



Research Paper

Disyllabic Word Minimun in Kamrupi Dialect of Assam: An OT Perspective

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ABSTRACT: This paper examines the minimal word requirement in the Kamrupi dialect of Assamese, focusing on its strong preference for disyllabic word structures. While Standard Assamese primarily exhibits a bimoraic minimal word requirement, Kamrupi enforces disyllabicity through phonological processes such as vowel epenthesis, vowel deletion, and vowel lengthening. Using Optimality Theory, the study identifies key constraints- **DISYLLABIC TROCHEE**, **PARSE-SYL**, and **ONSET**- that govern these transformations, ranking them above faithfulness constraints like **DEP-IO** and **MAX-IO**. The analysis reveals that vowel epenthesis ensures disyllabicity in originally bimoraic monosyllables, while vowel deletion restructures trisyllabic words into a binary foot pattern. Additionally, vowel lengthening, explained through a catalectic approach, reinforces the dialect's strict disyllabic requirement. These findings highlight the prosodic distinctions between Standard Assamese and Kamrupi and contribute to a broader understanding of dialectal variation in Indo-Aryan phonology.

KEYWORDS: Assamese, Kamrupi dialect, minimal word requirement, Optimality Theory, disyllabic trochee

Received 25 Mar., 2025; Revised 02 Apr., 2025; Accepted 04 Apr., 2025 © The author(s) 2025.

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I. INTRODUCTION

It is widely acknowledged in current linguistic research that languages generally require lexical categories to meet certain minimal length requirements. Specifically, words must be either bimoraic or disyllabic, depending on the prosodic structure of the language. This minimal word requirement, is derived from the prosodic hierarchy (1) proposed by Selkirk (1980) and further developed by McCarthy and Prince (1986, 1993).

(1) Prosodic Hierarchy

Pr WD	Prosodic Word
FT	Foot
σ	Syllable
μ	Mora

Prosodic structure is built upon hierarchical units, with the mora serving as a fundamental unit of syllable weight (Prince 1980, McCarthy and Prince 1986 etc). In this framework, light syllables dominate a single mora, while heavy syllables correspond to two moras. The hierarchy includes the syllable, the foot, and the prosodic word. Since lexical categories function as prosodic words-meaning they are capable of receiving stress-they must contain at least one foot. Universally, a foot is required to have a binary branching structure, which can be either bimoraic or disyllabic, depending on the prosodic typology of the language. Words should be either bimoraic or disyllabic depending on the prosodic typology of the language (Vijaykrishnan, 2007).

This paper examines how this requirement is met in two dialects of Assamese: the Standard dialect and the Kamrupi dialect. The first part of the study introduces different ways by which disyllabic minimum requirements are met in Kamrupi morphology. The second part deals with an OT analysis of the same.

Kamrupi dialect

Assamese has many dialectal variations which can be broadly categorized into Eastern and Western dialects. Standard Assamese closely resembles the Eastern dialect with a few minor variations. The Kamrupi dialect, belonging to the Western group, displays distinct phonological and morphological variations. Although a dialect of Assamese, Kamrupi is spoken not only in Assam's Kamrup district but also in North Bengal. Historically regarded as a prestigious variety, Kamrupi continues to be spoken in the Kamrup region.

The Assamese language, originating from the west, entered Kamrup (Western Assam) through North Bengal (Upendranath Goswami, 1970). The Kamrupi dialect can be traced back to Magadhi Prakrit and was the first Aryan language spoken in Assam. However, with the arrival of the Ahoms and the establishment of Sibsagar as their capital, Eastern Assam and the Eastern Assamese dialect gradually gained prominence. Later, when Assam came under the control of the East India Company, the Sibsagar dialect was adopted for literary purposes. As a result, Kamrup developed as a distinct political, social, and cultural unit, leading its speech to evolve separately as an independent dialect.

Now, let us examine the differences observed in the Kamrupi dialect compared to Standard Assamese.

II. CHANGES IN KAMRUPI DIALECT

The two dialects of Assamese exhibit both bimoraic and disyllabic minimal words. In Standard Assamese, the minimal word tends to be bimoraic, as illustrated below (2). This pattern is observed specifically in nouns.

(2)	<i>gat</i>	'hole'
	<i>pok</i>	'insect'
	<i>k^hel</i>	'game'
	<i>rup</i>	'silver'
	<i>xun</i>	'gold'

The data above show that these monosyllabic words are bimoraic, comprising a short vowel and a coda. In Assamese, coda consonants are considered moraic, meaning they contribute to the weight of a syllable. A light syllable (L) has only one mora (typically a short vowel), while a heavy syllable (H) has two moras, which can result from a long vowel or a short vowel followed by a coda consonant. Since Assamese coda consonants are moraic, they increase the syllable's weight, making it heavy. In languages where prominence (such as stress) is assigned based on syllable weight, heavier syllables are more likely to be stressed. This explains why, in Assamese, syllables ending in a coda attract prominence—because the coda contributes an additional mora, making the syllable heavy and stress-bearing.

Assamese follows a trochaic (strong–weak) rhythmic pattern, where the foot is always bimoraic, as prominence always requires a bimoraic minimum. Consequently, in Assamese, foot construction is restricted to the moraic level. All heavy syllables are stressed unless there are two consecutive heavy syllables, in which case the second one remains unstressed due to stress clash. This pattern strongly supports the claim that coda consonants in Assamese are moraic, making all VC, CVC, and CVCC syllables heavy (H) in the language.

(3) Prominence in Assamese

<i>zi. 'bɔn</i>	'life'
<i>sɔ. 'rai</i>	'bird'
<i>pa. 'tal</i>	'hell'

In the Kamrupi dialect, the language seems to prefer disyllabic minimal words. The lexical words with CVC syllable structure become disyllabic in the Kamrupi dialect by the process of vowel epenthesis where the front vowel /-a/ is inserted.

CVC → CV.CV

Standard Assamese	Kamrupi	Gloss
<i>gāt</i>	<i>ga.ta</i>	hole
<i>pok</i>	<i>po.ka</i>	insect
<i>rup</i>	<i>ru.pa</i>	silver
<i>xun</i>	<i>xu.na</i>	gold

Table 1: Vowel epenthesis in Kamrupi dialect

Another striking feature observed in this dialect is the omission of the vowel in unstressed or medial positions, resulting in a disyllabic structure. The unstressed vowel in the second syllable gets deleted, causing the onset to function as the coda of the preceding syllable.

CV.CV.CV → CVC.CV

Standard Assamese	Kamrupi	Gloss
<i>xi.di.na</i>	<i>xid.na</i>	that day
<i>xe.me.ka</i>	<i>xem.ka</i>	damp
<i>no.ko.ra</i>	<i>nok.ra</i>	do.NEG
<i>ke.ne.ke</i>	<i>keŋ.ke</i>	how

Table 2: Vowel deletion in Kamrupi dialect

The majority of words in the Kamrupi dialect follow this pattern. However, some words remain monosyllabic and do not undergo any changes.

Standard Assamese	Kamrupi	Gloss
<i>gɔs</i>	<i>gas</i>	tree
<i>lɔg</i>	<i>lag</i>	companionship
<i>zor</i>	<i>zur</i>	strength
<i>gʰɔh</i>	<i>kʰuh</i>	to rub
<i>nu:m</i>	<i>lum</i>	body hair
<i>nez</i>	<i>lez</i>	tail

Table 3: Vowel lengthening in Kamrupi dialect

In the data above, it can be seen that the syllable structure remains the same, however, the medial vowel changes to the low vowel /a/. This can be attributed to vowel lengthening in these syllables. Since vowel length is not phonemic in Assamese, the vowel seems to lengthen in the syllables of the Kamrupi dialect.

(4) *gɔs* → *ga:s* ‘tree’

A similar phenomenon occurs in Bangla, where vowels in monosyllabic words, with or without a coda, undergo lengthening. Since codas in Bangla are always moraic, this poses a challenge. As mentioned earlier, there is a direct relationship between quantity sensitivity and the minimal word size. In languages where heavy syllables attract prominence, the minimal word consists of two moras, as seen in English. Conversely, in languages where quantity-insensitive feet are formed, the minimal word is disyllabic, as observed in Diyari. Hence, this vowel lengthening can be accounted for using the concept of “catalexis.”

III. A CATALECTIC APPROACH

‘Catalexis’ is the logical opposite of ‘extrametricality,’ wherein certain languages are assumed to permit extra, empty syllable at the right edge in words with odd number of syllables. The primary advantage of a catalectic approach is that it eliminates the presence of degenerate, non-branching feet in such systems. A catalectic syllable is present in both cases, fulfilling the foot binarity condition. While quantity-sensitive languages establish a two-mora minimum for words, quantity-insensitive languages favor disyllables.

Assamese, like Bangla, exhibits partial sensitivity to syllable weight, with primary prominence falling on the first syllable. Using a catalectic approach helps explain vowel lengthening and highlights how this process is linked to the Disyllabic Trochee, which ensures a minimum word size of two syllables. Thus, Bangla maintains a strict disyllabic requirement, compelling all feet to be binary-branching at the syllabic level (Vijayakrishnan, 2007). In Kamrupi as well, monosyllabic words, when supplemented with a catalectic syllable, fulfill this disyllabic requirement and account for the observed vowel lengthening.

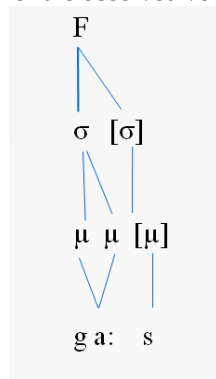


Figure 1: Representation of vowel lengthening in Kamrupi

Kager (1995), after analyzing a large number of languages, supports the validity of the catalectic approach to this issue. While standard Bangla does not fully conform to a catalectic solution due to its partial quantity sensitivity, compelling arguments in favor of this approach are: first, within Optimality Theory, quantity sensitivity is no longer regarded as a fixed parameter that is simply ‘on’ or ‘off’ in a given language; rather, languages can exhibit different degrees of quantity sensitivity. Second, although vowel length is not a distinctive feature in Bangla, the grammar must still account for the systematic alternation of vowel length within the language. From a representational standpoint, catalexis offers an optimal explanation for these vowel length alternations (Vijayakrishnan, 2007).

By adopting a catalectic approach, we can account for vowel lengthening in Bangla as well as Kamrupi while preserving the fundamental principle that codas contribute a mora. This reinforces the idea that Kamrupi has a strict disyllabic requirement, ensuring that all feet are binary-branching at the syllabic level. As a result, both true monosyllables and final stressed syllables, when augmented with a catalectic syllable, meet this disyllabic requirement and explain the observed vowel.

IV. AN OT ANALYSIS

Monosyllables to disyllables

The monosyllables in Standard Assamese become disyllables in Kamrupi through the process of vowel epenthesis. We now attempt to provide an OT analysis for the same. The three markedness constraints that can be developed for Kamrupi are as follows:

ONSET: Syllables must have onsets (Itô 1989, Prince and Smolensky 1993):

This constraint means that syllables cannot start with vowels. It only applies to syllables that begin with a consonant sound. So, in languages where this constraint is the most important, every syllable needs to start with a consonant sound.

NO-CODA: Syllables are open

This constraint states that syllables cannot end in a consonant. In languages where this constraint is higher ranked, every syllable will always end with a vowel, resulting in only open syllables.

DISYLLABIC TROCHEE: Minimum word should be a disyllable.

The faithfulness constraints observed in Kamrupi are as follows:

DEP-IO: “Output segments must have input correspondents.” No epenthesis. (McCarthy & Prince 1995:16)

This constraint is critical for ensuring that the output remains consistent and relevant to the input data.

MAX-IO: Input segments must have output correspondents. No deletion

This constraint is critical for ensuring that the output remains consistent and relevant to the input data.

Therefore, the constraint hierarchy for vowel epenthesis in Kamrupi is as follows:

DISYLLABIC TROCHEE, ONSET, MAX-IO >> DEP-IO >> NO-CODA

pok	DISYLLABIC TROCHEE	ONSET	MAX-IO	DEP-IO	NO-CODA
a. pok	*!				*
☞ b. po.ka				*	
c. po	*!		*		

Table 4: Tableau for vowel epenthesis in Kamrupi dialect

In this tableau, both candidates (a) and (c) violate **DISYLLABIC TROCHEE** because /pok/ is bimoraic, as is /po/. Therefore, the only way to achieve an optimal output is by ensuring disyllabicity through vowel epenthesis. Thus, candidate (b) emerges as the optimal candidate.

Trisyllables to Disyllables

The previously discussed constraints explain the phenomenon of vowel deletion in Kamrupi. However, an additional constraint is required to account for foot parsing in trisyllabic words. This can be addressed using the **PARSE-SYL** constraint.

PARSE-SYL: Syllables are parsed by feet (Hayes 1980, Halle and Vergnaud 1987, Prince and Smolensky, 1993)

A foot, whether a trochee or iamb, is ideally constituted of two syllables in its syllabic analysis. That is, all syllables within a prosodic word are incorporated or ‘parsed’ by foot.

Therefore, the constraint hierarchy for vowel deletion in Kamrupi dialect is as follows:

PARSE-SYL, DISYLLABIC TROCHEE, ONSET >> MAX-IO >> DEP-IO >> NO-CODA

'ku.mu.ra	PARSE-SYL	DISYLLABIC TROCHEE	ONSET	MAX-IO	DEP-IO	NO-CODA
a. ('ku.mu).ra	*!	*				
☞ b. 'kum.ra				*		*

Table 5: Tableau for vowel deletion in Kamrupi dialect

In this tableau, candidate (b) is the optimal choice as it forms a foot with two syllables. Candidate (a), however, violates **PARSE-SYL** because one syllable remains unparsed, given that feet are strictly binary.

Vowel lengthening in Kamrupi dialect

Vowel lengthening in Kamrupi can be accounted for using the constraint **Dep-μ-IO**.

Dep-μ-IO: Output moras have input correspondents.

Being a faithfulness constraint, it militates against insertion of any new segment, here a vowel resulting in the insertion of mora. But this has to be ranked very low - below markedness constraints which force insertion.

The constraint hierarchy for vowel lengthening in Kamrupi dialect is as follows:

PARSE-SYL, DISYLLABIC TROCHEE, ONSET >> MAX-IO >> DEP-IO >> NO-CODA >> Dep-μ-IO

gos	PARSE-SYL	DISYLLABIC TROCHEE	ONSET	MAX-IO	DEP-IO	NO-CODA	Dep-μ-IO
a. gos		*!				*	
☞ b. ga:s						*	*

Table 6: Tableau for vowel lengthening in Kamrupi dialect

In this tableau, candidate (b) emerges as the optimal candidate as it does not violate any of the high ranked constraints. Candidate (a) violates **DISYLLABIC TROCHEE** as it forms a bimoraic syllable.

To summarize, the constraint hierarchy for disyllabic word minimum in Kamrupi is as follows:

PARSE-SYL, DISYLLABIC TROCHEE, ONSET >> MAX-IO >> DEP-IO >> NO-CODA >> Dep-μ-IO

V. CONCLUSION

This study has examined the disyllabic requirement in the Kamrupi dialect of Assamese through a combination of phonological analysis and Optimality Theory. While Standard Assamese primarily exhibits a bimoraic minimal word requirement, Kamrupi demonstrates a strong preference for disyllabic minimal words which is met in different ways- i) vowel epenthesis ii) deletion of unstressed vowel iii) vowel lengthening.

The analysis revealed that vowel epenthesis ensures disyllabicity in originally bimoraic monosyllables, while vowel deletion in trisyllabic forms restructures words to maintain a binary foot structure. Additionally, vowel lengthening in certain words can be accounted for using a catalectic approach, further reinforcing the disyllabic minimum. The OT analysis demonstrated that the ranking of constraints such as **DISYLLABIC TROCHEE**, **PARSE-SYL**, and **ONSET** over faithfulness constraints like **DEP-IO** and **MAX-IO** explains the observed phonological patterns in Kamrupi. This can also be seen as a persistent influence of Bangla on Kamrupi dialect as Bangla also undergoes through a similar phenomenon.

Overall, this study provides evidence that Kamrupi adheres to a strict disyllabic word minimum, setting it apart from Standard Assamese. By applying OT, we gain a clearer understanding of the phonological motivations behind these transformations, reinforcing the role of prosodic structure in shaping dialectal variation. Further research could explore additional morphophonological factors influencing these processes and compare similar phenomena in other Indo-Aryan languages.

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