# Verb second (and Dutch-English code-switching

In Dutch (and other verb second (V2) languages) the following asymmetry can be observed (1). In the main clause, the auxiliary is assumed to move to the second position. In the subordinate clause, however, this auxiliary remains in its verb-final position.

(1)  a. **Ik heb Adele gezien.**  b. **...dat ik Adele heb gezien.**  DUTCH
     I have Adele seen        ...that I Adele have seen

A host of different proposals exist to account for this asymmetry, but the mainstream position is summarised by Holmberg (2015) as follows (2):

(2)  a. a functional head in the left periphery (usually called $C^0$) attracts the finite verb
     b. this functional head then attracts something to the specifier position of the CP

In the subordinate clause, the complementiser (e.g. **dat**) occupies the $C^0$ position and this prevents the finite verb from moving up, which accounts for the asymmetry shown in (1). In non-V2 languages, the properties of the CP are such that in non-focus, declarative main clauses, $C^0$ does *not* attract anything, leaving the CP-layer empty (3a). In Dutch (3b), the finite verb has moved to $C^0$, prompting movement of the adverb *vandaag* to specCP.

(3)  a. $[_{CP} [_{TP}$ Today $[_{T'}$ I $[_{T^0}$ have$]] [_{vP}$ I̶ $[_{VP}$ seen Adele$]]]]$
     b. $[_{CP}$ Vandaag $[_{C^0}$ heb$] [_{TP}$ ik $[_{T^0}$ h̶e̶b̶$] [_{T'}$ v̶a̶n̶d̶a̶a̶g̶$] [_{vP}$ i̶k̶ $[_{VP}$ Adele gezien$]]]]$

While the exact details can differ from analysis to analysis, they all share the same problem when it comes to accounting for code-switched bilingual data. Code-switching (CS) is one of many possible results of language contact and has been said to be "a hallmark of bilingual communities world-wide" (Poplack, 2001, p.2062). Looking at data from Dutch-English code-switching reveals a complication when it comes to V2 word order which is not apparent in monolingual data. $C^0$, being a functional projection, is *unlexicalised*, i.e. phonologically null. Consequently, the only way to tell what properties $C^0$ has, is to look at the surface word order. If we have a surface V2 word order, we know that the $C^0$ must be of the "Dutch type" (3b). If there is no V2 word order on the other hand, we are dealing with a $C^0$ of the "English type" (3a).

As long as we are dealing with monolingual speakers, this remains unproblematic. However, as soon as we consider a (Dutch-English) bilingual speaker, a difficulty arises. Presumably, such a speaker would acquire both a $C^0$ of the "Dutch type" to derive Dutch sentences, and a $C^0$ of the "English type" to derive English sentences. Since $C^0$ is not phonologically realised by a word or morpheme in the utterance, such a bilingual speaker could in principle use either of the C-heads when building their mixed-language structures. This would mean that if we follow this standard account for V2, no predictions are made in regards to preference between the word order in **Dutch**-*English* CS. Depending on which $C^0$ is selected, either word order in (4) can arise.

(4)  a. *Today,* **ik zag Adele**  b. *Today,* **zag ik Adele.**
     I saw Adele              saw I Adele

Word order preferences were investigated using an acceptability judgment task. This task consisted in an online questionnaire developed using the survey software Qualtrics which participants took at home. Simultaneously bilingual participants were asked to rate sentences on a 1-7 Likert scale from 'completely unacceptable' to 'completely unacceptable'. Respondents were also asked to provide linguistic background information and answer questions about language attitudes. A small

proficiency test was included. Results from respondents who scored below 80% on the proficiency test, and from bilinguals that acquired their $L_2$ after the age of four were excluded, as recommended by López (2014).

All stimuli were in Dutch-English CS mode. All sentences were monotransitive and contained a fronted adjunct. Language of the finite verb, word order, language of the direct object and language of the adjunct were manipulated factors. Combination of these factors resulted in 12 conditions (2*2*2*2 = 16 - 4 monolingual conditions). Each condition was presented in three lexicalisations to improve statistical power, yielding 36 test items, all with different lexicalisations. 40 filler items were included.

The results show that, instead of an expected equal acceptability of equivalents to (4a) and (4b), the language of the finite verb is a robust predictor of acceptability. If the verb is Dutch, the preference is for V2 word order. If the verb is English, then English word order (i.e. non-V2) is preferred. Incorporating these results could lead us in two directions. Either we need to re-think the usual way V2 is dealt with in the Generative literature. Simultaneous bilinguals show a significant preference for sentences that have a word order which is consistent with the language of the finite verb.[1] The other option to account for these results is to rely on a mechanism which links (the properties of) the finite verb (i.e. $T^0$) and $C^0$. Several mechanisms are available in the literature, such as feature-checking (Van Dulm 2007), the Functional Head constraint (Belazi et al. 1994), the PF-interface condition (MacSwan & Colina 2014), the most promising of which is Feature Inheritance (Chomsky 2008). If it is indeed true that there are some features, such as tense, that $T^0$ inherits from $C^0$, then the mainstream Generative approaches to V2 would in the end make a clear prediction for code-switched constructions and therefore be able to explain the data of the present study.

**References**

Belazi, Heidi M., Edward J. Rubin & Almeida Jacqueline Toribio. 1994. Code switching and X-bar Theory: The functional head constraint. *Linguistic Inquiry* 25(2). 221–237.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory*, vol. 45 Current Studies in Linguistics, 133–166. MIT press.

Holmberg, Anders. 2015. Verb second. In T Kiss & Artemis Alexiadou (eds.), *Syntax – theory and analysis. an international handbook*, vol. 42 Handbooks of Linguistics and Communication Science, 342–382. Berlin: De Gruyter.

López, Luis. 2014. Updates from the UIC Center for Bilingualism. Oral presentation at the LACG-talks, Leiden University.

MacSwan, Jeff & Sonia Colina. 2014. Some consequences of language design: Code switching and the PF interface. In Jeff MacSwan (ed.), *Grammatical theory and bilingual codeswitching*, 185–200. Cambridge, MA, USA: MIT Press.

Poplack, Shana. 2001. Code-switching (linguistic). In N. Smelser & P. Baltes (eds.), *International encyclopedia of the social and behavioral sciences*, 2062–2065.

Rambow, Owen & Beatrice Santorini. 1995. Incremental phrase structure generation and a universal theory of V2. In *Proceedings of NELS*, vol. 25, 373–387.

Van Dulm, Ondene. 2007. *The grammar of English-Afrikaans code switching: A feature checking account*: Radboud Universiteit Nijmegen dissertation.

---

[1]See Rambow & Santorini (1995) for a possible way this may be implemented.