elpublishing

Language Documentation and Description

ISSN 2756-1224

This article appears in: *Language Documentation and Description, vol 18*. Editors: Candide Simard, Sarah M. Dopierala & E. Marie Thaut

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Cite this article: Sen, Satarupa. 2020. Mapping of spirantization and de-aspiration in Sylheti: An Optimality Theory analysis. In Candide Simard, Sarah M. Dopierala & E. Marie Thaut (eds.) Language Documentation and Description 18, 42-55. London: EL Publishing.

Link to this article: http://www.elpublishing.org/PID/198

This electronic version first published: August 2020

# Mapping of spirantization and de-aspiration in Sylheti: An Optimality Theory analysis

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## Abstract

Sylheti, with its long literary tradition and its own independent script and rich cultural heritage, is attracting increased attention in academia, thus opening numerous avenues for linguistic research. In this paper we explore consonant phonological patterns and their analysis within an Optimality Theory (OT) model. Sylheti bilabial plosive /p/ and velar plosive /k/, along with their aspirated counterparts /pʰ/ and /kʰ/, participate in spirantization, resulting in the fricative sounds /f/ and /χ/. Unlike related languages, spirantization in Sylheti occurs in pre-vocalic, inter-vocalic and post-vocalic positions, and can best be understood as competition between ranked constraints.

Sen, Satarupa. 2019. Mapping of spirantization and de-aspiration in Sylheti: An Optimality Theory analysis. *Language Documentation and Description* 18, 42-55.

## 1. Introduction

Sylheti is an Indo-European language spoken in the Barak Valley region of northeast Bangladesh and southeast Assam (India). It shares a high proportion of its basic vocabulary with Standard Colloquial Bangla (SCB or Bengali hereafter); Spratt & Spratt (1987) report 70% shared vocabulary, while Chalmers (1996) reports at least 80%. Table 1 gives some cognates between Sylheti and standard Bengali.

*Table 1. Sylheti and Bengali comparison*

| **Sylheti** | **SCB** | **English Gloss** |
|---|---|---|
| /hɑf/ | /ʃɑp/ | 'snake' |
| /aːɪz/ | /ɑːdʒ/ | 'today' |
| /χɔira/ | /kore/ | 'having done' |
| /χutai/ | /kotʰɑɪ/ | 'where' |

Phonological differences between Bengali and Sylheti point to influences on the latter from neighbouring Standard Colloquial Assamese (SCA or Assamese), as both languages have long been in contact due to their geographic proximity. Sylheti is therefore often considered to be a dialect either of Bengali or of Assamese, but because of significant morpho-phonological differences and a lack of mutual intelligibility, a strong argument can be made in favour of Sylheti claiming the status of a language in its own right.

This paper studies spirantization and de-aspiration processes in Sylheti with reference to SCB and SCA, within the framework of Optimality Theory (OT). Section 2 of this paper discusses lenition and the associated processes of spirantization and de-aspiration in Sylheti. This section sheds light on the theoretical background of the processes, and exemplifies each with instances from Assamese, Bengali and Sylheti. Section 3 introduces various Optimality Theoretic constraints used to analyse and describe the two processes in Sylheti. This section contains the relevant OT tables that analyse the examples of the processes in terms of constraints and their rankings. Section 4 concludes the paper with a summary of the research results.

## 2. Lenition, spirantization and de-aspiration in Sylheti

Lenition is a phonological process that involves the weakening of a sound as part of synchronic and diachronic language changes. Typically, it involves a change from a stop to a fricative, a fricative to an approximant, a voiceless sound to a voiced sound, or a sound being reduced to zero; spirantization (stop to fricative) and de-aspiration (aspirated segment to unaspirated) are particular instances of this overall process. A diachronic phonological analysis deals with the development of a particular phonological pattern over time, whereas

a synchronic phonological analysis provides a concise and specific description of the facts related to the phenomenon in question at a point in time. In the Optimality Theory (OT) framework, articulatory effort is taken as the motivation of lenition (Kirchner 1998). This section presents the theoretical background to this paper, with illustrative examples.

## 2.1 Lenition

The term 'lenition' was coined by Thurneyesen (1946:74) for whom it is a process 'used to describe a mutation of consonants which normally originated in a reduction of the energy employed in their articulation'. Lenition mostly affects consonants in intervocalic position (Thurneysen 1946) and is outside the domain of assimilation in place of articulation, the most common segmental interaction between consonants and vowels (or, sometimes, other sonorants). According to Odden (2005: 219), 'typical examples of lenition involve either the voicing of voiceless stops, or the voicing and spirantization of stops: the conditioning context is a preceding vowel, sometimes a preceding and following vowel.'

Lenition has received different interpretations in the literature, depending on the theoretical framework adopted. Most linguists, however, do acknowledge that the processes considered under the broad category of lenition are related and form a coherent group, though the defining criteria for a process to be categorised under lenition are largely debated.

Kirchner (1998) discusses the notion of lenition involving some abstract scale of 'strength', which might or might not be related to a fixed phonetic dimension, and distinct from the sonority scale. Foley (1977) explicitly adopts the concept of a 'lenition scale'. In subsequent studies, Hock (1992) and Lavoie (2001) add their own representations of the lenition scale that attempt to capture the generalisation that 'a segment X is said to be weaker than a segment Y, if Y goes through an X stage on its way to zero' (due to Vennemann, cited in Hyman 1975:165). Figure 1 presents an example of such a scale:

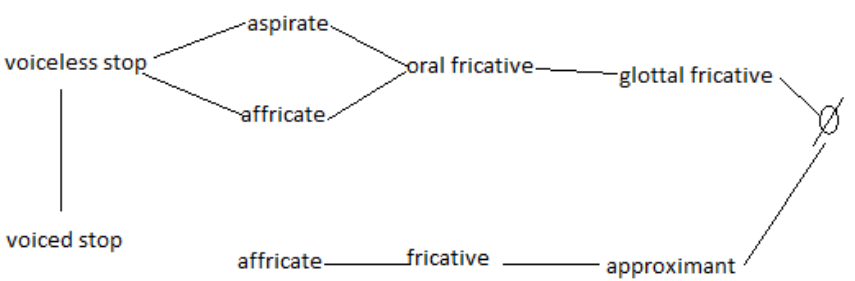


*Figure 1: Lenition trajectory* (*Lass 1984:178*)

In this paper, I adopt the definition by Ashby & Maidment (2005:141) of lenition as a process by which 'consonants can be arranged on scales of strength. The scales can be summed-up by saying that a consonant is stronger the more is differs from vowels; a consonant becomes weaker the more it comes to resemble a vowel'.

In the Autosegmental Metrical framework, lenition involves feature spreading (Harris 1983; Mascaro 1983; Jacobs & Wetzels 1988; Selkirk 1980; Cho 1990; Lombardi 1991). Harris (1990) defines lenition as the loss of private features; within the OT framework (see Kirchner 1998) it is expressed in terms of re-ranking of two constraints (LAZY, and faithfulness), or as a sonority promotion treatment (Foley 1977; Clements 1990, Hock 1991; Lavoie 1996). Dell & Elmedlaoui (1985), for example, propose the following sonority scale:

> stops> voiceless fricatives> voiced fricatives> nasals> liquids> high vowels/glides> low vowels

While the feature-spreading model takes into account processes like de-gemination, de-buccalisation, and elision, it fails to provide an account for why the sound change occurrs in inter-vocalic position, the most common environment for lenition. The sonority promotion treatment also fails, as it does not provide explicit and unified phonetic grounds to account for the lenition process. In the scale above, fricative sounds acquire characteristics of nasals when they undergo lenition. Further, this approach does not specify the environment in which lenition occurs.

Kirchner (1998) proposes that phonetic factors, notably ease of articulation, lead to lenition. He identifies specific and unified characteristics based on the phonotactics of particular languages, underpinned by the cost-effectiveness of the articulatory gestures involved. He suggests an OT constraint, LAZY, which interacts with the lenition blocking conditions of particular languages to form language-specific lenition constraints. Thus, the conflict between LAZY and language-specific lenition blocking faithfulness constraints, and their order of ranking, can account for all the sound changes brought under the label of lenition.

Kirchner (1998) argues that an articulatory gesture of greater displacement requires more effort than one of lesser displacement. Hence, fricatives involve lesser articulatory effort than stops, as articulatory displacement for target constriction for fricatives is less than that for stops. This is not agreed by all researchers, and, indeed, Boersma (1998) claims that despite greater articulatory displacement, a stop can be easier to pronounce than a fricative, which involves calculated effort to produce. Silverman (1997:5) supports Boersma's view: 'fricatives are marked and presumably involve more effort to properly implement in comparison to stops'.

## 2.2 Spirantization

Spirantization is a lenition process whereby stops lose their closure and are realised as fricatives. According to Rhee (1998), spirantization in most cases takes place where a target stop is adjacent to a [+cont] segment in pre-vocalic, post-vocalic, or inter-vocalic position. The inter-vocalic position, bounded by continuants, is cross-linguistically more favoured; the stop loses its [-cont] feature and gains a [+cont] feature.

For example, in (1), from the Chibchan language Paya Kuna, the stops /b, d, g/ change into /β, ð, ɣ/ following a stressed syllable (Pike 1943).

(1)

| **Paya Kuna** | **Gloss** |
|---|---|
| /paβa/ | father |
| /peðe/ | you |
| /naɣa/ | foot |

The following example is from Spanish, where the voiced stops /b, d, g/ undergo spirantization and are realised as /β, ð, ɣ/, respectively (Odden 2005: 219):

(2)

| **N** | **with N** | **there are Ns** | **Gloss** |
|---|---|---|---|
| burro | kom burro | aj βurros | 'donkey' |
| deðo | kon deðo | aj ðedos | 'finger' |
| gato | koŋ gato | aj ɣatos | 'cat' |

Here, the [+continuant] feature of the preceding vocoid leads to spirantization. The study of French spirantization by Jacob (1994) introduces an anti-association markedness constraint *LE/ [+voice, -cont], which prevents a voiced stop occuring in the context of lenition. Similarly, the ranking of *LENI (-cont) σ by Hahn (1998) over the faithfulness constraint IDENT (cont) is responsible for Spirantization in word-final position in German. These two approaches support the ranking constraints approach of Kirchner; however, they make it difficult to form a correlation between spirantization and other closely related lenition processes such as elision.

### 2.2.1 Spirantization in Assamese, Sylheti and SCB

In Sylheti, the bilabial plosive /p/ and velar plosive /k/, and their aspirated counterparts /pʰ/ and /kʰ/, are observed to participate in spirantization, resulting in the fricative sounds /f/ and /χ/. For example, we have:

(3)

| **Underlying** | **Sylheti** | **Gloss** |
|---|---|---|
| /kore/ | [χɔria] | ‘done’ |
| /palak/ | [falɔχ] | ‘spinach’ |

In Assamese, aspirated stops /pʰ/ and /bʰ/ are spirantized as [f] and [v] in word-final position, leaving the unaspirated stops unaffected. For example, /kɔpʰ/ ‘phlegm’ and /mapʰ/ ‘excuse’ surface as [kɔf] and [maf]. In word-initial and word-medial positions spirantization is blocked in Assamese. In Bengali, spirantization is also blocked, but not in Sylheti.

Example (4) demonstrates the spirantization processes in Sylheti and Assamese. Unlike the labial and coronal stops, the velar stops sometimes resist spirantization in Assamese, but in Sylheti, this transformation is available.

(4)

| **Underlying** | **Assamese** | **SCB** | **Sylheti** | **Gloss** |
|---|---|---|---|---|
| /ʃɒkʰ/ | [ʃɒkʰ] ~ [ʃɒχ] | [ʃɒkʰ] | [ʃɒχ] | ‘style’ |
| /dɛkʰ/ | [dɛkʰ] ~ [dɛχ] | [dækʰ] | [d̪ɛχ] | ‘to see’ |
| /dʊkʰ/ | [dʊkʰ] ~ [dʊχ] | [dʊkʰ] | [d̪uχ] | ‘sorrow’ |
| /ʃʊkʰ/ | [ʃʊkʰ] ~ [ʃʊχ] | [ʃʊkʰ] | [ʃʊχ] | ‘happiness’ |

Unlike word-final position, the word-initial and word-medial positions are not suitable environments for spirantization in Assamese. For example:

(5)

| **Underlying** | **Assamese** | **Gloss** |
|---|---|---|
| /pʰʊl/ | [pʰʊl] | ‘flower’ |
| /pʰʊɑɪɑ/ | [pʰʊɑɪɑ] | ‘fountain’ |
| /pʰɑgʊn/ | [pʰɑgʊn] | ‘name of a month’ |
| /gɔrbʰɔ/ | [gɔrbʰɔ] | ‘womb’ |
| /pɔrbɔ/ | [pɔrbɔ] | ‘section’ |
| /katʰɪ/ | [katʰɪ] | ‘stick’ |
| /pʰɔɪɪŋ/ | [pʰɔɪɪŋ] | ‘cricket (insect)’ |

### 2.2.2 Spirantization in Sylheti in pre-vocalic, inter-vocalic and post-vocalic positions

In Sylheti, the bilabial plosive /p/ and velar plosive /k/, and their aspirated counterparts /pʰ/ and /kʰ/, are observed to participate in spirantization, resulting in the fricative sounds /f/ and /χ/. For example:

(6)

| **Underlying** | **Sylheti** | **Gloss** |
|---|---|---|
| /kʰɔma/ | [χɔma] | ‘pardon’ |
| /pɔrɔkʰ/ | [pɔrɔχ] | ‘test’ |
| /murkʰɔ/ | [murχɔ] | ‘fool’ |
| /pʰʊl/ | [ful] | ‘flower’ |
| /pʰɔrɪŋ/ | [fɔrɪŋ] | ‘cricket (insect)’ |
| /pʰoɑrɑ/ | [fuɑrɑ] | ‘fountain’ |

Examples (7), (8) and (9) show comparative examples for Bengali and Sylheti in all three positions.

(7) Spirantization at pre-vocalic position

| **Bangla** | **Sylheti** | **Gloss** |
|---|---|---|
| /pɑt̪ɑ/ | /fɑt̪ɑ/ | ‘leaf’ |
| /pet/ | /fet/ | ‘belly, stomach’ |
| /pʰolɑ/ | /fʊla/ | ‘inflated’ |
| /pʰɔl/ | /fɔl/ | ‘fruit’ |
| /kɑt̪ʰ/ | /χɑt/ | ‘wood’ |
| /kɑdʒ/ | /χɑm/ | ‘work’ |
| /kʰɑlɪ/ | /χɑlɪ/ | ‘empty’ |
| /kʰɑt̪/ | /χɑt/ | ‘bed’ |

(8) Spirantization at inter-vocalic position

| **Bangla** | **Sylheti** | **Gloss** |
|---|---|---|
| /kʰõpɑ/ | /χufɑ/ | ‘kind of hairstyle’ |
| /kɑpoɽ/ | /χɑfɔr/ | ‘cloth’ |
| /t̪upʰɑn/ | /t̪ufɑn/ | ‘heavy storm’ |
| /ʈɑkɑ/ | /teχɑ/ | ‘money’ |
| /bɑ̃kɑ/ | /bɛχɑ/ | ‘bend’ |
| /pɑkʰɑ/ | /fɑχɑ/ | ‘fan’ |
| /rɑkʰɑl/ | /rɑχɑl/ | ‘shepherd’ |

(9) Spirantization at post-vocalic position

| **Bangla** | **Sylheti** | **Gloss** |
|---|---|---|
| /gatʃʰ/ | /gas/ | ‘tree’ |
| /matʃʰ/ | /mas/ | ‘fish’ |
| /lɑt̪ʰ/ | /lɑt̪/ | ‘kick’ |
| /mɑ̂tʰ/ | /mɑt/ | ‘field’ |
| /rakʰ/ | /raχ/ | ‘keep’ |
| /bʰukʰ/ | /buχ/ | ‘hunger’ |

Spirantization in Sylheti is a diachronic process. Concerning sound change, Chen & Wang (1975:278) state that it is 'mainly the concrete, phonetic properties of speech sounds that trigger or allow changes to take place in the sound system, and determine their subsequent development'.

## 2.3 De-aspiration

The process of de-aspiration refers to the loss of aspiration at a specific position in a syllable, where aspiration is the burst of air that accompanies the release of a given sound. In certain languages, such as English, aspirated sounds are in complementary distribution with their un-aspirated counterparts, making them allophones of a single phoneme, but in others, including most Indic languages, the aspirated and non-aspirated sounds are in contrastive distribution, and hence separate phonemes. Even so, in rapid speech aspiration may be dropped, as Gupta (1982) points out for Colloquial Hindi (especially Western Hindi).

(10)

| **Underlying** | **Hindi Form** | **Gloss** |
|---|---|---|
| /bʰuːkʰ/ | /bʰuːk/ | 'hunger' |
| /d̪uːd̪ʰ/ | /d̪uːd̪/ | 'milk' |
| /dʒʰɔkʰ/ | /dʒʰɔk/ | 'eccentricity' |
| /tʃʰatʃʰ/ | /tʃʰas/ | 'cream, whey' |

### 2.3.1 De-Aspiration in Assamese, Sylheti and SCB

In Assamese, de-aspiration affects coda consonants when they are followed by an aspirated onset, with stops replaced by their unaspirated counterparts. Note that the fricatives /f/ and /v/ become /pʰ/ and /bʰ/, respectively, when they are followed by obstruents, but not when followed by continuants (Dutta, 2012), as in (11).

(11)

| **Underlying** | **Assamese** | **Gloss** |
|---|---|---|
| katʰ kʰɒn | kat kʰɒn | 'the mat' |
| rɒt̪ʰ kʰun | rɒt̪ kʰun | 'the chariot' |
| ad̪ʰ bhag | ad̪ bhag | 'middle part' |
| kɒf kʰini | kɒpʰ kʰini | 'the phlegm' |
| lav kʰini | labʰ kʰini | 'the profit' |
| bɒrɒf kʰʊa | bɒrɒpʰ kʰʊa | 'to eat ice-cream' |
| bɒrɒf lua | bɒrɒf lua | 'to take ice cream' |
| bɒrɒf nai | bɒrɒf nai | 'no ice' |

De-aspiration does not occur in Standard Colloquial Bangla (SCB), but it does in Sylheti where the voiceless aspirates /pʰ/,/t̪ʰ/,/ʈʰ/,/kʰ/,/tʃʰ/ and voiced aspirates /bʰ/, /dʰ/. /ɖʰ/, /gʰ/, /dʒʰ/ turn into /p/, /t/, /ʈ/, /k/, /tʃ/, and /b/, /d/, /ɖ/, /g/, /dʒ/ respectively. In this process, they lose their spread glottis [+spg] feature. The voiced aspirates /bʰ/, /dʰ/, /ɖʰ/, /gʰ/ neutralize to the existing set of corresponding sounds with the specification [-son, +cons, +voice] i.e. /b/, /d/, /ɖ/ and /g/. For example:

(12)

| **Underlying** | **Sylheti** | **Gloss** |
|---|---|---|
| /ɖʰol/ | /ɖul/ | 'kind of musical instrument' |
| /ɑgʰɑːt̪/ | /ɑgɑːt̪/ | 'injury' |
| /matʃʰ/ | /mas/ | 'fish' |
| /boitʰa/ | /bɔita/ | 'oar' |

Similarly, voiceless aspirates /t̪ʰ/, /ʈʰ/ neutralize to /t̪/, /ʈ/, however the voiceless stops /pʰ/ and /kʰ/, and the affricates /dʒʰ/, and /tʃʰ/ lose both the laryngeal feature [+spg] and the manner feature [-cont] and spirantize. These developments provide a glimpse at the diachronic history of sound change in Sylheti; however, the de-aspiration process discussed in this paper is an account of synchronic sound change. Example (13) shows de-aspiration and spirantization.

(13)

| **Underlying** | **Sylheti** | **Gloss** |
|---|---|---|
| /pʰul/ | /ful/ | 'flower' |
| /kʰɑt/ | /χɑt/ | 'bed' |
| /tʃʰɑɪ/ | /sɑɪ/ | 'ash' |
| /dʒʰɑu/ | /zɑu/ | 'tamarind tree' |

### 2.3.2 De-aspiration process in Sylheti in pre-vocalic, inter-vocalic and post-vocalic positions

In contrast to Assamese and Bengali, de-aspiration is a very widespread phonological process in Sylheti. While Bengali shows no de-aspiration, and Assamese has preferred positions and environment for it, Sylheti shows de-aspiration in all positions in word. Examples (14), (15) and (16) illustrate this.

(14) De-aspiration in pre-vocalic position

| **Bangla** | **Sylheti** | **Gloss** |
|---|---|---|
| /bʰɑɪ/ | /bɑɪ/ | 'brother' |
| /bʰut̪/ | /but̪/ | 'ghost' |
| /dʰɑn/ | /dɑn/ | 'paddy' |
| /gʰɔr/ | /gɔr/ | 'house' |
| /ɖʰɔŋ/ | /dɔŋ/ | 'joking' |

(15) De-aspiration in intervocalic position

| **Bangla** | **Sylheti** | **Gloss** |
|---|---|---|
| /ɒbʰɪd̪ʰɑn/ | /bɪd̪ɑn/ | 'dictionary' |
| /kʰud̪ʰɑ/ | /χɪd̪ɑ/ | 'hunger' |
| /bˈɑtʰɑ/ | /bɛt̪ɑ/ | 'pain' |
| /pɪtʰɑ/ | /fit̪ɑ/ | 'type of dessert' |

(16) De-aspiration in post-vocalic position

| **Bangla** | **Sylheti** | **Gloss** |
|---|---|---|
| /gatʃʰ/ | /gas/ | 'tree' |
| /matʃʰ/ | /mas/ | 'fish' |
| /lɑt̪ʰ/ | /lɑt̪/ | 'kick' |
| /mɑ̃tʰ/ | /mɑt/ | 'field' |

## 3. Optimality Theoretic account of spirantization and de-aspiration

This paper discusses synchronic sound changes in Sylheti, especially lenition, and more specifically spirantization and de-aspiration. In his discussion of lenition processes and articulatory factors, Kirchner (1998) proposes the following cross-linguistic constraints:

LAZY: Minimize articulatory effort
IDENT(cont): Correspondent segments in input and output have identical values for continuancy

We adopt Kirchner's constraints, and analyse the spirantization process in Sylheti as taking place when minimising effort outranks maintenance of continuancy, i.e. LAZY>> IDENT(cont), as shown in Table 2.

*Table 2: Spirantization of /pʰ/ and /f/ in Sylheti*

| Input /pʰ/ | LAZY | IDENT(cont) |
|---|---|---|
| Candidates:<br>a. / pʰ/ | *! | |
| ☞ b. /f/ | | * |

Here, candidate (a) fails to fulfil the markedness constraint LAZY. Though candidate (b) violates the faithfulness constraint IDENT(cont), it is the optimal candidate as the markedness constraint LAZY is ranked above the faithfulness constraint IDENT(cont). Note that Sylheti does not have a voiceless bilabial plosive /p/ in any word positions. A highly-ranked context-specific markedness constraint can be proposed to ensure the lack of /p/ or its

aspirated counterpart in Sylheti vocabulary. Table (3) presents these constraints.

*[-cont, +/-voice] : the bilabial plosives are not allowed in a spirantization context.

*Table 3: Spirantization of /pan/ and /fan/ in Sylheti*

| Input: /pan/ | *[-cont,+/- voice] | LAZY | IDENT(cont) |
|---|---|---|---|
| Candidates:<br>a. /pan/ | *! | | |
| ☞ b. /fan/ | | | * |
| c. /ban/ | * | *! | * |

Here, candidates (a) and (c) do not qualify as optimal as they both fail to satisfy the highest ranking markedness constraint *[-cont, +/-voice]. Moreover, candidate (c) violates the crucially ranked constraint LAZY. Thus, candidate (b) becomes the optimal candidate, despite incurring a violation of the lowest ranking faithfulness constraint *[-cont, +voice].

The discussion by Davis & Cho (2003) about aspirated stops in American English proposes two constraints, one for markedness and one for faithfulness:

*-sg: The feature [+sg] is prohibited (can be treated as a general markedness constraint)
Max-sg: [+sg] in input must have a corresponding [+sg] in output.

These two constraints can be adopted for Sylheti, as shown in Table 4.

*Table 4: De-aspiration of /mat$^h$/ and /mat/ in Sylheti*

| Input: /mɑt$^h$/ | *-sg | Max-sg |
|---|---|---|
| Candidates<br>a. /mɑt$^h$/ | *! | |
| ☞ b. /mɑt/ | | * |
| c. /mɑd$^h$/ | *! | |

Here, candidates (a) and (c) do not qualify as optimal as they both fail to satisfy the highest ranked markedness constraint *-sg, thus making (b) the

optimal candidate. Sylheti exhibits both spirantization and de-aspiration within a single word, as shown in Table 5.

*Table 5: /phul/ and /ful/, Spirantization and de-aspiration in Sylheti*

| Input: /phul/ | *[-cont,+/- voice] | LAZY | *-sg | IDENT(cont) |
|---|---|---|---|---|
| Candidates:<br>a. / pʰul/ | | *! | | |
| b. /pul/ | * | | * | * |
| ☞ c. /ful/ | | | | * |
| d. /bul/ | *! | | * | |

Candidate (a) fails to qualify as optimal as it fatally violates the crucially high ranked markedness constraint LAZY. Candidates (b) and (d) both violate the highest ranked markedness constraint *[-cont., +/- voice], and so they can not be an optimal candidate. Although candidate (c) violates the lowest ranked faithfulness constraint IDENT(cont), it is chosen as the optimal candidate as it incurs the fewest violations.

## 4. Conclusion

Lenition is a robust phenomenon in Sylheti and it has been analysed in this paper within the Optimality Theory framework. Sylheti's preference for economy and ease of articulation can be observed in the spirantization and de-aspiration processes. In Sylheti, the bilabial plosive /p/ and the velar plosive /k/ and their aspirated counterparts /pʰ/ and /kʰ/ are observed to participate in spirantization, resulting in the fricative sounds /f/ and /χ/. Unlike neighbouring and related Assamese, Sylheti spirantization occurs in all three pre-vocalic, inter-vocalic and post-vocalic positions. It must be said, however, that instances of the velar plosive /k/ undergoing spirantization in syllable coda position are very limited. De-aspiration affects the voiceless aspirates /pʰ/, /t̪ʰ/, /ʈʰ/, /kʰ/, /tʃʰ/ and voiced aspirates /bʰ/, /dʰ/. /ɖʰ/, /gʰ/, /dʒʰ/, all of which lose their spread glottic [+spg] feature. This process also occurs in all three pre-vocalic, inter-vocalic and post-vocalic positions. Finally, aspirated voiceless and voiced palatal affricates /tʃʰ/ and /dʒʰ/ change into fricatives /tʃ/ and /dʒ/.
Spirantization and de-aspiration can be analysed in terms of rankings of four universal constraints as: *[-cont., +/- voice], LAZY >> *-sg, IDENT(cont). The synchronic analysis of spirantization and de-aspiration in Sylheti presented here contributes to the documentation of typological variation of lenition processes cross-linguistically.

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