Japanese/English Code-mixing Part II: Sublexical Mixing

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Abstract:
拘束形態素を越えて起こる言語混成が，Myers-Scotton (1990) の MLF モデルの中で示され議論されている。この MLF モデルによれば，基底言語 (Matrix Language) が形態素配列や生産的なシステム形態素，すなわち，屈折や機能語を規定する。一見すると，我々のアメリカ人二言語使用者のデータはこれに反し，英語の屈折形態素が日本語の動詞上に現れる。しかし，より詳しく調査してみた結果，これは原理に違反しておらず，むしろ原理を支持していることが判明した。英語の動詞屈折以外の拘束形態素—複数の '-s'，比較級の '-er'，抽象名詞化の '-ness'，副詞化の '-ly'，形容詞化の '-ish' など—が日本語の語幹に接辞として現れる例も，我々のデータに含まれている。MLF モデルは，動詞屈折において何も役割を果たしていない拘束形態素にたいして何の説明も与えていない。むしろ，これらのデータは，副語彙混合 (Sublexical Mixing) という新しい概念を支持しているものと考えられる。すなわち，埋め込まれている言語から語幹を取り出し，それを基底言語の語形成規則に入力し，基底言語の内容形態素 (content morpheme) の位置にこれを出力するというプロセスが関与しているのではないかと考えられる。

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Appendix: List of Abbreviations Used in the Glosses

1. Introduction

1.1 Statement of Purpose

Code-mixing and code-swtiching are natural linguistic phenomena that occurs in bilingual communities around the world. In Part I: Language Assignment, hybrid sentences were examined syntactically to argue for a distinction of these terms. In this Part II: Sublexical Mixing, we turn our attention to the hybrid word, in other words, the word which contains a free morpheme from one language, and a bound morpheme from another. Myers-Scotton (1990) is reviewed for morphological considerations in analyzing data involving switches across morpheme boundaries, or more accurately stated, data with sublexical mixing.

Zwicky and Pullum (1983) state that two types of bound morphemes are found attached to free words: clitics and affixes. The former occur quite freely in my data, in the form of the English possessive *'s* and the contracted form of *is*. Though I will not go into this type, it should be noted that clitics pose no problem to the assumption that constituents are mixed, as simple clitics require a node separate from the words to which they are attached. However, clitics are by definition phonologically bound morphemes, and therefore these examples indicate that English bound morphemes can attach to Japanese words which are not phonologically integrated into English.

The conditions governing affixes, on the other hand, are morphological and/or lexical in character, and are concerned with the substructure of words. The following discussion focuses on non-clitic bound morphemes.

1.2 Subjects and Data

All code-mixed sentences used in this study are from the corpus described in Japanese/English Code-mixing Part I: Language Assignment, section 1.2 unless otherwise noted. Again we note that the data

include utterances from letters, notes, and tapes exchanged between three female missionary kids from fourth grade through twelth grade. The portions of the letters written in the Japanese writing system are treated as Japanese and the portions written in the Roman alphabet are treated as English. Personal names have been altered to protect identities.

2. Literature Review

Earlier constraints proposed in regard to bound morphemes in code-mixing data include Timms (1975). Her first constraint restricts prenominal subjects and objects to the same language as the verb which they immediately precede. This refers to the pronominal clitics in Spanish. Pfaff (1979) proposed the Clitic Pronoun Constraint which prohibits switching between the clitic pronoun and the verb to which it is attached, as well. Poplack (1978) expanded this constraint to include all and any bound morphemes and that to which they attach. Her Free Morpheme Constraint states:

> a switch may not occur between a bound morpheme and a lexical item unless the latter has been phonologically integrated into the language of the bound morpheme. (p. 3)

Joshi's (1984) theory of nonswitchability of closed class items includes possessives, tense, and helping verbs, all of which, incidently, manifest themselves as bound morphemes in either English or Japanese.

More recently, Myers-Scotton (1990) reviews all available data of code-mixing in (mini)communities and formalizes a comprehensive hierarchical model which recognizes intraword switching, to a point. In the following, Myers-Scotton's model will be tested against data from bilingual Americans in Japan.

An Overview of the Matrix Language Frame Model

Myers-Scotton calls her proposed model the Matrix Language Frame Model (MLF model). It is said to represent a two stage process. First, a matrix language (ML) is selected by the speaker, with alterna-

tion at any constituent level. The ML also referred to as the 'frame', consists of at least system morphemes, which determine the constituent order of the utterance. These system morphemes are said to be 'non-switchable'. Secondly, lexemes are inserted into the slots for content morphemes from either (or more) languages. In addition, the difference in system morphemes and content morphemes appears to be the crucial point in the applicability of this model to the data at hand.

Myers-Scotton's main points are highlighted in Table I. The model claims the ML to have dominance over the embedded language (EL). The ML is generally predictable as it is usually the language which speakers have higher proficiency in and is the more dominant language used in the community. This model identifies three different kinds of constituents: 1) ML + EL constituents, 2) ML islands, and 3) EL islands. Islands, here, refer to constituents which consist of "a unit showing internal structural dependency" (Myers-Scotton 1990: 6).

Table I: Matrix Language Frame Model

Matrix Language Hypothesis-

The Morpheme Order Principle
Morpheme order will be that of ML in ML + EL constituents consisting of any number of ML morphemes and (generally) singly-occurring EL morphemes. (p. 10)

The System Morpheme Principle
All 'relationally active' system morphemes will come from the ML in ML + EL constituents.... System morphemes are considered 'relationally active' when they govern/are congruent with other system morphemes in the utterance outside their relationship with their own head. (p 10)

Blocking Hypothesis
Even if the EL realizes a given grammatical category as a content morpheme, if it is realized as a system morpheme in the ML, the ML blocks the occurrence of that EL content morpheme in the ML + EL constituents. The ML also blocks an EL content morpheme if it is unrealized in the ML with a congruent content morpheme; non-congruence results when there is not a match for an EL morpheme in the ML regarding the subcategorization of its head in the maximal projection of which it is a complement. (p. 23)

The EL Trigger Hypothesis
This hypothesis predicts the obligatory occurrence of EL islands. Accessing any EL morphemes not licensed under the ML or Blocking Hypothesis triggers the process to inhibit all the ML morphemes and complete the current constituent as an EL island. (p25)

The EL Hierarchy Hypothesis
This hypothesis states when optional EL islands are expected.
The more peripheral a constituent is, in regard to the main argument of the verb, the more likely it is to be an EL island. (p. 26)

3. Data

According to the MLF model, the ML sets the morpheme order and the productive system morphemes, namely inflections and function words. Besides having a verb final restriction on an otherwise relatively free word order, Japanese uses postpositional particles to help express nominal relations among other features. There are three parts of speech that inflect in Japanese: verbs, adjectives, and auxiliary verbs (typically occurring as suffixes). Japanese inflection is agglutinative and may involve a string of suffixes such as in (1)

(1) Vstem-causative-passive-aspect-desiderative-Neg-tense
(Shibatani 1990 p. 307)

An example of this would be:

(2) *uta- wase- rare -te i- taku- nakat -ta*
sing CAU- PASS- PROG- DES- NEG- PAST
'(I) didn't want to continue to be made to sing.'

3.1 Do verb affixing

In Japanese matrix utterances involving English verbs, the inflection is placed not on the English verb, but rather on a dummy verb suru ('do') which is suffixed onto the English 'bare form' of the verb, as in (3) through (8) below.

present:

(3) Walk-*suru desyoo, soko made*
do right? there up-to
'So you walk up to there, right?'

past:

(4) *Korede* move-*sita no wa* 7th time.
with-this did NOM TOP
'This is the 7th time [I] moved.'

present progressive:

(5) *Sateto, ima* chew gum *-siteru tokoro kika-se-te*
all right, now do-PROG-PRES place listen-CAUS-GER-
-yaru ka?
allow QUES
'All right, now shall [I] let you listen to [me] chewing gum?'

passive:

(6) *Tabun* gross out *-sare-te* throw up-*suru daroo.*
probably do-PASS -CONJ do-PRES be-likely
'[You]'ll probably be grossed out and throw up.'

imperative:

(7) *Kondo wa motto* talk-*siro na.*
next-time TOP more do-IMP O.K.
'Next time talk more, OK.'

desiderative:

(8) *Demo* fly-*sitai to-iu no wa hontoo.*
but do-DES-PRES COMP NOMI TOP true
'But that (I) want to fly is true.'

The suffixing of *suru* is common in Japanese and occurs regularly with Sino-Japanese compounds and and other foreign loan words. As (5) and (6) indicate, bound morphemes are affixed to English verb compounds freely. Rarely do foreign words ever become so integrated into the language that they would ever be inflected directly[1].

3.2 Verb Inflection

The English ML with Japanese verbs are not as simple. There appears to be some inconsistency in the attachment of English verbal inflections on Japanese verbs. Examine (9) through (14), noting the percentage of occurrence.

Verbal Inflection: -s, 100%

(9) *Temee ga ireba minna onegai-suru* -s to you to
you (vulgar) NOM if-present everyone request-do-PRES

baito-suru.
part-time-job-do-PRES
'When you're here everyone asks you to do part-time jobs.'

(10) She *dasu*-s so much *sukudai!*
give-out-PRES homework
'She gives out so much homework!'

Verbal Inflection: -ed, 0%

(11)... but I *kotowat-ta.*
refuse-PAST
'... but I refused.'

(12) We made a goal that wasn't *mitome-rare-ta.*
acknowledge-PASS-PAST
'We made a goal that wasn't acknowledged.'

Verbal Inflection: -ing (50%)

(13) So many missionaries are *kie-te-ru* -ing from Hokkaido.
disappear-PROG-PRES
'So many missionaries are disappearing from Hokkaido.'

(14) She was *buzyoku-si-te-ru* my mother and *monku-it-te-ru...*
insult-do-PROG-PRES complaint-do-PROG-PRES
'She was insulting my mother and complaining...'

At first glance, the inconsistency of the English inflection on the Japanese verb appears to be a violation of Myers-Scotton's System Morpheme Principle. However, a closer look will show that not only does it not violate it, the data cast a strong support in favor of the principle.

a. (9) and (10) show that the Japanese verb is inflected for non-past[2]. In addition, it receives the English inflection which marks the feature third person singular, present, 100% of the time.

b. (11) and (12) show that the Japanese verb is marked for past tense and receives no English inflection. The English -ed occurs 0% of the time.

c. (13) and (14), the Japanese verbs are marked for aspect in its

non-past tense form or basic form. It takes *-ing* 50% of the time. Whether it takes the *-ing* suffix or not, the verb in Japanese as EL never inflects for past tense. The tense is carried instead by the English copula, a function word, and therefore a system morpheme. The copula also inflects for number.

Myers-Scotton's System Morpheme Principle states that all 'relationally active' system morphemes will come from the ML. According to her explanation of 'relationally active', the system morphemes must have an agreement relation outside of their own head. English verb inflection *-s* agrees with the subject and is therefore indispensible. The English verb inflection *-ed*, on the other hand, does not agree with anything else in the utterance and therefore is not 'relationally active'. Since it is not required for agreement, the Japanese verb carries the tense marker.

As for the progressive forms, it seems the presence of the copula (which is relationally active, as already mentioned) may or may not trigger the suffix *-ing*. This may be due to the fact that *be* and *-ing* constititute a kind of unit, yet, they do not agree with each other. The need to add the *-ing* to complete the *be+ing* unit accounts for 50% of the occurrence, and the fact that they do not agree with each other may explain why it is only 50%. When the *-ing* is suffixed to the embedded verb, the Japanese verb's aspectual inflection is not dropped.[3] 'Double morphology' is recognized by Myers-Scotton, and is not considered a violation of her hypothesis.

What we witness here, then, is evidence of the bilingual's subconscious distribution of grammatical features across languages.

3.3 Non-inflectional Morphemes

Bound morphemes from one language, which are not inflected for verbs, and not system morphemes, are also found to affix stems from the other language in these data (Myers-Scotton does not address them). While they are considerably fewer in number, they are frequent enough to be acknowledged. The repertoire of bound morphemes on L2 stems include a wide range of functions, including plurals, comparatives, and derivational suffixes. Examine (15) - (19)

for English bound morphemes on Japanese words in an English matrix.

ML-English, EL-Japanese; —English Bound morpheme

(15) Your *tegami* -s sound so *sabisii.*
letter(s) sad-PRESa
'Your letters sound so sad.'

(16) But we told them how it got *kantan* -er the second day...
easy
'But we told them how it got easier the second day...'

(17)... so full of happiness and *siawase* -ness and all...
happy, content
'... so full of happiness and [happiness] and all...'

(18)... was singing *onchi* -ly along with the radio.
off-tune
'... was singing off-tune along with the radio.'

(19) When we got there it was gray and *tuyu* -ish.
misty (or monsoon)
'When we got there it was gray and misty.'

You will notice that the above examples are of insertions of Japanese nouns and adjectives into an English frame. However, there are other kinds of mixing as well. (20) – (21) are examples of Japanese bound morphemes attached to English words in an English matrix.

ML- English, EL- Japanese, - Japanese Bound Morpheme

(20) You're *onnarasii*, more self-confident and *nanka* American-*ppoi.*
ladyish kind of -ish
'You're ladyish, more self-confident and kind of American-ish.'

(21) She's so America-*kusai.*
stinks of
'She's so American-like.'

Example (24) shows us a rare case of an English prefix on a

Japanese stem, in a Japanese matrix.

ML- Japanese, EL-English, English Bound morpheme

(22) *Atama mo ii-si,* non-*sukebe de...*
head also good-and perverted and
'Not only (is he) smart but (he's) non-perverted and ...'

The next two examples show Japanese bound morphemes on English stems in a Japanese matrix.

ML-Japanese, EL-English, Japanese Bound Morpheme

(23) *Zettai* this week-*tyuu ni* send off *-suru zo*
definately within ADV do-PRES
'I 'll send it off definately within this week.'

(24) ... *nantonaku* John-*mitai dakedo zenzen tigau.*
somewhat -like but completely different
'... somewhat John-like but completely different.'

It should be noted that (23) and (24) are phrasal affixes. Therefore, even though *this week* corresponds to one word in Japanese, and *tyuu* cannot occur with week alone, this week seems to be acceptable. Also in (22) the dummy *suru* is suffixed to English *send off* which is treated as one unit (see figure 1).

Figure 1:

In Japanese, there are the morphemes *-na* and *-ni* which mark certain adjectives and adverbs respectively. Examples of these are found in (25) and (26).

(25) *Sizuka-na machi*
quiet-adj town
'a quiet town'

(26) *Sizuka-ni ugoku*
quiet-adv move
'move quietly'

In fact, bilinguals use these affixes with English morphemes, as found in (27)

(27) Mary *ga* *situkoku* boring *-na* movie *no* *hanasi* *o*
NOM persistently -ADV GEN story ACC
si-te-ta.
do-PROG-PAST
'Mary was persistently telling me a story about a boring movie.'

While these morphemes are considered affixes, and one often hears about the '*na-* type adjectives', when adjectives are conjoined, the first adjective is in the gerund form, and only the last adjective receives this affix, as in (28)

(28) *Utukushiku-te sizuka-na machi*
beautiful-and quiet-ADJ town
'a beautiful and quiet town'

and for the adverbs, to is used to conjoin the adjectives to transform them into adverbs, as done in (29)

(29) *Yappari* efficient *to* economical *-ni* *yari-tai-n-dat-tara*
After-all and -ADV do-DES-NOMI-COP-if
booken *wa* *muri* *ka-na.*
adventures TOP impossible 'I wonder'
'If we want to do this efficiently and economically, I don't suppose we should be trying out new things after all.'

Again, these qualify as phrasal affixes as well. In the cases involving phrasal affixes, it appears that the affixes tend to be in the language of the matrix. The EL phrase is treated as a lexical unit. The conditions governing affixes are morphological and/or lexical in character, and are concerned with the substructure of the set of words. Unlike clitics, affixes do not occur independently in the syntax and do

not form a separate constituent from the stem. I suspect that the process involved here takes a stem from EL and puts into a ML word formation rule. This is then put in the content morpheme slot of the ML.

4. Conclusion

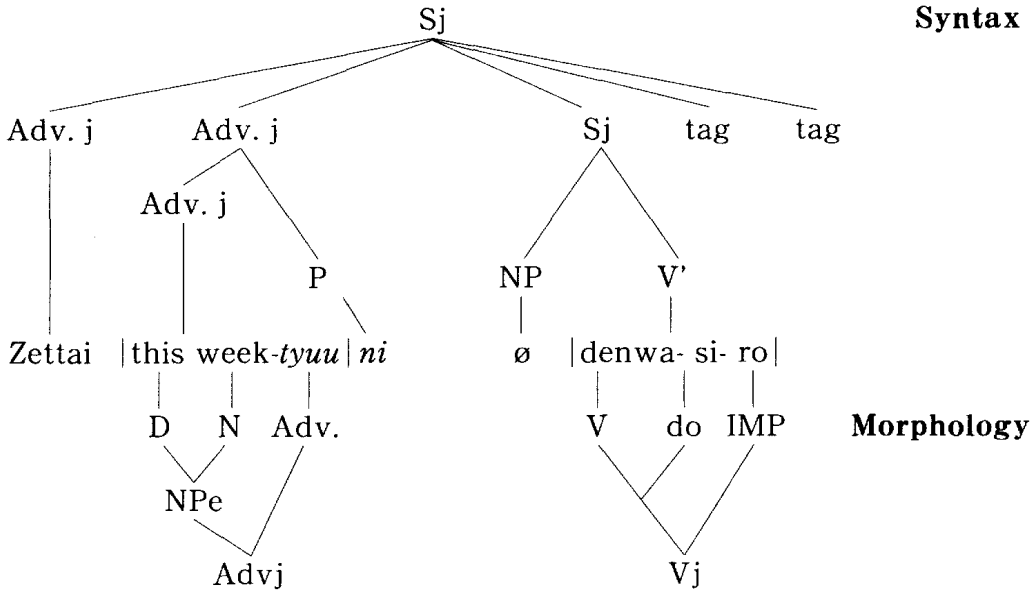
Myers-Scotton's MLF model accounted well for the data which involved English verb inflections with Japanese verbs in the Japanese/English code-mixing data of American bilinguals. In particular, the System Morpheme Principle helps to explain the otherwise seemingly inconsistent data. However, while the data involving switching across bound morphemes support the MLF Model in terms of verb inflections, it is insufficient in explaining the presence of bound morphemes which had no play in verbal inflection, giving support to the notion of non-syntactic **sublexical mixing**[4].

Notes:

1. In recent years it has become acceptable to inflect a limited set of English loan words with a two mora construction, such as *memo-ru*, 'take note', and *demo-ru*, 'demonstrate', as in a protest rally.
2. The problem of segmentation of inflectional endings has remained a problem for centuries. Various linguists, both Japanese and foreign, have proposed inflectional categories and subcategorizations of auxiliaries and conjunctive particles. The term 'non-past indicative' is Bloch's term. Sakuma calls this the 'basic form'. Both appear in Shibatani (1990).
3. If the aspect marking inflection is dropped for the verb when the English marking was in effect, the sentence becomes completely unacceptable:

   * Many people are *kieru* -ing.
   disappear
4. A theoretical framework that could accomodate these two representations is Sadock's (1991) Autolexical Syntax , the theory of parallel grammatical representations, as shown in figure 2 below. While exploring its application is beyond the scope of this paper, the possibilities are promising.

Figure 2



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Appendix:

List of Abbreviations Used in Glosses

ACC accusative
AGNT agent
CAU causative
COMP complementizer
COP copula
DES desiderative
GEN genitive
GER gerund
NEG negative
NOM subject case marker
NOMI nominalizer
PASS passive affix
PAST past tense affix
PRES present tense affix
PROG progressive aspect
QUES question particle
QUOT quotative particle
TOP topic marker
subscript N noun
subscript V verb
subscript A adjective