

LATIN FREE STRESSED a IN OLD FRENCH

Douglas C. Walker

University of Ottawa

1. Introduction. The development of Latin free stressed a as it evolves in Old French (OF) continues to furnish one of the most perplexing problems in OF philology. Inasmuch as we know the starting point in Latin, /ā/ ([a(:)]), and the end points (/e/ or /ɛ/) arrived at in the course of the 16th and 17th centuries, the analytical difficulties do not appear insurmountable. The crux of the matter lies, however, at the OF stage, where in the assonating¹ poetry of the period, the reflex of á[assonates neither with /e/ nor with /ɛ/, both of the latter reliably established on the basis of independent evidence. ("[" indicates that the preceding segment is in syllable final position, i.e. in an open syllable; "]", on the other hand, indicates a vowel in a closed syllable.) Thus, in the period in question, lez(<LATUS), nes(<NASUM), ele(<ALA), pere(<PATREM) and so on assonate neither with erbe(/ɛ/) (<HERBA) nor with mes(/e/) (<MISSUM). If it was neither /e/ nor /ɛ/, what was the quality of the vowel in lez, nes, pere and so on? In what follows, we will compare two proposals, /e:/ versus /a/ as the reflex of á[.

This question has intrigued scholars for many years and for several reasons. On the one hand, the shift is almost perfectly diagnostic of the langue d'oc - langue d'oïl difference. Northern dialects invariably have e for CL a; Provençal retains the a (French porter, mer; Provençal portar, mar and so on).² Secondly, the number of lexical items and morphological categories affected is important, both in terms of frequency and structural role. The shift affects, for example, the first conjugation infinitives and past participles (chanter < CANTARE, chanté(e) < CANTATUS, -ATA); the desinence of the second person plural (chantez < CANTATIS); the third plural perfect (chantèrent < CANTARUNT); the derivational suffixes -el or -é (mortel, ostel, bonte, plente from MORTALIS, HOSPITALEM, BONITATEM, PLENITATEM) as well as many common vocabulary items such as lez, assez, pere, mere, mer, sel, nes and others.³

The shift is also interesting from the point of view of phonological theory. Certain analyses of the OF system posit four degrees of height among the front vowels: /i e ɛ æ/. When compared to the possibilities allowed in standard treatments of generative phonology (Chomsky and Halle 1968: 304-5), wherein the features [high] and [low] allow for only three distinct degrees of aperture, the OF data argue for a modification of this widely accepted distinctive feature theory. It is also possible to use the evidence from this change of a to e in evaluating several structurally based arguments which propose a single "second diphthongization" in OF affecting the vowels /e o a/ in a parallel

fashion. Finally, detailed discussion of the evolution of a should be compared to recent claims regarding the routes taken by shifting vowels (as in Labov et al. 1972: 103). It should be clear that, aside from its intrinsic interest, the evolution of a may be clarified by or may influence several currently active areas of phonological research.

2. Data and discussion. Vulgar Latin (VL) and Gallo-Roman (GR) contained the following four non-rounded vowels: /i e ϵ a/ from CL \bar{i} , \check{i} , \bar{e} , \check{e} , $\check{\alpha}$, \check{a} respectively. In the course of the development of VL, all stressed vowels in free syllables, whether originally long or short, became (remained) long, while checked and unstressed vowels were short.⁴ Depending on stress, therefore, we would find two series of vowel allophones:

(1) VL vowels.

(a) free stressed (b) checked stressed (c) unstressed

i	i	i
e	e	e
		(assuming this vowel did not merge with e)
a	a	a

We may subsequently ignore the unstressed vowels (since they play no role in the system of assonance), comparing instead the evolution of the stressed segments in GR depending on syllable structure.

(2) GR stressed vowels.

(a)	free	(b)	checked
	i		i
	ej		e
	j		
	?		a

What can we say about the phonetic value of the unknown vowel? We know first that, like all stressed vowels, it is long. In addition, as we have already seen, it assonates with none of the vowels in (2); not with ej or j ϵ because of their diphthongal nature nor with checked e ϵ or a. At the stage in question, the reflex of CL \acute{a} assonates only with itself. Is it correct to conclude, therefore, that (with the exception of its length) the vowel was phonetically distinct from e or ϵ ? Not if we accept the

arguments of scholars such as Darmesteter, who claimed (1890: 119):

L'hypothèse qui rend le mieux compte des faits est celle qui fait intervenir la quantité des syllabes: toute voyelle entravée était brève, toute voyelle libre était longue; par suite l'e provenant de ĕ entravé était un e ouvert bref; l'e provenant de ē, ī entravés était un e fermé bref; par suite aussi, ils ne pouvaient assoner avec l'e provenant de a, puisque ce dernier était une long, étant dans une syllabe ouverte.⁵

For all its attractiveness, however, this hypothesis must be viewed with considerable reservation. Recall that at the OF stage, the length of vowels is completely determined by their phonological context, as the quotation makes clear. Vowels in open syllables are long; vowels in closed syllables are short. Length, in other words, is an allophonic feature in OF, just as it is in the Modern French pairs [vi:v]-[vif], [vi:z]-[vis], [vi:r] [vil] and so on.⁶ It is a basic principle of phonological theory that allophonic features cannot serve to distinguish segments, either in rhyme or elsewhere (although recent work in sociolinguistics does indicate their role in social evaluation). But in any case, we have direct evidence against Darmesteter's position. We find that long i: (in open syllables) assonates with short, checked i in OF: ami-vertiz, medisme-graciet (Alexis); ubli-mercit, mie-sentisme (Roland) laidir-mari (Gormont et Isembart) and so on. If the length differences do not block assonance in the case of [i:]-[i], how can they prevent it in the case of [e:]-[e]? As a consequence, Darmesteter's argument seems seriously flawed, in spite of its initial attractiveness. At the very least, we would require further discussion of the highly exceptional use of an allophonic feature in distinguishing non-assonating syllables.

If this counter-argument is valid in the preceding case, it may also be used to reject similar claims, such as that by Pope (1934: 107):

The difference between this e-sound and the others may be partly quantitative, the e from a tonic free being long and the other two, both blocked, being short; the range of e-sounds is, however, varied enough to allow quantitative difference also, and the close pronunciation of e in learned loan words, the later development of the sound, and the character of the glide formed between it and u (< vocalising ʔ), e.g. in p̄eys < p̄eys < palos, cf. beaus < beys, indicate a very high, close pronunciation of the e.

Although Pope is not consistent in her representation of the reflex of á[(sometimes using ē̄, sometimes e, sometimes e), her remarks indicate that she considers length the distinguishing property of the reflex of á[. She also opens the door, however, to qualitative differences, and we must examine these possibilities in turn.

It is clear, as Pope indicates, that there is enough perceptual "space" for three non-high front vowels in OF. Pope would consider them to be /e/ (< CL ī, ē), /ɛ/ (from CL ě, æ) and a long, more closed version of /e:/ (from CL á[). Her arguments for the quality of the latter are not convincing, however. If loan words containing /e/ have a close pronunciation, this is not an argument for a close pronunciation of /e:/. The /e/ in learned loans is not derived from á[; it is a characteristic of such loans that the shift of a fails to apply. Consequently, it is more plausible that the reflex of á[be qualitatively distinct from that of /e/, and its representation as ē̄ does not accomplish this in the most efficient manner. Nor does the subsequent development of the sound to [e] or [ɛ], depending on syllable structure, require that the starting point be /ē̄/. That sequence of events is possible, of course, but not necessary, since the MF forms could just as easily be derived from other sources, say /æ/, by raising, rather than from /ē̄/ by lowering. Finally, the nature of the off-glide in forms such as p̄eus < palos (> Mf pieu) is again non-conclusive. In p̄eus, the off-glide is e preceding u; in beaus, it is a. But this does not prove that the stressed vowel in p̄eus was closed. Assuming that the two reflexes are to be kept distinct, there are other possible representations for pieu (OF pieus) which would permit distinct off-glides before u, and which would allow equally plausible phonetic sequences, given the necessity of keeping the forms distinct. In fact, two of the main competing hypotheses, /æ/ and some sort of off-gliding diphthong, are both compatible with the distinction between pieu and beau. Thus, while Pope's arguments for the precise quality of the reflex of á[remain inconclusive, she has pointed out the role of qualitative differences among the three non-asonating vowels. Before we explore this difference in more detail, let us examine further details of the development of á[.

There is evidence, for example, that the source of this vowel was already fronted in Gallo-Roman times. To begin with, it provoked the palatalization of velars, whatever its position: CAPUT > OF chief > MF chef, CARUM > chier cher, CALIDUM > chalt chaud, CALVUM > chalf chauve, CABALLUM > cheval, CAPILLUM > chevel cheveu, CARPENTUM > charpent charpente, CANTARE > chanter and so on. It is entirely reasonable to expect that only fronted variants of vowels could condition palatalization. A second argument comes from the area of diphthongization, which was very widespread at the OF stage. In general terms, OF diphthongization worked in the following way: front vowels take front glides, back vowels take back glides. Thus, /e/ and /ɛ/ diphthongize to /ej/

and /jɛ/ respectively, while /o/ and /ɔ/ pair up with /ow/ and /wɔ/ > /wɛ/. If this is a general constraint on OF diphthongization (at the early stages) the development of á[is interesting, because it is generally believed to have passed through a stage æ or aj. Again, the arguments in favour of diphthongization must be evaluated with care, but it is clear that if such a change took place, it involved a front glide, not a back one, placing a among the front vowels in terms of its quality.

One of the arguments for the diphthongization of á[is found in its representation before nasal consonants. As early as the Cantilène de Ste Eulalie, we find the form maent, and the standard OF orthography for the stressed vowel before nasals is ai: main MANUM, pain < PANEM, fain < FAMEM, aine < AMET and so on. If oral vowels behaved in the same way as their nasalized counterparts, and if the orthography consistently represents a diphthong, then this evidence from nasal contexts indicates that the first stage in the shift of á[was an off-gliding diphthong.

One final piece of evidence arguing for a fronted realisation of a involves its development after palatals, where it assumes a jod on-glide: OF cherchier < CIRCARE, laissier < LAXARE, apoiier APPODIARE, chief < CAPUT doien < DECANUM and so on. While it is perfectly natural to assume that the palatal element could disengage a jod whatever the nature of the following segment, the regularity and pervasive nature of the outcome suggest that the process was facilitated by a fronted variant of the low vowel.

To conclude this discussion of data, we may explore certain assonances of the period in question, with a view to eliminating certain possible values for the reflex of á[. Recall first that this vowel, whatever its quality, was in assonance with no other segments. What about further vowels? We must first recognize that the phonological distinctions are under-represented in the orthography of the period, so that e is used for /e/, /ɛ/ and the reflex of á[. Philological evidence has established, however, that /e/ and / / were distinguished in assonance, as were the other distinctions with which we are concerned.⁷ To begin with, A and AI regularly assonate in early stages, although in later periods, AI (= /aj/) also assonates with E (= /ɛ/). Both assonances occur in the Chanson de Roland, for example, indicating that /aj/ is in the process of monophthongizing to /ɛ/. Subsequently, AI comes to assonate with E, to the exclusion of A. In the same vein, E and EI assonate when the E represents /e/ or /ɛ/, but not when it is the symbol for the reflex of á[. Finally, each of these symbols when followed by a nasal consonant usually assonates with its oral counterpart. Where this is not the case, the lack of assonance is due to qualitative differences in the vowel, not to nasalization,⁸ although the nasalization is what provoked the qualitative modifications. The assonance of EN - AN in the Roland is a case in point. These changing assonances reinforce the impression of variability in the system at the early

stages, and indicate that whatever was the precise nature of the reflex of \acute{a}], it would have to be kept distinct from the variants of several changes in progress in order to avoid being caught up in modifications affecting other phonemes. The general situation may be better understood in terms of the following diagram.

(3) Stressed vowels in Early Old French.

	CL	VL/GR	EOF	orthography	
CL	\check{i}, \bar{e}	$e:$	ej	ei	free
		e	e	e	checked
CL	\check{e}, α	ε	$j\varepsilon$	e	free
		ε	ε	e	checked
CL	\check{a}, \bar{a}	$a:$		e	free
		a	a	a	checked
		$a:$	$\tilde{a}j^9$	ai	free before nasal
		$a:$	$j\varepsilon^{10}$	ie	free after palatal

Against this background, we may now make explicit a second hypothesis concerning the reflex of \acute{a}], a hypothesis which has been hinted at above. It is stated in the following passage from Nyrop (1904: 201):

Cet e (< lat. a) n'assonait qu'avec lui-même (et avec un petit nombre de mots en ě, que nous laissons de côté); il était ainsi différent de l'e < ě entravé et de l'e < ē, ī entravés; on ne trouve jamais ni quel (qualem): bel (bellum), ni quel (qualem): chevel (capillum); donc, il n'était ni è ni é.

Nous inclinons à croire que e < lat. a avait partout au moyen âge un son très ouvert, et que si quel et bel ne s'associent pas dans la même assonance, il se peut qu'on ait dit [kæɪ] et [bɛɪ] [I have substituted for Nyrop's ä]; plusieurs langues, le suédois, par exemple, possèdent ces deux sons, l'un à côté de l'autre, sans les confondre. Quelle qu'ait été la qualité de notre e, il paraît fort probable que la quantité a été relativement longue et que cet e a eu pour commencer une prononciation diphtonguée.

Nyrop's position inserts itself into the framework of possible qualitative differences outlined by Pope,¹¹ and resolves the problem of the use of allophonic features in blocking rhyme that has already been raised. In essence, Nyrop is proposing a four height system for the front vowels; with length (and perhaps diphthongization at the early stages) being allophonic:

- (4) i
e
ɛ
æ

If we accept /æ/ as the reflex of á[in OF, several points regarding the data of (3) may be made. First, we do find early cases of AC = AI plus nasal. While it is not necessary that the behaviour of free stressed vowels preceding nasals parallel exactly that before oral consonants, it seems entirely appropriate that AIN = AN = AC assonances argue for an open pronunciation of á[, namely /æ/, given that it is generally agreed that AI before nasals never went to /e/, even if free stressed a did. The parallelisms are greater in this case given an open value for á[. By the same token if the reflex of Bartsh's law was /jɛ/ rather than /je/, an open value for the reflex of á[is also indicated by the assonances IE = E, both coming from á[, given that IE from á[also assonates on occasion with /(j)ɛ/ from CL ě, whether checked or free. Furthermore, the open value attributed to the reflex of á[is compatible with the assonances "avec un petit nombre de mots en e" cited by Nyrop, where these few words would have the vowel [ɛ]. If á[had gone to [e(:)], we would also have the right to expect a few assonances in [e], which do not occur. The value [æ], in other words, is compatible with a few assonances in [ɛ]. The value [e(:)], on the other hand is compatible with these same irregular assonances in [ɛ], but also with irregular assonances in [e]. Since the latter do not occur, we have an indirect argument in favour of Nyrop's position.

Finally we may consider the way in which certain diphthongs assonate with simple vowels. In general, we find that /jɛ/ assonates with /ɛ/, /ej/ with /e/, /aj/ with /a/ and so on. The onglides or offglides are generally ignored in determining assonance. If we accept /e:/ as the OF reflex of á[, we are confronted with a case where /e:/ does not assonate with /ej/, even though length and syllable structure conditions are parallel. The "Darmesteter" solution in other words, contradicts a general principle of OF poetic functioning, and is thereby weakened. We shall see that the /e:/ interpretation violates other general considerations of linguistic structure.

3. Theoretical Discussion. Having briefly sketched the background to the interpretation of the reflex of CL á[in Old French, we may now consider certain theoretical consequences of this interpretation. To begin with, the OF material argues against the phonological features for vowels proposed in Chomsky and Halle 1968 (SPE), and widely adopted thereafter. In SPE, the features [high] and [low] describe phonological distinctions of vowel height, but allow only three distinctive degrees:

- (5) + high i
 - low
 - high e
 - low
 - high ε
 + low

Given that the features have intrinsic phonetic content, the combination [+ high, + low] is ruled out as an articulatory impossibility. If, as we have supposed, the OF system is to be represented as (4) above, the SPE features cannot accommodate the OF case. Various modifications, both "binarist" and "non-binarist" have been proposed as remedies to this situation. Wang (1968) or Kiparsky (1968), for example, propose a feature system [high] [mid], which would categorize the OF system as in (6):

- (6) + high i
 - mid
 + high e
 + mid
 - high ε
 + mid
 - high œ
 - mid

This proposal has not met with great success, largely because it was viewed, I suspect, as an ad hoc attempt to maintain binarism, but with few if any other redeeming qualities. (Note that it groups /iœ/ together as a natural class, but does not allow /ieɣ/ to be set in contradistinction to /œ/.)

A second option, advocated recently by Sloat, Taylor and Hoard (1978) but also found in SPE, would make use of the feature [tense], and would group front vowels as in (7):

(7)		i	I	e	ɛ	æ
	high	+	+	-	-	-
	low	-	-	-	-	+
	tense	+	-	+	-	+/-

This solution permits the requisite number of distinctions; but at least in the French case, contradicts the phonetic specification of the vowels, where /i e ɛ/ are all [+tense]. (This is widely documented for the modern language: see, for example, Delattre (1966) or Malmberg (1969).) In OF, since /i e ɛ æ/ were long in the positions with which we are concerned, and since at least /e ɛ/ and perhaps /æ/ diphthongized, we have reasonable evidence that they too were tense, given the well-known links between length, tension and diphthongization in vowels. It is evident, therefore, that the OF vowel system, if we accept the arguments presented so far, provides additional material justifying a feature system that allows for four degrees of tongue height; and, moreover, for an n-ary approach to that parameter, given the weaknesses in the use of [mid] and [tense] we have just seen.

A further argument against the Darmesteter/Pope position, and in favour of a qualitative (four height) distinction, may be advanced on typological grounds. If we compare the alternative OF systems in (8) and (9), it is clear that the most typologically acceptable (unmarked) analysis is that in (9).

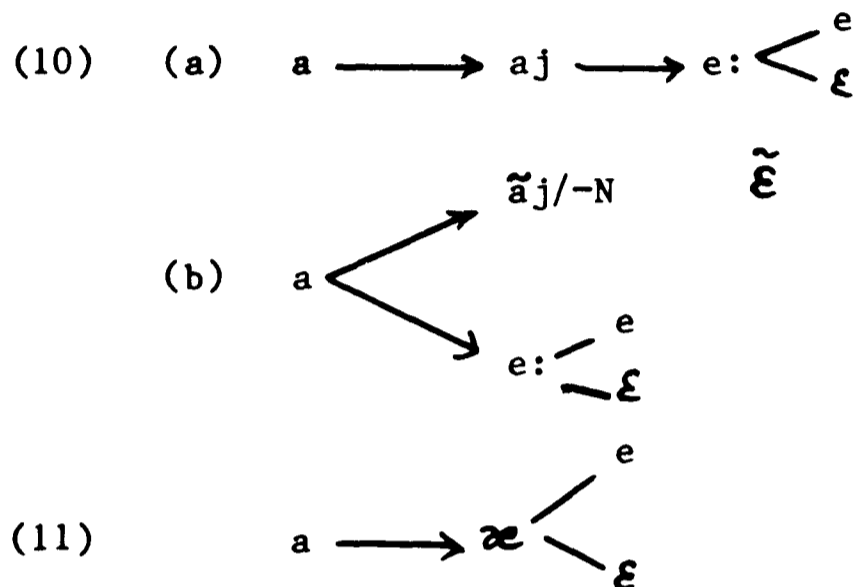
(8)	i	y
	e e:	o
	ɛ	ɔ
		a

(9)	i	y
	e	o
	ɛ	ɔ
	æ	ɶ

The system (9) represents a relatively common quadrangular type (with the exception of the fronted /y/ from /u/, which has provided an additional focus for a wide variety of discussions).

(8), on the other hand, has an isolated length distinction that receives no support elsewhere in the set of phonological oppositions. Typological considerations, therefore, argue in favour of the qualitative analysis of the difference between /e/, /ɛ/ and the reflex of á[.

Let us now turn to a consideration of the "routes" that the competing analyses (/æ/ vs /e:/) involve. There appear to be two main possibilities, outlined in (10a-b) and (11):



These diagrams call for several comments. In (10a) for example, we have assumed that the vowel behaved in the same fashion before both oral and nasal consonants, up to the stage where the nasal vowels lower and diverge from their oral counterparts. In (10b), on the other hand, we have assumed differential behaviour before nasals as opposed to oral consonants. Nothing prevents us from supposing additional stages in the lower part of (10b), $a \longrightarrow \text{æ} \longrightarrow e: \longrightarrow e/\varepsilon$, for example. What distinguishes (10b) and (11) from (10a) is the absence of diphthongization. But we could even propose an alternate for (11), of the form $a \longrightarrow aj \rightarrow \text{æ} - \text{e}/\varepsilon$; the fundamental question remaining whether the end point was /e:/ or /æ/ just prior to the merger and adjustments to /e/ or /ɛ/ on the basis of syllable structure. But even considering possible intermediate stages, one can construct plausible arguments in favour of (11) as opposed to (10). Following Labov et al. (1972: 103), it is clear that there is a general tendency for tense vowels to move "up and out", and the schema in (11) recognizes this accurately. In (10), on the other hand, we find tense /a/ raising, as expected, but then lowering again. The greater simplicity of (11), plus its agreement with general tendencies of vowel shifts, also seem to argue for the solution advanced by Nyrop, and against Darmesteter.

4. Conclusion. On the basis of the evidence currently available, it seems we will never arrive at a definitive solution to the problem of the reflex of á[in OF. But such solutions are

rare in all domains, and their absence does not exhaust the interest of these enigmas, which may be clarified by the application of theoretical considerations. In the present case, we have opposed two solutions, - one claiming /e:/, one claiming /æ/ as the reflex of CL á[. Arguments against the use of allophonic distinctions in assonance, and arguments from typological or markedness evaluations of vowel systems and from general principles of the routes taken in vowel shifts all seem to favour /æ/ as the OF vowel. Conversely, acceptance of /æ/ has immediate implications for linguistic theory, where we find additional support for the modification of phonological feature systems to include the possibility of four degrees of tongue height. In this respect, we find another classic example of the reciprocal influence of theory and description as we attempt to grapple with the details of historical change.*

NOTES

* I would like to thank John and Margaret Jensen for comments on this paper. I have occasionally ignored their good advice at my own peril.

1. In assonating poetry, correspondence between the lines is determined by the stressed vowels, irrespective of the nature of the following consonants. Thus vil and rive, part and mal, etc. assonate in Old French.

2. Certain northern or eastern dialects d'oïl including modern descendants go one stage further, having ei instead of e: doneir, son peire for doner, son père etc.

3. Two types of exceptions to the shift of a may be noted. Several learned or loan words retain the original segment: chandelabre, pape, estable, delitable and so on. Secondly, first conjugation perfect forms show a rather than e: parla instead of *parle, for example, no doubt for reasons of morphological structure.

4. We ignore here several questions of detail, either as irrelevant or as unclear. Among the former is the development of other CL diphthongs; among the latter, the precise height of certain unstressed [- high] vowels, as well as the length of unstressed vowels. See de la Chaussée 1974: 94.

5. This explanation, from Darmesteter's introduction to the Dictionnaire général de la langue française (p. 119), is taken up by Beaulieux (1927: 48) with approval.

6. There is a minor exception to this status in MF, found in such marginal pairs as maitre - mettre, [me:tʁ]-[metʁ]. For a more complete discussion of vowel length in MF, see Malmberg (1969: 35).

7. Evidence in this discussion is drawn largely from Lote 1949, vol. III.

8. This statement is somewhat controversial, as the debate between Suchier (1906) and Paris (1881, 1898) makes clear. For a modern solution, see Rochet (1976). The position adopted here seems correct, in that there were always VN sequences which assonated with corresponding VC sequences. If nasalization alone were sufficient to block assonance, there should be no such cases. Nasalization remained allophonic well into the Middle French period. Recall the earlier remarks concerning the role of length (also allophonic) in distinguishing rhyme.

9. AIN, AIM assonate in early stages with A, and also with EN when the latter represents a lowered vowel. See Lote (1949: 208).

10. The phonetic quality of the nucleus of this diphthong is still debated. De la Chaussée (1974: 110) notes it as open iê, a position with which I agree. However, several other authors consider it a close [e], but this cannot explain several clear cases of assonance with /ɛ/. In other cases, we find E (= [e]) in assonance with E(=[ɛ]), but this only means they had similar qualities, without identifying either of them as closed variants.

11. We may also cite the interpretation given to á[by Hall (1946), without agreeing with Hall's "hocus pocus" approach to the question.

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