

# Morphonological Phenomena in Derivation Process (as Exemplified by the Bashkir Language)

Gulfira Rifovna Abdullina<sup>1</sup>, Zulfiya Karimovna Ishkildina<sup>1</sup>, Munir Idelovich Karabaev<sup>2</sup>, Luiza Khamzinovna Samsitova<sup>3</sup>, Liliya Radifovna Fayzullina<sup>4</sup>

<sup>1</sup> Sterlitamak branch of Bashkir State University, Sterlitamak, Russian Federation

<sup>2</sup> Sterlitamak Multi-Disciplinary Professional College, Sterlitamak, Russian Federation

<sup>3</sup> M. Akmullah Bashkir State Pedagogical University, Russian Federation

<sup>4</sup> Sibai Institute of Bashkir State University, Sibai, Russian Federation

## Abstract

**Background:** The scientific article investigates morphonological phenomena observed in the formation of new words in the Bashkir language. In addition, the object of morphonology and linguistic nature of morphonological processes are considered. **Methods:** The article focuses on morphonological phenomena observed in the process of affixed derivation, as morphonological conversion occurs exactly in case of affixation in the structure of motivational word; other methods of derivation also have not remained out of sight. The authors of the scientific article considered the level of phonemes, performing morphophoneme function in the Bashkir language. **Findings:** This article focuses on morphonological phenomena taking place in the formative system of modern Bashkir language. According to the authors, the following morphonological phenomena types are highlighted in modern Bashkir language: Stem clipping, morpheme augmentation, juxtaposition of phonemes, phoneme alternation. **Improvements:** The novelty of the proposed method consists in the fact that during the study, morphophonemes, actively functioning in derivation process of the Bashkir language have been revealed. Their place and role in the formation of linguistic units of certain lexical and grammatical group have also been determined.

**Keywords:** Bashkir Language, Derivation, Morphonological Phenomena, Morphophoneme, Morphophonology

## 1. Introduction

There is an opinion in linguistics that the root and the stem of a word remain unchanged in the agglutinative languages in case of affixation. At the same time, Turkologists recently paid attention to the fact that the affixation entails various changes – alternation – in words. From the last century to the present day Turkological research on phonology, morphology, dialectology, historical lexicology, etymology affect morphonological problems in some extent as well. Thus, in the statements of vowel harmony, syllable structure of root and affixed morphemes, alternations of sounds and different phonological phenomena, elements of morphonological analysis can be distinguished.

Morphonology (there are also such terms as “phonomorphology”, “morphophonology”, “morphonemy”, “morphophonemics”) is one of the relatively young and little-explored areas of linguistics. Today, it is recognized as an independent linguistic aspect by many researchers.

The object of morphonology of modern Bashkir language is the study of the phonological system and the laws of morpheme connection involved in the of derivation, morphogenesis and inflection of words<sup>1</sup>. In the process of derivation and the formation of grammatical categories of Bashkir language there are different kinds of changes in the phoneme composition of roots and affixes. Such changes are traditionally explained by different phonetic processes occurring in the speech flow in the phonemic composition of roots and affixes attached to them.

\*Author for correspondence

## 2. Literature Review

In spite of some scientists opinion, who deny the existence of this subdiscipline (e.g.<sup>2</sup> considers morphonology as a “nonbasic” level), it is impossible not to note growing interest in recent years to morphonology problems.

A. A. Reformatskiy, although considering morphonology as a “nonbasic” level, still recognized the importance of studying the border phenomena between phonology and grammar. In his opinion, morphonology is a necessary level of language ontology for linguistics and necessary linguistics subdiscipline where two main tiers of language receive the connection and thus, two subdisciplines: Phonology and morphology. However, the author persistently asserts the morphonology autonomy with respect to phonology and morphology: “Morphonology is neither phonology nor morphology, but the bridge between them” – he writes<sup>2</sup>.

Some scientific studies also analyzed different morphonological phenomena. For example, in the work of N. Z. Bashirova, juxtaposition does not stand out as a separate morphonological process. The author believes that in case of combination of two morphemes, the marginal vowel phonemes of which coincide, there is a clipping of an “unnecessary” part of a morpheme: Either an affix or a root. A general trend of language can serve as a criterion when determining which of two morphemes undergoes a phonological change.

“Positions (the morphemic boundary, the root and affix juncture) and conditions (a combination of two vowels at the junction of morphemes) both of stem clipping and juxtaposition of morphemes are the same, so it is inappropriate to artificially highlight a particular type of morphonological processes only on the grounds that there are two identical morphemes at the junction”<sup>3</sup>.

In recent years, morphophonology is recognized as an independent branch of linguistics in the Bashkir linguistics and is included as a separate subdiscipline in university textbooks<sup>4-8</sup>.

## 3. Methods

Descriptive method and elements of analysis and synthesis have been used in the work for a comprehensive review of morphonological phenomena in derivation system of the Bashkir language. Descriptive and historical methods have been applied in the collection and cataloging, as well as in the systematization of linguistic material.

Using descriptive method, linguistic units, namely, fundamental and derivative words and morphophonemes were divided into categories and types. The historical approach in the study of morphonological processes of the Bashkir language allowed showing the connection of this phenomenon with the development of language history. In addition, the historical method allowed determining the correlation of certain morphonological phenomena with a particular period in the life of the Bashkir language media. When using the method of analysis, phonemic composition and derivation structure of a motivating word have been identified; the active morphophonemes have been clarified. The results of work can contribute to the development of the narrative morphonology and derivation. Some conclusions can be used in the study of the historical grammar of the Bashkir language. The practical significance of this study is that the results can be used while compiling general and specific dictionaries; article materials can be applied in studies on morphonology and derivation.

## 4. Results

### 4.1 Stem Clipping

In modern Bashkir language the stem clipping process is considered as a productive morphonological phenomenon. Experience shows that sometimes there is an accumulation of similar phonemes at the morphemic boundary. The combination of unpronounceable phonemes is considered a deviation from the orthoepic norms of modern Bashkir language. For this reason, the stem clipping phenomenon is due to aspiration for harmonious sound.

In the derivation process, deriving roots are subjected to clipping at affixation, compounding, reduplication and abbreviation.

Bashkir stem clippings can be: 1. Final: *кәкрә* ‘crooked’ + - *әй* = *кәкрәй* - ‘warp, v’ [e-Ø], *һаллы* ‘flabby’ + - *ай* = *һалпай* - ‘hang down’ [ы-Ø]; b) middle: *ирек* ‘liberty, freedom’ + - *ен* = *иркен* ‘spacious’ [e-Ø], *күрек* ‘view’ + - *әм* = *күркәм* ‘attractive’ [e-Ø].

The clipping of the final vowel is considered as a regular morphonological phenomenon. In most cases, phonemes [ы], [e] drop out of the stem as the weakest and more susceptible to reduction phonemes. Roots finishing with the vowels [o], [e], [ə] are clipped relatively

rarer: *йокко* 'dream' + -ла = *йокла* - 'sleep' [o-Ø], *көмрө* 'humpbacked' + -эй = *көмрэй* - 'hump' [ə-Ø], *Йәһүзә* (a masculine name) + -ин = *Йәһүзин* 'Yahudin' (a family name) [ə-Ø], etc.

Dropping out of the middle vowels usually takes place between two consonants, which are most often sonorants, fricative and also occlusive, plosive, back-lingual and media-lingual [κ] and [κ]: *уйын* 'game' + -а = *уйна* - 'play' [ы-Ø], *киҫек* 'length' + -ен = *киҫкен* 'sharp' [e-Ø].

The Bashkir language, along with the other Turkic languages, having borrowed both a productive word and a derivative separately from Arabic, adapted them according to their phonetic laws according to which there cannot be the accumulation of consonants at the end of a word<sup>2</sup>.

Thus, in the process of derivation in the Bashkir language, clipping of productive stems can be final and middle. There occur clippings of individual phonemes and phonemic complexes. Stem clipping is observed at affixed derivation, compounding, reduplication and abbreviation. Both native Bashkir words and borrowings are clipped. Stem clipping may be used in written and spoken language.

## 4.2 Augmentation of Morphemes

During morpheme augmentation (in linguistics functioning as the terms "stem augmentation", "inserting an asemantic phoneme", "interfixing", "inserting phonemes between morphemes"), combinations of phonemes uncharacteristic for the structure of the Bashkir word and unpronounceable repetitions of similar morphemes are eliminated. Individual inserted phonemes and complexes of phonemes act as morphological means used for connection of morphemes in a word. The fact that these linking morphemes have neither lexical nor grammatical or derivation meanings, is a characteristic feature of them. The appearance of a particular phoneme/a complex of phonemes at the morphemic boundary depends, in most cases, on the phonemic composition of the productive stem<sup>5</sup>.

When there is an affixation, both the original stem augmentation and the derivational affix augmentation are observed. We will start an overview with the phenomenon of original stem augmentation for derivation affixation. In case of affixation, the final part of the stem is augmented. The "building material" for original stem augmentation is

traditionally consonant phonemes, as well as vowel interphonemes<sup>10</sup>.

In the formation of onomatopoeia verbs according to the model "onomatopoeic word + -ылда/-елдә", there is an original stem augmentation with the phonemes [κ], [ɾ], [κ], [ɸ]. In this case, the augmentation depends on the vowel or the final consonant stem: If the stem ends in a vowel of the front row, then consonants [κ], [ɾ] are joined to it; if the stem vowel belongs to the back row, then phonemes [κ], [ɸ] are added. The stems ending in a voiceless consonant are added by [κ], [κ] consonants, [ɾ], [ɸ] follow the voiced consonants: *кап* 'imitating the cry of a crow' - *каркылда* - 'crawk/about a crow etc.' [Ø-κ], *кет* 'imitation of the trills of laughter' - *кеткелдә* - 'laughing with trills' [Ø-κ], *саң* 'imitation of the sound of blow against iron' - *саңғылда* - 'ring, make a sound' [Ø-ɸ], *дең* 'imitation of thread of sound, tinkling' - *деңгелдә* - 'tinkle, strum' [Ø-ɾ].

This fact confirms that interphonemes function in a language only if they are necessary to create more favorable conditions with a combination of morphemes.

Interphonemes [o], [ə], [ы] appear in the formation of names of countries and states according to the model "an ethnonym ending in a consonant + affixoid - стан": *башкорт* 'Bashkir' - *Башкортостан* 'Bashkortostan', *хинд* 'Indian' - *Һиндостан* 'India', *төрөк* 'Turk' - *Төркөстан* 'Turkestan', *үзбәк* 'Uzbek' - *Үзбәкстан* 'Uzbekistan'<sup>11</sup>.

Morpheme augmentation in affixed derivation in the Bashkir language is a complex and ambiguous phenomenon. This is due to the difficulty of determining what morphemes/stems or affixes are that include additional phonemes. The distinguishing criteria are: Using an inserted phoneme or a set of phonemes in numerous derivatives with the same affix (in this case the segment belongs to an affix) or using a form or a segment in different derivatives with various affixes from the same original stem (in this case a segment is a part of the original stem{

## 4.3 Juxtaposition of Phonemes

Juxtaposition of phonemes is used in order to avoid repetition of identical phonemes occurring at the end of the first morpheme and at the beginning of the second morpheme in their combination. These phonemes are combined with each other (juxtaposed against each other), whereby at the morphemic boundary only one phoneme is pronounced instead of two identical phonemes.

Juxtaposition in the Bashkir language as the morphonological phenomenon is significantly different from juxtaposition in other languages. For example, in the Russian language this phenomenon is called “juxtaposition of morphemes”<sup>12</sup>. As it is seen from the name, it is about juxtaposition (overlapping) of morphemes – integral minimum parts of the word. In the Bashkir language, not full morphemes but mostly individual phonemes are subjected to juxtaposition. The phenomenon of overlapping (juxtaposition) of morphemes in the language is almost not observed. Despite the fact that in special works devoted to morphonology of Bashkir language, the term “juxtaposition of morphemes” is used, in our opinion, it would be better to call this phenomenon juxtaposition of phonemes.

The phenomenon of juxtaposition of phonemes has much in common with the phenomenon of stem (root) clipping, however, there are fundamental differences between them: 1. In case of stem clipping, vowel and consonant phonemes mostly in root morphemes drop out, juxtaposition of phonemes takes place exclusively at the morphemic boundary; in case of dropping out root phonemes they take the final part of a motivating stem; 2. In the process of stem clipping at the morphemic boundary there are different types of phonemes and part of a morpheme or a certain phoneme is clipped, then with juxtaposition at the morphemic boundary, there occur two identical phonemes and as a result one of them is lost<sup>13</sup>.

In the language there are two types of juxtaposition: Juxtaposition of vowel phonemes and juxtaposition of consonant phonemes.

In case of juxtaposition of phonemes, we have identified the following types of vowel morphonemes.

Morphophoneme [aa-a] is observed:

- In case of formation of blended nouns on the basis of phrases of the type “a noun in the indefinite possessive case + a noun in the form of possessiveness”: *алма агасы – алмагас* ‘apple-tree’, *таба агасы – табагас* ‘pan gripper’;
- In case of formation of compound verbs: *аша атла-* – *ашатла* - ‘step over somebody, something’, *олога аш-* – *олгааш* - ‘rise over, transmute’.

Morphophoneme [ии-и] occurs during the formation of the Bashkir names by adding the suffix - *ин(а)* to the nominal stem ending in - *и*: *Ғәли* ‘Gali’ - *Ғәлин(а)* ‘

*Galina*’, *Ғазу* ‘Gazi’ - *Ғазин(а)* ‘Gazina’, *Хажу* ‘Hazhi’ - *Хажин(а)* ‘Hazhin (a)’<sup>14</sup>.

As it can be seen, juxtaposition of phonemes in the Bashkir language in comparison with other morphonological phenomena is considered to be less productive. Not so prevalent spread of the morphonological phenomena in the language, perhaps to some extent is due to the fact that some scientists suggest considering juxtaposition as a type of another, more common, phenomenon – stem clipping.

#### 4.4 Alternation of Phonemes

Alternation of phonemes in the derivation of the Bashkir language system is the most common morphonological phenomenon. Alternations are classified according to the following principle: 1. Alternation of phonemes in the final position of stem; 2. The use of derivation affixes, according to the law of vowel harmony in different phonological variants<sup>15</sup>.

Morphophonemes formed as a result of alternation of phonemes are usually considered in the aspect of the distinctive features of these phonemes: 1. Morphophonemes consisting of interchange of vowel phonemes; 2. Morphophonemes bringing together consonant phonemes in their structure<sup>16</sup>.

This article analyses in detail the alternation of vowel phonemes. It is known that the peculiarity of the Bashkir vocalism is the law of vowel harmony. Synharmonism plays a major role in binding morphemes in a word in order to create notional and phonetic word unity. Within a single word (traditionally – native Bashkir words) vowels of different synharmonic models cannot be used. For this reason, some differences of vowel phonemes are neutralized under the influence of the law of vowel harmony<sup>8</sup>.

Vowels morphophonemes, observed in affixed derivation are as follows:

- In the formation of nouns through affixes:
  - *сы/-се*: *умарта* ‘hive brood chamber’ – *умартасы* ‘apiculturist, beekeeper’, *таш* ‘rock’ – *ташсы* ‘bricklayer’, *тел* ‘language’ – *телсе* ‘scholar of language, linguist’ [ы-е];
  - *ыш/-еш/-ош/-өш*: *йыйыл* - ‘meet’ – *йыйылыш* ‘meeting’, *әйт* - ‘talk, say’ – *әйтеш* ‘eytesh, competition, wrangle’, *борол* - ‘to turn’ – *боролош* ‘turn, wriggle, bend’, *тезел* - ‘to be build, to be sculpted’ – *төзөлөш* ‘construction’ [ы-е-о-ө];

- In the formation of adjectives through affixes:

- *кы/-ке/-ко/-кө:арт* 'back side' – *арткы* 'back', *кис* 'evening' – *киске* 'evening, afterdark [adjective]', *ос* 'edge, bottom, top' – *оско* 'final, culminant', *тәш* 'noon' – *тәшкә* 'noon [adjective]' [ы-е-о-ө];

- *лы/-ле/-ло/-лө:яй* 'right moment, mean' – *яйлы* 'comfortable', *ин* 'sense, neatness' – *инле* 'clean, neat', *моң* 'grief, melancholy, melody' – *моңло* 'sad, melodious', *көс* 'strength, activity' – *көслө* 'powerful, strong' [ы-е-о-ө];

- In the formation of verbs through affixes:

- *ай/-әй: озон* 'long, tall' – *озонай* - 'to get lengthen', *әкрән* 'slowly, quite' – *әкрәнәй* - 'to be retarded, to become silent' [а-ә];

- *лан/-лән: уй* 'thought, meditation' – *уйлан* - 'think, mediate', *әз* 'footprint, print' – *әзлән* - 'search, root out' [а-ә].

In the Bashkir language words formed by repeating the productive stems occupy a special place<sup>2</sup>. As a rule, the formation of words-repetitions is at the level of derivation and this method of word derivation, in our opinion, has the right for detailed consideration along with other ways (for example, affixation and stem compounding).

When reduplication, vowels in the first syllables are traditionally alternated. There are also vocalic alternations in the following syllables, but the fact should be taken into account that the tone is set exactly by the initial syllable<sup>17</sup>. In the study, we have revealed the following types of vowel morphophonemes in the formation of word repetition: *карсык* – *карсык-корсок* 'old women, grannies', *тамыр* – *тамыр-томор* 'roots, worts', *таньш* – *таньш-тонош* 'acquaintances', *каты* – *каты-кото* 'scraps, dried pieces of bread'. As it is seen from the examples, formation of nouns of the vowel morphophonemes [а-о] in the first syllable is accompanied by the alternation of vowels in the second syllable [ы-е]<sup>5</sup>.

Alternation of vowel phonemes at reduplication is divided into two types<sup>3</sup>: 1. In hard stems, the whole structure of vowel phonemes is alternated in the stem of the second component of reduplicated words: *сокор* – *сокор-сакыр* 'bumps, holes' [о-а; о-ы]; 2. In soft stems there is a through alternation of vowel phonemes that occurs in the stem of the second component with vowels of a different row, followed by hardening of consonants: *көңгөр* – *көңгөр-каңгыр* 'as far as possible' [к-к; ө-ы;

ө-а], *тишек* – *тишек-тошок* 'holes, apertures' [и-о; е-о; к-к].

## 5. Discussion

In the derivation of modern Bashkir language system, productive stems are subjected to clipping in the formation of words through affixation, compounding, reduplication and abbreviation. Clipping of Bashkir stems can be final and middle. In many derivatives this process does not take into account the rules of the Bashkir language spelling and it is observed only in the spoken language. In the process of derivation, clipping of individual phonemes and clipping of phonemic complexes are traditionally distinguished<sup>18</sup>.

The phenomenon of augmentation of morphemes in the Bashkir language is especially productive in the affixed derivation. In case of affixing, there is an augmentation of both the original stem and augmentation of derivational affix. Augmentation of stem performs phonological and morphonological functions. Augmentation of affixed morphemes leads to the appearance of their new variants. Traditionally, the final part of the stem is augmented. Consonants and vowel phonemes are often insertable elements, phonemic complexes are also observed. The appearance of a particular phoneme at the morphemic boundary depends on the phonemic composition of productive stem that is determined by the law of vowel harmony. Interphonemes in language function only if they are necessary to create more favorable conditions with a combination of morphemes.

Cases of juxtaposition of phonemes are usually explained by the phonetic laws of the language (for example, the ability to use only a certain number of combinations of consonant sounds etc). The phenomenon of juxtaposition also occurs both in the spoken and written language. Most of the examples with the overlapping (juxtaposition) of phonemes are traditionally observed in the flow of speech and are not reflected in writing. This is probably due to the fact that the juxtaposition takes place at the boundary of two identical phonemes and combinations uncharacteristic of the language are often formed at the boundary of words in everyday speech<sup>19</sup>.

This is applied to the examples of vowel juxtaposition between words, combined with one rhythmic accent. Both vowel and consonant phonemes can be juxtaposed. The basis for the juxtaposition of phonemes are traditionally nouns, adjectives, verbs and pronouns<sup>20</sup>.

Alternation of vowels occurs simultaneously with augmentation of the second component in a consonant phoneme and consonant alternation. Vowels of the first syllables are traditionally alternated, but vowel phonemes of the following syllables may also be subjected to alternation. The Bashkir language has relatively small number of word reduplication, whose components differ by only vowel phonemes. With reduplication, vowels of the first syllables are traditionally alternated. There are vocalic alternations that have been observed in the following syllables, but the tone is set exactly by the initial syllable<sup>21</sup>.

## 6. Conclusion

As the facts of the Bashkir language illustrated, morphonological phenomenon is widespread in derivation system of the Bashkir language. These linguistic phenomena are closely related to the historical development of the language, its interaction with other language groups. Morphonological phenomena are divided into types and each type has its own characteristics. Stem clipping may be final and medial in derivation. Clipping of individual phonemes and phonemic complexes occur in the Bashkir language. Clipping of productive stems in affixed derivation, compounding, reduplication and abbreviation is observed. Both native Bashkir words and borrowings are clipped. The complexity of augmentation of phonemes is due to the difficulty of determining which morpheme the additional phonemes are related to.

Vowel morphophonemes, functioning in the derivation of the Bashkir language, can be classified as follows:  
1. Morphophonemes observed in derivational affixation;  
2. Morphophonemes formed during reduplication.

Thus, morphonological phenomena observed in the system of Bashkir derivation have been comprehensively investigated. Nevertheless, there are some open issues regarding this subdiscipline of the Bashkir linguistics. In the future, a further in-depth study of morphonological phenomena that occur in the process of derivation and inflection is expected.

## 7. References

1. Abdullina GR. Bashkir Language. Morphology. Ufa: Gilem; 2004.
2. Reformatskiy AA. Once again on morphonology status, its borders and problems. Phonological studies; Moscow. 1975. p. 98–118.
3. Bashirova NZ. Morphonological processes accompanying derivation in English and Tatar languages. [PhD in Philology Dissertation]. Kazan; 1994.
4. Abdullina GR. Problems of morphonology in Bashkir Language. [Extended abstract of PhD in philology dissertation]. Ufa; 2001.
5. Abdullina GR. Clipping of productive stems as a morphonological regular phenomenon in the derivation system of the Bashkir language. Tomsk State University Bulletin. Philology. Tomsk. 2014; 2(28):5–15.
6. Abdullina GR, Valiyeva GD, Ishbayev KG. Bashkir Language. Textbook for students of philological faculty of higher educational institutions. Ufa: Kitap; 2012.
7. Ishbayev KG, Abdullina GR, Ishkildina ZK. Morphemics, derivation and morphonology of Bashkir language. Ufa: Gilem; 2006.
8. Karabaev MI, Abdullina GR. Lexico-syntactic derivation as a way to enrich the vocabulary of the Bashkir language. Fundamental Research. 2015; 2(2):433–7.
9. Ishberdin EF. The historical development of lexicon of the Bashkir language. Moscow: Science; 1986.
10. Kasevich VB. Morphology. Leningrad: Leningrad University; 1986.
11. Karabaev MI. Lexico-syntactic way of derivation in the Bashkir language. Ufa: Bashkir State University RRC; 2011.
12. Nemchenko VN. Modern Russian Language. Derivation. Moscow: High School; 1984.
13. Ishbayev KG. Башҡорт теленең һүдһьяһалышы [Derivation of Bashkir language. Ufa: Scientific Center RAS; 1994.
14. Karabaev MI, Abdullina GR, Ishkildina ZK. Bashkir onomatology in the light of modern linguistics. Mediterranean Journal of Social Sciences. Rome: MCSER Publishing. 2015; 6(3):73–82.
15. Tolstaya SM. Slavic morphonology: [Extended abstract of PhD in philology dissertation]. Moscow; 1993.
16. Yuldashev AA. Information on Phonomorfology. Modern Standard Bashkir Language Grammaticus. Moscow: Science; 1981. p. 79–87.
17. Zolkhoyev VI. Phonology and morphonology of agglutinative languages. Novosibirsk: Science. Сибирское отделение; 1980.
18. Danilina NI. To a question about the theory and practice of comparative morphonology. Lobachevsky Nizhny Novgorod University Bulletin. 2011; 6(2):162–6.
19. Tikhonov AN. Формально-семантические отношения слов в derivation гнезде. [Extended abstract of PhD thesis in philology]. Moscow; 1974.
20. Barru M. Morphonological alternations in Russian and French Languages. [Extended abstract of PhD thesis in philology]. Moscow; 2014.

21. Zubairova IG, Abdullina GR, Ilisheva RKh, Karabaev MI, Nikolaev ER. Formation and development of literary terms

in *Turkic Languages (Study Background)*. IJST. 2016; 9(27). DOI: 10.17485/ijst/2016/v9i27/97693.