Autosegmental news from h aspiré and liaison without enchaînement

Against the generative analysis of French liaison since the late 60s, PFC-based work entertains the idea that liaison is not a uniform phonological phenomenon but rather a cover term that subsumes a number of quite distinct processes. Côté (2008) holds that liaison consonants have three different origins: epenthetic (in prenominal adjectives: petit [t] animal), as a prefix of word 2 (when occurring as a plural marker: des petits [iza] animaux) and suppletive (when the preceding vowel varies in nasality: bon [b3] vs. bon [...na...] ami). In this perspective, the option that is excluded is the classical location, i.e. the lexical recording of liaison consonants at the end of word 1. Beyond French liaison, the claim that liaison consonants never belong to word 1 is directed against the autosegmental formalism as such, which has allowed for the representation of liaison in terms of flowing consonants. That is, Côté's (2008: 61) explicit goal is to show that "syllable structure and well-formedness, which are crucial elements of the defective segment analysis, play no role."

On the basis of liaison without enchaînement (LWE), h aspiré-triggered glottal stop insertion, schwa generation and data from acquisition, we show that the classical autosegmental take must be correct: there is a consonantal position at the end of word 1 in all liaison-triggering words. This implies three things: 1) at least this position establishes liaison as a uniform phenomenon, 2) the vector of this unity is located at the end of word 1 and 3) autosegmental representations involving floating pieces of melody and empty constituents are needed.

Let us first look at LWE as e.g. in j'avais [...ez | ?ê...] un rêve "I had a dream": instead of being pronounced as the onset of word 2, the liaison consonant occurs at the end of word one and is separated from word 2 by a glottal stop (occupying its onset). This means that there must be a lexically recorded consonantal position at the right edge of liaison-inducing words where the liaison consonant is realized in LWE. This is incompatible with Côté's analysis and the claim that liaison is a non-uniform phenomenon. Therefore the PFC literature argues that LWE is phonologically irrelevant on the grounds of two arguments: 1) it is too rare to be taken seriously (0.35% of all liaisons realized in the PFC corpus); 2) it may be reduced to a spelling effect and hence is absent from the competence of speakers.

Recent evidence from acquisition invalidates both claims. It is usually assumed that since LWE is restricted to specific (high, journalistic, official) style, illiterate pre-school children have no chance to come across it at all. In this scenario, LWE arises only as a side-effect of children's access to literacy after age 6, and is concomitant with the acquisition of optional liaison (which appears at this developmental stage) (Dugua 2008). Recent data from Splendido (2014) show that this is not the case. In a longitudinal study (3.5 to 6 years) conducted with 8 illiterate pre-school children (2 French L1, 3 bilingual Swedish-French (BSF), 3 Swedish early L2 French (EFL2)) and based on a picture-naming task, Splendido documents that one BSF and one EFL2 child produce respectively 8% and 13% of LWE (which most of the time is followed by a glottal stop). Note that none of the 8 children was systematically exposed to written representations of French words or explicitly taught either French or Swedish spelling. These data show that LWE may emerge presumably in absence of any LWE in the input, and independently of spelling. We interpret this LWE ex nihilo as an intermediate stage 3 in the developmental path leading from the storage of word 1 and word 2 as single lexical entry ([#e]word 1 [z/n/t amis]word 2, stage 1) to an analysis where all liaison consonants are stored in word 2 ([#e]word 1 [z/n/t amis]word 2, stage 2) to adult representations with a floating liaison consonant stored at the end of word 1 (stage 4).

Another piece of evidence brought to bear comes from h aspiré-triggered glottal stop insertion (described by Encrevé & Scheer 2005). It is well known that h aspiré words may generate a glottal stop after consonant-final (quel [...l?ê...] hêtre "which beech"), but not after vowel-final words (joli *[...i?ê...] hêtre "nice beech"). What has gone unnoticed is the fact that the consonant of the preceding C-final word does not need to be pronounced: liaison consonants, although unpronounced, produce the same effect as pronounced items (gros [... o?ê...] hêtre "big beech"). Hence whether a word is consonant- or vowel-final is not a matter of the surface, but of structure (which may or may not be pronounced). This brings home the prediction made by LWE: there is a consonantal position at the end.
of word 1. We show that the behaviour of liaison-inducing words is perfectly uniform: a glottal stop may appear after all words that end in an unpronounced liaison consonant. This includes the three cases which according to Côté have a variable management of the liaison consonant: h aspiré produces a glottal stop after unpronounced liaison consonants that occur at the right edge of prenominal adjectives (un petit [...] hêtre) as much as after the plural marker (des petits [...] hêtres) and after items with variable vowels (un bon [...] hêtre). This shows that the liaison consonant, or at least its position (the same position on which LWE is realized), is present at the right edge of liaison-inducing words. Which means that both PFC claims are incorrect: liaison is a uniform phenomenon in the sense that it is lexically encoded at the right edge of liaison-inducing words through a syllabic position, and at least this position (melody may be subject to debate) occurs where Côté claims liaison has no business, i.e. at the end of word 1.

The analysis of h aspiré presented also prompts two additional insights regarding h aspiré as such. The classical description says that h aspiré-initial words are phonetically vowel-initial, but behave as if they were consonant-initial (liaison les *[z] housses, elision *l'housse, suppletion *mon housses). There is one h aspiré-induced phenomenon, though, which does not follow this pattern: word-final schwa may be dropped before regular consonants (c' mur "this wall"), but not before h aspiré (*c'hêtre "this beech"). We show that this effect is only indirectly related to h aspiré. What h aspiré does is blocking elision (*c'hêre [setə]), thereby creating a hiatus /ce etra/ whose first member is schwa. This type of hiatus is not found in French except in re- prefixation which reveals that schwa in hiatus position cannot drop (compare r'-faire "redo" with *r'-organiser "reorganize"). Hence the impossibility to drop schwa before h aspiré has nothing to do with h aspiré itself: it is a consequence of the general inability of schwa to disappear in hiatus position. This means that the uniform description of h aspiré as an item that behaves like a consonant is correct in all cases.

Finally, we argue that the phonological identity of h aspiré is twofold. On the one hand (following Encrevé 1988) the initial empty onset of h aspiré words possesses an x-slot that regular words lack: this representational property is responsible for the hard-wired, i.e. categorical h aspiré effects (liaison, elision, suppletion). On the other hand, h aspiré words may set off themselves from the preceding word by creating a computational domain of its own (cycle, today called a phase). This derivational property accounts for optional h aspiré effects: h aspiré may either generate a schwa (quel [...ləe...] hêtre) or a glottal stop (quel [...ləe...] hêtre), but not both (*quel [...loʔe...] hêtre). In our analysis, the realization of either option depends on whether external sandhi is allowed or blocked, i.e. whether phonological computation crosses the word boundary or not. In case it does, the first vowel of word 2 governs the final empty nucleus of word 1, thereby placing the onset of word 2 in strong position, which triggers glottal stop epenthesis (Pagliano 2003). In case h aspiré creates its own domain, the first vowel of word 2 cannot reach out into word 1 and therefore governs its own onset (hence no glottal stop insertion). The final empty nucleus of word 1 thus remains un governed and is subject to schwa epenthesis. The locus of variation is thus the optional creation of a domain by which h aspiré words set themselves off.


