

## HETEROGENEITY IN THE UZBEK SYSTEM OF CONSONANTS IN RELATION AND THE REALITY OF THE CATEGORY OF TENSE



### Linguistics

**Keywords:** Consonant, association, relation, system, level, homogeneous, heterogeneous, tense, gradation, adverbial, adjectival, category.

**Kenjayeve Zahro Suyunovna**

Teacher of the Karshi State University, Uzbekistan

### Abstract

The category of tense is generally considered morphological, while consonants are regarded as units of the phonetic level, and both are considered to possess homogeneous values. However, considering the essence from the second level, that is, from the associative level, both units move beyond their inherent domain and exhibit the quality of heterogeneity, consonants, by leaving the shell of the phonetic level, also bring forth the affiliation with the tense category of the morphological level. This article presents ideas regarding solutions to these problems.

### Introduction

Consonants are classified on the basis of principles different from those of vowels. However, despite this, the classification of consonants is grounded in specific, established rules. The classification of consonants is considerably more complex than that of vowels, as consonants possess a somewhat more intricate structure due to factors such as their formation, the process involved, and the role of the intonated sound during articulation.

Both of the presented views relate to the phonetic nature of consonants and reflect a tendency toward homogeneity. However, the heterogeneous nature of consonants is even more complex. This is because “any work devoted to phonetic analysis usually begins with the analysis of vowels. This is a tradition in European linguistics, likely because, in Indo-European languages, the main semantic load is typically carried by vowels. In contrast, in Eastern linguistics, particularly Arabic (in Semitic languages), the semantic load is often assigned to consonants, whereas the limited number of vowels serve primarily to express various forms of the core meaning. Therefore, a phonetic system description typically begins with consonants. Moreover, from the standpoint of articulation (production and pronunciation), consonants are considerably more complex than vowels. That is why Eastern linguistics begins phonetic system description with consonants.”

In the Uzbek language, consonants are considered to hold a more prominent position than vowels. This is because the phonetic value of vowels (such as their hardness or softness and other phonetic phenomena) is manifested mostly through the influence of consonants. Moreover, if homogeneity is considered at all, it is significantly greater for consonants. In the historical phonetics of Turkic languages, this view has its roots in the work of V.V. Radlov — a prominent figure in the historical grammar of Turkic languages — who, in describing the phonetic structure of Turkic languages, identified more than 70 phonetic markers. He also applied this principle in the arrangement of words in his special dictionary.

Usually, consonants are regarded as the unifying layer of phonetics. However, if one looks more deeply into their internal interpretation, it is possible to observe that they also reflect the morphological layer—particularly the category of tense—on the basis of associative value. Naturally, this linguistic process represents the essence of implicit expressions and serves as an indication that even heterogeneous consonants possess system-specific features as a result of the structured nature of language.

## Methods

The interlevel resonance of consonants can be appropriately classified on the basis of a microtext from O‘tkir Hoshimov’s novel “Ikki eshik orasi” as follows:

*Ana, oyim! O‘n qadam narida, kaftini tizzasiga qo‘yib, mayus ko‘zlarini olislarga tikib o‘tiribdi. Xuddi eshik oldiga chiqib, botib borayotgan quyoshga termilgan ko‘yi yo‘l poylayotgandek. O‘rtamizda yonib turgan gulxan tafti ikkalamizga baravar uryapti. Nariroqda gulsafsarlar ochilib yotibdi. Xuddi hovlimizdagiga o‘xshagan gulsafsarlar. Rostimni aytsam, shu gulni judayam sog‘ingandim...*

*Bilaman, bu – oyimning haykali. Ammo bugun onamning o‘zini ham ko‘rdim. Tirik diydorini! Yo‘q, avval Oqsoqolni ko‘rdim. Munkillab qopti. Ammo ovozi, gap-so‘zi hamon o‘sha-o‘sha... Keyin yonimga oyim keldi. Qarib, bir hovuch suyak bo‘lib qolibdi. Sochlari oppoq... O‘shanda – vokzalga kuzatib chiqqanida bunchalik emasdi. Faqat ko‘zlari o‘sha... Boshimni silagan qo‘llari o‘sha... Uyam meni tanidi. Darrov tanidi! Onamning ko‘z yoshi yuzimga tomganida yupatdim.*

*“Oyijon! Nega yig‘laysiz? Mana, diydor ko‘rishdik-ku!”*

## Results

**The consonant b.** Usually, this consonant can be one of three types:

1. In the phonetic sense, the *b* phoneme is a labial, plosive, voiced consonant sound. It appears at the beginning of a word (*bola*), in the middle (*shabada*), and at the end (*kitob*). In pronunciation, the final *b* is always devoiced: *kitob* > *kitop*, *oftob* > *optop*, etc. The *b* consonant was very active in the ancient Turkic language period and was often used in place of other consonants, such as the following:

ban – men  
 sab – so‘z  
 bung – mung  
 sub – suv  
 ab – ov  
 qaba – qama

In the microtext taken from O‘tkir Hoshimov’s novel “Ikki eshik orasi”, the *b* consonant appears in 22 out of 111 words (20%). Examples include: *qo‘yib, tikib, olibdi, chiqib, borib, boryotgan, baqirayotgan, ochilib, yo‘qibdi, bilaman, bu, bugun, mungillab, qopti, qarib, bir, bo‘lib, qolibdi, kuratib, chiqarmida, bunday, boshimmi* and others. This shows that this consonant, compared with others, has become less active in modern Uzbek countries.

2. The Converb (Ravishdosh) is a formant that, in ancient Turkic, was actively used in the form *-p*, as in *de+p* (“saying”). In modern Uzbekistan, due to certain substratal influences, it has undergone voicing.

In modern Uzbek linguistics, the development of the conversation with the help of consonant *b* was noted in the 1976 “Uzbek Language Grammar” book: suffix *(i)b*: *so‘rab* (“having asked”), *eslab* (“having remembered”), and *quvonib* (“being happy”). The variety of functions that this form performs clearly distinguishes it from other converb forms. Its main functions are as follows:

1. It indicates the manner of an action and functions as an adverbial modifier:

*Shu payt chorbog‘dan echki yetaklab Dildor kirib keldi* (“At that moment, Dildor came in leading a goat from the orchard”) (Said Ahmad).

If it expresses a relationship in this way, then, in the 2010 textbook “Modern Uzbek Literary Language,” the section on converbs states: Forms and their variants: The converb form that has the grammatical meaning of “linking a verb to another verb” includes the following variants: *-(i)b, -ib, -gach, -guncha, -gancha, -ganda, -gani, -may, -masdan*, and others. These variant forms are characterized on the basis of the meanings they express. The *-(i)b* form is marked in the status of “expressing the aspect of continuous/noncontinuous action”. In general, in scientific sources, the *b* form is not discussed as a morphological marker in relation to other levels. This is because, in grammatical practice, the function of expressing its heterogeneous value has not been assigned to this consonant.

The consonant *b* shifts into the verb category and functions as a past tense marker. For example: 1. *To‘g‘ri, bizning yigitlar unaqa emas: o‘n uch kishi zilziladan buyon birga ishlaymiz: o‘n ikki yil bo‘ldi.* 2. *Razm solib qarsangiz, oppoq chinni laganning ikki chetiga ikkita piyola to‘nkarib qo‘yilganga o‘xshaydi.* (O‘tkir Hoshimov. *Ikki eshik orasi*. – p. 4.)

3. The form produced by conjugating an adverbial derived from the *-(i)b* suffix with person-number: *yoziyman, yozibsan, yozibdi*; the form produced by conjugating an adverbial derived from the *-(i)b* suffix with person-number: *yoziyman, yozibsan, yozibdi*; the past tense narrative verb expresses an action or state that occurred before the speech situation and is conveyed by narrating. This form occurs by adding the suffix *-b (-ib)* to the verb stem and conjugating it.

Singular	Plural
I <i>yozi<b>man</b></i>	<i>yozi<b>bmiz</b></i>
II <i>yozi<b>san</b></i>	<i>yozi<b>bsiz</b></i>
III <i>yozi<b>di</b></i>	<i>yozi<b>di (-lar)</b></i>

The consonant phoneme *b*, standing between the fields of phonetics and morphology and its manifestation as a phoneme, as well as its role in verbalizing grammatical forms, is considered a fundamental tool in the intrinsic aspect of our language.

**The consonant y.** The phoneme in a language is explained primarily by how it is distinguished from other phonemes. Accordingly, all the phonemes of a language form a system of contrasts, and each member is identified through a series of different contrasts as an individual phoneme or a group of phonemes. This resembles the law of dialectical opposites.

Similarly, the *consonants* can contrast with each other by being units of two levels: in phonetics, i.e., consonants, and in morphology, i.e., a) tense, b) mood. Moreover, according to its method of formation, it demonstrates an opposite feature to all consonants with an intermediate marker of the language.

In this consonant microtext, the consonant appears in 24 words, such as *oyim, qo'yib, mayus, borayotgan, quyoshga, ko'yi, yo'l, poylayotgandek, yonib, uryapti, yotibdi, oyimning, haykali, diydorini, yo'q, keyin, yonimga, oyim, uyam, yuzimga, yupatdim, oyijon, yig'laysiz, diydor*, making up 22% of the total word collection. Typically, the consonant *y* can occur in three positions: at the beginning (anlaut), in the middle (inlaut), and at the end (auslaut). In the microtext, it appears in the initial position in 8 words: *yo'l, yonib, yotibdi, yo'q, yonimga, yuzimga, yupatdim, yig'laysiz*; in the middle position in 17 words: *oyim, qo'yib, mayus, borayotgan, quyoshga, ko'yi, poylayotgandek, uryapti, oyimning, haykali, diydorini, keyin, oyim, uyam, tomganida, oyijon, diydor*.

None of the lexical units in the microtext use the consonant *y* in the auslaut position. Although the roots of many words in Uzbek, such as *qo'y, oy, boy, soy*, and hundreds of others, end with this consonant. Therefore, studying phonology, the most fundamental stage of language, comprehensively plays an important role in clarifying issues related to other stages, such as morphonology, morphology, syntax, lexicon, and stylistics.

a) The present-future tense definite form is created by conjugating an adverbial derived from the *-y* suffix with a person-number: *yozaman, yozasan, yozadi, yozamiz, yozasiz, yozadi(lar); ishlayman, ishlaysan, ishlaydi; ishlaymiz, ishlaysiz, ishlaydi(lar)*

b) The first-person singular form participates in the formation of the imperative-desire mood: *yozay, ishlay, boray, kelay, olay, etc.* The concept of “desire” in the “imperative-desire mood” is characteristic of all three persons. This is also natural because desire and commands cannot be completely separated from one another.

**The consonant k.** In speech, it functions as a unity of three levels.

At the phonetic level – the consonant. The *k* phoneme is a close back, plosive, voiceless consonant sound. It can appear at the beginning (*ko‘z, kishi*), in the middle (*ikki, tulki*), and at the end (*yurak, bilak*) of a word.

When a possessive affix is added after consonant *k* at the end of words with two or more syllables, this consonant undergoes voicing and becomes *g*: *yurak + -im* → *yuragim*, *ichak + -i* → *ichagi*, *kurak + -i* → *kuragi*.

In urban dialects, the consonant *k* changes to *y*: *etak* → *etay*, *yurak* → *yuray*, *pishak* → *pishay*.

In the Oghuz group dialect, *k* at the beginning of a word is voiced and becomes *g*: *ko‘z* → *go‘z*, *kel* → *gel/gal*, *ketdi* → *getti*, etc.

In our main microtext, the consonant *k* appears in 18 words, such as *kaftini, ko‘zlarini, tikib, poylayotgandek, haykali, ko‘rdim, tirik, ko‘rdim, munkillab, keyin, keldi, suyak, vokzalga, kuzatib, bunchalik, ko‘zlari, ko‘z, and ko‘rishdik-ku*, making up 16% of the total word count.

Within the scope of the morphological level, as a marker of the first person plural in the past tense with a definite aspect, it is observed that:

In verb forms constructed using the past tense affix *-di* and the defective auxiliary verb *edi*, as well as in the subjunctive mood, person and number are indicated by specific morphemes: the first person singular by *-m*, the first person plural by *-k*; the second person singular by *-ng*, and the second person plural by *-ngiz*.

The first person plural is used in place of the first person singular. In such contexts, it conveys nuances of modesty, self-exaltation, or irony/sarcasm. For instance, “*O‘sha bog‘bon biz bo‘lsak deb keldik.*” (*Sh. Sa‘dullayev*) “*Tushki payt, soch-soqolni oldirdik, mo‘ylovni qaychilatdik, atirni septirdik.*”

At this point, it is appropriate to emphasize that the morphological marker *-k* plays a dominant role in expressing the semantics of numbers. As noted by Safarov, the number category of the verb indicates the quantity of the subject (the doer of the action), and this grammatical category is composed of two parts: the root/stem and more than thirty affixes. The relationship between the forms of the number category and the meaning of quantity is not tied to the lexical meaning of the root or stem, since these forms express not the amount of action but the quantity of the subject (entities performing the action).

In fact, this form is a shortened version of the respective person-number marker, which was historically derived from fuller, more explicit morphological structures. Over time, these concise

forms emerged as a result of diachronic phonological and morphological processes within the verbal paradigm.

A central factor in the development of these shortened forms was the internal transformation of the verb form itself. The affix *-duq/-dyk//-tuq/-tyk*, originally functioning as a past tense marker, evolved into the modern *-di/-di//-ti/-ti* variant. As this shift occurred, a parallel reduction occurred in the person-number suffixes.

In some grammatical persons, only the initial phoneme of the original person-number morpheme was preserved, whereas in others, the final segment remained intact. This phonological erosion led to reanalyzed and contracted forms in the verbal system.

For example, *barduq men*→*bardu* (→*bardi*) *men*→*bardim*, *barduq sen*→*bardu* (→*bardi*) *sen*→*bardin//bardin*.

The question of whether word formation is a part of other linguistic levels (such as morphology) or an independent domain has sparked significant debates in linguistics. One of the prominent figures in Uzbek linguistics, academician A. Hojiyev, has settled this debate by stating the following: *Therefore, recognizing word formation as an independent field (distinct from morphology) and incorporating it back into grammar — when defining grammar as a separate system comprising morphology and syntax — we must emphasize that the primary method of word formation is the affixation process, where morphemes serve as the material, and the tools for word formation are grammatical tools.* On the basis of this statement, we assert that the *k* morpheme is a distinct member of the system and that *k* is a unit of the third section. As noted by the scholar: *-k (-ik, -ak)//-k (-iq, -uk, -oq)* — these were originally a single affix, and depending on the hardness or softness of the root, the variants shown in parentheses are used, influenced by the vowel in the root. Nouns formed with these affixes are quite rare, such as *tilak*, *og'riq*, *qaviq*, *buyruq*, and *qiynoq*. Additionally, nouns formed with the affixes *-gi (-ki, -qi)*, *-m (-im, -um)* belong to the same semantic category: *sevgi*, *kulgi*, *unum*, and *chidam*, for example. Compared with *qochirim*—*qochiriq*, *tilim*—*tilik*.

In the provided microtext, we can observe that historically derived words, such as *suyak*, participate in word formation. For example, the word *suyak* historically emerged from the variant *sungak*, which has been recorded in European and Russian linguistics. Today, *sungak* has become a historical base form. The *r* consonant in speech represents the unity of three levels:

1. Phonetic level – where it is articulated as a sonorous, trilled, voiced dental consonant.
2. Morphological level: a) As a tense marker, b) as part of the adjectival form, and c) as part of a nominalization process to form the action noun.
3. Word-forming morphemes.

**The *r* phoneme** is a front, sonorous, trilled, voiced consonant. It can occur at the beginning (e.g., *rasm*, *ro'mol*, *ro'yxat*, *rais*), middle (e.g., *surday*, *barmoq*, *turna*), or end (e.g., *gulzor*, *bozor*, *chopar*) of words. This sound does not appear at the beginning of words in pure Uzbek (Turkic) words. In colloquial speech, particularly in urban dialects, this sound is often dropped in the

pronunciation of the plural affix *-lar* and in the word *bor*: for example, *dadamla(r) keladila(r)*, *puldan bo(r)mi?*

In our study, the following 24 words were used, accounting for 22% of the total words: *narida, ko'zlarini, olislarga, o'tiribdi, borayotgan, termilgan, o'rtamizda, turgan, baravar, uryapti, nariroqda, gulsafsarlar, gulsafsarlar, ko'rdim, tirik, diydorini, ko'rdim, qarib, bir, sochlari, qo'llari, darrov, diydor, ko'rishdik-ku.*

**The *r* consonant** has the property of replacing other consonants in various languages, altering the meaning. This phenomenon is known as rotacism. Rotacism, a term derived from Greek, refers to the process by which a sound changes into *r*. This phonetic feature is common in the Romance-Germanic, Slavic, Mongolic, and Turkic language families. The modern Chuvash language, as a historical descendant of the Bulgars and Hazar languages, has inherited this phenomenon of rotacism. This is why, in Chuvash, the replacement of other Turkic consonants such as *y/z/sh/s/t* with the *r* consonant is consistent. For example, *xer* winter, *xuran* cauldron, *chir* knee//kneecap, *epir* we, *shar* (*siy-*) to form, *ura* foot, *keru* son-in-law, *sar-to-bow*, *ira* (*iyi/iygi*) good, *arak* boot, and so on.

This phenomenon in our language is reflected in pairs such as *o'tkarmoq ~ o'tkazmoq, bitkarmoq ~ bitkazmoq, qarormoq ~ qoraymoq, oqirmoq ~ oqizmoq, tomirmoq ~ tomizmoq, qutqar ~ qutqaz, sirpanmoq ~ siypanmoq, biror ~ biron*, where sound alternation is clearly observed.

a) The *-r* suffix is one of the word-forming morphemes for creating adjectives. The adjective form created with this morphological marker is known in Uzbek as the future tense adjective.

The derivation of participles via the *-r* morpheme occurs relatively rarely. As Professor Sh. Rahmatullayev notes, "... In reduplicated lexemes such as *o'tar-o'tmas*, the *-r* allomorph is added to the first component, while the *-s* allomorph is added to the second component; such a lexeme functions as a form-building unit: *oradan ikki soat o'tar-o'tmas yoqilib, bir soat o'tar-o'tmas alanga pasaydi*," for example.

The *-r* suffix is used to form the future tense, expressing the action in an indefinite or probable manner; therefore, this form is referred to as the probable future tense. For example, *gapir + ar + man* (I might speak), *so'zla + r + man* (I might talk). When the negative suffix is used, the *-s* allomorph of this affix is added: *gapir + ma + s + man* (I might not speak).

The *r* consonant also serves in forming verbal nouns, functioning synonymously with the suffix *-(i)sh*. This form is significantly less productive than other verbal noun-forming suffixes. For example:

*Turarga holim qolmadi.*  
*Xuftonda kirdim bir do'kon,*  
*Qildi ashula bir juvon,*

*Eshak demang, undin yamon,  
Hangrarda yaxshi hang ekan.  
(Muqimiy, Sayohatnoma)*

The suffix **-r** belongs to the group of low-productivity derivational morphemes. It primarily functions to derive verbs from adjectives, as in *oqarmoq*, *ko'karmoq*.

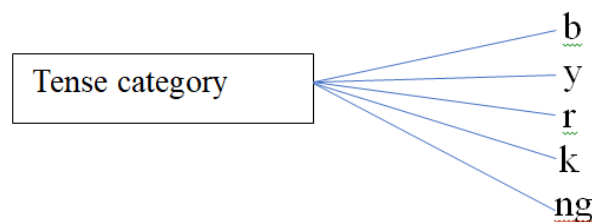
The consonant *ng* functions as a consonantal sound at the phonetic level, whereas at the morphological level, it can appear as:

- a) A possessive marker,
- b) a person-number suffix, and
- c) a tense marker.

Thus, when the *ng* phoneme extends beyond the phonetic layer, it manifests in two distinct morphological forms.

The ***ng* phoneme** is a near-back, nasal, plosive, voiced consonant. It does not occur in the initial position of words but can appear in the middle (*yangi*, *ingichka*) or at the end (*chang*, *tong*). In the selected micromaterial, this consonant appears in only three words—*oyimning*, *onamning*, and *onamning*—thus contributing to only 2% of the phonetic load of the text. Therefore, it is reasonable to consider this consonant as the least frequently used phonetic unit in the speech sample.

At the morphological level, *ng* functions as: a) a second person singular possessive suffix, e.g., *sening sumkang* (your bag), *sening ruchkang* (your pen); b) a second person singular person-number marker that also conveys tense meaning simultaneously, as in: *sen kelding* (you came), *sen olding* (you took). Thus, the relationships between consonants and the tense category can be summarized in the following diagram:



## Discussion

Thus, the system of consonants is extensively manifested in speech as a means of expressing the grammatical category of tense. Specifically, consonant *b* functions as a marker of participle and past tense; *y* denotes present-future tense; *k* indicates past tense; and *r* serves to express future tense, whereas *ng* tends to convey future tense semantics through person-number inflection. This reflects their functional heterogeneity. In this context, these consonants, although phonological units at the phonetic level, partially assume morphological status in the structure of the verb.

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