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13<sup>th</sup> Manchester Phonology Meeting 26-28 May 2005

# **ASSOCIATION IS NOT AUTOMATIC**

- (1) purpose
  - a. floating autosegmental units are usually assumed to "automatically" associate to some syllabic constituent: they somehow "want" to get realised - typical vocabulary used is "they parachute".

This is true both for tones and floating segments.

- b. we show that in case of French floating consonants, this is not true: floating consonants are endowed with their own skeletal slot in the lexicon optional liaison
- c. obligatory liaison

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e	t	i	t			a	m	i	il	es	t		а	m	oureux
n enc	chaîr	neme	ent						with	nout	enchaîn	emei	nt (o	nly	optional)
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d. whether a floating consonant attaches to its "domestic position" or to a "foreign position" depends on three factors, hierarchically ordered in the following way:

- 1. phonological: no liaison possible if the following word is consonant-initial or begins with an h aspiré.
- 2. syntactic: here obligatory vs. optional vs. forbidden liaison is defined.
- 3. social: if optional, there is a choice where to attach, and this choice is then a matter of style, social conventions etc.
- e. arguments developed:
  - 1. if you take liaison without enchaînement seriously, i.e. if it is part of the speaker's competence and needs to be reflected in the grammar, there is no way not to have the "domestic position". In this case, however, association could not be automatic: were it, the floating consonant would be heard all the time. Also, optional liaisons would be heard all the time if association were automatic.
  - 2. the analysis of the appearance of glottal stops in h-aspiré words requires the existence of a consonantal position at the end of the preceding word iff this word ends in a floating consonant. Critical contrast:
    - un gros ?honteux un papa \*?honteux vs.
  - 3. enchaînement of stable consonants (= non-floating, e.g. un sac en cuir) shows that the presence of a "domestic position", whose existence is beyond doubt, does not prevent the consonant from attaching to the Onset of the following word .
- disclaimer f.

we do not participate in the recent debate regarding the lexical status of floating consonants/ their existence (Chevrot et al. 2005). Instead we assume the traditional analysis, i.e. where floating consonants are floating consonants (hence belonging to "word 1").

# I. Passive competence is also competence: Why non-enchaînement needs to be taken seriously

- (2) liaison and enchaînement are different
  - a. enchaînement = in a sequence  $W_1$ - $W_2$ , the fact of pronouncing the last consonant of W1 in the onset of W2.
  - b. enchaînement of stable consonants (= those that are always pronounced no matter what the beginning of the following word) is possible
    - 1. if W2 is vowel-initial (Delattre 1966:55,143-144)
    - 2. in the majority of cases where W2 begins with h aspiré. In fact there are two classes of h aspiré words:
      - those that admit enchaînement with all speakers: quel hasard, par hasard
      - those that do not with some: \*quel hêtre, \*quel héros, \*quelle haine,
      - \*quel haut voltige

[Cornulier 1981:209ff, Encrevé 1988:200f]

there is a great deal of variation among speakers, i.e. membership of most haspiré words in one or the other class is a matter of "personal" (and inherently variable) decision. However, some h-aspiré words appear to especially refuse enchaînement: hêtre, héros, haine, haut, honte, honteux, hideux, haïr, hongre.

c. classical analysis: resyllabification un sac admirable

par hasard

	х	Х	х	Х	x	х	х	Х	Х	х	х	
			+	$\geq$				ŧ	$\nearrow$			
un	S	а	с		a dmirable	р	а	r		а	S	ard

c. stable consonants are always enchained: non-enchaînement occurs only when emphasis is put on W2. Emphasis has two consequences:
1. non-enchaînement
2. appearance of a glottal stop, i.e. the regular manifestation of emphasis

2. appearance of a glottal stop, i.e. the regular manifestation of emphasis un sac [?] ADMIRABLE par [?] HASARD

d. liaison = in a sequence W1-W2 where W1 is vowel-final when occurring in isolation, a consonant belonging to W1 is pronounced.

In short: **liaison is only with unstable consonants**. Liaison may be obligatory optional forbidden un petit enfant c'est admirable \*ont-ils une maison?

depending on

- 1. phonology: no liaison possible if the following word is consonant-initial or begins with an h aspiré.
- 2. syntax: if phonologically possible, syntax decides whether liaison is obligatory, optional or forbidden.
- 3. social: if optional, liaison is a matter of style, social convention etc., see below. enchaînement and liaison are different because there is also
- e. enchaînement and liaison are different because there is also
  liaison without enchaînement:
  c'est | admirable
  les uns [z?] et les autres (F. Mitterrand 10-3-88)

f. in the classical literature

[which rests on a few academic examples out of context that are repeated over and over again - for a critique of theories relying on non-fieldwork data in relation with liaison, cf. Encrevé 1988:43ff, Durand et al. 2002, Durand & Lyche 2003]

- 1. enchaînement of stable consonants is usually not considered
- 2. liaison and enchaînement are usually confused: all liaisons are taken to be enchained

==> liaison without enchaînement is not taken into consideration [Fouché 1959:434, Dell 1970:68, Anderson 1982:560, Clements & Keyser 1983]

- (3) focus on liaison without enchaînement what a strange animal
  - a. liaison without enchaînement has been reported at least since Passy (1899), especially in "professoral" speech.
  - b. examples
    - c'est [t | ?] absolument vrai [set | ?apsolymã vre] Passy (1899:51 note 1)
    - j'avais [z | ?] un rêve (V. Giscard d'Estaing, 19-5-1981)
    - j'ai beaucoup [p | ?] écouté les zun [z | ?] et les [z] autres (F. Mitterrand 10-3-1988)
    - il est [t | ?] indispensable...(J. Chirac 1-04-04)
    - beaucoup d'autres seront [t | ?] avec nous (L. Fabius 22-05-05)
  - c. variation
    - typically
      - -C plus glottal stop: c'est [t | ?] absolument
      - -C plus schwa: c'est [t | ə] absolument
      - in either variant a significant pause may separate -C and the glottal stop/ schwa
  - c. it has been documented in specific styles:
    - careful radiophonic speech
    - "intellectual" speakers: journalistes, professors, politicians etc.

e.g. Ågren (1973), Encrevé (1978,1983,1986,1988), Lucci (1983), Morin & Kaye (1982), Green & Hintze (1988), Morin (2005)

- d. Encrevé (1983, 1988) is based on radio broadcast of a homogeneous socioprofessional category, i.e. 21 political leaders, which express themselves in "careful, formal" style. This corpus contains
  - 10816 occurrences of obligatory and optional liaison, of which
  - 7842 = 72,5 % are realised, of which
    - 5027 are obligatory these are realised in 98,8 % of the cases (11 are not)
       ==> all obligatory liaisons are enchained
    - 2815 are optional of those
      - 2499 = 88,8% are enchained
      - 316 = 11,2 % are not enchained
- e. style dependence
  - 1. liaison without enchaînement is typically produced by "professionals of public speech" when they express themselves in audio-visual media.
  - but it is not frequent in other styles, given also the fact that the majority of
    "average" speakers do not realise many optional liaisons: Laks (1980).
     Already Martinon (1913:391f) says that "les gens qui font profession de la parole,
    avocats, hommes politiques, etc." realise many more optional laisons than the
    "gens du monde". This has also been encoded in generative formalism by Selkirk
    (1972 et passim): "the more formal the speech, the more boundaries are deleted".

f. inherent variation

just as optional liaison in any style, LWE is an "inherent variation" of the grammar, i.e. it cannot be interpreted as a trace of a particular style: the same speaker in the same situation and the same sociological/ stylistic environment produces LWE at a stable rate, but randomly distributed over the range of optional liaisons.

g. evolution

within the category of "professional" speakers, over the past 25 years

- 1. the proportion of optional liaisons has increased
- 2. among these, the proportion of liaison without enchaînement has increased: J. Chirac

1978-81: 15,2 % of optional liaisons realised without enchaînement 2004: 20%

- (4) liaison without enchaînement (LWE) is to be taken seriously I production: it is part of the competence of those who produce it
  - a. LWE is regular (= not occasional, equally distributed over speech acts)
  - b. not negligible numerically
  - c. never followed by any self-correction
  - d. only occurs in phonologically (before V-initial words) and syntactically (identifying optional liaisons) specified contexts. Hence grammar opens the window for LWE, and this window is never violated.
  - ==> LWE is not a performance error it is part of the grammar of the speakers.
- (5) LWE is to be taken seriously II

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

- a. since audio-visual media have developed, all natives constantly bathe in an environment where they are confronted with LWE.
- b. the speakers who produce LWE are perceived as especially
  - noteworthy
  - legitimate/ important
  - socially high-ranking
- c. no native of whatever social level has any 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.
- (6) acquisition of LWE
  - a. obligatory liaison is found in two contexts
    - det + noun: le petit enfant
    - pronoun + verb : ils\_envoient
    - plus idioms/ expressions (Etats-Unis, c'est-à-dire and the like)
  - b. obligatory liaison is acquired in production before entering school (Wauquier 2005).
  - c. all natives receive State-organised obligatory education from age 4 to 16, and therein are intensively trained in reading and writing.

d. doing optional liaison consists in the pronunciation of floating consonants exactly as spelling writes them.

Doing LWE consists in the pronunciation of floating consonants exactly **where** spelling writes them.

e. most of optional liaison appears in production only by the time children go to school (Wauquier 2005).

==> it is reasonable to assume that the training in reading and writing favours the development of a passive competence of LWE, and of a positive grammaticality judgment thereof, with subjects who realise themselves only very few optional liaisons and no LWE at all.

(7) conclusion

[Encrevé 1988:275-284, Jakobson 1975]

optional liaison in general and LWE in particular is part of the passive grammar/ competence of all French natives no matter what their production looks like

- (8) consequences and summary
  - a. LWE needs to be taken seriously by all theories of liaison.
  - b. in case of LWE, the liaison consonant does not sit the onset of the following word since
    - 1. it is separated from the following word by a segment: either a glottal stop or a schwa.
    - 2. it may be separated from the following word by a pause.
  - c. hence it must be attached to a skeletal slot that belongs to its own word
     => in LWE, liaison consonants are realised in a domestic position.

	j'avais un rêve												
minimal	ana	lysis					Enc	revé	(19	88)			
1. lexica	ıl rep	prese	ntatio	1									
							0	Ν	Ο	Ν		0	Ν
Х	Х	Х	Х	Х	Х			х	х	Х	х		Х
a	v	ε	Z		un	rêve		a	v	ε	Z		un rêve
2. liaiso	n wi X	th en	chaîne x	x	X		0	N   x	O   X	R   N   x	X	0	N   x
a	 V	 ε	z	//	 un	rêve		 a	 V	 ε	Z		un rêve

3. liaison without								
					R			
		0	Ν	Ο	Ν	C	0	N
						$\uparrow$		
X X X	X X X	<u> </u>	Х	Х	Х	Х		Х
	$\uparrow$					$\wedge$		
a v e	z u	n rêve	а	v	ε	Ż	ι	in rêve

- d. Encrevé's (1988) analysis: "double floatation" (Tranel 1995) in optional liaison environments, the speaker makes two choices
  - 1. to attach the floating consonant to its domestic x-slot (the following Onset doesn't have any) or not = to have liaison or not to have it.
  - 2. to attach the x-slot either to the floating Coda of its domestic word, or to the Onset of the following word = liaison is with or without enchaînement.

e. in any event, there must be a domestic skeletal slot over all floating consonants: otherwise they could not be accommodated in LWE. Hence association cannot be automatic since otherwise all liaison consonants would always be pronounced.

f. hence two predictions are made: 1. floating consonants are endowed with a domestic skeletal position in the lexicon. 2. their association with a skeletal slot/ a syllabic constituent is not automatic.

# **II.** Confirmation: the distribution of the glottal stop

		h-aspiré	ordinary V-initial
a.	liaison	NO	YES
		les *[z] housses	les [z] hommes
<b>b</b> .	élision	NO	YES
		la *l' housse	*le l'homme
c.	suppletion	<b>NO</b> (like C-initial words)	YES
		ce / *cet hêtre	cet / *ce homme
		[cf. ce / *cet tableau]	
d.	enchaînement	NO	YES
		quel   hêtre, *quel hêtre	quel homme, quel * homme
		YES	
		par hasard, *par   hasard	

(9) peculiar properties of h-aspiré words I

### recall:

all h aspiré words show uniform behaviour regarding a-c. With respect to d, however, recall that there are two classes of h-aspiré words:

1. those that admit enchaînement with all speakers: quel\_hasard, par\_hasard

2. those that do not with some: \*quel\_hêtre, \*quel\_héros, \*quel\_haine, \*quel\_haut voltige

[Cornulier 1981:209ff, Encrevé 1988:200f] there is a great deal of variation among speakers, i.e. membership of most h-aspiré words in one or the other class is a matter of "personal" (and inherently variable) decision. However, some haspiré words appear to especially refuse enchaînement: hêtre, héros, haine, haut, honte, honteux, hideux, haïr, hongre.

(10) peculiar properties of h-aspiré words II they may "spit out" a schwa if the preceding word is C-final Schane 1968:162), Selkirk (1972:329f), Dell (1973:186,262), Tranel (1981:286f)
[Dell & Selkirk suggest that the schwa in question is the feminine marker, but its appearance also with masculines (which he says does not occur) and in absence of any putative schwa (avoir [ə] honte, avec [ə] haine) refutes this option, cf. Tranel (1981:287), Pagliano (2003:635)]

	-	h-aspiré + schwa	ordinary V-initial + schwa
a.	after C-final words	YES fem quelle [ə] housse masc quel [ə] hêtre	NO fem quelle *[ə] armoire masc quel *[ə] homme
b.	after V-final words	NO fem une jolie *[ə] housse la *[ə] housse masc un joli *[ə] hêtre le *[ə] hêtre	NO fem une jolie *[ə] armoire la *[ə] armoire masc un joli *[ə] homme le *[ə] homme

(11) peculiar properties of h-aspiré words III they may "spit out" a glottal stop if the preceding word is C-final Dell (1973:186, 262), Tranel (1981:310f)

		h-aspiré + [?]	ordinary V-initial + [?]
a.	after C-final words	YES fem quelle [?] housse masc quel [?] hêtre	NO fem quelle *[?] armoire masc quel *[?] homme
b.	after V-final words	NO une jolie *[?] housse la *[?] housse un joli *[?] hêtre le *[?] hêtre	NO fem une jolie *[?] armoire masc un joli *[?] homme

(12) WATCH OUT - We are not talking about emphasis ! the glottal stop is the regular manifestation of emphasis: if emphasis is put on the noun, a glottal stop appears with ANY V-initial word, not just with h-aspiré words. Crucially, non-emphatic pronunciations of the NO-cells under (11) are ill-formed. Freeman (1975), Tranel (1981:310f)

with emphasis (indicated by upper case letters) [?] is everywhere:

	-		
		h-aspiré emphatic	ordinary V-initial emphatic
a.	after C-final words	YES fem quelle [?] HOUSSE masc quel [?] HEROS	YES fem quelle [?] ARMOIRE masc quel [?] HOMME
b.	after V-final words	<b>YES</b> une jolie [?] HOUSSE un joli [?] HEROS	YES fem une jolie [?] ARMOIRE masc un joli [?] HOMME

- (13) new observation by Pagliano (2003:634ff)
  - a. h-aspiré words spit out either a schwa OR a glottal stop, not both at the same time:

une grosse [ə] housse une grosse [ʔ] housse une grosse \*[əʔ] housse

- b. the presence of both schwa and the glottal stop is possible, but necessarily emphatic. In other words, the stable phonological trace of emphasis (the "emphasis morpheme") is a glottal stop, no matter what the context (h-aspiré or not, preceding C-final word or not).
- (14) critical generalisation

h-aspiré words only spit out things - schwa or a glottal stop - after consonants

- (15) Pagliano's (2003) analysis
  - which you don't have to buy in order to follow our argument
  - from now on we will present in parallel 1) Pagliano's analysis and our development thereof as well as 2) the minimal analysis that we believe cannot be eluded whatever the theoretical orientation.
  - a. following Dell (1973) and others, h-aspiré words have a lexically specified glottal stop in their underlying representation. In an autosegmental environment, this means that h-aspiré words have a lexically floating glottal stop in their first Onset.
  - b. consonant-final words must end in an empty Nucleus because the schwa that may appear before h-aspiré words needs to be put up: quel [ə] hêtre.
  - c. this glottal stop appears on the surface iff its Onset comes to stand in Strong Position. Hence it is a form of strengthening/ fortition: its existence is the phonetic trace of the strength of the Onset in question.
  - d. we know independently that there are two Strong Positions (i.e. where fortition is observed and where consonants are protected against lenition, cf. Ségéral & Scheer 2001): 1) post-consonantal and 2) word-initial. Hence the contextual conditions of the glottal stop are precisely those of a strong position: post-consonantal.
  - e. in CVCV (Lowenstamm 1996, Scheer 2004, Szigetvári 1999, Szigetvári & Scheer 2005), "post-consonantal" means "after a governed empty Nucleus", and a Strong Position is an Onset that is ungoverned (=unspoiled) but licensed (=supported) (Ségéral & Scheer 2001).

#### quel [?] hêtre

the first vowel of hêtre governs the final empty Nucleus of quel. Therefore its own Onset remains ungoverned, but is licensed - hence a Strong Position.

#### vs. joli \*[?] hêtre

the final Nucleus of the preceding word is filled - hence cannot/ does not need to be goverend. The first vowel of hêtre therefore governs = spoils its own Onset, which comes out as nonstrong.





### quel [ə] hêtre

instead of governing the final empty Nucleus of the preceding word, the first vowel of hêtre may also "decide" to govern its own Onset. Consequences: this Onset will be non-strong, and the preceding empty Nucleus will need to be segmentally identified - by schwa epenthesis.



#### quel \*[ə?] hêtre

cannot exist because the first vowel of hêtre will always govern either its own Onset or the final empty Nucleus of the preceding word - it cannot govern nobody (this is predicted by the theory, cf. Ségéral & Scheer 2001).

- (16) "? only after Cs" is not quite true
  - a. the glottal stop does occur in phonetically intervocalic position iff the preceding word ends in a floating consonant.

preceding fake V-final word		preceding true V-final word
tout [u ?5] hongre		un joli *[i ?5] hongre
un petit [i ?e] héros	un honoré *[e ?e] héros	
un gros [o ?5] honteux	TIC	un foutu *[y ?5] honteux
un gros [o ?i] hideux	VS.	un gai *[ɛ ?i] hideux
c'est trop [o ?o] haut		une foutue *[y ?o] hauteur
un grand [ã ?ɛ] hêtre		un joli *[i ?ɛ] hêtre
	tout [u ?õ] hongre un petit [i ?e] héros un gros [o ?õ] honteux un gros [o ?i] hideux c'est trop [o ?o] haut	tout [u ?5] hongre         un petit [i ?e] héros         un gros [o ?5] honteux         un gros [o ?i] hideux         c'est trop [o ?o] haut

- c. there is some variation
  - 1. the existence of a glottal stop after floating consonants has been evidenced experimetally by Gabriel & Meisenburg (2005): on a double-blind reading task read by 8 native subjects, "tout Hongrois" was pronounced 5 times with a glottal stop, 3 times without. Gabriel & Meisenburg (2005), however, 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.
  - 2. the existence of some variation here is not surprising: exactly the same variation occurs in regular post-consonantal contexts as under (11) quel [?]/ ø hêtre.
  - 3. we are preparing an experiment, both in production and perception, that controls for all relevant parameters. We will run this on about 30 subjects, results to come...

#### (17) thus

- a. phonetics do not define what is intervocalic
- b. phonetically intervocalic consonants are in fact post-consonantal if they follow a floating consonant.
- c. however, "post-consonantal" is not defined at the melodic level. Rather, it is a property of syllable structure. Hence we must conclude that "fake intervocalic" consonants un gros [0...?e...] hêtre occur after a consonantal position.



(18) as we said before...

hence floating consonants must have their own "domestic" constituent in the lexicon exactly what we have predicted on the grounds of liaison without enchaînement.

- (19) finally: two questions, one answer
  - a. question 1
    - the glottal stop and schwa have exactly the same distribution in h-aspiré words, cf. (10) and (11), they are actually in "free" variation after consonants: une grosse [?] housse

or

une grosse [ə] housse

2. hence if "ending in a floating consonant" counts as "C-final" as seen under (16) (un gros [...o ?ɛ...] hêtre), schwa should also be able to appear instead of the glottal stop. This however is completely impossible - not even remotely imaginable:

un gros \*\*[...o əɛ...] hêtre

3. the syllabic configuration is identical for



4. hence the critical contrast here is the **phonetic** realisation of the consonant.b. question 2

if there is always a "domestic" constituent that could receive the floating consonant, and if the association of depends on a social command, why can't we have liaison before consonant-initial words?

=> \* un petit [t] café ?

- c. answer: the OCP (Encrevé 1988:179f) doing what can't be done would create
  - 1. two adjacent consonants \* un petit [...it k...] café
  - two adjacent vowels un gros [...o əɛ...] hêtre

true, the OCP is an old tool from the 80s. It has been largely discredited by the fact that on the assumption of its universal validity, phonologists have typically used it when it could do a job, but did not mention it when it was violated in the same language and exactly the same context. One of its functions has nowadays been replaced by ONSET in OT, and various liaison analyses are based on this (e.g. Tranel 2000).

We tentatively propose the following domain of application of the OCP:

- 1. the OCP prevents the creation of identical adjacent objects during a derivation.
- 2. it does not care for identical objects being adjacent if they have a lexical origin. Hence the following "OCP-violations" are ok
  - hiatus morpheme-internally: création, héroïne.
  - hiatus at word boundaries: le hasard, la housse, il va a Arles, elle a eu un enfant.
  - cluster morpheme-internally: partir, patrie etc.
  - cluster at word boundaries: l'unique tableau, une grande fille etc.

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