

THE BINARY FEATURES OF THE ALBANIAN SOUND SEGMENTS

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ABSTRACT

In this paper the author has undertaken the task to provide the standard Albanian with a system of phonemic binary features. As a starting point for him serves the work done by G. L. Bevington in his monograph "Albanian Phonology", where based on the N. Chomsky–Halle system of binary features, offers his system of 14 features for Albanian. But in his system of binary there are some inconsistencies as well as some mistakes. Consequently, in order that this system to be used for the specification of the sound segments of Albanian, it is necessary to make to it some modifications and corrections.

The author does not agree neither with Chomsky–Halle, nor with Bevington concerning the number of sound segments, the number of features for the phonemes of Standard Albanian, and features ascribed to some of the most problematic sound segments of Albanian, like the vowel / ə /, the glottal / h /, the laterals / l /, / l̥ / and the vibrants / r / and / r̥ /.

After a detailed discussion, the author arrives at a system of 15 binary features suitable for the specification of the sound segments of the Standard Albanian.

This paper is an attempt to define the phonemic binary features of the Standard Albanian based on the Chomsky–Halle's system of features elaborated by them in their seminal work "the Sound Pattern of English". Of course, nowadays there are other systems of features in use, but we prefer their system because it is based on the binary principle and is widely used by phoneticians.

A previous effort to specify features of the sound segments of Albanian based on Chomsky – Halle system of features is that of Gary L. Bevington made in his doctoral dissertation "Albanian Phonology" submitted to the Department of Linguistics of the University of Massachusetts at Amherst in August 1970 and published four years later¹. But because of ideological taboos of that time his study went unnoticed by Albanian phoneticians, as it had happened previously with the system of binary acoustic features used in 1954 by Eric Hamp in the description of sounds of a Calabro-Albanian dialect². Only these last years we have introduced binary features instead of Troubetzkoy's and Jakobson's acoustic features in our published textbooks, as well in an article on binary features of the sound segments of the Standard Albanian³.

1. Before going into details, let us represent first the consonantic and vocalic systems of the Standard Albanian, which has a rich inventory of phonemes that includes 29 consonants and seven vowels, as this will be seen in the following tables:

Table 1: Consonants and vowels of the Standard Albanian

Consonants						Vowels		
f	θ	s	ʃ		h	i / y		u
v	ð	z	ʒ	j				
p	t	ts	tʃ	c	k	e	ə	o
b	d	dz	dʒ	ɟ	g			
m	n			ɲ				a
			l / l̥					
			r / r̥					

Some of these sound segments are particular for Albanian, like the opposition / l / – / l̥ / and flap / r / – trill / r̥ /, or the vowel / ə /. As it will be seen below, these sound segments are among the phonemes of Albanian that present difficulties in their characterization with binary features.

¹ Gary L. Bevington, *Albanian Phonology*, Wiesbaden, 1974.

² E. P. Hamp, *Vacarizzo Albanese Phonology: The Sound System of a Calabro-Albanian Dialect*, Harvard University Cambridge, Massachusetts, 1954.

³ R. Memushaj, *Hyrje në gjuhësi*, DITURIA, 2002, pp. 103-105; *Gjuhësia gjenerative*, TOENA, Tiranë, 2003, pp. 184-187; *Idem*, *Tiparet binare të fonemave të shqipes standarde*, *Studime filologjike*, nr. 3-4, 2005, pp. 42-63.

2. This paper grew out of some difficulties I have met while trying to specify these and other sound segments of the standard Albanian using Bevington's binary features. Our aim is to raise some problems about the system and give a solution for the specification of the sounds of Albanian.

Some of the problems in the specification of the sound segments of Albanian are connected with the Chomsky-Halle system itself; other difficulties derive from the Bevington's own interpretation of the phonemes of Albanian. As Bevington points out, his system of binary features is fundamentally "the one proposed by Chomsky and Halle with certain modifications"⁴. This system comprises 14 features: [±syllabic], [±consonantal], [±sonorant], [±high], [±low], [±back], [±labial], [±coronal], [±voice], [±continuant], [±nasal], [±strident], [±lateral], and [±HSP]⁵.

⁴ G. L. Bevington, *Albanian Phonology*, Otto Harassowitz. Wiesbaden, 1974, p. 11.

⁵ *Idem*, see pp. 11–13.

Table 2: Bevington's matrix of features

Features	i	y	u	o	e	ə	a	j	h	w	r	ɹ	l	ɫ	p	b	f	v	m	t	θ	d	ð	n	s	ʃ	z	ʒ	ts	tʃ	dz	dʒ	c	ɟ	ɲ	k	g				
Syllabic	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Consonantic	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Sonorant	+	+	+	+	+	+	+	+	-	+	+	+	+	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	
High	+	+	+	-	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	+	+	+	+	+	+	+		
Back	-	-	+	+	-	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	
Low	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Labial	-	+	+	+	-	-	-	-	-	+	-	-	-	-	+	+	+	+	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-		
Coronal	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	
Voice	+	+	+	+	+	+	+	+	-	+	+	+	+	+	-	+	-	+	+	-	-	-	+	+	+	-	-	+	+	-	-	+	+	+	+	-	+	+	-	+	
Continuant	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	-	-	-	+	-	+	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	
Nasal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-
Strident	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-
Lateral	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
High subglotal pressure (HSP)	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

As it is known, to the Chomsky–Halle system of binary features many objections are made regarding the number of features as well as the grouping of these features in different classes. Thus, phoneticians differ according to which of the features ‘vocalic’ or ‘syllabic’ has to be accepted. The two features are found in their book “The Sound Pattern of English”, although its authors prefer the second over the first. In Part Four of their book they give the feature ‘vocalic’ as one of the features of major classes. Nevertheless, finding it difficult to apply this features in the characterization of phonemes of different languages, in the eighth chapter of Part Four, they say that “the feature ‘vocalic’ might be replaced by a feature ‘syllabic’ which would characterize all segments constituting a syllabic peak”⁶. Consequently, obstruents are by definition [–syllabic], while vowels and sonorants could have the value [+syllabic] when they constitute a syllabic peak.

However, there are phoneticians who see the syllabic feature as a shortcoming of the binary feature system because this feature is based on a functional criterion, meanwhile in the base of this system are physiological criteria. On the other hand, other phoneticians are in favor of this feature and have avoid as unnecessary the vocalic feature, arguing that vowels would be characterized better with the [–consonantic] and [±syllabic] features. Joining this second group of phoneticians, we find the ‘syllabic’ feature suitable especially for the sounds of the Standard Albanian, since in its phonological system there are no glides⁷, which make the ‘vocalic’ feature necessary because they are [–vocalic, –consonantic].

One of the basic characteristics of the Chomsky and Halle system of binary features is the avoidance of place of articulation features, because of their unary character, preferring features based on the active articulator, which are binary. Nevertheless, in their system there are features based on the place of articulation, such as the ‘anterior’ feature. In connection with this, they say: “Consonants and liquids are anterior when they are formed with an obstruction that is located farther forward than the obstruction for [ʃ]. The consonants that in traditional terminology are described as palato-alveolar, retroflex, palatal, velar, uvular, or pharyngeal are therefore nonanterior, whereas labials, dentals, and alveolars are anterior.” Starting from their definition of the anterior sounds as sounds “produced with an obstruction that is located in front of the palato-alveolar region of the mouth”, they arrive at the conclusion “that vowels which are formed without constrictions in the oral cavity, are always nonanterior”⁸.

But there are languages that have central vowels, like Swedish, Turkish with its high vowel / ɨ /, or Albanian that has a schwa segment / ə /, a half-closed, nonlabial and central vowel⁹. Central vowels like Turk. / ɨ / in *kɨr* “blind” Chomsky and Halle regard as [+back], differentiating from the back vowels only by the feature ‘labial’¹⁰. But this characterization contradicts their claim that “in the neutral position the body of the tongue was assumed to be raised and fronted, approximating the configuration found in the vowel [e] of English *bed*”¹¹ and that back sounds are those that “are produced by retracting the body of the tongue from the neutral position; nonback sounds are produced without such a retraction from the neutral position”¹². In fact, front vowels differ in two features from their respective back vowels, the place of articulation and labialization. But, considering all vowels [–anterior], makes it impossible to differentiate correctly central vowels from their respective front and back vowels.

G. Bevington following Chomsky and Halle has characterized the Albanian schwa as a [+back] sound, counting it among the sounds “produced by retracting the body of the tongue from the neutral position”¹³. We think that to characterize / ə / as a [+back] vowel means to put this sound on a procrustean bed, a sacrifice made for the sake of the theory. This make us firmly convinced that the [anterior] feature is necessary for the description not only of the consonants, but also of the vowels of the Standard Albanian. Using this feature even for the vowels, we can describe the central vowel / ə / as [–anterior] and [–back], thus differing it from its respective front vowels in the first feature, and from back vowels in the second.

Another difficult point is that of the distinctive feature of the phonemes / r / and / ɾ / of Albanian. Chomsky and Halle have used for this purpose the feature HSP, saying that the trilled [r] is produced with heightened subglottal pressure; the tap [ɾ] without it”. But not all phoneticians agree with them, because with a high subglottal pressure are produced even unvoiced obstruents. In fact, our authors accept that “tense sounds are produced with greater subglottal pressure and this fact accounts for the well-known presence of aspiration in the tense voiceless stops of many languages”¹⁴. According to P. Ladefoged, the heightened subglottal pressure is in the base of the distinction between tense and nontense sounds, so this feature cannot be used as a distinctive feature only for vibrants. It is for this reason

⁶ N. Chomsky, M. Halle, *The Sound Pattern of English*, p. 354.

⁷ A. Dodi, *Fonetika dhe fonologjia e gjuhës shqipe*, Tiranë, 2004, f. 103.

⁸ N. Chomsky, M. Halle, *op. cit.*, p. 304.

⁹ A. Dodi, *op. cit.*, p. 46.

¹⁰ N. Chomsky, M. Halle, *op. cit.*, p. 309.

¹¹ *Idem*, p. 304; P. Ladefoged contradicts their claim, saying that “there is no evidence that this position (the neutral position–R.M.) is the level of that in the vowel [e] (see P. Ladefoged, *Preliminaries to linguistic phonetics*, The University of Chicago Press, Chicago and London, 1971, p. 99.)

¹² N. Chomsky, M. Halle, *op. cit.*, p. 305.

¹³ G. L. Bevington, *Albanian Phonology*, p. 12.

¹⁴ *Idem*, p. 326.

that to make this distinction he proposes the feature “rate of articulation”, giving to trilled / r / the value 0, while to / r / the value 1 (one)¹⁵, but later on he has replaced this feature with features *trill* and *flap*. Since for the opposition / r / – / r / of Albanian is not found a binary feature accepted by all, we will refer to the feature HSP to differentiate them.

From what we have said above, it comes out that to use the Bevington’s system of binary features for the description of the sound segments of Albanian, it is necessary to make to it slight modifications and corrections. The modifications to be made concern the number of segments, while corrections should be made as concerns the features ascribed to certain phonemes. As regards the number of features, we consider necessary to include the system the feature ‘anterior’. Thus, our system of binary features for the specification of sound segments of the Standard Albanian comprises 15 features: [±syllabic], [±consonantal], [±sonorant], [±high], [±low], [±anterior], [±back], [±labial], [±coronal], [±voice], [±continuant], [±nasal], [±strident], [±lateral], and [±HSP].

3. While watching carefully the Bevington’s table of features one can discover some inconsistencies as well as some mistakes. Thus instead of 36 phonemes of the phonological system of Standard Albanian, he gives 38 sound segments. From this table must be excluded [ŋ], a nasal velar sound found in some Albanian sub-dialects, and the / w / sound segment not found in Albanian. According to him, “ / w / exists only at the underlying level of representation and is always modified or deleted by phonological rules so that it never appears in its original form in surface representation”¹⁶. This is done in the spirit of the early Generative Phonology, which invented such “morphophonemes” or “abstract phonemes” that “are psychologically real”¹⁷, in order to make the transition from underlying forms to the surface forms easier.

To specify the sound segments of the Standard Albanian, Bevington uses only four features: ‘back’, ‘low’, ‘high, and ‘labial’. The most problematic is the specification of / ə / and / a / vowel segments. According to Bevington, the sound / ə / is a [–high], [–low], [+back], and [–labial] sound, while / a / as [–high], [+low], [+back], and [–labial]. It can be easily seen that the feature that differentiates these two vowels is the feature ‘low’, which has a minus value for / ə / and a positive value for / a /. This specification is close to classifications of vowels made by Lowman¹⁸ and following him by Anastas Dodi¹⁹, and dialectologists Jorgji Gjinari²⁰ and Bahri Beci²¹. According to them, these two sounds are central vowels, so they differ only in the degree of openness: / ə / is a non-high and non-low sound, while / a / is a low vowel. The only difference is that for Bevington / ə / is a back vowel, while for the Albanian authors is a central one. But what we gain by keeping intact the privative opposition / a / ~ / ə /, we lose on the other side, because / ə / comes closer to / o /, differing from it only in the labiality feature, / ə / being [–labial], while / o / [+labial]. But from the articulatory point of view / ə / differs in two features from / o /, entering thus into a non privative opposition: / ə / is a central, half-closed and unrounded vowel, while / o / is back, half-closed and rounded.

Now to come back to / a /, the specification of this sound by the above-mentioned Albanian authors as a central vowel is not supported by articulatory and acoustic data. Before going into details, it is worth mentioning that more than a century ago, Sami Frashëri, author of a grammar book, considered a a back vowel²²; for Kostaq Cipo also a is a back vowel²³. In fact, compared to cardinal vowels, the Albanian [a] is closer to the back cardinal vowel [a] than to the front cardinal [a]. Acoustically, according to the data given by Albanian phonetician Lumnie Boriçi, the F₂ value of the Albanian [a] is 1265Hz compared to the F₂ values of the front [a] (1500 Hz), and of the back [a] (1300 Hz) of the French, it comes out that the Albanian [a] is more posterior than the back [a] of French. Thus the feature [+back] assigned to this sound segment by Chomsky and Halle²⁴ is true also for the Albanian. Consequently, the opposition between / a / and / ë / is not a privative one, because they differ in features “low” and “back”: / a / is [+low, +back], while / ë / [–low, –back].

To conclude our discussion about the vowel / ə /, it comes out that four features used by Bevington are not enough for the specification of the vowels of the Standard Albanian. Considering / ə / as a [–back] sound we arrive at a situation where this sound becomes equal with / e /, because the two have the same features: [–high, –low, –back, –labial]. To avoid this we need the help of the feature ‘anterior’. Adding this feature to the system, we can differentiate the / ə / and / e / sounds, giving to / ə / the [–anterior] and to / e / the [+anterior] feature.

So adding this feature to the system we have this matrix of features for the vowels segments of the Standard Albanian:

¹⁵ P. Ladefoged, Preliminaries to Linguistic Phonetics, p. 107-108.

¹⁶ Idem, p. 16.

¹⁷ L. M. Hyman, How concrete is phonology, Language, 46 / 1, 1970, p. 66.

¹⁸ G. S. Lowman, The phonetics of Albanian, Language, vol. VIII, 1932, p. 282.

¹⁹ A. Dodi, Fonetika e gjuhës shqipe, Tiranë, 1961 (dispense); 1983 and 2004.

²⁰ J. Gjinari, Dialektologjia shqiptare, Shtëpia Botuese e Librit Universitar, Tiranë, 1988, p. 40-41.

²¹ B. Beci, Fonetika e shqipes standarde, Shtëpia Botuese “Libri Shkollor”, Prishtinë, 2004, p.32.

²² S. Frashëri, Shkronjëtorë e gjuhësë shqip (1866), Vepra, 2, Tiranë, 1988, p. 99

²³ K. Cipo, Gramatika e gjuhës shqipe, Tiranë, 1949, p. 15.

²⁴ N. Chomsky and M. Halle, The sound pattern of English, The MIT Press, Cambridge, Massachusetts, 1991, p. 332.

	i	y	e	ë	a	o	u
High	+	+	-	-	-	-	+
Low	-	-	-	-	+	-	-
Back	-	-	-	-	+	+	+
Anterior	+	+	+	-	-	-	-
Labial	-	+	-	-	-	+	+

4. Difficulties grow as we cross over to the consonantic system of the Standard Albanian. Among the most problematic cases here is that of the / h / sound, a point where Bevington differs almost totally from Chomsky–Halle as concerns the features ‘high’, ‘low’, ‘back’, and ‘sonorant’. According to him, / h / has the features [+high, -low, +back, and +sonorant], while for Chomsky and Halle these features of / h / have opposite values, namely [-high, +low, -back, and -sonorant]²⁵.

According to Bevington, who sees such a characterization of / h / as “an attempt to show it as a glottal fricative”, “this analysis creates problems on the phonological level in English and French (Schane 1968), where it is found to behave like velar”²⁶. Because the / h / segment of Albanian behaves phonetically and phonologically like the / h / of English, more closely associated with vowels, he sees “no particularly strong reason for representing [h] as a glottal spirant, but rather merely a voiceless glide, i.e. [-cons] and [-syll], [-voi]”. He continues his argumentation saying that “since the segment often acts with velar consonants phonologically, we may give it the classificatory marks of [-back, +high]”. This solution is justified by him with the “advantage of allowing us to make the phonetic interpretation rules for [h_E] universal rather than having to specify whether they apply for each language”²⁷.

As a result, he assigns to / h / the following values: [-syll, -cons, +son, +high, -low, +back, -labial, -cor, -voi, +cont, -nasal, -stri, -lateral, and -h.s.p.]. But some of these features does not hold at least for this sound of Albanian. First, it is true that topologically / h / enters into opposite relations with velars, but this fact does not justify the grafting of Troubetzkoian and Chomskian phonology. In fact, features [-high], [+low] given by Chomsky to / h / correspond to the real articulatory characteristics of this sound segment. But we do not agree with them about the feature [-back] they assign to this sound, nor with them and Bevington about the features [-consonantic] and [+sonorant] they assign to / h /. This consonant is not a glide, as they think, neither in Albanian, nor in English or German; it is an unvoiced sound with the features [+consonantic] and [-sonorant].

It is worth mentioning that the / h / sound is a problematic one not only in Albanian. For example, let us compare some of the values assigned to this segment of Albanian by Bevington with those given by Chomsky–Halle to this segment of English and with the values given by Utz Maas to the same segment of German:

	Bevington	Chomsky	Utz Maas
consonantic	-	-	+
high	+	-	-
low	-	+	+
back	+	-	+
sonorant	+	-	-

This different characterization of the / h / segment does not derive from the differences among [h] sounds of languages like Albanian, English, and German (because of their similar articulation they are called “European h” (h_E)), but partly from the different manner the features are understood, and partly from the different characterization of this sound by these authors.

5. The most complicated case is that of / l / and / ɭ / laterals. To the treatment of these two sounds is given enough space by different authors, beginning with G. Straka. There are other languages with two [l] sounds. Italian, for ex., has an alveolar [l] which is found in words like *luogo*, *Italia*, and a palatal / ɭ / in *gli*, *moglie* etc. According to M. Nespór, the binary distinctive features of this pair are ‘anterior’ and ‘coronal’, / l / having the plus value, while / ɭ / minus value²⁸. Russian also has two / l / sounds that function as two phonemes, one an apical alveolar and the other a “laminal alveolar

²⁵ In “The Sound Pattern of English” this feature is absent. But the authors discuss it in the Chapter Seven of the Part Four of the book. There they say: “Sonorants are sounds produced with a vocal tract cavity configuration in which spontaneous voicing is possible; obstruents are produced with a cavity configuration that makes spontaneous voicing impossible... Hence sounds formed with more radical constrictions than the glides, i.e. stops, fricatives, and affricates, are nonsonorant, whereas vowels, glides, nasals, consonants, and liquids are sonorant” (see p. 302).

²⁶ G. L. Bevington, *idem*, p. 18.

²⁷ *Idem*, p. 19.

²⁸ M. Nespór, *Fonologia, il Mulino*, 1994, p. 61.

or laminal dental”, which are differentiated by the feature ‘laminal’²⁹. More similar to the Albanian laterals are two lateral sounds of the British English. One of these sounds is produced with the tip of the tongue “touching the alveolar ridge, and one or both sides are near the upper teeth, but not quite touching”; the other as in *feel* [fi:t], *cold* [kəʊld] is pronounced with the tip of the tongue touching the alveolar ridge... but the center of the tongue is pulled down and the back is arched upward as in a back vowel”. The arching upward of the back of the tongue, – Ladefoged continues, – forms a secondary articulation which we will call velarization.”³⁰. But these two sounds, the alveolar lateral and the velarized alveolar lateral, are allophones of the same phonemic segment / l / of English. So, the two Albanian lateral segments have no counterpart not only in these languages, but, based on their inventory given by Ladefoged and Maddieson³¹, we can say that they are not found in any other language of the World.

A. Dodi describes / l / as an alveolar lateral and fricative, while its counterpart ll / ł / as an alveo-dental and velarized lateral fricative (see the fig. below), and as a distinctive feature of this pair he accepts the feature of velarization³².

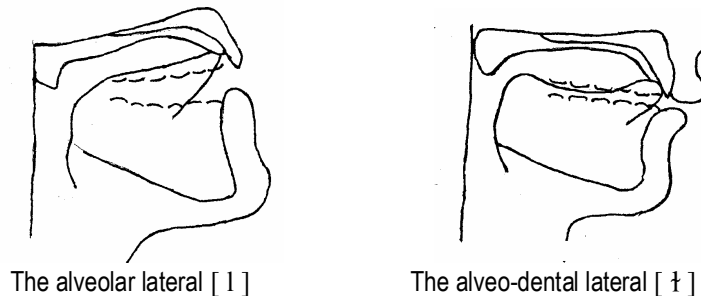


Figure 1: The laterals (Dodi)

Going back in time, we find that K. Cipo in his book “Gramatika e gjuhës shqipe” (1949) considers ll [ll] as a velar sound, and classifies it together with / k, g, h / velar phonemes of Albanian³³.

Among foreign authors, A. Bothorel has devoted an article to the laterals of Albanian based on his recordings. According to him, l [l] of Albanian has the same realization as that of French: the blade of the tongue touches the alveolar ridge and the body of the tongue after the apical contact goes down progressively and regularly”. The sound produced in this manner is an apical alveolar lateral. The other sound ll [ł] is produced at the border between front teeth and the alveolar ridge: the tip of the tongue stretches forward, all the body of the tongue is lowered and lays down parallel with the roof of the palate, without any visible raising of its back part. As a result of this movement there is an enlargement of the mouth resonator and of lateral passages, but also a backward withdrawal of the root of the tongue which narrows the pharynx. The sound produced in this manner is characterized by him as an apical alveo-dental lateral³⁴ (see the figure).



The apical dental [l] in *halla* [ha:la] “aunt”

The apical alveolar [l] in *pala* [pa:la] “pair”

Figure 2: The laterals (Bothorel)

²⁹ P. Ladefoged and I. Maddieson, *The Sounds of the World's Languages*, Blackwell Publishers Ltd., Cambridge Mass., p. 187–188.

³⁰ P. Ladefoged, *A Course in Phonetics*, U.S. etc., 2001, p. 55.

³¹ Idem, p. 185–186.

³² A. Dodi, J. Gjinari, *Fonetika dhe gramatika e gjuhës së sotme letrare shqipe – I*, Fonetika, Tiranë, 1983, f. 86.

³³ K. Cipo, *Gramatika e gjuhës shqipe*, Tiranë, 1949, f. 23 and 34.

³⁴ A. Bothorel, *Kontribut për studimin përshkrues të bashkëtingëlloreve anësore të shqipes*, *Studime filologjike*, 1972, nr. 2, f. 71.

Although in principle Bothorel accepts that during the articulation of the “strong” [ɣ] the back part of the tongue is retreated toward the wall of the pharynx, i.e. that this sound is somewhat velarized, he differs from Dodi in that he takes as the distinctive feature of these two phonemes not the velarization as Dodi does. According to Bothorel the distinctive feature of this opposition “is based in characteristics that are not found in any other European language”³⁵. This feature is the difference in the place of articulation: [ɣ] is articulated at a point lower than [l], which is articulated at the alveolar ridge zone.

The same treatment of the Albanian laterals is found at G. Bevington and Ladefoged – Maddieson. Bevington differs from Dodi and Cipo because for him these two segments are made distinct by the feature [±high]. He writes: “The two laterals are, of course, [+lateral, –h.s.p.]. One is a “European” or palatal lateral [l], which is articulated with the tongue tip raised against the alveolar ridge (therefore [+cor] and the body of the tongue raised up close to the palate (therefore [+high]). The other is a “dark” [ɫ]. It is not articulated with the tongue raised as in [l] so that the feature value [–high] seems the most appropriate.”³⁶. Thus, /l/ is [+high], while /ɫ/ is [–high], although in his table /l/ and /ɫ/ segments have the same set of features³⁷.

The latest who have discussed the status of these two laterals are P. Ladefoged and I. Maddieson. They write:

“Cine x-rays (Bothorel 1969–1970) indicate that Albanian has a distinction between what might be labeled as apical dental and apical alveolar laterals. Tracings of these are given in fig. 6.3 (see above). Note that besides the different location of the ‘place of articulation’ there are several other differences between l in *pala* and [ɫ] in *halla* in this figure. The back of the tongue is retracted for [ɫ] so that a narrowed pharynx results, and the body of the tongue lies lower in the mouth than for l. The speaker represented in Dodi (1970) seems to have less of a place difference than the two speakers examined by Bothorel, but does show the difference in tongue profile. The Albanian laterals indicate that the dental vs. alveolar place can occur with the ‘enhancement’ of different tongue body positions but without differing by one being laminal and the other apical.”³⁸

It is clear that Ladefoged and Maddieson follow Bothorel’s conclusion³⁹, although they notice that for [ɣ] “a narrow pharynx results”. Because they have not had direct contact with Albanian and no credible written sources, they have not paid attention to this very important fact.

This specification is untenable not only because of the traditional position of the Albanian researchers, who take as the distinctive feature of this pair the velarization, but mainly because the practice shows that it is not the place of articulation that differentiates these to sound segments. You can pronounce a higher [ɣ] as easily as a lower one, without changing the meaning of the word. The same is true also for the other sound: you can pronounce a lower [l] as easily as a normal one, and the meaning of the word remains unchanged. On the other side, if you make a [l] sound velarized, i.e. if you pull the root of the tongue toward the back wall of the pharynx, you will have a different sound and a different word. Compare, for example, *hala* and *halla*, *pula* “hen” and *pulla* “stamp” etc.

All this makes us reject the feature [±high] as a distinctive feature of this pair and to look for another real feature. But what makes things difficult is that velarization does not figure out as a binary feature in the Chomsky-Halle’s matrices or in any other works on phonetics.

A solution that in fact sustains the position of the Albanian researchers is given by Chomsky – Halle. According to them, the features ‘high’, ‘low’ and ‘back’ “may be used in a natural manner to characterize subsidiary consonantal articulations such as palatalization, velarization, and pharyngealization. These subsidiary articulations consist in the superimposition of vowel-like articulations on the basic consonantal articulation. In palatalization the superimposed subsidiary articulation is [j]-like; in velarization [ɣ]-like; and in pharyngealization, [a]-like... We shall say that palatalized consonants are high and nonback; the velarized are high and back; the pharyngealized are low and back”⁴⁰. From what is said above, it comes out that the phoneme /ɣ/ may be characterized as [+high], and [+back], while /l/ as [–high], and [–back]. But a problem raises here. The only difficult point here is that as concerns the difference between the two laterals, a problem raises: in place of one feature of one distinctive feature we have obtained two distinctive features.

6. After the discussion of the weak point of the system of binary features and proposals to resolve their contradictions and weak points, we may give the following matrix of binary features for the sound segments of the Standard Albanian.

³⁵ Idem, p. 75.

³⁶ G. L. Bevington, *Albanian Phonology*, p. 15.

³⁷ Idem, p. 20–21.

³⁸ P. Ladefoged and I. Maddieson, *The Sounds of the World’s Languages*, p. 186.

³⁹ See p. 42 of the above cited book, where Ladefoged and Maddieson refer to Bothorel.

⁴⁰ Chomsky and Halle, op. cit., 306-307; in truth, G. Bevington when describes the feature ‘high’ counts the velarized sounds as [+back], but when discusses laterals this value gives to the unvelarized /l/ (see G. L. Bevington, op. cit., p. 12).

Table 3: Binary features of the Standard Albanian

	i	y	u	o	e	ë	a	r	rr	l	ll	p	b	f	v	m	th	dh	t	d	n	s	z	c	x	sh	zh	ç	xh	q	gj	nj	j	k	g	h			
Syllabic	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Consonantic	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	
Sonorant	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	
High	+	+	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	-	
Low	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	
Back	-	-	+	+	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	
Anterior	+	+	-	-	+	-	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	
Labial	-	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Coronal	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-
Nasal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	
Lateral	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Voiced	+	+	+	+	+	+	+	+	+	+	+	-	+	-	+	+	-	+	-	+	+	-	+	-	+	-	+	-	+	-	+	+	+	+	+	-	+	-	
Continuant	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	-	+	+	-	-	-	+	+	-	-	+	+	-	+	-	-	-	-	-	-	+	-	-	+
Strident	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-
HSP (high subglottal pressure)	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-