Code-switching and prosody: English-Spanish bilingual complements

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Though the linguistic conditions on code-switching (CS) are still disputed, many models appeal to some notion of equivalence or congruence, whereby switching between languages is seen to occur at junctures at which linguistic structure is homologous (e.g., Muysken 2000). The Equivalence Constraint (Poplack 1980; Sankoff 1998) states that bilinguals tend to avoid CS at points of word order conflicts between the two languages. But how do bilinguals deal with variable equivalence sites? A good case is that of Spanish-English bilinguals' realization and placement of the complementizer 'that' (cf. Dussias 2003), which is absent most of the time in monolingual English (e.g., Thompson & Mulac 1991) but near-categorically present in monolingual Spanish (Silva-Corvalán 1994).

- (1) (1.0) (H) creo que, he='s been dead for a while.

 '(1.0) I think that, he='s been dead for a while.'

 [NMSEB 07 Basketball Teams, 32:44–32:45]
- (2) .. and you were surprised **que** era el ~Rudy? '.. and you were surprised **that** it was ~Rudy?' [NMSEB 09 La Salvia, 0:01:15–0:01:17]

Data are from the New Mexico Spanish-English Bilingual (NMSEB, Torres Cacoullos & Travis in preparation) corpus, which comprises 30 hours of bilingual interactions, for a total of 300,000 words and 36,000 clauses produced by the 40 speakers, evenly divided between Spanish and English. NMSEB features copious instances of the unequivocal manifestation of CS, namely concatenated *multiword* sequences of two (or more) languages in a single discourse event (Poplack 2015), as illustrated in (1) and (2). The bilingual corpus is prosodically transcribed in Intonation Units (N=98,000). The Intonation Unit (IU) is "a stretch of speech uttered under a single, coherent intonation contour" (Du Bois et al. 1993: 47). Each IU is represented on a single line in the transcription and is marked for transitional continuity; prosodic features such as pauses and truncations are also represented.

This study integrates prosody and syntax into the analysis of CS to ask whether bilinguals use prosodic separation of CS boundaries at sites of variable equivalence. We draw on the generalization that words in the same IU tend to have a tighter syntactic relationship than material across different IUs (Croft 1995: 849-864). In particular, while adjacent main clauses are usually in different IUs, complement clauses tend to be prosodically integrated with the main verb, occurring in the same IU, as in (2), rather than in a different IU, as in (1), in monolingual varieties of both English and Spanish (Steuck 2016). If speakers employ prosodic distancing between languages as a bilingual strategy for dealing with variable equivalence, complement clauses should be integrated with the main verb at lower rates when CS is involved ((1)-(2)) than in Spanish-only and English-only benchmarks. The pilot results indicate precisely such a trend. Effects of intervening material and non-first-person main clause subjects, however, are the same as in monolingual speech.

Proportions of main and complement clauses in the same IU (NMSEB sample)

	CS		Spanish		English	
	N	%	N	%	N	%
Same IU	25	58%	122	64%	134	79%
Different IUs	18	42%	68	36%	35	21%

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