

Canadian French Affrication within external sandhi: the facts, and a CVCV analysis

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The phenomenon. Affrication (also assibilation) of coronal stops before high-front vowels and glides is recognized as one of the strongest and most reliable markers of the Laurentian French dialect (1a). It is therefore surprising that its triggering environment in external sandhi, or whether it occurs at all across word boundaries, remains a mystery in the literature (1b). It is described as variable, non-obligatory, or even prohibited (Walker 1980, Brasseur 2019).

- (1) a. [tʏ] ‘you’ b. ? [fɔ̃tʏtil] ‘very useful’

Despite the fact that much research has been conducted on this type of assimilation over the years (Gendron 1970, Juneau 1972, Santerre 1976, Dumas 1987), there is little consensus on its phonological conditioning, on its diachronic, synchronic and sociolinguistic variation, and even on its phonetic description (Friesner 2010, Dow 2019, Pöchtrager 2021). Most of these studies agree on one point, however: when the affrication is present in a dialect, it is obligatory in internal sandhi, but variable in external sandhi. However, there is very little data concerning its behavior across words, even if this phenomenon is attested. On this subject, Walker affirms, in an article published in 1980, that "assibilation" is blocked by word boundaries. He specifies that the pronunciation in (2a) is obligatory, while that in (2b) is prohibited.

- (2) a. [pətitivõ] b. *[pətitivõ] ‘Little Yvon’

However, in *The Pronunciation of Canadian French* (1984), he adds that Canadian French is not homogeneous. As such, assibilation between two words would be optional for some speakers, for whom (2b) would be a possible pronunciation.

The study. We present here the first systematic study of affrication in external sandhi in Laurentian French. This pilot study begins to remedy the lack of empirical data currently available. The speech of 35 native speakers of Quebec has been collected (aged 26-75, 20 females and 15 males). Two lists of sentences were created to generate distinct syntactic environments in which a word ending phonetically in [t] or [d] is followed by a vowel or a semi-vowel, either /i/, /y/, /j/ or /ɥ/. In addition, contexts in which affrication is recognized as being systematic, i.e., within a word, were also generated to control the level of affrication of the participants in an optimal situation. Potential affrication occurrences were classified by acoustical analysis, into two distinct categories representing the presence or absence of affrication. The data show three distinct behaviors: in some particular syntactic environments, affrication can be triggered, blocked, or variable. Thus, affrication takes place between a determiner and a noun; (3), (4), but not between a nominal phrase and a verb phrase (5), as is the case for liaison in French.

General analysis. The data show that affrication between two words is optional only in the sense that it is not always present. But, in under certain conditions it is, in fact, obligatory. These conditions are systematic, syntactic, and structural, in the sense that the syntactic derivation determines phonological cycles (à la Chomsky 1995 and much subsequent work in the field). External sandhi affrication occurs within a phase, when the word containing the coronal stop is interpreted in the same cycle as a following high-front vowel or glide. It is therefore clear that affrication in Laurentian French is a phonological (rather than a phonetic) process. It is triggered in the same domains in which liaison is triggered.

The phonological analysis. Interface studies in phonology must account for how the phonology reacts to the chunks of information sent via the syntactic cyclic derivation. The standard tool used

to account for phonological domains is the Prosodic Hierarchy (PH) (Nespor & Vogel 1986, Selkirk 2011, and a vast recent literature). However, the PH is argued to be unable to account for particular segmental effects purportedly triggered by its presence (why would a PW block rather than trigger, say, assimilation?). It is also argued to be non-modular (requiring reference to phonology and syntax simultaneously) and to be diacritic (in that the PH is not a phonological object) (Scheer 2008). The analysis presented here does not suffer these criticisms. A CVCV linear theory analysis (Scheer 2004) combined with cyclic interpretation of syntactic phases can illustrate the influence of syllabic position on affrication, and most importantly, the predictions for phonology resulting from syntactic phase boundaries. Phases here are marked by a dotted line and indicate the edge of a complex subject DP in (5). This boundary does not separate the coronal stops and the high front vowel in (3) and (4). Other phases will be discussed in the presentation.

(3) ‘the seven Yvons’

(4) ‘That Yvonne’

(5) ‘The seven go there’

C	V	C	V	C	V	C	V	C	V
s	ε	tʰ			i	v	ɔ	n	

C	V	C	V	C	V	C
s	ε	tʰ	i	v	ɔ	n

C	V	C	V	C	V	C	V	C	V
s	ε	t			i	v	ɔ	n	

Scheer (2004) proposes (based on cross-linguistic evidence) that a syntactic phase sent to the phonology is treated as a string of syllables. At the left edge of such a string, an empty CV may be inserted (the orange CV in (5)). An empty VC sequence within a phase will be deleted (following Charette 1990) (highlighted in grey in (3) and (5)). A liaison consonant (in blue in (4)) will be syllabified as the onset of the following vowel. In both (3) and (4), the coronal consonant-high vowel sequence is local on the surface. In (5), the coronal is not part of the same phase as the following word. Only one VC sequence is deleted, as the other (yellow) crosses a phase boundary. The syllabic structure of the surface string in (5) does not allow for affrication, as the coronal consonant-high vowel sequence is non-local. This completely modular account of the interface between syntax and phonology (with no reference to PW or PPh), allows for this phonological pattern to fall out of the predicted computational domains and derivational cycles. Thus, two words belonging to the same derivational cycle can trigger an affrication between their borders; (3), (4), while two words belonging to two different derivational cycles will block the affrication (5).

Conclusion. Laurentian French affrication is subject to systematic phonological conditioning in internal and external sandhi. This presentation: 1. gives the first systematic data on this phenomenon, 2. demonstrates that Laurentian French affrication is subject to conditioning via syntactic structure/cycles, and 3. offers a fully modular phonological account of the process.

References.

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