

Major Research Paper: English-Mandarin code-switching in a bilingual family

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1. Introduction

The study of code-switching has raised and attempted to answer a number of questions related to the nature of language use, the motivations behind different kinds of language use, and the very nature of a “language.” Broadly, two questions have been central: the “how?” and the “why?” When interlocutors alternate between two or more languages or language varieties, what are the formal and structural features of their language use, and what are their motivations for doing so? The present study intends to investigate both of these questions in the context of the code-switching behaviours of one English-Mandarin bilingual family living in Canada. Canada is home to many immigrant languages, one of the most prominent among them being Mandarin (Statistics Canada, 2017; 2022). In addition, Chinese diaspora communities that speak a variety of Chinese and non-Chinese languages exist worldwide, and their code-switching practices are accordingly varied (Li, 2016).

Code-switching is generally defined for the purposes of this study as the use of more than one linguistic code (i.e. language or language variety) in a given interaction by participants; however, in light of a number of theoretical issues, a more refined definition will be necessary as part of my discussion of the data. Section 2 therefore discusses some of the relevant existing research and theoretical frameworks of code-switching, both to situate the present research in previous research and to clarify some key terms, as there is a great deal of debate in regards to terminology. Section 3 then describes the methodology, including participants, sociolinguistic context, data collection, and analysis. Section 4 consists of description and analysis of the results, including examples from the data. Overall, speakers used code-switching to serve a number of organizational functions, including lexical cohesion, turn-based contextualization cues, and other miscellaneous discourse functions.

Finally, section 5 briefly summarizes the overall findings and briefly discusses some potential future research directions.

2. Literature review and theoretical framework

2.1 Definitions and theoretical issues

In order to facilitate analysis and discussion, it is necessary to more precisely define some key terms such as “code-switching,” “code-mixing,” and “linguistic code” for the purposes of this paper. While code-switching can generally be defined as the use of more than one linguistic code (i.e. language or language variety) by a given participant in a given interaction, researchers are not entirely in agreement as to what should be termed “code-switching,” or even what constitutes a linguistic code. There are a number of factors which complicate the task of defining code-switching, such as the problem of distinguishing it from other language contact phenomena such as borrowing and the difficulty of defining a language or a language variety. The common-sense notion of languages as neatly bounded, separate linguistic entities with “correct” rules of usage is, as some have pointed out, more ideologically based than empirically attested, and not even a universal idea among the world’s linguistic communities (e.g. Blackledge & Pavlenko, 2001; Milroy, 2001; Silverstein, 1998). In fact, some researchers run into issues when attempting to identify and analyze instances of code-switching precisely because languages are not neatly bounded and separate. Histories of language contact and borrowing mean that there is no simple, one-to-one correspondence between individual lexical items and individual languages. Angermeyer (2002) identifies this as an issue in his analysis of code-switching in an English-French-German trilingual family in New Brunswick: on account of the history of contact between these three languages, there are a great deal of English loanwords in French and German, and of French loanwords in English and German. Therefore, in his analysis, he

distinguishes loanwords from code-switching based on phonological assimilation, e.g. words of French origin are counted as German when pronounced according to German phonology, and as French when pronounced according to French phonology. Even with this as a criterion, however, making such a distinction is not always straightforward; for instance, there may still be the challenge of distinguishing L2-accented code-switches from loanwords that have made their way into the L2. In his book where he formulates a typology of intrasentential code-switching (which he refers to as “code-mixing”), Muysken (2000) discusses the issue of distinguishing borrowing from insertional mixing; how can one reliably distinguish between the one-time insertion of a lexical item into a clause and the borrowing of a lexical item into the lexicon of a language overall? Muysken suggests that this should be approached from the perspective of the bilingual speaker, whose bilingual competence gives them access to two lexicons, which can also be viewed as a single collection of lexical items; viewed this way, an appropriate term for the borrowing of lexical items could be “lexical sharing” (p. 69).

Diglossia and processes such as linguistic convergence and creolization also present theoretical issues (Gumperz & Blom, 1972; Li, 2015). In studying language alternation in Norway, Gumperz and Blom (1972) find that *Ranamål* and *Bokmål* seem to exist in a state of diglossia in that they are perceived as distinct varieties of Norwegian. This may, in fact, be a crucial component of the definition of code-switching: the perception by participants within the speech community of linguistic codes as distinct choices. In a given interactional and/or sociolinguistic context, speakers may recognize two language varieties as distinct where an outsider may not; for instance, Gardner-Chloros (2009) gives an example of code-switching between London English and Jamaican Creole by a second-generation Jamaican teenager in London that would appear to be purely English to an outsider without prior knowledge of the sociolinguistic context. While an outsider might not perceive these codes as distinct, the

switches by the speaker certainly appear to serve a distinct purpose, lending distinct “voices” to the individuals involved in the situation the speaker is recounting. In regards to this issue of distinct codes, Auer (1999) draws up a typology with a three-way distinction between code-switching, language mixing, and fused lects, which he defines as points on a continuum from greater to less juxtaposition between the codes involved. In this typology, code-switching refers to the juxtaposition of codes in a way that is “locally meaningful” to participants on an interaction level, language mixing to juxtaposition of codes in a way that has larger-scale meaning in a “global sense,” and fused lects to mixed varieties that have become less variable and more stable and grammaticalized (p. 310). Over time, language usage in a community may transition from code-switching to language mixing, and from language mixing to fused lects, as different switching patterns occur and reoccur.

Finally, the question of the degree to which two given codes are structurally and grammatically distinct is related to the question of whether codes can be considered to be empirical entities at all. Some authors distinguish code-switching from “translanguaging” and “named languages” from “idiolects”; in this view, a named language such as English, German, or Mandarin is a social object that is viewed as a language on a community or national level, while an idiolect consists of a mental grammar and linguistic repertoire as it exists in the mind of an individual speaker (Otheguy, García, & Reid, 2015). While speakers may be aware of the existence of these state- and nation-level distinctions between these languages, they may not necessarily think of these codes as two neatly separate systems or keep them distinct in their usage. The term “translanguaging” can thus be used to refer to the use of more than one (nationally defined) linguistic code without emphasizing them as distinct codes, or, in Otheguy et al.’s words, “the deployment of a speaker’s full linguistic repertoire without regard for watchful adherence to the socially and politically defined

boundaries of named (and usually national and state) languages” (2015, p. 283). Under this framework, code-switching could perhaps be used to refer to the deliberate juxtaposition of more than one linguistic code, while translanguaging refers to language use that does not intend to respect linguistic codes as separate entities in the first place.

On account of all of these issues, defining the term “code-switching,” or even the terms “language” or “dialect,” is not as straightforward as it might initially appear.

2.2 Models and frameworks

Various models and frameworks have been developed by various researchers to describe and categorize the many forms and functions of code-switching. These models vary somewhat in their usage of linguistic terminology.

In attempting to answer the “how” question (i.e. the formal and structural features of code-switching), a few frameworks have been proposed. Poplack’s (1980) study of a Spanish-English bilingual community in New York City identifies three different forms of code-switching: intersentential, intrasentential, and tag-switching. Intersentential code-switching occurs across different sentences, intrasentential code-switching occurs within sentences, and tag-switching occurs at items such as “interjections, fillers, tags, and idiomatic expressions,” which are relatively grammatically detached from the surrounding speech (p. 605). Following this framework, Poplack’s (1980) study found that, while both balanced and more Spanish-dominant bilinguals were able to code-switch frequently and grammatically in both languages, bilinguals with more balanced proficiency in both languages switched more freely within sentences, while “non-fluent” bilinguals preferred to switch intersententially—that is, across syntactic boundaries. She argues that these results suggest that code-switching “proceeds from that area of the bilingual’s grammar where the

surface structures of L_1 and L_2 overlap” (p. 581); balanced bilinguals, who had competence in both the L_1 and the L_2 grammars, were able to combine them more frequently. Poplack proposes that there are certain grammatical constraints on code-switching, namely the Equivalence Constraint, which states that code-switching must occur at points with equivalent grammatical constituent order in both languages, and the Free Morpheme Constraint, which holds that codes may be switched after any free morpheme, but not a bound morpheme. Myers-Scotton’s (1993b) Matrix Language Frame model posits slightly different constraints. In this model, one language serves as the matrix language (ML), while the other serves as the embedded language (EL). In this model, a clause is consistent with the constituent order and function morphemes of the ML; only content morphemes from the EL, and not function morphemes, can be inserted into the ML, and only when consistent with the category in that position in the ML. The relationship between the ML and the EL is thus an asymmetrical one.

The constraints proposed by Poplack (1980) have been criticized, as it appears that they are not universally followed, particularly between more typologically different languages (Muysken, 2000). In regards to Myers-Scotton’s (1993b) Matrix Language Frame model, Muysken (2000) also notes that there may not always be an identifiable ML in mixed utterances. Muysken (2000) himself refers to the use of more than one linguistic code by a speaker within a sentence as “code-mixing,” rather than “code-switching,” which he uses in a more restricted sense to refer to the “rapid succession of several languages in a single speech event” (p. 1). He also proposes his own typology of intrasentential code-mixing: where Poplack’s (1980) approach is more alternational, and Myers-Scotton’s (1993b) is more insertional, Muysken’s (2000) overarching approach attempts to reconcile them. He distinguishes between three grammatical strategies: insertion, alternation, and congruent

lexicalization. In insertion, which broadly corresponds to Myers-Scotton's (1993b) Matrix Language Frame model, a lexical item or grammatical structure from one language is inserted into another structure in another language. In alternation, which broadly corresponds to Poplack's (1980) "fluent" code-switching, a speaker alternates between distinct grammatical structures or constituents from more than one language. Finally, in congruent lexicalization, elements taken from more than one language are used in conjunction within a shared grammatical structure.

As for the "why" question, the functions of code-switching (along with speakers' potential motivations) are many. Gumperz and Blom (Gumperz, 1982; Gumperz & Blom, 1972) distinguish between situational vs. metaphorical code-switching. In situational code-switching, speakers simply choose the code that is conventionally associated with a certain speech situation; metaphorical code-switching, on the other hand, is less straightforward. While it can serve as a contextualization cue for a given interaction, Gumperz and Blom argue that the codes still carry with them the connotations of their typical conventionalized speech situations, which can serve to lend certain social meanings, such as formality, confidentiality, etc. to an interaction. Gumperz (1982) also distinguishes between the "we code" and the "they code": the "we code" is the code "associated with in-group and informal activities," and the "they code" is "associated with the more formal, stiffer and less personal out-group relations"; commonly, the ethnic minority language comes to be treated as the "we code" and the majority language as the "they code" (p. 66).

In a somewhat similar vein, under Myers-Scotton's (1993a; 1998) Markedness Model, certain code choices become associated with certain speech situations through continued usage by speakers in a given speech community; different codes therefore come to be conventionalized as either more or less marked in certain speech situations. Since different

speech situations are associated with different social norms (termed “rights and obligations,” abbreviated RO), these codes also come to index different ROs. Speakers may choose the unmarked code for a given interaction in order to affirm the normative ROs of that interaction (the “Unmarked Choice Maxim”); alternatively, they may make a marked code choice in an interaction in which they wish to establish new ROs (the “Marked Choice Maxim”).

Myers-Scotton identifies a few other maxims under this Markedness Model as well, such as the Exploratory Choice Maxim, which states that a speaker may switch between codes as exploratory choices for the unmarked code in situations where the unmarked choice is unclear, and the Virtuosity Maxim, which states that speakers will switch to the code necessary to accommodate the speakers in a given interaction. Myers-Scotton’s model of code-switching is a type of Rational Choice (RC) model, which posits that the motivations for code-switching come from a general underlying goal of individuals to optimize: that is, to maximize the rewards and minimize the costs of their actions. Speakers are rational in that they choose a language or language variety in an attempt to maximize anticipated benefits as a result of their code choice.

In contrast to RC models and other models emphasizing macro-level motivations for code-switching, Auer (1984; 1998), as well as Li Wei (1994; 1998; 2002; 2005), are proponents of the Conversation Analysis (CA) approach to code-switching, which emphasizes the local, interaction-level negotiation of meaning and organization by a given group of speakers and how they show themselves to understand their own language choices in the process of the interaction itself. Auer and Li argue that the CA approach has at least two advantages in that it prioritizes “the sequential implicativeness of language choice in conversation, i.e. the fact that whatever language a participant chooses for the organisation of his or her turn, or for an utterance which is part of the turn, the choice exerts an influence on

subsequent language choices by the same or other speakers” (Auer, 1984, p. 5) and that it “limits the external analyst’s interpretational leeway because it relates his or her interpretations back to the members’ mutual understanding of their utterances as manifest in their behaviour” (Auer, 1984, p. 6). While they do not deny that code choices can index broader social categories, they argue that it cannot be *assumed* that speakers intend their code choices in this way, and that code choices must be shown to be relevant in a given interactional episode based on the linguistic evidence. In Auer’s (1984; 1998) model, language alternation may be discourse-related or participant-related. The former refers to alternation used to organize aspects of the interaction such as turn-taking, while the latter is used by interlocutors to negotiate language preference and language choice between them; in this case, speakers will generally settle on an agreed language. Auer claims that this negotiation of a shared language results from a general preference by participants for “same-language talk” (1984; p. 29). Auer also uses the term “code-switching” in a more restricted sense, distinguishing between code-switching and insertion (which he formerly referred to as “transfer” before adapting “insertion” and “alternation” from Muysken [2000]); the former refers to language alternation that entails a switch in the overall language of interaction, and the latter to the use of elements from another language that do not entail a change in the overall language of interaction.

2.3 The “how” and the “why”: case studies

Specific case studies have identified some other potential motivations for code-switching. For instance, a commonly cited potential motivation for code-switching is the desire to index a particular ethnic or cultural identity (or identities), such as with some members of the Chinese diaspora in the Philippines (sometimes referred to as “Tsinoy,”

Chinese-Filipinos who are Filipino citizens). Tsinoyos may perform Chinese-ness among other Chinese diaspora individuals by code-switching; specifically, Zulueta (2007) finds that Tsinoyos respond to the code-switching of other Tsinoyos with their own switches, which serves to establish rapport between them. Giampapa's (2001) study of the language practices of Italian-Canadian youths finds that their switching serves discourse as well as identity-building functions; while some speakers may code-switch into Italian for emphasis (e.g. when expressing strong emotions), they also use it to index certain regional identities; for instance, two friends who speak different Italian dialects (Calabrese and Abruzzese) borrow expressions from both dialects when speaking to each other. They also speak Italian as a sort of "we code" to metaphorically exclude others, such as when speaking about a non-Italian whom they dislike. Cashman's (2005) study of Spanish and English speakers at a social service agency in Michigan, focusing on identity construction on a more local level, finds that speakers switch to Spanish to index themselves as competent Spanish speakers and others as incompetent Spanish speakers within a given interaction.

There have also been studies that examine code-switching in intergenerational interactions. Georgalidou, Kaili, & Celtek's (2010) study of a Turkish-Greek bilingual Muslim family residing in Greece finds that there are clear intergenerational differences in code choice; the older generation seems to treat Turkish as the "we code" by more consistently speaking Turkish, while the younger generation uses Greek and the "Bilingual Medium" to construct their identities as youths in contrast to the older generation. In addition to constructing identities, code-switching also serves discourse functions, such as contextualizing certain segments of speech as quoted speech and negotiating language choice. Ng and He's (2004) study of tri-generational Chinese diaspora family conversations in New Zealand finds that parents (the second generation) often code-switch between turns to address

the English-dominant third-generation children in Mandarin and the Mandarin-dominant first-generation grandparents in English, potentially to help forge a link between the generations by encouraging the third party to pay attention and the addressed party to respond in the third party's preferred language; they refer to this type of code-switching whose purpose is to accommodate and facilitate understanding as "interpretive code-switching." Hua's (2008) study on intergenerational conflict talks among the Chinese diaspora in Britain finds that parents and children "use code-switching as a linguistic resource to try and dominate the interaction, to establish and negotiate their positions, and to oppose and challenge each other" (p. 1808); for example, in one interaction, the mother uses Mandarin in order to state her own position, but English to respond to her daughter's challenge to her position. Li and Milroy's (Li & Milroy, 1995; Li, 1994) study of Chinese-English bilingual families in Tyneside (a community in the northeast of England) takes a CA approach and demonstrates how speakers use code-switching to contextualize aspects of interactions such as preference organization, turn-taking, and repairs. For example, in one instance, a girl contextualizes her refusal (a dispreferred response) of her mother's offer of rice in Cantonese by responding in English, a contrastive code choice, but shortly after accepts in Cantonese, thereby also accepting her mother's code choice. Finally, Angermeyer's (2002) study of an English-French-German trilingual family in New Brunswick shows that switching can be used for the purpose of lexical cohesion: that is, to coherently link utterances to previous utterances within an interaction. When a speaker inserts an English lexical item into a different matrix language, for example, other speakers may continue to use that same lexical item in English regardless of the current matrix language.

Besides identity-building and discourse functions, San (2009) notes that code-switching can fill lexical gaps with a suitable word from the borrowed code, not

necessarily because of a speaker's lack of competence, but because, in some contexts, there is no semantically or pragmatically appropriate word for a given referent in the host language (e.g. technical terms such as "excel" or internet terms such as "menu" and "post" [pp. 38–43]). Stapa & Khan (2016) similarly find that code-switching can serve to fulfill a lexical need (for example, a speaker might choose to switch codes if the roughly equivalent word in the present code is too formal for their purposes), as well as a number of other functions, including quotations and emphasis.

While this survey of the existing literature is by no means exhaustive, it appears that speakers can have a wide variety of motivations for code-switching in any given speech situation and any given sociolinguistic context, not all of them mutually exclusive. The position taken in this paper is that code-switching, like other linguistic cues, can index a variety of meanings and serve a variety of purposes, and that while it cannot always be assumed that a given speaker intends a given language choice to index a broader social meaning or identity, meaning can be constructed or conveyed regardless of a speaker's intention. While the speakers in the studies surveyed above may not make their sociolinguistic and sociocultural knowledge explicit in a given interaction, it is safe to assume that most of them, having relevant experience, are to some extent aware of issues of social identity as it relates to language. Speakers can use code-switching, among other cues, to organize their interactions and construct local meaning, but they also have the power to co-construct and reproduce meaning on a larger, community-level scale as members of a larger group of language users.

Keeping the above theoretical issues in mind, the present paper will use "code-switching" in its most general sense as a cover term for the use of more than one linguistic code in a given interaction by one or more participants. "Linguistic code" is defined

as a distinct language or language variety that is perceived as such by either the participants or the broader speech community.

3. Methodology

The present study focuses on two members of one English-Mandarin bilingual family. The family is originally Chinese but currently resides in Canada, and consists of two parents and one child who attends a school in Canada which uses English as the medium of instruction. All speakers grew up dominant in Mandarin, but currently use both Mandarin and English regularly in their day-to-day lives.

Participants were asked to audio record themselves having typical day-to-day conversations. The final data set consisted of three recordings, each of which were approximately 20 minutes in length, though several minutes had to be excluded from analysis due to issues with environmental noise interfering with the clarity of the recording, rendering either the switches or the surrounding speech partly or totally incomprehensible. Following the recordings, participants were also asked to fill out a sociolinguistic questionnaire concerning relevant demographic information, including previous places of residence, language proficiency, language experience, language dominance, current language use, and attitudes toward code-switching. The results of this questionnaire are summarized below (see Appendices A and B for the completed questionnaires).

The pair of participants consists of the mother (age 58; hereafter referred to as M) and daughter (age 17; hereafter referred to as D); data was collected only from these two family members, as the other member of the family (the father to D and husband to M) did not participate in the study. Both participants indicate their respective English and Mandarin proficiencies as fluent and currently use both languages very frequently, though they both

consider themselves dominant in Mandarin. Both indicate that they have full speaking, listening, reading, and writing proficiency in both languages. Both were born in China, acquired their dominant language in China, and have been exposed to Mandarin since birth. D lived in China until the age of 12, while M lived in China until the age of 28, in Canada until the age of 33, returned to China until the age of 52, and again returned to Canada with D, where they have been residing for five years. D indicates that she acquired Mandarin from her family at home, while M indicates that she acquired Mandarin from family, at home, in the workplace, in everyday interactions, and at school. Both speakers regularly use Mandarin at home with family, while M also uses it in everyday interactions. Both speakers indicate that they acquired English in both China and Canada; D has been exposed to English since approximately the age of nine (eight years), and M since approximately the age of 13 (45 years). D acquired and still regularly uses English in everyday interactions and in school, while M acquired and still regularly uses English in everyday interactions, in school, and in the workplace. D also indicates some limited proficiency in French, though this is not included in the analysis, as only English and Mandarin appeared in the data. Their language attitudes are discussed in detail in section 4.3 below.

Audio recordings were transcribed, translated, and coded using ELAN, with instances of code-switching organized into categories based on Muysken's (2000) three-way distinction between insertion, alternation, and congruent lexicalization. Muysken uses "alternation" mostly to refer to intrasentential alternation of syntactic structures in Muysken (2000), which primarily focuses on code-mixing within sentences, but because no instances of intrasentential alternation were found in the present data, I use "intersentential switch," "intersentential alternation," and "alternation" interchangeably in my analysis in the following sections to refer to switches into a language that last an utterance or more. For the

purposes of the analysis, “sentence” and “utterance” are used somewhat loosely and are identified by both syntax and intonation contour, as speakers do not always utter full sentences; for example, an incomplete sentence that does not contain both a subject and a predicate is still treated as an utterance. Based on patterns observed during transcription, intrasentential code-switches were also categorized based on their position in the utterance: initial, medial, or final. Finally, insertions were categorized by type of inserted constituent (e.g. noun, noun phrase, verb phrase, adjective phrase, etc.). In cases where the code which a given constituent or utterance belonged to was unclear, an attempt was made to distinguish them based on phonology, as in Angermeyer (2002); for example, backchannels are frequently used, some of which appear to be more consistent with Mandarin phonology, while others appear to follow English phonology.

In my analysis, I attempt to identify different instances, functions, and potential motivations of code-switching, as well as compare code-switching patterns between both speakers. Auer’s (1984; 1998) model of discourse-related vs. participant-related alternation was considered, as well as other CA work on code-switching as a contextualization cue serving various discourse functions (e.g. Li, 1998; 2005). I also attempted to contextualize speakers’ code-switching behaviour within the sociolinguistic context of their current place of residence and their life experience, including the information provided in the questionnaire. In this way, I attempt to take into account both macro-sociolinguistic and interaction-level aspects of the speech situations under investigation.

4. Results and discussion

4.1 Formal features of code-switches

As will be apparent in the extracts, the speakers’ respective code-switching between English and Mandarin was very asymmetrical. The vast majority of the participants’ turns

and lexical items used were either entirely or predominantly in Mandarin, and there were no instances of Mandarin insertions into English syntactic structures. All insertions were of English lexical items or constituents into Mandarin syntactic structures, and even in instances where speakers switched to English for entire utterances, these utterances were brief and never lasted more than three consecutive turns. Therefore, while intersentential switches from English into Mandarin were marked in ELAN, they are only briefly discussed and not analyzed in any great detail. There seemed to be little to no attempt to negotiate a language of interaction other than English (in Auer's terms, code-switches generally served discourse-related rather than participant-related functions), with one possible exception discussed in section 4.2.4 "Language choice negotiation" below.

The tables below summarize switches into English from Mandarin by both speakers. Tables 1 and 4 break down individual tokens (i.e. instances) of switches into English from Mandarin by structural features, tables 2 and 5 break down insertion tokens by constituent type, and tables 3 and 6 break down alternational tokens (because backchannels were so frequent in D's data, they are given their own sub-category). Arguably, backchannels could alternatively be classified as insertions rather than alternations, as they do not entail an alternation into a different language of interaction (Auer, 1984); for the purposes of this analysis, however, I choose to define "insertions" as lexical items or constituents from one language positioned within a syntactic structure from another language (Muysken, 2000). Backchannels are classified here as alternations because they are not constituents, nor are they a part of a syntactic structure in any language; rather, they are spoken independently of other utterances and of each other, making them structurally more like utterances—that is, intersentential switches. In any case, they are given their own discussion in section 4.1.2.1

“Backchannels,” which is more or less independent of the discussion of other alternations in section 4.1.2.

Table 1. Code-switches into English by speaker D according to structural features (tokens).

	Insertions	Intersentential alternations	Congruent lexicalization	Total
Initial	11	---	0	11
Medial	18	---	0	18
Final	5	---	0	5
Total	34	50	0	84
	(40.5%)	(59.5%)	(0%)	

Table 2. Constituent types from English inserted by speaker D.

Constituent type	Number of tokens
Tag/interjection	4
Noun	14
(Common noun)	(10)
(Proper noun)	(4)
Noun phrase	14
Verb	0
Verb phrase	0
Adjective	1
Adjective phrase	1
Prepositional phrase	0
Total	34

Table 3. Alternations from English by speaker D.

Environment	Number of tokens
English backchannels	42
Other alternations	8
Total	50

Table 4. Code-switches into English by speaker M according to structural features (tokens).

	Insertions	Intersentential alternations	Congruent lexicalization	Total
Initial	10	---	0	10
Medial	53	---	0	53
Final	65	---	1	66
Total	128	16	1	145
	(88.3%)	(11.0%)	(0.7%)	

Table 5. Constituent types from English inserted by speaker M.

Constituent type	Number of tokens
Tag/interjection	2
Noun	59
(Common noun)	(52)
(Proper noun)	(7)
Noun phrase	36
Verb	9
Verb phrase	15
Adjective	2
Adjective phrase	2
Prepositional phrase	3
Total	128

Table 6. Alternations from English by speaker M.

Environment	Number of tokens
English backchannels	1*
Other alternations	15
Total	16

*Uncertain due to environmental noise

Comparing the two speakers, M switched much more frequently than D, with 145 switches in total compared to D, who switched 84 times. Most often, these switches were either insertions of individual lexical items (especially by M) or backchannels by D. In terms

of structural features, M mostly used insertions, while D mostly switched intersententially, and the vast majority of these switches were backchannels. Only one example of potential congruent lexicalization was found and is discussed in regards to extract 11 in section 4.1.3 “Congruent lexicalization” below. In terms of intersentential alternations back into Mandarin, M alternated back into Mandarin 11 times, while D alternated back into Mandarin 27 times; this likely has to do with the fact that M did not alternate intersententially into English a great deal in the first place.

4.1.1 Insertions

Insertion of English constituents was one of the most frequent switch types, especially for speaker M. Most often, these constituents were either nouns or noun phrases, though verbs and verb phrases were also fairly common. Some examples of these insertions can be found in the following five extracts below. In extracts 1, 2, 3, and 5, the speakers are discussing an article written about a teenager in British Columbia who died of a drug overdose and a bill concerning privacy and medical records. In extract 4, the speakers are discussing the differences between and respective merits of studying the humanities and studying the sciences.

Note: switches into English are shown in boldface.

Extract 1.

1 M: 有一篇文章:是写:那个:**BC**的
yǒu yī-piān wénzhāng shì xiě nèi-ge BC de
 have one-CLF article COP write DEM2-CLF BC ATR
 ‘there was one article that was written about uh BC’

2 D: 啊
a
 ‘ah’

- 3 M: **BC**的: (1.3) 啊: (.6)就是: (.)
BC de a jiù shì
 BC ATR uh just COP
 ‘BC’s uh so it’s’
- 4 它有一个:一个一个一个**privacy**的(.)啊:法案
tā yǒu yí-ge yí-ge yí-ge yí-ge privacy de a fǎ'àn
 3SG have one-CLF one-CLF one-CLF one-CLF privacy ATR uh bill
 ‘they have a a a a privacy uh bill’
- 5 D: **uh-huh**
- 6 M: 就是你的那个**teenager**
jiù shì nǐ de nèi-ge teenager
 just COP 2SG ATR DEM2-CLF teenager
 ‘it’s like you know a teenager’
- 7 他有权利决定[(.) 他的这个医疗记录 [(.)
tā yǒu quánlì juédìng tā de zhè-ge yīliáo jìlù
 3SG have right decide 3SG ATR DEM1-CLF medical record
 ‘they (singular) have the right to decide for their medical record’
- 8 D: [uh-huh [uh-huh
- 9 给不给[家长看]
gěi bù gěi jiāzhǎng kàn
 give NEG give parent see
 ‘whether to show it to their (singular) parents’
- 10 M: [给不给]家长看] (.)
gěi bù gěi jiāzhǎng kàn
 give NEG give parent see
 ‘whether to show it to their (singular) parents’
- Extract 2.
- 1 M: 然后就找到那个: **coroner** (.) **coroner office**
ránhòujiù zhǎodào nèi-ge coroner coroner office
 then just find DEM2-CLF coroner coroner office
 ‘then (they) found the uh coroner coroner office’
- 2 D: 嗯
ēn
 ‘mm-hm’
- 3 M: **coroner office**是不是法医啊?
coroner office shì bù shì fǎ-yī a
 coroner office COP NEG COP legal-doctor TAG
 ‘is the coroner office a forensics team?’

4 D: 啊::好像
a hǎoxiàng
 uh seem
 ‘uh I think so’

5 M: 法医
fǎ-yī
 legal-doctor
 ‘forensics team’

Extract 3.

1 M: 他还 //还 (.) 就说他这个 **coroner office** 也说了 //说 (.)
tā hái hái jiù shuō tā zhè-ge coroner office
 3SG even even just say 3SG DEM1-CLF coroner office
yě shuō le shuō
 also say PFV say
 ‘they even even like the coroner office also said’

2 如果 (.) 不是一个 **formal investigation** 的话 (.)
rúguǒ bú shì yí-ge formal investigation de huà
 if NEG COP one-CLF formal investigation ATR case
 ‘if (it) wasn’t a formal investigation’

3 这些记录他们都看不到
zhè-siē jìlù tā-men dōu kàn bù dào
 DEM1-some record 3-PL all see NEG to
 ‘they couldn’t even see any of these records’

Extract 4.

1 D: [嗯]
ēn
 ‘mm-hm’

2 M: ~你~觉得 (.) 其实学文科的人 (.)
nǐ juéde qíshí xué wénkē de rén
 2SG think actually study humanities ATR person
 ‘do you think actually people who study the humanities’

3 [学]理科的人 (.) 就说 (.) 可以 **save the day**
xué lǐkē de rén jiù shuō kěyǐ save the day
 study sciences ATR person just say can save the day
 ‘people who study the sciences you know can save the day’

4 **save the day**

5 但是呢学文科的人可以 **save the world**
dànshì ne xué wénkē de rén kěyǐ save the world

but PARTICLE study humanitiesATR person can save the world
 ‘but then people who study the humanities can save the world’

Extract 5.

1 M: 所以这个**freedom**是和这个:**accountability** 和**responsibility**要连在一起来 (.9)
suǒyǐ zhè-ge freedom shì hé zhè-ge accountability
 so DEM1-CLF freedom COP with DEM1-CLF accountability
hé responsibility yào lián zài yīqǐ lái
 and responsibility must connect LOC together come
 ‘so freedom has to come with accountability and responsibility’

2 不能光全**freedom**
bù néng guāng quán freedom
 NEG can only all freedom
 ‘(you) can't only have freedom’

Insertions of English nouns by M include “BC” (extract 1, lines 1 and 3), “privacy” (extract 1, line 4), “teenager” (extract 1, line 6), “freedom” (extract 5, lines 1 and 2), “accountability” (extract 5, line 1), and “responsibility” (extract 5, line 1). Insertions of English noun phrases by M include “coroner office” (extract 2, lines 1 and 3; extract 3, line 1) and “formal investigation” (extract 3, line 2). Finally, insertions of English verb phrases include “save the day” (extract 4, lines 3 and 4), and “save the world” (extract 4, line 5). While some of these English lexical items may be quoted directly from the original context, such as when the speakers are discussing an article, there may also be other factors contributing to M’s code choices here, which are discussed in more detail in sections 4.2.1, 4.2.2, and 4.2.3.

4.1.2 Alternations

Speaker D used far more alternations into English than speaker M, though the vast majority of her alternations were backchannels (see tables 1, 3, 4, and 6); therefore, these are discussed in more detail in section 4.1.2.1 “Backchannels” below. M, on the other hand, only very rarely used backchannels (in English or Mandarin). Some examples of alternation by M

are shown below, in extract 6, line 6 and extract 7, lines 3 and 8. It appears that these alternational switches into English are more likely to occur in close proximity to other switches into English, including insertional ones; however, since non-backchannel alternations were fairly uncommon, it is difficult to identify clear patterns or potential functions.

Extract 6.

1 M: 然后最近我经常用这个**frame of mind** (.) 来安慰我自己
ránhòuzuìjìn wǒ jīngcháng yòng zhè-ge frame of mind
 then recently 1SG regularly use DEM1-CLF frame of mind
lái ānwèi wǒ zìjǐ
 to comfort 1SG self
 ‘so recently I’ve regularly been using this (phrase) frame of mind to comfort myself’

2 D: xxx

3 M: 也跟:: (1.3)
yě gēn
 also with
 ‘it’s like’

4 啊别人的看法跟你不一样 (.)
a bié rén de kàn-fǎ gēn nǐ bù yíyáng
 uh other person ATR look-method with 2SG NEG same
 ‘uh someone else’s way of looking (at things) is different from yours’

5 D: *mm-hm*

6 M: *very difficult to change (.) some (.) //some //someone’s (.) ~frame of mind~*

Extract 7.

1 M: 因为他吃冰淇淋多了 ~会不会因为~ 是夏天
yīnwei tā chī bīngjǐlín duō le huì bú huì yīnwei shì xiàtiān
 because 3SG eat ice.cream more PFV will NEG will because COP summer
 ‘is it that they’re eating a lot of ice cream because it’s summer?’

2 D: 对啊
duì a
 right PARTICLE
 ‘right’

3 M: *it's a hot summer*

4 D: (h)对啊(h)
 duì a
 right PARTICLE
 ‘right’

5 M: [xxx]

6 D: [对啊(hh)]
 duì a
 right PARTICLE
 ‘right’

7 那你 [这个(h)]
 nà nǐ zhè-ge
 then 2SG DEM1-CLF
 ‘so then this’

8 M: *[many] more people swimming*

4.1.2.1 Backchannels

As discussed in the methodology section, backchannels (i.e. minimal responses such as “uh-huh” and “mm-hm”) were deemed either Mandarin or English based on phonology. Of course, while items such as “uh-huh” can be attributed to a certain language on the basis of formal features such as phonology, speakers likely do not perceive them as words strictly belonging to a certain language’s lexicon in the same way as, for instance, nouns and verbs. In addition, they are not a part of the syntactic structure of a language in the same way as lexical items such as nouns and verbs. However, while speakers may not perceive the use of an English (or English-sounding) backchannel in a predominantly Mandarin interaction as mixing, there are apparent patterns in how each speaker uses backchannels, which are discussed below.

D uses both Mandarin and English backchannels quite frequently: of the English backchannels, “uh-huh” appears a total of 23 times in the data set, and “mm-hm” a total of 19 times. As for Mandarin, “啊” (a; roughly equivalent to “uh-huh”) appears a total of 31 times, and “恩” (ēn; roughly equivalent to “mm-hm”) a total of 36 times. M, on the other hand, uses backchannels much less frequently; in her data, the backchannel “恩” appears six times, and “啊” appears three times, with one potential instance of “uh-huh” (this is unclear due to issues with environmental noise during recording, and is therefore excluded from the analysis). Not only does D use far more backchannels, but backchannels following English phonology were almost exclusively used by D.

In extract 8, M is telling D a story about the family of a woman who passed away, and D only interjects in lines 2, 4, and 14 to use the Mandarin backchannel “恩.” Extract 9, a continuation of the same conversation, provides examples of the English backchannel “uh-huh” in lines 2, 5, and 7. It is not entirely clear why D sometimes chooses to use Mandarin backchannels and sometimes English ones, though it is apparent that she does not alternate them in rapid succession; rather, she typically uses one, whether it is Mandarin or English, for the duration of the other speaker’s turn. This is discussed in more detail in section 4.2.2 “Lexical cohesion” below.

Extract 8.

- 1 M: 她姐姐 (.) 接到一个电话 (.)
tā jiějiě jiēdào yí-ge diànhuà
 3SG older.sister pick.up one-CLF phone
 ‘her older sister got a phone call’
- 2 D: 恩
ēn
 ‘mm-hm’
- 3 M: 就她 (.) // 妹妹的一个朋友的电话 (.)
jiù tā mèimèi de yí-ge péngyǒu de diànhuà
 just 3SG younger-sister ATR one-CLF friend ATR phone

‘so it was her younger sister’s friend calling’

- 4 D: 嗯
ēn
 ‘mm-hm’
- 5 M: 说她已经(.)去世了 (0.6)
shuō tā yǐjīng qùshì le
 say 3SG already pass.away PFV
 ‘saying she already passed away’
- 6 哇: (1.2)
wa
 ‘woah’
- 7 这个:: (1.1)
zhè-ge
 DEM1-CLF
 ‘this’
- 8 这家就急了, 你知道吗(.)
zhè jiā jiù jí le nǐ zhīdào ma
 DEM1 family just anxious PFV 2SG know INTERR
 ‘this family just lost their minds you know’
- 9 然后说为什么去世的
ránhòushuō wèishénme qùshì de
 then say why pass.away ATR
 ‘then they said why did (she) pass away’
- 10 嗯:不知道
ēn bù zhīdào
 um NEG know
 ‘um (they) didn’t know’
- 11 什么原因也不知道
shénme yuányīn yě bù zhīdào
 what reason also NEG know
 ‘(they) didn’t even know what the reason was’
- 12 就是已经人都没了(.)
jiù shì yǐjīng rén dōu méi le
 just COP already person all gone PFV
 ‘(she) was just already gone’
- 13 没了而且是已经//没了(.)好多天了, 你知道吗
méi le érqiě shì yǐjīng méi le hǎo duō tiān le
 gone PFV in.addition COP already gone PFV very many day PFV

nǐ zhīdào ma

2SG know INTERR

(she) was gone and not only that (she) had already been gone for many days you know

14 D: 嗯

ēn

‘mm-hm’

Extract 9.

1 M: 就跟我们单位的这个人 他 (1.2)

jiù gēn wǒ-men dānwèide zhè-ge rén tā
just with 3-PL unit ATR DEM1-CLF person 3SG
‘just like this person in our unit he’

2 D: *uh-huh*

3 M: 他这个:: (1.2) 是: 是: (1.9)

tā zhè-ge shì shì
3SG DEM1-CLF COP COP
‘so he did did’

4 是 //是自杀了 [但是呢] (.)

shì shì zì-shā le dànshì ne
COP COP self-kill PFV but PARTICLE
‘did commit suicide but’

5 D: [*uh-huh*]

6 M: 虽然我们谁都不知道但是我们是 **off the record** 对吧

suīrán wǒ-men shuí dōu bù zhīdào dànshì wǒ-men shì off
although 3-PL who all NEG know but 3-PL COP off
the record duì ba
the record right TAG
‘none of us knew but we were off the record right?’

7 D: *uh-huh*

Whereas the frequent use of English backchannels by D may indicate that this has simply become a feature of her idiolect, at least the one she uses with M, M hardly uses any backchannels in either language, even when D is also taking extended turns. In extract 10, M does not interject until line 6 of D’s turn. This may simply be a difference in personal communication style; in terms of code choice, however, it is interesting to note that out of the

few backchannels M does use, all or almost all are in Mandarin. D, who came to Canada at a younger age, may have assimilated English items into her linguistic repertoire that she uses more freely than M, at least in certain speech situations. This is somewhat similar to a process observed by Auer (1999) that occurs when a state of language mixing transitions to a state of fused lects involving sedimentation of relatively unbound items such as discourse markers and particles from one language into another; for example, in a certain variety of American German, speakers almost exclusively use English as opposed to German discourse markers and conjunctions (though of course the process observed in the present study is different, as D does not exclusively use English as opposed to Mandarin backchannels).

Extract 10.

- 1 D: 说实话但不说全部这本身就是一种 (.)
shuō shíhuà dàn bù shuō quánbù zhè běnnshēn jiù shì yī zhǒng
 say truth but NEG say whole DEM1 in.itself just COP one kind
 ‘to tell the truth but not the whole (truth) is in itself a kind of’
- 2 一种罪过
yī zhǒng zuìguò
 one kind crime
 ‘a kind of offence’
- 3 是一种引导舆论的手段 (.) 就 (.)
shì yī zhǒng yǐndǎo yúnlùn de shǒuduàn jiù
 COP one kind guide public.opinion ATR means just
 ‘(it)’s a means to guide public opinion like’
- 4 这个类似的那个可以举出来很多
zhè-ge lèisì de nèi-ge kěyǐ jǔ chūlái hěn duō
 DEM1-CLF similar ATR DEM2-CLF can raise out very many
 ‘(one) can raise many (examples) of similar (things)’
- 5 首先一点就是说
shǒuxiān yī diǎn jiù shì shuō
 firstly one little just COP say
 ‘first of all there’s’
- 6 [男性]
nán-xìng
 male-gender

‘male’

7 M: 那那那 [xxx]
 nà nà nà
 that that that
 ‘so so so’

4.1.3 Congruent lexicalization

Finally, extract 11 provides a potential example of congruent lexicalization. While it may initially appear that the items “freedom” (extract 11, lines 1 and 2), “accountability” (extract 5, line 1), and “responsibility” (extract 11, line 1) are all simply inserted, the use of “freedom” in line 2 is not entirely consistent with either standard Mandarin or standard English grammar. This kind of syntax in an English utterance would likely sound unacceptable to speakers of the dialect of English that D and M speak. In Mandarin, a predicate may be formed with a verb or an adjective; however, “freedom” is a noun in English. However, in more colloquial Mandarin speech, it is sometimes acceptable to use non-standard constituents as predicates and/or elide elements that are implied by the context, and since these speakers are family members who know each other well and are conversing in a fairly relaxed setting, more colloquial syntax is not entirely unexpected. In any case, in line 2, rather than simply inserting English nouns into available noun positions in mostly Mandarin utterances, M appears to be applying Mandarin grammar to an English noun within a mostly Mandarin utterance, thereby blending the grammars of both languages.

Extract 11.

1 M: 所以这个**freedom**是和这个:**accountability** 和**responsibility**要连在一起来 (.9)
 suǒyǐ zhè-ge **freedom** shì hé zhè-ge **accountability**
 so DEM1-CLF freedom COP with DEM1-CLF accountability
 hé **responsibility** yào lián zài yīqǐ lái
 and responsibility must connect LOC together come
 ‘so freedom has to come with accountability and responsibility’

- 2 不能光全**freedom**
bù néng guāng quán freedom
 NEG can only all freedom
 ‘(you) can't only have freedom’

4.2 Functions of code-switching

The following functions of switches were identified and discussed in more detail below:

- Lexical need
- Lexical cohesion
- Sentence-final insertions as contextualization cues
- Language choice negotiation
- Other discourse functions (supplying lexical items, translation/explanatory, quotation)

Note that I am not suggesting that code-switches or codes should or can be identified as having neatly categorizable and mutually exclusive functions, which Auer (1984) cautions against. I use the word “function” loosely here to describe a number of patterns I observed in the data involving the organization of the interactions.

4.2.1 Lexical need

One potential contributing factor to the speakers’ English insertions, related to the issue of original context, has to do with lexical need or expedience (for further discussion of lexical need and lexical gaps, see San, 2009; Stapa & Khan, 2016). The English word “teenager” in extract 1, line 6 strictly refers to youths between the ages of 13 and 19, and while Mandarin words such as “青年” (qīngnián), “少年” (shàonián), and “青少年” (qīngshàonián) exist as rough equivalents referring to youths and adolescents, these terms do not necessarily refer to a specified age range. As there is no exact equivalent for the term

“teenager,” the speakers may find it more precise and expedient to use the English term that they are presumably familiar with, being (by their own self-assessment) fluent in English. A similar situation can be found in extract 4. M expresses her belief that those who study the sciences can “save the day” (lines 3 and 4), but that those who study the humanities can “save the world” (line 5). While “save the world” has a common and fairly straightforward literal counterpart in Mandarin in the form of “拯救世界” (zhěngjiù shìjiè), the translation of “save the day” is rather more contextual and varied, so it would appear that M chooses to alternate between English and Mandarin structures in order to draw on these conventionalized English phrases and more easily draw a clear contrast.

Similarly, English proper nouns were often simply spoken in English rather than translated or transliterated, such as “BC” (extract 12, lines 1 and 3) and the name of the park the speakers are walking in (extract 13, line 1). Mandarin may not have exact translations or equivalent names for lesser-known proper nouns such as the name of the park in extract 13, and while British Columbia does have a Mandarin transliteration, it is considerably longer than the abbreviation BC, which uses characters (in this case Latin letters) not native to Mandarin, but rather taken from English.

Extract 12.

1 M: 有一篇文章:是写:那个:BC的
yǒu yī-piān wénzhāng shì xiě nèi-ge BC de
 have one-CLF article COP write DEM2-CLF BC ATR
 ‘there was one article that was written about uh BC’

2 D: 啊
a
 ‘ah’

3 M: BC的: (1.3) 啊: (.6)就是: (.)
BC de a jiù shì
 BC ATR uh just COP
 ‘BC’s uh so it’s’

- 4 它有一个:一个一个一个privacy的(.)啊:法案
tā yǒu yí-ge yí-ge yí-ge yí-ge privacy de a fǎ'àn
 3SG have one-CLF one-CLF one-CLF one-CLF privacy ATR uh bill
 ‘they have a a a a privacy uh bill’

Extract 13.

- 1 M: 我们就继续在:(.) [redacted] Park 里头再走一圈儿吧
wǒ-men jiù jìxù zài [redacted] Park lǐtou zài zǒu
 1-PL just continue LOC [redacted] Park inside again walk
yī quān ba
 one circle TAG
 ‘so let's just continue and take one more walk around in [redacted] Park?’

4.2.2 Lexical cohesion

Another potential factor contributing to the speakers’ choice of English insertions is lexical cohesion (for a brief definition of this concept, see section 2.3; for a more detailed discussion, see Angermeyer, 2002). In extract 2, line 3, M asks D about the Mandarin translation of the phrase “coroner office,” and after D responds “好像” (“I think so”) in line 4, M repeats the Mandarin translation “法医” (translated here as “forensics team,” though other translations are possible in different contexts) in line 5. However, she continues to use the English phrase “coroner office” later in the interaction despite having established a Mandarin translation, including in extract 3, line 1. This more cohesively ties her later utterances to her first reference to the coroner’s office in its introductory context. Another example of this can be found in extract 6, line 6, where M repeats the noun phrase “frame of mind” from extract 6, line 1. Backchannels seem to have a similar cohesive effect to some of the lexical insertions. As mentioned in section 4.1.2.1 “Backchannels,” D does not alternate both English and Mandarin backchannels in rapid succession, but typically uses one in either Mandarin or English for the duration of the other speaker’s turn. In this way, the backchannel links to previous backchannels and therefore ties them all together as responses to the same extended turn by speaker M.

4.2.3 Sentence-final insertions as contextualization cues

Of course, insertions do not necessarily indicate a lack of proficiency on the part of a speaker or a lexical gap in the language of interaction, as evidenced by the fact that a sizable proportion of the inserted English lexical items had a Mandarin counterpart that was also used within the interactions by one or both participants: approximately 24.4% when counting only unique English lexical items/constituents instead of individual tokens (e.g. “coroner office” was only counted as one item, though it appeared several times). This is demonstrated in extracts 14–16 below. The use of the English words “problem” (extract 14, line 2) and “help” (extract 14, line 3) is not because Mandarin lacks expedient alternatives; the Mandarin words “问题” (wèntí; “problem”) and “帮” (bāng; “help”) are also very common, would be acceptable, and do not need to be replaced by English words. In fact, they are used elsewhere by speaker M in the same conversation: she uses “问题” in extract 15, line 1 and extract 16, line 1, and “帮” in extract 15, line 2.

Why, then, would M choose to insert an English lexical item? It should be noted that a majority of M’s insertions occurred sentence-finally (see table 4; though medial switches were only somewhat less frequent), and that the frequency of sentence-final noun and noun phrase insertions could be partly because Mandarin is predominantly an SVO language, leading to a great deal of nouns being positioned sentence-finally (which would therefore make inserted nouns from English likely to appear sentence-finally). However, the pattern observed in extracts 14, 16, and 17, while not always exhibited by sentence-final insertions, does occur a few times in the data. The lexical items “problem” (extract 14, line 2), “help” (extract 14, line 3), “mental problem” (extract 16, line 1), “meaning” (extract 17, line 1) and “phrase” (extract 17, line 4) occur sentence-finally but not turn-finally. In extracts 15 and 16,

however, the positions of “问题” and “帮” are not sentence-final and could therefore not serve the same contextualization function as “problem” and “help” in extract 14. In extracts 14, 16, and 17, the sentence-final English insertions are sentence-final but not turn-final; that is, M ends her sentences with English insertions then continues her turn. The salience of the switch (along with other cues such as intonation) may help to draw attention to the end of a sentence. Moreover, D seems to take note of these sentence-final insertions and silently allows M to continue her turn without even using a backchannel despite the noticeable pauses by M after each utterance. While these sentence-final English insertions do not necessarily make the continuation of a turn more likely than the use of a sentence-final Chinese lexical item, their salience may help to more clearly signal the continuation of a turn than intonation alone in a purely Mandarin sentence (keeping in mind that Mandarin is a tonal language and therefore does not assign sentence-level intonation in the same way as English, an intonational language). Compare, for instance, extract 9, where M does not use sentence-final insertions and D uses more backchannels to invite the continuation of M’s turn instead of remaining silent to allow M to continue her turn, even overlapping her speech with M’s at some point rather than silently letting M’s turn continue.

Extract 14.

- 1 M: 然后他们(.)他就知道
ránhòu tā-men tā jiù zhīdào
 then 3-PL 3SG then know
 ‘so then they they knew’
- 2 他(.)//他:有这个有这:个这个:(.) **problem** (.7)
tā tā yǒu zhè-ge yǒu zhè-ge zhè-ge problem
 3SG 3SG have DEM1-CLF have DEM1-CLF DEM1-CLF problem
 ‘he he had this had this this problem’
- 3 然后呢(.5) 但是呢(.2) 他们不能够**help** (1.9)
ránhòu ne dànshì ne tā-men bù nénggòu help
 then PARTICLE but PARTICLE 3-PL NEG can help

‘then but then they couldn’t help’

- 4 然后呢因为他 //他 //他选择就说 (.)
ránhòu ne yīn-wei tā tā tā xuǎnzé jiù shuō
 then PARTICLE because 3SG 3SG 3SG choose just say
 ‘then because he he he choose like’

- 5 不给他家长知道 (.)
bù gěi tā jiāzhǎng zhīdào
 NEG give 3SG parent know
 ‘not to let his parents know’

Extract 15.

- 1 M: 这个他 (.) 那他们 //就知道他有问题了 (.)
zhè-ge tā nà tā-men jiù zhīdào tā yǒu wèntí le
 DEM1-CLF 3SG so 3-PL so know 3SG have problem PFV
 ‘this he so they knew he had a problem’

- 2 但是呢也没有办法帮他
dànshì ne yě méi yǒu bànfa bāng tā
 but PARTICLE also NEG have way help 3SG
 ‘but they had no way to help him’

Extract 16.

- 1 M: 他 //他有问题的 //比如说你的小孩儿有 **health//mental//mental problem**(.2)
tā tā yǒu wèntí de bǐrùshuō nǐ de xiǎoháir
 3SG 3SG have problem ATR for.example 2SG ATR child
*yǒu **health mental mental problem***
 have health mental mental problem
 ‘he he had a problem for example if your child had a health mental mental problem’

- 2 他正在去看
tā zhèngzài qù kàn
 3SG currently go look
 ‘he’s (getting it) looked at’

Extract 17.

- 1 M: 给你两个:**meaning** (.4)
*gěi nǐ liǎng ge **meaning***
 give 2SG two CLF meaning
 ‘(it) gives you two meanings’
- 2 看你猜哪个对哪个:(.) xxx
kàn nǐ cāi nǐ-ge duì nǐ-ge
 look 2SG guess which-CLF right which-CLF
 ‘to have you guess which one is correct and which one xxx’
- 3 xxx

4 还还是学了几个**phrase** (1.4)
hái hái shì xué le jǐ ge phrase
 still still COP learn PFV some CLF phrase
 ‘(I) did (I) did learn a few phrases’

5 比如(.)
bǐrú
 for.example
 ‘for example’

4.2.4 Language choice negotiation

While there are no long stretches of talk conducted mostly or entirely in English, and most switches into English appear to be simply insertions in a Mandarin frame, there is one sequence that at least somewhat resembles Auer’s (1984) concept of language negotiation whereby speakers switch between codes while attempting to settle on an agreed-upon language of interaction, though it ultimately ends in both speakers switching back to Mandarin as the language of interaction.

Note: utterances enclosed in plus signs (++) are emphatic/louder than the surrounding talk.

Extract 18.

1 D: 说实话但不说全部这本身就是一种 (.)
shuō shíhuà dàn bù shuō quánbù zhè běnshēn jiù shì yī zhǒng
 say truth but NEG say whole DEM1 in.itself just COP one kind
 ‘to tell the truth but not the whole (truth) is in itself a kind of’

2 一种罪过
yī zhǒng zuìguò
 one kind crime
 ‘a kind of offence’

3 是一种引导舆论的手段 (.) 就 (.)
shì yī zhǒng yǐndǎo yúnlùn de shǒuduàn jiù
 COP one kind guide public.opinion ATR means just
 ‘(it)'s a means to guide public opinion like’

4 这个类似的那个可以举出来很多
zhè-ge lèisì de nèi-ge kěyǐ jǔ chūlái hěn duō
 DEM1-CLF similar ATR DEM2-CLF can raise out very many
 ‘(one) can raise many (examples) of similar (things)’

- 5 首先一点就是说
shǒuxiān yī diǎn jiù shì shuō
 firstly one little just COP say
 ‘first of all there's’
- 6 [男性]
nán-xìng
 male-gender
 ‘male’
- 7 M: 那那那 [xxx]
nà nà nà
 that that that
 ‘that that that’
- 8 *you tell the story but [you xxx tell] (.) [one side of the story]*
- 9 D: *[you xxx] [+you tell one piece of it+]*
- 10 [对吧像]
duì ba xiàng
 right TAG like
 ‘right like’
- 11 M: *one [piece of the story 啊]*
one piece of the story a
one piece of the story TAG
 ‘one piece of the story right’

In extract 18, the interaction is entirely in Mandarin up until line 8, when M interrupts and begins a new sentence entirely in English. D, talking over M and raising her voice, responds in English in line 9. By briefly switching to English, M’s language choice in her interruption, D acknowledges both M’s language choice and the status of M’s utterance as an interruption. By switching to Mandarin immediately after in line 10, she also declines to switch to English entirely. D reasserting her own language choice is accompanied by her reasserting her right to continue to speak as she continues what she was saying before being cut off. It is also apparent that D’s utterances in line 9 are overlapping with M’s in such a way that she is almost completing M’s sentences, or at least rephrasing them, which could also

explain why she switches to English along with her; however, the loudness of her speech compared to the surrounding speech seems to indicate that she is also fighting for the floor. It is not entirely clear whether M had any intention of switching the language of interaction to English, either permanently or temporarily, or whether she simply intended to state a few utterances in English before switching back to Mandarin; while her next utterance in line 11 is also in English, it is also a paraphrase of D's utterance in line 9 (which can also be interpreted as being motivated in part by lexical cohesion), and she attaches a Mandarin tag to it, perhaps indicating that she is still operating under Mandarin as the overall frame. In any case, D's choice to switch to English for a single turn is significant here for its acknowledgment of M's language choice, as well as notable for being the only instance of her switching to English for a full utterance (not counting single words and backchannels).

4.2.5 Miscellaneous discourse-related functions

Other miscellaneous discourse-related functions are discussed here, as they occurred relatively less frequently and are more straightforward. Some of these functions are metalinguistic in nature. For example, in some instances, D supplies a lexical item in English to M when prompted, acknowledging the switch in codes and therefore difference in lexicon; this is somewhat related to lexical need (for a more detailed discussion of lexical need, see section 4.2.1). In extract 19, a part of their conversation about a teenager who died of a drug overdose, D provides M with the English word “overdose” (line 6) when M hesitates (line 5). Again in extract 20, when M says “funeral house” (line 3), D corrects her and says “funeral home” (line 4).

Extract 19.

1 M: 他: (.) //他这一对夫妇呢他就有一个孩子:就死掉了
 tā tā zhè yī duì fū-fū ne tā jiù yǒu
 3SG 3SG DEM1 one pair husband-wife PARTICLE 3SG just have
 yí-ge háizi jiù sǐdiào le
 one-CLF child just die PFV

‘they, this couple, they had a child who died’

2 D: 啊
a
‘uh-huh’

3 M: 是:吸毒
shì xīdú
COP take.drug
‘(they, singular) did drugs’

4 D: 啊
a
‘uh-huh’

5 M: 吸毒就**over** // [**overdose**]
xīdú jiù **over overdose**
take.drug then over overdose
‘(they, singular) did drugs and had an overdose’

6 D: [**overdose**]

7 M: *yeah overdose* (.)

Extract 20.

1 M: 后来(.)她们家就到处//就找原因啊
hòulái tā-men jiā jiù dào chù jiù zhǎo yuányīn
then 3-PL family just everywhere just search reason
‘so then their family looked everywhere for a reason’

2 说为什么这么招
a shuō wèishénme zhème zhāo
then say why DEM1 way
‘like why did this happen’

3 然后呢就去到它这个这个**funeral**啊这个这个**house**
ránhòu ne jiù qù dào tā zhè-ge zhè-ge
then PARTICLE just go to 3SG DEM1-CLF DEM1-CLF
funeral a zhè-ge zhè-ge **house**
funeral uh DEM1-CLF DEM1-CLF house
‘then they went to a a funeral uh a a house’

4 D: *funeral home*

5 [殡仪馆]
bīnyì-guǎn
funeral-establishment
‘funeral parlour’

6 M: [home]啊殡仪馆
home a bīnyì-guǎn
 home oh funeral-establishment
 ‘home oh funeral home’

In some instances, switches into English are accompanied by explicit metalinguistic commentary, such as when a speaker acknowledges that they are translating, defining, or explaining a term. This occurs in extract 2, discussed previously, where M asks D if the Mandarin translation of “coroner office” is 法医 (fǎyī) (line 3), and in extract 21 below, where M pauses after introducing a word that she is trying to recall (line 1) asks “there’s a noun what is (it) called” (line 7), and repeats the letter “m” when attempting to recall the acronym “MAD” (lines 6 and 7). These are also instances of flagged insertions, as they are marked by cues such as hesitation and incomplete attempted insertions of the constituent (see also extract 1, line 4 and extract 2, line 1). In instances such as these, the use of English rather than Mandarin is inevitable, as the speakers are deliberately and explicitly discussing the English words rather than their Mandarin counterparts.

Extract 21.

1 M: 还有一个案子呢就是写那个: //那个: (.) 叫做 (.)
hái yǒu yí-ge ànzi ne jiù shì xiě
 also have one-CLF case PARTICLE just COP write
nèi-ge nèi-ge jiàozuò
 DEM2-CLF DEM2-CLF call
 ‘there’s another case that’s about the the (it’s) called’

2 D: 噢
o
 ‘oh’

3 M: *medical* (2.4)

4 *[medical] //medical assisted die*

5 D: 对啊 是
duì a shì

right PARTICLE COP
‘that’s right yeah’

6 M: 叫啊: **m:**

jiào a m
call uh m
‘(it’s) called uh m’

7 就有个 // 有个名词叫什么 (.)**m**啊:

jiù yǒu ge yǒu ge míngcí jiào shénme m a
just have CLF have CLF noun call what m uh
‘there’s a there’s a noun what is (it) called m uh’

8 **medical**

9 D: **MAD**

10 M: **MAD**好像是

MAD hǎoxiàng shì
MAD seem COP
‘MAD I think’

The use of English is also inevitable, or at least highly likely, when speakers are quoting from sources, such as in extract 22, where M tells D the name of a program she has been using to study English, which she names in lines 3 and 5.

Extract 22.

1 M: 这叫做那个: (.)

zhè jiàozuò nài-ge
DEM1 call DEM2-CLF
‘it’s called the’

2 D: **mm-hm**

3 M: **English at movies**

4 D: 啊

a
‘uh-huh’

5 M: **teach you (.) American English xxx movies**

4.3 Discussion and potential motivations for code choices and switches

As discussed above, while the speakers display some similarities, such as the fact that they both frequently use insertions and intersentential switches but rarely or never use intrasentential alternation or congruent lexicalization, there are also some notable differences, such as M's considerably more frequent switches and D's considerably more frequent use of backchannels, especially English ones. These may be partly due to differences in their respective preferred communication styles and idiolects; as discussed in the methodology section, the speakers have somewhat similar language backgrounds due to being family members who live together, but they differ in some key ways. For example, while both grew up speaking Mandarin in China and have been exposed to English for many years, D's exposure to English began at a younger age than M's (nine as opposed to 13), and her residence in Canada at a much younger age (13 as opposed to 28; prior to this, both lived in Mandarin-speaking regions of China). Therefore, the use of some English elements may have become more regularized in her speech than in her mother's speech; her use of English backchannels has simply become a feature of her language use, even within a mostly Mandarin frame, at least in these particular interactions.

Another factor involved may be language attitudes. M indicated in her questionnaire that she viewed code-switching within a conversation "very positively" and that she felt "very comfortable" switching, "especially in the conversation with the same kind of bilingual person by mixing words and expression for more precise and subtle expression." D, on the other hand, only viewed switching positively "when the speaker is fluent in both languages," acknowledging that "some words cannot be translated." She views such switching negatively "when the speaker is not fluent," which she views as "trying to 'flex' their knowledge of another language," though she elaborates that this negative attitude does not extend to not yet

proficient speakers who are “trying to use a new language but forget words.” While D does assess both her English and Mandarin as fluent and therefore may not view her own switching negatively, M’s more overwhelmingly positive attitude towards switching, as well as her view that switching assists in “more precise and subtle expression,” may have influenced her more frequent code-switching, as well as her greater variation in terms of when she used English lexical items, when she used Mandarin lexical items, and when she switched codes entirely for one turn or more.

Although code-switches had a number of functions and were very frequent at some points in the data, both speakers still appeared to have a preference to communicate in Mandarin. Even when speakers switch to English for entire utterances, this never lasts more than three consecutive turns. Therefore, switches back into Mandarin from English were not analyzed in detail, as this seems to be the speakers’ default language choice with each other. A code that utilizes predominantly Mandarin may have come to be the unmarked choice over the course of their interactions at home, as both speakers grew up in China and were predominantly exposed to Chinese for much of their early lives (particularly M), and both still consider themselves Mandarin-dominant. This contrasts with the findings of some other studies focusing on intergenerational codeswitching (e.g. Hua, 2008; Li & Milroy, 1995; Li, 1994; Ng & He, 2004) where speakers from different generations noticeably diverge in terms of linguistic preferences, proficiencies, and repertoires. The apparent lack of language negotiation sequences in the data could be at least in part explained by this less pronounced generational gap.

It should also be noted here that while certain code-switches served as contextualization cues, speakers made use of other contextualization cues as well, including prosodic cues and interjections/fillers in Mandarin, though these are not transcribed and

analysed in detail here. While code-switching is available to speakers who have knowledge of more than one code for a variety of functions, it is not the only cue serving these functions.

5. Conclusion

Though this discussion is preliminary and the findings are not conclusive, as this study is based on a small data set from a very small sample size in a very narrow range of interactions, this paper has attempted to identify and explicate several functions of code-switching available to multilingual individuals, describe the similarities and differences between the language usage of two speakers from two different generations of Mandarin-English bilinguals residing in Canada, and contextualize these findings within the field of code-switching research as a whole. The code-switching of the two speakers analyzed in this study seems to have certain conventionalized features; however, these speakers are close family members, likely very familiar with each other's respective language competencies and speech patterns, and certainly did not utilize the full range of their linguistic repertoires in the audio recordings under examination. While the generational gap between their language usage does not appear to be very pronounced based on this small data set, these interactions only provide examples of their language usage with each other and not in other contexts; their code choices and code-switching behaviours may well vary a great deal depending on their environment and speech situation. Future research may wish to examine the code choices of other Chinese diaspora populations both in intergenerational talk (e.g. Hua, 2008) and in various other types of interactions, such as with English monolinguals, Chinese monolinguals, other bilinguals of their own generation, etc. Other factors that could be considered and compared in future research include language dominance, language attitudes, and so on.

While the scope of the present study is limited, it has the potential to shed light on some of the mechanisms by which idiolects develop and code choices are made by bilingual diaspora populations, and can hopefully both contribute some insight into this particular range of code-switching behaviours and be a starting point for future contributions in similar directions.

Transcription conventions

[]	overlapping speech
:	long preceding syllable (number of colons indicate length)
++	higher volume/emphatic speech
(.)	pause of less than 0.2 seconds
(0.3)	pause in tenths of a second
//	self-interruption
.	falling intonation
,	rising intonation
?	questioning intonation
(h)	laughter (number of 'h's indicate length)
~ ~	uncertain transcription
xxx	indistinct speech, unable to transcribe
[redacted]	words/items that have been redacted for privacy reasons
<i>italics</i>	original speech (Mandarin in pinyin below Hanzi)
boldface	switches into English
‘ ’	English translation of speech in Mandarin, below original speech

Note: items appearing in round brackets () in the translation are either 1. elements that did not appear overtly in the original speech but are implied or can be inferred by the context, or 2. additional clarifications, such as in instances of ambiguous grammar.

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Appendix A: Questionnaire (D)

All questions are optional; if you do not feel comfortable answering, you may choose to leave any question blank.

Section A. Linguistic background.

1. What languages do you use/are you regularly exposed to?

Mandarin

Which of these proficiencies do you have in this language? (circle all that apply):

speaking **listening** **reading** **writing**

Proficiency:

fluent conversationally fluent moderate proficiency limited/basic proficiency

other: ____

Approximately how long have you used/been exposed to this language?: 17 years OR
since birth

How frequently do you use this language? (1 = very infrequent, 5 = very frequent)

1 2 3 4 5

In what domains do you regularly use this language? (circle all that apply)

at home **with family** in the workplace in everyday interactions at
school other: ____

How did you acquire this language? (circle all that apply)

at home ↔ **with family** in the workplace in everyday interactions at
school other: ____

In what country/region(s) did you acquire this language? CN

Anything you would like to elaborate on: ____

English

Which of these proficiencies do you have in this language? (circle all that apply):

speaking **listening** **reading** **writing**

Proficiency:

fluent conversationally fluent moderate proficiency limited/basic proficiency

other: ____

Approximately how long have you used/been exposed to this language?: 8 years OR since birth

How frequently do you use this language? (1 = very infrequent, 5 = very frequent)

1 2 3 4 5

In what domains do you regularly use this language? (circle all that apply)

at home with family in the workplace **in everyday interactions** at **school** other: ____

How did you acquire this language? (circle all that apply)

at home with family in the workplace **in everyday interactions** at **school** other: ____

In what country/region(s) did you acquire this language? CN+ CA

Anything you would like to elaborate on: ____

Other language(s): FR

Which of these proficiencies do you have in this language? (circle all that apply):

speaking **listening** **reading** writing
half ↑

Proficiency:

fluent conversationally fluent moderate proficiency **limited/basic proficiency**
other: ____

Approximately how long have you used/been exposed to this language?: 5 years OR since birth

How frequently do you use this language? (1 = very infrequent, 5 = very frequent)

1 2 3 4 5

In what domains do you regularly use this language? (circle all that apply)

at home with family in the workplace in everyday interactions at school other: class work

How did you acquire this language? (circle all that apply)

at home with family in the workplace in everyday interactions at **school** other: ____

In what country/region(s) did you acquire this language? CA

Anything you would like to elaborate on: been slowly forgetting

2. Please rank the languages you have indicated in order of dominance, according to frequency and proficiency of use (your dominant language is the one used most frequently and with the most proficiency):

Dominant language(s) (please list all that apply): Mandarin

Second: English

Third: _____

Fourth: _____

...

3. Which countries or regions have you lived in?

Birthplace: China Ages: 0–12

Country/region: CA Ages: 13–17

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Section B. Other demographic information.

4. Age: 17

5. Gender (circle one): M **F** Other: _____

6. What is your relationship to the other participant(s)?

Participant relationship 1: Daughter

Participant relationship 2: _____

Participant relationship 3: _____

Section C. Language attitudes.

7. What are your general attitudes towards the act of switching between languages during a conversation (your own switching and/or other speakers' switching)? Do you view it positively, negatively, etc.?

Positive when the speaker is fluent in both languages (some words cannot be translated).

Negative when the speaker is not fluent (aka. trying to “flex” their knowledge of another language). does NOT apply to ppl. who are trying to use a new (/in-proficient) language but forget words.

Appendix B: Questionnaire (M)

All questions are optional; if you do not feel comfortable answering, you may choose to leave any question blank.

Section A. Linguistic background.

1. What languages do you use/are you regularly exposed to?

Mandarin

Which of these proficiencies do you have in this language? (circle all that apply):

speaking **listening** **reading** **writing**

Proficiency:

fluent conversationally fluent moderate proficiency limited/basic proficiency

other: ____

Approximately how long have you used/been exposed to this language?: ____ years

OR **since birth**

How frequently do you use this language? (1 = very infrequent, 5 = very frequent)

1 2 3 4 5

In what domains do you regularly use this language? (circle all that apply)

at home **with family** in the workplace **in everyday interactions** at

school other: ____

How did you acquire this language? (circle all that apply)

at home **with family** **in the workplace** **in everyday interactions** at

school other: ____

In what country/region(s) did you acquire this language? China

Anything you would like to elaborate on: ____

English

Which of these proficiencies do you have in this language? (circle all that apply):

speaking **listening** **reading** **writing**

Proficiency:

fluent conversationally fluent moderate proficiency limited/basic proficiency

other: ____

Approximately how long have you used/been exposed to this language?: 45 years OR since birth

How frequently do you use this language? (1 = very infrequent, 5 = very frequent)

1 2 3 4 5

In what domains do you regularly use this language? (circle all that apply)

at home with family **in the workplace** **in everyday interactions** at school other: ____

How did you acquire this language? (circle all that apply)

at home with family **in the workplace** **in everyday interactions** at school other: ____

In what country/region(s) did you acquire this language? China, Canada

Anything you would like to elaborate on: ____

Other language(s): ____

Which of these proficiencies do you have in this language? (circle all that apply):

speaking listening reading writing

Proficiency:

fluent conversationally fluent moderate proficiency limited/basic proficiency

other: ____

Approximately how long have you used/been exposed to this language?: ____ years OR since birth

How frequently do you use this language? (1 = very infrequent, 5 = very frequent)

1 2 3 4 5

In what domains do you regularly use this language? (circle all that apply)

at home with family in the workplace in everyday interactions at school other: ____

How did you acquire this language? (circle all that apply)

at home with family in the workplace in everyday interactions at school other: ____

In what country/region(s) did you acquire this language? ____

Anything you would like to elaborate on: ____

2. Please rank the languages you have indicated in order of dominance, according to frequency and proficiency of use (your dominant language is the one used most frequently and with the most proficiency):

Dominant language(s) (please list all that apply): Chinese (Mandarin)

Second: English

Third: _____

Fourth: _____

...

3. Which countries or regions have you lived in?

Birthplace: China Ages: 0–28, 34–52

Country/region: Canada Ages: 28–33, 53–current

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Country/region: _____ Ages: _____

Section B. Other demographic information.

4. Age: 58

5. Gender (circle one): M **F** Other: _____

6. What is your relationship to the other participant(s)?

Participant relationship 1: _____

Participant relationship 2: Mother

Participant relationship 3: _____

Section C. Language attitudes.

7. What are your general attitudes towards the act of switching between languages during a conversation (your own switching and/or other speakers' switching)? Do you view it positively, negatively, etc.?

Feel very comfortable to switch between two languages especially in the conversation with the same kind of bilingual person by mixing codes and expression in two languages for more precise and subtle expression.

View the switching very positively.