

Revisiting the Phonemic Inventory of the Kashmiri Language: A Comprehensive Analysis of Consonants, Vowels, Diphthongs, and Nasal Vowels

Tariq Ahmad Dar, M.A. Linguistics, Ph.D. Research Scholar

Department of Linguistics, University of Kashmir
Hazratbal, Srinagar 190006, Kashmir, India
tariq.haider686@gmail.com

Dr. Sajad Hussain Wani, Sr. Assistant Professor

Department of Linguistics, University of Kashmir
Hazratbal, Srinagar 190006, Kashmir, India
wani.sajad@gmail.com

Abstract

This paper presents a comprehensive analysis of the phonemic inventory of the Kashmiri language, focusing on consonants, vowels (monophthongs), diphthongs, and nasal vowels. By analyzing both historical and contemporary data, the research focuses on the dynamic roles of vowels, consonants, diphthongs, and nasal vowels within Kashmiri phonology. The study confirms the consistency of consonant and monophthong inventories with previously documented findings, while offering new insights into the diphthongal and nasal vowel systems.

Key findings include the identification of a newly recognized diphthong [oi] and the classification of 14 nasal vowels as distinct phonemic categories with substantial variation across dialects: the central urban dialect exhibits the widest range, while central rural, southern, and northern dialects show a reduction in diphthongs, often replaced by monophthong variants. This discovery highlights the need for revising existing descriptions of Kashmiri diphthongs.

The examination of nasal vowels identifies fourteen distinct types, organized into front, central, and back categories, and highlighting their phonemic status contrasting with previous

studies that had not fully recognized their phonemic relevance. The study's findings challenge traditional views on the category of nasal vowels and contribute to a refined understanding of Kashmiri phonology. This research enriches the phonological analysis of Kashmiri, providing a detailed account of its diphthongs and nasal vowel systems and suggesting directions for further exploration in phonemic theory.

Keywords: Kashmiri Phonology, Phonemic Inventory, Diphthongs, Nasal Vowels, Dialectal Variation.

1. Introduction

The Kashmiri language, a prominent member of the Dardic subgroup within the Indo-Aryan Languages, has long been a focal point of linguistic research. Since the late 19th century, scholars have endeavoured to document and analyze its phonological and grammatical intricacies. The pioneering work of Ishwar Kaul in 'Kashmira Shabdarnitam' (1879) marked the beginning of a detailed exploration of Kashmiri grammar. This foundational study was followed by Grierson's 'Standard Manual of the Kashmiri Language' (1911), which offered an extensive description of Kashmiri phonetics, grammar, and vocabulary, significantly contributing to the field.

In subsequent decades, researchers such as Kachru (1969) and Bhat (1987) provided more refined analyses of Kashmiri's phonological and morphological systems. Kachru's 'A Grammatical Study of Kashmiri' (1969) introduced a systematic outline of Kashmiri grammar, including phonetic and phonemic aspects. Bhat's work further elaborated on Kashmiri phonology, morphophonemics, and morphology, providing crucial insights into the language's sound system and its phonological processes.

Despite these extensive studies, the phonological description of Kashmiri has experienced notable revisions. Grierson's (1919) classification of 54 sounds, including 29 consonants and 25 vowels, and his identification of 'Matra vowels' were initially influential. However, the validity of the Matra vowels was later disputed, and Grierson's recognition of two diphthongs— [ai/ and /au/]—was subsequently refuted by later researchers. Kelekar and Trisal (1964) revised the phonemic inventory to 43 segmental phonemes, including 25 consonants and 14 monophthongs,

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Tariq Ahmad Dar, M.A. Linguistics, Ph.D. Research Scholar and

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and acknowledged only two diphthongs— [ua/ and /au/]. Bhat (1987) identified a slightly expanded inventory of 43 segmental phonemes and introduced four diphthongs, which contributed to the evolving understanding of Kashmiri vowels. Recent scholarship has continued to refine the phonological inventory. Razdan (2000) listed 42 segmental phonemes, excluding diphthongs, while Ahmad (2002) expanded the inventory to include seven diphthongs. Koul and Wali (2006) provided an updated count of 44 segmental phonemes and three diphthongs, and Kak and Panzoo (2011) reported 46 segmental phonemes along with eight diphthongs. These ongoing revisions reflect the dynamic nature of Kashmiri phonology and highlight the need for continuous examination.

This paper aims to offer a comprehensive re-evaluation of the Kashmiri phonemic inventory, focusing particularly on the roles of diphthongs and nasal vowels. By synthesizing historical and contemporary findings, the study seeks to clarify the phonological system of Kashmiri and provide a comprehensive understanding of its phonemic structure. The analysis not only addresses the complexity of Kashmiri phonology but also contributes to broader discussions on language variation, phonological theory, and the implications of language contact. Through this comprehensive investigation, the paper aims to enhance our understanding of Kashmiri phonology and its theoretical implications, advancing the discourse on the phonological features and processes that characterize this linguistically significant language.

2. Methodology

This study employs a multifaceted approach to re-evaluate the phonemic inventory of the Kashmiri language, with a particular focus on diphthongs and nasal vowels. The methodology integrates both historical data and contemporary empirical analysis, utilizing a combination of phonological theory, fieldwork, and data analysis.

a. Data Collection

A comprehensive review of existing literature on Kashmiri phonology was conducted, including foundational works such as Grierson’s Standard Manual of the Kashmiri Language (1911), Kachru’s A Grammatical Study of Kashmiri (1969), and more recent studies by Bhat

(1987), Ahmad (2002), Koul and Wali (2006), and Kak and Panzoo (2011). This historical data provided a baseline for understanding previous phonological descriptions and revisions. Fieldwork was conducted to collect primary data on contemporary Kashmiri phonology. This involved recording native Kashmiri speakers from diverse dialectal backgrounds to ensure a representative sample. Audio recordings were made in controlled settings to capture natural speech patterns, focusing on both standard and regional variations of Kashmiri.

b. Phonetic Analysis

The recorded data were analyzed using acoustic phonetic methods to identify and categorize diphthongs and nasal vowels. To account for dialectal variation, the study included a cross-dialectal analysis of Kashmiri phonology. This involved comparing the phonological features observed in different dialects to identify common patterns and variations. The analysis aimed to determine the extent to which diphthongs and nasal vowels are consistent across dialects and to explore any dialect-specific phenomena.

3. Validation and Reliability

3.1. Data Triangulation

To ensure the reliability of the findings, the study employed data triangulation by comparing results from multiple sources, including historical data, empirical recordings, and theoretical analysis. This approach provided a sturdy validation of the phonological inventory and processes identified in the study.

3.2. Peer Review and Expert Consultation

The findings were reviewed by experts in Kashmiri phonology and phonological theory to validate the accuracy and interpretation of the data. Feedback from these consultations was incorporated to refine the analysis and ensure its scholarly rigor.

3.3. Ethical Considerations

All participants in the fieldwork provided informed consent prior to recording. The study adhered to ethical guidelines for conducting research involving human subjects, ensuring that participants were fully aware of the purpose and use of the recordings.

4. Data Analysis and Findings

This section provides a detailed analysis of phonemic inventory of the Kashmiri language, concentrating on diphthongs and nasal vowels. The study confirms that the consonant and vowel inventories of Kashmiri are consistent with previously documented findings. However, it addresses discrepancies in the classification of diphthongs by integrating data from Central, Northern, and Southern dialects, as well as both urban and rural regions. This comprehensive approach highlights variability in diphthong identification across different studies and seeks to standardize their classification. Additionally, the research delves into nasal vowels, which had previously been explored primarily in terms of secondary articulation phenomena but had not been assigned phonemic status. By evaluating the phonemic significance of these nasal vowels, the study fills a crucial gap in the literature. The comparison of new findings with historical phonological descriptions is crucial for assessing the accuracy and reliability of past analyses and refining the phonemic inventory of Kashmiri, thus contributing valuable insights into its phonological structure.

a. Consonants and Vowels of Kashmiri Language

The study observed that the consonants and monophthongs of the Kashmiri language remain largely consistent with findings from earlier research, showing no substantial deviations. Given this stability, the study opted not to explore these phonemic categories in depth. Instead, it provides detailed charts that depict the consonants and vowels (monophthongs) inventories of Kashmiri, emphasizing their alignment with previously documented data. By focusing on these charts, the study reaffirms the reliability and uniformity of consonant and Vowel (monophthongs) system of Kashmiri Language, while redirecting attention towards more variable aspects of the phonological system, such as diphthongs and nasal vowels. This approach allows for a concise

presentation of the established phonemic inventory, without redundant reiteration of well-documented consonant and Vowel (monophthongs) of Kashmiri Language.

4.1. Consonant Chart

Consonants (Pulmonic)	Labial		Coronal				Dorsal			Laryngeal	
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b p ^h		t d t ^h			ʈ ɖ ʈ ^h		k g k ^h			
Nasal	m			n				ŋ			
Trill											
Tap/Flap				r							
Fricative		v		s z	ʃ						h
Affricate				ts tsh	tʃ dʒ tʃ ^h						
Approximant	w		l				j				

Table 1: Description of Kashmiri Consonant sounds

4.2. Vowel Phoneme Chart (Oral Vowels)

VOWELS			[-back]	[+back]	
			[-round]		[+round]
[+high]	[-low]	[+ATR]	/i/		/u:/
		[-ATR]	/i:/	/ɨ/ /ɨ:/	/u/
[-high]	[-low]	[+ATR]	/e/		
		[-ATR]	/e:/	/ə/ /ə:/	/o/ /o:/
	[+low]	[+ATR]		/a/ /a:/	

Table 2: Description of Vowels sound of Kashmiri Language

5. Diphthongs

This study re-evaluates the diphthongs in the Kashmiri language by examining them across various dialects. Historically, the number and types of diphthongs in Kashmiri have been contentious, with some scholars affirming their presence and others rejecting the notion entirely. Disagreements also exist among those who recognize diphthongs, particularly regarding their quantity and variety. This controversy may stem from the fact that some researchers, such as

Grierson, Kelkar, and Morgenstierne, were non-native speakers, while others, though native, based their conclusions on limited linguistic samples.

Key studies have significantly contributed to the understanding of Kashmiri diphthongs. Grierson (1919) initially identified two diphthongs, [ai] in [aith] (eight) and [au] in [gauv] (cow). Kelkar and Trisal (1964) expanded the inventory with [ua] in [khuar] (foot) and reiterated [au] in [nau] (nine). Bhat (1987) documented four diphthongs, including [ui] in [shiur] (children) and [u:i] in [gu:ir] (milkmaid), offering a broader analysis. Ahmad (2002) identified seven diphthongs, such as [u:a] in [u:al] (nest) and [ia] in [iat] (eight), highlighting their diversity. Koul and Wali (2006) focused on three main diphthongs: [ui] in [shuir] (child - feminine), [u:i] in [gu:ir] (milkmaid), and [o:ə] in [o:əl] (nest), refining previous analyses. More recently, Kak and Panzoo (2011) identified eight diphthongs, including [ui] in [guir] (mare) and [ei] in [mei] (I/me), reflecting the evolving and complex nature of Kashmiri diphthongs.

The present study identifies nine distinct diphthongs and their variants across different dialects, underscoring the language’s rich phonetic landscape. The description of the diphthongs and their Variants present in the dialects of Kashmiri Language is as follows:

1) [ai]

The diphthong, characterized as a ‘closing diphthong,’ transitions between the low central unrounded vowel [a] and the high front unrounded vowel [i]. Documented by Grierson (1991), Ahmad (2002), and Kak and Panzoo (2011), this study confirms its presence across all Kashmiri dialects, validating its phonological significance and uniformity. No alternative variants were observed in any dialect, indicating a consistent realization throughout the Kashmiri language.

	Central		Northern	Southern
	Urban	Rural	Urban/Rural	Urban/Rural
[k ^h ai] (rust)	✓	✓		✓
[dai] (God)	✓	✓		✓

[sai]	✓	✓	✓
(down payment)			

Table 3: Examples of [ai] diphthong and its presence (shown by check symbol such as ‘✓’) in dialects of the Kashmiri language

2) [ei]

The [ei] diphthong, classified as a ‘closing diphthong,’ involves a transition from the mid-front unrounded vowel [e] to the high-front unrounded vowel [i]. It primarily occurs in word-final positions within Kashmiri. Documented by Kak and Panzoo (2011), this diphthong is present across all three Kashmiri dialects. However, in the northern variety, it is occasionally replaced by a monophthong, with the preceding consonant undergoing palatalization.

Central		Northern	Southern
Urban	Rural	Urban/Rural	Urban/Rural
[mei]	✓	[mij]	✓
(i)			
[tsei]	✓	[tsij]	✓
(you)			
[rei]	✓	✓	✓
(ant)			
[k ^h ei]	✓	✓	✓
(eat ‘fem.’)			

Table 4: Examples of [ei] diphthong and, its presence and variation (shown in the respective columns) in dialects of the Kashmiri language

3) [oə]: The [oə] diphthong, classified as a ‘centring diphthong,’ involves a transition from the mid-back rounded vowel [o] to the mid-central rounded vowel [ə]. It appears in both word-initial and word-medial positions in Kashmiri. Documented by Bhat (1987), Ahmad (2002), and Kak and Panzoo (2011), this diphthong is confirmed in the central urban and rural dialects. In contrast, the northern dialect rarely uses [oə], favouring monophthongs like [o:] and [u]. The southern dialect also largely replaces [oə] with [u:] and [o:]. Examples of words showcasing this diphthong and its variants are provided across different dialects.

Central		Northern	Southern
Urban	Rural	Urban/Rural	Urban/Rural
[oəl] (nest)	✓	[o:l]	[oəl]
[goəl] (circle)	✓	✓	[goəl]
[tsoət] (short)	✓	[tsuʈ]	[tsot]
[loəl] (love)	✓	[lo:l]	[loəl]

Table 5: Examples of [ei] diphthong and, its presence and variation in dialects of the Kashmiri language

4) **[ui]** : The [ui] diphthong, classified as a ‘centring diphthong,’ transitions from the high-back rounded vowel [u] to the high-central unrounded vowel [i]. It is typically found in word-medial positions in Kashmiri. Documented by Ahmad (2002), Koul and Wali (2006), and Kak and Panzoo (2011), [ui] is confirmed in the central urban dialect. However, in the central rural, northern, and southern dialects, this diphthong is largely replaced by the monophthong [u].

Central		Northern	Southern
Urban	Rural	Urban/Rural	Urban/Rural
[guir] (mare)	[gudʒin]	[gudʒin]	[gudʒin]
[ʃuir] (child ‘fem.’)	[ʃur]	[ʃur]	[ʃur]
[tuil] (mulberries ‘plu.’)	[tulʃ]	[tul]	[tulʃ]

Table 6: Examples of [ui] diphthong and, its presence and variation in dialects of the Kashmiri language

5) **[u:i]**: The diphthong [u:i], classified as a ‘centring diphthong,’ transitions from the high-back rounded vowel [u] to the high-central unrounded vowel [i]. In Kashmiri, it typically occurs in word-medial positions and is integral to the language’s phonological structure. Documented by Ahmad (2002), Koul and Wali (2006), and Kak and Panzoo (2011), [u:i] is confirmed in all three Kashmiri dialects. No additional variants of this diphthong were found, suggesting a consistent phonological realization across the dialects.

	Central		Northern	Southern
	Urban	Rural	Urban/Rural	Urban/Rural
[hu:in] (dogs 'plu.')	✓	✓		✓
[su:iz] (sent 'plu.')	✓	✓		✓
[mu:id] (died 'plu.')	✓	✓		✓

Table 7: Examples of [u:i] diphthong and, its presence and variation in dialects of the Kashmiri language

6) **[u:a]**: The diphthong [u:a], an ‘open diphthong,’ transitions from the high-back rounded vowel [u:] to the low-central unrounded vowel [a]. In Kashmiri, it typically appears in both word-initial and word-medial positions, contributing significantly to the language’s phonological structure. Ahmad (2002) first documented [u:a], and the current study confirms its presence in the central urban, central rural, and southern dialects. In contrast, the northern dialect often uses monophthong variants like [u:] and occasionally [o:], sometimes with palatalization of the preceding consonant. This variation illustrates the phonological diversity of [u:a] across Kashmiri dialects.

	Central	Northern	Southern
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Urban	Rural	Urban/Rural	Urban/Rural
[bu:am] (sad)	✓	[bu:m]	✓
[su:an] (our)	✓	[su:n]	✓
[mʲu:an] (mine)	✓	[mʲu:n]	✓
[bu:az] (listen)	✓	[bo:z]	✓

Table 8: Examples of [u:a] diphthong and, its presence and variation in dialects of the Kashmiri language

7) **[i:a]**: The diphthong [i:a], an ‘opening diphthong,’ transitions from the long high-central unrounded vowel [i:] to the low-central unrounded vowel [a]. In Kashmiri, it typically appears in word-initial and word-medial positions. Ahmad (2002) and Kak and Panzoo (2011) documented this diphthong, but the present study confirms its occurrence only in the central urban dialect. Other dialects do not feature [i:a] and instead use variants such as [ə:] and [ẽ:], highlighting regional phonological differences. This illustrates the phonetic diversity and dialectal variation within Kashmiri phonology.

Central		Northern		Southern	
Urban	Rural	Urban/Rural	Urban/Rural	Urban/Rural	Urban/Rural
[i:ar] (plum)	[ə:r]	[ə:r]	[ə:r]	[ə:r]	[ə:r]
[di:an] (pomegranate)	[də:n]	[də:n]	[də:n]	[də:n]	[də:n]
[li:ar] (cucumber)	[lə:d]	[lə:d]	[lə:d]	[lə:d]	[lə:d]

/d̪i:ar/ /d̪ə:r/ /d̪ə:r/ /d̪ə:r/
 (window)

Table 9: Examples of [i:a] diphthong and, its presence and variation in dialects of the Kashmiri language

8) **[ia]:** The diphthong [ia], an ‘opening diphthong,’ transitions from the high-front unrounded vowel [i] to the low-central unrounded vowel [a] and generally appears in the word-medial position in Kashmiri. Documented by Kak and Panzoo (2011), it is present exclusively in the central urban dialect. In contrast, the central rural and southern dialects use the monophthong [e:], while northern dialects employ [e] and [e:]. This distribution highlights the phonological variation within Kashmiri.

Central		Northern	Southern
Urban	Rural	Urban/Rural	Urban/Rural
[tsiar] (delay)	/tse:r/	[te:r]	[tse:r]
[kial] (banana)	[ke:l]	[kel]	[ke:l]
[niar] (kettle)	[ne:r]	[ne:r]	[ne:r]
[jiar] (wool)	[je:r]	[je:r]	[je:r]

Table 10: Examples of [ia] diphthong and, its presence and variation in dialects of the Kashmiri language

9) **[oi]:** The [oi] diphthong in Kashmiri, resembling the diphthong in the English word ‘boy,’ is a closing diphthong transitioning from the mid-back rounded vowel [o] to the high-front vowel [i]. Typically occurring in word-final positions, [oi] was previously undocumented in Kashmiri phonology. The current study has identified its presence across all three dialects, showing no variant forms and suggesting a consistent phonological realization. This finding adds

to the understanding of Kashmiri's phonetic inventory and affirms the need for further investigation into its phonological aspects.

Central		Northern	Southern
Urban	Rural	Urban/Rural	Urban/Rural
[roi]	√	√	√
(face)			
[boi]	√	√	√
(smell)			
[k ^h oi]	√	√	√
(temper, habit)			

Table 11: Examples of [oi] diphthong and its presence in dialects of the Kashmiri language

The following section presents a diagrammatic representation of the diphthongs in the Kashmiri language.

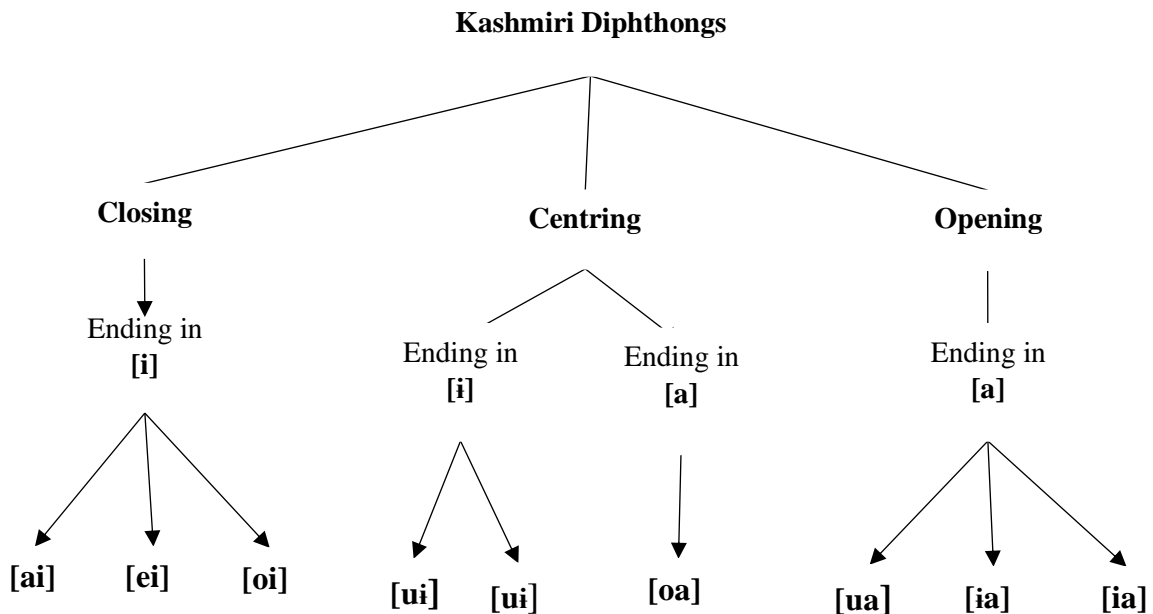


Figure 1: Diagrammatic representation of Kashmiri diphthongs

The analysis identified nine distinct Kashmiri diphthongs, divided into three categories: closing diphthongs ending in [i] (e.g., [ai], [ei], [oi]), centring diphthongs ending in [ɨ] (e.g., [uɨ], [u:ɨ]) and [ə] (e.g., [oə]), and opening diphthongs ending in [a] (e.g., [u:a], [ɨ:a], [ia]). The central urban dialect had the widest range, including all nine diphthongs, and is the standard reference for Kashmiri phonology. The central rural and southern dialects each had six diphthongs, with some monophthong substitutions, indicating a trend towards simpler vowel structures. The northern dialect showed the most reduction, with only four diphthongs and more monophthong replacements, reflecting a preference for simplification. The study reveals a gradient of diphthongal variation from the central urban to the northern dialect, demonstrating regional phonological influences.

The comparative analysis juxtaposed the current findings with historical accounts from Grierson (1919), Kelekar and Trisal (1964), Bhat (1987), and others. Grierson's initial identification of two diphthongs [ai] and [au] was found to be inconsistent with later studies, which refined the diphthong inventory to include additional elements. The current study's results align with the expanded inventories proposed by Ahmad (2002) and Kak and Panzoo (2011), and including the newly identified diphthong [oi], confirming the presence of nine diphthongs in Kashmiri Language.

6. Phonological Implications

The identification of [oi] and other diphthongs has significant implications for Kashmiri phonology. The study explores how these diphthongs interact with adjacent phonemes, influencing both phonotactic constraints and morphological processes. For instance, the presence of [oi] affects vowel harmony and assimilation patterns in word formation. Additionally, the study examines the role of diphthongs in stress patterns and syllable structuring, providing insights into their phonological behaviour and their impact on the overall sound system.

7. Nasal Vowels

The analysis of Kashmiri nasal vowels revealed a total of fourteen distinct nasal vowels, categorized based on their phonemic significance rather than mere allophonic nasalization. Nasal

vowels are characterized by their articulation with the velum lowered, allowing airflow through both oral and nasal cavities. Unlike allophonic nasalization, which is a phonetic phenomenon influenced by adjacent nasal consonants, phonemically distinctive nasal vowels contrast with oral vowels and function as separate phonemes. The study meticulously documented these nasal vowels, presenting them in a tabulated format to illustrate their phonemic distribution and significance within the Kashmiri language.

Nasal Vowels	Description	Occurrence Or Distribution	Examples Words	Oral and Nasal Vowel Contrast
[ĩ:]	High front unrounded long Nasal vowel	Word medial and final position	[rĩ:t] ‘hem of cloth’, [pĩ:ts] ‘a pinch, tiny bit’	[ri:tʰ] ‘tradition’ [rĩ:tʰ] ‘hem of cloth’
[ẽ]	Mid front unrounded short Nasal vowel	Word medially	[sẽd] ‘sind river’, [kẽh] ‘some’ [nẽnd] ~ [nẽd] ‘weeding’ [grẽd] ‘counting’	[sed] ‘enter (imp.)’ [sẽd] ‘Sind river’
[ẽ:]	Mid front unrounded long Nasal vowel	Word medially	[krẽ:kʰ] ‘gem stone’ [bẽ:kʰ] ‘base; roots’	[krẽ:kʰ] ‘gemstone’ [kre:kʰ] ‘shout’

[ɪ]	High central unrounded short Nasal vowel	Word medially	[nĩz] ‘house’ or ‘shed’ (in northern dialect), [kʰĩz] ‘to skin off; bribe’	[bɪz] ‘roast’ [kʰĩz] ‘to skin off; bribe’
[ĩ:]	High central unrounded long Nasal vowel	Word medially	[kĩ:ts] ‘younger, fem.’ [kĩ:z] ‘buttermilk’	[ki:ts] ‘how much (fem. sg.)’ [kĩ:ts] ‘younger (fem. sg.)’
[ə̃]	Mid central unrounded short Nasal vowel	Word initial and medial position.	[pə̃z] ‘monkey. Fem’ [ə̃zrun] ‘to solve’ [gə̃zrun] ‘to count’	[pəz] ‘truthful (fem. sg.)’ [pə̃z] ‘monkey (fem. sg.)’
[ə̃:]	Mid central unrounded long Nasal vowel	Word initial and medial position	[ə̃:] ‘yes’ [hə̃:z] ‘fisherman’, [pə̃:si] ‘paise (in southern dialect)’, /pə̃:ts/ ‘five’	[ə:tʰ] ‘eight’ [ə̃:t] ‘drupe’
[ã]	Low central unrounded short Nasal vowel	Word medially	[kãh] ‘anyone’, [gãd] ‘knot’, [gãd̪i]~[gãnd̪i] ‘onion’	[kah] ‘eleven’ [kãh] ‘someone’

[ã:]	Low central unrounded long Nasal vowel	Word initial, medial and final position	[bã:g] ‘azan’ [aztã:] ~ [aztã:n] ‘till today’ [ã:tʃa:r] ‘pickle’, [krã:k] ‘gemstone’	[ba:g] ‘garden’ [bã:g] ‘azan’
[ũ]	High back rounded short Nasal vowel	Word medially	[gũdʒi]~[gũndʒi] ‘hooligan’ [kũdʒi] ‘iron’ [kũz]~ [kũ:z] ‘key’	[gudʒi] ‘a Kashmiri proper name’ [gũdʒi] ‘hooligan’
[ũ:]	High back rounded long Nasal vowel	Word medially	[lũ:t] ‘corner’ [kũ:s] ‘youngest, masc.’ [wũ:t]~[wũ:nt] ‘camel’ [pũ:t] ‘a pinch’	[lu:tʰ] ‘loot’ [lũ:t] ‘hem’
[õ]	Mid back rounded short Nasal vowel	Word medially	[põz]~[põnz] ‘monkey, masc.’ [brõh] ‘before’	[poz] ‘truth’ [põz] ‘monkey (masc. sg.)’
[õ:]	Mid back rounded long Nasal vowel	Word medially	[wõ:t] ‘fathom’ [gõ:tsi] ‘moustaches’	[wo:t] ‘reached’ [wõ:t] ‘fathom’

			[ʃõ:ʈʰ] ‘ginger’	
[ɔ̃]	Low back rounded short Nasal vowel	Word medially	[kõg]~[kõng] ‘saffron’ [rõg] ‘clove’ [mõg] ‘green gram’ [ʃõg] ‘sleep, (imp.)’	[hõd] ‘obstinateness’ /hõd/ ‘hundi’

Table 12: Nasal vowels, their description, distribution, oral nasal contrast of nasal vowels of the Kashmiri language.

The analysis of the Kashmiri nasal vowel system uncovers a diverse array of nasal vowels that contrast with their oral counterparts. All oral vowels, except for [i] and [ɔ:], have nasalized variants, though their distribution varies across different phonological environments. Nasal vowels predominantly occur in word-medial positions, with [ĩ:] appearing in both medial and final positions, and [ã:] found in initial, medial, and final positions. Conversely, [õ] and [õ:] are limited to word-initial and word-medial positions. The study identifies a total of fourteen nasal vowels, categorized into three front, six central, and five back nasal vowels. The front and central nasal vowels are unrounded, while the back nasal vowels are rounded. This detailed inventory highlights the complexity and phonemic importance of nasal vowels in Kashmiri.

8. Conclusion and Research Findings

This study provides a comprehensive re-evaluation of the phonemic inventory of the Kashmiri language, with a particular focus on diphthongs and nasal vowels. Through a combination of historical review, empirical data collection, and theoretical analysis, the research has yielded several significant findings that contribute to the understanding of Kashmiri phonology. In revisiting the phonemic inventory of the Kashmiri language, this comprehensive analysis offers substantial insights into its consonants, vowels (Monophthongs), diphthongs, and nasal vowel system of the language. The consonant and vowel (monophthong) inventories largely align with

previously documented findings, demonstrating a stable phonemic structure that represents the consistency of these categories within Kashmiri phonology.

The investigation into diphthongs identifies a total of nine distinct diphthongs, illustrating notable variations across different dialects. The central urban dialect displays the most extensive range of diphthongs, while the central rural, southern, and northern dialects show varying degrees of diphthongal reduction and substitution with monophthong variants. This discovery of previously undocumented diphthongs, such as [oi], and the differential use of diphthongs across dialects reveal significant phonological diversity and suggest that existing descriptions of Kashmiri diphthongs may need revision.

The analysis of nasal vowels uncovers a complex system of fourteen distinct nasal vowels, categorized into front, central, and back nasal vowels. This detailed categorization highlights the phonemic significance of nasal vowels in Kashmiri, where all oral vowels, except [i] and [ɔ:], have nasalized counterparts. The positional distribution of nasal vowels—primarily in word-medial positions, with specific vowels occurring in word-initial and final positions—adds depth to our understanding of their phonological behaviour. The study’s findings challenge the traditional view of nasal vowels as mere allophonic variants and support the notion of their phonemic status.

The theoretical implications of these findings extend to phonological theory, particularly in the areas of phonemic inventory and variation. The identification of additional diphthongs and the detailed classification of nasal vowels contribute to refining phonemic models and highlight the need for more detailed approaches to account for regional variation. This research highlights the importance of considering dialectal and positional factors in phonological analysis, which can enhance the accuracy and completeness of phonemic inventories.

Overall, the study enhances the understanding of Kashmiri phonology by providing a comprehensive account of its diphthongs and nasal vowels. It not only elucidates the stable and variable aspects of Kashmiri phonemic categories but also offers valuable insights into the broader theoretical implications for current phonological theory, emphasizing the need for continued exploration and refinement in phonemic analysis.

9. Implications for Phonological Research

The updated phonemic inventory and the refined understanding of diphthongs and nasal vowels have important implications for ongoing research in Kashmiri phonology and related fields. The study highlights the need for continued exploration of phonemic variation and the impact of dialectal differences. Future research may benefit from further examination of the interaction between diphthongs, nasal vowels, and other phonological features, as well as the influence of language contact on phonological evolution.

10. Contributions to Linguistic Theory

The findings of this study offer valuable insights into the complexities of vowel systems and phonological processes. By revisiting the phonemic inventory of Kashmiri and providing a detailed analysis of diphthongs and nasal vowels, the research contributes to a more comprehensive understanding of phonological theory. The study's results also emphasize the importance of empirical data in refining theoretical models and advancing knowledge in phonology.

11. Limitations and Future Directions

While the study provides a thorough analysis, there are limitations that should be addressed in future research. The scope of the study was primarily focused on diphthongs and nasal vowels. Future research could expand on these aspects to provide a more holistic view of Kashmiri phonology.

In conclusion, this study advances the field of Kashmiri phonology by offering an updated phonemic inventory and a deeper understanding of diphthongs and nasal vowels. The integration of historical data, empirical evidence, and theoretical insights has enriched the understanding of Kashmiri phonological processes, providing a foundation for future research and theoretical development.

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Abbreviations

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Tariq Ahmad Dar, M.A. Linguistics, Ph.D. Research Scholar and

Dr. Sajad Hussain Wani, Sr. Assistant Professor

Revisiting the Phonemic Inventory of the Kashmiri Language: A Comprehensive Analysis of Consonants, Vowels, Diphthongs, and Nasal Vowels

fem. = Feminine

sg. = Singular

imp. = Imperative

Plu. = plural

masc. = Masculine

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