

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

## Effect of Despirantization of Plosives in Silchar Bengali Vernacular

Kakoli Dey

Department of Humanities, Galgotias College of Engineering and Technology, Greater Noida, U.P., India

**ABSTRACT:** ‘Silchar Bengali Vernacular’ which is spoken in Silchar (Assam), has a tendency to spirantize labial and velar plosives. Silchar Bengali got infused into Tibeto-Burman belt from 1835 onwards due to the influx of immigration in this part of the region from the neighboring country, Bangladesh. The new Bengali vernacular spoken in Silchar today is an outcome of contact among numerous Bengali dialects (apart from other languages) differing from each other to varying degrees. Bengali which is spoken over a wide region does not constitute a homogenous group and thus, the Bengali dialects brought into Assam were diverse and not uniform (see Grierson, 1903). In spite of the linguistically diverse situation, spirantization was introduced to Assam by the immigrants from Eastern Bengali dialect regions. Spirantization got diffused from the numerous Bengali dialects into Silchar Bengali Vernacular and has undergone significant changes after its arrival in this region. However, the presence of other linguistic groups such as the Hindustanis and Tibeto-Burmans participated in the process of spirantization but in a limited manner.

Contrary to spirantization, there is a minor tendency of despirantization where the labial and velar spirants shift to the corresponding (un)aspirated plosives in Silchar Bengali Vernacular. This paper explores the nature of despirantization in Silchar Bengali Vernacular. An analysis on the linguistic constraints on despirantization reveals that the two seemingly mutually opposing processes of spirantization and despirantization form a mirror image only in a limited sense and show mutual independence. In general, the despirantization and spirantization processes being variable in nature, both occur in the same contexts. It is the degrees that make them different from each other. In terms of rule application and the linguistic factors that constrain the rule application, the two do not simply stand in logical opposition to each other.

**KEYWORDS:** Spirantization, despirantization, Plosives, Immigration, Contact language

### I. INTRODUCTION

Silchar Bengali Vernacular has a tendency to spirantize labial and velar plosives. In Dey 2010, a detailed discussion revealed how the processes of spirantization operate in Silchar Bengali. Geographically, Silchar falls in the south of Assam and used to historically and linguistically form a part of a Tibeto-Burman belt. However, Bengali became an important language in this region due to the establishment of tea plantations, which started in the year 1835 (Dey 2010, 2014). Bengalis formed the largest work force, which came from the erstwhile East Bengal (Indo-Aryan) to work in tea plantation. The rest were from the neighboring eastern regions such as Chota Nagpur and Bihar, who maintained their mother tongue at their home domain. The findings in Dey’s dissertation showed that in spite of the linguistically diverse situation, spirantization was introduced to Assam by the immigrants from Eastern Bengali dialect regions. The other linguistic groups, such as the Hindustanis and Tibeto-Burmans participated in the process of spirantization but in a limited manner. Spirantization got diffused from the numerous Bengali dialects into Silchar Bengali Vernacular and has undergone significant changes after its arrival in this region (see Dey 2014).

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

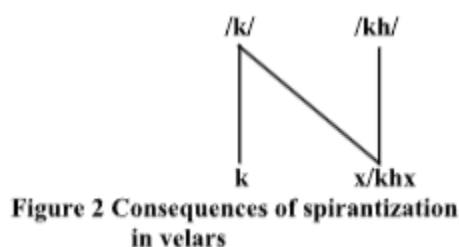
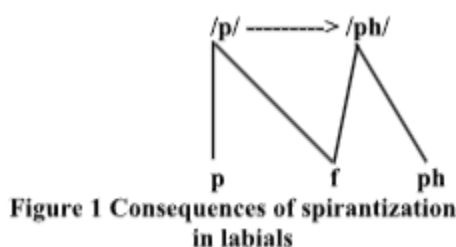
In contrary to spirantization, the paper investigates the nature of despirantization, a reverse effect to spirantization. In Silchar Bengali Vernacular, there is a minor tendency of despirantization where the labial and velar spirants shift to corresponding (un)aspirated plosives.

## 1.1. The research findings:

There are two mutually opposing phonological processes: spirantization and de-spirantization in Silchar Bengali (Dey 2010). Both the processes being variable in nature, they occur in the same context, but it is the degrees which make them different from each other. I shall discuss here the function and process of despirantization in Silchar Bengali Vernacular.

To understand the function and process of despirantization in Silchar Bengali Vernacular, I present a brief preview of how spirantization functions. Dey (2010) has shown how the labial plosives /p/, /ph/ and velar plosives /k/, /kh/, both aspirated and unaspirated participate in the process of spirantization and are variably realized as labio-dental [f] and velar [x] spirants respectively. Though, the two phonemes form a natural class of non-coronal plosives, but differ in their place of articulation. While one is pronounced at the front of the oral cavity, the other is pronounced in the back.

Figure 1 and Figure 2 show the consequences of spirantization in labials and velars (Dey 2010).



The labials /p/ and /ph/ in Silchar Bengali Vernacular constitute separate phonemes. However, in the process of spirantization, in many cases, both unaspirated and aspirated labials results in a merger i.e. /p/ and /ph/ > /f/ (see figure 1). The process of merger further results in ambiguity, and thus, in some instances, the phonemic contrast is lost resulting to homophony such as: *pul* 'bridge' and *phul* 'flower' both are pronounced as [ful]. There is a widespread tendency across Indo-Aryan languages to realize the aspirated labial /ph/ as [f] due to the influence of Perso-Arabic and English loans. However, in Silchar Bengali Vernacular the underlying (un)aspirated labial plosives and the resulting labio-dental spirant are clearly differentiated.

Similarly, the process of spirantization in the case of velar (see figure 2) also lead to consequences often resulting in homophony through loss of phonemic contrast for instance *khand* 'shoulder' and *kand* 'to cry' both are pronounced as [xand] in Silchar Bengali Vernacular. However, unlike labials, where the underlying aspirated plosive and the resulting labio-dental fricative are clearly differentiated, this is not so with velars. In many cases, the resulting velar aspirated plosive and the fricatives merge, making it difficult to separate the two (see figure 2). Many of the tokens of [x] are actually intermediate between the voiceless aspirated plosive [kh] and the voiceless fricative [x]. Moreover, many of these may be slightly affricated [khx].

## 1.2. The variables in study: Despirantization

The paper explores a minor tendency of despirantization, where labio-dental and velar spirants shift to corresponding (un)aspirated plosives in Silchar Bengali under certain linguistic and sociolinguistic conditions. Despirantization is a process which refers to the transformation of spirants into plosives.

# International Journal of Innovative Research in Science, Engineering and Technology

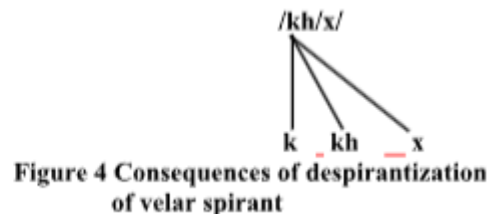
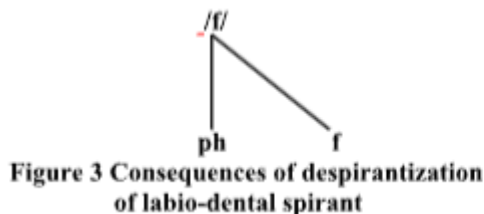
(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

The same plosive which becomes a spirant, in Dey's study, also show despirantization. In Figure 3 and 4, we see a reverse pattern. The labio-dental spirant /f/ is variably realized as [p] but more frequently as [ph], as shown in Figure 3.

Figure 3 and Figure 4 show the consequences of despirantization in labial and velar plosives.



In the case of velars, many of the tokens of velars are intermediate between aspirated velar plosive [kh] and the spirant [x]. Therefore, only those instances were considered where the velar spirants results in an unaspirated plosive [k] irrespective of whether the underlying form is [kh] or [x]. Look at the excerpts (a) and (b) below:

Example (a)

*tarar bari durga fuja shomoe arki nomomi fuzar din, ek jura xaforkiniya ani-lais-la. fura hol gor ar:ki hou tumrar bari-r ar fison diya asla amar xa.xa-r bari.* [Rani: line 7-10]

‘...It was the festival of Goddess Durga in their house...on the 3rd day (*nomomi*), (he (hon.)) had already bought one pair of clothes before, so it was a big hall.....there...at the back of your house was my uncle’s house...’

Example (b)

*(dhan) bostath thoilae...undur-e xater ek-muka...ar forer ekbae...ekbae murug-e xaitra...ar ota taki thoiya hari jegun roilo...bis falai.* [Caca: line 109-111]

‘(If we keep paddy) in the sack, then (you’ll find) the rats nibbling on one side and on the other side (of sack) it is just falling down ... then there are hens all over...and whatever remains after that it is taken to the field for harvesting.’

Unlike labials where the spirant /f/ exists in words of English origin, in the case of velars the underlying form taken into consideration for despirantization is /kh/. Many of the instances of what seem like /kh/ actually range from [kh] to [x]. Historically, there is no phoneme /x/ in the language under study. Instead of considering this phenomenon simply as a case of deaspiration, I shall consider this as a case of despirantization.

Minimal pairs like *khoi* ‘where’ and *koi* ‘a kind of fish’, the process of spirantization would result in /xoi/ as in (c), whereas the process of despirantization would result in /koi/, causing homophony as in (d) below.

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

- (c) *khoi* 'where' } [xoi] (Spirantization)  
*koi* 'a kind of fish' }
- (d) *khoi* 'where' } [koi] (Despirantization)  
*koi* 'a kind of fish' }

The despirantization of labio-dentals does not result in mergers, as I did not come across any minimal pairs contrasting [p] and [f] with distinct meanings.

More examples are cited for spirantization and despirantization in Table 1 and 2 below

Table 1 Examples of Spirantization in SBV

Examples of spirantization			
[p/ph]~[f]		[k]~[kh/x]	
<i>kafor</i>	'cloth'	<i>jaxra</i>	'to shake'
<i>biforith</i>	'opposite'	<i>xoru</i>	'kind of dry curry'
<i>futani</i>	'proud'	<i>xet</i>	'field'
<i>furti</i>	'enjoyment'	<i>moxa</i>	'a kind of fish'

Table 2 Examples of despirantization in SBV

Examples of despirantization			
[f]~[ph/p]		[kh/x]~ [k]	
<i>hap-pent</i>	'half-pant'	<i>kub</i>	'many/plenty'
<i>paib</i>	'five'	<i>raklo</i>	'keep-T'
<i>phemeli</i>	'family'	<i>dilkush</i>	'proper name'
<i>propheor</i>	'professor'	<i>dekse</i>	'he/she saw'

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

## II. RESEARCH QUESTIONS

1. Which sounds undergo despirantization elsewhere?
2. How does despirantization function in Silchar Bengali Vernacular?
3. Does it have mutually opposing context?
4. What makes the two different from each other and mutually opposing in Silchar Bengali?

### 2.1. Despirantization across languages

Both spirantization and despirantization are well attested in Indo-European languages. In Indo-European languages, dental sounds [t, d] undergo spirantization [θ, ð] in intervocalic positions as shown in Table 3. While Germanic has retained spirantization, English has lost this distinction which led to despirantization as in *needle* (see table 3). Spirantization is also reported from Spanish (both voiceless and voiced /t/, /d/) and Latin (voiceless /t/) (Dey 2010).

Table 3 Constraints of despirantization across languages

Constraints of despirantization	Examples	Language	Source
Intervocalic positions	Latin [d] audire > Gallo-Roman [ð] auðire 'hear' [t,d]> [θ, ð]	Mediaeval and Early Modern English	Welna (2004)
-Following sonorants [l, r, m, n]	PGmc * <i>naeþlo</i> > OE <i>naedl</i> 'needle' <i>roðres</i> > <i>rudyr</i> 'rudder'	Dialects of English	Welna (2004:253-54)
After a liquid-	<i>byrðen</i> > <i>burden</i>	Dialects of English	Welna (2004: 253)
Fricatives become stops after other fricatives-	<i>xa-</i> 'shoot' <i>cxifqha-</i> 'to shoot a bear'.	Nivkh (Palaeo-Siberian language spoken in Japan and Russia)	Shairashi (2006: 83)

However, Spanish and Latin do not exhibit despirantization. Sharashi (2006) reports spirantization and despirantization in Nivkh spoken in Russia and Japan. He argues that the two processes exhibit an interesting asymmetry with respect to their application to word-initial obstruents. Labials, dentals, velars and palatals undergo spirantization at the word initial morpheme boundary. Sharashi (2006) calls hardening complementary to spirantization. Despirantization applies when a morpheme-initial fricative follows either a fricative or nasal, for example *xa-* 'shoot', *cxif qha-* 'shoot a bear'; *xu-* 'kill', *khxif khu-* 'kill a bear' (see Table 3).

Review of literature suggests that, though spirantization is attested in many languages, the process of despirantization is limited and restricted. Where a language exhibits a series of plosives undergoing spirantization, the same phenomenon in a

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

reverse order is almost negligible and hardly reported. There is a long history of spirantization of dental plosive, but labials and velars are not reported much.

## 2.2. Despirantization in Silchar Bengali Vernacular

### 2.2.a. Data and Methodology

Data were collected, keeping in mind age, class, gender and also the speaker's duration of stay, i.e. a minimum of 10-15 consecutive years in Silchar with no significant break. The samples were collected from spontaneous running speech from a sample of 24 speakers born between 1895 and 1995.

The language used while collecting data was the local vernacular, and each recording (60-90 minutes approx) was digitized and then transcribed. In addition, we have earlier texts on Bengali Dialects (Grierson's *Linguistic Survey of India*, 1903). Grierson's text gives evidence of spirantization of labial plosives but not of velar plosives. Likewise, he does not mention despirantization, nor do his texts corroborate such.

### 2.2.b. Envelop of variation

The overall distribution of despirantization in the two variables (f) and (x/kh) and their variants are shown in Table 4.

Table 4 Distribution of despirantization in Silchar Bengali Vernacular

No	Variable		[p]	[ph]	[f]	Total N
1.	(f)	%	9.3	13.0	77.8	
		(N)	5	7	42	
		Total	22.2% (12)		77.8% (42)	54
			[k]	[kh]	[x]	Total
2.	(x+kh)	%	17.5	59.8	22.7	
		(N)	95	324	123	
		Total	17.5 % (95)	82.5% (447)		542

The tokens of despirantization were coded for the eleven linguistic factors that were used for spirantization in the doctoral work of Dey (2010).

### 2.2.c. Despirantization of labial spirants

The tendency of despirantization in labials is attested in a total of only 12 tokens out of 54 tokens. It is interesting to find that out of 54 tokens, 47 tokens are of English origin. Examples of despirantization of labio-dental spirant /f/ are shown in table 5.

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

Table 5 Examples of Despirantization of English words

English words /f/			
[p]		[ph]	
<i>hap-pent</i>	'half-pant'	<i>phemeli</i>	'family'
<i>paib</i>	'five'	<i>prophesor</i>	'professor'
<i>opish</i>	'office'	<i>transpher</i>	'transfer'
<i>stap</i>	'staff'	<i>ophish</i>	'office'
<i>transper</i>	'transfer'	<i>phorein</i>	'foreign'

It must be noted that /f/ is not an original phoneme of Indo-Aryan. While the spirantization of /p/ is not influenced by English, the despirantization of /f/ to [p] is also not influenced by vernacularization, which appears to be so in those cases where /f/ shifts to [ph] as in the case of two words reported which are of Perso-Arabic origin like *tupfan* > *tufan* > *tuphan* 'storm'; *forok* > *phorok* 'differences'.

To provide a meaningful account of this minor process of despirantization, I discussed only those words that are of English origin showing relatively less spirantization as compared to words of non-English origin. However, among the words of English, one finds relatively more spirantization and comparatively less despirantization as shown in Table 6.

Table 6 Overall rate of spirantization and despirantization of English words

English words		Variable spirantization		
(p)		[f]	[ph]	[p]
Total - 169		50		119
		(30%)		(70%)
English words		Variable despirantization		
(f)		[p]	[ph]	[f]
Total - 47		5	7	35
		[p + ph] 25%		(75%)

The following inferences can be drawn for labials:

1. Despirantization occurs more in word medial positions.

- opish* 'office'
- transpar* 'transfer'
- hap-pent* 'half-pant'

2. Despirantization also occurs in geminates. This is the only constraint that may show that the despirantization is a mirror image of spirantization.

- hap-pent* 'half pant'

3. Despirantization occurs at the beginning of a syllable.

- phemili* 'family'

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

- ii. *phorin* 'foreign'
- iii. *transpar* 'transfer'

Though the labio-dental tokens are very small in number the following inferences can be made. Except for the geminates, the rest of the constraints suggest that the spirantization and despirantization are independent processes as in Table 7. More data, however, are required to test these inferences.

Table 7 Constraints on spirantization and despirantization

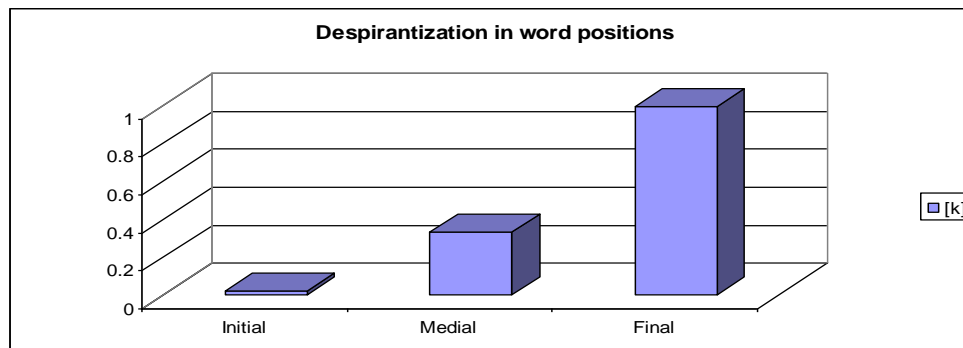
Constraints	Labials	
	Spirantization	Despirantization
Geminates	Significant	Significant
Clusters (consonant sequence)	Significant	Not significant
Preceding consonants	Significant	Not significant
Following vowels	Significant	Not significant
Linguistic origin of words	Significant	Not significant

## 2.2.c. Despirantization of velar spirant /x/kh/

As compared to the despirantization of labials, there are far more instances of despirantization of velars. Of a total of 542 tokens of spirants 95 tokens are realized as [k]. The linguistic factors which turned out to be significant for velar spirants are:

(i) **Word Position.** As evident from figure 5, word medial position constitutes a favorable environment for despirantization. This is also the case with labials. Despirantization is categorical in word-final positions. Thus, unlike the spirantization of velars, which occurs in word initial position, despirantization occurs in non-initial word positions.

Figure 5 Effect of despirantization on word Positions





# International Journal of Innovative Research in Science, Engineering and Technology

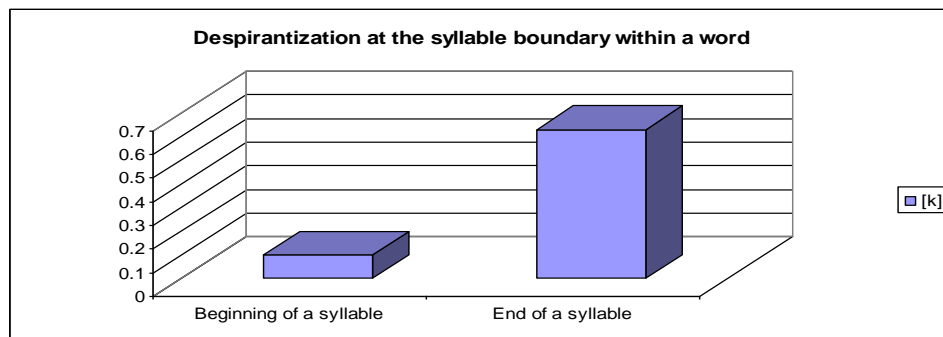
(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

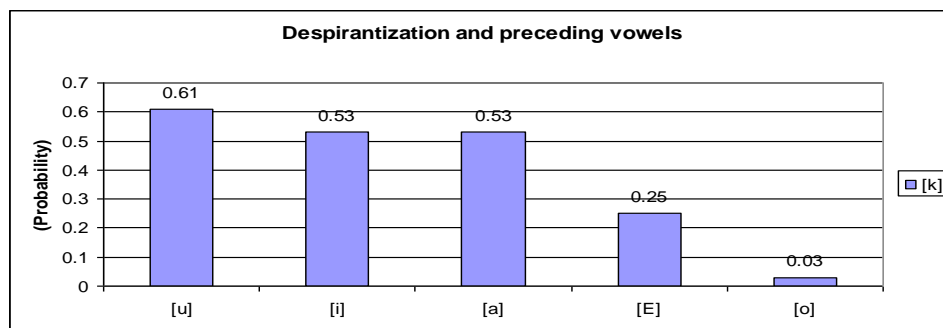
(ii) **Syllable boundary in a word.** In Silchar Bengali, despirantization is observed at a syllable boundary. The end of a syllable boundary favors despirantization much more than the beginning of a syllable boundary as shown in figure 6.

Figure 6 Effect of despirantization at the syllable boundary within a word



(iii) **Preceding vowel.** Figure 7 below suggests that among the preceding vowels, the vowels [i, u and a] favor despirantization maximally and the rest of the vowels disfavor despirantization in Silchar Bengali Vernacular. Though the factor group was selected for spirantization as well, the internal hierarchy of vowels in terms of their effect is different in the case of spirantization and despirantization.

Figure 7 Effect of despirantization on preceding vowels



(iv) **Following vowel.** On the other hand, a careful study shows that following consonants seems to have a favorable effect. However, considering that the following consonants as a factor group were not selected, this distribution only implies that a following consonant has a more favorable influence on despirantization as opposed to a following vowel. Figure 8 shows a front high vowel has the more strongly favoring effect than other vowels.

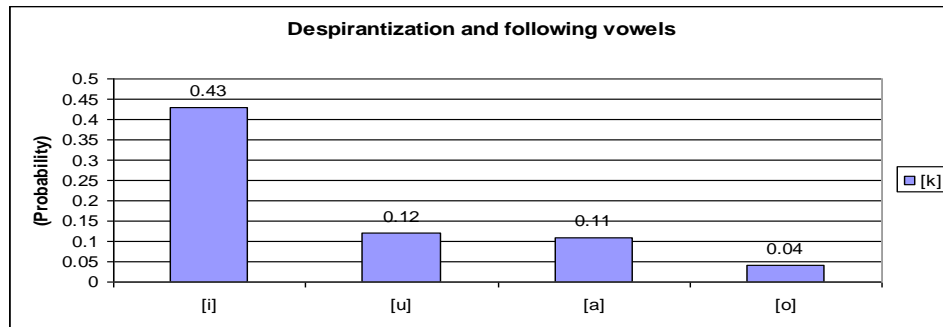
# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

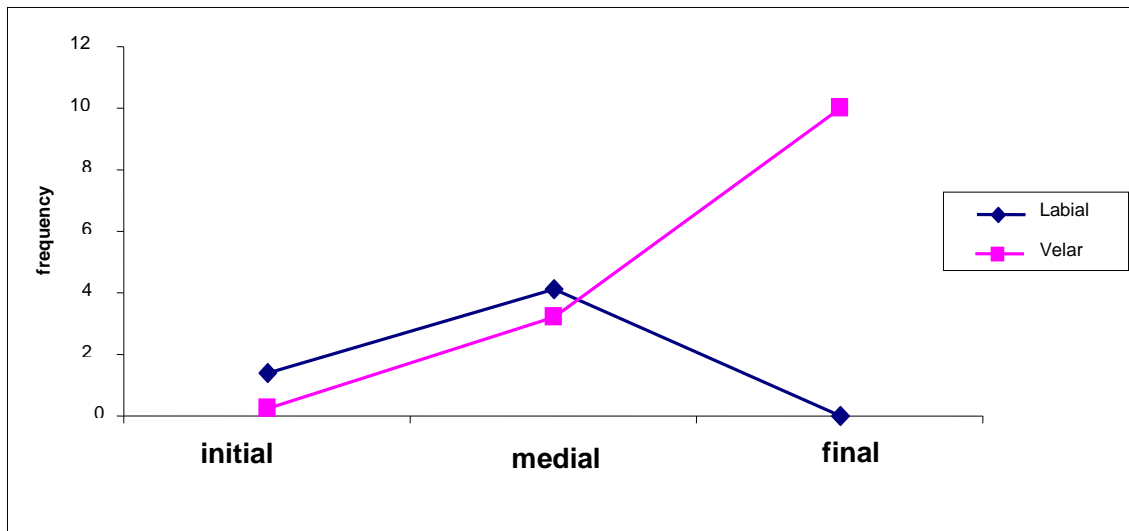
Figure 8 Effect of despirantization on following vowels



## 2.3. Labial and velar spirants do have mutually opposing context

The word positions allow us to see how the processes of despirantization affect the two categories of spirants, namely the labials and the velars (see figure 9). Though the initial and the medial position of a word show almost a similar effect on the despirantization of both labials and velars, the two deviate in word-final position.

Figure 9 Despirantization of labial and velar spirants in word positions



While labials disfavor despirantization categorically in word-final position, velars favor despirantization. Consequently, spirantization and despirantization both occur in the same contexts. The contexts which spirantize are also the contexts which result in despirantization. The reasons for the difference between the constraint on labials and velars may rest in differences in the place of articulation between the labials and velars.

# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

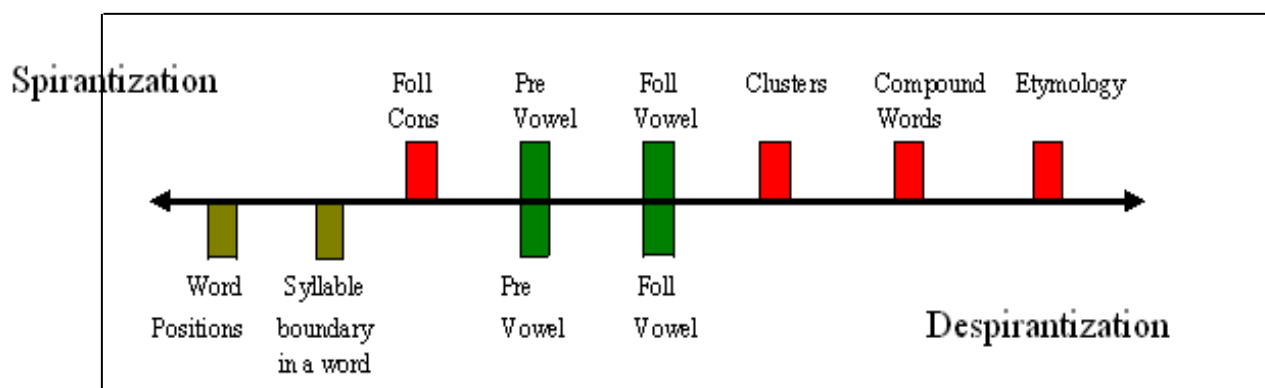
Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

## 2.4. Comparison of despirantization and spirantization of velars

It has been observed that the linguistic constraints that operate on the spirantization of labials in Silchar Bengali Vernacular are different from spirantization of velars (Dey 2010). The small data set of labial spirants does not allow me to draw realistic comparisons between despirantization of labials and velars. However, I would like to highlight what makes the despirantization and spirantization of velars different and mutually opposing in Silchar Bengali Vernacular. Based on a comparison of spirantization and despirantization in velars, I would like to make the following observations.

Figure 10 Significant constraints on spirantization and despirantization of velars



As despirantization is the reverse of spirantization, one would expect linguistic contexts to exert an opposing effect on the two processes. That is, the contexts that favor spirantization would be expected to disfavor despirantization. Figure 10 show that the two form a mirror image only in a limited sense. The two factors, word position and syllable boundary, that are significant for despirantization are not significant for spirantization. There are two factor groups that are significant for both the processes preceding and following vowels. However, there are internal differences.

## III. CONCLUSION

The discussion has shown that despirantization is a complex process which is conditioned by a number of linguistic constraints. Both are variable and not categorical phenomena in Silchar Bengali Vernacular. An analysis on the linguistic constraints on despirantization reveals that the two seemingly mutually opposing processes of spirantization and despirantization form a mirror image (see figure 11) only in a limited sense and shows mutual independence.

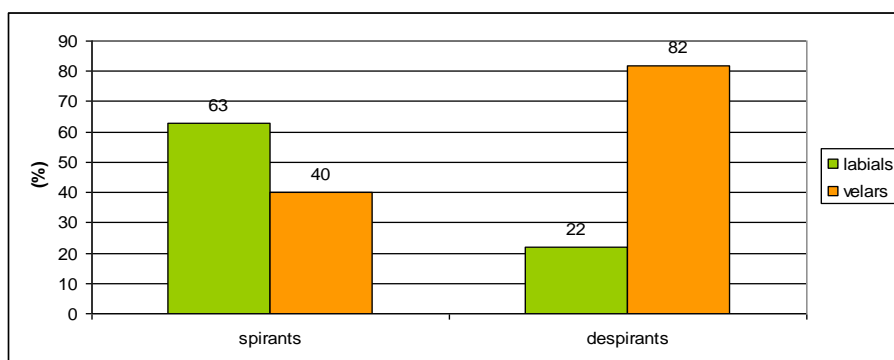
# International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijirset.com](http://www.ijirset.com)

Vol. 8, Issue 11, November 2019

Figure 11 Effects of Spirantization and Despirantization in Silchar Bengali



In general, the despirantization and spirantization processes being variable in nature both occur in the same contexts. It is the degrees that make them different from each other. In terms of rule application and the linguistic factors that constrain the rule application, the two do not simply stand in a logical opposition to each other.

## REFERENCES

1. ALLEN, B. C. 1901. *Census of Assam*. Vol. I. Report. (Reprint 1984). Delhi: Manas Publication.
2. ALLEN, B. C. 1905. *Assam District Gazetteers: Sylhet*. Vol. II. Calcutta.
3. ALLEN, B.C. and Gait. E. A. 1979. *Gazetteer of Bengal and North-East India*. New Delhi: Mittal Publications.
4. CEDERGREN, H. J. and Sankoff, D. 1974. Variable rules: performance as a statistical reflection of competence . *Language*. 50: 2.
5. GRIERSON, G. A. 1903. *Linguistic Survey of India*. Vol. V. Part I. Indo-Aryan Family (Eastern Group). Bengali and Assamese. (Reprint 1994. Delhi: Low Price Publications).
6. DEY, Kakoli. 2010. 'Silchar Bengali: A Sociolinguistics Study'. Unpublished P.HD Dissertation. Department of Linguistics, University of Delhi, Delhi.
7. DEY, Kakoli. 2014. 'Spirantization in Tibeto-Burman-Bengali bilinguals in south of Assam'. In Stephen Morey et al. North East Indian Linguistics 6. Published by Asia-Pacific Linguistics College of Asia and the Pacific. The Australian National University Canberra ACT 2600, Australia. (pp. 213-229). ISBN: 9781922185136
8. SHIRAISHI, Hidetoshi. 2006. *Topics in Nivkh phonology*. (P. 83). *Groningen Dissertations in Linguistics* 61.
9. WELNA, Jerzy. 2004. Spirantization and de-spirantization. In Kay, Hough and Wotherspoon (eds.) *New perspectives on English historical linguistics: selected papers from 12 ICEHL*, Glasgow, 21-26 August 2002. (pp. 251 – 265). John Benjamins Publishing Company: Amsterdam.