AUTOSEGMENTAL NEWS FROM H ASPIRÉ AND LIAISON
WITHOUT ENCHAÎNEMENT

1. The issue

(1) four questions
a. is liaison a uniform phenomenon?
b. is there anything lexicalized at the end of word 1?
c. is liaison managed by autosegmental representations including floating Cs?
d. is liaison without enchaînement (LWE) phonologically relevant?

(2) answers
a. 4 times NO
   PFC-based work in general and in particular Côté (2008)
   [there is also PFC-based work that answers NO only 3,5 or 2,5 times.]
b. 4 times YES
   classical generative and autosegmental analysis: Encrevé (1988)
   "what we set out to show is correct"

2. Côté’s analysis

(3) Côté (2008: 82): liaison consonants may be
   a. epenthetic
default case as in petit [t] animal “little animal”;
   b. a prefix of word 2
      when it plays a morphological role as e.g. the plural marker z in des petits [iza] animaux "little animals”
c. suppletive
      when the preceding vowel is distinct in liaison and non-liaison forms, as in bon [...] ami “good friend” vs. bon [...]... café “good coffee”, in which case there are two allomorphs stored, /bs/ and /bɔːn/.

1 See Boyé et al. (2005) and Eychenne (2011) where liaison consonants are approached in an HPSG perspective: they belong to word 1, but do not float. Rather, the lexical entries of all French words is split into two sub-entries, the root and an “appendix” where the latter contains eventual liaison consonants and may be independently accessed by phonological computation.

3. Recap: the classical autosegmental analysis of liaison

(4) thus
   a. non-uniformity
      liaison is a cover term for a number of distinct phonological processes
   b. there is nothing at the end of word 1
      the option that is excluded is the lexical recording of the liaison consonant at the end of word 1
   c. no autosegmentalism needed
      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.”
      Her target is the ”holy trinity” of French phonology (her term) schwa, liaison and h aspiré, and the instrument of her endeavour regarding the latter two items is the idea that liaison consonants never belong to word 1.
   d. anti- and pre-autosegmental analysis
      h aspiré is encoded by a diacritic (something like [+h aspiré]), which is then accessed by lexically-specific constraints and/or rankings (co-phonologies or indexed constraints).

(5) optional liaison according to Encrevé (1988)
   a. lexical ingredients
      phonological computation

   b. with enchaînement

   c. without enchaînement

h aspiré according to Encrevé (1988) and Clements & Keyser (1983)

a. *petit être*: obligatory enchaîned liaison  

b. *petit hêtre*: liaison impossible

4. Liaison without enchaînement (LWE)

(7) recap: liaison without enchaînement

a. c'est […et | ʔa…] absolument vrai

Passy (1899: 51 note 1)

b. j'avais […ez | ʔe…] un rêve

V. Giscard d'Estaing, 19-5-1981

c. j'ai beaucoup […up | ʔe…] écouté les uns […ez ŋe…] et les […ezo…] autres

F. Mitterrand 10-3-1988

d. il est […et | ʔe…] indispensable…

J. Chirac 1-04-2004

e. beaucoup d'autres seront […st | ʔa…] avec nous

L. Fabius 22-05-2005

(8) lexical representation of liaison consonants

\[
\begin{array}{cccc}
\text{O} & \text{N} & \text{O} & \text{N} \\
\hline
\text{x} & \uparrow & \text{x} & \uparrow \\
\hline
\text{pe t i t é tre} & \text{pe t i t h é tre} \\
\end{array}
\]

(9) consonantal position at the end of word 1

a. liaison consonants

1. are stored at the end of word 1

2. there is a consonantal position at the end of word 1

3. the liaison consonant is lexically unassociated to this position: it floats

b. LWE

1. when LWE occurs, the floating C attaches to this empty C slot at the end of w1

2. under liaison with enchaînement, it attaches to the onset of the following word.

c. there is also a vocalic position at the end of word 1

[→] on which more below.

(10) what is at stake

a. if LWE is phonologically relevant, there must be a floating consonantal position at the end of word 1

There

1. since the liaison consonant (of whatever lexical origin) is pronounced at the end of word 1,

2. and only liaison-inducing words allow for it to be pronounced:

beaucoup d'autres seront […st | ʔa…] avec nous

vs.

quelqu'un sera *[…at | ʔa…] avec nous

b. LWE stands in the way of a major analytical result regarding liaison that comes from PFC: the idea that nothing is stored at the end of word 1.

Côté (2008: 89f) explicitly acknowledges this fact.

c. ==>

if nothing ought to be stored at the end of word 1, LWE must not be phonologically relevant.

(11) anti-LWE arguments from the PFC literature

a. "the PFC corpus does not corroborate the phonological status that Encrevé attributes to LWE"

("[l']examen du corpus PFC ne corrobore pas le statut phonologique accordé à la liaison non-enchaînée par P. Encrevé").

Durand et al. (2011: 114)

b. argument #1

LWE is numerically marginal (rare)

c. argument #2

LWE reduces to a spelling effect.

(12) rarity of LWE

a. Mallet (2008: 179ff)

130 cases of LWE in the complete PFC corpus (only mainland)

= 0.35% of all liaisons realized (totalling obligatory and optional liaisons)

b. Laks (2009)

explores two corpora regarding low ranking socio-professional groups:

1. workers born in the 19th century whose pronunciation was studied by Ferdinand Brunot in 1912/13 (Veken 1984)


3. Laks (2009: 248) reports that LWE is completely absent in these data

4. and concludes that "LWE is not a property of ordinary speech"

("le non-enchaînement n'est pas une propriété de la parole ordinaire").

c. That much we knew from the pre-PFC literature including Encrevé.
LWE is a spelling effect

a. obvious relationship with orthography and extensive training of children in school.
   "The crucial role of spelling in the acquisition and use of optional liaison […]
   accounts simultaneously for the existence of liaison without enchaînement, its
   restriction to optional liaison, and its occurrence in very formal types of speech,
   read speech in large part."
   Côté (2008: 90, emphasis in original).

b. that much we knew,
   but this does not mean that LWE reduces to spelling.

(14) arguments by Encrevé (1988)

production: LWE is part of the competence of those who produce it

a. LWE is regular is equally distributed over speech acts
b. never followed by any self-correction
c. only occurs in phonologically (before V-initial words) and syntactically (identifying
   optional liaisons) specified contexts. Hence grammar opens a window for LWE, and
   this window is never violated.
   ==> LWE is not a performance error - it is part of the grammar of the speakers.

(15) arguments by Encrevé (1988)

perception: LWE is part of the competence of those who perceive it

a. since audio-visual media have developed, all natives constantly bathe in an LWE-rich
   environment.

b. speakers who produce LWE are perceived as especially
   - noteworthy
   - legitimate/ important
   - socially high-ranking

b. no native of whatever social level has trouble understanding an arbitrary mix of
   - liaison with enchaînement
   - liaison without enchaînement
   - no liaison
   in the same context (=optional liaison) coming from the same speaker in the same
   pragmatic context.
   ==> LWE is part of the passive competence of all natives.

(16) the occurrence of LWE is not random

a. LWE scales along
   1. socio-professional categories and
   2. type of production
   as expected: there is more LWE
   1. in higher socio-professional groups
   2. when reading aloud than in free oral production

(17) PFC data²

<table>
<thead>
<tr>
<th>liaisons realized (PFC corpus, mainland France, August 12th, 2013)</th>
<th>liaisons realized (obligatory and optional)</th>
<th>LWE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. total (all types of production and social categories)</td>
<td>14290</td>
<td>119</td>
</tr>
<tr>
<td>b. by socio-professional category</td>
<td></td>
<td></td>
</tr>
<tr>
<td>liberal professionals</td>
<td>694</td>
<td>13</td>
</tr>
<tr>
<td>teachers, medical professions, state employees</td>
<td>1513</td>
<td>14</td>
</tr>
<tr>
<td>civil service senior executives (including University professors and researchers)</td>
<td>628</td>
<td>4</td>
</tr>
<tr>
<td>peasants</td>
<td>655</td>
<td>5</td>
</tr>
<tr>
<td>workers (qualified or unqualified)</td>
<td>390</td>
<td>2</td>
</tr>
<tr>
<td>c. by type of production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>text read aloud</td>
<td>4116</td>
<td>50</td>
</tr>
<tr>
<td>directed discussion</td>
<td>5700</td>
<td>50</td>
</tr>
<tr>
<td>spontaneous speech</td>
<td>4460</td>
<td>19</td>
</tr>
</tbody>
</table>

5. Children produce things that are absent from the stimulus

(18) LWE: a theatre for the age-old confrontation with empiricist thinking

a. usage-based approach
   (Bybee 2005), applied to liaison by, among others, Chevrot et al. (2013)
   1. children only reproduce what they hear
   2. there is no autonomous phonological activity based on lexical items: all that
      children do is to store, to concatenate and to repeat (cut and paste) pieces of
      speech.
   3. constructions resulting from surface-based parsing are stored
   4. this is an instantiation of the regular empiricist philosophy
      nothing can exist in the mind/brain that did not exist in the senses before
   5. prediction
      nothing in the production of children can be absent from the stimulus.

b. rationalist alternative
   the production of children is based on
   1. the environmental input
   2. a language faculty that is partly independent of any stimulus
   prediction:
   items that are absent from the stimulus may well be present in the production of
   children: they are the result of computation carried out by grammar.

² Based on an access of the online PFC corpus (http://www.projet-pfc.net/moteur.html) on August 12th, 2013, which at that point contained 20 data spots over mainland France representing 209 interviews (hence an average of about 10 speakers per spot). The PFC corpus is coded for liaison and distinguishes liaison with and without enchaînement. However, it does not code the eventual occurrence of schwa or glottal stop with the latter. The PFC corpus distinguishes 18 socio-professional categories, of which five were chosen which presumably include the two end points of the scale.
5.1. LWE ex nihilo

(19) acquisition of LWE: currently entertained scenario:

LWE absent from the input, therefore absent in children
a. LWE is restricted to specific (high, journalistic, official) style,
b. illiterate pre-school children have no chance to come across it at all.
c. LWE thus arises only as a side-effect of children's access to literacy after age six,
d. and is concomitant with the acquisition of optional liaison (which appears at this developmental stage).
e. Hence there is no ground for children to produce LWE before age six, and they only sporadically recur to LWE later on under the influence of instruction and literacy (Dugua 2006: 328).

(20) acquisition of LWE: evidence available to date

a. conforming to this scenario, the empirical record thus far has not identified any LWE before age six.
b. this is true for longitudinal studies
   1. the Sophie corpus, cited in Chevrot et al. (2005, 2009)
   2. cross-sectional studies (e.g. Wauquier-Gravelines & Braud 2005) as well as for
c. LWE is observed in L2 literate learners
      2. all cases of LWE observed have a strong likelihood to originate in spelling. This is rather unsurprising for adult L2 learners and extends to liaison beyond LWE.
      3. example pronunciation of *grand ami* "great friend" as [grãdãmi] instead of [grãtami]: underlying /d/ (established by grande [grãd] "great, fem.") appears as [l] in liaison, but is always spelt <d>.
      The L2 speakers in question have never heard a single instance of [grãdãmi] from any French native, but still produce [d], which is the item they see in orthography.

(21) perception of LWE

a. no data available to date.
b. Focusing on sociolinguistic variation in the acquisition of liaison, Nardy (2008) for example probes grammaticality judgements by children. She contrasts cases where the liaison consonant is realized on word 2 with instances where it is absent. However, the perception of a realized liaison consonant on word 1, i.e. LWE, is not tested.

(22) LWE ex nihilo

a. Splendido (2014) documents the existence of LWE before age six and in absence of a graphic input.
b. longitudinal study (3,5 to 6 years)
   conducted with 8 illiterate pre-school children
   1. two French L1,
   2. three bilingual Swedish-French (BSF)
   3. three Swedish early L2 French (EFL2)
c. none of the 8 children was systematically exposed to written representations of French words or explicitly taught either French or Swedish spelling.
d. picture-naming task
   e. results
      1. one BSF and one EFL2 child produce respectively 8% and 13% of LWE which most of the time is followed by a glottal stop.
      2. productions with LWE occur towards the end of the longitudinal study, i.e. around age six.
      3. these LWE are always produced with the correct consonant, i.e. children never make substitution errors (which are otherwise well documented).
      Splendido (2014: 249)

(23) discussion

a. the evidence documented by Splendido suggests that LWE may emerge in absence of any LWE in the input, and independently of spelling.
b. unexpected by the empiricist / usage-based approach

c. in line with the rationalist approach.
LWE emerging in children may be the result of a developmental path whereby learners try to make sense of these consonants that are sometimes present, but absent at other times.

5.2. LWE betrays an intermediate developmental stage

(24) interpretation of LWE ex nihilo

a. following Splendido (2014: 248), we believe that the presence of LWE in illiterate pre-school children makes sense as an intermediate step in the developmental path that infants follow when moving towards the adult system.
b. recall that the LWE documented in her data were observed on the last recording sessions, i.e. at a stage where the acquisition of liaison was about to be completed (while omissions continued to be produced but substitution errors faded).

(25) developmental path

a. stage 1
   common to the constructionist and autosegmental scenario
Surface-based parsing that identifies the DP as a single unit, i.e. without individualizing the words it contains.
developmental path
b. stage 2
   common to the constructionist and autosegmental scenario
   1. Children analyze the internal structure of the DP and make parsing hypotheses.
   2. This produces errors: the main pattern found (see Dugua 2006, Nardy 2008, Wauquier 2009) is an interpretation of liaison consonants as being regular (stable) word-initial consonants of word 2.
   3. Hence the storage of /nours/ "bear" (on the basis of un ours [luʁəs]) yields *le nours [*luʁəs] "the bear" (instead of l’ours [luʁ]), *les nours [*luʁəs] (for les ours [luʁəs] "the bears"); *petit nours [*potiʁəs] (against adult petit ours [potiʁəs] "little bear") and so forth.

c. step 3
   constructionist scenario
   1. Infants lexicalize structures such as /un + nX/, /un petit + tX/
   2. Where the liaison consonant -n-, -z-, -t- etc. is stored twice: once at the end of word 1, another time at the outset of word 2.
   3. As was mentioned, the status of stable and liaison consonants in this approach is identical.

d. step 3
   autosegmental scenario
   1. Children understand that liaison and stable consonants have different phonological status and hence emancipate their segmental content from their syllabic support, thereby creating floating pieces of melody and empty constituents.
   2. They also understand that the segment belongs to word 1, while the constituent in which it is realized is a piece of word 2.
   3. That is, Wauquier (2009) argues that on the third developmental stage children arrive at the adult system.

(26) LWE = intermediate developmental stage
a. after the individuation of words within the DP (stage 2)
   b. before reaching adult competence (stage 4)

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a. after the individuation of words within the DP (stage 2)
   b. before reaching adult competence (stage 4)
6. H aspiré-triggered glottal stop after unpronounced liaison consonants

6.1. Recap: h aspiré

(30) properties of h aspiré words, part I

diagnostics for h aspiré

\[
\begin{array}{|c|c|c|c|} 
\hline
& h \text{-aspiré} & C \text{-initial} & \text{ordinary V-initial} \\
\hline
\text{a. liaison} & \text{NO} & \text{NO} & \text{YES} \\
\text{b. clision} & \text{NO} & \text{NO} & \text{YES} \\
\text{c. suppletion} & \text{NO} & \text{NO} & \text{YES} \\
\text{d. enchaînement} & \text{NO} & \text{YES} & \text{YES} \\
& \text{par hasard, *par | hasard} & \\
\hline
\end{array}
\]

(31) properties of h aspiré words, part II

after C-final words, h aspiré may generate a schwa


\[
\begin{array}{|c|c|c|c|} 
\hline
& h \text{-aspiré} + \text{schwa} & \text{ordinary V-initial} + \text{schwa} \\
\hline
\text{a. after C-final words} & \text{YES} & \text{NO} \\
\text{fem. quelle [z] housses} & \text{fem. quelle *[z] armoire} \\
\text{masc. quel [z] hêtre} & \text{masc. quel *[z] homme} \\
\hline
\text{b. after V-final words} & \text{NO} & \text{NO} \\
\text{fem. une jolie *[z] housses} & \text{fem. une jolie *[z] armoire} \\
\text{la *[z] housses} & \text{la *[z] armoire} \\
\text{masc. un joli *[z] hêtres} & \text{masc. un joli *[z] homme} \\
\hline
\end{array}
\]

(32) properties of h aspiré words, part III

after C-final words, h aspiré may generate a glottal stop


\[
\begin{array}{|c|c|c|c|c|} 
\hline
& h \text{-aspiré} + [?] & \text{ordinary V-initial} + [?] \\
\hline
\text{a. after C-final words} & \text{YES} & \text{NO} \\
\text{fem. quelle [?] housses} & \text{fem. quelle *[?] armoire} \\
\text{masc. quel [?] hêtres} & \text{masc. quel *[?] homme} \\
\hline
\text{b. after V-final words} & \text{NO} & \text{NO} \\
\text{fem. une jolie [?] housses} & \text{fem. une jolie *[?] armoire} \\
\text{la *[?] housses} & \text{la *[?] armoire} \\
\text{masc. un joli [?] hêtres} & \text{masc. un joli *[?] homme} \\
\hline
\end{array}
\]

(33) either a glottal stop or a schwa – not both

a. the generation of either a schwa or a glottal stop is obligatory when h aspiré occurs in post-consonantal position.

b. glottal stop and schwa cannot co-occur

\[
\begin{array}{c}
\text{une grosse [...z...]} \text{ housses}
\end{array}
\]

but

\[
\begin{array}{c}
\text{une grosse *[...zàh...]} \text{ housses}
\end{array}
\]


(34) disclaimer: emphasis

a. we are not talking about emphasis.

All data presented only concern non-emphatic contexts.

b. the glottal stop is a regular exponent of emphasis in French:

if emphasis is put on a noun, a glottal stop may appear with any V-initial word, not just with h aspiré words.

Freeman (1975), Tranel (1981: 310f), Pagliano (2003: 640ff)

c. Grammont (1914: 144):

"insistence can apply to an initial syllable beginning with a vowel. Even in this case its major specific characteristic, consonantal strengthening [elsewhere Grammont shows that gemination is also an exponent of emphasis], is observed since the initial vowel is preceded by a glottal stop" (translation ours).

d. Malécot (1975: 52)

Based on sound recordings of 50 Parisian speakers, Malécot writes that the glottal stop occurs "exclusively before vowels [...], it serves as a stress marker to distinguish that the speaker wishes to make, (2) to a cited word, proper noun or initials, or (3) to a correction made to something he has just said."

Glottal stops of emphatic origin are also distinct from h aspiré-generated items by the fact that they may occur after vowels: Malécot (1975: 53) gives examples for dé l'arriver with emphasis on arriver.

e. Hence pronunciations marked as ungrammatical under (32) are only ill-formed in non-emphatic contexts. They are possible in case emphasis lies on the noun. This is shown under (35) below (where emphasis is indicated by upper case characters).

(35) glottal stop is an exponent of emphasis

\[
\begin{array}{|c|c|c|} 
\hline
& h \text{-aspiré emphatic} & \text{ordinary V-initial emphatic} \\
\hline
\text{a. after C-final words} & \text{YES} & \text{YES} \\
\text{fem. quelle [?] HOUSSE} & \text{fem. quelle [?] ARMOIRE} \\
\text{masc. quel [?] HEROS} & \text{masc. quel [?] HOMME} \\
\hline
\text{b. after V-final words} & \text{YES} & \text{YES} \\
\text{fem. une jolie [?] HOUSSE} & \text{fem. une jolie [?] ARMOIRE} \\
\text{un joli [?] HEROS} & \text{un joli [?] HOMME} \\
\hline
\end{array}
\]
After consonants, h aspiré obligatorily generates a schwa or a glottal stop.

But not both: schwa and glottal stop cannot co-occur.

Only h aspiré words can do that, and they can do it only after consonants.

Analysis
Pagliano (2003)

a. the glottal stop is generated (via epenthesis) in the initial empty onset of word 2 because this onset is in strong position (post-consonantal) => glottal stop epenthesis is strengthening
b. the schwa is generated in the final empty nucleus of word 1 (if available). In this case, the initial onset of word 2 is not in strong position anymore and hence no strengthening can occur.

c. locus of variation: Government
the schwa / glottal stop variation is due to the target that speakers "choose" Government from the first vowel of word 2 to apply to:
1. target = initial onset of w2 => schwa epenthesis
2. target = FEN of w1 => glottal stop epenthesis

Glottal stop generation is strengthening

a. quel [ʔ] hêtre
   glottal stop in strong position: C__V
   Gvt
   \[ \begin{array}{c}
   O O O O O \\
   \hline
   x x x x x \\
   \hline
   qu e l \\
   \hline
   \end{array} \]
   Lic

b. joli *[ʔ] hêtre
   glottal stop in weak position: V__V
   Gvt
   \[ \begin{array}{c}
   O O O O O \\
   \hline
   x x x x x \\
   \hline
   j o l i \\
   \hline
   \end{array} \]
   Lic

Schwa insertion

quel [s] hêtre

Gvt

\[ \begin{array}{c}
O O O O O \\
\hline
x x x x x \\
\hline
qu e l \\
\hline
\end{array} \]

Lic

6.2. "Glottal stop only after consonants" is not quite true

a. a new piece of empirical evidence exposed in Encrevé & Scheer (2005) but which otherwise went unnoticed
b. it is not quite true that h aspiré generates a glottal stop only after consonants.
c. the glottal stop also appears after vowel-final words in case they bear a liaison consonant.
d. before h aspiré this liaison consonant is not pronounced – but the appearance of the glottal stop shows it is there.
e. the existence of a glottal stop after (unpronounced) floating consonants was also evidenced experimentally by Gabriel & Meisenburg (2005):
1. on a double-blind reading task effected by eight native subjects, "tout Hongrois" was pronounced five times with a glottal stop, three times without.
2. variation between the presence and the absence of the glottal stop is expected, as it is also found in regular post-consonantal contexts as under (32) (quel [ʔ/ø hêtre]): glottal stop generation in this context is optional.
3. Gabriel & Meisenburg (2005) did not work on the contrast "after floating consonants vs. after real V-final words", hence have not controlled for the contrast with real V-final words.

Glottal stop is generated by h aspiré in phonetically post-vocalic position iff the preceding word ends in a liaison consonant

a. fake V-final word + h aspiré
   tout [...uɛ] hongre
   un petit [...iɛ] héro
   un gros [...oɛ] honteux
   un grand [...aɛ] hêtre
   c’est trop [...oɛ] haut
   un grand [...ãɛ] hêtre
   tout [...uɛ] hongre
   un joli *[...] hongre
   un honoré *[...] héro
   un hôte *[...] hôteux
   une honte *[...] honteux
   un grille *[...] grille
   c’est trop *[...] haut
   un gras *[...] héros

b. true V-final word + h aspiré
   un joli *[...] hongre
   un honoré *[...] héro
   un hôte *[...] hôteux
   une honte *[...] honteux
   un grille *[...] grille
   c’est trop *[...] haut
   un gras *[...] héros

Take-home message

a. what is intervocalic and what is post-consonantal is not defined by phonetics and cannot be read off the surface.
b. phonetically intervocalic consonants are in fact post-consonantal if they follow a floating consonant.
   => there must be something consonantal at the end of word 1
c. existence of a consonantal constituent at the end of word 1
   1. we know independently that syllabic positions are defined by syllable structure, that is by x-slots and syllabic constituents.
   2. therefore fake intervocalic h aspiré – the one after unpronounced liaison consonants as in un gros [...oɛ] hêtre – must occur after a consonantal constituent.
recall the lexical representation of liaison consonants

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{petit}
\end{array}
\]

(44) \textit{gros hêtre vs. joli hêtre}

a. \textit{gros} [...] hêtre
   \hspace{1cm} \text{glottal stop in strong position: C}_V

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{gr} \\
\text{o} \\
\text{s} \\
\text{hêtre}
\end{array}
\]

b. \textit{joli} [...] hêtre
   \hspace{1cm} \text{glottal stop in weak position: V}_V

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{x} \\
\text{x} \\
\text{joli} \\
\text{hêtre}
\end{array}
\]

(45) converging evidence

a. \textit{LWE} \Rightarrow there is a consonantal position at the end of word 1

b. \textit{h aspiré} \Rightarrow there is a consonantal position at the end of word 1

7. \textit{H aspiré} and domains of phonological computation

7.1. \textit{Why there is no \textit{gros} *[o a e] hêtre: hiatus avoidance}

(46) no schwa after pronounced liaison consonants

a. after pronounced consonants, schwa and glottal stop are in free variation
   \textit{grosse housse} can come out as
   \textit{grosse} [...] \textit{sau} [...] \textit{housse} or
   \textit{grosse} [...] \textit{sau} [...] \textit{housse}.

b. we expect the same free variation after unpronounced liaison consonants
   1. a glottal stop may be generated
   2. but no schwa:
      \textit{un gros} *[o a e] hêtre
      is not even remotely possible.
   3. Why?

(47) \textit{quel hêtre} vs. \textit{gros hêtre}

a. \textit{quel} [...] \textit{hêtre}
   \hspace{1cm} \text{Gvt}

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{que} \\
\text{e} \\
\text{l}
\end{array}
\]

b. \textit{gros} *[o a e] hêtre
   \hspace{1cm} \text{Gvt}

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{gr} \\
\text{o} \\
\text{s}
\end{array}
\]

(48) only difference associated vs. floating status of the last consonant of word 1

(49) consider another question

a. that arises if, as we contend, floating consonants indeed possess their own onset
   lexically at the end of word 1:
   b. why is there no \textit{LWE} before consonant-initial words?

1. speakers may decide
   under sociological motivation to associate the floating consonant to the empty
   onset at the end of word 1: this is \textit{LWE}.
   \textit{il est} [t] \textit{amoureux}

2. why are they not free to decide
   to do so when the following word is \textit{C}-initial?
   \textit{il est} *[t] \textit{grand}?

(50) why is there no \textit{LWE} before consonants?

a. \textit{il est} [t] \textit{amoureux}

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{il} \\
\text{es} \\
\text{t}
\end{array}
\]

b. \textit{il est} *[t] \textit{grand}

\[
\begin{array}{cccc}
\text{ONONON} \\
\text{x} \\
\text{il} \\
\text{es} \\
\text{t}
\end{array}
\]

(51) proposal

both questions have the same answer:
\textbf{hiatus avoidance}

a. \textit{Hiatus avoidance has always played a role in the analysis of liaison.}

b. \textit{This is true for pre-20th century approaches (Morin 2005: 8 provides an overview),}

c. \textit{for the classical linear and autosegmental literature (see the survey in Encrevé 1988:}
   \textit{79ff), his own OCP-based analysis 167f)}

d. \textit{and for OT-based analyses (e.g. Perlmutter 1996, Steriade 1999, Tranel 1998, 2000:}
   \textit{45ff).}

\[3\] \text{Hiatus-driven analyses diverge in their workings, though: while Steriade (1999) argues for hiatus repairs}
   \textit{through the insertion of individual consonants of feminine forms (rather than of the entire feminine lexeme),}
(52) no LWE before consonants
a. il est [t] amoureux (50)a
 hiatus avoidance is the motor for attaching the liaison consonant.
b. il est *[t] grand (50)b
 this motivation is lacking, which is why there is no liaison in this context.

(53) no schwa after unpronounced Cs
a. *gr[oø] hêtre
 schwa insertion creates a hiatus
gros *[…oœ…] hêtre
b. quel [a] hêtre
 no hiatus is produced after pronounced final Cs

7.2. H aspiré may set itself off

(54) interesting observation
a. hiatus ≠ hiatus
 b. *gr[oœ] hêtre vs. grosse […sœ/u…] housse
   *[œ e]  [œ u]  
   *VV ≠ hV
   V ≠ V
 c. generalization
    surface hiatus across the h aspiré word boundary is no hiatus for phonology.
1. phonology is sensitive
to word 1-internal hiatus: *gr[oœ]
2. phonology is insensitive
to hiatus whose first vowel belongs to word 1 and whose second vowel belongs
to the h aspiré-initial word 2
3. *gr[oœ] hêtre
   o "sees" schwa
   but
   schwa does not "see" e
4. *grosse [au] housse
   schwa does not "see" u

(55) h aspiré sets itself off
a. ==> h aspiré blocks intervocalic communication
   over a word boundary that is otherwise permeable.
b. Morin (1974: 87f) and Schane (1978a,b) propose that h aspiré words are vowel-
   initial and bear a syllable boundary to the left of h aspiré in the lexicon.
   This syllable boundary is hard wired, i.e. cannot be altered during phonological
   computation, so that the initial vowel of h aspiré words will always be syllable-
   initial (see also Tranel 1979 on this analysis).
c. Cornulier (1978) argues that h aspiré induces a "separation" and is marked for this
   property in the lexicon.

Bermúdez-Otero (Ms) upholds the traditional perspective on suppletion where only entire lexemes can be
involved (otherwise forms like *nouvol ami (for intended nouvel ami) are produced).

(55) h aspiré sets itself off
b. Côté (2008: 91) discusses the autonomy of h aspiré with respect to the preceding
   word.

(56) take-home message
a. h aspiré introduces a domain boundary
b. in the sense of
cycles, phases etc.
c. interesting pattern

since domain boundaries are usually an exponent of morpho-syntactic structure.
Here it comes as an idiosyncratic property of lexical items.
===> piece-driven vs. node-drive chunking (Scheer 2011: §765)

8. Cases where h aspiré does not behave like a consonant

(57) h aspiré
a. classical description
   h aspiré-initial words are phonetically vowel-initial, but behave as if they were
   consonant-initial.
b. There are two phenomena that do not follow this pattern, though
c. Côté (2008: 66f) insists on the importance of this asymmetry for the analysis of h
   aspiré.

(58) when h aspiré does not behave like a consonant
h-aspiré C-initial
a. word-final schwa drop
   NO
   c[œ] / *c hêtre
   YES
c[œ] / c' gâteau
b. post-C schwa epenthesis
   YES
   quel […lœ…] hêtre
   NO
   quel *[…lœm…] mur

8.1. Post-C schwa epenthesis

(59) post-C schwa epenthesis
a. schwa epenthesis is a consequence of the domain boundary introduced by h aspiré:
   the FEN of word 1 under (60)a is ungoverned and therefore subject to epenthesis.
b. the absence of the domain boundary under (60)b enforces regular communication
   between the two words. Since empty nuclei call for government and nothing
   prevents the first vowel of the second word to reach that nucleus, government
   is established and there is no reason for epenthesis.

4 A number of Southern dialects may generate a schwa in this position, see Durand et al. (1987). The pattern
   thus only holds for other varieties.
why there is no schwa epenthesis after regular consonants

8.2. Word-final schwa drop

8.2.1. Word-final schwa before h aspiré

8.2.2. Word-final schwa before regular consonants

8.2.3. Observation

8.2.4. Prediction

8.2.5. Schwa in hiatus

9. Conclusion
(69) lexical representation of liaison-inducing words

\[
\begin{array}{cccc}
| & O & N & O & N \\
| & x & x & x & x \\
| & p & e & t & i & t \\
\end{array}
\]

(70) unpronounced liaison consonant:
invariable behaviour of liaison-inducing words before h aspiré

- a. prenominal adjectives
- b. plural marker
- c. items with variable vowels

(71) trouble

a. for analyses where liaison consonants have an origin different from the lexical recording
b. if Côté's analysis is correct, the liaison consonant is necessarily absent from word 1 when unpronounced
c. but (70) shows that it is present

(72) or rather…

- a. what (70) shows is that the constituent in which the liaison consonant is realized in case of LWE is present at the end of word 1
- b. our results do not speak to the lexical origin of the melody of the liaison consonant.

(73) four answers

a. is liaison a uniform phenomenon? yes: consonantal position in w1
b. is there anything lexicalized at the end of word 1?
c. is liaison managed by autosegmental representations including floating Cs? yes
d. is liaison without enchaînement (LWE) phonologically relevant? yes

References

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