Asturian and Cantabrian metaphony

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In this short contribution the main characteristics of the metaphonic systems found in northern Spain are reviewed. Although in the dialect of Lena we find a typical shift chain by which the low vowel rises to mid and the mid vowels become high in metaphonic contexts, in other varieties phonemic boundaries are not crossed and instead distinct allophones are produced. I argue that these varieties present an earlier evolutionary stage and provide us with important clues on the origin of metaphonic shifts.

0. Introduction

In parts of Asturias and neighboring areas of northern Spain we find metaphonic alternations which recall those found in southern Italy. The discovery of this phenomenon is to be credited to the great Spanish philologist Ramón Menéndez Pidal (1899, 1906). Interviewing a speaker from the Lena Valley, in Asturias, Menéndez Pidal noticed that, in this dialect, standard Spanish *palo* 'stick' is rendered as *pelu* and Spanish *pelo* 'hair' becomes *pilu*. The dialect of Lena was later the object of a detailed monographic study by Neira (1955), himself a native speaker of the dialect. The neighboring dialect of Alto Aller was described by Rodríguez Castellano (1952). Other Asturian (or Bable) and Cantabrian (or Montañés) varieties have also been described in detail since then. These are all five vowel systems /i, e, a, o, u/, since, like in Castilian, Late Latin /ɛ/ and /ɔ/ diphthongized unconditionally in stressed syllables giving [je], [we], respectively. These diphthongs also undergo metaphonic raising: *bwéna* 'good, fem sg', *bwínu* 'good, masc sg'. A crucial difference with respect to standard Spanish is that the unmarked masculine singular ending, which in standard Spanish is *-o*, in Asturian is *-u*, although in the plural we have *-os* in the relevant Asturian varieties. There is also an ending *-o* born mostly by "mass" masculine nouns, adjectives and pronominal forms agreeing with "mass" nouns and a few other exceptional nouns not falling in this semantic class.

Metaphony in Lena is describable as a stepwise rising of stressed vowels not unlike that found in some Italian dialects. In other Asturian and Montañés varieties, on the other hand, the metaphoni-

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zed vowels are raised but without reaching the height of the next phonemic level and have been described as being centralized, with a "throaty" quality and also sometimes labialized before /-u/. This suggests the existence of a partial gestural assimilation which would not be adequately characterized as spreading of a height feature.

To understand the phenomenon of metaphony we need to find its physical (articulatory and/or acoustic) causes and subsequent analogical effects which may have led to the extension of the phenomenon to contexts where it did not naturally arise and to its simplification.

1. Metaphony in Lena

In Lena, in forms ending in /-u/ stressed /a/ raises to *e* , (1a), and stressed mid vowels become high, (1b):

(1) *Lena*

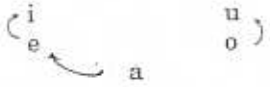
a.	*pálos*	'sticks' vs.	*pélu* 'stick'
b.	*nénos*	'children', *néna* 'girl' vs.	*nínu* 'boy'
	tsóbos	'wolves', *tsóba* 'she-wolf' vs.	*tsúbu* 'wolf'

We thus find a stepwise raising shift that is reminiscent of metaphonic processes in certain southern Italian dialects. As Neira (1955:5) puts it "siempre que haya *-u* final, la vocal acentuada se cierra un grado" [every time there is final *-u*, the stressed vowel rises one degree].

It should be pointed out that metaphony in Lena is a purely phonological process, not a morphologically induced alternation (see Hualde 1992). Since the ending *-u* only occurs in masculine singular count forms, almost all forms showing metaphonic raising belong to this morphological category (forms ending in *-i*, which also trigger metaphony, are very few, unlike in Italian, cf. Neira 1983). This results in paradigms such as *blénku* 'white, masc sg count', *blánkos* 'masc pl', *blánka* 'fem sg count', *blánkas* 'fem pl', *blánko* 'mass' where metaphony redundantly marks the masculine singular count category. With masculine nouns we have contrasts such as *pílu* 'a hair' vs. *pélo* 'hair, mass' or *fjírru* 'an iron' vs. *fjérro* 'iron, mass'. It should be emphasized, however, that masculine singular countable forms which happen to have an ending other than unmarked *-u*, including those ending in *-o*, do not present metaphony. Thus *tóro* 'bull', for instance,

exceptionally ends in *-o* and does not present metaphony. In words not ending in a high vowel there is no metaphony, even if the word belongs to the morphological category where metaphony typically operates.

In the metaphonic context we have the shift schematized in (2) in the dialect of Lena:

(2) 

As noted in Hualde (1989), a problem that arises in a binary feature-based analysis is how to characterize this process of stepwise raising in a unitary fashion. In principle, theoretical models where vowel height is seen as a multivalue scalar feature (e.g. Ladefoged 1971) appear to be more adequate for dealing with this type of phenomenon. The consideration of other neighboring varieties offers a more complex situation which, in fact, raises doubts on the advisability of proposing a single feature-based phonological rule to capture the metaphonic facts.

2. *Metaphony in Alto Aller*

In the dialect spoken in Alto Aller (or Upper Aller Valley), a region east of Lena and bordering with it, metaphony appears to be a phonologically less "clean" process than in Lena. As in Lena, stressed /a/ rises in the context of a final high vowel. But the result of the metaphonic rising is distinct from /e/. Rodríguez-Castellano (1952) describes this vowel as a type of *e* which is "open and mixed" (p. 59) or "mixed and with a throaty quality" (p. 35). We may represent this vowel with the symbol [ɛ] (Rodríguez-Castellano uses an ad-hoc diachritic). Rodríguez-Castellano insists that for native speakers of this dialect the stressed vowel in a word like *pɛ́lu* 'stick' (pl. *pálos*) is never confused with that in *pélọ* 'hair', even though Spanish-speaking outsiders may not be able to hear the difference.

As for stressed /e/ in metaphonic contexts, it is usually realized as a more raised vowel that in other contexts, but this allophone of /e/ is nevertheless distinct from /i/. According to Rodríguez-Castellano (1952:56-57) only in the diphthong /wé/ is there complete metaphonic raising of /e/, producing [wí], as in *swílu* 'floor' (Sp. *suelo*).

More generally, Rodríguez-Castellano (1952:58-59) states that "las vocales resultantes de esta inflexión no son sonidos de timbre claro y preciso, a la manera castellana, sino que presentan en todos los casos un matiz oscuro y mixto muy característico" ["the vowels

resulting from this inflection are not sounds with clear and precise quality, like the Castilian ones, but rather, in every case they present a very characteristic dark and mixed quality"]. We may perhaps interpret this "dark and mixed quality" and "throaty quality" as being produced by the retraction of the tongue root; that is, as pharyngealization. Metaphony in Alto Aller does not usually produce merger between phonemes, unlike the typical situation in Italian dialects, and apparently also unlike what happens in Lena. In Alto Aller there is no true metaphonic vowel shift. Instead, new allophonic distinctions are created.

In Alto Aller final /-u/ has an assimilatory effect on the stressed vowel. Final /-i/ also has a similar albeit smaller effect (Rodríguez-Castellano 1955:58). As mentioned, the metaphonic effect of final high vowels on stressed vowels is probably a retraction of the tongue root accompanied by a raising of the dorsum. Clearly a detailed instrumental analysis would be of the greatest importance if we are to understand the true nature of the phenomenon. In the absence of instrumental data, and based only on Rodríguez-Castellano's impressionistic description, we may characterize metaphony in Alto Aller as the partial assimilation of the stressed vowel to the gesture of a final high [RTR] vowel.

My hypothesis is that the Alto Aller dialect represents a more conservative stage than Lena. The vowel shift observed in Lena would be the result of the historical reinterpretation and simplification of the vowel qualities appearing in metaphonic contexts in terms of the vowels found elsewhere in the dialect. It appears that distinctive vowel qualities occurring in a restricted environment may tend to be reinterpreted in terms of more widespread articulations, as Calabrese (this issue) argues. For instance, a [ɛ]-type vowel arising in metaphony and found nowhere else in the language may be reinterpreted as [e]. But this elimination of complexity in the vowel system would be a secondary historical development. The final result may be that what originally was an approximation of the stressed vowel to the articulatory gesture of the final vowel ends up looking like vowel shift in the context of a high final vowel.

3. Metaphony in the Nalón Valley

Another neighboring Asturian area with extensive metaphonic phenomena is the Nalón Valley. This dialect presents the remarkable difference with respect to both Lena and Alto Aller that the low vowel becomes ɔ in metaphonic contexts. Thus corresponding to a Lena

form such as *blénku, pélu , gétu,* in the Nalón Valley we find *blɔ́nku* 'white, masc sg count', *pɔ́lu* 'stick', *gɔ́tu* 'cat', etc. (Sp. *blanco, palo, gato*; cf. Menéndez Pidal 1954, Rodríguez-Castellano 1952, 1955, García Alvarez 1960. A map showing the isogloss between both realizations is found in Rodríguez-Castellano 1955:139). Here too we have a case of partial assimilation which does not produce a merger with any other phoneme. On the other hand, the mid vowels do merge with the high vowels in metaphonic contexts; e.g.: *úsu / ósus* 'bear/bears', *gúrdu / górdus* 'fat masc sg/masc pl', *kordíru / kordérus* 'lamb/lambs' (in the masculine plural we find an ending *-os ~ -us* where a close [o̜] appears to be moving towards [u], but in any case without metaphonic effects). But García Alvarez (1960) tells us that although stressed /e/ usually becomes a clear [i] in metaphonic contexts (except in the diphthong /je/, where the raising of the vocalic element is not complete), sporadically and in the speech of some older speakers, we have instead a centralized and very labialized vowel when the final vowel is /-u/, so that /kaldéru/ 'pot' may be pronounced [kaldɯru] instead of [kaldíru]. Assuming that [kaldɯru] represents, in fact, an older pronunciation, the rising of /e/ to [i] under the influence of final /u/ would be a simplification in the allophonic system resulting from the change [ɯ] > [i].

The interpretation that I am defending here is that Asturian metaphony in its historically primary stage is a partial assimilation phenomenon which approximates the gesture of the stressed vowel to that of a final high vowel. This assimilation may later be reinterpreted in terms of the basic vowel system of the language, producing the effect of vowel shift.

A question that needs to be addressed is why the realization of the low vowel in metaphonic contexts is a front vowel in Lena and Alto Aller, but a back, rounded, vowel in the Nalón Valley. Perhaps the answer to this question could be found by examining the realization of stressed /a/ in non-metaphonic words in the two sets of dialects. If we found that stressed /a/ tends to be a more fronted vowel in Lena and Alto Aller than in the Nalón Valley that would explain why when it is raised it tends towards /e/ in one area but towards /o/ in the other.

4. Proparoxytones

In all three dialects considered (Lena, Alto Aller and Nalón), metaphonic alternations are found also in proparoxytonic forms such as those in (3), where another vowel intervenes between target and trigger:

(3) proparoxytones

a. Lena (Neira 1955)

péšaru	*pašarín, pášara*	'bird / little bird / female bird'
pémpanu	*pámpanos*	'old and decrepit person masc sg/masc pl'
kéndanu	*kándanos*	'dry branch / dry branches'

b. Alto Aller (Rodríguez-Castellanos 1952)

péšaru	*pašarín*	'bird / little bird'
téladru	*táladros*	'drill / drills'
ébanu	*ábanos*	'snow embankment'

c. Bimenes, Nalón Valley (García Alvarez 1960)

mɔ́tolu	*mátola, máto*	'I kill him' / I kill her/ I kill'
mɔ́talu	*mátala, máta*	's/he kills him / s/he kills her / s/he kills'
pɔ́šaru	*pášaros*	'bird/birds'

It seems reasonable to assume that all assimilatory processes initially result from the influence between adjacent gestures. The fact that in the examples in (3) assimilation appears to be a "long-distance" process which skips a vowel between trigger and target is a puzzle for our understanding of vowel assimilation, regardless of whether or not a formal account is feasible (see Hualde 1989). Two possible explanations seem to be available. An explanation for this situation would be that in proparoxytones there has been analogical extension of metaphony from paroxytones. The other possibility is that, in fact, the unstressed penultimate is also affected by metaphony in some slight way and researchers have simply failed to perceive its retracted/raised quality.

5. Cantabrian (Montañés) dialects

Centralization and retraction of the tongue root in the context of /-u/ has also been described for some varieties spoken in the region presently known as Cantabria (a.k.a. province of Santander), to the east of Asturias. For the variety of Tudanca, Penny (1978) states that in words ending in a high vowel, stressed mid and high vowels are centralized (with different degrees of centralization depending on the vowel). Mid vowels are also raised but without merging with the phonologically high vowels. In the same context the low vowel is raised and fronted. In proparoxytones the penultimate vowel is also affected by the metaphonic process, e.g. *antigwÍsImU* 'very old, masc. sg.'. This non-skipping of the posttonic vowel is what a priori one would

expect in an assimilatory process. Penny also reports centralization of pretonic vowels under some more specific conditions.

In the Pasiego dialect, which was the object of a masterful study by Penny (1969a,b), metaphonic harmonization appears to be a more extensive phenomenon, affecting all syllables in the word and even proclitics, e.g. *Il kUrdÍrU* 'the lamb' , pl *kordérus* (standard Spanish *el cordero*). Very likely the extension of centralization/pharyngealization to the pretonic syllables was aided by the fact that in Cantabrian varieties there is an independent process of raising of pretonic mid vowels when the stressed vowel is high, as in *komeré* 'I will eat' but *kumiría* 'I would eat'.

A noticeable difference between the two Montañés dialects described by Penny is that whereas in Tudanca metaphonized vowels stay within the boundaries of the underlying system of contrasts, in Pasiego stressed mid and high vowels are neutralized in metaphonic contexts:

(4) a. Tudanca

/á/	sekálU	'to dry it, masc sg'	sekálo	'to dry it, mass'
/é/	késU	'(a) cheese'	késos	'cheeses'
/í/	čÍkU	'boy'	číkos	'boys'
/ó/	ÓhU	'eye'	óhos	'eyes'
/ú/	θÚrdU	'lefthanded, masc sg'	θúrdos	'lefthanded, masc pl'

b. Pasiego

/á/	málU	'bad, masc sg'	mála	'bad, fem sg'
/é/	lIxÍrU	'light, masc sg'	lixéra	'light, fem sg'
/í/	lÍmpjU	'clean, masc sg'	límpja	'clean, fem sg'
/ó/	flÚxU	'loose, masc sg'	flóxa	'loose, fem sg'
/ú/	sÚθjU	'dirty, masc sg'	súθja	'dirty, fem sg'

The Pasiego facts were reanalyzed in the autosegmental framework in an influential paper by McCarthy (1984), which drew considerable attention from generative quarters (cf. Vago 1988, Hualde 1989, among others). But feature-spreading analyses must deal with the facts at a somewhat abstract level. At the phonetic level, metaphonic harmonization in Pasiego appears to involve more than one articulatory aspect. According to Penny's description final /-u/, which is pharyngealized and centralized, causes raising, centralization and pharyngealization of other vowels, but also the labialization of front vowels. In fact, Penny (1969a: 50, n. 4) notes that [I] and [U] are rather similar sounds and that there is some confusion between

the two. This is thus an assimilation to the tongue body, tongue root and labial gesture of the final vowel.

6. Conclusion

In an area of Asturias and Cantabria an early Romance distinction between unstressed final *-o* and *-u* has been preserved (although with an important restructuring of the original distribution, see Neira 1991). This distinction was lost elsewhere in Ibero-Romance, although it appears that it existed also in early Portuguese. A distinction between unstressed *-e* and *-i* has also persisted, but with less consistency (see Neira 1983). Something that contributed to keeping *-o* and *-u* distinct was the fact that final *-u* acquired pharyngealization. Final pharyngealized *-u* triggers the regressive assimilation of the stressed vowel. This is a gestural assimilation involving not only some raising of the tongue body for nonhigh vowels but also assimilation along the front/back axis and labialization, along with retraction of the tongue root. An issue that remains to be investigated is why the assimilation of /a/ gives rises to a front vowel in some areas but to a back vowel in other neighboring varieties. From that stage we find different evolutions. In the Pasiego dialect of Cantabria, the assimilation was extended to the pretonic syllables giving rise to a more extensive harmony process. Perhaps this was helped by the fact that in Cantabrian varieties there is an independent process of pretonic mid-vowel raising in words where the stressed syllable is high. On the other hand, in Lena pharyngealization appears to have been lost and the "mixed" vowels reported for other areas have merged with the "clear" vowels found in nonmetaphonic contexts which were closest to them in acoustic quality. The result has been that metaphony in Lena has become a stepwise rising of nonhigh vowels. The fact that the dialect of Lena was the first one to be described led researchers to quickly establish a parallelism with southern Italian facts and to hypothesize a common origin for metaphony in both areas (Menéndez Pidal 1954, Alonso 1958, cf. also Blaylock 1965). Whether or not the metaphonic process had the same origin in Italy as that hypothesized here for northern Spain, what is apparent is that metaphony in Asturian and Cantabrian varieties other than that of Lena cannot be adequately characterized in terms of vowel shift respecting independently existing allophonic inventories or feature combinations.

Metaphony in some Asturian and Cantabrian dialects appears to present an early evolutionary stage with clear phonetic conditioning.

The phonetic basis for the process described has not been sufficiently investigated. All we have is impressionistic description. This is a phenomenon which requires serious instrumental study, in my opinion. Cantabrian and Asturian are sister languages of Castilian Spanish. Cantabrian or Montañés is a very close relative indeed. These varieties are spoken next to the area from which Castilian Spanish sprang and are uniformly regarded as nothing but slightly dialectal and rural forms of standard Spanish (cf. Holmquist 1988, Penny 1970:28-30). Under these conditions, it is uncertain whether speakers who preserve the traditional metaphonic alternations can still be found. Asturian varieties are more different from Castilian Spanish, which contributes to their somewhat higher prestige. There are both speakers and linguists who regard Asturian as a separate language. There is an Academy of the Asturian Language and there is some measure of recognition for Asturian in the educational system. However, standard Asturian, while preserving the *-u/-o* distinction, does not incorporate any metaphonic alternations, which are seen as "too dialectal" (Neira 1982:173). To the extent that fluent native speakers can still be found, a detailed study of the phenomenon in these dialects can potentially shed much light on how metaphonic processes arise and develop. I have suggested that the metaphonic process in Lena, where seemingly there is a stepwise raising of nonlow vowels may have arisen from the interpretation of a phonetically more directly motivated process where phonemic boundaries were not crossed. Perhaps the same explanation is also valid for Italian metaphony, where the process appears as fossilized to different degrees.

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