TOUCHING BASE: THE RELEVANCE OF GRAMMATICAL MODELS TO CODE-SWITCHING

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1. Introduction

> In order to argue convincingly for or against the existence of 'code-switching constraints' and 'code-switching grammars 'based on the two monolingual ones' (…), research should first convincingly prove that (a) speakers who code-switch possess two (or more) identifiable linguistic systems or languages, each with its identifiable grammatical rules and lexicon; and (b) 'code-switched' speech results from the predictable interaction between lexical elements and grammatical rules from these languages. None of these assumptions, I believe, is proven yet.
>
> (Álvarez-Cáccamo, 1998: 36)

In this paper we consider certain assumptions underlying grammatical approaches to code-switching (CS). Research in this field has largely concentrated on finding universally applicable, predictive grammatical constraints on CS, so far without success. This may be owing to misapprehensions as to the way in which grammar is relevant to code-switching. We pay particular attention to a key concept used unquestioningly in some of the literature on the CS grammars, namely that of the 'Base' or 'Matrix' language (actually a 'base grammar'). We believe that the assumptions underlying this notion require scrutiny, for several reasons. First, there is a lack of clarity regarding how this Matrix, derived from a general description of a language X, translates into individual competence. Secondly, the dynamic character of CS, which is a major vehicle of language change and convergence, is not accounted for. Thirdly, the role of sociolinguistic factors in CS is neglected, although studies have shown that CS between the same two languages in different contexts can produce widely differing grammatical results.

We are indebted to many remarks and criticisms made by others (Auer, 1997; Clyne, 1987), and, in particular, a much fuller version of many aspects discussed here can be found in Muysken (2000). What we hope to add is a specific focus on the

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implicit *assumptions* on which the grammatical enterprise is based, and an assessment of their appropriacy in the study of CS.

2. The nature of grammatical description

> We should constantly remind ourselves that languages do not do things; people do things, languages are abstractions from what people do.
>
> (Le Page & Tabouret-Keller, 1985: 188)

Le Page & Tabouret-Keller (1985) explore the range of senses in which the term 'Language X' is used, both popularly and by linguists, going from 'the property of an individual', their mother-tongue ('*John speaks Swahili*') to an abstraction based on the (partially known) performance of a group or community, and including such further – but clearly distinct– senses as that of the 'standard language' with its normative ramifications. They also deconstruct the notion of a 'rule', used in a variety of ways in Linguistics, from a prescriptive meaning to a meaning based on observed regularities in a set of data. In the latter case, prediction is based on a closed system, an existing body of data, and by definition, innovative usage cannot be predicted. The notion of 'grammar' needs to be submitted to a similar analysis before deciding what it means to 'seek grammatical regularities' in code-switched speech. For present purposes, we can identify at least 5 different senses of the term 'grammar':

1. *Prescriptive* / *pedagogical grammar*: How you should use language.
2. *Chomskyan* / *Universalist grammar*: Theories about principles/constraints underlying syntax and morphology of all human languages –a concept like 'Government' is claimed to be a fundamental element in all grammars.
3. *Formal* / '*Parsing*' *grammars* (Mahootian, 1993; Joshi, 1985): Explicit, formal statements about grammatical structure of particular languages (variants of Phrase Structure grammar).
4. *Cognitive* / *functional* / *word grammars*: Theories which do not suggest that there is a strict division between syntax, meaning and discourse functions.
5. *Idiolectal competence*: Within this notion, George (1990) draws a distinction between what speakers know/believe about their grammar and how these beliefs are actually internally represented ('psychogrammar').

Grammatical studies of CS have on the whole been based on grammars in Sense 2 or Sense 3. However those which have been based on Sense 2 (e.g. Di Sciullo *et al*., 1986), i.e. those which try to show universal patterns in CS, have so far not succeeded in doing so. Many other studies have been based, implicitly or explicitly, on grammar in

Sense 3 –statements about the structure of particular languages, and how the differences between them are reconciled in CS. In this case, the productions of bilingual speakers are interpreted through the template of a set of regularities derived from a quite different set of data, monolingual –and often introspective– which has provided what is considered to be 'the grammar' of Language X and of Language Y.

3. Some reasons why the glove does not fit

Let us now look more specifically at the reasons why CS data poses problems for grammatical description.

3.1.

> It is a matter of doubt whether the notion of grammaticality can be applied at all to data as variable as that of code-switching […]. (Clyne, 1987: 744)

The first reason is its *variability*. This variability is found between communities, within a single community, right down to within the speech of individuals, and even within the speech of an individual in the same conversation. In Gardner-Chloros (1991: 93-94), a female employee in an insurance office in Strasbourg was recorded speaking with a variety of interlocutors on a single day. Depending on the interlocutor and type of conversation, she spoke monolingually in standard French; monolingually in regionally accented French; in Alsatian dialect with some technical terms in French; in a code-switched variety where switches mark topic-shifts; or in a dense code-switched variety where the switches appear in themselves arbitrary ('*mixed discourse*'). It seems difficult to see how a single set of grammatical rules could cover all these variations.

3.2. Secondly, grammar is essentially a description of properly formed sentences, as found principally in the written language. It is at least questionable whether CS discourse can be meaningfully analysed in terms of syntactic categories such as 'noun', 'noun phrase', 'clause' etc. As Auer points out, a further limitation here is that grammatical approaches can only help explain CS within the sentence, whereas in any situation where there is CS within the sentence unit, there is bound to be CS between sentences and also between conversational 'moves'. A grammatical analysis will therefore only be able to account at best for some of the patterns in the data (Auer, 1998: 3) Auer (1997) illustrates the problem of segmenting utterances into clauses in this example, taken from his German-Italian corpus:

Example 1
'**zum beispiel** due sbaglie cinquanta **an'anschläge abziehe**
for instance *two mistakes fifty* **tou- touches subtract**
"For instance (if you make) two mistakes, they will subtract 50 points"

This can be segmented in at least three different ways:

(a) /**zum beispiel** /due sbaglie/ cinquanta **an'anschläge abziehe/**
/'**zum beispiel** due sbaglie/ cinquanta **an'anschläge abziehe/**
/'zum beispiel due sbaglie cinquanta an'anschläge abziehe/

3.3. Thirdly, code-switchers take advantage of various 'let-outs' to avoid the straightjacket of grammatical rules. One example is the use of a type of CS variously described as ragged (Hasselmo, 1972), paratactic (Muysken, 1995), disjointed (Gardner-Chloros, 1991), etc. In this, speakers use pauses, interruptions, 'left/right-dislocation' etc to neutralize any grammatical awkwardness resulting from switching at a particular point in the sentence.

Example 2 (French/Brussels Dutch)
Les étrangers, ze hebben geen geld, hè?
The foreigners, they have no money, huh?
(Treffers-Daller, 1994: 207)

In monolingual conversation, these interruptions, reformulations, etc are often functional in terms of the meaning produced/ the message conveyed. In CS they are all the more functional: they allow the full resources of both varieties to be exploited while sidestepping any grammatical incompatibilities. They can 'legitimize' combinations from languages which are typologically different, for example as regards word-order. 'Flagged' switches, which involve inserting a conversational marker or comment at the point where the switch occurs, fulfil a similar function.

3.4. Fourthly, CS involves creative, innovative elements, often based on exploiting similarities between the two varieties.

> CS as verbal behaviour has language-like properties, i.e., it is really not assumed to consist just of the combination of two completely independent systems.
> (Boeschoten, 1998: 21)

Examples include:

3.4.1. The creation of new bilingual verbs. These can be compounds involving a lexical item from one variety and an 'all-purpose' or 'operator' verb from the other (e.g. Romaine 1986). Instances of this have been found in many language combinations,

whether or not a native model exists within either language (Gardner-Chloros, 1995); or the simple morphological adaptation of single lexeme verbs, as in the English-French coinage ***Je* sunbath*ais*** '*I was sunbathing*' (Gardner-Chloros, unpublished example).

3.4.2. The exploitation of similar or identical sounding words, '*homophonous diamorphs*' (Muysken's terminology), including function-words, in the two languages as a 'bridge', such as Dutch *de* and *dat* and English *the* and *that*, or *in* which is common to both (Clyne, 1972). Similarly, Treffers-Daller (1994), in her study of French-Dutch contact in Brussels, found that the two varieties shared numerous phonemes; and many words, e.g. *unique*, *sympathique* could belong to either variety. For reasons such as these, she abandoned the idea that a clear line could be drawn between borrowing and CS.

3.4.3. The use of compromise forms to get round conflicting morphologies, as in the following example:

> Example 3: French/Alsatian
> **Ah voilà**, nitt dass se do **cueillir**, un gehn dann uf d'ander Sit
> **Yes there you are**, they shouldn't **pick**, and then go to the other side
> (Gardner-Chloros, 1991: 159)

The sentence has a 'pidgin' feel to it: the French verb '**cueillir**' is an infinitive - the verb should be conjugated in the third person plural in order to be grammatical in *either* French or Alsatian. But in Alsatian, very many verb infinitives end in '-iere' (e.g. *marschiere*, to march), *which is also the 3rd person plural ending*. It therefore seems likely that the French infinitive is a compromise form, as the French infinitive ending '-ir' sounds like an Alsatian *conjugated* 3rd person plural.

There are further reasons why CS has 'language-like' properties: it does not regularly present grammatical monstrosities and there is no evidence that it departs from widely accepted universals of language structure and function; in relatively stable CS contexts, speakers express views as to what are acceptable or unacceptable instances of switching; thirdly, CS varieties are often designated by a particular name (e.g. *Spanglish*, etc).

We will now look more specifically at some of the major approaches to the grammar of CS, namely Constraints, Government, the Matrix Language Frame model, and the eclectic approach of Muysken in *Bilingual Speech* (2000). We will also look at

the notion of Matrix Language itself, whose relevance is often taken for granted in studies of CS. Interestingly, apart from Government, these approaches cannot be classed within any of the major categories of grammar listed above, but are *sui generis* interpretations of 'grammar'.

4. The 'constraints' tradition

Researchers who have proposed constraints on where CS can occur in the sentence have derived these constraints from particular data-sets, and the regularities and patterns found therein. Several argued that the constraints found would apply to all code-switching situations. The quest for universals thereby moved from the very deep and abstract levels targeted by the Chomskyan grammarians to a level derived directly from a particular type of linguistic performance.

For example, Poplack's (1980) analysis of a corpus collected in the New York Puerto-Rican community led her to propose that two constraints were operating, the *free morpheme constraint* and the *equivalence* constraint. These appeared simple enough to be universally applicable and have been widely discussed (Clyne, 1987; Myers-Scotton, 1993; Jacobson, 1998). The *free morpheme* constraint stated that there could not be a switch between two bound morphemes, i.e. within the word, and the *equivalence* constraint precluded switches at points in a sentence where word order was different in the two languages.

Others, including Lipski (1978), Pfaff (1979) and Woolford (1983), also formulated constraints, all in effect stating that CS cannot occur at points in the sentence where the surface structures of the two languages differ. As more data was collected in different contexts and involving different language combinations, it became apparent that the proposed constraints did not generalize to other data-sets (Bentahila & Davies, 1983; Berk-Seligson, 1986; Nortier, 1990). We briefly illustrate below some counter-examples to Poplack's constraints.

4.1. Counter-examples to the free morpheme constraint

Example 4: French-Arabic:
Tatbqa tat**gratter**
You keep scratching
(Bentahila & Davies, 1983: 315)

Example 5: English-Swahili
Hapa **flame** hiyo inaenda juu- haiwezi ku -ku- **-burn**
The flame is going upwards, it can't burn you.
(Myers-Scotton, 1993: 30)

Myers-Scotton points out that such coinages are likely to be commoner in agglutinative languages. Halmari (1997: 76) gives examples such as **library**in and **lunchbox**iin, where phonologically unintegrated English nouns are freely combined with Finnish bound morphemes. The variation between the patterns found in different settings is so great that switches which appear to be precluded in some communities are actually the commonest type in others.

4.2. Counter-examples to the equivalence constraint

Example 6: Swahili-English
nikapata chakula nyingine iko **grey** ni- ka- i- **-taste** nikaona i-na **taste lousy** sana
*and I got some other food that was **grey** and I **tasted** it and I thought it had a very **lousy taste***
(Myers-Scotton, 1993: 29)

Here the noun and adjective 'lousy' and 'taste' follow Swahili (Noun-Adj.) word order even though both elements are English.

Example 7: French- Dutch
Le français de Bruxelles **spreek ik**
*I speak **Brussels French***
(Treffers-Daller, 1994: 220)

In Brussels French, the subject would have to precede the finite verb, though the topicalized direct object is apparently possible.

4.3. Counter-examples were found for all the other proposed constraints, e.g. the *clitic* constraint, which states that clitic subject or object pronouns are realized in the same language as the verb (Timm, 1975: 478; Pfaff, 1979: 303).

Example 8: Alsatian-French
il koch güet
***he** cooks well*
(Gardner-Chloros, 1991: 168)

4.4. There are even –admittedly rarer– examples of switches between a finite verb and object pronoun:

Example 9: Malay-English
dia kasi **I**
*she gave **me***
(Ozog, 1987: 78, reported in Romaine, 1989: 126)

Interestingly here, the pronoun is the English 'I' instead of the expected 'me'.

Instances of CS have been found in every conceivable grammatical position, as evidenced not only from comparisons of several corpora but even within a single corpus (Nortier, 1990). Clearly this state of affairs should bring about some overall reconsideration of the basis of these constraints.

Nortier (1990: 169-70) notes an important contradiction in their formulation: on the one hand it is stated that in CS, syntactic rules of either language must not be violated, which implies that underlying structures are the focus of attention; on the other hand, the examples given are all to do with points at which the surface structures do or do not map on to each other. Romaine (1989: 118) also points out that the constraints assume that the two languages in contact share the same categories. Sebba (1998) makes a related argument: the idea that equivalent structures can be switched and non-equivalent ones cannot supposes that equivalence is an objective fact about the two languages. In reality, equivalence is constructed by speakers (as Example 2 above illustrates). This shifts the grammatical burden onto the speaker, and adds weight to the argument that linguists' grammars' may be of limited use in explaining CS.

5. Government

Government-based analyses contend that there can be no switching between elements related by Government. Leaving aside the fact that various formulations of 'Government' and 'Proper Government' have succeeded one another in the Government-Binding literature, such approaches fail to account for many common switches, such as those between verb and adverb ("**Uno no podia comer carne** every day" *We couldn't eat meat every day*), or subject NP and main verb ("**Les canadiens** scrivono *c*" *The Canadians write c*) (examples quoted in Muysken, 1995). The proposals were therefore modified in Muysken (1990) and restricted to lexical government by non-function words. Even this was too strong. Muysken refers in particular to the numerous counter-examples in Nortier (1990) from Dutch-Moroccan Arabic CS. These include switches between verbs and direct objects ("**anaka-ndir**

intercultureel werk" *I I-am doing intercultural work*), between direct and indirect objects (**"ib li-ya** een glas water of so" *Get for-me a glass of water or so*) and between copula-type verbs and their predicates ("**wellit** huisman" *I became a houseman*). Further counter-examples have been found in Finnish-English CS by Halmari (1997) and in Greek Cypriot Dialect- English CS by Aaho (1999).

It appears, therefore, that *neither* a relatively *ad hoc* approach based on surface adjacency, *nor* one based on the deeper, theoretically motivated concept of Government, can predict the type of switches which occur.

6. The MLF model

A third substantial theoretical model which claims to "*predict* the form of CS utterances" is the Matrix Language Frame (MLF) model developed by Myers-Scotton (1993). Work by Klavans (1985), Joshi (1985) and others had already posited a "frame" or "matrix" into which elements of the other language could be embedded, but Myers-Scotton, in a series of publications, formulated an elaborate grammatical model based around this concept. Although, by its predictive nature, it also involves constraints, it differs from earlier constraints-based explanations in providing a hierarchical framework and in tying in the proposed constraints with a broader explanation related to:

(a) the role of *open and closed class* words: it is suggested that only the matrix language (ML) can supply the closed class words in CS speech;

(b) the psycholinguistic notion of *activation* of languages in the brain.

It is assumed that language processing involves the construction of a frame, dictated by one of the two languages (the *matrix*), into which elements of the other language (the *embedded* language) are slotted. Again, the notion of grammar underlying the system is *ad hoc* rather than fitting in to any of the major categories of grammar listed above. As it deliberately draws on psycholinguistic notions, it probably fits best within category 4. The model is based on the two oppositions of ML versus EL, and the content versus system morpheme distinction. It is strongly 'insertional', in that it assumes that the ML provides the grammatical frame into which EL elements are inserted. The ML is to be thought of not as a language in itself, but rather as the 'abstract grammatical frame of a bilingual CP'. This allows the ML to be composed of

'abstract structure from more than one source variety', thus constituting a 'composite ML'.

7. The Matrix Language

Criticisms of the model revolve largely around the definition of the ML (and consequently the EL).

7.1. The most important criterion in identifying the ML is held to be the **number of morphemes** in each language, in a discourse sample of more than one sentence (although "How large is "large enough" is an unresolved issue" (1993: 68)). Many bilingual conversations, according to this criterion, would change ML several times. As Bentahila and Davies (1998) aptly ask:

> Should an interaction containing four sentences dominated by one language that are followed by two more sentences dominated by the other be analyzed as having a single matrix language, calculated on overall morpheme frequencies, or should one recognize a change of matrix language within the interaction? Nor is it clear how one should view a conversation where one participant's contributions are clearly dominated by Language A and another participant uses almost exclusively Language B.
>
> (Benthalia & Davies, 1998: 31)

7.2. The division between function and content words is problematic. Muysken (2000) points out that there are at least four different criteria which are relevant to this kind of classification in different languages; also, the distinction does not operate in the same way across languages. Jake admits that "there is variation across languages in the assignment of particular lexical "concepts" to content or system morpheme status" (1998: 354). Also, there are cases of CS where many switches involve function words *on their own* being the switched elements –so it is difficult to see how this is enough for them to determine the ML.

> Example 10: French-Alsatian
> Et lui qui n'est là que trois mois **odder** deux mois **odder** quatre mois
> *And with him being there only three months **or** two months **or** four months.*
> (Gardner-Chloros, 1991: 169).

In a corpus of Punjabi-English, discourse markers such as *but* were a frequent locus for CS, and conjunctions, either alone or with another function word, were frequently the only code-switched element in the sentence (Gardner-Chloros, Charles & Cheshire, 2000).

In subsequent writings on the MLF model, a new "submodel for classifying morphemes into four categories", known as the 4-M model, was presented (Myers-Scotton & Jake, 2000). This relies on a subdivision of system morphemes into various subcategories which are said to be directly related to, and differentially activated during, the process of language production. Accordingly it is predicted that these different types of system morphemes will be differently treated in CS, and indeed in other types of language contact and change. Thus the 'proof' that these morphemes are the product of different processes in the brain consists in showing that they are treated differently in different instances of CS –no independent method of ascertaining their different status in the brain is proposed.

7.3. Since we are talking about setting a grammatical frame, a purely *linguistic* definition of the ML should be enough. However, other criteria are also used:

7.3.1. *Psycholinguistic*: the ML is said to be more "activated" in the brain. In one respect at least, this criterion is self-evident. Exactly what is to be understood by 'activated', however, is not made clear. Which language is more activated in the brain may or may not be relevant to the grammatical frame of a sentence, even if it were amenable to empirical verification.

7.3.2. *Social*: the ML is said to represent the "unmarked choice" for conversations of that type in the community. But which language is the unmarked choice for that community is a separate issue from that as to which *set of rules governs the productions of a particular individual* at a particular moment. Auer (1997) has pointed out that the use of this criterion presupposes a very uniform community where linguistic choices are highly constrained. In many cases where there is no social pressure to use either of the two varieties on their own, the alternation found is mainly related to the structuring of individuals' discourse (e.g. Alfonzetti, 1998, on Italian and Sicilian).

As we said above, the notion of a Base or Matrix language has been used by a number of researchers, often without proposing any particular definition or means of identifying it. Some authors have proposed, however, that the ML is determined by the language of the main verb (Klavans, 1985; Treffers-Daller & van de Hauwe, 1990). One problem here is, as Muysken (1995) points out, that many languages have

strategies to incorporate alien verbs (e.g. through prefixes in Swahili), and taking that borrowed verb as determining the base language can be misleading.

Nortier (1990: 158) distinguishes between the *base* language of a whole conversation, and the *matrix* language of individual sentences. Similarly Moyer (1998) contrasts the *base* language, meaning the language which determines the grammar of the sentence, and the *main* language, which 'sets the frame for the entire exchange'. The latter "can only be determined by taking into account the wider linguistic context of the conversation or speech event" (Moyer, 1998: 223). Therefore, as Moyer suggests, we are not dealing with a unitary phenomenon, and our view of which language is the matrix will depend on the level of planning –and the size of the corpus– which we have to examine. Each criterion may lead to different results in terms of determining the base language.

The notion of matrix can perhaps be salvaged at a practical level as a means of *sifting* the data and correlating the patterns found with sociolinguistic parameters. Rindler-Schjerve (1998) uses Myers-Scotton's first, quantitative criterion and identifies a different ML among the younger generation, which is symptomatic of language shift. At a grammatical level, however, instances of CS which contradict the MLF model are found in her data (1998: 243). But it is a big leap from using the notion of quantitative preponderance of morphemes from Variety A over those in Variety B to asserting that the framework of Variety A (as defined by who?) provides a psychologically significant template for bilingual language production.

8. Muysken's 'Bilingual Speech' model

Muysken (2000) brings together a huge range of evidence from work on the grammar of CS and offers a way of fitting it into a coherent framework. He prefers *code-mixing* (CM) to the commoner CS, reserving the latter term as a synonym for what he calls *alternation*. Alternation occurs when there is compatibility of the two grammars, or at least equivalence at the point where the switch occurs. Models such as Poplack's, in which grammatical equivalence is held to be a precondition for switching, are seen as a consequence of her Spanish-English data being mainly of the alternational variety. Alternation is illustrated in several data-sets which vary considerably as to the patterns exhibited, but which share the feature of containing sentences whose grammar

is hybrid, and where the elements following and preceding the switched string are not structurally related. Some of the variation within these data-sets can be explained by taking account of deep v. surface structure contrasts/equivalences between the languages; in others a sociolinguistic explanation is more appropriate.

The second type is *insertion*, a process akin to borrowing but where elements longer than a single word may be inserted. According to Muysken, the MLF model is directly related to the primacy of insertional material in Myers-Scotton's African corpus. The notion of a ML*,* it is claimed, *is* relevant to this type of switching: although no single criterion is generally valid for establishing which language this is, Muysken claims that in this type of CM, one language remains more activated, tends to provide the language of the main verb and most of the functional elements. Models based on Government represent a particular interpretation of insertion.

The third process is *congruent lexicalization*, in which the languages share a grammatical structure but the vocabulary comes from two or more languages. Counter-examples to the constraints and the base-language models, from data such as Clyne's Dutch-English in Australia, are explained as instances of congruent lexicalization. The latter is a product of grammatical convergence *or* of similarities between languages. An important proviso in determining the steps which lead to this type of CM are the difficulties of determining the nature of the monolingual varieties which are mixed.

Each of these three types of CM is associated with different linguistic, socio- and psycholinguistic factors. Alternation is likely to occur in stable bilingual communities with a tradition of language separation, each language being successively activated in the bilingual's brain. Insertion is likely to be found in situations where bilingual proficiency is asymmetric (e.g. colonial or recent migrant settings); here the activation of one language at a time is temporarily reduced. Inter-generational language shift may be reflected in a change in the direction of the insertion. Congruent lexicalization is likely to occur between closely related languages, where their relative prestige is roughly equal, or where there is no tradition of overt language separation (e.g., 2nd generation migrant groups, post-creole continua); here the languages are assumed to partly share their processing systems.

Muysken therefore accepts the notion of constraints, but considers that they vary depending on the specific type of CM He also explores the links between the three

major processes, which he considers to be on a continuum. His recognition that no universal set of 'grammatical' rules is likely to be relevant to all cases of CS is compatible with the view we expressed above that grammar, in any of its usual senses, cannot be directly equated the production processes of individual bilinguals. The pluralism of this approach does not negate the importance of describing CS utterances in the light of grammatical regularities. The task is simply complicated by the recognition that linguistic and sociolinguistic factors operate simultaneously. It is clear that further research is needed on their relative role.

9. Typological vs. sociolinguistic factors

Once it has been recognized that both types of factors are relevant, it becomes important to make comparisons between cases where the same pairs of languages are combined in different sociolinguistic settings, and different pairs are combined in similar settings. How do the two aspects relate to one another? Are the restrictions imposed by grammar the inescapable bottom line, with sociolinguistic parameters merely pushing the patterns towards one set of options rather than another? Or are the social, personal and interactional reasons for CS determinant, with grammatical options serving merely as second order expressions of those socially/individually determined choices?

Useful evidence is provided by the fact that we find *different* patterns within the *same* community and the *same* language combination, depending on the speakers' age, education, social background, context, topic etc, (Bentahila & Davies, 1983; Li Wei, 1998; Schmidt, 1985). Conversely, we find *similar* patterns, however diverse the language-pairs, where similar social circumstances obtain: for example amongst close-knit groups of immigrants, CS is often not only very frequent but apparently very intricate at a grammatical level (Agnihotri, 1987; Cheshire & Gardner-Chloros, 1997; Nortier, 1990).

Thirdly, we have instances of CS between the *same* language-pairs in *different* sociolinguistic settings, where the CS patterns are radically different. For example compare German-English CS in the UK, described in Eppler (1999), where German word SOV order is preserved in CS speech, with German-English CS in Australia, described in Clyne (1987), where the verb sometimes follows the English SVO order. It

seems likely that basic word-order is relatively resistant to change and is not "toppled" by the word-order of the other variety until a number of other symptoms of convergence –or dominance of one variety over the other– have manifested themselves. Muysken (2000) has also shown how the manner of incorporation of bilingual verbs varies between Malay-Dutch spoken in Indonesia and Malay-Dutch among Moluccans in the Netherlands.

Evidence suggests that the role of typological factors is not decisive. An extreme prediction, based on typological considerations, was that there would be no switch-sites available in pairs of languages which had markedly distinct word orders, such as SOV Tamil and VSO Welsh (Sankoff & Mainville, 1986). In reality, as we have seen, the fact that two varieties used in a CS context are typologically far apart is not a barrier to intensive grammatical mixing.

10. Conclusion

We have argued above that attempts to characterize CS speech using the assumptions of formal syntactic analysis, or even to explain the structure of CS in purely syntactic terms, may be missing the point. There are several reasons for this:

1. "The phenomenon of CS confronts researchers with the problem of distinguishing between the idea of a *language* as the product of an individual's (grammatical) competence and that of a *language* as an externally defined, self-contained entity" (Le Page & Tabouret-Keller, 1985). Chomsky (1986) made a comparable distinction between the E-language, meaning the totality of utterances that can be made in a speech community, and I-language, defined as 'some element of the mind of the person who knows the language'. As Muysken (2000) has pointed out, there are various possible explanations as to how there may not be a one-to-one correspondence between the E and the I-language, some of which would help us to account for CS. In particular, bilingual language use involves combining modules from different languages, and several E-languages may correspond to a relatively coherent I-language. As I-language is based on principles common to all grammars, rather than on 'rules' specific to particular languages, CS must, in general terms, conform to UG principles, but such speech is bound not to reflect the *rules* of *particular languages*. Of

course, the more the processes involved appear to be 'surface' ones, the less relevant formal grammar will be.

2. The behaviour of code-switching speakers *eludes* grammatical description in that it is highly variable (between and within communities and even on the part of individuals), and in that it exploits the propensity of speech –unlike writing– to avoid full, 'grammatical', sentences. It also leads to the development of more or less local conventions of its own, i.e. displays rule-creation mechanisms like other natural languages.

Thus our argument is not about *whether* grammar plays a role in CS, but about how best to characterize the level at which grammar operates. We accept, for example, that "There are no CS utterances with 'helter-skelter' constituents, at least not as reported to date" (Myers-Scotton, 1993: 69), and with Muysken's prediction that "The looser the syntagmatic relation is in a sentence, the easier it is to switch. This prediction is borne out by all available data" (Muysken, 1995: 188). There is also good evidence that similar typologies lead to code-switching based on equivalence between the structures, whereas conflicting typologies (e.g. opposing word-orders) lead to different tactics being employed and to different linguistic outcomes. However, much of the grammatical research on CS has made the leap from descriptive to predictive. Thus it is not uncommon to find claims in the grammatical literature that certain types of juxtaposition "are not" CS. We regard such claims as unjustifiable, in the absence of a clear understanding of the level at which CS regularities/patterning operate.

3. Perhaps the greatest difficulty with such models is in accounting for the role of CS in language change. If there are two discrete systems involved in CS, which must be combined in a particular fashion, then there is no clear place for the variation which precedes and underlies the refocusing of norms. Myers-Scotton's suggestion that the ML in a community may change over time, or even in extreme cases within a conversation, fails to account for gradualness in this process. The "ML turnover hypothesis" is presented as if one generation speaks A with elements of B, and the next speaks B with elements of A. The rules –claimed to be universal– do not change, only the order/role of the languages. Both constraint-based models of CS, and models which invoke a base or matrix language rely on the assumption that two distinct languages interact in CS, while at the same time retaining their identities as separate languages.

There is ample evidence that this is an oversimplification, and that speakers operate with a repertoire of styles, and also create convergence.

In connection with the last point, we might note that work in several areas of linguistics is questioning the traditional division of grammar into morphological, syntactic, etc components, and acknowledging the need to recognize that discourse, structural and expressive factors operate simultaneously. Purely 'grammatical' constraints on CS –beyond those which may be assumed to be inherent in language (structure-dependence, some aspects of phrase structure) may, therefore, be irrelevant or non-existent. Indeed, many of those who believe in the universality of certain grammatical constraints, acknowledge that non-grammatical factors play a role in determining *which* of the possible switch-sites are exploited, and with what frequency. Muysken (2000) draws attention to the interaction between different grammatical patterns in CS and different sets of sociolinguistic circumstances, but more comparative research is needed to find out the relative impact of these factors.

To sum up, although syntax plays an important role in CS, it cannot be assumed *a priori* that the constructs of syntacticians are necessarily the best means for characterising the processes of performance data such as CS. The possibility of throwing light on this question depends partly on whether or not it is right to assume that all bilinguals alternate in some meaningful way between two clearly distinguishable sets of rules –and this is a question which manifestly cannot be decided by grammatical analysis alone.

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