Dialectologia 33 *(2024), 139-161.*
ISSN: 2013-2247

Received 5 September 2022.

Accepted 18 December 2022.

Published July 2024.

DOI: 10.1344/DIALECTOLOGIA.33.6

MORPHOPHONEMIC ANALYSIS OF INFLECTIONAL MORPHEMES IN INDO-ARYAN LANGUAGES: A CASE OF EMPHATIC CONSTRUCTIONS IN MAGAHI

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Abstract

Many languages seem to have some kind of emphatic grammatical elements. They are applied to emphasise or to focus on particular elements of the sentence and handle other discourse phenomena such as whether the information is new, or old but related to new, presupposed, and other pragmatic functions. Emphatic discourse markers function to highlight the important utterance by the addresser to catch the attention of the addressee. This study aims to investigate the morphophonemic alternations of the emphatic constructions and explore some senses contributed by them in Magahi, an Indo-Aryan language, concerning its distribution, in order to reveal the range of functions it displays as it appears with different classes of words. This article also includes an effort to shed light on its base modification. The data for this study have been obtained through recorded speech samples from twenty native speakers of the language — males and females — in a laboratory-controlled environment.

Keywords: emphatic construction, Indo-Aryan languages, Magahi, morphophonemic analysis

ANÁLISI MORFOFONÉMICA DE MORFEMES FLEXIUS EN LLENGÜES INDOÀRIES: UN CAS DE CONSTRUCCIONS EMFÁTIQUES EN MAGAHI

Resum

Moltes llengües sembla que tenen alguna classe d'elements gramaticals emfàtics. S'apliquen per emfatitzar o centrar-se en elements particulars de l'oració i operar en altres fenòmens del discurs, i tant per a la informació nova o antiga relacionada amb funcions pragmàtiques noves, pressupostades i d'altres. Els marcadors emfàtics del discurs tenen la finalitat de ressaltar l'expressió de l'emissor per copsar l'atenció del destinatari. Aquest estudi té com a objectiu investigar les alternances

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morfofonèmiques de les construccions emfàtiques i explorar alguns dels sentits que aporten al Magahi, una llengua indoària, en relació amb la seva distribució, per revelar la gamma de funcions que mostren tal com apareixen amb diferents classes de paraules. Aquest article també fa un esforç per donar llum sobre la seva modificació bàsica. Les dades per a aquest estudi s'han obtingut a través de mostres de parla enregistrades de vint parlants nadius de la llengua —homes i dones— en un entorn controlat al laboratori.

Paraules clau: construcció emfàtica, llengües indoàries, magahi, análisi morfofonémica

ANÁLISIS MORFOFONÉMICO DE MORFEMAS FLEXIVOS EN LENGUAS INDO-ARIAS: UN CASO DE CONSTRUCCIONES ENFÁTICAS EN MAGAHI

Resumen

Muchas lenguas parecen tener alguna clase de elementos gramaticales enfáticos. Se aplican para enfatizar o centrarse en elementos particulares de la oración y operar en otros fenómenos del discurso, y tanto para la información nueva o antigua relacionada con funciones pragmáticas nuevas, presupuestas y de otro tipo. Los marcadores enfáticos del discurso funcionan para resaltar la expresión del emisor para captar la atención del destinatario. Este estudio tiene como objetivo investigar las alternancias morfofonémicas de las construcciones enfáticas y explorar algunos sentidos aportados por ellas en Magahi, una lengua indoaria, en relación con su distribución, con el fin de revelar la gama de funciones que muestran tal como aparecen con diferentes clases de palabras. Este artículo también hace un esfuerzo por arrojar luz sobre su modificación básica. Los datos para este estudio se han obtenido a través de muestras de habla grabadas de veinte hablantes nativos de la lengua —hombres y mujeres — en un entorno controlado en laboratorio.

Palabras clave: construcción enfática, lenguas indo-arias, magahi, análisis morfofonémico

1. Introduction

Many languages have some kinds of emphatic constructions to emphasise or to focus on certain sentence constituents, as well as for other pragmatic functions, like managing various discourse phenomena, such as whether the information is new, old yet linked to new, presumptive, and so on. Emphatic discourse markers function to highlight the important utterance by the addresser to catch the attention of the addressee.

The emphatic marker can be of many types, such as emphasis in general, emphasis on the degree, emphasis on the mood, emphasis on the comparison, emphasis on the cause, emphasis on value, and emphasis on the result. Its pragmatic functions can express pity, desire, compliment, principle, oddity, consequence, difference, interest, occasion, doubt, reason, exclamation, similarity, regret, and

hatred. But only in appropriate contexts, can all the functions be fully realised. Moreover, only when all the features and functions are processed in a cognitively appropriate way, the intention of the addresser can be exactly recognised (Mingqiang 2017).

Emphatic construction can focus on almost any part of a sentence depending on what the speaker intends to convey. The constructions may also vary across languages. Many western languages, such as English, use the emphatic word stress for these purposes, whereas Tamil does not have the emphatic word stress but uses 'emphatic particles' instead. In Indo-Aryan languages, syntactic as well as morphological constructs are employed to focus on certain elements. Hindi has the emphatic particle 'hɪ' (Kachru 2006, McGregor 1972, Verma 1971), which is a syntactic construction.

Magahi, on the other hand, exhibits emphasis by purely morphological constructions, even though any of the open grammatical class phrases can be emphasised. Morphemes /-e/ and /-o/ are the emphatic markers in Magahi, which may mean something like 'only' and 'too,' i.e., exclusive and inclusive, respectively (Sinha 1966). There is another marker, 'hɪ,' which applies with pronominal constructions only. 'hɪ' is also available in Hindi and functions as a particle rather than a bound morpheme (Parghi 2016). /t̪o/ is another emphatic device, but it behaves as a particle that falls under the purview of syntax. This study, however, only focuses on the inflectional process.

The emphatic constructions in Magahi are inflectional, which means exclusive and inclusive morphemes attach to a noun phrase (NP) that also include pronouns, verb phrase (VP), adjective phrase (AdjP), and adverb phrase (AdvP) to put emphasis or focus on them. In the process of inflection, these morphemes tend to go under morphophonemic alternations. At times, the base of the phrase also goes under modifications.

An alternation in the forms involving phonemes and morphemes is known as the morphophonemic process. Due to the morpheme-phoneme link, sounds around a morpheme might affect how it changes in form. The alternation of a morpheme's phonological forms in response to its surroundings is known as morphophonemic

alternation (Nurhayati 2015). Morphophonemics is an interface where phonology and morphology frequently interact and modify or entirely change the pronunciation. These changes might be regular or irregular and usually context-dependent (Aronoff & Fudeman 2005).

In morphophonemics, one looks at how morphological and phonological processes interact and influence one another (Ampa Basri & Ramdayani 2019). Morphophonemic change is the most common at the morpheme boundary and involves sounds linked with different phonemes. An example of morphophonemics in the English language can be the use of the indefinite article. “A” and “an” are alternate forms of indefinite articles. If the following word begins with a consonantal sound, the indefinite article appears as 'a' (a mango or a cat). Whereas, if the following word begins with a vowel sound, it appears as 'an' (an apple or an idiot).

1.1 About Magahi

Magahi, also known as Magadhi, is one of the Bihari languages. It is an Indo-Aryan language spoken in the Indian states of Bihar, Northern Jharkhand, some pockets of West Bengal, as well as in certain parts of Nepal bordering northern Bihar. Magahi, believed to be the language of Buddha and the ancient Kingdom of Magadha, descended from Prakrit. It comes under the Indo-Aryan (Grierson 1903) languages. It served as the official language of the Mauryan court and is included in the edicts of Ashoka, King of the Mauryan Empire. Magahi, Bhojpuri, and Maithili, collectively called Bihari languages, are closely related (Comrie 2001). There are about 18 million native speakers of the Magahi language. Kaithi and Devanagari are its two scripts (Verma 2007).

It was once misunderstood as a dialect of Hindi, but more recently, it has been shown that, along with Bengali, Assamese, and Oriya, it is a descendent of and very close to Eastern Indo-Aryan languages (Chatterji 1926). However, the Government of India is yet to constitutionally recognise it as a language of its own. There is little to no historical written literature, but it has a long and rich heritage of folk songs and legends.

Magahi has a total of 31 phonemic consonants and six phonemic oral monophthongs. Each vowel can be nasalised, and the nasalisation is phonemic. Its syllable contains vowels as a nucleus, followed and/or preceded by a consonant. Typically, words have two or three syllables, Sinha 2018). A Magahi syllable consists of an obligatory nucleus, an optional consonant onset, and a consonant coda. CV, VC, V, and CVC are the canonical syllable inventories (Kenstowicz 1994). Consonant clusters at the beginning and end of syllables are avoided in Magahi (Sinha 2014). According to weight, the syllable structures in Magahi are V, CV, VC, CVC, and CV: C. The penultimate syllable in Magahi has the most emphasis (Sinha 2014).

2. Conceptual framework

This paper looks at an analysis that impacts the morphemic and phonemic structure of Magahi. The term 'morphophonemic' refers to linguistic claims that characterise a morpheme's phonemic structure. It is how a morpheme varies according to its surroundings (Gimson & Cruttenden 2014). The morphophonemics of the English plural morpheme include the alternations of the /s/ allomorph in cats, the /z/ in dogs, and the /iz/ in losses. The term "phonological representation" is preferred by Chomsky & Halle (1968). However, in this study, the term "morphophonemics" is used in the sense that Gimson & Cruttenden (2014) define it.

3. Data collection and methodology

The data have been obtained through recorded speech samples from twenty native speakers of the language, both males and females, in a laboratory-controlled environment. All the speakers were natives of the Aurangabad district of Bihar. The age of the speakers ranged from 18 to 40 years keeping in mind the fact that adolescence is the time of life when people explore the boundaries of variation,

whereas adulthood is when conservatism takes hold. Adults have been demonstrated to be more conservative in their use of variables than younger age groups (Horvath 1985, Labov 2006, Macaulay 1977, Trudgill 1974, Wolfram 1969).

The obtained data was transcribed using Leipzig Glossing Rules to display the morphophonemic analysis. This study adheres to the Basic Linguistic Theory (Dixon 2010), and the acquired data was utilised to formulate the rules.

4. Results and discussion

This section provides and discusses the major emphatic constructions in Magahi. This also discusses morphophonemic alternations of these inflectional constructions and processes like assimilation, stress shift, vowel deletion, and consonant changes that have been observed in Magahi.

4.1 Morphophonemic alternations in Magahi

The morphology of the Bihari languages is extremely complex and rich. It should be noted that one of the most complex paradigms in Indo-Aryan languages, verb agreement paradigms in Magahi co-reference to a wide range of participants. The verb agreement enables the simultaneous encoding of numerous referents in various case relations (Bickel *et al*. 1999, Kashyap 2012). Affixes for number and gender in Magahi nominal morphology are scarce. /-log/, *səb* and cardinal numbers are added prior to the noun to indicate the number. The particle *-ən* is sometimes added to the end of nouns. Except for natural gender agreement, there are little to no gender marking constructions. The exclusive marker (-e), inclusive/collective marker (-o:), diminutive marker (-wa:), and past participle (-əl), all have relatively frequent and elaborate uses and realisations in contrast to gender and number morphology. A thorough examination of each one of them is required. The present study examines the exclusive marker (-e) and inclusive marker (-o:) in great detail.

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4.1.1. Emphatic Constructions in Magahi

Emphatic constructions in Magahi include inclusive marker /-o/, exclusive marker /-e/, and reflective marker /hɪ/ (Sinha 1966). They frequently occur in nominal constructions but are not suffixed exclusively to nouns. They can be suffixed to any word declinable as well as indeclinable in Magahi (ibid.). At first glance, it can be observed that they attach at the end of NPs, VPs, AdjPs, and AdvPs, emphasising different components of the phrase accompanied by variations in their meanings. Exclusive marker (EM) /-e/ has several uses in common with the inclusive marker (IM), /-o/. They behave alike in all important respects such as realisations in different phonological environments.

(1a) *bəbu-**o*** *kʰə-t̪əi*
child- IM eat-[fut, 3rd pers]
'The **CHILD** too will eat.'

(1b) *əd̪mi-jɑ̃* *ɑ:m-õ* *kʰə-t̪əi*
The man mango-IM eat-[fut, 3rd pers]
'The man will eat **MANGO** also.'

(1c) *bɑ:bu* *kʰɑ:b-**o*** *kərt̪-əi*
child eat-IM do-[fut, 3rd pers]
'The child will **EAT** also.'

(2a) *bəbu-**e*** *kʰə-t̪əi*
child-EM eat-[fut, 3rd pers]
'The **CHILD** alone will eat.'

(2b) *əd̪mi-jɑ̃* *ɑ:m-**ẽ*** *kʰə-t̪əi*
The man mango-EM eat-[fut, 3rd pers]
'The man will eat **MANGO** only.'

(2c) *bɑbu* *kʰəb-**e*** *kərt̪-əi*
child eat-EM do-[fut, 3rd pers]
'It is **EATING** that the child will do.'

In the examples above (1a, 1b, 2a & 2b), we can see that /-o/ and /-e/ respectively can adjoin to a noun (NP), and (1c & 2c) show that they can attach to inflected verbs (VP). The markers can also attach to an overtly inflected NP. Adjectives and adverbs also get emphasised in a similar manner. Markers /-o/ and /-e/ are added at the end of the adjective and adverb stems.

(3a) *kuṯ-wa:* *ləlk-**o*** *ɟuṯ-wa:* *ʧɪba:* *ge-ləi*
The dog red-IM shoes-FM chew go-PST
'The dog chewed the **RED** shoes too.'

(3b) *kuṯ-wa:* *ləlk-**e*** *genḏ-wa:* *ʧɪba:* *ge-ləi*
The dog red-EM ball-FM Chew go-PST
'The dog chewed the **RED** ball alone.'

(3c) *həmər* *ʈəren-wã:* *a:ɟ-e* *həi*
my train-FM today-EM is
'My train is **TODAY** itself.'

(3d) *sku:l-wa:* *a:ɟ-o* *bənḏ* *həi*
The school today-IM shut off is
'The school is closed even **TODAY**.'

Similar to nouns and verbs, in Magahi, adjectives and adverbs can be focused on as well. In constructions 1b and 2b, the IM /-o/ and EM /-e/ respectively are nasalised. The nasalisation process in the examples mentioned above occurs due to the phonological properties of the final sound of the base to which these markers get attached. In both these cases, the bases end with nasal sounds. Therefore, it can be inferred that they are nasalised in order to assimilate with the preceding sounds. Hence, they are cases of progressive assimilations and thus concrete instances of morphophonemic alternations.

The constructions shown in the above examples are complete sentences, as they must be either complete sentences or discourses to correctly determine the placement of focus or emphasis in a certain sentence or discourse. These examples show that almost any part of a sentence can bear the focus. The four grammatical classes — NPs, VPs, AdjP, and AdvP — are the most preferably emphasised in Magahi. However, this

study aims to investigate only the morphophonemic alternations taking place in the process of formation of emphatic constructions. Henceforth, the examples provided for the claims of occurrence of any such structures would only have immediate constituents of the discourse which exhibit morphophonemic alternations due to their phonological environment.

In sentences, emphasis is used to make a contrast, connect, or clarify things. Typically, emphasis or concentration focuses on the word a speaker deems most crucial. In other circumstances, even a function word may be emphasised. Emphatic stress is when a word in a sentence is assigned articulatory prominence or emphasis.

4.1.1.1 Emphasis on nominal constructions

Both exclusive maker /-e/ and inclusive marker /-o/ behave similarly. Their realisations in similar phonological environments are alike. They only differ in their semantic functions. E.g.

(4a) *ləɪkɑ*:	*-o*	=	*ləɪk**o***
boy	IM		**BOY** also
(4b) *ləɪkɑ*:	*-e*	=	*ləɪk**e***
boy	EM		only **BOY**

In the above-cited examples, (4a) & (4b), the final vowel is deleted, and no other morphological or phonological difference is evident, provided that the presented phonological environment is similar. Hence, no separate explanations for IM and EM. One noteworthy thing about the above-cited example in (4a & b) is that the word *ləɪkɑ*: in its uninflected form can be used as a gender-neutral noun that refers to a child rather than only a boy or a male child.

The exclusive marker (EM) /-e/ and inclusive marker (IM) /-o/ are markers on nouns, verbs, adjectives, and adverbs in Magahi. In nominal constructions, they have three allomorphs [-e, -je, -jẽ], and [-o, jo, jõ], respectively. They exhibit morphophonemic alternations when occurring in different phonological environments

or contexts in contrast with their underlying forms. Following are the illustrations from Magahi, indicating various environments for the occurrence of the morpheme /-e/ and/-o/, and their allomorphs.

(5a)	*bʰaːt̪*	*+*	*-e*	*=*	*bʰaːt̪-e*
	rice		EM		**RICE** only
	naːt̪i		*-e*	*=*	*nət̪i-je*
	grandson		EM		**GRANDSON** only
	pani:	*+*	*-e*	*=*	*pəni:-jẽ*
	water		EM		**WATER** only
(5b)	*bʰaːt̪*	*+*	*-o*	*=*	*bʰaːt̪-o*
	rice		IM		**RICE** too
	naːt̪i		*-o*	*=*	*nət̪i-jo*
	Grandson		EM		**GRANDSON** too
	pani:	*+*	*-o*	*=*	*pəni:-jõ*
	water	I	M		**WATER** too

Upon careful observation of the data, it is noticed that emphatic morphemes in Magahi realise as [-e, -je, -jẽ], and [-o, jo, jõ], respectively, given the different phonological environment of the stem to which the morphemes get attached to. The underlying form of these allomorphs is/-e/ and /-o/, respectively. Various phonological processes seem to be involved in these realisations. [-je] and [-jo] are formed from /-e/ and [-o] respectively by [i] insertion and later palatalisation. Similarly, [-jẽ] and [-jõ] involve nasal assimilation. This underlying representation is achieved with the help of some rules, usually referred to as morphophonemic rules.

In Magahi, the distribution of emphatic allomorphs is not random. It is governed by the phonological context at the right boundary of the morpheme. Typically, an underlying representation alternative is an allomorph with the largest distribution. In this context, the underlying forms of the Magahi emphatic morpheme are *-e* (EM) and *-o* (IM). They appear in the most diverse spectrum of phonological contexts. Other allomorphs have been derived from the allomorphs /-e/ and /-o/, respectively. These have been discussed below.

Nouns ending with /a:/ or a non-nasal consonant when inflected for emphasis take the underlying forms of exclusive and inclusive markers.

(6a)	*gʰoɽa:*	*+*	*-e*	*=*	*gʰoɽ-e*
	horse		EM		**HORSE** only
	d̪eha:t̪	*+*	*-e*	*=*	*d̪eha:t̪-e*
	countryside		EM		**COUNTRYSIDE** only
(6b)	*gʰoɽa:*	*+*	*-o*	*=*	*gʰoɽ-o*
	horse		IM		**HORSE** also
	d̪eha:t̪	*+*	*-o*	*=*	*d̪eha:t̪-o*
	countryside		IM		**COUNTRYSIDE** also
(Morphophonemic rule:	**a**:		**→**	**Ø**	**/_e/o#**
	C		**→**	**C**	**/_e/o#)**

In the data analysed above in (6a & 6b), the nouns end with either open back unrounded vowel /a:/ or a non-nasal consonant sound. It is evident from the data that unmarked or underlying forms of the EM and IM remain unmodified. However, the base ending with open back unrounded vowel /a:/ loses its final vowel.

Nouns ending with an /a:/ sound that follows gemination of consonants, when inflected for emphasis take the underlying forms of exclusive and inclusive markers.

(6c)	*kuʈʈa*:	*+*	*-e*	*kuʈʈ-e*					
	dog		EM	dogs					
	kuʈʈa:	*+*	*-wa*:	*+*	*-e*	*=*	*kuʈ-w-e*		
	dog		FM		EM		the dog alone		
	kuʈʈa:	*+*	*-wa*:	*+*	*ən*	*+*	*-e*	*=*	*kuʈ-w-ən-e*
	dog		FM		Pl		EM		the dogs alone
(Morphophonemic rule:			**CCa**:	**→**	**CØØ**	**/_FM++(Pl)+(EM)#**			
-wa:	**→**	**wØ**	**/NP_(Pl)+EM#)**						

In (6c), when the EM/IM is attached, the gemination is intact, whereas when it is further inflected for familiarity and plural number, it gets degeminated.

It must be noted that EM and IM not only attach to an uninflected noun but also to inflected nouns. Nouns can take the plural marker -ən and the familiarity marker -wa: before getting inflected for emphatics. In the case of unhuman animate nouns,

they are inflected for familiarity first. The plural marker and familiarity marker also modify the base of the nouns.

(6d)	*baːgʰ*	*+*	*-waː*	*+*	*-e*	*=*	*bəgʰ-w-e*		
	tiger		FM		EM		the **TIGER** only		
(Morphophonemic rule:			**aː C**	**→**	**ə**		**/_FM+EM#**		
			waː	**→**	**wØ**		**/aː C_EM#)**		
	baːgʰ	*+*	*-waː*	*+*	*-ən*	*+*	*-e*	*=*	*bəgʰ-w-ən-e*
	tiger		FM		Pl		EM		the **TIGERS** only
(Morphophonemic rule:	**aː C**	**→**	**ə**	**/_FM+Pl+EM#**					
			waː	**→**	**wØ**	**/aː C_Pl+EM#)**			
(6e)	*baːgʰ*	*+*	*-waː*	*+*	*-o*	*=*	*bəgʰ-w-o*		
	tiger		FM		IM		the **TIGER** also		
(Morphophonemic rule:			**aː C**	**→**	**ə**		**/_FM+IM#**		
			waː	**→**	**wØ**		**/aː C_IM#)**		
baːgʰ	*+*	*-waː*	*+*	*-ən*	*+*	*-o*	*=*	*bəgʰ-w-ən-o*	
tiger	+	FM	+	Pl		IM		the **TIGERS** also	
(Morphophonemic rule:	**aː C**	**→**	**ə**	**/_FM+Pl+IM#**					
			waː	**→**	**wØ**	**/aː C_Pl+IM#)**			

The illustrations in (6d & e) show that emphatic markers can also attach to inflicted nouns. However, they appear in a specific order. FM and EM/IM are optional. It is possible that the base noun for the emphatic is inflected for only familiarity or number. In (6a & b), the base remained unmodified, whereas in (6d & e), the vowel preceding the final sound gets graded. The final sound of the familiarity marker /waː/ is also deleted.

In the case of emphasis on an animate noun (human), it can be inflected for number without being inflicted for familiarity.

(6f)	*ləikaː*	*+*	*-ən*	*+*	*-e*	*=*	*ləik-ᵊn-e*
	boy		Pl		EM		**BOYS** only
(Morphophonemic rule:			**aː**	**→**	**Ø**		**/_PL+EM)**
	ləikaː	*+*	*-ən*	*+*	*-o*	*=*	*ləik-ᵊn-o*

	boy	Pl	IM		**BOYS** too
(Morphophonemic rule:		**a:**	**→**	**Ø**	**/_PL+IM)**

In the illustrations presented in (6f) above, /-e/ and /-o/ morphemes are attached to a noun already inflected for plural number. Here, it must be noted that the base noun is not inflicted for familiarity.

When the nominal base ends with either a bilabial plosive, dental plosive, /u:/, or /o/ sound, the exclusive and inclusive morphemes are realised as /-je/ and /-we/ respectively.

(7a)	*ˈɟʰaːru* +	*-e*	=	*ɟʰəru-je*		
	broom	EM		**BROOM** only		
	ˈɟʰaːru +	*-o*	=	*ɟʰəru-jo*		
	broom	IM		**BROOM** also		
(Morphophonemic rule:		**a:Cu**	**→**	**əCu**	**/_EM/IM#**	
			Øe/Øo	**→**	**je/jo**	**/a:Cu_#)**

Examples in (7a) show that when EM/IM attaches to a noun ending with /u/, and /j/ sound is inserted after the word boundary. Moreover, if the vowel in the preceding syllable is long, it gets graded. This is evident in both the examples above, where the sound /a:/ becomes /ə/.

(7b)	*cunaːo* +	*-e*	=	*cunaː-we*		
	election	EM		**ELECTION** only		
	cunaːo +	*-o*	=	*cunaː-wo*		
	election	IM		**ELECTION** also		
(Morphophonemic rule:		**a:o**	**→**	**a:Ø**	**/_EM/IM#**	
		Øe/Øo	**→**	**je/jo**	**/ao_#)**	

Similarly, in illustration (7b), the vowel /o/ in the final position changes to /u/, and the vowel in the preceding syllable has also been graded to a central vowel. To make the final two sounds dissimilar, /j/ has been epenthesised between the word boundary and the suffix.

However, when the base nouns are already inflected for familiarity and or number, /i:/ is inserted, and the final sound /o/ changes to /u/ between the root form

and the familiarity and the number morpheme, and the emphatic morphemes are realised as /-je/.

(7c)	*ˈɟʰaːru*	+	*-waː*	+	*-e*	=	*ɟʰəˈru-i-j-e*	
	broom		FM		EM		the **BROOM** only	
	ˈɟʰaːru	+	*-waː*	+	*-o*	=	*ɟʰəˈru-i-j-o*	
	broom		FM		EM		the **BROOM** too	
(Morphophonemic rule:			**aːCu**	→	**əCu**		**/_FM+EM/IM#**	
			Ø	→	**i**		**/aːCu_FM+EM/IM#**	
waː	→	**jØ**	**/aːCu_EM/IM#)**					

As mentioned above, emphatic morphemes can attach to inflected nouns as well. Familiarity and number marking suffixes can be inserted before the emphatic marker, in the given order. These two are optional. As shown in (7c), the noun is inflected for familiarity followed by emphatic. The long vowel /aː/ in the penultimate syllable is graded to the central vowel /ə/. Sound /i/ is also inserted before the familiarity marker /jaː/. FM loses its final vowel.

(7d)	*cunaːo*	+	*-waː*	+	*-e*	=	*cunəu-j-e*	
	election		FM		EM		the **ELECTION** only	
	cunaːo	+	*-waː*	+	*-o*	=	*cunəu-jo*	
	election		FM		EM		the **ELECTION** too	
(Morphophonemic rule:	**aːo**	→	**əu**	**/_FM+EM/IM#**				
			waː	→	**jØ**	**/ao_EM/IM#)**		

In (7d), the noun is inflected for familiarity followed by emphatic. The long vowel /aː/ in the penultimate syllable is graded to the central vowel /ə/. Sound /i/ is also inserted before the familiarity marker /jaː/. FM loses its final vowel.

(7e)	*ˈɟʰaːru*	+	*-waː*	+	*ən*	+	*-e*	=	*ɟʰəru-i-j-ən-e*
	broom		FM		Pl		EM		the **BROOMS** only
	ˈɟʰaːru	+	*-waː*	+	*ən*	+	*-o*	=	*ɟʰəru-i-j-ən-o*
	broom		FM		Pl		EM		the **BROOMS** too
(Morphophonemic rule:	**aːCu**	→	**əCu**	**/_FM+Pl+EM/IM#**					
			Ø	→	**i**	**/aːCu_FM+Pl+EM/IM#**			
waː	→	**jØ**	**/aːCu_Pl+EM/IM#)**						

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ISSN: 2013-2247

In (7e), the base noun is inflected for familiarity as well as number. The long vowel of the root is replaced with a central vowel due to gradation. A sound /i/ is also inserted before the familiarity marker changes to /j/. The familiarity marker loses its vowel in the palatalisation process.

(7f)	*cunaːo*	*+*	*-waː*	*+*	*ən*	*+*	*-e*	*=*	*cunəu-ən-e*
	election	FM		Pl		EM		the **ELECTIONS** only	
	cunaːo	*+*	*-waː*	*+*	*ən*	*+*	*-o*	*=*	*cunəu-ən-o*
	election	FM		Pl		EM		the **ELECTIONS** too	
	(Morphophonemic rule:			**a:o**	**→**	**əu**	**/_FM+EM/IM#**		
				wa:	**→**	**jØ**	**/ao_EM/IM#)**		

In (7f), the base noun is inflected for familiarity as well as number. The long vowel of the root is replaced with a central vowel due to gradation. The familiarity marker is not realised at all.

As shown in the illustrations (7a-f) above, nouns in Magahi can be simultaneously inflected for familiarity, number as well as emphatics. Each of them can be optional, however, when all three occur simultaneously, the familiarity marker attaches first, making it the first-tier inflectional morpheme, followed by the plural marker, the second tier inflectional morpheme, and ends with the emphatic marker, the third tier inflectional morpheme. Here, one should not confuse the tier assignment of inflection morphemes in this study with the conventional ordering of strata assignment between derivational and inflectional morphemes where derivational affixes are primary whereas inflectional affixes are secondary affixes, since one of the morphemes can occur without the occurrence of the other two in this study.

When the final coda of the nominal base ends with either a /ni:/, /ni/, or /n/ sound, the exclusive and inclusive morphemes are realised as /-jẽ/. However, when the base nouns are already inflected for familiarity and or number, /i:/ inserted between the root form and the familiarity and number morpheme, and the emphatic morphemes are realised as /-jẽ/. The illustrations are shown below.

(8a) *ra:ni:* + *-e/-o* = *rəni-jẽ/rəni-jõ*
queen EM/IM **QUEEN** alone/**QUEEN** also
(Morphophonemic rule: **V:ni:** → **əni:** **/_EM/IM#**
Ø → **j** **/ni:_EM/IM**
-e/-o → **-ẽ/-õ** **/ni:_#)**

It can be seen in (8a) that when the EM/IM attaches to an uninflected base noun ending with an /ni:/ sound, the EM/IM is nasalised. The vowel /a:/ in the penultimate syllable is replaced with a central vowel /ə/ due to gradation. Since a vowel sound precedes the EM/IM, an /j/ is inserted for disassimilation.

(8b) *ba:gʰin* + *-e/-o* = *ba:gʰin-ẽ/ba:gʰin-õ*
Tigress EM/IM **TIGRESS** as well
(Morphophonemic rule: **V:Cin** → **əCin** **/_EM/IM#**
-e/-o → **-ẽ/-õ** **/n_#)**

Similarly, in (8b), when the EM/IM attaches to an uninflected base noun ending with an /n/ sound, the EM/IM is nasalised. However, the vowel /a:/ in the penultimate syllable remains unchanged.

(8c) *ra:ni:* + *ən* + *-e/-o* = *rəni-j-ən-ẽ/rəni-j-ən-õ*
queen Pl EM/IM **QUEENS** only
(Morphophonemic rule: **V:ni:** → **əni:** **/_FM+EM/IM#**
Ø → **j** **/ni:_FM+EM/IM**
-e/-o → **-ẽ/-õ** **/ni:+FM_#)**

In (8c), the EM/IM attaches to a noun ending with an /ni:/ sound that is already inflected for number.

(8d) *ba:gʰin* + *ən* + *-e/-o* = *bəgʰin-i-j-ən-ẽ/bəgʰin-i-j-ən-õ*
tigress Pl EM/IM **TIGRESS'** as well
(Morphophonemic rule: **V:Cin** → **əCin** **/_FM+EM/IM#**
Ø → **i** **/n_FM+EM/IM**
Ø → **j** **/n_FM+EM/IM**
-e/-o → **-ẽ/-õ** **/n+FM_#)**

Similarly, in (8d), the EM/IM attaches to a noun ending with an /n/ sound that is already inflected for number.

4.1.1.2 Emphasis on verb constructions

In Magahi, verb stems can be divided into three basic categories: (i) primitive, (ii) derivative, and (iii) complex (Verma 2007). All three verb categories exhibit emphatic constructions, but only a complex verb exhibits morphophonemic alternations in emphatic construction.

(9a)	*u*	*suṯ-b-e*	*kəri*
	s/he	sleep-EM	do.FUT
	'S/he will only **SLEEP**.'		

(9b)	*u*	*suṯ-b-o*	*kəri*
	s/he	sleep-IM	do.FUT
	'S/he will **SLEEP** too.'		

(Morphophonemic rule: **Ø → b /verb stem_EM/IM#**

In (9a & 9b), /b/ has been inserted between the verb stem and the EM. A similar morphophonemic process is also true when IM is attached to the verb stem.

(9c)	*u*	*suṯ-ᵊl-e (suṯṯəl +-e)*	*həi*
	s/he	sleep-EM	do.FUT
	'S/he is **STILL SLEEPING**.'		

(Morphophonemic rule: ***əl*** **→ Øl /verb stem_EM/IM#)**

Other verb stems or forms can also be emphasised in Magahi, but no such morphophonemic alternations are seen. Therefore, emphatic constructions with other verb forms that do not exhibit morphophonemic alternations have not been discussed further.

4.1.1.3 Emphasis on adjective constructions

Magahi is a morphologically rich and complex language. In Magahi, the adjective agrees with the subject in terms of number and gender.

(10a)	*la:l*	*+*	*-e/-o*	*=*	*la:l-e/-o*
	red		EM/IM	**RED** alone/ **RED** also	

In example (10a), it has been shown that an adjective has been inflected for EM/IM. Neither the stem nor the attached morpheme has been modified in any manner. However, it should be noted that EM and IM morphemes can also be attached to an inflected adjective. In Magahi, adjectives can be inflected for number, gender, and familiarity. Morpheme for emphasis can also be attached to an adjective already inflected for number, gender, and familiarity.

(10b)	*la:l*	*+*	*ka*	*+*	*-e/-o*	*lal-k-e/o*
	red		FM		EM/IM	the **RED** one alone**/**the **RED** one also
(Morphophonemic rule:	**a:C**	**→**	**ə**	**/_FM+EM/IM#**		
Ca:	**→**	**Ø**	**/Adj_EM/IM#**)			

As shown in (10b), the long vowel /a:/ in the adjective stem is graded to /ə/, and the final vowel in the familiarity marker is deleted.

(10c)	*la:l*	*+*	*ka:*	*+*	*ən*	*lal-k-ən-e/o*
	red		FM		Pl	the **RED** ones alone/the **RED** ones also
(Morphophonemic rule:	**a:C**	**→**	**ə**	**/_FM+Pl+EM/IM#**		
Ca:	**→**	**Ø**	**/Adj_Pl+EM/IM#**)			

Similarly, in (10c), the long vowel /a:/ in the adjective stem is graded to /ə/, and the final vowel in the familiarity marker is deleted as well.

4.1.1.4 Emphasis on adverb constructions

Adverbs in Magahi cannot be inflected for emphasis; however, nouns functioning as adverbs can be.

(11)	*həm*	*aːɟ-o*	*nə*	*suṯ̈li*
	I	today-IM	NEG	sleep.PAST
	I did not sleep **TODAY** either.			

As shown in (11), an adverb is inflected for emphasis. It should be noted here that the stem functioning as an adverb is a noun. Therefore, an adverb in Magahi will morphologically and phonologically behave like nouns for all other kinds of emphatic constructions. Therefore, see section 4.1.1.1 Emphasis on nominal constructions for details on emphasis on adverbs.

4.1.1.5 Other emphatic constructions

Apart from the four major grammatical categories, personal pronouns, demonstratives, and genitives can also be emphasised in Magahi. Illustrations can be seen below.

(12a)	*həm*	*+*	*hi/hu*	*=* *həm-hĩ/həm-hũ*
	I		EM/IM	**I** alone/ **I** also
	tu	*+*	*hi/hu*	*=* *tu-hi/tu-hu*
	you		EM/IM	**YOU** alone/**YOU** also.
	o	*+*	*hi/hu*	*=* *o-hi/o-hu*
	s/he		EM/IM	**S/HE** alone/ **S/HE** also

In Magahi, personal pronouns can be focused on or emphasised through reflective constructions. This has been shown in illustration (12a). The reflexive marker in the first person has been nasalised since it is preceded by a nasal sound.

(12b)	*həmər*	*+*	*-e/-o*	*=*	*həmᵊr-e/həmᵊr-o*
	mine		EM/IM	**MINE** only/**MINE** also	
	tor	*+*	*-e/-o*	*=*	*tor-e/tor-o*
	you		EM/IM	**YOURS** only/**YOURS** also	
	okər	*+*	*-e/-o*	*=*	*okᵊr-e/okᵊr-o*
	his/her		EM/IM	**HIS** or **HER** only/**HIS** or **HER** also	

Illustration (12b) shows a focus on possessive pronouns. The shwa (*ə)* sound in the ultimate syllable may or may not realise.

(12c)	*e*	*+*	*hi/hu*	*=*	*e-hi/e-hu*
	this		REF		**THIS** only/ **THIS** also
	o	*+*	*hi/hu*	*=*	*o-hi/o-hu*
	that		REF		**THAT** only/**THAT** also

Illustration (12c) shows an emphasis on demonstrative pronouns. No morphophonemic alternations are evident.

4.2 Limitations of the study

In certain contexts, the functions of the makers analysed in this study may vary. However, their realisations in a similar phonological environment remain consistent. Since the study focuses on analysis of the morphophonemic alternations in emphatic constructions in Magahi, their semantic functions have not been discussed in detail.

5. Conclusion

In the previous section, various morphophonemic processes in Magahi have been discussed. Assimilation, vowel deletion, vowel alternation, and consonant deletion are some of the major morphophonemic processes in Magahi. Among the morphophonemic processes in Maghai, affixation for emphasis has been investigated in the study. They are applied to emphasise or focus attention on particular elements of the sentence and handle other discourse phenomena such as whether the

information is new, or old but related to new, presupposed, and for other pragmatic functions. Emphatic discourse markers function to highlight the important utterance by the addresser to catch the attention of the addressee.

The findings of the study suggest that /-e/, /-o/, /hi/, and /hu/ are emphatic morphemes in Magahi. They can attach to the inflected as well as uninflected nouns. Nouns already inflected for familiarity followed by plural number inflection can take an emphasis marker in a certain order. Unlike nouns, an uninflected verb cannot take an emphatic marker, however, only complex verbs inflected for emphasis exhibit morphophonemic alternation. Emphatic markers can be attached to uninflected, as well as inflected adjectives. Furthermore, personal, demonstrative, and possessive pronouns can also be emphasised.

This study aims to demonstrate the morphophonemic processes identified in Magahi. In conclusion, while this study is based on limited data, further research into the morphophonemic and morphological processes in Magahi may be beneficial and enriching.

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