A study of intrasentential code-switching in 21 Finnish-English bilinguals focuses on the characteristics of two types of switches: those that are fluent and those that reflect repair phenomena. Data are drawn from naturally occurring conversations. Analysis highlights patterns in the use of Finnish case morphology in 550 instances of switched nouns. It was found that the majority of English nouns within Finnish matrix sentences were in accordance with Finnish case morphology, reflecting the government constraint stipulated as a principle of universal grammar, and that most of those were cases of fluent code-switching. Of those nouns that were missing Finnish case morphology, most were accompanied by repair phenomena. Implications for the relationship between repair and syntax are discussed. (MSE)
THE INTERPLAY OF SYNTAX AND DISCOURSE
IN THE EXPLANATION OF FINNISH-ENGLISH CODESWITCHING

In his seminal 1979 paper "The relevance of repair to syntax-for-conversation" Schegloff writes: "...the occurrence of repair in a sentence can have consequences for the shape of the sentence and for the ordering of its elements beyond the consequence embodied by sheer inclusion of the repair element (e.g. the uh)" (Schegloff 1979: 263). In the present paper, looking at naturally occurring bilingual conversations, I will also discuss the relationship of repair and syntax, and I will argue that in addition to causing changes in the shape of the sentence, certain repair phenomena themselves may also mirror near-violations of a syntactic principle, assumed to constrain bilingual codeswitching.

The purpose of the present paper is to explain certain tendencies in Finnish-English intrasentential codeswitching. Please, look at sentences (1) and (2) in the handout:

1. Mää oon koulu+ssa joskus pelannu basketball+ia.  
   'I have school+INE sometimes played +PART  basketball+at school.' S2

2. Se on ostanu [0.22] mm- [0.48] you know [0.27] apartment+Ø.  
   'She has bought [0.22] mm [0.48] you know [0.27] an apartment.'

These sentences are typical examples from my data of conversations by 21 Finnish/English bilinguals. In both sentences, Finnish is the matrix language, and in both sentences the codeswitched noun phrase (basketball in 1, and apartment in 2) is in the object position. The object phrase in sentence (1) conforms to the rules of Finnish syntax: it carries the Finnish partitive case marker. The object phrase in sentence (2) does NOT conform to the rules of Finnish syntax, since according to those rules, the object phrase should here have the accusative case marker, in other words, it should appear in the form apartmentin, instead of the zero-case marked apartment. The switch in (1) is fluent. The switch in (2) is not a fluent switch: the verb on ostanu 'has bought' and its object are separated by pauses and fillers. I will here focus on such phenomena, attempting to search for an explanation of why certain types of switches tend to be fluent, while others are associated with more or less extensive and audible repair phenomena.

The paper is based on several assumptions, and builds on earlier work on codeswitching. First of all I assume that Myers-Scotton's (1992, 1993) Matrix Language Frame Model explains the bulk of my data. Sentence number (1) is a perfect example of the
workings of the Matrix Language Frame Model: the matrix language, Finnish, dictates the fact that the Finnish ending is present in the object. According to the Matrix Language Frame Model, system morphemes, exemplified here by the inflectional suffix (the partitive ending), come from the matrix language. Content morphemes, such as the word basketball here, may come from the embedded language (here English).

The second assumption is based on the work by Poplack, Wheeler and Westwood (1989). They report that in Finnish/English codeswitching there is a tendency of the embedded English elements to be preceded by various "flagging" phenomena. Sentence (2) is an example. The switch is flagged by you know and pausing.

The third assumption complements the other two assumptions. It attempts to find answers to the following questions: First: why does the Finnish partitive ending need to be present in example (1), and the explanation is sought beyond the fact that the matrix language determines the morphosyntactic frame of the sentence. (In other words, the question is: HOW does the matrix language determine this frame.) Second: WHY is the switch in sentence (2) preceded by repair phenomena, and the explanation is sought beyond the descriptive fact that English elements in Finnish matrix sentences are often "flagged". The third assumption is based on the work by Di Sciullo, Muysken and Singh, and their 1986 proposal of a Universal Grammar -based Government Constraint on codeswitching. According to this constraint, codeswitching is possible when there is no government relation between two elements. When a government relation holds, codeswitching is possible only if the governed phrase includes a language-carrying element, the language of which matches the language of the governor. This theory allows other elements of the governed phrase to be inserted from either language. The tree in (3) (adapted from Di Sciullo et al. 1986: 7 and Stenson 1990: 185) illustrates this relation and the Government Constraint:

3. 
```
X''
  / \Y''
 X'' q / \ Y'' q
 / \ Y''
 Z'' q \ Y''
```

The elements X and Z have to have the same language index (marked here by 'q'), while Y could be in either language (Di Sciullo et al. 1986: 5, 21-22).

The Government Constraint explains for instance sentence (1). According to Di Sciullo et al.'s definition, the lexical governor (here the verb pelata 'play') and the highest lexical element of the governed maximal projection need to be in the same language. I argue that the partitive case morpheme in the NP basketball+ia serves in the function of the 'same language' carrier.

I assume that the Finnish transitive verbs (governors of the
following DPs) obligatorily assign Finnish case (accusative or partitive) to their object DPs. The governing case-assigner and the case itself need to be in the same language. This explains the prevalence of Finnish inflectional morphology in governed positions, and it also explains the fact that the governed phrases are often preceded, or "flagged" by a determiner-like element, even though Finnish generally does not have an article system, and written Finnish would not necessarily have a determiner in a corresponding position, for example (4):

4. Mutta se tulee myöntäen semmose+n social security number+G
   but it will issue such+ACC
   'But he will issue a social security number ...'
   (S11 XXIII/12)

The determiner semmosen 'such' acts as a language carrier. Note that the accusative case-marker is missing from the end of the phrase social security number. To conform to the Finnish morphosyntactic rules, this would need to be in the form social security numberin with the appropriate Finnish accusative case marker. The Finnish inflectional suffix can be left out, since it is not needed as a language carrier, the determiner-like element semmosen 'such' serving this function. No language carrier is needed, when there is no government relation for instance after copulas that are non-governing verbs, as in (5), and in sentence fragments, which are non-governed elements as well (as in (6)). This constraint could potentially help in explaining where embedded language islands tend to occur.

5 a. Se on band director.
   it is
   'He is a band director.' (S19 XVII/41)

b. Kato, string!
   look
   'Look, a string!' (S1 I/143)

   Government facts also explain the presence of language-carrying elements in subject phrases, and the fact that the English codeswitched verbs receive Finnish agreement morphology. Please, consider the examples (6) and (7):

6. Se driveway jatkuu sinne sata metrii varmaan.
   it continues there hundred meters certainly
   'The driveway continues there at least a hundred meters.'
   (S6 VI/1)

7. Ja minä rinse+saa+n se+n
   and I +VERBMARKER+1SG it+ACC
   'And I'll rinse it.'
   (S16 XX/21)
In (6) the determiner se 'it/that' acts as a language carrier, since the Finnish AGR governs the subject position. In (7), the inflection (or AGR) of the verb rinse matches the language of the pronominal subject phrase which it governs. As Chomsky (1991) points out, government relations both in terms of subject-verb agreement and verb-object agreement are crucial for case-assignment (the relevant quote is in 8),

8. [S]tructural Case generally is correlated with agreement and reflects a government relation between the NP and the appropriate AGR elements. Thus, subject-verb agreement is associated with nominative Case and is determined by the relation of the specifier to the AGR-S head of AGR-S [ ...], whereas verb-object agreement is associated with accusative Case, and is determined by the relation of the NP to the AGR-O head of AGR-O" (Chomsky 1991: 436).

and it's exactly the two types of agreement (subject-verb and verb-object) that are important in determining what is possible in Finnish/English codeswitching and what is not.

In sentences (6) and (7), the transitions between the subject phrases and the verb phrases happen smoothly. Please, compare them with (9):

9. Minen huomannu kun vaan [0.40] pääsin kotia
   I+NEG noticed when only got+PAST+1SG home
   → että [0.82] the heel [0.27] lähti pois.
      that go+PAST+3SG away

   'I didn't notice before [0.40] I got home
    that [0.82] the heel [0.27] came off.' (S16 XI/8)

Example (9) does not have a Finnish determiner in the governed subject phrase to function as the Finnish language-carrier. This is not a fluent switch: the speaker pauses for almost a second before uttering the heel and there is a short pause also after it (longer than a quarter of a second). In my data switches such as the one in (9) are extremely rare, and when they appear, they seem to be accompanied by serious disfluencies. If the above switch were considered a fluent switch (which I claim it is not) it would violate the Government Constraint.

Table 1 lists the distribution of English nouns in Finnish matrix sentences. Of all the 550 English nouns, the vast majority (71 percent) form perfectly grammatical sentences in Finnish. In other words, Finnish case is assigned to governed elements. Less than a third (29 percent) show some kind of morphological deviation from the rules of Finnish (in other words, Finnish case suffixes are missing from codeswitched English nominal elements). It's exactly these 162 switches, not accompanied by Finnish case morphemes, that need to be looked at carefully, since if the claim is that Finnish case morphemes in governed positions function as
language carriers, the 162 switches that do NOT carry Finnish suffixes are potential trouble spots for the Government Constraint.

Table 1. The Prevalence of Finnish Case Morphology in Switched Nouns (N=550).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>English nouns within Finnish matrix sentences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In accordance with Finnish case morphology</td>
<td>388</td>
<td>71</td>
</tr>
<tr>
<td>Missing Finnish case morphology</td>
<td>162</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>550</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Now, please look at Table 2. It so happens, that most of the 388 switches that carry appropriate Finnish cases (and thus when in governed positions, satisfy the Government Constraint) are also fluent. Of the 388 English nominal switches that were in accordance with Finnish case morphology, 75 percent were fluent, without any hesitation, pausing, repetition, or stuttering (for instance sentence 1 in the handout).

Table 2. Fluent vs. Non-fluent Switches of English Nouns (N=550).

<table>
<thead>
<tr>
<th></th>
<th>Fluent</th>
<th>Non- fluent</th>
<th>Total fluent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (% )</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>In accordance with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finnish case morphology</td>
<td>292 (75)</td>
<td>96 (25)</td>
<td>388 (100)</td>
</tr>
<tr>
<td>Missing Finnish case morphology</td>
<td>63 (39)</td>
<td>99 (61)</td>
<td>162 (100)</td>
</tr>
</tbody>
</table>

On the other hand, of those switches, that were missing Finnish case morphology (potential language carriers in governed elements) 61 percent were actually accompanied by repair phenomena. In other words, what Table 2 tells us, is that the switching to an English element tended to be much more often free of repair, when the switched element was assigned Finnish case morphology, and vice versa.

Table 3 shows the breakdown of the 162 switches which were missing proper Finnish inflectional morphology, and out of which 61 percent were non-fluent:
3. Types of Noun Switches Showing Defective Finnish Morphology (N=162).

<table>
<thead>
<tr>
<th></th>
<th>Fluent switches</th>
<th>Non-fluent switches</th>
<th>Total switches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NPs:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L&lt;sub&gt;q&lt;/sub&gt;-carrier showing case present</td>
<td>21</td>
<td>28</td>
<td>49</td>
</tr>
<tr>
<td>After copular verb</td>
<td>13</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>No L&lt;sub&gt;q&lt;/sub&gt;-carrier present</td>
<td>23</td>
<td>30</td>
<td>53</td>
</tr>
<tr>
<td><strong>Locative phrases:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L&lt;sub&gt;q&lt;/sub&gt;-carrier showing case present</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>No L&lt;sub&gt;q&lt;/sub&gt;-present</td>
<td>6</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

63 (39%) 99 (61%) 162 (100%)

Please look at examples in (10):

10. a. Ja voi ostaa [0.11] th- [0.20] e:r[0.21] e:r thermometer+Ø.
    'And one can buy [0.11] th- [0.20] e:r [0.21] a thermometer.' (S16 XII/5)

b. Ne haki kansalais+i+ksi että saa [0.29] että saa+vat [0.69] social security+Ø.
    'They applied for citizenship in order to get [0.29] in order to get [0.69] social security.' (S15 XIV/20)

c. Teeksää vai Irish- Irish coffee+Ø?
    'Are you making Irish- Irish coffee?' (S2 1/153)

All the switches in (10) are in governed object phrases. The case suffixes are missing, and there are no determiner-like elements to act as language-carriers either. These switches are associated with clear non-fluencies. What I claim here is that the non-fluency 'breaks up' the government relation. Looking at things from Schegloff's point of view, it seems as if the governor 'loses its power' to assign case to the governed element if a non-fluency (be it in the form of an inserted or repeated element, or a pause) intervenes between the governor and the governee. Or, the non-fluency is an overt syndrome of something about to go wrong. Based solely on this assumption, all the 99 non-fluent noun switches are thus not violations of the Government Constraint. In addition, when a language carrier which shows case is present (the 49 instances), the Government Constraint is fulfilled, as in example (4). Also, as
pointed out above, the 35 instances of copulas in Table 3 are non-governing verbs, and after those, switching to English does not violate the proposed constraint, even though no language-carrier is present.

As it turns out, of the 162 switches which do not show complete assimilation to Finnish morphology only 23 are genuinely problematic. These are fluent switches in governed positions, and there is no language-carrier present to rescue the Government Condition. (11) is an example:

11. Ja mää luulin että se saa heart attack+Ø.
   and I thought that it gets
   'And I thought that he's gonna get a heart attack.'
   (S12 IV/7)

These kind of switches constitute less than 3 percent of all the examined code-switches. A more in-depth discussion of these few "ungrammatical" switches is outside the realms of this paper, but I want to suggest that these switches reflect variation among the bilingual population, variation that may best be explained along the dimensions of L1 attrition, and sociolinguistics factors of cultural identity (that is, the maybe unconscious attempt to speak 'broken Finnish' (Pandharipande 1990; Halmari 1994).

Finally, I want to point out that there is no one-to-one correspondence between violations of grammatical constraints of codeswitching and repair phenomena. Repair is a complex notion, reflecting many other things. For instance in (12), the Government Constraint is well satisfied by the presence of the Finnish language-carrying partitive case marker; yet, there is repair at the switch boundary:

12. Äitskä, mää tartten fru:-fru:-fruitloop+peja.
   mom I need-1SG +PL+PART
   'Mom, I need fruitloops.' (S2 I/138)

   Even though no one-to-one relation between repair and syntax exists, I hope to have been able to show that there are certain associations between discourse level phenomena and syntax in codeswitching data. Discourse features join with purely syntactic notions to together explain the phenomenon, and this conjoining of syntax and discourse reflects the multifaceted nature of not only code-switching, but also more generally the nature of language itself. Multi-layered explanations are possible and sometimes necessary. While processing and syntactic notions can indeed explain the basic principles of how code-switching is constrained, the repair phenomena quite consistently associated with near-violations of syntactic constraints do not complicate, but complement, the explanation.
Selected bibliography


