.

> (4) G: "What are you going to?"
> K: *"Datte, norimontai ga nakatta"*
> (Like, want to stick [it] but none.)
> G: "Sorry. What are we doing?
> (*Transcript data, 19th February 2012*)

Later in the same session [K] makes an attempt at a pun through the similar sounds of an English word and a Japanese discourse marker (shown in italics), but the attempt falls flat as his Grandmother [G] fails to understand the Japanese.

(5) G:"Which colours are you going to choose this time?"

G:"What's this one? This one?"

G:"And that is?"

K:"Yellow!"

G:"Good boy."

K:"Yellow *yaro*! Yellow. Yellow *yaro*."

(Yellow it seems. Yellow. Yellow it seems.)

K:"Yellow, Yellow, Yellow, yellow."

G:"So, where's the yellow?"

K:"I ... this one. Yellow."

[[K] is given the yellow paper.]

G:"What do you say?"

K:"Thank you."

(*Transcript data, 19th February 2012*)

Such instances where features of [K]'s Japanese use are ignored appear to act as a signal that Japanese is not to be used with his Grandmother [G]; possibly much more so than a response that seeks clarification as shown in the preceding extract above (4). This might explain why levels of inter-sentential switching (shown in italics) are much lower on the 25th of March and the 1st of April. In an extract from the 25th of March, we can see that [K] consciously switches to English while collecting ladybugs in the garden with his grandmother [G].

(6) G:"Put them in there."

K:"*Ah, hora! Itta de.*"

(Ah, look! Went away.)

G:"I don't understand. You have to tell me in English."

K:"*K***-kun ga* (as for me) ... hiding there."

G:"Hiding under there?"

K:"Yes."

(*Transcript data, 25th March 2012*)

The phrase "*K***-kun ga*", literally denoting [K] as the agent of an action, i.e. "as for me", could also be interpreted in Japanese to mean "Oh, I did it again", suggesting that [K] is aware that he is expected to speak English to his grandmother and not switch unconsciously into Japanese. Given that [K] was not himself hiding, then this seems like the most logical interpretation.

From this extract, it is also possible to see that [K] may also be aware of the different requirements and nuances of Japanese and English. The Japanese verb, *iku*, meaning 'to go' also carries the nuance of 'to go out of sight', so instead of offering a straight translation of '*itta de*' as 'went away' or even the slightly erroneous 'going away' when he switches to English, [K] gives a more specific interpretation of the scene: the ladybugs are "hiding there". So it would appear that not only may [K] be consciously aware of the sociolinguistic expectations of his grandmother, i.e. that he only speak English with her, but also that he may be unconsciously aware of the fact that Japanese and English have different cognitive-linguistic demands in the form of differently nuanced meanings. Unfortunately, there is insufficient data to corroborate this and "hiding there" may be simply [K]'s best attempt at producing an appropriate English phrase as quickly as possible, but even so, it would still appear that [K] is consciously controlling his use of language and avoiding Japanese when conversing with his grandmother.

The session on the 28th of March seems to stand out against this trend of conscious control of code-switching with a level of inter-sentential switching comparable with those seen in exchanges with [F] in Japan (See Graph 1). However, the most obvious difference in this recording session is the palpable excitement in [K]'s voice and actions. This session involved playing with brightly coloured playdough, which is one of [K]'s favourite activities, but while he had used play dough numerous times before, his grandmother took this as an opportunity to introduce some new toys to mould and shape the play dough. So whereas 3 days earlier admonishments by his grandmother [G] to use

English elicited a thoughtful response in English, here the same instructions are ignored in [K]'s excitement and followed by further inter-sentential switches into Japanese (Japanese shown in italics).

> (7) K:"*Hora, mite. Kore aru kaitande midori to.*"
> (Look, see. Written that have this. Green one and.)
> G:"Really?"
> K:"*Roketto.*" (Rocket.)
> G:"Are you going to tell me in English?"
> K:"*Eto, kore yatte. Hora.*"
> (Umm, going to do this one. Look.)
> (*Transcript data, 28th March 2012*)

Later in the session, his grandmother's [G] repeated requests that [K] only speak English result in [K] switching to English, but then he quickly switches back into Japanese, and from the audible sighs, it appears that he is not interested in making such a conscious effort to suppress his use of Japanese.

> (8) G:"Now, bits of blue."
> K:"Bits of blue. *K***-kun ga aoi ga suki na. Aoi no hikoki ga suki.*"
> (Bits of blue. I like blue. Like blue plane.)
> G:"Sorry?"
> K:"*Aoi no.*" (Blue one.)
> G:"No, can't ask me like that, can you?"
> G:"Cause Grandma doesn't understand."
> G:"There."
> K:"Grandma, please." [sighs] "Okay. Plane and push."
> K:"*Hora, hikoki*, plane."
> (look, plane, plane.)
> (*Transcript data, 28th March 2012*)

Thus, even though there is a lot more inter-sentential code-switching in the session on the 28th of March, the data still seems to show that [K] is aware of his grandmother's expectations of only speaking English, and while he is quite capable of meeting those expectations, to suppress code-

switching requires a conscious effort on his part. Compare this with the session a few days later on the 1st of April, where [K] is not as excited by the activity that day and he is more conscious of his grandmother's prohibition on Japanese, resulting in a reduced amount of inter-sentential switching (see Graph 1). This prohibition of Japanese may also be de-motivational as [K] speaks considerably less during sessions with [G]. This is in contrast with interactions between [K] and [F] where he speaks considerably more.

5.2 Identity

There is also evidence that [K]'s code-switching is related to his sense of identity as this data extract indicates (Japanese in italics).

> (9) G:"What's this? A Satsuma or a *Mikan*?"
> (What's this? A Satsuma or a [Japanese name for a satsuma]?)
> K:"Orange"
> (*Field notes, 12th May 2012*)

As this shows, when challenged by his grandmother [G] to choose between the English or the Japanese noun for the same object, [K] avoids the two answers presented. His answer is even more interesting because "orange" is an English loan-word in Japanese: he has chosen the most bilingual answer possible. Given the choice of either Japanese or English, he chooses both. In this way, he does not reject the Japanese part of his identity.

The fact that [K] recognizes himself as a Japanese-speaking guest in an English-speaking world may also explain the increased amount of inter-sentential code-switching on the 24th of February, where he use switches into Japanese to politely express reluctance to engage in the activity with [F] and a reluctance to interact with his English-speaking grandparents.

> (10) F:"Okay, shall we take the staples out?"
> K:"Mmm. *Motto chigau asobu nohouga*

yukatta."
(Mmm. More different playing would be better.)
(*Transcript data, 24th February 2012*)

(11) F:"We should pack up because we're going to help Grandpa soon, aren't we?"
K:"Grandma *to*?"
(with Grandma?)
F:"No, Grandpa."
K:"Grandpa *wo* help *to iu demo K-kun ga chigau arunde.*"
([You] say help Grandpa, but I have something different [to do].)
F:"Oh? Okay."
(*Transcript data, 24th February 2012*)

There are no signs of any reluctance to engage with his English-speaking grandparents a few months later; in fact, [K] becomes increasingly at ease with them as might be expected. In effect, his use of Japanese here takes on the appearance of a "we code" (Auer, 1998), where he is able to express his opinion without offending his grandparents and he asks a number of times throughout the session where they are before giving his opinion. [K]'s parents report similar behaviour at home in Japan, where he switches into Japanese to discuss his father or into English to discuss his mother with his father, respectively. Awareness of adult sanctions on language use in child bilingualism has also been reported by Lanza (2004) and Myers-Scotton (2005) and the recorded data seems to concur with her evidence. Thus, [K]'s use of code-switching suggests that he is fully aware of his sociolinguistic environment.

5.3 Awareness of Changing Sociolinguistic Environment

As shown in Graph 1, [K]'s use of inter-sentential switching in his interactions with his father falls after the 9th March, but unlike his grandmother, [K]'s father puts no prohibitions on the use of Japanese; and the sessions on the 9th and 22nd of March involved the same activity, namely playing with a toy train and track, so this cannot explain the dramatic change, although it should be noted that the 9th of March was the first time to lay out all of the track and trains.

Another likely explanation would seem to be [K]'s increased exposure to English. Up to the 22nd of March, [K] had spent about 60 hours in contact with English native speakers of the same age in an English-dominant playgroup, so it seems possible that he is increasingly aware that his environment has changed from one of Japanese dominance to one of English dominance, where his close family increasingly communicates in English. This would appear to share similarities with research by Dahl et al. (2010), who found a rapid increase in the use of a language by an early bilingual when that language was dominant in a pre-school environment.

There is further evidence of [K]'s awareness of his sociolinguistic environment in the session on the 9th of March that shows the greatest occurrence of intra-sentential switching. This may be due to [K]'s excitement to be playing with the toy trains as noted above; however, it may also be due to the social domain that this activity belongs to, because [K]'s father [F] was usually the person playing with [K] as he played with his toy train set in Japan and some of the intra-sentential switches involve English content specific to playing with a toy train set as shown by the following data extracts.

(12) K:"Station *ga yukatta.*"
(Station is good.)
F:"Hang on. No, they're not. There's something wrong with it."
K:"Break it *dakara papa ga naoshite.*"
([Someone] broke it, so Papa fix it.)
(*Transcript data, 9th March 2012*)

(13) K:"This one *wa* straight line *ga arude.*

Hora."
(As for this one, it has a straight line. Look.)
(*Transcript data, 5ᵗʰ April 2012*)

(14) F:"Oh, you want a straight bit."
K:"Straight bit better."
F:"I thought that we could put a long raised section."
K:"Raised section *ga iranai.*"
(Don't need a raised section.)
F:"Oh, okay."
(*Transcript data, 9ᵗʰ March 2012*)

[K]'s use of English for lexical items related to trains even when Japanese has its own terms, e.g. '*eki*' meaning 'station', may suggest that he associates English more than Japanese with this play activity, since it was his father [F] who often played with him for this activity at home in Japan. This may also be the case with the mending and fixing of toys as suggested by the following extract.

(15) F:"Oh, the other one is broken, isn't it?"
K:"Yes, *achi no yatsu* broken."
(Yes, the one over there is broken.)
F:"Yes."
K:"*Kore no yatsu mo* broken."
(This one here is also broken.)
F:"Oh."
(*Transcript data, 9ᵗʰ March 2012*)

However, the above extract could also suggest that [K] is simply repeating key vocabulary as a discourse tactic to aid understanding. The repetition of "raised section" in the example (14) might be easily replaced with any noun phrase indicating 'that thing mentioned' and it would achieve the same communicative result. The fact that many other examples of intra-sentential switching taken from the data involve reported speech seems to indicate that this may be a possibility, although this is not entirely clear, as the following extract seems

to indicate.

(16) F:"I thought you said this was a boat? *Fune*, Boat?"
(I thought you said this was a boat?
Boat, boat?)
K:"Boat *to yutteinaiyo*. Bus *to yutta.*"
(I am not saying boat. I said bus.)
F:"Okay."
(*Transcript data, 24ᵗʰ February 2012*)

In the extract above (15), [K]'s father [F] provides a sandwiched translation of the word 'boat' into the Japanese, '*fune*'. This is obviously intended to help clarify and check meaning and [K]'s response shows that he understands and intended to say it was a bus. Such use of code-switching by [K]'s father [F] might also have influenced [K]'s own intra-sentential code-switching and in a few places [K] provides a Japanese interpretation of preceding utterances (Japanese shown in italics) possibly as a way of indicating his understanding.

(17) F:"Yeah, put that there."
K:"*Moto* long train." (Longer train.)
F:"Are you going to make a long train?"
K:"Yeah, *moto nagai* train."
(Yes, longer train.)
F:"Well."
K:"*Nagai yatsu. Futatsu nagai yatsu.*"
(Long one. Two long ones.)
F:"Hmm."
(*Transcript data, 9ᵗʰ March 2012*)

In Extract 17, [K]'s initial utterance "*Moto* long train" uses the Japanese word '*moto*' meaning 'more', instead of the English bound morpheme '-er' as in 'longer', whereas in other places in the data there is evidence that [K] has acquired this English morpheme. Then, in order to clarify the meaning further, [K]'s second utterance replaces the English word 'long' with the Japanese word '*nagai*'. In [K]'s third utterance, he replaces all the

English content with Japanese. This gradual transition into Japanese is seemingly intended to clarify meaning as well as share ownership of the activity. The reason why he chooses to use 'yatsu' meaning 'one thing' instead of 'densha' meaning 'train' may be that, as noted above, he associates the subject of toy trains more with the use of English than with the use of Japanese. So while an inter-sentential switch into Japanese instantly makes the activity [K]'s, this more gradual transition with intra-sentential switching recognizes the place of English within the activity and signals the inclusion of his father.

It is interesting to note that both the first and second utterances in this example (17) draw their system morpheme 'moto' from Japanese, suggesting that their matrix language is Japanese according to the MLF model (Myers-Scotton, 2005). This follows the pattern seen across the data with 87 utterances involving an intra-sentential switch with Japanese as the matrix out of a total of 95 utterances involving switching. In these utterances, English nouns or noun phrases make up most of the content morphemes placed within the matrix of Japanese system morphemes, as shown by the following example. Japanese morphemes are shown in italics.

> (18) F:"Shall we stick it down?"
> K:"Ah, *ooki no* glue."
> (Ah, big glue [stick].)
> F:"Okay, is that better?"
> K:"*Hora. Ooki nori.*"
> (Look. Big glue [stick].)
> F:"Okay. That's a lot of glue."
> (*Transcript data, 24th February 2012*)

Interestingly, this data seems to match well with data from the literature (See Section 3.1 above) that suggests English-speaking children prioritize the learning of nouns, while Japanese-speaking children prioritize the learning of verbs as a result of the nature of those languages (Clancy, 1985;

Oshima-Takane, 2006; Peccei, 2006). In the few instances where English morphemes occur in verb phrases within the intra-sentential code-switching recorded, they mostly either appear as reported speech or are treated as nouns and modified as dictated by Japanese morphosyntactic rules, as the following example shows. Japanese morphemes are shown in italics.

> (19) F:"Are you going to cut that again?"
> K:"No."
> F:"Okay."
> K:"*Nagai na.*" ([Its] long.)
> F:"Mmm."
> K:"*Saki*, go slowly and this one, cut it."
> (First, go slowly...)
> F:"Okay."
> K:"*Nagai kara* cut *suru.*"
> (Because long, [going to] cut.)
> F:"Okay. Just be careful."
> (*Transcript data, 24th February 2012*)

It should be noted here that according to Japanese morphosyntatic rules, the irregular verb 'suru' is used to turn any noun phrase into a verb, so English morphemes modified in this way cannot really be considered verbs. Thus, it would appear that [K]'s intra-sentential code-switching favors Japanese verbs and English nouns.

5.4 Problematic Exceptions

The three examples from the data that would seem to challenge the above trend are a little unclear and are possibly too short to really make a determination as to their matrix language, although it is possible to speculate. These examples are as follows (Japanese shown in italics).

> (20) K:"Where you going to put this?"
> F:"Where do you want this?"
> K:"*Achi* put this." (Over there put this.)
> F:"Okay."
> (*Transcript data, 5th April 2012*)

> (21) F:"Alright? Let's put the next one in."

K:"*Are! Moto* cut it." (Ah! Cut it more.)
F:"Cut it again? Okay."
(*Transcript data, 3ʳᵈ March 2012*)

(22) K:"*Kore de* cut it."
(Cut it here.)
(*Transcript data, 1ˢᵗ April 2012*)

In the first of these three examples (20), the utterance "*Achi* put this" contains the adverb 'achi' meaning 'over there', which is a system morpheme according to the MLF model, suggesting that the matrix language is Japanese; however, the remainder of the utterance follows English word order, which according to the morpheme order principle of the MLF model suggests that the matrix language is English. The other two examples (21 & 22) also have same features with a Japanese system morpheme, 'moto' and 'kore de' respectively, followed by the phrase 'cut it', which follows English word order and possesses the required direct object 'it'. Another example that is similarly problematic can be found in a session with [K] and his grandmother [G] and is as follows.

(23) K:"This more *yatte*." (do this more.)
G: Are you going to do some more?"
(*Transcript data, 28ᵗʰ March 2012*)

This example (21) follows Japanese surface word order, but the only real system morpheme, 'more' is English. One possible explanation for the structure of these examples (20, 21, 22 & 23) is that [K] is simply translating elements into English and then embedding them into a Japanese matrix. Ellipsis in Japanese favours the dropping of nouns, including direct objects, so simple translation from Japanese into English requires the insertion of pronouns (Oshima-Takane, 2006), such as 'this' and 'it'. Given the collocation of words such as 'cut' and 'it' (Murison-Bowie, n.d.), it is also possible that such code-switching is primed through repetition (see for example Kootstra, van

Hell, & Dijkstra, 2012).

5.5 Key Factors

Even taking into account any data that are more problematic, several key factors related to my research aims emerge. The first is the awareness of the sociolinguistic demands of others as can be seen in the differences in code-switching usage between interlocutors. The second is the negative, de-motivational impact of language-use prohibitions on communicative engagement. The third is the role of identity and rejection of the monolingual native speaker as a model for language use. The fourth is the utility of code-switching in bilingual communication. These all have a major impact on [K]'s use of code-switching, and my research questions, and will be discussed further in the final section.

6. Conclusion

The key factors that emerge from my discussion of the results go some way towards answering my research questions. It is evident from the data that a change in linguistic environment has an affect upon the use of code-switching by an early bilingual, so code-switching reflects awareness of the sociolinguistic environment. Within the bounds of the study, it would also appear that early bilinguals may have sufficient sociolinguistic skill by age 4 to consciously control code-switching and tailor their language use to the linguistic skills of their adult interlocutors. In addition, the evidence presented suggests that early bilinguals may have sufficient skill to use such code-switching to check understanding, clarify meaning and signal social relationships, such as shared ownership of an activity.

This evidence of the utility of code-switching is supported by a comparison between a monolingual adult interlocutor (G) who prohibits the use of two languages, and hence, code-switching, and a

bilingual adult interlocutor (F) who does not. This comparison suggests that prohibiting the use of one language requires additional conscious cognitive effort by early bilinguals and may be de-motivational, possibly causing a reduction in communicative engagement. As discussed in Section 5, [K] makes the conscious effort to signal the inclusion of [F] through the use of code-switching: he exercises his shared bilingual identity, suggesting that he is much more motivated by a bilingual model than by a monolingual native speaker model. In effect, he has nothing to lose by adopting a bilingual model and plenty to gain.

Throughout the data, [K] shows that he has quite a high level of awareness of pressures to only communicate in a monolingual mode, but instead of abandoning his bilingual identity, he reduces the amount of communication and does not engage as much as he could. The audible sighs and other signals displayed when he is pressured into monolingual communication suggest that he values the ability to communicate bilingually more than he values accuracy and in a specific language. As discussed above, when given a choice between Japanese and English, he chooses both and uses language to retain his bilingual identity while still recognizing the demands of his sociolinguistic environment. Thus, prohibition of code-switching has a negative impact as it conflicts with identity as a bilingual as expressed through code-switching.

This recognition of his sociolinguistic environment can be seen in his use of code-switching when an activity, such as playing with toy trains, belongs to the particular domain of one language, or when an interlocutor is associated with one language. However, that does not mean that such code-switching is associated with lack of knowledge or proficiency and I have presented several examples that show how code-switching can be much more complicated and nuanced (e.g. Extract 6). There is also evidence that suggests that

code-switching involving word play and repetition (e.g. Extracts 5 & 16) may help form cross-linguistic links that are useful in acquiring or consolidating that language for later use. Code-switching has utility.

Thus, the evidence in this report suggests that code-switching is an important cross-linguistic skill and may actually prove useful in the further acquisition of a second language. This is reflected in the increased discussion of translation as a rediscovered teaching methodology (G. Cook, 2010) as well as the rejection of the native speaker as a model for second language acquisition, and suggests that the bilingual speaker has a role to play as a new model with code-switching as not only a characteristic of that model, but as a way of achieving it.

The evidence presented in this report shows that enforcing a target-language-only rule requires additional cognitive effort on the part of bilinguals and possibly has a de-motivational effect. Compare this with the increased communicative engagement that results from a sociolinguistic environment that accepts and uses code-switching. This suggests that teachers should not only allow code-switching, but that they should try to harness it as a teaching technique. The question that remains is exactly how teachers should go about harnessing such code-switching. The use of code-switching to check and clarify meaning is evident throughout the data collected, but is that the only positive use in a teaching context? Given that a model of the ideal bilingual speaker as a target of language learning has yet to be agreed, then code-switching and the pedagogical use of code-switching may provide more insights in the future.

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