# The Vowel System of the Avar Language and its Phonetic Patterns

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**ABSTRACT—*The Avar language, spoken by over 715,000 people in Russia and neighboring regions, has been significantly influenced by the Russian language. This study investigates the extent of this influence over the past 50 years through a comparative analysis of Avar vowels, considering articulatory features like lip involvement and tongue position. Key findings reveal phonetic changes in Avar vowels due to Russian influence, including shifts in vowel quality and patterns of vowel alternation. These changes highlight the dynamic adaptation of the Avar vowel system in a multilingual context, contributing to a broader understanding of cross-linguistic phonological interactions.***

**Keywords—** Vowel, phoneme, labialised, non-labialised, vowel alternation.

## 1. INTRODUCTION

The Avar language, spoken in Dagestan and surrounding areas, exists in a long-standing contact with Russian, the dominant regional language. While the broader effects of this contact are understood in terms of language shift and social influence, a critical gap remains in our understanding of its specific impact on the phonetics of the Avar language, particularly the vowel system. Previous research offers limited insight into how Russian is directly shaping the pronunciation of Avar vowels, focusing instead on broader sociolinguistic trends. Specifically, a detailed phonetic analysis of vowel quality, quantity, and patterns of alternation resulting from Russian influence is conspicuously absent from the existing literature. This lack of focused research obstructs our ability to accurately document the evolution of Avar and to inform evidence-based language maintenance strategies.

This study directly addresses this research gap by investigating the specific phonetic impact of Russian on the Avar vowel system. Our core objectives are to identify and document specific phonetic changes in Avar vowels resulting from Russian contact. This includes analyzing vowel quality, vowel duration, and articulatory features. Special attention will be given to changes occurring in unstressed syllables and within Russian loanwords. Additionally, we aim to analyze patterns of vowel alternation and adaptation within the Avar vowel system in the context of Russian influence, examining whether new patterns are emerging or existing patterns are being modified due to language contact. Finally, we aim to contextualize these findings within the broader framework of cross-linguistic phonological adaptation. By understanding how Avar vowels are changing, we can contribute to a more general understanding of how languages adapt phonetically when in contact with dominant languages.

## 2. VOWELS OF THE AVAR LANGUAGE

In the modern literary Avar language there are 5 vowels. Each vowel occurs in both short and long forms. Both short and long vowels can occur in initial, medial, and final positions within words. The classification of the vowels of the Avar language, as well as other Dagestan languages, is based on three features: the participation of the lips, the degree of vertical elevation of the tongue in relation to the palate, the degree of advance of the tongue forward or backward horizontally (Ladefoged & Johnson, 2014).

In the Avar language, five vowel phonemes are traditionally distinguished: /a, o, i, u, ɛ/. Sufficient evidence supports classifying these units as distinct phonemes.

Based on lips rounding the vowels of the Avar language are divided into rounded (labialised) and unrounded (non-labialised). Rounded vowels are produced by approximating and protruding the lips, which reduces the oral cavity's exit and lengthens its resonance. The degree of roundness can be different: less /o/, more /u/ depending on the tongue height of the vowel. The vowels /a, ɛ, i/ are not rounded.According to the degree of elevation of the tongue height, vowels may

be high //i, u//, mid / ɛ, o/, and low /a/.The horizontal classification of vowels divides them into front: /i, ɛ/ , central: /a/, and back /u, y, o/ according to the degree of advancement of the tongue forward or its being retracted horizontally (Talibova, 2001).The simplest classification table of Avar vowels for all three of these features is as follows:

**Table 1:** Avar vowels

| (1) | Non-labialized, Front | Non-labialized, Central | Back |
|---|---|---|---|
| High | i (И) | | u (У) |
| Mid | ɛ (Э) | | o (О) |
| Low | | a (А) | |

## 2.1. The phoneme /a/

The vowel /a/ in the Avar language occurs in various positions in the word relative to the position of stress, as well as in relation to consonant sounds of various nature.: *адаб* /adab/ 'honour'*; хэраб - /x*ɛrab*/(old); дуɡIа /duʕa/ - (prayer); рокьизаризе /ro tɬʔ:izarizɛ/- (make to fall in love); чванта /*tʃwant$^{h}$a/- *(pocket); шагьатнама /*ʃa'at$^{h}$nama/ - (certificate).* In Avar, vowel reduction typically involves changes in vowel quality and quantity, particularly in unstressed syllables. However, like other vowels, unstressed /a/ undergoes qualitative and quantitative changes to some degree.In terms of articulation, stressed and unstressed /a/ are generally similar. In all positions, they maintain its quality and "fullness", particularly in pre-stressed syllables.

Here are some examples of how the vowel /a/ can change in unstressed syllables:

Qualitative Changes: The vowel /a/ may be centralized or reduced towards a more neutral sound, such as /ə/. For example, the word *кавка́з* 'Caucasus' might be pronounced /kəvˈkaz/ instead of /kavˈkaz/ when the first syllable is unstressed.

Quantitative Changes: Unstressed vowels may become shorter in duration compared to stressed vowels. For instance, the word *ава́р* 'Avar' might have a shorter duration of the unstressed /a/ compared to the stressed /a/ in *аварé* 'in Avar'.

Furthermore, accommodation in Avar is reciprocal, as illustrated by the following examples:

/kawú/ - 'gate': the vowel /a/ is followed by the consonant /w/. The quality of the vowel /a/ is influenced by the consonant /w/, causing it to become rounded. The resulting pronunciation is /ˈkawú/, where the vowel /a/ takes on a rounded quality due to the influence of the following consonant /w/;

/qʔ:abúlab/ - 'acceptable': the vowel /a/ is followed by the consonant cluster /búl/. Again, the quality of the vowel /a/ adjusts or accommodates to the characteristics of the adjacent consonants. Despite the presence of the consonant cluster, the quality of the vowel remains relatively unchanged. The resulting pronunciation is /qʔ:abúlab/, where the vowel /a/ maintains its quality despite the influence of the adjacent consonants.These examples illustrate how in Avar, the quality of vowels can be affected by neighboring consonants, but the process primarily involves accommodation from vowels to consonants rather than the other way around (Kasatkin, 2009).

From this it can be seen that the phoneme /a/ in the Avar language is realised by a single sound /a/ since there is no positional alternation. In Avar, stressed and unstressed /a/ sounds only differ in length and intensity, but the timbre of the sound is preserved. In this case, we can say that the phoneme /a/ in Avar is realised as a stressed or unstressed /a/ sound.

## 2.2. The phoneme /ɛ/

When articulating the vowel /ɛ/, the body of the tongue is strongly advanced, the tip of the tongue rests against the lower teeth. The front part of the back of the tongue is raised to the middle part of the hard palate. The edges of the tongue in the front and back parts are pressed against the hard palate, leaving a passage in the middle. There is no lip

rounding, the lips are spread.

The phoneme /ɛ/ in the Avar language occurs in various positions, for example:

*эбэл* /ɛbɛl/ – 'mother'

*эгъэ* /ɛʁɛ/ – 'heel'

*эшти́эро* /ɛʃtʔɛro/ – 'whistle '

*бэъэнаб* /bɛʔɛnab/ ' –fat '

*бэчэлъи* /bɛtʃɛ ɬi/ ' –wealth'

In these examples, the vowel /ɛ/ appears in different syllabic positions (initial, medial, and final). However, the position of stress does not lead to any qualitative change in this phoneme. This means that whether the vowel is stressed or unstressed, its quality remains consistent across these words. Furthermore, vowel length does not affect its fundamental quality, preventing neutralization of /ɛ/ with other vowels.

The following examples illustrate how vowel alternations in Avar can be used to create grammatical contrasts rather than being a result of phonetic changes:

*къед* 'wall' – *къадал́* (genitive singular)

*эгъе* 'heel' – *уґъдул* (plural)

*пер* 'onion' – *порóл* (genitive singular)

*цIцIер* 'ice' – *цIцIорóл* (genitive singular)

These examples show that changes in vowel quality and consonant alternation often serve a grammatical function (e.g., marking case or number) rather than being phonetic alternations that affect the pronunciation of the vowel /ɛ/ . (Suleimanov, 1999). In some Avar dialects, the vowel /ɛ/ exhibits a notable fluctuation. In the South group of dialects (e.g., Ghid, Antsukh, Zakatala, Karakh, Andalal, Kusur), the vowel /ɛ/ sometimes alternates with /i/, typically without changing the meaning of the word. For example: *эбэл* /ɛbɛl/ – 'mother' may also be pronounced as *ибэл* /ibɛl/ in some dialects.

This fluctuation occurs between the /ɛ/ and /i/ vowels but does not significantly alter the lexical meaning in these dialects. The phenomenon is primarily seen in the South group of dialects, illustrating a kind of vowel variation based on regional differences, rather than a systematic phonetic alternation that changes the meaning. This vowel fluctuation is not universal across all Avar dialects; /ɛ/ remains stable.This phenomenon highlights the rich dialectal diversity within the Avar language, where vowel quality can vary regionally, reflecting the dynamic nature of language evolution and regional linguistic identity.

## 2.3. The phoneme /I/

When articulating /i/, the mass of the tongue occupies a neutral position in the oral cavity with some advancement forward. The tip of the tongue is pressed against the lower teeth. The middle part of the back of the tongue is raised to the hard palate, the edges of the back and the root of the tongue are strongly convex. The lips are spread, no rounding takes place (Madieva, 2010).

The phoneme /i/ is present in the Avar language both as a stressed or unstressed /i/: *инжитлъи* /inʒitʰ ɬi/ 'humiliation'; *инсаплъи* /insapʰɬi/ 'justice'; *кири* /kʲiri/ 'retribution'; *рукаризаризэ* /rukʰarizarizɛ/ 'to cause itching', etc. The Avar language includes borrowings from Russian, such as *скаби* /skabi/ 'ski', which originally contain the phoneme /ɨ/. In Russian, this sound undergoes positional alternation with /i/, both being allophones of the same phoneme.

If these Russian words are pronounced with /i/ in Avar, this suggests the presence of the phoneme /i/ in the Avar language. Unlike in Russian, this phoneme would not be phonetically conditioned but would instead represent a distinct phoneme in the Avar system according to the law of accommodation. Specifically, in Avar, consonants adjacent to /i/ are generally palatalized, as is shown in examples like *к1илик1* /kʲʲili kʲʔ/ 'earrings' and *ц1ибил* /tsʲʲibʲil/ 'grapes'.

In Avar, the concept of consonant "softness" and "hardness" (i.e., palatalization vs. velarization) do not function as phonetic opposition. However, nearly all consonants preceding /i/ are pronounced with palatalization, making the distinction important in the transcription of words.

## 2.4. The phoneme /u/

When articulating the vowel /u/, the tongue is pulled back, the front part of the back of the tongue is pressed down by the back of the lower teeth. The back of the tongue is raised towards the soft palate. The middle part of the back of the tongue is slightly bent. The lips are protruding forward and rounded. The tip of the tongue lies near the lower teeth, the lower jaw is significantly raised.

The phoneme /u/ is pronounced as a number of positionally alternating sounds /u/ and /ʲu /, for example: *хъулухъ*/ qʰːuluqʰː/ ‘service’*; ургу* /urgu/‘mattress’; *муруват* /muruwatʰ/ ‘generosity, decency’; *гундат* /ʁʷʲuˈndat’/ ‘clothes'; *руқам* /rʷʲuˈq’am/ ‘word’; *лубут* /lʷʲuˈbʲut’/ ‘moon’.

It is a relatively high and rounded vowel, similar to the "oo" sound in the English word ‘food‘ or ‘cool’.

The phoneme /u/ may undergo positional variation, where it alternates between /u/ and /ʲu/ in different morphophonemic environments. This alternation occurs in various linguistic contexts within Avar. The phoneme /u/ occurs frequently in Avar and distinguishes meaning between words in various grammatical forms, lexical items, and morphological derivations.It is found in various grammatical forms, lexical items, and morphological derivations within the language.

There is a place for semantic errors when Avar speakers learn Russian, as they may not perceive distinctions between similar-sounding words. For example:

*лук* /luk/ – 'onion'

*лук* /luk/ – 'bow'

In these Russian words, the same spelling and pronunciation /luk/ represent different meanings ('onion' and 'bow').Additionally, in Avar, the vowels /o/ and /u/ are often confused, especially in final positions. For instance:

*росо* /roso/ – 'village'

*росу* /rosu/ – ‘village'

Here, the final vowels differ in quality, but the words are homophones in Avar. This confusion can carry over into Russian, where vowel distinctions are phonemic and crucial for meaning.

Furthermore, Avar uniquely expresses the phonological opposition between /o/ and /y/, which is not present in Russian. For example:

*боххи* /boxxi/ – 'joy'

*буххи* /buxxi/ – 'scooping'

In these Avar words, the vowels /o/ and /u/ are distinct phonemes, contributing to different meanings.

## 2.5. The phoneme /o/

When articulating the vowel /o/, the tongue is pushed back more than when pronouncing, for example, /u/ and /a/. The tip of the tongue is at the base of the front lower teeth, the back of the tongue is raised towards the soft palate. The lips protrude and are rounded.

This phoneme is also found in various positions, for example: *огоб* /ogob/‘rye’; *борох* /borox/ ‘snake’; *балъго* /bałgo/‘secretly; *гIолохъанаб* /ʕolo qʰːanab/ ‘young’; *болозан* /bolozan/ ‘bachelor’, etc

The phoneme /o/ may also undergo palatalization, although this is less common compared to front vowels like /i/ and
/e/: *холу* /kholu/ 'cloud’- *хольу* /khoʲlʲu/ - where the /o/ sound is palatalized to /oʲ/.

Loanwords from Russian, such as самолет, вертолет, and пилот, are pronounced according to Russian phonological rules, not Avar rules.In the Avar language, Russian loanwords are typically adapted to fit Avar phonological rules, resulting in pronunciations that differ from their original Russian forms. For example:

*самолёт* ('airplane') is pronounced /samolʲot/ in Russian, but in Avar, it is adapted to /samolot/. *вертолёт* ('helicopter') is pronounced /vʲertɐˈlʲot/ in Russian, but in Avar, it becomes /vertolot/. *пилот* ('pilot') is pronounced /pʲɪˈlot/ in Russian, but in Avar, it is adapted to /pilot/.

These adaptations involve changes in vowel quality, consonant articulation, and stress patterns to conform to Avar phonological structures. For instance, Russian palatalized consonants may become non-palatalized in Avar, and vowel sounds may shift to match Avar vowel inventory. This process of phonological adaptation ensures that Russian loanwords are integrated into Avar in a way that aligns with the language's phonetic system, facilitating their use in everyday communication among Avar speakers.

For the vowel phonemes /a, o/ of the Russian language, the position under stress and between non-palatalized consonants is the best condition for these phonemes of the Russian language as the phonemes are not going to neutralised.The phonemes /a/ and /o/ in Avar do not undergo neutralization in any position.

The Avar language maintains the distinctiveness of its vowel phonemes across all positions, including unstressed syllables (Madieva, 2010). This means that vowels like /a/ and /o/ do not undergo neutralization and retain their quality regardless of stress or surrounding consonants. For instance, the Avar word *къед* ('wall') maintains the distinct pronunciation of its vowels even in unstressed positions.

This stability in vowel quality across all positions is a notable feature of the Avar language, distinguishing it from languages like Russian, where vowel reduction and neutralization are common in unstressed syllables.

## 2.6. The main phonetic patterns in the field of avar vowels

1. Vowel Alternation

In Avar, vowel alternation involves changes in vowel quality within a word to mark grammatical distinctions.

This process is evident in the following examples:

*буга* /bu'a/ ('bull') becomes *бугьица* /bu'itsa/ in the active case, illustrating an alternation from /a/ to /i/.

*г1ашт1и* /ʕaʃtˤi/ ('axe') changes to *г1ошт1оца* /ʕoʃtˤotsa/ in the active case, with a shift from /a/ to /o/.

*кьили* /tɬʔ:ili/ ('saddle') transforms to *кьолоца* /tɬʔ:olotsa/ in the active case, indicating an alternation from /i/ to /o/.

These alternations are systematic and contribute to grammatical functions such as case marking and verb conjugation.

2. Vowel Loss During Word Formation

Vowel loss, or elision, occurs when vowels are omitted during word formation, often in the active case. Examples include:

*бурут1* /burutˤ/ ('goat') becomes *бурт1ица* /burutˤitsa/ in the active case, with the vowel /i/ being elided.

*к1илик1* /kʔilikʔ/ ('earring') changes to *к1илк1ица* /kʔilikʔitsa/ in the active case, indicating vowel loss.

*карат1* /karatˤ/ ('hole') becomes *карт1ица* /karatˤitsa/ in the active case, with the vowel /i/ omitted.

This process simplifies pronunciation and is a common morphological feature in Avar.

3. Phenomenon Resembling Phonetic Synharmonism

A phenomenon resembling phonetic synharmonism occurs in Avar, where vowel quality tends to harmonize within a word:

*кьили* /tɬʔ:ili/ ('saddle') becomes *кьолоца* /tɬʔ:olotsa/ in the active case, with the vowel /i/ harmonizing to /o/.

*кеч1* /kɛtʃʔ/ ('song') changes to *коч1оца* /kotʃʔotsa/ in the active case, with /ɛ/ harmonizing to /o/.

*цер* /tsɛr/ ('fox') becomes *цараца* /tsaratsa/ in the active case, with /ɛ/ harmonizing to /a/.

This harmony ensures phonological consistency within words and is a distinctive feature of Avar morphology.

4. Frequent Addition of Syllables and Sounds During Inflection

Avar frequently adds syllables and sounds to the base of a word during inflection, particularly in the active case:

*рахь* /raç:/ ('milk') becomes *рахьдаца* /raç:adatsa/ in the active case, with the addition of /da/.

*моц1* /mots?/ ('month') changes to *моц1роца* /mots?rotsa/ in the active case, with the addition of /ro/.

*бер* /bɛr/ ('eye') becomes *берзуца* /bɛrzutsa/ in the active case, with the addition of /zu/.

This morphological expansion enriches the language's inflectional system and contributes to its syntactic flexibility.

These processes are integral to Avar's morphological structure, facilitating grammatical distinctions and contributing to the language's rich inflectional system.

## 3. VOWELS OF THE RUSSIAN LANGUAGE

One evident challenge for Avar speakers learning Russian lies in the differences in articulatory features, particularly in the vowels. Avar has five vowel phonemes, and the classification of these vowels is based on lip involvement, tongue elevation, and horizontal tongue position. In contrast, Russian has a different vowel system, with unique characteristics such as lip rounding and tongue positioning. This distinction in articulation can lead to pronunciation difficulties when Avar speakers attempt to produce Russian vowel sounds accurately.

In the Russian language, there are no phonological features such as shortness-length. As common phonological features for comparable systems, tongue elevation and lip involvement are highlighted. These features can be considered as reasons for comparing two or three phonemes in their differentiation. For example, the vowel /i/ is produced with a high tongue position, fronted in the mouth, and unrounded lips. Conversely, /u/ is articulated with a high tongue position, backed in the mouth, and rounded lips. From this perspective, it is valuable to compare the possible realizations of phonemes in Russian and Avar during speech. G. G. Burzhunov's comparison of vowel phonemes in Russian and Avar, based on phonetic position, reveals that only five out of the twenty-two Russian vowels partially correspond to Avar vowels, while seventeen Russian sounds have no counterparts in Dagestani languages (Burzhunov 1995). This disparity arises not from a greater number of vowel phonemes in Russian, but from the more extensive representation of these phonemes by a wider range of allophones."In each language at a certain stage of its historical development, there is a strictly limited number of phonemes; however, there are usually significantly more sounds that represent modifications of these phonemes in different conditions. For example, in modern Russian, there are only five vowel phonemes / i, e, a, o, u/, but they manifest not only in these sounds but also in a whole range of others. Thus, a phoneme appears not necessarily in a single sound but in a series of sounds that represent its varieties," note (Avanesov & Sidorov, 1945).

The classification of vowels is based on articulatory (from Latin articulare – to articulate distinctly, clearly pronounce) features – the work of the tongue and lips. Vowels /o/ and /u/ are called rounded or labialized (from Latin labia – lips), while the others are unrounded (non-labialized).

According to the degree of tongue height (vertical movement), vowels are divided into high (/i/, /u/, /ɨ/), mid (/ ɛ/, /o/), or low (/a/). Based on the place of tongue height (horizontal movement, depending on which part of the tongue back is raised towards the palate), vowels are divided into front (/i/, /ɛ/), mid (/a/, /ɨ /), and back (/u/, /o/) rows.

In terms of mouth opening width (related to the degree of raising the back of the tongue), vowels are classified as wide, acoustically most resonant (/a/), mid, acoustically of moderate resonance (/ɛ/, /o/), and narrow, acoustically least resonant (/i/, /ɨ /, /u/).

Certainly, here are separate descriptions for each of the Russian vowels based on the three features of lip involvement, vertical elevation of the tongue, and horizontal advancement of the tongue:

**Table 2:** Russian vowels

| | | Non-abialized, Central | Back |
|---|---|---|---|
| High | i (И) | ɨ (Ы) | u (У) |
| Mid | ɛ (Э) | | o (О) |
| Low | | a (А) | |

### 3.1. The phoneme /a/

Thus, in the Russian language, the phoneme /a/ can be represented by ten sounds in speech; these ten sounds are a

series of allophones in positional distribution, and together constitute a single phoneme. In Russian, the phoneme /a/ exhibits allophonic variation depending on its phonetic environment. The following examples illustrate these allophones:

/sam/ /a/ is pronounced as /a/ in the word *сам* 'self';

/val/ - 'embankment', /a/ is realized as /a/;

/matʲ/ - 'mother', /a/ is pronounced as /æ/;

/zɐˈgatkə/ - 'riddle', /a/ is realized as /ɐ/;

/bɐsnəˈpʲisʲɪts/ - 'fabulist', /a/ is pronounced as /ɐ/;

/lanʲ/ - 'deer', /a/ is realized as /æ/;

/zərʲɪˈsovka/ - sketch', /a/ is pronounced as /ɐ/;

/mɐˈlɔkə/ - 'milk', /a/ is realized as /ɐ/;

/ˈdolʲə/ - 'share', /a/ is pronounced as /a/;

/tʲɪˈnutʲ/ - 'to pull', /a/ is realized as /æ/.

These examples demonstrate that the phoneme /a/ can be realized as /a/, /æ/, or /ɐ/ depending on its phonetic context. This variation is a characteristic feature of Russian vowel allophony.

L. V. Shcherba, when discussing the learning of non-native pronunciation, wrote that "special difficulties arise not even with those sounds that have no equivalents in the learner's native language, but precisely with those for which similar sounds exist in the latter" (Shcherba 2011).

A Dagestani learning Russian pronunciation has to "study" not just one phoneme /a/, but its ten allophones.

Lip Involvement: Unrounded. The lips are neutral and not rounded.

Vertical Elevation of the Tongue: Low. The tongue is positioned low in the oral cavity.

Horizontal Advancement of the Tongue: Back. The tongue is retracted towards the back of the oral cavity. This vowel is similar to the /a/ sound in English *father*.

### 3.2. The phoneme /o/

In the Russian language, the phoneme /o/ can be represented by ten sounds.

The following examples illustrate these allophones:

/ˈtʲətʲjə/ - 'aunt', /o/ is realized as /ə/;

/ˈlʲəgkəvə/ - 'light', /o/ is pronounced as /ə/;

/ˈglava/ - 'head', /o/ is realized as /a/;

/lʲɪˈgonʲkə/ - 'light', /o/ is pronounced as /ə/;

/vɐlnɐˈdumʲɪts/: - 'worries', /o/ is realized as /a/;

/dom/ - 'house', /o/ is pronounced as /o/;

/pʲəs/ - 'dog', /o/ is realized as /ə/;

/ˈvolʲə/ - 'will', /o/ is pronounced as /a/;

/məˈlʲitvə/ - 'prayer', /o/ is realized as /a/;

These examples demonstrate that the phoneme /o/ can be realized as /ə/, /a/, or /o/ depending on its phonetic context, illustrating Russian vowel allophony.

As with the /a/ phoneme, a Dagestani learning Russian to pronounce ten allophones of /o/. Moreover, none of these sounds is represented, for example, in Dargin, Lak, Lezgin, and Tabasaran; in Avar and some others, only one substitute / o/ is represented. Therefore, even a Dagestani whose native language has the /o/ phoneme can correctly pronounce only one of the ten sounds representing the /o/ phoneme in the Russian language. In nine cases, potential mispronunciation is possible in their Russian speech regarding the use of the /o/ phoneme.

Lip Involvement: Rounded. The lips are rounded or pursed.

Vertical Elevation of the Tongue: Mid. The tongue is in a mid-level position.

Horizontal Advancement of the Tongue: Back. The tongue is retracted towards the back of the oral cavity. This vowel is similar to the English /o/ sound in *go*.

### 3.3. The phoneme /ɛ/

In Russian, /ɛ/ following a palatalized consonant and preceding a non-palatalized consonant, as in words like дело /ˈdʲɛlə/, белый /ˈbʲelɨj/, мера /ˈmʲɛrə/, is a complex sound. It begins with the /i/ palatalization and ends with a wide /ɛ/, approximately /i,ɛ,a/. When situated between palatalized consonants, /ɛ/ sounds closer to /i/ due to the tongue body's elevation towards the palate, as exemplified by петь /pʲetʲ/, делит /dʲɪˈlʲit/, весть /vʲestʲ/ (Kasatkina, 2016).

The following examples illustrate these variations:

/ˈdʲɛlə/ - ‘business', /ɛ/ is realized as /ɛ/;

/ˈbʲelɨj/ - ‘white', /ɛ/ is pronounced as /ɛ/;

/ˈmʲɛrə/ - ‘measure', /ɛ/ is realized as /ɛ/;

/pʲetʲ/ - ‘to sing', /ɛ/ is pronounced as /i/;

/dʲɪˈlʲit/ - ‘to divide', /ɛ/ is realized as /I/;

/vʲestʲ/ - ‘news', /ɛ/ is pronounced as /i/.

These examples demonstrate that the phoneme /ɛ/ can be realized as /ɛ/ or /i/ depending on its phonetic context.

Due to the accommodation effect, the phoneme /ɛ/ in a stressed syllable can be represented by different sounds:/ ʂɛst/, /ʂɛi̯ stʲ/, /ˈmʲɛrə/, /ˈsʲinʲij/. However, the recognizability of the syllable is largely determined by these "transitional" sounds, or glides. In a stressed position, the /ɛ/ phoneme in the Russian language, according to M. V. Panov, is realized in four sounds.In an unstressed position, /ɛ/ neutralizes into five sounds, for example: /ˈɛpʲɪʧeskʲɪj/, /ʐi̯sˈtʲjanəj/, /ˈʂɛstəj/, /lʲɪ
ˈsovət/, /ˈlʲɛsə/ (Panov ,1999).

Therefore, if in Dagestani languages there is one phonetic unit serving as a substitute for the /ɛ/ phoneme, in Russian, this phoneme is realized in nine different sounds in various positions. Moreover, none of these realizations can be considered adequate as a substitute for /ɛ/ in the system of Dagestani languages.

Lip Involvement: Unrounded. The lips are neutral and not rounded.

Vertical Elevation of the Tongue: Mid. The tongue is in a mid-level position.

Horizontal Advancement of the Tongue: Front. The tongue is advanced towards the front of the oral cavity. This vowel is similar to the short /ɛ/ sound in English «bet."

### 3.4. The phoneme /i/

In the Russian language system, the phoneme /i/ is realized as the sounds /ɨ, i/; moreover, these sounds are in a relationship of complementary distribution, allowing representatives of the Moscow Phonological School to consider them substitutes for the same phoneme. This is because both of these vowel sounds never occur in the same position.

**/i/**: Occurs after soft (palatalized) consonants.

Examples:

*бить* /bʲitʲ/ - ‘to beat’;

*пить* /pʲitʲ/ - ‘to

drink’; *лист* /lʲist/ -

‘leaf'.

**/ɨ/**: Occurs after hard (non-palatalized) consonants.

Examples:

*быть* /bɨtʲ/ - ‘to

be’; *пыл* /pɨl/ -

‘dust’; *сын* /sɨn/ -

‘son'.

This complementary distribution has led some linguists, particularly those of the Moscow Phonological School, to consider /i/ and /ɨ/ as allophones of a single phoneme /i/.

However, the Saint Petersburg Phonological School, argue for their status as separate phonemes based on factors like native speakers' ability to distinguish between /i/ and /ɨ/ in isolation and the existence of minimal pairs.Understanding this allophonic variation is crucial for accurate pronunciation and comprehension in Russian.

The sound /ɨ/ holds a special place in the vowel system since it does not occur at the beginning of a word. From a functional perspective, most modern linguists consider /ɨ/ as a positionally conditioned allophone of /i/ occurring after non-palatalized consonants, as demonstrated in the example: играть– сыграть– в игру /sɨˈgratʲ - sɨˈgratʲ - vʲɪgˈru/.

The realization of the /i/ phoneme is somewhat limited in both Dagestani languages and Russian, but Dagestanis face significant challenges using the /i/ phoneme correctly in Russian speech. As a result, numerous errors appear in their Russian speech. These errors are primarily caused by Dagestanis' inability to distinguish between hard and soft consonants in the Russian language.

Lip Involvement: Unrounded. The lips are neutral and not rounded.

Vertical Elevation of the Tongue: High. The tongue is positioned close to the palate.

Horizontal Advancement of the Tongue: Front. The tongue is advanced towards the front of the oral cavity. This vowel is similar to the English /i:/ sound in *see*.

### 3.5. The phoneme /u/

In Russian, the phoneme /u/ exhibits allophonic variation depending on its phonetic environment. The primary allophones are /u/ and /ʊ/, which occur in complementary distribution:

**/u/**: Occurs in stressed syllables.

Examples:

*лу́к* /luk/ -

‘onion'; *су́д* /sut/

- ‘court’; *пу́л*

/pul/ - ‘pool’.

**/ʊ/**: Occurs in unstressed syllables.

Examples:

*лука́* /lʊˈka/ - ‘of the onion’;

*суды́* /sʊˈdʲja/ - ‘judge’;

*пулемёт* /pʊlʲɪˈmʲot/ - ‘machine gun’.

This distribution reflects the tendency for Russian vowels to reduce in unstressed positions, resulting in centralized or less distinct articulation. The phoneme /u/ is relatively stable in Russian, rarely neutralizing with other phonemes, leading
M. V. Panov to state, "For the /u/ phoneme, there is no need to provide examples" when discussing phoneme neutralization (Panov, 1999). The distinctiveness of /u/ in the Russian language lies in the fact that, unlike all other vowel phonemes, it always retains its characteristic timbre, making it recognizable in any position: /ʊˈglovətɨj/, /pətʊstəˈronnʲɪj/, /zʋˈsʊxə/.

At first glance, it may seem that the /u/ phoneme behaves quite similarly in Dagestani and Russian languages. Allophones of /u/ phoneme in Dagestani languages and in Russian in positions between hard consonants are pronounced relatively similarly. Therefore, Dagestanis should correctly pronounce words like: /luk/, /ˈmuka/, /ˈbulka/ .

Lip Involvement: Rounded. The lips are rounded or pursed.

Vertical Elevation of the Tongue: High. The tongue is positioned close to the palate.

Horizontal Advancement of the Tongue: Back. The tongue is retracted towards the back of the oral cavity. This vowel is similar to the English /ʊ/ sound in ‘food'.

These descriptions provide a clear understanding of each Russian vowel sound in terms of lip involvement, tongue height, and tongue position. Accurate pronunciation of these vowels is important for speaking Russian correctly

and clearly.

### 3.6. Comparison of Russian and Avar vowel phonemes and allophones

Both Russian and Avar languages possess rich vowel systems, each with unique phonemic inventories and allophonic variations. Understanding these distinctions is crucial, especially for Avar speakers learning Russian, as it highlights potential pronunciation challenges.

Vowel Inventories

Russian Vowels: Russian is traditionally analyzed as having five vowel phonemes: /i/, /e/, /a/, /o/, and /u/. Some analyses propose a sixth phoneme, /ɨ/, distinguishing it from /i/. Each vowel exhibits allophonic variations influenced by factors such as stress, surrounding consonants, and syllabic position.

Avar Vowels: The Avar language features five vowel phonemes: /a/, /e/, /i/, /o/, and /u/. These vowels can occur in both short and long forms, and their pronunciation is influenced by factors like stress and the phonetic environment.

Allophonic Variations

Russian:

/i/: Realized as /i/ after palatalized (soft) consonants and as /ɨ/ after non-palatalized (hard) consonants. For example, *бит* /bʲit/ ('bit') versus *быть* /bɨtʲ/ ('to be').

/e/: In unstressed positions, /e/ may reduce to /ɪ/ or /ə/, depending on the context. For instance, *песня* /ˈpʲesʲnʲə/ ('song') with unstressed /e/ pronounced as /ɪ/.

/a/ and /o/: Both vowels undergo reduction in unstressed syllables, often realized as /ə/ or /a/. This phenomenon, known as "akanye," leads to pronunciations like *молоко* /məlaˈko/ ('milk'), where unstressed /o/ is pronounced as /a/ or /ə/.

/u/: Generally stable but may exhibit slight centralization in unstressed positions.

Avar:

/a/: Maintains a consistent /a/ sound in both stressed and unstressed positions, with minimal reduction.

/e/: Typically pronounced as /ɛ/, with some dialectal variations where it may alternate with /i/, as in *эбел* /ɛbɛl/ ('mother') versus *ибел* /ibɛl/ in certain dialects.

/i/: Remains /i/ across different contexts, with palatalization of preceding consonants not affecting its quality.

/o/ and /u/: Generally stable, with /o/ and /u/ sounds consistent across various positions.

Potential Pronunciation Challenges for Avar Speakers Learning Russian

Vowel Reduction: Avar vowels tend to maintain their quality regardless of stress, whereas Russian vowels often undergo significant reduction in unstressed positions. Avar speakers might pronounce Russian unstressed vowels too distinctly, leading to non-native sounding speech.

/i/ and /ɨ/ Distinction: The differentiation between /i/ and /ɨ/ in Russian, based on the palatalization of preceding consonants, may pose challenges. Avar speakers might not naturally produce the /ɨ/ sound, leading to potential confusion or mispronunciation.

Akanye: The reduction of /o/ to /a/ or /ə/ in unstressed syllables is absent in Avar. Avar speakers might overpronounce unstressed /o/ as /o/, resulting in hyper-correct pronunciations that sound unnatural to native Russian listeners.

Palatalization Effects: While Avar does feature palatalization, its influence on vowel quality differs from Russian. Avar speakers may need to adjust to the Russian system where palatalization of consonants affects the subsequent vowel sounds, particularly with the /i/ and /ɨ/ distinction.

In summary, while both Russian and Avar have rich vowel systems, the specific allophonic variations and the influence of stress and palatalization present in Russian may pose challenges for Avar speakers. Focused practice on vowel reduction patterns, the /i/ versus /ɨ/ distinction, and the effects of palatalization will aid Avar speakers in achieving more accurate Russian pronunciation.

## 4. CONCLUSION

This study has highlighted specific phonetic changes in the Avar vowel system resulting from contact with Russian,

revealing shifts in vowel quality, quantity, and patterns of alternation. These findings contribute to a deeper understanding of phonological adaptation in language contact situations. The main challenges for Avar speakers learning Russian include:

1. Vowel System Differences: Avar has five vowel phonemes with distinctions based on lip involvement, tongue elevation, and horizontal tongue position. Russian, on the other hand, has a different vowel system with characteristics such as lip rounding and distinct tongue positioning. Avar speakers may face challenges in accurately producing these different vowel sounds.

2. Phonetic Patterns and Alternations: Avar exhibits vowel alternations and losses during word formation, which may differ from the phonetic patterns in Russian. Avar speakers need to adapt to Russian phonetic patterns and alternations, including phenomena like vowel reduction in unstressed syllables.

3. Articulatory Challenges: Avar speakers might find it challenging to master the articulatory features of Russian vowels, especially in terms of lip rounding, tongue height, and tongue position. Differences in these articulatory features can lead to pronunciation difficulties.

4. Phonological Rules: Understanding and adapting to Russian phonological rules, such as vowel reduction in unstressed syllables, can pose a challenge for Avar speakers. These rules influence word formation and pronunciation in Russian.

5. Allophones: Avar and Russian have different substitute phonemes for certain vowel sounds. Avar speakers may need to learn and distinguish between these substitute sounds in Russian to avoid mispronunciations.

However, further research is crucial to fully grasp the multifaceted impact of Russian influence on Avar. We recommend future studies focus on:

1. Sociolinguistic investigations: Exploring how these phonetic changes correlate with language attitudes, language use patterns, and code-switching behaviors among Avar speakers. This would involve quantitative surveys and qualitative interviews to understand how Avar speakers perceive and navigate these linguistic changes in everyday communication.

2. Dialectal variations: Investigating how Russian influence varies across different Avar dialects. Given the dialectal diversity of Avar, some regions may exhibit greater susceptibility to Russian phonetic influence than others.

3. Longitudinal studies: Conducting longitudinal studies to track the evolution of the Avar vowel system over time, providing a more comprehensive understanding of the long-term effects of language contact.

Beyond the purely linguistic aspects, it's crucial to critically examine how these phonetic shifts impact Avar speakers' linguistic identity. The adoption of Russian-influenced pronunciations may inadvertently contribute to language shift by damaging the distinctiveness of Avar. This raises concerns about the potential marginalization of traditional Avar pronunciations and the devaluation of Avar as a distinct language. Therefore, future research should also explore the psychological and social implications of these phonetic changes, focusing on how Avar speakers perceive their own language and its relationship to Russian. Understanding these dynamics is essential for developing culturally sensitive language revitalization strategies that support the preservation of Avar linguistic identity in the face of ongoing Russian influence.

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