CROSS-SYLLABIC CONSTRAINTS AND THE FRENCH "E MUET"[*]

Yves-Charles Morin

Université de Montréal

0.   Introduction

Among the many attempts to account for the behavior of "e muet" in French, one can distinguish basically two approaches: a linear one, where the presence or absence of "e" is regarded as a function of the sequences of segments (and possibly boundaries) preceding and/or following it,[1] and a metric one, where this is a function of the resulting syllabic structure. This last approach is exemplified by the work of Weinrich (1958) and Pulgram (1965), which has recently received a new interpretation within the framework of metrical theory by Selkirk (1978) and Bouchard (1981).

In this note, I will review these last two proposals and show that they suffer basically from the same shortcomings as the initial Weinrich-Pulgram's analysis, because they ignore the possibility for cross-syllabic constraints, which have been interpreted as linear constraints in Morin (1976).[2]

1.   Pulgram's Analysis

Pulgram's analysis simply says that an "e"

...must be articulated where its omission would produce a non-occurring consonant cluster within a syllable; in all other cases the articulation of the ["e"] is optional, dependent on style and subcode... (1965:317).

This rule has the advantage of simplicity. Unfortunately, however, it predicts many cases of syncope where none occurs; e.g., the "e" of acreté should

be syncopatable according to this proposal, since the resulting syllable structure would be [akr-te], the initial syllable of which occurs as the independent word acre [akr] and the second as thé [te]. In order to rescue Pulgram's analysis, Klausenburger (1979) interprets it as a theory of future change, rather than as a description of observed facts: "the prediction made is that all obligatory ["e"s to which the rule is applicable] will disappear eventually". Be this as it may,[3] this syllabic approach does not describe adequately current modern French.[4]

One of the basic problems with Pulgram's approach, and, as we will see, with both Selkirk's and Bouchard's approaches, is the implicit assumption that *all* cases of "e muet" syncope are exclusively determined by syllabic conditions. Tied to this problem is the absence of precise indication on what constitutes a "e muet" for the purpose of syncope rules. The identification of "e muets" is simple in varieties of French where it corresponds to a vowel whose quality is distinct from that of all other vowels, as in the variety discussed by Martinet (1969). It is less so for varieties of French where "e muet", when pronounced in word internal position is homophonous with one of the vowels /œ/ or /ø/, as assumed by Dell, Selkirk, or Bouchard, for instance. Pulgram seems to recognize as "e muets" those modern reflexes of historical schwas which may be syncopatable in the discourse, depending on the style and/or the environment. For example, he does not consider the e's in pesant or dis-le to be

instances of "e muets" in Paris, because they cannot be syncopated. This definition seems to extend to the e's which alternate with Ø in morphological derivations, as in the allomorphs -té/-eté (joyeuseté/acreté), -ment/-ement (subitément/allègrement), etc., otherwise, there would be little case for discussing "exceptions" such as acreté, if the stable e's in such words were not instances of "e muets" subject to the same syncope rules.

One may, however, seriously question the assumption that all these "e muet" syncopes are governed by the same rules, or even more simply that these syncopes are all governed by syllabic conditions. Let us observe the following widespread oppositions found in Paris French:

(1) a. i.   rapport(e)-m'en   [raportœmã]   renferm(e)-toi   [rãfɛrmœtwa]
       ii.   [raportmã]   [rãfɛrmtwa]

    b. i.   l'avortement   [lavortœmã]   la fermeté   [lafɛrmœte]
       ii. l'empotément   [lãpotmã]   la dureté   [ladyrte]

(2) a. i.   je gard(e)rai   [ʒœgardœrɛ]   je résist(e)rai   [ʒœrezistœrɛ]
       ii.   [ʒœgardrɛ]   [ʒœrezistrɛ]

    b. i.   la garderie   [lagardœri]   la fumisterie   [lafymistœri]
       ii. la gâterie   [lagatri]   la finassérie   [lafinasri]

The e's in (1a.i) and (2a.i) should count as "e muets" since they are variably deletable (depending upon style and speed), as appears in (1a.ii) and (2a.ii). The e's in (1b.i) and (2b.i) should also count as "e muets", because they alternate with Ø in morphologically related constructions such as (1b.ii) and (2b.ii). Note, however, that the phonological contexts alone cannot account for the fact that the e's are variably pronounced in (1a) and (2a), but obligatory in (1b.i) and (2b.i). The rules responsible for the alternations between these e's and Ø must somehow recognize that

-m'en and -toi in (1a) are enclitics but that -ment and -té in (1b) are derivational suffixes, and in the same manner that -rai in (2a) is a tense suffix, but not -rie in (2b).

In the analysis provided by Dell (1973), these facts are easy to be accounted for: there will be different rules of "e muet" syncope, sensitive not only to the phonological environment, but also to some of the morphological information (through judicious encoding by means of morpheme and word boundaries). Any analyses including metric analyses, will have to distinguish between several kinds of "e muet" syncopes, and propose that some of these rules are sensitive to morphological information.[5] Failing to do so leads to overgeneralization, as is the case of Pulgram's analysis (qua synchronic description) or to undergeneralization, as we will see is the case for Selkirk's and Bouchard's analyses.[6]

2.   Selkirk's Analysis

Selkirk (1978) addresses the same problem as Pulgram, but adds to it the problem of closed syllable adjustment, viz. a phonological account for the alternation between "e muet" and [ε] as in (3a), and the alternation between [e] and [ε], as in (3b).

(3) a. appeliez [apœlje] appelle [apεl] appellérai [apεlrε]
    b. régler [regle] règle [rεgl] règlement [rεglœmã]

These alternations, she argues, are the reflection of the metric organization which combines syllables into feet: a foot in French can contain two consecutive syllables just in case the second syllable is open and contains a /ə/ (the symbol used for the underlying representation of "e muet"); otherwise a foot contains a single syllable, e.g., règlement has the following metric structure: $[rε\text{-}glə]_\varphi [mã]_\varphi$. Within this framework, closed syllable adjustment takes the form (4), while "e muet" syncope is expressed as (5):

(4) Closed syllable adjustment: $\begin{Bmatrix} ə \\ e \end{Bmatrix} \rightarrow ε \ / \ [C_0 \ \_\_\_ \ W]_\varphi, \ W \neq \emptyset$

(5) ə-syncope: $ə \ \rightarrow \ \emptyset \ / \ [... \ VC \ \_\_\_ \ ...]_\varphi$

Rule (4) indicates that an underlying /ə/ or /e/ is realized as [ε] when it is not foot-final. Rule (5) indicates that a /ə/ is not pronounced when it is preceded by a sequence *vowel-consonant* (VC) in the same foot.

The formulation of closed syllable adjustment in terms of bi-syllabic feet, as defended by Selkirk, constitutes a great advance for the understanding of the historical process that lead to the alternations found in (3). Indeed, we still note alternations such as (6) in 19th century French which strongly suggest a syllabic organization of syllables into binary feet at one time in history:

(6) a. bref   [brɛf]
     b. brevet   [brəvɛ]
     c. breveter   [brɛvəte]
     d. breveterai   [brəvɛtərɛ]

When the distribution of [ə] and [ɛ] became established in this paradigm, the final _t_ of _brevet_ was probably still pronounced. The foot structure was presumably as follows:[7]

(7) a. bref $[\text{brɛf}]_\varphi$

     b. brevet $[\text{brə}]_\varphi \ [\text{vɛt}]_\varphi$

     c. breveter $[\text{brɛ-və}]_\varphi \ [\text{te}]_\varphi$

     d. breveterai $[\text{brə}]_\varphi \ [\text{vɛ-tə}]_\varphi \ [\text{rɛ}]_\varphi$

This analysis provides a principled explanation for the otherwise curious fact that "closed" syllable adjustment affected not only vowels in historically closed syllables, but also in some open ones, viz. the initial syllables of bi-syllabic feet, e.g., the initial syllable of sèvrera [sɛvrœra] (compare with _sevrer_ [sœvre] where the adjustment does not apply). The problem with closed syllable adjustment as it is expressed in (4) is simply that it does not correspond to a productive phonological process in Modern French. Instead, I claim it is completely morphologized everywhere (cf. Morin 1978). In particular, the alternations found in (6) have been regularized, with (6c) becoming [brœfte]; the alternations now found in _bref_, _brevet_, and the various forms of the verb _breveter_ should be explained as cases of stem allomorphy.[8] Selkirk's analysis wrongly predicts the alternations in (6) to be still operative. In the same vein, it also predicts closed syllable adjustment in sequences of clitics such as _je ne te le dirai pas_. When the "e muets" of _ne_ and _te_ are syncopated, the corresponding foot structure $[\text{ʒə-nə}]_\varphi \ [\text{tə-lə}]_\varphi \ [\text{di}]_\varphi$ $[\text{rɛ}]_\varphi \ [\text{pa}]_\varphi$ should normally lead to closed syllable adjustment in the first two feet and give the unattested *[ʒɛntɛldirɛpa] instead of the observed form [ʒœntœldirɛpa].[9]

If we turn to her analysis of "e muet" syncope, we note that, as was the case with Pulgram's analysis, her rule (5) cannot account for the opposition noted in (1) and (2). In this case, the proposed analysis undergeneralizes, as it offers no explanations for syncope in (1a) or (2a), which would then require separate treatments. It is important to note here, as we will elaborate in our review of Bouchard's analysis, that whatever process correctly blocks "e muet" syncope in (1b) and (2b) does not appear to be justified solely by metric considerations: "e muet" is "syncopatable" in similar environments as (1a) and (2a) show. By choosing (1b) and (2b) as the paradigm case to be accounted for by metric

rules and leaving aside (1a) and (2a), Selkirk seems to have made the wrong methodological choice.[10]

3. Bouchard's Analysis

Bouchard (1981) also addresses the two questions of closed syllable adjustment and "e muet" syncope. Following a proposal made earlier in Morin (1978), he distinguishes two rules of closed syllable adjustments depending upon the stress: in unstressed feet, the adjustment is morpho-phonological, but (contrary to Morin 1978) phonological in stressed feet.[11]

For "e muet" syncope, he proposes two rules:

(8) a. Rule A: a vowel under the weak branch of a foot[12] is obligatorily deleted.

b. Rule B: reduce a vowel under the weak branch in a 2-stress foot.[13]

Both rules are further constrained by certain conditions. Rule A is blocked by language specific conditions, i.e., whenever its application would create an impossible French syllable; rule B, because it "reduces" rather than "deletes" an "e muet", is less restricted and blocked by simple universal conditions, i.e., when its application would create syllables violating universal syllabic structures. Another difference between the two rules is the stress condition: rule A applies to any unstressed "e muet", while rule B only applies to unstressed "e muets" that do not immediately precede a stressed vowel. For example, the "e" in dép<u>ar</u>tement is in the domain of rule A only, while the one in dép<u>ar</u>temental is in the domain of both rules A and B. A final difference between the two rules is the direction of resyllabification after deletion/reduction: the consonant preceding "e" is resyllabified to the left when rule A applies, to the right when rule B does.

I will not say much about rule B, except that it belongs to a variety of French that I am not aware of, and that Bouchard does not identify (see his footnote 13). The behavior of "e muet" may vary considerably in different varieties of French (cf. Morin 1982 for a comparison between Paris and Saint-Etienne French). In some varieties of French, syncope may affect not only "e muet", but also many other vowels; for example, in Montreal French, one can hear in fast speech frequent syncope of high vowels (cf. Santerre 1975), and of many other vowels as in dém(é)nager, cong(é)lateur, réf(é)rendum, racc(o)moder, etc.,[14] of which syncope in départ(e)mental could perhaps be a particular case. One of the striking features of the variety of French described by Bouchard is the (predicted) opposition between (9a) and (9b): according to his analysis of this variety, "e" syncope should be possible in (9a) because <u>t</u> is resyllabified

to the right and creates the unmarked syllable onsets t̲l̲- and t̲m̲-, while it is impossible in (9b) because l and m are resyllabified to the right and create the marked (impossible?) syllable onset l̲t̲- and m̲d̲-.

(9) a. pour té laver
        pour té marier

    b. pour lé tabac
        pour mé demander

All varieties of French I am familiar with which allow syncope in (9a), also allow it in (9b) under the same conditions (the syllabifications in (9a,b) are not necessarily the same as those predicted by Bouchard, however).

If we turn to the analysis subsumed with the formulation of rule A, we see that it suffers from exactly the same shortcomings as Selkirk's analysis, and for the same reason: it takes as paradigmatic case of phonological conditioning the syncopes in (1b) and (2b), rather than (1a) and (2a). More precisely, Bouchard proposes the following syllabic pattern for modern French:[15]

(10)
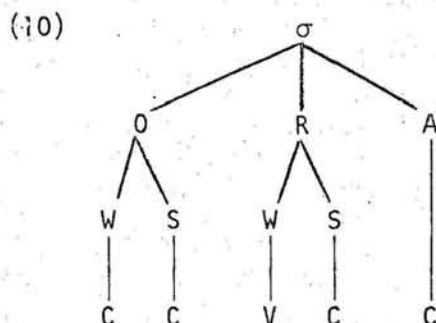
The appendix A is possible only when the syllable is word-final (but should normally contain more than one consonant if one wanted to account for well-known phonetic syllables such as dextre [dɛkstr]). The onset can also receive, at will, an extra initial s̲ for such syllables as abstrait [ap-strɛ]. This syllabic analysis can explain why "e" is not syncopatable in avortement, garderie, or fumisterie: the preceding (s̲)t̲ and d̲ cannot

be resyllabified with the previous syllable without violating the syllabic pattern (10): [a-vɔrt-mã], [gard-ri], and [fy-mist-ri]. By insisting that rule A adds the stranded consonant to the rime of the previous syllable, and imposing strong constraints on internal rimes in Modern French, Bouchard purports to explain why syncope is blocked in garderie or fumisterie.

This was a problem for an analysis like Pulgram's that does not impose any such constraint as to where the stranded consonant should be added and predicts therefore that syncope in these words should be possible, simply

because of the existence of such words as <u>perdrix</u> or <u>industrie</u>. But if this is the correct explanation for the absence of syncope in these words, how does one explain that syncope is possible in the words <u>rapport(e)-m'en</u>, <u>gard(e)rai</u>, and <u>résist(e)rai</u> (which are prosodically identical to <u>avortement</u>, <u>garderie</u>, and <u>fumisterie</u> when the "e muets" are pronounced).

His analysis also makes the wrong predictions (as is the case for Pulgram's and Selkirk's analyses) when "e muet" is followed by a *liquid-yod* cluster, e.g. in <u>bourrelier</u> *[bur-lje], <u>chapelier</u> *[ʃap-lje], or (vous) demanderiez *[dœ-mãd-rje],[16] syncope should be possible, since [lj-] and [rj-] are legitimate syllable onsets in French, cf. (vous) parliez [par-lje], <u>parier</u> [pa-rje]. I will elaborate on this later.

4.   Cross-syllabic Constraints

If, as I claim, most historical schwas now found in lexical items have been stabilized (i.e., reanalyzed as the stable vowels /œ/ or /ø/ (see note 6)), and if the alternations now observed are partly morphologized, Modern French is not the ideal ground on which to observe the effect of vowel syncope on syllable structure. Still, one may reconstruct with some certainty some of the phonological constraints that have shaped the current distributions. This reconstruction points to the existence of cross-syllabic constraints on schwa syncope.

4.1 In Morin (1978), I hypothesized that at one time all schwas were free to syncopate, except when this would create certain specific consonant sequences, in particular *liquid-obstruent-liquid* (LOL) sequences as in <u>forteresse</u>, and *consonant-liquid-glide* (CLG) sequences as in <u>bourrelier</u>. Originally, these constraints were presumably phonological. Eventually, the schwas in these contexts took on a different vowel quality and became stable. It is important to note, however, that the two constraints noted above are not syllabic constraints; if syncope had applied in the words <u>forteresse</u> or <u>bourrelier</u>, the resulting sequences could have been resyllabified as follows: [for-trɛs] and [bur-lje], corresponding to syllables found elsewhere in the language at that time. The constraints involve here sequences of consonants which span two consecutive syllables.

Bouchard's analysis may appear to be a viable alternative to the linear constraint against LOL sequences; if syncope was accompanied by a process of resyllabification such as he proposes, it is perhaps possible to say that syncope in <u>forteresse</u> was blocked because the resulting syllabification [fɔrt-rɛs] would contain an impossible internal syllable [fɔrt] (assuming that it is true). There are reasons to doubt that this constitutes a proper explanation. It is not obvious that stranded consonants after vowel syncope could not be resyllabified to the right when they preceded a liquid,

as this explanation would require. When the following changes occurred: reguelisse > réglisse, houbelon > houblon, there are no reasons to believe that the obstruents did not join with the following liquid to make a syllable onset, just as necessarily occurred in the changes verai > vrai or belouse > blouse (it is true that in these last two examples, the metric configuration may have been different).[17]

Whatever the merits of such an explanation, it does not remove the necessity for linguistic theory to account for cross-syllabic linear constraints. The constraint against CLG sequences is one of them, and is curiously absent from Bouchard's analysis:

(11) a. bourre_lier, somme_lier, (vous) jume_liez, canne_lier.[18]

    b. bourre̷let, omme̷lette, (vous) jume̷lez, canne̷lure.

(12) a. (vous) mêle_riez, serre_riez, aime_riez, donne_riez, gagne_riez.[19]

    b. (vous) mêle̷rez, serre̷rez, aime̷rez, donne̷rez, gagne̷rez.

Syncope occurred in (11b) and (12b), e.g., [bur-lɛ] and [mɛl-re], but not in (11a) and (12a), although the resulting syllabification would have been similar: *[bur-lje] or *[mɛl-rje]. The only difference is the presence or absence of CLG sequences at the juncture between the two resulting syllables.

4.2 The two examples of cross-syllabic constraints that we have seen here have a high degree of probability; still they are reconstructions.[20] The same types of constraints are attested, luckily, in recently observed dialects of French.

The first example is again current Modern Paris French (the situation being very similar in Montreal French). The constraint against CLG sequences has survived in the rule accounting for the presence of [œ] between independent words, and which appears to be truly phonological (whether it be a rule of syncope or of epenthesis):

(13) a. La Banqu(e) Royale   Michel(e) Roy
       [la bɑ̃k(œ) rwajal]   [miʃɛl(œ) rwa]

    b. La Banqu̷ Robert   Michel Rey
       [la bɑ̃k rɔbɛr]   [miʃɛl rɛ]

In many syntactic constructions, and in particular in "compound" nouns as in (13), a vowel [œ] is often heard at the juncture of the two words when it contains a CLG sequence as in (13a), but hardly ever when it contains a simple CL sequence as in (13b),[21] even though the syllabic pattern may be similar in both cases.

The second example shows the necessity for constraints against LOL sequences in an Occitan dialect spoken in Vinzelles and described by Dauzat (1897:46 and 1900:179):

(14)   a.   módrə   'mordre'

       b.   mudré   '(je) mordrai'

       c.   mórdə   '(je) mords'

       d.   múrdʲa   '(il) mordait'

According to Dauzat, syllable final r's were regularly lost when the following syllable begins with an OL onset, but not elsewhere (actually, there do not appear to be cases where the liquid in LOL sequences could have been l). The effect of this historical change appears clearly in the paradigm of the verb mordre in (14). When the radical /mord-/ is followed by a vowel, as in (14c,d), the r remains in the rime: /mórd+ə/ > [mórdə] (in (14d), as well as in (14b), o > u in (former) unstressed positions). When it is followed by the liquid r in the infinitive as in (14a) or in the future, as in (14b), this creates a LOL sequence which is simplified through the loss of the first liquid, as in /mórd+rə/ > [módrə]. This elision affects syllable final r on the basis of what the next syllable contains, as there are no particular constraints on syllable final r within a syllable.[22]

5.   Conclusion

It is abundantly clear that syllabic, and more generally metric structures play an important role in the mechanism of vowel syncope or rime simplification: for instance, schwa syncope is attested early in Old or Middle French before and after liquids, i.e., exactly when its application created "simple" syllables, most of which were already attested in the language at that time; another example is n deletion in Spanish rimes when diphthongization complicates the syllabic structure, as appears in the alternation monstrare/muestro (cf. Harris 1983). There appear nonetheless to be also cross-syllabic constraints on the processes of vowel syncope and of rime reduction.

It is important to note in this conclusion that the constraints in question need not be true phonotactic constraints on the language. The constraint against LOL sequences prevented schwa syncope in forteresse, although there existed LOL sequences in the language: perdrix, mercredi, surplis, etc.[23] The existence of "abstract" constraints which apply preferentially to structure changing processes rather than to already existing structures seems to be well established, e.g., glide formation applied to /u/ in Middle French in many environments, souhait [suɛ] > [swɛ],

louait [luɛ] > [lwɛ], but not after OL onsets, as in clouait [kluɛ] (and
not *[klwɛ]), although the resulting syllable onset was then possible and
is found, e.g., in cloître [klwɛ́trə] (later [klwatr]); cf. Morin (1976).

Such abstract constraints, preventing configurations that are
actually attested in the language, made schwa syncope necessarily opaque.
This explains why the historic schwa of -erie may remain in words such
as garderie, while the future suffix -erai in gard(e)rai may lose

simultaneously its thematic vowel on the model of the athematic suffix
-rai found in perdrai.

FOOTNOTES

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[1]Cf. Grammont (1884), Fouché (1959), Delattre (1949, 1951) or Dell
(1973) for example.

[2]This does not mean to imply that all metric approaches are doomed
to failure. Indeed, metric theory recognizes domains larger than the
syllable where cross-syllabic constraints could be made precise.

[3]Actually, it appears that syncope of "e" in words such as acreté
has been possible in the past in some varieties of French, when r could
take a syllabic realization: [akr̥te], cf. Morin (1978).

[4]Of course, there are other ways of refining Pulgram's theory, as
Selkirk's and Bouchard's analyses show.

[5]Unless one is willing, like Basbøll (1978; 1981:40), to set up
abstract syllables sensitive to morphological information.

[6]In Morin (1978), I argue that the alternations -ement/-ment and
-eté/-té found in (1b) are synchronically the result of a morphophonological
process by which an "e" is inserted (or deleted) before -ment, -té, etc.,
in some specific phonological environments.

I also argue that the alternations found in (2a) are parallel to the
(non-standard, but not infrequent) alternations dormirai/dorm'rai,
mourirai/mourrai, cueillirai/cueillɇrai, etc., which correspond to the use
of two different future suffixes. Indeed, there appears as little reason
to speak of "e muet" in future paradigms such as (2a.ii), as of "i muet"
in future forms such as mourrai. The reanalysis involved in these alterna-
tions is but a special case of stabilization of "e muet" as the regular
vowel /œ/ or /ø/, also noted in the initial syllable of many words such
as pesant (cf. Walter 1977a, 1977b; Fischer 1980; or Morin 1982).

[7]The foot structures of (7b) and (7d), however, are historically suspicious for the period when [e] was reduced to [ə], if we assume that each foot must receive some degree of stress.

[8]This regularization is not complete for all lexical items for all speakers. For instance, some Parisian speakers can still use the older pronunciation [ʒɛnvwa] for Genevois who will nonetheless say breveté [brœfte]. Marc Plénat informs me that in Toulouse regional French, pronunciations such as [brɛvote] are indeed quite frequent; one can also hear [brɛfte] in alternance with [brœfte] in the speech of Northern French speakers currently living there (e.g., his own speech).

[9]Cornulier (1977) anticipates these problems for a strict syllabic analysis of closed syllable adjustment and suggests a complex proposal which seems to have the following properties:

1) Closed syllable adjustment is cyclic (it applies first at the level of the phonological word, then at the level of the lexical word, or eventually at the level of the morpheme); alternatively, it may apply right to left in a phonological word.

2) Closed syllable adjustment applies only to "feminine" underlying "e muets" (defined as "e muets" not followed by other vowels in the morphemes in the (phonological/lexical) word, except possibly by other "e muets").

3) Closed syllable adjustment is transderivational: it applies only to "checkable" feminine "e muets" (i.e., which may appear in a closed syllable in one of the phonetic realizations of the morpheme or word containing it.

In their analyses of Selkirk's proposal, Verluyten (1982:79) and Basbøll (1981:39-40) also note this problem of overgeneralization. Basbøll shows that it can be overcome in the sequences of clitics by ordering closed syllable adjustment between obligatory foot formation (within a lexical word) and optional foot formation (within a phonological word). This author notes, however, that the remedy cannot help for the brevet paradigm (he uses as a test case the alternation Genève [ʒœnɛv]/ Genévois [ʒœnvwa]). He suggests that ultimately closed syllable adjustment is sensitive to morphological information. More precisely, adjustment will affect underlying /ə/'s in closed syllables, which also includes the initial /ə/ of a sequence ...ə C_1 ə..., but only if there is a morpheme boundary before the second /ə/. Thus the opposition genevois /ʒənəv+wa/ without adjustment, but mèneriez /mən+ə+rje/ where adjustment will apply.

It is not clear, however, how Basbøll's analysis can handle all the cases of alternation (or absence of alternation) without further refinements. It seems that *all* morpheme boundaries do not have the same effect on closed syllable adjustment: the words sèvrerez and chevreter 'to lay down kids' should have, in his analysis, similar underlying representations:

/səvr+ə+re/ (with the morphological structure proposed by the author, but without the final "liaison" consonant he postulated, as this is not relevant to this discussion) and /ʃəvr+ət+e/ (chevreter is a verb derived from chevrette [ʃœvrɛt], which is a diminutive of chèvre [ʃɛvr]). Nonetheless, closed syllable adjustment applies to the first syllable of sèvrerez [sɛvrœre], but not to chevreter [ʃœvrœte]. A possible difference could be that the morpheme boundaries before (inflectional) future thematic vowel in sèvrerez and (derivational) diminutive -et- are different. Another possible difference between the two underlying forms could be created by postulating an extra /ə/ in the underlying representation of chevreter /ʃəvrə+ət+e/ and ordering closed syllable adjustment before its deletion. This way, closed syllable adjustment cannot apply to the sequence /(ʃ)əvrə(+ət+e)/, as it does not contain any morpheme boundary. This last solution, however, implies that the underlying form for chèvre also contains a final /ə/: /ʃɛvrə/, which now *must* be deleted before closed syllable adjustment applies.

[10]Cf. Ruwet (1981) for a discussion of paradigmatic case.

[11]Actually, Morin (1978) was concerned only with the status of the alternation ∅:[ɛ] or [œ]:[ɛ]. It is not clear why Bouchard decides to extend this distinction to the alternation [e]:[ɛ]. It is not altogether clear either what is the precise analysis of stress assumed by Bouchard.

His presentation suggests that he takes stress to fall on the last foot of a word, i.e., the last vowel of a word, unless it is an "e muet", in which case the stress is on the penultimate. He does not discuss, however, the case of verbs followed by enclitics where the stress falls on the last enclitic, as in vois-la 'see her' (pronounced as voilà) or fais-la (pronounced as fellah), cf. Dell (1982).

To account for the adjustment in words such as sèvre-la or appelle-la, where the "e muet" underlying [ɛ] is unstressed, one would require either cyclic rules (stress is first assigned to the innermost constituent in [#[#sèvrə#]la#], followed by adjustment [#[#sévrə#]la#], followed by de-stressing in the last cycle [#[#sɛvrə#]lá#]) or morphophonological rules.

Tranel (1981) also proposes a distinction between two kinds of closed syllable adjustments: one is obtained through morphological suppletive rules; the other changes underlying /e/ and /ə/ to [ɛ] in closed syllables. He fails to note, however, that Selkirk's feet, and not syllables, are the proper domain for a phonological rule of adjustment: it has to apply to sèvre-la [sɛ-vrœ-la], even though the initial syllable is open.

[12]Bouchard adopts Selkirk's foot, basically. The weak syllable of a foot is the final underlying /ə/ of a two syllable foot. His justifications for this kind of foot, however, are misleading. The pronunciation of

papeterie [papœtri], noted, for example, in Montréal French is not necessarily due to its foot structure. Rather, it appears that the historical schwa before t has been stabilized, as evidenced by the pronunciation of the related word papetier [papœtje]. Other varieties of French will say for instance papetier [paptje] and papeterie [papɛtri] or [paptri].

[13] I.e., all vowels preceding the stressed vowel in a word.

[14] One also hears, in Montréal French, syncope in fast speech in words such as parl(e)mentaire, which should also be impossible in the variety described by Bouchard, for the same reason as (9b) below.

[15] Actually the syllabic pattern (10) does not seem to correspond to the syllabic properties of Modern French as evidenced by recent creations, borrowings, and reanalyses, where the syllabic divisions are very likely to be as follows:

parcmètre	[park-mɛtr]
voltmètre	[vɔlt-mɛtr]
arctique	[ark-tik]
cornedbeef	[kɔrn-bif]
Bernstein	[bɛrn-stin]
(ils) déferléront	[de-fɛrl-rõ]
(il) calméra	[kalm-ra]

[16] These forms are not normal in Paris French; they may be possible in some cases in other varieties of French, in particular in Liège (Belgium) French and in Saint-Etienne French.

[17] The change surpelis > surplis is also attested. It occurred relatively early, before the constraint against LOL sequences appeared in the language. The passage of reguelisse and houbelon to réglisse and houblon seems to have occurred later, when the constraint discussed by Bouchard would already have been active. The dating of such events, however, is not always precise.

[18] Syncope was blocked, even though the resulting sequence existed in the language at that time, as in parliez [par-lje].

[19] In these verbs, the historical patterns are sometimes obscured by the possibility of suffix switch; for example, one can sometimes hear serrériez [sɛr-rje]. The opposite is also true; next to regular courriez [kur-rje], with an athematic suffix, one can also hear coureriez [ku-rœ-rje].

[20] The data given by Hatzfeld and Darmesteter in their Dictionnaire général de la langue française, in particular, seem to suggest that "e muet" syncope was possible at the end of the 19th century in Paris

before l-yod, as in hôtelier or chapelier. These data should be further analyzed, however, and taken with great care; elsewhere also, their description of "e" syncope does not appear to correspond to an intermediate stage between Middle and Modern French; cf. their syncope in the word garde-robe (where it does not occur now) and its absence in garde-malade (where it now occurs).

[21] I exclude, of course, the use of word-final emphatic [œ], heard in many different contexts: communication with surrounding noise, or more generally for emphasis.

[22] This constraint is found in numerous other dialects of French. In particular it is observed in the francoprovençal dialects of Saint-Etienne (Veÿ 1911) and of Poncin (Gonon 1947:233), or in the Eastern French dialect of Châtenois (Vautherin 1896). We give below some examples from the Poncin dialect:

[pádrə]   'perdre'   [pardÿ]   'perdu'
[módrə]   'mordre'   [mórzə]   '(je) mords'   [modré]   '(je) mordrai'
[sótrə]   'sortir'   [sórtə]   '(je) sors'   [sotré]   '(je) sortirai'

[23] This does not mean that reductions are not historically observed in such words in Paris. In particular, reductions similar to the ones noted in Vinzelles and the dialects mentioned in note 22, are also attested in Paris: pedrix, mecredi, etc. These forms, however, have not survived. On the other hand the epenthesis in tourtrelle > tourterelle has survived.

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