

Syllabification Rule (9.0) and the Syllable Structure Condition - SSC- (10.0) in this paper are not true generalizations in this respect.¹ However, the two processes of gemination discussed in this paper, which produce the characteristic or distinctive rhythmic quality in modern spoken Sinhala, are shared by both levels and the SSC and Syllabification Rule apply in their description.

The two processes of gemination investigated in this paper are (i) Reduplication and (ii) Assimilation — Progressive and Regressive. Both are syllable structure processes involving strengthening and weakening respectively.

Strengthening and weakening are preferred syllable structure processes which, generally speaking, operate to produce the optimal — \$CV\$ — syllable structure. In Sinhala, however, these two processes, while preserving or creating the optimal syllable structure on the one hand, also violate the optimal syllable principle by preserving and/or creating \$CVC\$ and \$CCV\$ syllables. Yet both processes are extremely active and insuppressible in modern Sinhala and even colour the pronunciation of 'Ceylon English'. The dominance of the two processes, as well as their apparent contradictory behavior, demand and also merit further investigation and analysis. The examples in the following pages are intended to illustrate the processes, the environments that generate the processes and the resultant syllabic structure.

2.0 REDUPLICATION

The examples in 2.1 show consonant gemination in positions preceding syllable-initial vowels. The process operates at syllable boundaries which, in these examples, also coincide with word boundaries since this is essentially a process of compounding.

2.1 Reduplication I. $C \rightarrow CC/ - \#\$V$

- | | | | |
|----|-----------------|---|-------------------------------|
| a) | po #u ə | → | [pollu ə] |
| | \$CVC\$ VC | | \$CVC\$CV\$CV\$ |
| | coconut # stake | | 'A stake for husking coconut' |

- b) mal # a:sənəyə → [mal|la:sənəyə]
 \$CVC\$ V\$CV\$CV\$CV\$ \$CVC\$CV\$CV\$CV\$CV\$
 flower # seat 'altar'
- c) duk # ađo:na: → [duk|kađo na]
 \$CVC\$ V\$CV\$CV\$ \$CVC\$CV\$CV\$CV\$
 sorrow # wailing 'sorrowful wailing'
- d) ko:t̩ # ekə → [ko:t̩ t̩ekə]
 \$CVC\$ V\$CV\$ \$CVC\$ CV\$CV\$
 coat # one (def) 'the coat'
- e) bas # ekə → [bassekə]
 \$CVC\$ V\$CV\$ \$CVC\$CV\$CV\$
 bus # one (def) 'the bus'

In 2.2 reduplication results in the creation of C+LIQUID clusters within a syllable.

2.2 Reduplication II C → CC/\$ — C_[+LIQUID]

- a) a + priyə → [appriyə] ~ [appiriyə]
 \$V\$CCV\$V\$CV\$ \$VC\$CCV\$CV\$ \$VC\$CV\$CV\$CV\$
 un + pleasant 'unpleasant'
- b) paṭrə → [paṭṭrə] ~ [paṭṭərə]
 \$CV\$CCV\$ \$CVC\$CCV\$ \$CVC\$CV\$CV\$
 'paper/leaf' 'paper/leaf' 'newspaper'
- c) wakrə → [wakkrə]
 \$CV\$CCV\$ → \$CVC\$CCV\$
 'crooked/curved'
- d) wipləwə → [wipləwə]
 \$CVC\$CV\$CV\$ \$CVC\$CCV\$CV\$
 'revolutions'
- e) paṭlə → [paṭṭlə] ~ [paṭlə]
 \$CVC\$CV\$ \$CVC\$CCV\$ \$CVC\$CV\$
 'bottom'

Reduplication in 2.3 below results in the creation of C+GLIDE clusters in educated speech. In uneducated speech Progressive

Assimilation consistently eliminates the clusters but causes gemination. It is noteworthy that there appears to be a growing tendency to do this even at the educated level.

2.3 Reduplication III C → CC/ — \$C_[+GLIDE]

- a) $\underset{\$CVC\$CV\$}{\text{ɔakwa:}} \rightarrow [\underset{\$CVC\$CCV\$}{\text{ɔakkwa:}}] \sim [\underset{\$CVC\$CV\$}{\text{ɔakka:}}]$ 'show/drive (as cattle)'
- b) $\underset{\$CVC\$CV\$CV\$}{\text{t̪at̪wəy̥e}} \rightarrow [\underset{\$CVC\$CCV\$CV\$}{\text{t̪att̪wəy̥e}}] \sim [\underset{\$CVC\$CV\$}{\text{t̪atte}^+}]$ 'status'
- c) $\underset{\$CVC\$CV\$}{\text{kap + wa:}} \rightarrow [\underset{\$CVC\$CCV\$}{\text{kappwa}}] \sim [\underset{\$CVC\$CV\$}{\text{kappa:}}]$ 'cause to cut'
- d) $\underset{\$CVC\$CV\$}{\text{saɪy̥e}} \rightarrow [\underset{\$CVC\$CCV\$}{\text{satt̪iy̥e}}] \sim [\underset{\$CVC\$CV\$}{\text{satt̪e}^+}]$ 'truth'
- e) $\underset{\$CVC\$CV\$}{\text{wa:k̪y̥e}} \rightarrow [\underset{\$CVC\$CCV\$}{\text{wa:k̪k̪y̥e}}] \sim [\underset{\$CVC\$CV\$}{\text{wa:k̪ke}^+}]$ 'sentence'

(+ marks forms which occur in uneducated speech only.)

2.4 Ceylon English pronunciation exhibiting the three processes of Reduplication given above (2.1 - 2.3)

- a) 'not + at + all' $[\underset{\$CVC\$CVC\$CVC\$}{\text{noʔt̪æt̪t̪oʔl}}]$
- b) 'up + above' $[\underset{\$CV\$CV\$CVC\$}{\text{appəbav}}]$
- c) 'oppress' $[\underset{\$VC\$CCVC\$}{\text{oppres}}]$
- d) 'agree' $[\underset{\$VC\$CCV\$}{\text{əgri:}}]$
- e) 'igloo' $[\underset{\$VC\$CCV\$}{\text{igglu:}}]$
- f) 'supply' $[\underset{\$CVC\$CCV\$}{\text{səplai}}]$

- g) 'Edward' [edɔwəɖ] \$VC\$CCVC\$
 h) 'shipyard' [ʃippya:d] \$CVC\$CCVC\$

3.0 ASSIMILATION

Both Progressive and Regressive Assimilation occur in Sinhala. Regressive Assimilation is by far the most widespread. Progressive Assimilation is restricted and, although it operates at both levels, it appears to be more characteristic of uneducated speech (compare 3.1 with 2.3 above).

3.1 Progressive Assimilation I

$$C_{[+GLIDE]} \rightarrow C_{\left[\begin{array}{l} -GLIDE \\ \leftarrow \text{FEATURE} \end{array} \right]} / C_{\left[\begin{array}{l} -GLIDE \\ \leftarrow \text{FEATURE} \end{array} \right]} \$ -$$

- a) $\underset{\wedge}{d}akwa: \rightarrow [d\underset{\wedge}{a}kka]$ 'show/drive as cattle'
 \$CVC\$CV\$ \$CVC\$CV\$
- b) $\underset{\wedge}{p}enwa: \rightarrow [p\underset{\wedge}{e}nna]$ 'show'
 \$CVC\$CV\$ \$CVC\$CV\$
- c) $\underset{\wedge}{s}atya \rightarrow [s\underset{\wedge}{a}t\underset{\wedge}{t}e^+]$ 'truth'
 \$CVC\$CV\$ \$CVC\$CV\$
- d) $\underset{\wedge}{a}ranya \rightarrow [a\underset{\wedge}{r}anna]$ 'woods/retreat'
 \$V\$CVC\$CV\$ \$V\$CVC\$CV\$
- e) $\underset{\wedge}{a}dwaka:t \rightarrow [a\underset{\wedge}{d}d\underset{\wedge}{a}ka:t^+]$ 'advocate'
 \$VC\$CV\$CVC\$ \$VC\$CV\$CVC\$

A comparison of 3.1 and 2.3 shows Progressive Assimilation to be a process still in evolution; a process which is not yet fully established, but which nevertheless shows the current drift of the language.

3.2 Progressive Assimilation II

The forms in Column II below also exemplify the Progressive

Assimilation rule in 3.1 above but are the optional or secondary forms of a possible two-way phonological derivation. Both forms are common at the educated and uneducated levels. However, forms in column II are again more characteristic of the uneducated mode. As can be seen, the forms in column I result from minimal C insertion between two contiguous vowels and preserve \$CV\$ structure. The forms in column II, which are the forms relevant to gemination, result from Progressive Assimilation after the loss of a minimally distinctive vowel in the forms in column I, e.g.,

	ka <u>ɬ</u> u + ə	thorn + sing. def.
Minimal C insertion	[ka <u>ɬ</u> uwə]	Column I
Loss of minimally distinctive V	*ka <u>ɬ</u> wə	
Progressive Assimilation	[ka <u>ɬ</u> ɬə]	Column II

3.2		Column I		Column II	
a)	ka <u>ɬ</u> u + ə \$CV\$CV\$V\$	→ [ka <u>ɬ</u> uwə] \$CV\$CV\$CV\$	→ (*ka <u>ɬ</u> wə)	→ [ka <u>ɬ</u> ɬə] \$CVC\$CV\$	'thorn/ shell'
b)	ko <u>l</u> u + a \$CV\$CV\$V\$	→ [ko <u>l</u> uwa] \$CV\$CV\$CV\$	→ (*ko <u>l</u> wa)	→ [ko <u>l</u> lla] \$CVC\$CV\$	'boy'
c)	ba <u>ɖ</u> u + ə \$CV\$CV\$V\$	→ [ba <u>ɖ</u> uwə] \$CV\$CV\$CV\$	→ (*ba <u>ɖ</u> wə)	→ [ba <u>ɖ</u> ɖə] \$CVC\$CV\$	'thing/ article'
d)	gə <u>ɬ</u> i + ə \$CV\$CV\$V\$	→ [gə <u>ɬ</u> iyə] \$CV\$CV\$CV\$	→ (*gə <u>ɬ</u> yə)	→ [gə <u>ɬ</u> ɬə] \$CVC\$CV\$	'edge/ rims'
e)	pə <u>ɬ</u> i + a \$CV\$CV\$V\$	→ [pə <u>ɬ</u> iya] \$CV\$CV\$CV\$	→ (*pə <u>ɬ</u> ya)	→ [pə <u>ɬ</u> ɬa] \$CVC\$CV\$	'young of animals'
f)	so <u>l</u> ə + wa \$CV\$CV\$CV\$	→ [so <u>l</u> əwa] [ho <u>l</u> əwa] \$CV\$CV\$CV\$	→ [so <u>l</u> wa] \$CVC\$CV\$	→ [so <u>l</u> lla] [ho <u>l</u> lla] \$CVC\$CV\$	'shake' + causative
g)	ka <u>p</u> ə + wa \$CV\$CV\$CV\$	→ [ka <u>p</u> əwa] \$CV\$CV\$CV\$	→ [ka <u>p</u> wa] \$CVC\$CV\$	→ [ka <u>p</u> pa] \$CVC\$CV\$	'cut' + causative
h)	a <u>ɖ</u> ə + wa \$V\$CV\$CV\$	→ [a <u>ɖ</u> əwa] \$V\$CV\$CV\$	→ [a <u>ɖ</u> wa] \$CV\$CV\$	→ [a <u>ɖ</u> ɖa] \$V\$CV\$	'drag' + causative

The examples in f), g) and e) above are somewhat different in that the minimal C — i.e., /w/ — is not inserted but is underlyingly present in the causative suffix. They also show the plausibility of the starred (unrealized) forms in a) to e) by the overt presence of similar forms after the loss of the minimal vowel. These forms, however, are restricted to the educated mode.

3.3 Regressive Assimilation $C \rightarrow C_{[\alpha\text{FEATURE}]} / _ \$C_{[\alpha\text{FEATURE}]}$

- a) lip # galə → [lɪggalə] \$CVC\$CV\$CV\$ 'hearth stone'
 b) sabdə → [saddə] \$CVC\$CV\$ 'noise'
 c) atsənə → [assənə] \$VC\$CV\$CV\$ 'signature'
 d) taɪpərə → [tappərə] \$CVC\$CV\$CV\$ 'seconds'
 e) atlas → [allas] \$VC\$CV\$CV\$ 'bribes'
 f) haɪ # dawəsə → [haddawəsə] \$CVC\$CV\$CV\$CV\$ 'seven-day'
 g) duk # paɪ → [duppaɪ] \$CV\$CV\$CV\$ 'poor'
 'grief' # 'befallen'
 h) laksənə → [lassənə] \$CVC\$CV\$CV\$ 'beautiful'

This process, like Reduplication, is extremely active at both the educated and uneducated levels, but causes no apparent alteration in the syllable shape.

4.0 EXAMPLES OF NON-ASSIMILATION/REDUPLICATION

The examples below document the failure of the processes of gemination to operate when the environment is altered by a reversal of the sequential order of segments on either side of \$, thereby indicating that the processes of gemination are generated by certain constraints on the sequence structure of Sinhala.

4.1 V#\\$C Sequence [Reverse of 2.1]

- a) kalu # pol → [kalupol] 'a kind of curry'
black coconut
- b) me: # tənə → [metənə] 'here'
this place
- c) ædə # kuḡa → [ædəkudə] 'faults/shortcomings'
crook hump

4.2 $\left. \begin{array}{l} \text{LIQUID} \\ \text{GLIDE} \\ \text{FRICATIVE} \end{array} \right\}$ \\$C Sequence (Reverse of 2.2 and 2.3)

- a) ṭarkə → [ṭarkə] 'argument'
- b) kalpə → [kalpə] 'eons'
- c) asṭa:nə → [asṭa:nə] 'unfounded'
- d) kalḡe:rəmə → [kalḡe:rəmə] 'cauldron'
- e) awkənə → [awkənə] A place name.
- f) æyḡə → [æyḡə] 'why'
- g) kawḡə → [kawḡə] 'who'

To summarize, then, the two processes of gemination, Reduplication and Assimilation, occur across syllable boundaries and are controlled by the sequential order of segments on either side.

- a) Reduplication occurs when the second segment is either a vowel, a glide or a liquid (V, GL or L), i.e.,

$$C \rightarrow CC/ - \left\{ \begin{array}{l} V \\ GL \\ L \end{array} \right\}$$

- b) Progressive Assimilation operates in some instances of the C\\$GL sequence; the exact constraints for this have not been worked out in this paper.

- c) Regressive Assimilation, on the other hand, operates when the second agreement is not a V, GL, or L and when the first segment is not one of these or the fricative /s/.

If, however, the above sequences are reversed, i.e., when the preceding segment is a V, GL, or L and the following is any obstruents gemination is blocked (4.0).

In traditional Sinhala grammar, the processes of gemination illustrated above (2.0 - 3.0) have been viewed as processes of liaison or Sandhi. While using insights from such analyses, this paper will attempt to draw some significant generalizations, in relation to the observations above, in terms of the syllable structure proposed within the theory of Natural Generative Phonology (NGP) (Hopper 1972, 1976).

The syllable will be taken as the basic phonological unit or segment sequence. This was the case in traditional Sinhala phonology as well. Also following Hooper, consonantal strength (rather than distinctive features) will be used as a cover feature to classify the segments. Preliminary to the analysis, I shall give below (5.0) the intrinsic structure of the syllable from Hooper (1976:199).

5.0

MARGIN	NUCLEUS	MARGIN
Obstruents, Nasals, Liquids, Glides	Vowels, Glides, Liquids, Nasals, Obstruents	
Least V-like	Most V-like	Less V-like
STRONG	WEAKEST	WEAK

According to 5.0, the weakest position in the syllable is the vowel nucleus and the strongest position is the syllable initial position. The syllable final position is relatively weaker than the syllable initial position.

Based on this syllable structure and exemplifying the optimal syllable principle, the following hierarchy of suitability of segments for syllable initial and syllable final position has been presented (Hooper, 1976:224).

6.0 OPTIMAL SYLLABLE INITIAL: OBSTRUENTS
 NASALS
 LIQUIDS
 GLIDES
 VOWELS, OPTIMAL SYLLABLE FINAL

The representations in 5.0 and 6.0 embody the three universals of syllabic structure summarized as 7.0 below.

- 7.0 a) CV is the optimal syllable structure.
 b) Syllable initial position is stronger than syllable final position.
 c) Optimal choice for syllable initial position is obstruent and for syllable final position is vowel.

How do these principles of syllabification apply to Sinhala? The possible distribution of consonants in the Sinhala Syllable (8.0) and the Major Syllabification Rules (9.0) below are indeed consistent with these principles.

8.0 THE SINHALA SYLLABLE

\$ C_m C_n V C_p \$

m₁ — p ṭ <ṭ>² k b ḍ <ḍ> g (s)

(m₁ = cluster initial position)

m — p ṭ ṭ č k b ḍ ḍ j̣ g m n s š h w y r l (ḅ ḍ ḍ ġ)

n — y w r l

p ṭ <ṭ> k m n /s-

p — y w r b ḍ ḍ j̣ g (not word finally)

p ṭ ṭ č k s š m n ŋ

9.0 SYLLABIFICATION RULES

- a) $\phi \rightarrow \$/C-C$ (Does not apply word initially)
 b) $\phi \rightarrow \$/V- CV(C)$

Early in this paper, the two processes of gemination in Sinhala, (Reduplication and Assimilation) were claimed to be Syllable Structure processes involving strengthening and weakening respectively. The feature changes they generate are therefore to be taken as directly conditioned and described by the Syllable Structure Conditions given above (11.0); more specifically by the SSC that $C_m > C_p$ in a contiguous sequence $XVC_p\$C_m$, where there is no pause between C_p and C_m . Let us review the two processes in relation to this SSC.

12.0 REDUPLICATION

mal # aʌ

REGRESSIVE ASSIMILATION

lip # galə

a) SSC inserts \$

$$\begin{array}{c} \$mal \# \$a\$tu\$ \\ CVC \quad V \hat{C}V \end{array}$$

$$\begin{array}{c} \$lip \# \$ga\$l\text{ə}\$ \\ CVC \quad CV CV \end{array}$$

b) A compounding or juncture rule eliminates the pause and brings together two segments violating the special condition that $C_m > C_p$ and/or the optimal syllable principle.⁴

$$\begin{array}{c} \$mal\$a\$tu\$ \\ 3 \quad \phi \quad \hat{C} \end{array}$$

$$\begin{array}{c} \$lip\$ga\$l\text{ə}\$ \\ 7 \quad 6 \end{array}$$

c) SSC generate a weakening or strengthening process as required — i.e., gemination — to adjust the strengths of segments on either side of \$.

$$\begin{array}{c} \$mal\$la\$tu\$ \\ CVC CV \hat{C}V \\ 3 \quad 3 \\ \longleftarrow \end{array}$$

strengthened

 $\$V\$ \rightarrow \$CV\$$

$$\begin{array}{c} \$lig\$ga\$l\text{ə}\$ \\ CVC CV CV \\ 6 \quad 6 \\ \longleftarrow \end{array}$$

weakened

No change

Reduplication also preserves the optimal syllable principle by inserting a C in syllable initial position. While no apparent change takes place in the shape (i.e., CV remains CV) of the syllable after Regressive Assimilation, the strength adjustments caused by it alter the structure of the syllable.

The rules for Reduplication and Regressive Assimilation are given as 13.0 and 14.0 below. The environments of the two rules, shown in terms of C strength, reveal the two processes to be mutually exclusive.

13.0 REDUPLICATION

$$\phi \rightarrow C \begin{bmatrix} \alpha \text{FEATURE} \\ \alpha \text{STRENGTH} \end{bmatrix} / C \begin{bmatrix} \alpha \text{FEATURE} \\ \alpha \text{STRENGTH} \end{bmatrix} \$ - \left\{ \begin{matrix} \alpha \\ \beta \end{matrix} \right\} \begin{bmatrix} \alpha \text{FEATURE} \\ \alpha \text{STRENGTH} \end{bmatrix} \left[\leq 3 \text{ STRENGTH} \right]$$

14.0 REGRESSIVE ASSIMILATION

$$C \begin{bmatrix} \alpha \text{FEATURE} \\ \beta \text{STRENGTH} \end{bmatrix} / - \$ C \begin{bmatrix} \alpha \text{FEATURE} \\ \beta \text{STRENGTH} \end{bmatrix}$$

Where β is > 3 .

Gemination, then, occurs at a syllable boundary when a segment which occupies the C_p position has a higher strength value than the one in C_m . More specifically, however, Reduplication (and Progressive Assimilation, which has not been fully dealt with here) takes place when C_m is ≤ 3 in the strength scale and is weaker than C_p , Regressive Assimilation takes place when C_p is ≥ 5 on the strength scale and $C_m > 3$. In Regressive Assimilation the dominant factor is the strength of syllable position. It is the consonant in syllable initial, or stronger, position (C_m) which dictates the assimilation regardless of its inherent features or strength value relative to the weakly positioned C_p , as long as C_m meets the condition that it is > 3 on the strength scale. Total assimilation, of course, results in C_p having no non-redundant features — i.e., C_p becomes non-distinctive or weakened.

This paper has viewed gemination as a syllable structure process which is specifically aimed at meeting the SSC that if C_m and C_p are contiguous, with no pause in between, then $C_m > C_p$. Since the geminate consonants, whether generated by reduplication or assimilation, are identical in feature and strength, the question arises as to whether this condition has been met.

Hooper (1976) claims that total assimilation is a weakening process. The acquisition of feature values from surrounding

segments reduces the distinctive function of the assimilated C. Also, the weakening occurs in C_p whose position in the syllable is intrinsically weaker. Even when the result of the assimilation is, according to the strength hierarchy, stronger than the original C, the C remains weakened as all redundant features have been lost. In Sinhala, Regressive Assimilation is generated to reduce the strength of C_p if it is contiguous with a C_m of > 3 strength which is weaker than or equal to it. Reduplication (and progressive assimilation) is generated when, in the contiguous sequence, $C_m < 3$ strength and $C_p > C_m$ by even one step on the scale. Again the reduplicated C is non-redundant in all its features but occupies a position of intrinsic strength in the syllable.

In the case of geminate pairs then, be they lexically present or generated by the SSC, the member occupying the C_p position is universally considered weak (Harris 1969). A rather loosely stated Redundancy Rule, 15.0 below, is adequate to make this generalization.

15.0 REDUNDANCY RULE

$$\text{STRENGTH} \left(C \begin{array}{l} \alpha\text{FEATURE} \\ +\text{RELEASED} \end{array} \right) > \text{STRENGTH} \left(C \begin{array}{l} \alpha\text{FEATURE} \\ -\text{RELEASED} \end{array} \right)$$

By this rule, a greater strength value (perhaps +1) is assigned to the released counterpart of a geminate pair. Thus the numerical value of the segments on the strength scale would be augmented by one (+1) where the feature [+released] is present, which would necessarily be the segment in the C_m position, and the SSC that $C_m > C_p$ will be met. For example, observe 16.0 below (from 12.0).

16.0 REDUPLICATION

\$ma|la\$tu\$
 C_p C_m
 3 3
 └──┬──┘
 ↑

REGRESSIVE ASSIMILATION

\$lig\$ga\$le\$
 C_p C_m
 6 6
 └──┬──┘
 ↑

d) C_m augmented by the Redundancy Rule (15.0)

C_p C_m
 3 3+1

C_p C_m
 6 6+1

It would appear, therefore, that these preliminary observations support the tenability of the hypothesis that gemination in Sinhala is a syllable structure process. However, the primary function of this process seems to be to meet the SSC in Sinhala that, in a contiguous sequence unbroken by a pause, $C_m > C_p$ rather than to preserve the optimal ($\$CV\$$) syllable structure. While the latter is also achieved in a marginal sort of way, the evidence in the preceding pages shows that gemination operates strongly to meet this special SSC, often even violating the Optimal Syllable Principle by creating or preserving $\$CVC\$$ or $\$CCV\$$ syllables.

NOTES

¹Educated speech allows syllable initial clusters of a restricted nature:

Educated Speech		Uneducated Speech
[priyə]	'beloved'	[piriyə]
[prəka:sə]	'public'	[pareka:sə]
[wast̪rə]	'clothing'	[wast̪ərə]
[swa:mi]	'master'	[suwā:mi]
[nya:yə]	'law'	[niya:yə]
[bre:k]	'break'	[berek]
[træ:m]	'tram'	[t̪ærəŋ]
[kri:m]	'cream'	[kiriŋ]

In uneducated speech, however, the SSC requires the insertion of $\$$ without exception between consonants. When a single consonant is left over by this rule, epenthesis takes place by a vowel insertion rule which usually copies the following vowel, except when the second C is a glide — w/y. In this case u/i respectively are inserted. This was a productive process in early Sinhala and remains so in uneducated speech today.

A further constraint exists on clusters with initial /s/ in uneducated speech. In educated speech /p, t, k, m, n/ also occur following /s/. In uneducated speech an epenthetic rule operates to break up the cluster. However, epenthesis occurs in initial positions preceding /s/ and the inserted vowel is the minimal vowel realized as /i/ in this position of word initial stress: e.g.:

Educated Speech		Uneducated Speech
[stá:nə]	'places'	[ísta:nə]
[sná:yu]	'sinews'	[íshá:yu]
[strí:]	'woman'	[ístiri]
[stó:ruwə]	'store'	[ísto:ruwə]
[sté:səmə]	'(railway) station'	[íste:səmə]

²<> indicate these are restricted to English loan words.

³These are the prenasalized stops in Sinhala. They have a restricted distribution occurring only in syllable initial inter-vocalic positions, e.g.,

[aḅə]	'mango'
[aḁə]	'blind'
[aḍə]	'sound'
[aḡə]	'horn/antler'

⁴It is noteworthy that early Sinhala exhibits a rule (active today in the language of poetry) that shifted the syllable boundaries in such cases to preserve the CV syllable structure.

$$\begin{array}{c} \$ma|\$a\$tu\$ \rightarrow \$ma\$|a\$tu\$ \\ \text{CVC V CV} \quad \quad \text{CV CV CV} \end{array}$$

Reduplication also creates a CV syllable but while doing so it retains the CVC syllable as well.

$$\begin{array}{c} \$ma|\$a\$tu\$ \rightarrow \$ma|\$|a\$tu\$ \\ \text{CVC V CV} \quad \quad \text{CVC CV CV} \end{array}$$

REFERENCES

- Bentara, Dharmasena Sthavira (ed). 1948. *Siyabas Lakara Vivaranaya*. Colombo: M.D. Gunasena & Co.
- Harris, James W. 1979. Some substantive principles in natural generative phonology, in Dinnsen (ed) *Current Approaches to Phonological Theory*. Bloomington: Indiana University Press.
- Householder, Fred W. 1979. How different are they? Review article in Dinnsen (ed) *Current Approaches to Phonological Theory*. Bloomington: Indiana University Press.

- Hooper, Joan B. 1976. *An Introduction to Natural Generative Phonology*. New York: Academic Press.
- Hooper, Joan B. 1979. Substantive principles in natural generative phonology, in Dinnsen (ed) *Current Approaches to Phonological Theory*. Bloomington: Indiana University Press.
- Hyman, Larry M. 1975. *Phonology: Theory and Analysis*. New York: Holt, Rinehart and Winston.
- Kisseberth, Charles W. 1972. On derivative properties of phonological rules. In Michael K. Braeme (ed) *Contributions to Generative Phonology*.
- Kisseberth, Larry M. and Michael Kenstowicz. 1977. *Topics in Phonological Theory*. New York: Academic Press.
- Paranavitana, S. 1956. *Sigiri Grafitti II*. Oxford University Press.
- Tennekoone, R. (ed). 1954. *Sidat Sangara Vivaranaya*. Colombo: M. D. Gunasena & Co.
- Welipatanwila, Dipankara Maha Thero (ed). 1953. *Elu Sandes Lakuna*, 2nd ed. Matara: Matara Welendo.