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## BODO SEMI-VOWEL (NORTH- CENTRAL DIALECT OF BODO) : AN ACOUSTIC ANALYSIS

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**Abstract :** Bodo is a Sino- Tibetan Language spoken primarily by the Bodo people of North-East India .It is an official language of the state of Assam and the Bodoland Territorial Region of India. Since 1975 the language has been written using Devanagari Script .The Bodo language has 16 consonants. There are two semi-vowel sounds found in Bodo language. These are /y,j/ . In this topic i am trying to analysis the acoustic value of semi-vowel phoneme of Bodo language.

**Keywords:** Acoustic analysis, Consonant, Semi- Vowel Sound, Phoneme.

### **Introduction:**

Bodo is a Sino- Tibetan Language spoken primarily by the Bodo people of North- East India. The Boros are known by different names in some regions of Assam and its few adjacent areas. In this Brahmaputra valley, the Bodo native speakers identity themselves as Boro while the Hindu Asamiya Speakers and speakers of other linguistic communities address them as Kachari or Boro Kachari.

Since 1975 the language has been written using Devanagari Script .The Bodo language has 16 consonants. There are two semi-vowel found in Bodo language. . These are /y,j/. A speech sound that is produced like a vowel but the function as a consonant.

### 1. Aims and objectives

- Acoustic analysis of semi- vowel of the Bodo language.
- Wave image analysis of semi vowel. Just like

a) Energy -Minimum energy

Maximum energy  
Mean energy

b) Pitch - Minimum pitch

Maximum pitch

c) Frame length

- Finding F1 and F2 value .

### 3. Literature Survey

Here , the selected thesis , books and articles are considered for the purpose of view Pratima Brahma, Ph.D. thesis “phonology and Morphology of Bodo and Dimasa : A comparative study (2013)”, here she discusses shortly about Bodo phonological and morphological structure.

Phukan Basumatary , he has published many books on language . Among them “ A Introduction to the Boro Language (2005)”, here he discusses descriptively about Bodo phonology.

Swarna Prabha Chainary , She has published many books on language and literature. Among them Boro Raothanthi(2006), Tibeto- Burman language of North-East India (2014), she discusses shortly about Bodo Language.

### 4. Methods:

- In this research work Descriptive and Acoustic Analysis methods have been applied.
- The data for the proposed study has been collected from both primary and secondary sources. For Primary data the researcher has visited different places of the Bodo Languagespeaking dominated areas . Secondary data has been gathered from various sources like the Bodo texts,lexicons, Bodo Dictionary , monthly and annual magazines , journal etc.

## 5. Results and Discussion

Acoustic analysis of semi vowel /y, j/

Phonetic Description

/y/- voiced bi- labial semi vowel

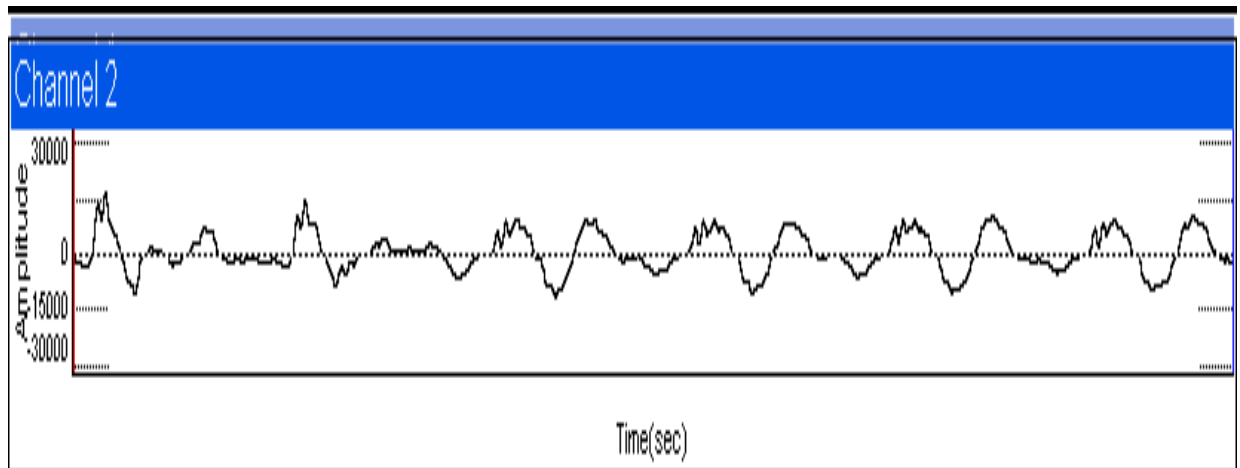
/j/- voiced palate semi vowel

Word. Example are as follows:

Initial	Medial	Final
-	/y/ daya(a kind of tree)	zay(winnow)
-	/j /ajda (chapter)	buj(to buy)



## Wave image analysis Medial position of /y/ phoneme



Word 'daya'

/y/ image

Here , Results are –

a) Energy

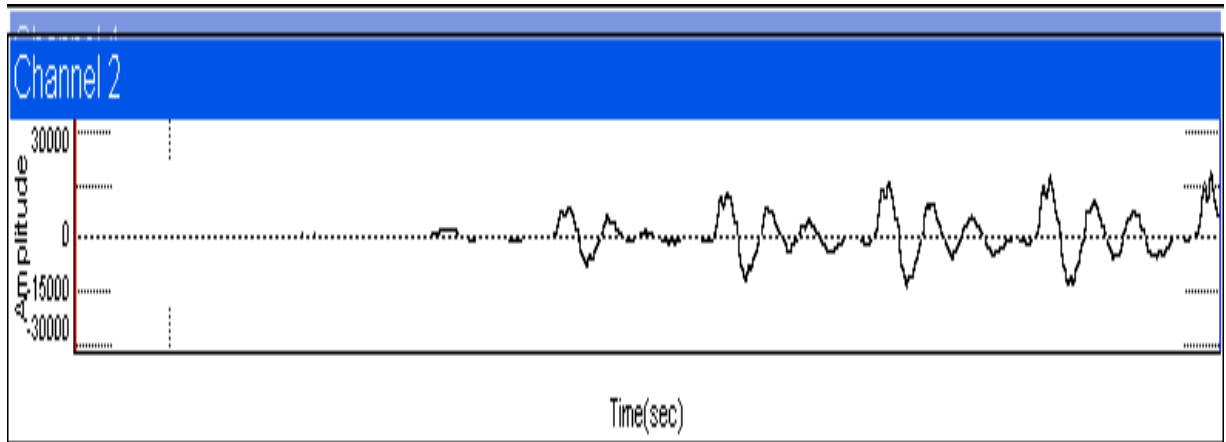
Minimum energy 68.31dB Maximum energy 70.72dB Mean energy 64.52dB

b) Pitch

Minimum pitch 125.57Hz Maximum pitch 138.04Hz

c) Frame length 25 M.sec, mean Period 0.00 M.s

Wave image analysis of medial position of /j/ phoneme



Word ‘ajda’

/j/ image

Here , Results are –

a) Energy

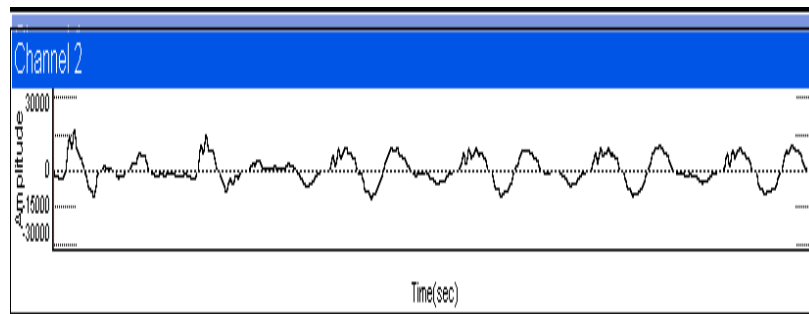
Minimum energy 58.26dB Maximum energy 61.71dB Mean energy 54.40db

b) Pitch

Minimum pitch 265.33 Hz Maximum pitch 272.03 Hz

b) Frame length 25 Msec Mean period 3.67Msec

Wave image analysis Final position of /y/ phoneme



Word 'zay'

/y/ image

Here , Results are –

d) Energy

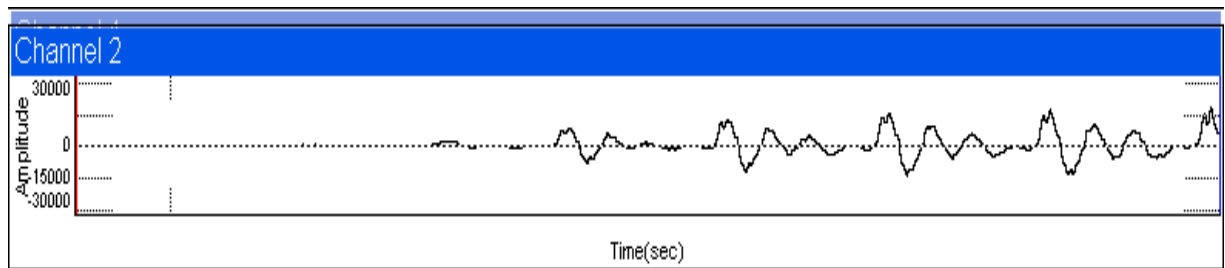
Minimum energy 48.49dB Maximum energy 67.63dB Mean energy 57.19dB

e) Pitch

Minimum pitch 131.00Hz Maximum pitch 138.09 Hz

f) Frame length 25 M.sec, mean Period 7.62 M.se

## Wave image analysis of Final position of /j/ phoneme



Word 'baj'

/j/ image

Here , Results are –

c) Energy

Minimum energy 53.34dB Maximum energy 69.36dB Mean energy 60.24db

d) Pitch

Minimum pitch 135.38Hz Maximum pitch 135.38Hz

b) Frame length 25 Msec Mean period 7.39Msec

## 6. Conclusion

In this topic researcher fined the actual acoustic value of Bodo semi – vowel

Here are the Findings-

- /y/- voiced bi- labial semi vowel
- /j/- voiced palate semi vowel
- F1 value of /y/ 742.86
- F1 value of /j/749.43
- F2 value of /y/1455.4
- F2 value of /j/1847.29

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