

J'ai joué avec *il-ku:ra*.  
Mi hermana *kitlasojtla*  
in Juan. *Arrancó in*  
*vestido non de Maria*.

## Grammatical Theory and Bilingual Codeswitching

edited by Jeff MacSwan



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Jeff MacSwan

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## Grammatical Theory and Bilingual Codeswitching

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# 1

## Programs and Proposals in Codeswitching Research: Unconstraining Theories of Bilingual Language Mixing

Jeff MacSwan

Codeswitching (CS) is the alternate use of two or more languages among bilingual interlocutors. The present book focuses on grammatical properties of languages mixed in this way, narrowing in on cases of *intrasentential* CS—that is, language mixing below sentential boundaries, as illustrated in (1).

- (1) *Mi hermano* bought some ice cream.  
'My brother bought some ice cream.'

CS is traditionally differentiated from *borrowing*, which involves the phonological and morphological integration of a word from one language (say, English *type*) into another (Spanish *typiar*). CS involves the mixing of phonologically distinctive elements into a single utterance, as illustrated in (1), where the Spanish lexical DP *mi hermano* is mixed into an otherwise English sentence. While considerable attention has been devoted to English-Spanish CS in the literature, examples of the phenomenon could involve any two languages.

The central problem for scholars interested in the linguistic properties of CS is the explanation of the contrast in grammaticality between cases such as (1) and (2).

- (2) \**El* bought some ice cream.  
'He bought some ice cream.'

Why would a bilingual's grammar permit switching between a lexical DP and verb but not between a pronoun and verb? What principles of grammar might account for the contrast, and what might these analyses tell us about the nature of bilingualism itself? The answers must account for CS between the particular languages in the data on hand as well as for switching between any other pair of languages.

This introductory chapter is organized as follows. I first set the stage by outlining principal disadvantages of proposing constraints in CS research, and

then describe two different research programs for CS—the *constraint-based approach* and the *constraint-free approach*. Next I show that the history of CS research largely involves an unfulfilled quest for a constraint-free solution, with technological limitations keeping genuine solutions out of reach – limitations now largely overcome by the Minimalist Program. The minimalist approach to CS is outlined with some illustrative analyses. Finally, a brief overview of subsequent chapters in the book is presented.

## 1.1 Two Research Programs for Codeswitching

### 1.1.1 Constraints on Syntax, Constraints on Codeswitching

In 1962 at the Thirteenth Annual Round Table Meeting on Linguistics and Languages at Georgetown University, Einar Haugen staked a claim to the original use of the term *codeswitching*, although the word had first appeared in print in H. Vogt's (1954) review of Uriel Weinreich's (1953) *Languages in Contact* and two years before that in Haugen's *Bilingualism in the Americas*, a bibliography published by the American Dialect Association in 1956. Although much earlier work by Aurelio M. Espinosa (1911) had noted the phenomenon, an actual CS research literature did not emerge until the late 1960s and early 1970s, when work focusing on both social and grammatical aspects of language mixing began steadily appearing with scholarly engagement of previously published research. (See Benson 2001 for further discussion of the early history of the field.)

Among the earliest to observe that there are grammatical restrictions on language mixing were Gumperz and his colleagues (Gumperz 1967, 1970; Gumperz and Hernández-Chávez 1970), Hasselmo (1972), Timm (1975), and Wentz (1977). For instance, Timm's list of restrictions noted that Spanish-English switching between a subject pronoun and a main verb is ill formed but not so when the subject pronoun is replaced with a lexical subject, as the contrast between (1) and (2) shows.

While construction-specific constraints were typical of this early work, a literature soon emerged in which the grammatical mechanisms underlying these descriptive facts were explored. It is well known and uncontroversial that CS is constrained in the descriptive sense, meaning, simply, that CS behavior is itself rule governed. Consider, for example, the contrast in (3) (Belazi, Rubin, and Toribio 1994).

- (3a) The students *habían visto la película italiana*.  
'The students had seen the Italian movie.'
- (3b) \*The student *had visto la película italiana*.  
'The student had seen the Italian movie.'

Although the basic word-order requirements are the same here for both English and Spanish, (3b) is judged to be ill formed. Regardless of what account we might construct for the contrast, (3) is sufficient to show that CS behavior, like other linguistic behavior, is constrained or rule governed.

However, research on CS conducted in the *Aspects* era (Chomsky 1965) of generative grammar soon turned to the notion that CS—a broad, horizontal linguistic phenomenon—could be explained by positing the kind of theoretical constraints developed in the contemporaneous syntactic literature to impose vertical limits on transformations and phrase structure. As early as 1955, Chomsky had noted that the transformational component in a hybrid generative-transformational system had the disadvantage of vastly increasing the expressive power of the grammar, permitting the formulation of grammatical processes that did not seem to occur in any language. In response to the problem, Chomsky (1964, 1965) and other researchers such as John Ross (1967) posited constraints on transformational rules. Ross noticed, for instance, that an NP could not be extracted out of a conjoined phrase, as in (4a), accounting for the ill-formedness in (4b) but not in the semantically equivalent (but syntactically divergent) example in (4c).

- (4a) John was having milk and cookies.
- (4b) \*What<sub>i</sub> was John having milk *and* t<sub>i</sub>?
- (4c) What<sub>i</sub> was John having milk with t<sub>i</sub>?

Here, constraints were viewed as psychologically real restrictions on the application of transformations to phrase markers and were therefore understood to be part of the grammar itself. Here *constraint* refers not just to a description of intuitions about a set of constructions, but to an actual mechanism of grammar in the mind/brain of a language user—that is, the term is being used in a theoretical sense.

### 1.1.2 So What's Wrong with Constraints on Codeswitching?

The idea of a constraint in this syntactic/grammatical sense appealed to a number of researchers in CS and was used to articulate the grammatical restrictions observed in CS data. However, there are good reasons for avoiding such mechanisms altogether. For concreteness, consider Joshi's (1985b) Constraint on Closed-Class Items.

#### (5) *Constraint on closed-class items*

Closed-class items (e.g., determiners, quantifiers, prepositions, possessives, Aux, Tense, helping verbs) cannot be switched.

Joshi's constraint, like many similar mechanisms, makes explicit reference to (code)switching; *codeswitching*, of course, denotes a change from one language to another, say, from Hindi to English, or Spanish to Nahuatl. However, all such entities—languages—are classes of expressions defined by the grammar. So a grammar  $G$  defines a class of expressions  $L$ . We cannot insert  $L$  as part of any function of  $G$ , because  $L$  is itself defined by  $G$ . Hence, explicit constraints on CS are not theoretically well defined because they reference language switching, and grammars are formally blind to the languages they generate.

Furthermore, constraints so formulated may serve to provide good linguistic description (to the extent they are empirically correct), but they do not serve to explain or enlighten. Constraints on CS, in the theoretical sense, restate the descriptive facts by telling us which grammatical constructions or properties are evident in CS. While *linguistic description* is an important first step, it does not constitute a *linguistic theory*. Hence, the more serious problem with CS-specific mechanisms is that they threaten to trivialize the enterprise. Rather than explaining descriptive restrictions observed in CS data, CS-specific mechanisms simply note these restrictions within the grammar itself so that no explanation is needed, and one is left still wondering what general principles of grammar might underlie the observations and descriptions.

We might define a CS-specific constraint, then, as a proposed grammatical mechanism that makes explicit reference to (code)switching or language(s), and that is understood to be part of the actual linguistic competence of a bilingual.

### 1.1.3 The Constraint-Based Research Program

Historically, CS researchers have consistently offered up CS-specific constraints, despite a clear and persistent intuition that a better theory of CS would do without them. Pfaff (1979, 314) appears to have been among the first to consider the question of whether some mechanism external to either grammar is needed in our account of the facts of CS, concluding that no such device should be needed: "It is unnecessary to posit a third grammar to account for the utterances in which the languages are mixed." About the same time Poplack and Sankoff (1981, 12) wrote: "What is more consistent with the data is simply to allow the possibility that in the uttering of a sentence, the rules used to construct its constituents may be drawn at times from one monolingual grammar and at times from another." Echoing Pfaff, Woolford (1983, 522) similarly wrote that "there is no need to propose any sort of third, separate code-switching grammar." Commenting on Spanish-English CS in particular,

but on theoretical approaches to CS more generally, Lipski (1985, 83–84) observed that

strict application of Occam's Razor requires that gratuitous meta-structures be avoided whenever possible, and that bilingual language behavior be described as much as possible in terms of already existing monolingual grammars. As a result, preference must initially be given to modifications of existing grammars of Spanish and English, rather than to the formulation of a special bilingual generative mechanism, unless experimental evidence inexorably militates in favor of the latter alternative.

Similar strong preference for a constraint-free approach continued into the 1980s and 1990s, as Di Sciullo, Muysken, and Singh's (1986, 7) influential work on the Government Constraint supposed that CS "can be seen as a rather ordinary case of language use, requiring no specific stipulation." Clyne ([1987] 2000, 279]), working from a different perspective, similarly conjectured that CS is "governed by the kinds of structural constraints applying to monolingual performance." Belazi, Rubin and Toribio (1994) proposed their Functional Head Constraint within the context of a view of CS as "constrained solely by Universal Grammar." Mahootian (1993), also echoing Pfaff (1979) and Woolford (1983), argued against the "third-grammar" approach, claiming in Santorini and Mahootian (1995, 4) that "codeswitching sequences are governed by exactly the same principles of phrase structure as monolingual sequences."

Hence, there has long been an intuition among CS researchers that language mixing is not constrained by actual mechanisms of grammar (a "third grammar" mediating between the two), but technological limitations available at the time made a genuine constraint-free approach difficult or impossible to implement. While a few examples of explicit endorsements of CS-specific mechanisms may be unearthed (e.g., Joshi 1985b; Sankoff 1998), the overwhelming perspective in the field has been that such mechanisms ought to be viewed with some measure of disdain.

Despite the call for constraint-free solutions, however, genuine implementation remained out of reach. Researchers tended to take one of three courses in light of this predicament: (1) explicitly confront the limitations of the formal mechanism and reluctantly but explicitly introduce CS-specific devices (e.g., Sankoff and Poplack 1981); (2) leave the analytic framework inexplicit or inadequately developed so that the issue did not arise (e.g., Woolford 1983; Mahootian 1993; Santorini and Mahootian 1995); or (3) propose explicit CS-specific mechanisms and argue that they are vacuously available to monolinguals too (e.g., Di Sciullo, Muysken, and Singh, 1986; Belazi, Rubin, and Toribio 1994; Myers-Scotton 1993). Let us take up each of these in turn.

### 1.1.4 Explicitly Confronting the Formal Limitations

One of the most important early contributions to CS was Sankoff and Poplack's (1981) effort to implement the Equivalence Constraint formally. Several researchers had converged simultaneously on the notion that language switching is controlled by some kind of syntactic equivalence requirement (Lipski 1978; Pfaff 1979; Poplack 1978, 1981). Poplack (1981) proposed two complementary constraints that are among the best known in the CS literature, shown in (6) and (7).

(6) *The Equivalence Constraint*

Codes will tend to be switched at points where the surface structures of the languages map onto each other.

(7) *The Free Morpheme Constraint*

A switch may occur at any point in the discourse at which it is possible to make a surface constituent cut and still retain a free morpheme.

As a variationist (see Labov 1963), Poplack believed that linguistic rules correlate with social structure and should be stated in terms of statistical frequencies, hence (6) is expressed as a tendency. The general idea is nonetheless clear: CS is allowed within constituents so long as the word-order requirements of both languages are met at surface structure. Surface structures derive from the (cyclic) application of transformations to phrase markers, which originate as the output of a phrase structure grammar. The constraint in (7) defines a restriction on morphology in CS contexts, also noted in Wentz and McClure 1977 and Pfaff 1979. To illustrate, (6) correctly predicts that the switch in (8) is disallowed, because the surface word order of English and Spanish differ with respect to object pronoun (clitic) placement; (7) correctly disallows (9), where an English stem is used with a Spanish bound morpheme without the phonological integration of the stem.

- (8) \*told *le*, *le* told, him *dije*, *dije* him  
 told *to-him*, *to-him* I-told, him I-told, I-told *him*  
 '(I) told him.'  
 (Poplack 1981, 176)

- (9) \**estoy*        eat-*iendo*  
 I-am        eat-ing  
 (Poplack 1980, 586)

Research since Poplack's initial proposals has found persuasive documentation that her Equivalence Constraint does not hold up to empirical tests (Stenson 1990; Lee 1991; Myers-Scotton 1993; Mahootian 1993; MacSwan

1999; Chan 1999; Muysken 2000). Note, for example, the contrast in (3), repeated here.

(3a) The students *habían visto la película italiana*.

'The students had seen the Italian movie.'

(3b) \*The student had *visto la película italiana*.

'The student had seen the Italian movie.'

The basic word-order requirements of Spanish and English are alike with regard to the construction in (3), yet a switch between the auxiliary and the verb renders the sentence ill formed, but not so in the case of a switch between the subject and the verb. However, (6) predicts that both examples should be well formed.

Also consider the examples in (10) (MacSwan 1999), where CS occurs between a subject pronoun and a verb, both in their correct position for both Spanish and Nahuatl, yet one example is ill formed and the other well formed.

(10a) \*Tú                    *tikoas*                    *tlakemetl*.  
          tú                    ti-k-koa-s                    tlake-me-tl  
          you/SING    2S-3Os-buy-FUT    garment-PL-NSF  
          'You will buy clothes.'

(10b) Él                    *kikoas*                    *tlakemetl*.  
          él                    0-ki-koa-s                    tlak-eme-tl  
          he                    3S-3Os-buy-FUT    garment-PL-NSF  
          'He will buy clothes.'

The descriptive adequacy of Poplack's Free Morpheme Constraint, on the other hand, remains controversial. While it is attested in numerous corpora (Bentahila and Davis 1983; Berk-Seligson 1986; Clyne 1987; MacSwan 1999), others claim to have identified some counterexamples (Eliasson 1989; Bokamba 1989; Myers-Scotton 1993; Nartey 1982; Halmari 1997; Chan 1999; Hlavac 2003). See Bandi-Rao and den Dikken (chapter 7, this volume) and MacSwan and Colina (chapter 8, this volume) for two theoretical perspectives on the ban on word-internal CS.

Although Sankoff and Poplack (1981) expressed a strong preference for avoiding CS-specific mechanisms to mediate between the two languages in contact, they nonetheless concluded that such a mechanism is necessary on empirical grounds. Otherwise, the authors argued, the free union of Spanish and English phrase structure grammars would yield ill-formed results. For instance, whereas English requires prenominal adjectives (NP → Det Adj N), Spanish requires postnominal adjective placement (NP → Det N Adj). A speaker is free to select the Spanish rule and lexically insert an English

determiner, Spanish noun, and English adjective (*\*the CASA white*) or even insert English lexical items for all categories (*\*the house white*). Therefore, to constrain the grammars so that they do not generate violations of (4), Sankoff and Poplack introduced a superscripting mechanism (sometimes called *bilingual tagging* or *language tagging*) that restricted lexical insertion rules so that the grammar contributing the phrase structure rule would also be the grammar from which lexical insertion rules were drawn. Hence, under conditions of CS, the Spanish phrase structure rule would be annotated as in (11a), generating (11b). The superscripting conventions followed from *heritability conditions*, according to the authors, which essentially allowed phrase structure rules to look ahead and restrict the application of lexical insertion rules.

(11a) NP  $\rightarrow$  Det N<sup>sp:n</sup> Adj<sup>sp:adj</sup>

(11b) the *casa blanca*

Sankoff and Poplack do not make explicit the mechanisms for superscript insertion. Rather, they indicate that phrase structure rules are so superscripted when they are selected in the generation of a CS utterance and are subsequently used to trigger language-specific lexical insertion rules (N  $\rightarrow$  *casa*, e.g. in the case of N<sup>sp:n</sup>). No account is presented as to how the superscript insertion mechanism is able to annotate the appropriate categories correctly—for instance, N and Adj in (11a), but not Det, where either language may be inserted without negative consequences. Despite these limitations, Sankoff and Poplack's work made important contributions to our understanding of the formal properties of CS.

### 1.1.5 Leaving the Analysis Insufficiently Explicit

Explicitness is an important tool in linguistic theory; as Chomsky (1957, 5) explained,

The search for rigorous formulation in linguistics has a much more serious motivation than mere concern for logical niceties or the desire to purify well-established methods of linguistic analysis. Precisely constructed models for linguistic structure can play an important role, both negative and positive, in the process of discovery itself. By pushing a precise but inadequate formulation to an unacceptable conclusion, we can often expose the exact source of this inadequacy and, consequently, gain a deeper understanding of the linguistic data.

Similarly in CS research, the use of explicit formulation of our theories and analyses will help expose weaknesses and shortcomings.

Like Sankoff and Poplack (1981), Woolford (1983) sought to derive the Equivalence Constraint within the theoretical assumptions of *Aspects*. The best



account of CS, Woolford emphasized, would avoid reference to any kind of CS-specific grammar. Woolford recognized, like Sankoff and Poplack, that the rules of lexical insertion must be trained on their language-specific phrase structure rules:

Phrase structure rules are drawn freely from both grammars during the construction of constituent structure trees, but the lexicon of each grammar is limited to filling only those terminal nodes created by phrase structure rules drawn from the same language. Nevertheless, in the event that there are phrase structure rules common to both languages, such rules belong simultaneously to both languages. Lexical items can be freely drawn from either language to fill terminal nodes created by phrase structure rules common to both languages. (p. 535)

Woolford believed that lexical insertion was unconstrained in the case of phrase structure rules common to both languages, but in the case of phrase structure rules that were not shared, lexical insertion was limited to the terminal nodes associated with the phrase structure rule of the grammar to which it belonged. Woolford's system does not seem to achieve its intended goals, because it predicts that Spanish-English CS would require that a language-unique phrase structure rule (for instance, NP  $\rightarrow$  Det N Adj for Spanish) could only be lexically filled by Spanish items (predicting *the casa blanca* to be ill formed, contrary to the facts). In addition, while Woolford's work is an excellent example of the articulation of the goals of CS research, Woolford does not herself present the formal mechanism that might be responsible for achieving the results expected within her framework. No explanation as to how the unique phrase structure rules get linked to language-specific rules of lexical insertion is offered.

Woolford accounts for Poplack's Free Morpheme Constraint by postulating that "the lexicons and word formation components of the two grammars remain separate" (p. 526). While this approach seems preferable to Poplack's, where the prohibition against word-internal switching is simply stated in descriptive terms, no rationale for the separation of the lexicons in terms of principles independent of CS itself is offered, leaving the basis for asserting that the model is free of any CS-specific mechanisms once again inexplicit.

As in Sankoff and Poplack's model, Woolford suggests, somewhat more directly, that a bilingual has two separate lexicons that must be referenced or indexed in some way for the purposes of lexical insertion. However, this stipulation alone does not add to our understanding of CS and bilingualism if it does not include an explicit rationale, making explicit the specific attributes of the language faculty responsible for the separation. The crucial question that remains unaddressed here is the following: What *basic properties of the*