Formulaicity in Code-Switching: data analysis

0 Introduction

This chapter explores the question derived from the discussion between Azuma's paper and Backus' on whether code-switching occurs at the boundary of the formulaic sequence or not. The kind of data we need to answer the question are incidences of non-syntactic constituent switching. Alternational code-switching appears to be an appropriate area to look at for such a pattern. We will apply the revised diagnostic criteria to code-switching materials from our dataset to address the following research question.

Specific research question

Does the hypothesised unitary processing status of formulaic sequences result in CS occurring between but not within them?

In 1 we will explore some patterns of alternational CS from the perspective of the formulaic language, some patterns of composite CS will be analysed in 2, and another dataset of code-switching will be employed to complement our main dataset in 3

1 Data analysis of alternational CS

Two of the patterns identified as alternational CS in chapter five will be used to check whether the switching point is the boundary of formulaic sequences or not, namely: 1) it's [Japanese clause]; 2) the portmanteau structure.

1.1 Preliminary analysis with insertional CS

Before analyzing alternational CS patterns, we will see a more straightforward formulaic sequence and examine whether CS occurs outside it rather than within it.

The following multi-word item, an N'- a combination of an adjective + a noun, previously introduced as (44) in chapter 5 appears to be formulaic.

(1) T>F : *sore wa* naughty boy *-na koto da*
That TOP make ADJS thing COP
{That is something naughty boy would do. }

This is an extract from an interaction between Toshiya and his father. Toshiya is talking about his brother, Ellis's behaviour. The formulaicity of 'naughty boy' is checked as follows (see table 8.1).

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	A	SD	N	A	SA	N	SA	SA	N	N	N	N

Table 1 Formulaicity in 'naughty boy'

The wordstring is not semantically irregular- 'Strongly Disagree' on B. Grammatically, the occurrence of NP without a determiner, as an N', is irregular- 'Agree' on A. It is placed in the slot for Japanese nominal adjectives or loan adjectives- 'Strongly Agree' on grammatical indication (G). Toshiya must have heard this wordstring when he or his brother

was scolded by his mother – with direct evidence of previous encounter, 'Strongly Agree' on H. He employs this wordstring frequently- with direct evidence, 'Strongly Agree' on E. The wordstring 'naughty boy' itself has a function of reproaching – 'Agree' on D.

In theory, Toshiya could have inserted just the English word 'naughty', which would have fitted better into the slot in the Japanese ML. Yet he used 'naughty boy' instead, a formulaic expression, as established above. In this example, CS doesn't occur inside the formulaic sequence but outside of it. This example is fairly straight forward but when constructions have a gap, e.g. 'it's [ ]', the story is more complicated. We will analyze such a pattern in the following section.

8.1.2 it's [Jp-CLAUSE] construction

First we will look at the most frequently observed pattern (sixty-eight tokens) of alternational code-switching, i.e. 'it's [Jp-CLAUSE]' construction[1]. If Japanese NPs or adjectives are inserted into the slot of the 'it's [ ]' construction, it will comply with the MLF model and then be called insertional CS (see chapter four). However, when a Japanese clause follows 'it's', the switching point doesn't correspond with the boundary of the syntactic constituent and alternational CS appears to be a reasonable account (see chapter six). We will examine the formulaicity of 'it's [Jp-CLAUSE]' in alternational CS here.

All the following examples occurred when the two siblings were playing with monster and super-hero figures.

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[1] The constructions described here are based Backus' use of the term. There are strong similarities to the notion of the 'construction' in Construction Grammar (Goldberg, 2003, 2006) but there is no scope within this thesis to make engage directly with that theory. The frame and gap formulation is, in fact, much more longstanding that these recent works, having been described as productive elements of formulaic language as long ago as Pawley & Syder (1983: 210).'

(2) T>E : If it's *karaa taimaa ga kuro* then it's *shinderu* Ellis?
energy indicator NOM black dead
{If the energy indicator is off then it's dead Ellis .}

(3) T>E : now it's (.) *taiyoo wa nai*
sun TOP doesn't exist
{Now, the sun doesn't exist.}

(4) T>E : then it's (.) *me o hiraiteru*
eye ACC open
{then the eyes are open}

(5) T>E : but it's (.) *ashita dattara dekiru* .
tomorrow if can-do
{but I can do it tomorrow}

(6) T>E : because it's *Gaochibi toka Gao-rainosu wa nige- ta kara* right?
PropN or PropN
{because *Gaochibi* (a monster) or *Gaorainosu*, for example, escaped right?}

(7) T>E : it's *minna waruku nat- ta* except for *sono futari* right
everyone bad become PAST those two
{everyone became bad except these two, right?} (audio file # 3)

The roles of the English and Japanese parts are fairly clear. All the examples above show that the Japanese parts are in charge of describing the toy's movements or states, i.e. they express propositional meanings. On the other hand the English parts appear to function as discourse markers. The formulaicity of the construction 'it's [Jp-CLAUSE]' is examined as follows (see Table 2). The second clause of example (2) is not an example of 'it's [Jp-CLAUSE]' because 'it' refers to the toy, therefore this is not included in this analysis. The wordstring 'it's' itself is grammatically fine but the whole frame 'it's [CLAUSE]' is

grammatically irregular-'Agree' on criterion A. This wordstring itself means 'the state of affairs' which is different from 'it's' in the normal usage such as the second 'it's' in example (2). This is semantically opaque - 'Strongly Agree' on criterion B. This pattern is frequently observed (68 tokens) in our dataset– 'Strongly Agree' on E.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	A	SA	N	SA	SA	N	N	A	A	N	N	SA

Table2 Formulacitiy in 'it's [Jp-CLAUSE]'

The wordstring 'it's' functions as a filler between the conjunctions 'because' (1) and 'if' (2) and the following Japanese clause. This filler appears to be buying time for the Japanese clause to occur. This pattern of 'it's + English clause' hasn't been observed in our dataset. Therefore 'it's' appears to function as a CS indicator- 'Strongly Agree' on pragmatic/discourse function (D). Both examples show that this English frame 'it's [ ]' is combined with the conjunctions and functions as pragmatic/discourse frames 'Strongly Agree' on L. The result of the diagnostics supports the idea that the 'it's [Jp-CLAUSE]' construction is formulaic.

The question we should ask next is 'Does CS occur only at its boundaries not internally?' With this construction, the pattern is that the clause always starts with English and it changes into Japanese after 'it's'. There are no examples of 'it's [English clause] pattern. CS doesn't occur inside 'it's'. At the boundary at the end of 'it's', CS occurs and it

is compulsory. At the boundary at the beginning of ‘it’s’, there is no evidence of CS. Out of the six examples, five of them have English conjunctions before ‘it’s’- no CS.

With regard to the boundary at the end of this construction, it is more complicated to identify whether CS occurs or not. The construction can be viewed as insertional or alternational. If it is viewed as insertional, the formula ends in English, even though the gap has been filled with Japanese. Therefore it will count as CS if Japanese comes next. Conversely, if the frame is viewed as alternational, then the clause finishes in Japanese, and the reverse rules apply. There 14 examples which have English , e.g. ‘right’, ‘then’, and ‘you know’, after the frame. If this frame is viewed as insertional, the occurrence of English after the frame doesn’t count as CS while if it is viewed as alternational, this should be counted as CS. As we have seen in chapter six, the most convincing analysis of this frame is as alternational CS. The switched Japanese items are not congruent with the English morphosyntactic frame, because they contain outsider system morphemes. If these Japanese items are formulaic, the possibility of insertion will be high since the formula will be treated as a single item. However, in none of the examples above are the Japanese items diagnosed as formulaic.

Although it appears to be complicated to identify CS in this frame, the possible answer here is that ‘it’s’[Jp-CLAUSE] is formulaic and code-switching at the boundary between ‘it’s’ and the clause is compulsory because the CS instruction is actually built into the substance of the formula—that is, the formula is a device for effecting CS. The CS is alternational pattern and the occurrences of English item, e.g. tags after the clause indicate that CS occurs outside the boundary of formula.

1.3 now is [ ] construction

As we have seen in examples (2) to (7), the 'it's [Jp-CLAUSE]' formula has a tendency to co-occur with discourse/pragmatic elements. There is a pattern which appears to conflate these elements in the dataset. The following example shows the pattern 'now is [Jp-CLAUSE]'

(8) E>T: Now is *robotto wa taore-ta*
robot TOP fall-PAST
{Now the robot fell} (audio file #5)

Here 'is' doesn't appear to convey any propositional meaning. The role of 'is' is similar to that of 'it's' which we have seen in the previous section. There are thirty-five tokens of Ellis's speech of alternational CS pattern with 'it's' or 'is'.

Pattern	now is	now's	and is	because is	no is	is	it's	Total
token	12	3	3	2	2	4	9	35

Table 3 Ellis' alternational CS pattern with 'it's /is'

Ellis's use of 'now is' or 'now's' pattern is fairly significant. The formulaicity of 'now is [Jp-CLAUSE] in example (8) is analyzed as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SA	SA	N	SA	SA	N	N	N	A	N	N	SA

Table 4 Formulaicity in 'now is [Jp-CLAUSE]'

The combination ‘now’ + ‘is’ + clause is unusual-‘Strongly Agree’ on criterion A. The meaning of the whole wordstring can be ‘and then’ which doesn’t derive from this combination of ‘now’ and ‘is’. Specifically, ‘is’ doesn’t mean anything here-‘Strongly Agree’ on B. From the point of view of discourse function this wordstring functions as a discourse marker which introduces the next movement or event-‘Strongly Agree’ on D. Ellis uses this wordstring consistently- with direct evidence ‘Strongly Agree’ on E. He might have copied Toshiya’s ‘Now it’s’ pattern-without direct evidence, ‘Agree’ on I. This is a frame with a gap- ‘Strongly Agree’ on L because the frame has a specific pragmatic/discourse function. This example also supports the discussion that CS occurs at the boundary of formulaic sequences.

8.1.4 The portmanteau structure

In this section we will look at another alternational pattern, the portmanteau structure in which English part and Japanese part have the same meaning and they occur as if they were mirror images. The following example is one instance of the portmanteau structure. (already introduced in 6.2.3.3)

(9) T>E : It’s really it was *tadano jaakuna ishi da-tta*
just evil will COP-PAST
{It was just an evil will}

The switching point doesn’t match the boundary of the syntactic constituents because Japanese VP comes in the slot for English NP or AP and alternational CS is a reasonable explanation. However, in chapter six we have established that this pattern is different from ‘it’s [Jp-CLAUSE] pattern because ‘it’ functions as a pronoun and refers to a concrete thing (a monster). The Japanese past tense copula *da-tta* has the same meaning as the English past tense copula ‘was’. The English part and the Japanese part appear to be hinged with the Japanese NP *tadano jaakuna ishi*. This pattern is one of the examples of the portmanteau

structure (Nishimura, 1997:103). We will examine formulaicity in this example.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	SD	SD	N	N	N	N	N	SD	SD	N

Table 8.5 Formulaicity in 'it was [Jp-CLAUSE]'

First, the formulaicity of 'it was [Jp-CLAUSE]' is verified (see Table 8.5).The grammatical form and meaning of 'it' and 'was' is clear- 'Strongly Disagree' on A and B. We can't find any 'Strongly Agree' or 'Agree' on the other criteria. There is no strong evidence that this wordstring is formulaic. Whereas, if we turn to the 'hinge' part *tadano jaakuna ishi*, it appears to be formulaic. The criteria are also applied to the Japanese NP as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	A	N	N	N	N	SA	N	SD	SA	SD

Table 8.6 Formulaicity in '*tadano jaakuna ishi*'

This phrase is heard in one of the super-hero programs. Toshiya is just copying what a character said, and he would never create this phrase as a novel one- 'Strongly Agree' on H.

This wordstring is employed to describe monsters in a super-hero TV program- 'Agree' on criterion C. The word *jaaku* doesn't match with the child's maturation- 'Strongly Agree' on K. With this example, 'it was' is a novel construction, which is followed by an attribute. Therefore when Toshiya needs to find the attribute, he goes to his lexicon and pulls out this formula *tadano jaakuna ishi*. The boundary is essentially the lexical unit here. The past tense copula *dat-ta* is triggered by this Japanese formula. This also supports the notion that code-switching occurs at the boundaries of formulaic sequences, whether before or after.

There is another example of the portmanteau structure which has been analyzed in 6.2.3.1, i.e. the loanword *goorukiipaa* works as a trigger word and alternation from English to Japanese occurs.

(10) I want to be *goorukiipaa* *ni* *nari- tai*
E>F:
goal keeper RSL become-MOD
{I want to be goal keeper}

From a syntactic point of view, an NP should occur after the wordstring 'I want to be', but the Japanese VP '*goorukiipaa ni nari-tai*' follows. Therefore the switching doesn't occur at the boundary of syntactic constituents. Our agenda here is to check the formulaicity around the switching point. The formulaicity in the English part 'I want to be [ ]' and the Japanese part [ ] *ni naritai* are both analyzed with the diagnostics.

	A	B	C	D	E	F	G	H	I	J	K	L

Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	SA	SA	SA	N	SD	A	SD	N	SD	SA

Table 8.7 Formulaicity in 'I want to be [ ]'

The English part 'I want to be [ ]' is a frame with a gap, therefore 'Strongly Agree' on L, which is supported by other criteria. It is used when he is playing and deciding which role to play- 'Strongly Agree' on C. By using this wordstring he is claiming to grab the role- 'Strongly Agree' on D. He may have learned this when he was playing with other children – 'Agree' on H (not 'Strongly' because there is no direct evidence). There is an example in the dataset where he says 'I want to be, I want to be' when he is competing to grab a role when playing with his brother– 'Strongly Agree' on E, which also support the judgment on C. If we turn to the Japanese part, we will have a similar result to the English one.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	SA	SA	A	NA	SD	A	SD	N	N	SA

Table 8.8 Formulaicity in' [NP] *ni naritai*'

The Japanese frame[ ] *ni naritai* is also used in a playing situation- 'Strongly Agree' on C and it has the function of claiming a role- 'Strongly Agree' on D. There isn't direct evidence

of his use of it in the data but he might have learned this wordstring from his friends when playing-'Agree' on H and will use it again-'Agree' on E. With this example, both the English wordstring 'I want to be [ ]' and the Japanese wordstring [ ] *ni naritai* appear to be formulaic. Code-switching occurs at the gap which is the finishing point of the English formulaic frame, and at the same time, the starting point of the Japanese formulaic frame. In this section we have seen two patterns of portmanteau structure which can be identified as the English part- the hinge part (Jp)- the Japanese part. With example (9) the NP which works as a hinge is formulaic. On the other hand, in example (10), the English and Japanese part surrounding the hinge part are formulaic. This strongly supports Backus' position that CS occurs at the boundary of formulaic sequences.

2 The bilingual formulaic frame

In chapter six we established that one of the problematic patterns, i.e. the '[Jp] is [Jp]' construction, can be explained in terms of composite CS in which the morphosyntactic frame of the bilingual clause consists of more than one language. Since it doesn't comply with the grammar of one language, there is a possibility of non-constituent switching in composite CS patterns which refutes Azuma's position. We will verify the formulaicity of bilingual composite frames in this section.

2.1 [Jp-TOPIC] is [Jp-PREDICATE] construction

The following examples were identified as composite CS in 6.3.3.1. The English copula 'is' replaces the Japanese topic marker *wa*.

(11) T>E : *e* is *kai-ta* *zo*
picture draw-PAST FP
{As for the picture, I drew it.}

(12) T>E : Yes but *Tenraisenpujin* is *tsuyo* *sugi* *ta*
PROPN strong too PAST

{Yes, but Tenraisenpujin (a robot) was too strong}

We can see the underlying frame '[Jp-TOPIC] is [Jp-PREDICATE]' here. This frame consists of a Japanese morphosyntactic frame and the English lexical item 'is' which has been taken in through the process of convergence (see 6.3.3.1).

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation /register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SA	SA	N	N	SA	N	N	A	A	N	N	SA

Table 8.9 Formulaicity in '[Jp-Topic] is [Jp-Predicate]'

Use of the copula 'is' instead of the Japanese topic marker *wa* is grammatically unusual – 'Strongly Agree' on criterion A. The meaning is not transparent at all– 'Strongly Agree' on B. The two siblings repeatedly use this frame in their conversation (13 tokens), so 'Strongly Agree' on E. The existence of the underlying frame is reinforced by the irregularity of grammar and the meaning, and the frequency- 'Strongly Agree' on L.

As for how this construction might have come about in their language, 'derivation' is a strong possibility- 'Agree' on I. The English copula 'is' comes before the Japanese verb phrases and the location overlaps with the Japanese topic marker '*wa*'. There is a construction of insertional CS, [Jp SUBJECT-NP] is [Jp PREDICATE-NP] for example (13).

(13) T>E : ah *honmono* is *orenji no Panpukun no yatsu* see Ellis?

real one orange GEN Proper Noun GEN one

{Ah the real one is the orange one named Pampukun, see, Ellis} (audio file #1)

Toshiya and Ellis might have derived the usage of 'is' instead of Japanese topic marker from this kind of example.

Another example (14) can be also analyzed as alternational CS.

(14) E>T : now toast(.) is *deki(.)deki* *-ta* is *hayakat* *ta*
make PAST fast PAST

{Now toast has been made, it was fast}

The '[Jp-TOPIC] is [Jp-PREDICATE]' construction consisting of a composite morphosyntactic frame shows non-constituent switching because 'is' as a topic marker is deviant and therefore not an appropriate syntactic constituent. Since the frame seems to be formulaic, we can see that the code-switching occurs at the boundary of it.

2.2 it's [Jp-TOPIC] is [Jp-PREDICATE] construction

The two significant frames we have seen in this chapter, 'it's [Jp-CLAUSE]' and '[Jp-TOPIC] is [Jp-PREDICATE]' are seen to occur at the same time. The following examples are three of the ten tokens of such a pattern.

(15) T>E : For Marlin it's *oyo-ideru* *toki* *ni* *Boonasu hitode* is *pon* *te* *butsukat-ta*
swim-PROG time at bonus starfish (PropN) ONM QT bump-PAST

right

{For Marlin, when he was swimming, a bonus starfish (game character) bumped into him "pon" right?}
(audio file #4)

(16) T>E: Oh (.) then it's *naka* *ni* *hait-teiru* *hito* is *shin-da* right?
inside at enter-PROG person die-PAST

{Oh then the person inside died right?}

(17) T>E: it's *mama* *to* *papa* is *issho-ni* *ik-eru* right?
mother and father together go-can
{Mummy and Daddy can go together, right?}

With four switches in each example, it is difficult to immediately identify what is happening here. If we look at these examples from the point of view of the formulaic sequences, we can see three underlying frames here. 1) Toshiya starts his utterance in English and then he employs 'it's [ ]' frame which is formulaic and must take a Japanese clause after it. The wordstring 'it's' works as a filler and a CS indicator. 2) Here a composite clause '[Jp-TOPIC] is [Jp-PREDICATE]' rather than a Japanese clause occurs. However its syntactic frame is basically Japanese. This is the second formulaic frame. 3) At the end of this composite frame, another switch occurs with the English tag-like word 'right'. This last switching pattern can be categorized as alternation and also we can see an underlying frame. The frame is analyzed as follows (see Table 10). Toshiya's use of '[ ] right' was first observed when he started going to international school where American English is stronger. He picked up '[ ] right' in school- 'Strongly Agree' on H. He uses this frequently- 'Strongly Agree' on E. It has a pragmatic function of confirmation- 'Strongly Agree' on D. It has a specific rising intonation contour- 'Strongly Agree' on F.

	A	B	C	D	E	F	G	H	I	J	K	L

Criteria	Grammatical irregularity	Semantic opacity	Situation /register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	SA	SA	SA	N	SA	N	N	N	SA

Table 10 Formulaicity in '[CLAUSE] right'

Therefore these bilingual clauses consist of three underlying frames as Figure 1 shows: frame (2) '[Jp-TOPIC] is [Jp-PREDICATE]' occurs in the slot of frame (1) 'it's [ ]'. Frame (1) occurs in the slot of frame (3) '[ ] right'.

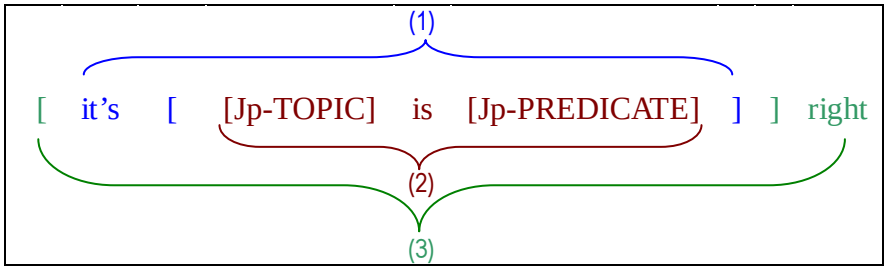


Figure 1 Frames in 'it's [Jp-TOPIC] is [Jp-PREDICATE] right]'

This pattern shows that code-switching occurs at the boundary of formulaic frames. As we have already seen in the previous sections, frames (1) and (2) don't correspond with syntactic constituents.

3 The Japanese discourse/pragmatic frame

The patterns we have seen in this chapter all show that in bilingual clauses, English makes a formulaic frame which has a pragmatic/discourse function whereas the Japanese provides the new information. The role of these formulaic frames in alternational CS appears to be significant. Are there any alternational CS patterns which have a Japanese frame? The

following one shows a Japanese frame which has a pragmatic function. Toshiya is interacting with his father.

(18) T>F: *Yooshi* keep an eye *suru* *zo*
Right, I'm going to do FP
{Right, I'm really going to keep an eye on you}

As we have seen in chapter four, this is an example of insertional CS which complies with the MLF model. The English VP 'keep an eye' is inserted into the Japanese 'do-construction', i.e. [ ] *suru*. The Japanese wordstring *yooshii* [VP] *zo* around the do-construction also appears to form a frame. The following example is made up by the author. This can be said when someone sets an alarm clock and plans to wake up early to do something the next day.

(19) *Yooshi* *asu* *wa* *hayaku* *okiru* *zo*
Right, I'm going to tomorrow TOP early wake-up FP
{Right, I'm really going to wake up early tomorrow}

The formulaicity of this frame *Yooshi* [VP] *zo* is verified as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation /register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	SA	A	SA	N	A	N	N	N	SA

Table 11 Formulaicity in '*yooshi* [VP] *zo*'

This wordstring is used to show that he has already made a decision and he is encouraging himself- 'Strongly Agree' on D. It has a specific prosodic feature, i.e. it is prolonged and

ends with rising intonation- 'Strongly Agree' on F. It is fairly evident that this is a formulaic frame with a pragmatic function. While showing formulaicity in the ML and the EL, example (10) is an instance of insertional CS and the inserted EL item is a syntactic constituent. Therefore it supports both Backus' and Azuma's positions. If this kind of Japanese frame occurs in alternational CS, e.g. *Yooshi* [English Clause] *zo*, it will be strong evidence to support Backus' position, since CS occurs not at the boundary of syntactic constituents but at the boundary of the formulaic frame.

However, there are no such examples in our dataset. The reason might be that the two siblings' CS patterns have been fixed. Toshiya's school language was English at the time when this utterance (18) occurred, therefore he was accustomed to interacting in English when playing. On the other hand many examples were collected when they are playing with Japanese toys and games. These might have led to the pattern in which the interactional part is English and the new information part is Japanese. The speech from Toshiya and Ellis tends to be in short chunks, and the structures we are seeking would only occur in longer stretches. Nishimura's study (1997) on the second generation of Japanese-American and Canadians shows such examples. Therefore, it was hypothesised that examples might be found in CS data from older individuals and longer texts. To this end a smaller data collection was made.

3.1 The Data

I have chosen two e-mail messages written by an English-Japanese bilingual, Jennifer (see appendix). Jennifer went to the same international school as Toshiya and Ellis. Her parents are Japanese but she was born in Canada and her family returned to Japan when she was eight years old. She went to the international school in Osaka for nine years. In that school, students use code-switching frequently. Now she lives in Southampton in the U. K. These

e-mail messages are written to other graduates from the school. E-mail-1 was written when she was 19 years old and E-mail- 2 was written when she was 22 years old.

A major weakness of using e-mail messages as our second dataset is that they are written text and the nature of the data is therefore likely to be different from the spoken data of our first dataset. Nevertheless, Crystal (2006) terms the language styles of the Internet "Netspeak" (p19) and argues that although e-mails and chats are conducted through the medium of writing, they have characteristics of speech. They are time-governed, expect an immediate response, are transient because they may be immediately deleted, and appear to be urgent and energetic (p.32). Jennifer's e-mail messages are written to her friend and the language used there is casual and resembles spoken text rather than written text. The messages are monologues therefore there are no interruptions from her addressee. This means that the differences from speech are less pronounced than they would be for other written data. In addition, there is a particular advantage to this kind of data, namely, that as 'written speech' it can help resolve some problems that naturally arise with spoken data. In CS data, there are cases where it is difficult to distinguish two languages. With e-mail this problem can be solved by looking at the orthography (see Appendices II). Of course lack of nonverbal cues is one of the disadvantages of e-mail messages compared to ordinary speech, but punctuation, emoticons, e.g. smiley face, capitalization, and asterisks help express nonverbal cues. We will adopt Jennifer's e-mail to explore Japanese formulaic frames in code-switching.

3.2 Analysis of Japanese pragmatic frames

In the two e-mail messages (see Appendices I & II), 18 of the 43 clauses are bilingual. Six of them are categorized as insertional CS and twelve of them are categorized as alternational CS (see table 11).

	English only clauses	Japanese only clauses	Mixed clauses	Insertion	Alternation
Message-1	7	7	10	3	7
Message-2	6	5	8	3	5
Total	13	12	18	6	12

Table 12 Language patterns in the e-mail messages

From the twelve alternational CS samples, just six patterns which appear to have an underlying Japanese formulaic frame have been selected and are analyzed below.

3.2.1 so ieba [CLAUSE] nanda yo-ne

Example (20) occurs after a story about a Japanese celebrity. It shows a fairly long stretch of English sequence surrounded by a Japanese part.

(20) *so~ieba* i remember he got married to this rich japanese lady who lives in NY,
Talking about (him)
and he moved over there *nanda* *yo-ne~...*
COP FP-FP
{Talking about him, I remember he got married to this rich Japanese lady who lives in NY,
and he moved over there didn't he?}

The Japanese part appears to consist of two formulas: *sooieba* [ ] and [ ] *nanda yo-ne*. These two formulas will be analyzed with our criteria.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	SA	A	N	N	A	N	N	N	SA

Table 13 Formulaicity in '*soo ieba* [CLAUSE]'

The first formula *soo ieba* [CLAUSE] is not grammatically or semantically deviant-

'Strongly Disagree' on criteria A and B. With this wordstring, she introduces new information which she has just remembered and seeks agreement- 'Strongly Agree' on D. She might have encountered this sequence before and might use it again- 'Agree' (without direct evidence 'Strongly Agree' will not be given) on E and F. With the strong evidence on D, this is a pragmatic frame- 'Strongly Agree' on L.

The other formula [CLAUSE] *nanda yo-ne* is analyzed as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	SA	A	SA	N	A	N	N	N	SA

Table 14 Formulaicity in '[CLAUSE] *nanda yo-ne*'

This wordstring consists of copula *nanda*, and two sentence final particles, i.e. *yo* and *ne*. Maynard (1997) proposes that "*yo* is used when the speaker assumes that he or she has more access to and/or possession of the information and wants to focus on the information conveyed in the utterance (p88) and that "*ne* is chosen when the speaker assumes that that he or she has less (or about the same amount of) access to and/or possession of the information and wishes to concentrate on feelings and attitude more than on information(p88)". When *yo* and *ne* are combined, they can "evoke or communicate information not shared while simultaneously adding information about interpersonal affect (p90). With such discourse and interpersonal functions, the word string is diagnosed as 'Strongly Agree' on pragmatic function (D). When this formula is employed in conversation it has prominent prosodic pattern, i.e. *ne* is pronounced with high pitch. With this e-mail data, the emoticon '~...' (see Appendix) appears to expresses the writer's

emotion and plays the same role as the prosody. 'Strongly Agree' on the performance indication (F) is given. With clear evidence in pragmatic function and performance indication, 'Strongly Agree' on L is given. Without direct evidence, 'Agree' is given to idiolect (E) and previous encounter (H).

If we look inside the English part, there is another formulaic English frame 'I remember [clause]' which is verified as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	A	A	N	N	A	N	N	N	A

Table 15 Formulaicity in 'I remember [CLAUSE]'

The wordstring has a discourse function of introducing the past event- 'Agree' on D and she might have encountered and might use it- 'Agree' on E and H. The evidence is rather weaker than the Japanese frame- 'Agree' on L. This example can be seen as the combination of three formulaic frames (see Figure 2). The occurrence of the English frame (3) inside the gap of two other frames (1) and (2) will reinforce Backus's position even more (see figure 2). Code-switching occurs at the boundary of the formulaic frame.

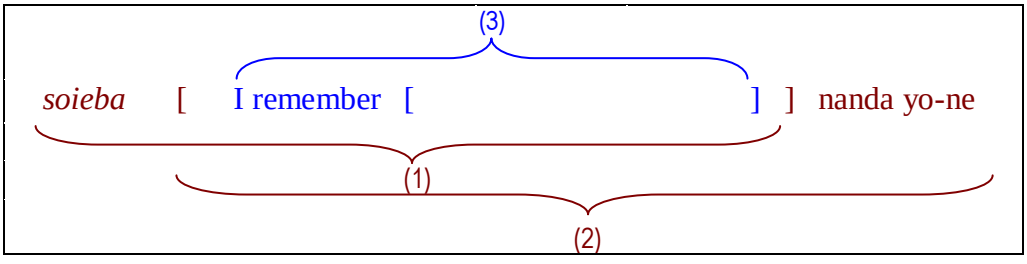


Figure 2 Frames in '*soieba* [ ]*nanda yo-ne*'

3.2.2 [TOPIC] wa [COMMENT] nanda

The following example occurs after the story about the celebrity finishes. Jennifer changes the topic to a story about herself.

(21) me *wa*, i'm on my last week of term, and working on this project *nanda*
TOP COP
{ As for me, I'm on my last week of term and working on this project }

The Japanese topic marker *wa* is employed to introduce a new topic. The other Japanese element *nanda* works as a copula which has the functions of emphasizing or confirmation. Nishimura (1989) argues that the use of *wa* in Japanese-English code-switching constructs topic-comment structure in which a topic marked by *wa* is followed by an English clause. Her example "She *wa*, took her a month to come home *yo*[2]" (Nishimura, 1989:371) has a similar structure to ours, i.e. English pronoun + *wa* + English VP (the subject 'it' doesn't occur, hence not a clause) + Japanese FP. With our example, the formulaicity of the combination [TOPIC] *wa* [COMMENT] *nanda* is analyzed as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	N	N	N	N	N	N	N	N	N

Table 16 'Formulaicity in [TOPIC] *wa* [COMMENT] *nanda*'

This pattern doesn't score 'Agree' or 'Strongly Agree' in any criteria. For instance, the topic marker *wa* is employed to introduce a new topic and it appears to have discourse function. However it is employed to build a novel phrase and there is no evidence of formulaicity-'N'

[2] FP

on D. Nishimura (1989, 371) finds that the use of 'me-*wa*' is common among Japanese-Americans or Canadians. There is a possibility that 'me *wa* [COMMENT] *nanda*' is a formulaic frame in its own right. However this dataset is too small to contain other examples and it is difficult to speculate on the occurrence of the bilingual wordstring 'me *wa*'.

3.2.3 demo [CLAUSE] kana

Before the following example, she mentions that she is busy moving out from her dormitory and planning to meet her friends from high school.

(22) *demo* it will be a *ii* break *ka-na*
but good QP-FP
{ but it might be a good break may be?}

The combination of the discourse marker for contrast *demo* and the interpersonal particle for uncertainty *ka-na* functions to express a different opinion from the previous context - 'Strongly Agree' on criterion D. We can safely define *demo* [ ] *ka-na* as a formulaic frame. There is another Japanese item *ii* which is not integrated into the English clause 'it will be a [ ] break' because the indefinite article before a vowel should be 'an' instead of 'a'. There is a possibility that *ii* also contributes to form a formulaic frame. The following Japanese monolingual example is made up by the author.

(23) *demo* [*kore* *mo*] *ii* [*kikai*] *ka-na*
this too good chance QP-FP
{ but this might be a good chance, too}

The first slot can be filled with another topic NP, e.g. *watashi* (I) *niwa* (TOPIC) and the second slot can be filled with a NOUN, e.g. *omoide* (memory) or *benkyoo* (study). Hence there is a possibility that the Japanese frame with the slots *demo*[TOPIC NP] *ii* [NOUN] *kana* can be formulaic. Its formulacity is verified as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	SA	A	A	A	A	N	N	N	SA

Table 17 Formulaicity in '*demo* [TOPIC NP] *ii* [NOUN] *kana*'

This frame is employed to suggest mildly to someone that something is a good thing to do although it doesn't seem so- 'Strongly Agree' on D. This might have been acquired as a whole and will be used in this form-'Agree' on H and E. Since the English article doesn't recognize the vowel in *ii* -'Agree' on F. The evident pragmatic function leads to 'Strongly Agree' on L. The items inserted in the first slot here is the English wordstring 'it will be a'. This is not a syntactic constituent either.

There might be some formulaicity in the bilingual clause 'it will be a *ii* break', though intuitively it seems unlikely. The English frame 'it will be a [ ]' and the bilingual wordstring *ii* break are analyzed separately.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	N	A	A	N	N	N	N	N	A

Table 18 Formulaicity in 'it will be a [ ]'

The use of 'a' in front of vowel [although it is Japanese] can be an indication of

formulaicity-'Agree' on F. The same form will be employed by the speaker-without direct evidence, 'Agree' on E. This frame doesn't show strong formulaicity in this limited data set.

The other wordstring, namely, *ii* break doesn't show strong formulaicity, either (see table 17).

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	N	N	A	N	N	A	N	N	N	N

Table 19 Formulaicity in '*ii* break'

Since she is a bilingual, the combination of Japanese and English could even be lexicalized and treated as a single item- 'Agree' on E and H.

Although the formulaicity in 'it will be a [ ]' and '*ii* break' doesn't appear to be strong, the Japanese frame *demo* [ ] *ii* [ ] *ka-na* shows formulaicity. CS occurs in the gap not inside the formula. This supports Backus' argument.

3.2.4 *ja* [CLAUSE] *mata ne*

The closing part in both messages has similar structure, i.e. *jya* [CLAUSE] *mata ne* (see the following examples).

(24) *jya,* i hope you have a nice birthday :) *mata ne~ baiba~i* :)
well again FP bye-bye
{ Well, I hope you have a nice birthday, talk to you again bye-bye}

(25) *jya,* i'll *mata* write to you soon
well again
{ Well, I'll write to you again soon}
i'll *hokokusuru* you how it was :)
report
{ I'll report to you how it was}
mata ne
again FP
{Talk to you again}

Two formulas with a gap can be seen in both examples, namely *jya* [ ] and [ ] *mata ne*.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	N	N	SA	SA	A	A	N	A	N	N	N	SA

Table 20 Formulaicity in '*jya* [ ]'

The wordstring *jya* is a colloquial variation of *soredewa* (then). Backus pddThe use of *jya* marks a topic shift and predicts that the speaker is going to say farewell. The clause in the slot after *ja* is about something in the future that the speaker is willing to do or hopes will happen- 'Strongly Agree' on C and it has a function of closing and greeting- 'Strongly Agree' on D. 'We don't have many examples but it is evident that she will employ this wordstring again when the same situation arises- 'Agree' on E. With strong evidence on C and D, this is an underlying formulaic frame- 'Strongly Agree' on L.

Having seen that the frame *ja* [ ] *matane* is a combination of two formulaic frames

ja [ ] and [ ] *matane*, one can predict that the gap between the two frames is where CS will occur. In examples 19 an English clause occurs and in example 20 two bilingual clauses which start and finish with English occur. That is, CS occurs between formulaic frames not inside them, which supports Backus' claim.

The other formula [CLAUSE] *mata ne* is analyzed as follows.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation /register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	A	A	SA	SA	A	SA	N	A	N	N	N	SA

Table 21 Formulaicity in '[ ] *mata ne*'

The wordstring *mata ne* is a contracted form of *mata* (again) *ai* (meet) *mashoo* (a politeness marker + let's) *ne* (FP)', i.e. 'let's meet again'. With the missing verb, this formula is grammatically and semantically irregular, 'Agree' on A and B. This formula is employed to express closing and farewell to the interlocutor- 'Strongly Agree' on C and D. The emoticon :) right before *mata ne* is a sign of performance indicator-'Strongly Agree' on F.

With example (24) the English clause inside the slot 'i hope you have a nice [personal experiential event]' can be seen as another formulaic frame as table 18 indicates. This clause is grammatically or semantically usual- 'Strongly Agree' on A and B. It is specific to the situation of the addressee's personal experiential event—'Strongly Agree' on C. It has a function of wishing good luck- 'Strongly Agree' on D. She will use the same phrase again-

'Agree'. The emoticon :) indicates performance demarcation- 'Strongly Agree' on F.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	SA	SA	A	SA	N	A	N	N	N	SA

Table 22 Formulacity in 'i hope you have a nice [ ]'

In the gap in example 25 there is a formulaic wordstring. In the bilingual clause 'I'll *mata* (again) write to you soon', 'write to you' appears to be formulaic therefore the Japanese adverb *mata* occurs outside the formula. The diagnostics are applied to this formula as follows:

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	SD	SD	SA	SA	A	N	N	A	N	N	N	N

Table 23 Formulaicity in 'write to you soon'

The wordstring is grammatically or semantically regular- 'Strongly Disagree' on A and B. This wordstring is employed as closing at the end of a letter- 'Strongly Agree' on C. It has function of expressing farewell- 'Strongly Agree' on D. With the next clause in example 25, 'I'll *hookokusuru* (report) you how it was', CS occurs between the verb and the object.

However with this clause CS doesn't occur at the verb , i.e. 'write' because 'write to you' is formulaic. This is further evidence that CS occurs outside the formula.

3.2.5 *yappari* [CLAUSE] *da yo-ne*

There are two examples of the combination of two frames, i.e. the modal adverb *yappari* followed by a gap and the copula *d*a with the sentence final particles *yo ne* following the gap.

(26) *yappari,* Idaho *to ie- ba* potatoes *da yo-ne~* :)
After all QT Say COND COP FP-FP
{ If you say Idaho, you think of potatoes, after all, don't you?}

(27) *yappari,* it's really difficult to have the reunion that we've been on about to happen
After all
da yo-ne~ :)
COP FP-FP
{After all it's really difficult to have the reunion that we've been on about to happen, isn't it?}

The modal adverb *yappari* is employed when something happens as expected. The formulacity of the frame *yappari* [ ] is diagnosed using the 12 criteria.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation / register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	N	N	N	SA	A	N	N	A	N	N	N	A

Table 24 'Formulaicity in *yappari* [ ]'

An expected event or known fact will come in the gap following *yahari*. This formula has a

discourse function-'Strongly Agree' on pragmatic function (D).

The combination of the copula *da* and the sentence final articles, *yo-ne*, following the gap appears to be a formula (see table 25).

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	N	N	N	SA	A	SA	A	A	N	N	N	SA

Table 25 Formulaicity in '[ ] *da yo-ne*'

The sentence final particles *yo-ne* express the interpersonal functions of 'asserting information' and 'seeking agreement'(see 3.2.1)- 'Strongly Agree' on the pragmatic function (D). The sign for prolonged sound "~" and the emoticon of smiley ":)" show performance demarcation- 'Strongly Agree' on F. The two occurrences in one message are an indication of idiolect-'Agree' on E. This is a pragmatic/ discourse frame- 'Strongly Agree' on L.

With example (26), the material inside the slot is bilingual. This wordstring '[NP] *to ieba* [NP]' appears to be formulaic, furthermore the whole structure of '*yappari* [NP] *to ieba* [NP] *da yo-ne*' could be formulaic, with, probably, the constraint that the noun in the second slot reminds you of the noun in the first slot, e.g. *yappari* [Wales] *to ieba* [rugby] *da*

yo-ne meaning 'If you say Wales, you think of rugby after all, don't you?' In either case, CS occurs at the boundary of the formulas, which supports Backus' claim.

3.2.6 *sekkaku* [CLAUSE] *nanoni*

Before and after the following example, Jennifer is talking about the difficulty of having a reunion. The ellipsis at the end indicates an omission which would be 'it's a pity that there wasn't a reunion there'.

(28) J : you *sekkaku* went to *Osaka* last winter *na* *noni*…
given that COP CONJ
{Given that you made an effort to go to Osaka last winter}

The combination of two frames can be seen here, i.e. *sekkaku* [ ] and [ ] *na noni*.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	N	N	N	SA	N	A	N	A	N	N	N	SA

Table 26 Formulicity in '*sekkaku* [VP]'

The gap after *sekkaku* is filled with "the event which needs effort". It expresses the speaker's disappointment that something hasn't happened despite an effort- 'Strongly Agree' on the pragmatic function (D). There is no appropriate cognate in English which can express the meaning of *sekkaku*. The reason why she starts the clause with 'you' in English and changes into Japanese *sekkaku* might be that she has a lexical gap in English for the meaning expressed by *sekkaku*. She will probably use this form again- 'Agree' on E and

she must have learned as a whole- 'Agree' on H. Since there is no direct evidence, 'Strongly Agree' are not giveFn to these criteria. With obvious pragmatic function, 'Strongly Agree' is given to L.

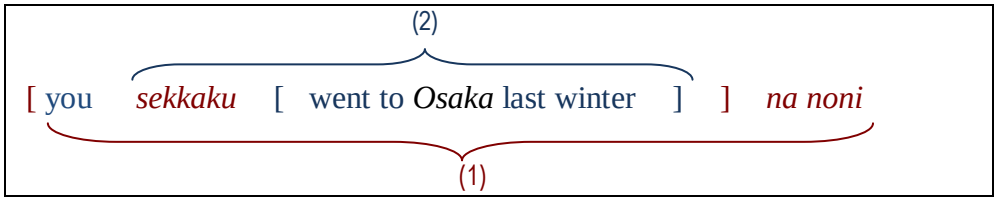
Another formula consists of the copula *na*, co-occurs with *noni*. This copula occurs after a noun in Japanese.

	A	B	C	D	E	F	G	H	I	J	K	L
Criteria	Grammatical irregularity	Semantic opacity	Situation/register/genre specificity	Pragmatic function	Idiolect	Performance indication	Grammatical/ lexical indication	Previous encounter	Derivation	Inappropriate application	Mismatch with maturation	Underlying frame
Judgment	N	N	N	SA	A	S A	A	SA	N	N	N	SA

Table 27 Formulaicity '[CLAUSE] *na noni*'

In the same way as the other formula *sekkaku* this formula shows the speaker's disappointment – 'Strongly Agree' on pragmatic function (D). The occurrence of the copula *na* after a VP instead of NP implies formulaicity of *nanoni*- 'Agree' on G. The three dots '…' at the end reinforced the feeling of disappointment 'Strongly Agree' on the performance indication (F). With the pragmatic function, we should assign 'Strongly Agree' on L.

The combination of the two formulaic frames can be represented as figure 3.



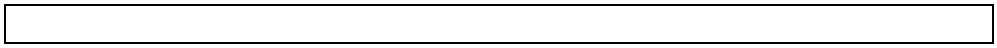


Figure 3 Frames in '*sekkaku* [ ] *na noni*'

The bilingual clause starting with 'you' and finishing with 'winter' occurs in the gap of the bigger Japanese frame [ ] *nanoni*- (1). Inside the gap of the frame (1), another Japanese frame (2) starting with *sekkaku* is employed. The gap of (2) is filled with the English VP (with the proper noun *Osaka*).

4 Conclusion

In order to answer the research question of whether code-switching occurs at the boundary of formulaic sequences rather than syntactic constituents, we have identified examples from alternational and composite code-switching in the two datasets. Our main dataset, i.e. the two siblings' speech, yields a specific pattern of alternational CS. English frames with slots have discourse/pragmatic functions and Japanese clauses convey new information. In contrast, our second small dataset, i.e. bilingual adult's e-mail messages, shows Japanese combined frames with slots which have discourse/pragmatic functions and switched English clauses conveying new information. The analysis shows that ten out of twelve patterns of frames are formulaic (see table 28).

One Japanese frame from the second dataset, [Jp-TOPIC] *wa* [COMMENT] *nanda* doesn't show any formulaicity in our diagnosis (see 3.2.2). With this pattern, further exploration in a bigger dataset has been suggested. One English frame from the portmanteau structure, 'it was' doesn't show formulaicity either, nevertheless the beginning part of the switched Japanese clause turns out to be formulaic (see 1.4). That means code-switching happens at the boundary of the formulaic sequence. The five patterns of the Japanese frames, i.e. except for the [TOPIC] *wa* [COMMENT] *nanda* pattern, are combinations of two or more frames. Each frame is diagnosed as formulaic (see 3.2.1, 3.2.3,

3.2.4, 3.2.5 and 3.2.6). The slots of the frames can be filled with either other formulaic sequences or novel strings. The data shows that code-switching occurs inside the formulaic frames but it only occurs at the boundary of fixed and variable items as well as the boundary of two formulas.

	patterns	Formulaicity in the frame	Formulaicity in the switched item	Multiple frame
1st dataset - English Frame	it's[Jp-CLAUSE]	✓		
	now is [Jp-CLAUSE]	✓		
	it was / Jp-CLAUSE		✓	
	I want to be [Jp-CLAUSE]	✓	✓	✓
	[Jp-TOPIC] is [Jp-PREDICATE]	✓		
	it's [Jp-TOPIC] is [Jp-PREDICATE] right	✓		✓
2nd dataset - Japanese Frame	*soo ie ba* [CLAUSE] *nanda* *yo-ne* talkin about~ COP FP	✓	✓	✓
	[TOPIC] *wa* [COMMENT] *nanda* TOP COP			
	demo [TOPIC] *ii* [NP] *kana* but good FP	✓	✓	✓
	ja, [CLAUSE] *mata* *ne* well again FP	✓	✓	✓
	yappari [CLAUSE] *da* *yo-ne* after all COP FP	✓	✓	✓
	sekkaku [VP] *na* *noni* despite the effort COP CONJ	✓		✓

Table 28 Formulaicity in frames

Appendix

Jennifer's e-mail message no.1

1. *ano* Hiromi GO*????*
   {(you mean) that Hiromi Go}
2. *sugo~~~~i!*
   {That's cool!}
3. *so~ieba* i remember
   {Talking about him, I remember}
4. he got married to this rich japanese lady

5. who lives in NY,

6. and he moved over there *nanda-yo-ne~...*
   { and he moved over there didn't he?}
7. me *wa*, i'm on my last week of term, and working on this project *nanda*.
   {Talking about me, I'm on my last week of term and working on this project}
8. i'm gonna see Ben & Mike tomorrow,

9. probably meet up in china town and hv a nice dinner or something,

10. but i hv to move out of my hall by Saturday

11. so *kekko* *isogashiku-shi-te-masu...*
    {so I'm quite busy}
12. *demo* it will be a *ii* break *ka-na ?*
    {but it will be a good break maybe?}
13. *demo* *yoku* *kangae-tara-sa,*
    {but if I think well}
14. it's really weird to meet those two in london.

15. *zenzen so~zo- tsukanaina~...*
    {I can't imagine at all}
16. *okashiine, jinseitte...*
    {Life is strange isn't it?}
17. *ahahaha.. babakusa~i...*
    {(Laughing) it sounds like an old woman}
18. anyways, i better get back to my *daigaku no* coursework...
    {Anyways I better get back to my coursework of the university}
19. *fu....* *owara-seru-zo~~~~...*
    {(sigh) I'll finish it}
20. *jya,* i'll *mata* write to you soon,
    {Well, I'll write to you again soon}
21. i'll *hokokusuru* you how it was :)
    {I'll report to you how it was}
22. *matane~*
    {Talk to you again}

Jennifer's e-mail no.2

1. haron :) *hisashiburi~....*
   {hello long time no see}
2. *ma~ nanto ii-masu-ka,*
   {well, I don't know how to start but...}
3. i suppose

4. it's pretty obvious

5. why i'm sending this email

6. but... *haha...* just wanted to wish you a happy birthday :)
   (laugh)
7. job search *toka gambatterun kana*?
   {Are you working hard on job search?}
8. *yappari,* Idaho *to ieba* potatoes *dayone~* :)
   {If you say Idaho, you think of potatoes, after all, don't you?}
9. *jagaimo daisuki nandayoneee, watashi.... iinaaaa....*
   {I love potatoes, you know, I envy you}
10. *tte, sonna koto wa do~demo ii… haha…*
    {Anyway, it doesn't matter (laugh)}
11. i think

10. a lot of us are now busy searching for jobs or finishing up their dissertations,

11. *yappri* it's really difficult to have the reunion that we've been on about to happen *dayone...*
    {After all it's really difficult to have the reunion that we've been on about to happen, isn't it?}
12. you sekkaku went to osaka last winter *nanoni*...
    {Given that you made an effort to go to Osaka laws winter}
13. *ma, shikatanaikedo...*
    {Well, it can't be helped..}
14. i've probably said this so many times,

15. but it would really be great to meet up together again *dayone*...
    (wouldn't it?)
16. *jya,* i hope you have a nice birthday :) matane~ baiba~i :)
    {Well, I hope you have a nice birthday, talk to you again, bye bye}

17. luv, jenni-

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