NOTES AND DISCUSSION

ANTIPHONY ON NASALIZATION

A BRIEF COMMENT ON JAMES FOLEY'S 'NASALIZATION AS UNIVERSAL PHONOLOGICAL PROCESS'

Rebecca Posner

The following remarks arise out of a reading of James Foley's paper in the present issue of YPL. I cannot hope to rival Professor Foley's laconicism, but I shall try.

There must be some universal, necessary features of nasalization (see Cowgill's piece in Greenberg, 1963); we should however endeavour to distinguish these from language-specific features. The sufficient conditions for some of the phenomena discussed by Professor Foley obviously cannot be universal.

1. Vowel nasalization ("nasal assimilation"). Assimilation of a vowel to a juxtaposed nasal consonant, resulting in acquisition of nasal resonance, is so widespread that it can, in modern parlance, be called "natural" (i.e. we can take it for granted). Like most types of assimilation, it is more often regressive or anticipatory than progressive — the nasal resonance usually begins before the consonantal articulation. Why, though, does it not occur in many languages, to any noticeable extent? Compare in this respect most Italian and Spanish dialects with most French and Portuguese dialects. Firmness, "clarity", of vowel articulation may be correlated with resistance to vowel nasalization: it is noteworthy that in French, Portuguese and Rumanian (where vowel nasalization probably occurred at an earlier period) unaccented vowels are muffled or swallowed. Is there a universal buried here somewhere?

1.1 Nasal vowel phonemes. One thing that is certainly not universal is the emergence of [+nasal] vocalic character as a distinctive feature: i.e. nasal vowels are not always in contrast with their oral counterparts. Professor Foley does not consider this question; neither shall I.

1.2 Nasal vocalization and vowel raising. The raising effect of a following nasal consonant on a vowel is well attested and can be accounted for in articulatory terms as due to narrowing of the mouth cavity. That in the process a palatal glide can develop is plausible enough: I add to Foley's examples such forms as Portuguese cheio [ceju] <- PLÉNU, where the jod is said to be inserted "to preserve the hiatus" after nasal effacement. I am, however, taken aback by the idea that French aime owes its i to the same process. Like other categories of "spontaneous diphthongization" in French, the a>ai change affects only tonic, free Vulgar Latin vowels (cf. santé, grande) and seems to be related to the change of tonic free a to e in non-nasal environment. It would appear to be more economical to use the same rule to describe the a>ai change as, say, the e>ai change which occurs in similar, though less restricted, conditions. However, I do not wish to discuss
here the voluminously documented question of French diphthongization. It requires only a little ingenuity to fit the empirical data into Foley's scenario, but, I think, at the loss of some generalizations of wider significance than those concerned with nasalization.

2. **Loss of nasal consonants ("nasal effacement").** When the conditioning nasal is lost, nasalization of the vowel remains as its only (surface) mark. That the disappearance of a nasal consonant always leaves a juxtaposed vowel with some nasal resonance is plausible enough, but the facts of language force us to assume that the nasality is then most often lost. Retention of nasality as a distinctive mark must be dependent on conditions shared by relatively few languages.

2.1 The "inherently weak" nasal. Foley's criteria for "weakness" appear to be wholly empirical; in the main they are based on undisputed historical evidence from Romance where, for instance, m and b are less prone to change than n and d. The label "strong" or "weak" is merely shorthand for a descriptive statement and makes no attempt at explanation. Foley is doubtless aware of discussions of "inherent strength", relating the concept to such factors as relative ease or energy of articulation, phonetic complexity, acoustic conspicuousness, frequency of occurrence, and even "naturalness", to be found in e.g. Zipf (1949), Martinet (1955), Posner (1961) and Postal (1968).

I doubt the universal significance of Foley's empirical observations; on the peculiar strength of m in Romance, cf. Posner (1961: 143-146). The diachronic resistance of b relative to d in Romance may have something to do with the fact that in Ciceronian Latin d was an inordinately high frequency sound (letter); in the Zipfian model it would consequently be likely to suffer heavy losses. However, the idea of universal "inherent strength" is worth pursuing (cf. Posner, forthcoming).

Foley's schema of preferential effacement otherwise makes sense to me, with certain exceptions which I shall discuss.

2.2 The "tautosyllabic nasal". Grammont (1936) regarded syllable-final ("implosive") consonants as phonetically weak (pronounced with less articulatory force); they are certainly prone to loss in the Romance languages which show a preference for open syllables. It does seem reasonable to suppose that consonants at the syllable onset are more energetically pronounced, while by the end of the syllable articulatory force has petered out. The weakness of syllable-final consonants may well, by this mark, be universal. However, in the Romance languages single intervocalic consonants, which begin the syllable, are also weak in Foley's terms. Grammont regarded the "appuyée" — the syllable-initial consonant preceded by a syllable-final consonant, not the intervocalic, as "strong". Although this is the most resistant position in Romance (word-initial position being a special case of the same category), there is no reason to think that there is anything universal about it (Posner, 1961: 11).

Foley's assumption that the intervocalic nasal is more resistant than the syllable-final seems to be based on observation of French alone. Loss of preconsonantal nasal consonants in French is a special case of the general phenomenon of loss of all preconsonantal consonants. In Portuguese, on the other hand, contrary to Foley's assumptions, textual evidence strongly suggests that intervocalic n was lost before syllable-final ñ; moreover in some Gascon dialects today the latter is retained whereas the former is lost. Of course it is possible to
postulate restoration of the syllable-final consonant at a more recent period, but isn't this rather gratuitous? Certainly Foley's argument that the n of Portuguese cento must be epenthetical because it does not fit into his scenario smack of casuistry. Possibly the retention of nasal consonants only before occlusives in Portuguese is evidence of their relative strength in this environment — which, incidentally, fits in well with Foley's assumptions about "preferential nasal effacement" (but cf. 4.1).

3. Operations on vowels after nasal effacement.

3.1 Contrastive (phonemic) vowel nasalization is usually regarded as linked with effacement of the conditioning nasal consonant; phonetic nasalization, I repeat, can be present in any language, even if only as an individual's variant.

3.2 Lengthening of nasal vowels is possibly a physiological consequence of their increased phonetic complexity. It is to be noted that in French, and possibly in most languages, effacement of a syllable-final consonant results in the compensatory lengthening of the preceding vowel. Diphthongization of nasal vowels can well be consequent on their lengthening.

3.3 Lowering of nasal vowels is far from universal. In Portuguese, for instance, there is a slight tendency for nasal vowels to be raised and closed; Brazilian varieties, with stronger nasalization, also have closer vowels. Foley's contention seems to be based on the undeniable French evidence — in French nasal vowels are velarized and lowered, or perhaps more accurately, laxed. I do not have enough knowledge of German, Slavonic and Greek history to discuss the three non-French examples Foley cites, but, at a glance, they provide no very convincing evidence.

In French the laxing of most nasal vowels followed, in my view, the loss of syllable-final nasal consonants and the denasalization of vowels before intervocalic nasals (possibly as late as the 17th century). One effect was to reduce the number of items in the nasal vowel subsystem. The graphical confusion of en and an, attested from the 12th century, may result from a laxing of both nasal vowels which nonetheless did not merge phonetically (Posner, 1971). Bernard Rochet (1971) suggests that the morphologically-determined substitution of -ant for -ent in present participle endings may have been an important factor. The same author's excellent doctoral dissertation (1970) provides ample documentation of the history of the French nasals and level-headed discussion of divergent views about the process. Professor Foley would do well to consult especially Rochet's discussion (and rejection) of the proposition that nasal vowels are necessarily lowered (54 - 75).

The contention that lowering is really just "strengthening" is incomprehensible to me, but I do not want to go into Foley's views on vowel strength here.

4. Denasalization. Foley's rigid attitude towards segmentation of the phonetic chain, combined with his lack of clarity about the difference between contrastive and non-contrastive vowel nasalization, makes this part of his scenario particularly indigestible.

4.1 Epenthetic denasalization. The relevance of the Portuguese cento example is not clear, as here the e remains nasalized. It is to be noted that between a stressed tense nasal vowel and an occlusive, nasal occlusion is difficult to avoid, and can often occur in the speech of
the individual or the group without affecting the system as a whole; much will depend on the syllabic structure of the language concerned. In standard Portuguese, though not in standard French (where nasal vowels are laxer), weak occlusion is normal. Whether this represents a retention of the original nasal consonant, or a restoration by epenthesis is possibly a pseudo-problem ([mUjntu] alongside [mUjtu] < MULTU shows that the development can take place even in the absence of an original nasal consonant). Denasalization of the vowel in these conditions would presumably be connected with language-specific features, concerning perhaps the status of the nasal vowel sub-system.

The ninho example is of very different character. It is to be linked with Vínho < VINU in which the palatal element, like that of cheio, mentioned above, may have served to preserve the hiatus in vixo > [vXjo] > [vXnu]. Between i and a more open vowel a palatal nasal develops; in articulatory terms it is easy to imagine that the high, tense [ij] combination might develop weak occlusion, as a sort of dissipatory process. Denasalization is not, however, necessarily connected with the epenthesis, but seems to fit in better with examples Foley puts into the category "corruptive denasalization" (4.3). The relative chronology of these changes is uncertain. "Corruptive denasalization" appears to date from the 15th century; there is no certain evidence of the epenthesis of nh before the end of the 15th century, or of jo before the 16th century. These however are the sort of changes that might well not be marked by the graphy (in particular, the graphies "h" and "nh" are often interchangeable).

4.2 "Syneric denasalization". This is likely to occur when nasal vowels have acquired phonemic status — that is, when the vowel nasality feature can no longer be regarded as conditioned by a nasal consonant in the syntagmatic environment. Thus French denasalization was completed only during the 17th century, after loss of "mute e" brought VN and V into contrast (Posner, 1971). Other languages may well show denasalization in different conditions; thus Rochet (1970: 42) cites some Gascon dialects which preserve vowel nasality before word-final nasal consonants (e.g. [bI"] "wine") but not where the intervocalic nasal has been lost ([Ilyo] < LDNA "moon"), whereas in some Bearnese dialects where the nasal consonant is regularly lost, vowel nasality remains ([bI] and [Ilyo]).

4.3 "Corruptive denasalization". A counter-example to Foley's hypothesis, based it appears on Portuguese evidence, has just been cited: Bearnese [Ilyo]. In Portuguese, denasalization under these conditions is not pan-dialectal. True, in standard Portuguese vowel nasality has disappeared when the nasal vowel was in hiatus with another (boa, also cheio and probably vinho). Where the two vowels form a diphthong nasality remains (mEo, lIcEs, cRes): the sequence of a more open followed by a closer vowel forms a "falling diphthong". How this can be described as "strengthening" I cannot really see. More relevant is the structure of diphthongs in Portuguese. In nearly all oral diphthongs (of which there are a large number) the stress falls on the more open element. [iu] appears to be an exception: in the Lisbon dialect, specifically, the earlier io sequence has merged with the diphthong (e.g. trio). The sequences ia, ia, ia and eo are never diphthongal. We may assume that epenthesis of a palatal glide in io and io predates the closing of final unstressed vowels, so that there was no chance of confusion between the denasalized sequences (> [wiu] and [iU]) and the diphthongs eu and au. (The fall of -n- probably dates from the 10th century and the closure of -o to [u] from the 12th. Early texts mark hiatus between vowels with a graphical h; the epenthetic jod appears in graphy only in the 16th century.)
4.4 "Spontaneous denasalization". I have no comments to make, except that this is conceptually rather odd and smacks of the classical view of linguistic history as corruption and degeneration. However, I would view with favour a theory in which survival of a superfluous complexity like contrastive vowel nasality depends on its serving a useful grammatical function.

5. Examples. I know so little about Polish and Old Norse that I shall refrain from comment. As for French, I have already questioned the hypothetical ëma > ëima change. The "explanation" of [mɔ̃nami] seems pure mystification: are we to assume that when [mɔnami] is pronounced (as it frequently is), the sentence stress is stronger? And what about [ʁjɛnaʃe] rien à faire? Or emmener/amener and enamourer?

6. Conclusions. I should prefer to reserve the term "nasalization" for the acquisition of distinctive nasality by vowels. This occurs in relatively few languages, though non-distinctive nasalization can occur in any language. A general study of nasalization should seek to specify the sufficient conditions for its occurrence, as well as listing necessary conditions. Rochet (1970) makes a significant contribution to such a study, within a functional-structural framework. Foley's model is apparently not compatible with such an approach.

References

Rochet, B.(1971) 'A morphologically determined 'sound' change: the merger en-an in Old French.' Unpublished paper (given before the Canadian Linguistic Association).