# WORD-FINAL CLUSTERS IN ALBANIAN 

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#### Abstract

The purpose of this article is to study the syllable boundaries (codas) in the Albanian language The end of a syllable boundary $\{\operatorname{coda}\}$ is seen as a possible component of the syllable showing some of the features associated with the way the units that build it are organized and is the strongest consonantal position. The final syllable structures in Albanian are various which depend not only on the number of elements but also on the possibilities of their combination. What is to be noted is that, concerning the ability to emerge in the coda position, there are no restrictions on the consonants of the Albanian language, which can occupy all this position either as a single component or as a branched component. Possible combinations of Albanian final clusters are regulated by phonological constraints. The last element of the syllable can consist of either a consonant only, which is the most often encountered pattern, or two consonants, ending in rarer formations of groups of three consonants, and thus giving us a variety of syllable boundaries in Albanian. All consonant segments can emerge as a single element at the end of the syllable making the end structures of the separated syllables in Albanian appear very rich. In Albanian, several combinations of codes appear and consequently, the double groups at the end position of the rhymes are numerous. The most common combinations are $\mathrm{S}+\mathrm{O}$ and $\mathrm{S}+\mathrm{F}$, the less common ones are $\mathrm{O}+\mathrm{S}$ and F +S combinations and the least common is the $\mathrm{O}-\mathrm{O}$ and $\mathrm{F}-\mathrm{F}$ groups. In Albanian, there is also the presence of the three-element end groups, which are part of the clearly defined and phonetically inseparable end-syllable structures. The binary features of the segments included in the double and triple sets of codes in Albanian are:




Keywords: syllable boundary, phonotactics, coda, consonant groups, nucleus.

## 1. INTRODUCTION

The consonants at the end of the word occupy the position of the syllable coda. The status of this syllable component has often been controversial, unlike other components, the existence of which is convincingly justified. Phonological studies often deny its existence as a component of the syllable, defining it simply as a post-nuclear element, or emerging as a complementary part of the rhyme. (Kaye, Phonology 7, 1990: 311)

## 2. DETERMINING THE STATUS OF THE FINAL CONSONANTS

Phonological theories that support the principle of legitimizing the final component of a syllable from a beginning component acknowledge that a coda cannot be found at the end of a word without having a beginning to justify its existence. (Harris, Gussmann, 1998:140)
Such an assertion is contradicted by the fact that there are many languages (including Albanian) that can take final consonants, but it finds support in an in-depth analysis of the characteristics and phonotactic combinations of the segments standing at the edges of words.
The syllable structure can be determined to some extent by the segmental composition of the word to which it is included. (Harris, Gussmann, 1998:140)

Views that support or contradict the existence of the final structure of the syllable, or coda, are related to two different grammatical traditions. Western or Greco-Roman tradition sees the realization of this component through various metric realizations as well as versification techniques. (Harris, Gussmann, 1998:140)
This theory contradicts the views of an earlier Eastern tradition, which states that consonants at the end of a word occupy the position of the beginning of a silent syllable, which lacks a vocal nucleus.
Let us consider the fact that the final consonant of a word is a beginning, as such staying in this position it must be justified by the existence of a nucleus, which in this case is phonetically unrealized. An empty nucleus can be conceived as a unit having a latent (hidden) segmental composition, which can take phonetic form only if certain conditions are met that are related not only to phonotactic but also to elements related to lexical levels and postlexical. (Bafile, 2005:7)
In such a situation, the appearance of an empty nucleus in the phonological structure often comes as a result of certain diachronic and synchronous processes of vowel fallout or shifts that have occurred due to the influence of an extinct (stunted) vowel, as it may be in the case of historical changes of vowels, especially metaphony, which is thought to have been caused by the assimilative influence of a short Indo-European ending, which before being reduced turned low or medium vowels into high vowels, for example:
natë-nati- net (night)
or
plak $\sim$ plakī $\sim$ pleq etc.(old man)
In the second example, the vowel before being reduced in addition to the transformation of the subject vowel, has also caused the palatalization of the consonant / k /.
Other examples of these processes are unstressed internal vowel reductions.
The differences that exist between the languages that admit the existence of final consonants and the languages that do not admit such an existence are related precisely to the possibility that such a segment is justified as a beginning followed by an empty terminal nucleus, which can be, in most cases, phonetically unrealized. (Bafile, QL, 2005:9)
In support of the phonological presence of so-called 'stagnant' syllables (syllables with an unrealized, non-auditory vocal nucleus), some facts presented come from three main areas (Harris, Gussmann, 1998:140):

1. Typology of syllables in different languages
2. The stress of the word
3. Vowel length

Referring to a well-known classification, languages are divided into two major groups:

- The first group includes those languages that allow only open syllables (type CV), whereas the second group allows both types of syllables, the open syllables and closed syllables (CVC type).
Characteristics of the final code views are the following assumptions:
- Any language that contains the syllable types CV lacks at the same time the internal structures of the codes and the final consonants, as well.
- Any language that contains CVC types of syllables allows the two types of codes, both the internal and consonant end segments.
In many languages, the phenomenon of short closed syllables presupposes that a vowel and a follow-up consonant form a single syllable. (Harris, Gussmann, 1998:140)
Long vowels in languages such as English, for example, can appear either in the inner position or in the final position allowing the stressed nuclei to be branched (i.e to consist of more than one segment) into open syllables and often appear as simple structures in closed syllables.
Despite the problems that the status of the final component of the syllable has presented and the coincidences that have been made to it with the beginning of the syllable, the presence of the final segments in the syllable structures of different languages is never denied.
Since the syllable is phonologically considered a hierarchically organized structure in components, the role of each of its components cannot be denied, regardless of the different attitudes toward their status. We will return to the problem of identifying this element below when we have precisely defined the segments that are part of it.
Generally, in the arboreal structures in the presentation of the hierarchy of the syllable elements, there are two ways of schematizing its elements: in the two-level scheme, which is also the earliest presentation of the syllable structure, a specification of the components is observed, where the coda structure covers its right edge.
In the three-level scheme, the final syllable component no longer appears isolated but infolds the phonotactic specifics within a more complex structure, which is the rhyme. At this point, the existence of this component begins to be 'questioned' giving way to later theories that determine the status of the beginning of the syllable for these final consonant elements.

Regarding the presence of consonants or groups of final consonants at the end of a word, languages are divided into two typological classes (Bafile, QL, 2005:8):

- languages that allow such final segments, sometimes imposing certain conditions, such as Spanish, English, or French; and
- languages that do not tolerate the presence of final consonants, such as Italian.

The Albanian language is part of the first group, bringing us a variety of combinations of consonantal segments in the final position.

## 3. THE WORD-FINAL SEGMENTS IN ALBANIAN

Since the Albanian language is part of the group of languages that allow final consonant segments, let us look in more detail at their various combinations.
Compared to the beginning structure (onset), the end elements of the syllable are not numerous but they are presented with various combinations of segments.
The final element of the syllable can consist of either just one consonant, which is the pattern most often encountered or of two consonants ending with rarer formations of groups of three consonants, thus giving us very diverse final structures of syllables in Albanian.
Without any restrictions, all consonant segments can emerge as the only final element of the syllable, this makes the separate final structures of syllables in Albanian appear very rich.

## 4. PAIRS OF CONSONANTS

The binary combinations of the final consonants that appear at the end of the syllables in the Albanian language are as follows:

Consonant clusters
Occlusive - occlusive

Fricative-occlusive
Occlusive - fricative
-ks
-kth
-ps
Fricative-occlusive

Sonorant-occlusive

## Examples

akt (act)
koncept (concept)
petk (dress)
afsh (heat)
mpiks (coagulate)
bulkth (cricket)
laps (pencil)
çift (couple)
jaht (yacht)
fresk (fresh)
bast (bet)
dushk (oak)
bisht (tail)
lavd (praise)
muzg (sunset)
bujk (farmer)
drejt (to)
kalb (rot)
gulç (gasp)
kalk (limestone)
shelg (willow)
mjalt (honey)
qelq (glass)
amullt (stagnant)
pellg (pond)
shkëmb (rock)
kamp (camp)
kumt (news)

| -nc | bilanc (balance) |
| :--- | :--- |
| -nç | vinç (crane) |
| -nd | fund (end) |
| -nk | bronk (bronchi) |
| -ng | cung (stub) |
| -ngj | qengj (lamb) |
| -nt | agjent (agent) |
| -nxh | tunxh (brass) |
| -njt | enjt (swell) |
| -rb | korb (raven) |
| -rc | divorc (divorc) |
| -rç | ngërç (kink) |
| -rd | absurd (absurd) |
| -rk | park (park) |
| -rg | varg (range) |
| -rs | mors (morse) |
| -rt | lart (up) |
| -rth | morth (frostbite) |
| -rp | turp (shame) |
| -rxh | borxh (debt) |
| -rrc | morrc (lousy) |

As can be seen, in the Albanian language, the coda structure has a multitude of combination possibilities and, consequently, the double groups in the final position of the rhymes are numerous. The most common combinations are the sonorant - occlusive and sonorant - fricative combinations, the least common occlusive-sonorant and fricative - sonorant combinations, and very rarely the occlusive - occlusive and fricative-fricative groups.
Some of the words singled out above are borrowings, as such along with the semantic-grammatical specifics, they also present structural peculiarities. The problem becomes clearer if we consider precisely the groups of occlusiveocclusive and fricative-fricative, in which a few words, mainly borrowed, are included, as such along with the borrowings, new combinational possibilities have entered Albanian, which is not noticed just for this syllable component.
Discussions about the existence of the coda as a possible component of the syllable are not only related to the possibilities of combining the consonants in this position.
The principle of licensing a finite structure from a subsequent beginning can best illustrate the relationships between these two components, especially when defining clear boundaries between elements is difficult. These are two special phonological situations, one related to the identification of the components in the body of the word and the other to the final ones when they are legitimized by the existence of empty nuclei.
The binary features of the segments included in the double sets of codes in Albanian are:


In addition to the double groups, in the Albanian language, the presence of final groups consisting of three elements is noticed, which are part of the final structures of the syllable as well as the initial groups, clearly defined and phonetically inseparable.
Possible limitations related to the number of the end segments of the syllables are noticed by considering the phonological features of languages, one of which is the hierarchy of the sound sonority, which to a considerable
extent solves the problem of defining syllable boundaries, excluding here the initial syllables in which violations of the sonority hierarchy are seen.
In the Albanian language, end groups are consisting of three elements. Dividing them according to the classes of consonants that enter into triple combinations, we receive:
Occlusives- fricative- occlusives

| -kst | tekst (text) |
| :--- | :---: |
| -psht | kopsht (garden) |
| Sonorant - occlusive - fricative |  |
| -nkth | ankth (anxiety) |
| -nks | sfinks (sphinx) |
| -mbth | gjembth (thorn) |
| -ndth | endth (weave) |
| -rkth | barkth (tummy) |
| Sonorant occlusive - occlusive <br> -nkt instinkt (instinct) <br> -rkt infarkt (infarct) |  |

Fricative - occlusive - Fricative
-shkth ashkth (touchwood)
-shtth bishtth (tail)
The scheme of binary features of these triangular structures depending on the segments that are part of them can be presented as follows:


## 5. CONCLUSIONS

As seen from the above presentation, these groups are fewer in number, unlike the initial groups, which are more diverse. However, their presence in this position makes the Albanian phonological system very rich in relation not only to the possibility of the existence of the components of the final triangles but also to the variety of segments that are part of them.
The Albanian language does not place restrictions on the selection of the final segments when these are single consonants: any Albanian consonant can appear in the position of the code, especially at the end of words. In addition, the codas in the body of the words are formed by the dissolution of groups of onsets, because of the change of syllable boundaries. In this way, in Albanian, there is no phonotactic restriction regarding the segments that are part of the coda structure, regardless of its position in question.
Phonotactic constraints apply to pairs and triple groups, where not all combination possibilities are realized. It goes without saying that as the number of segments increases, the chances of three-segment groups appearing decrease.
In contrast to the initial triple groups, the final groups are not numerous in number and limited possibilities of combining segments are observed. Some of them are separated from the body of foreign words, which is not noticed in the initial groups, most of which have a formation following the word-formation structures of the Albanian language (a considerable number of three-consonant onsets are created thanks to prefix formations).
Analyzing these final groups of consonants we see that a part of these groups are created as a result of paradigmatic addition, while some other groups are as structural derivations of foreign words, who has entered the Albanian language and has become part of it.

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