REDUPLICATION IN LAMNSO?

A DISSERTATION PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTERS DEGREE IN LINGUISTICS

BY

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JUNE 1997
DEDICATION

To my momma
Maryam Yongla Yiinyuy Ndzenyuy
who suffered the pains of my delivery,
brought me up in a christian manner,
and has continued to cater
both in prayer and in deed,
for my spiritual and secular well being

and

To my niece
Maika Chineken Kuvinyoh
who, by chance, or by design,
left this world at a tender age.
May her soul rest in perfect peace!
ACKNOWLEDGEMENTS

I am grateful to my brother Shey Ndzenyuy Henry Kuvinyoh for his devotion to my intellectual, spiritual and material nourishment. Without his encouragement and financial support, I could never have dreamt of a research project like this one.

I thank my supervisor, Ngessimo Mutaka, who introduced me to a branch of Linguistics - Generative Phonology, that won my love and interest, and continued to guide me throughout my research work. I acknowledge the help that he gave me when I was choosing my topic and equally all the instructive comments that he made and which led me to understand many linguistic phenomena.

I thank all my teachers of the Linguistics department of the University of Yaounde I. This work is a manifestation of their knowledge that they shared with me.

I am very grateful to all my informants, who either informed me on Lámnsö? generally, or verified my data, or did both. I refer particularly to my dad Ndzenyuy Solomon, Mr Miye Martin of the Nsö? language committee, Banadzam Relindis Nsaalav - a Lámnsö? language teacher, and Yuveyonge Dzeayeh Paulette.

I am particularly grateful to Nyuydzemo-on Dolores for reading the scripts and verifying the Lámnsö? in it.

I thank Karl Grebe and Winnie Grebe of the Summer Institute of Linguistics, Bamenda, for their hospitality and readiness to share with me any information that could help me in my research work. I acknowledge my extensive use of Grebe’s discoveries in Lámnsö?.

I am very grateful to the Summer Institute of Linguistics, Yaounde: to the library staff in general and to Esther Tawe in particular who readily helped me to get all the information I wanted from the
library; and to the organizers of the Tone Workshop Seminar of 30th September to 8th November 1996, I am referring here particularly to Keith Snider, Steven Bird and Jim Roberts. They inspired me a lot in learning how to do a tonal (phonetic and phonological) analysis of a language.

My special thanks go to the family of my brother, Shey Wiyeh Ndzenyuy Tobias, which made me feel at Kikaikom (home) in Yaounde, providing me with the parental and material support that enhanced the realization of this work.

I acknowledge the help given to me by my friends in the realization of this work. I refer here to: Umenjoh Florence, Yovka Alice, Tata Celestin, Yuyun Terence, Ngwa Gerald and all others that I might have forgotten unintentionally.

Much regards to my typist, Mme Jackie, who has taken her time to put this work into this formal and beautiful shape.
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ABBREVIATIONS AND SYMBOLS

C  Consonant
V  Vowel
Fig Figure
H /′  high tone
M /−  mid tone
L /−  low tone
  high-low contour tone
σ  Syllable
O  onset
R  rhyme
N  nucleus
Co  Coda
Suffi₁  lexical suffix
Suffi₂  grammatical suffix
X  base
Dn  Denasalization
œ  Zero
/  in the environment of
...⇒  becomes
=  equal to
RTS  Regressive Tone Spreading
PTS  Progressive Tone Spreading
  ungrammatical
W  word
+  plus
−  minus
|  association lines
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CHAPTER ONE:
GENERAL INTRODUCTION

The topic of this thesis is “Reduplication in Lámnsc.” In this general introduction we will include: the aim of study; the scope of work; motivation of choice of topic; an introduction to Lámnsc (location, sounds and graphemes, syllable and word structure); a definition of some terms and concepts as used in the work; a literature review; the methodology used; and a brief announcement of the plan of work.

1.1. AIM OF STUDY

The aim of this study is twofold: firstly, to show that reduplication is an important resource used to enrich the Lámnsc vocabulary; and secondly, to demonstrate how the regular process of reduplication takes place in Lámnsc.

For a start, we can define reduplication as the partial or whole repetition of a base, where the base may be a word, or a stem, or a root, or even an affix. For instance the Lámnsc word bām “hill” is repeated wholly - bām.bām, to mean “full of hills,” or “hilly,” or “like hills.”

1.2. SCOPE OF WORK

Reduplication in Lámnsc is vast and varied. It will be unfair to say that we can explain all forms of reduplication in Lámnsc, in this work, given the limited time allocated to this research work. We have therefore focussed on reduplicative processes that constitute part of the morphophonology of Lámnsc especially those that are more regular and frequent in the language. In this light,
we have distinguished four forms of reduplicative processes taking place in Lämnsō?: whole-word reduplication which is common in nouns, pronouns, adjectives and adverbs; whole-stem reduplication which involves only monosyllabic stems, and is attested in nouns, verbs, adjectives and adverbs; partial reduplication where the initial CV of the stem is repeated to the left, for intensity (this form is particular to nouns); and partial reduplication where the initial CV of the stem is repeated to the left and the repeated V made long. This last form of reduplication is particular to adjectives and adverbs.

We have also included cases of surface reduplications which underlyingly do not result from reduplicative processes, but from other morphological processes like compounding, possession, affixation and borrowing.

1.3 Motivation

The choice of the topic “Reduplication in Lämnsō?” was motivated by the researcher’s interest in Generative Phonology and in tonal analysis. Of course, reduplication as a morphophonological process (SPENCER 1991) provides a good base for Generative Phonology.

The researcher suspected that the reduplication process in Lämnsō? could bring out some phonological rules as well as interesting tonal processes - Lämnsō? being a tone language. In fact, the Denasalization rule, the Regressive Tone Spreading rule and the Progressive Tone Spreading rule, discussed in chapters two and three, all show that the researcher’s suspicion was somehow founded.
1.4 Lámnsô?

1.4.1 Location of Lámnsô?

1.4.1.1 Geographical Location

Lámnsô? is spoken in three of the five subdivisions of Bui Division in the North West province of Cameroon. These three subdivisions are: Kumbo, Jakiri and Mbvan Subdivisions. Lámnsô? is the language of the Nsô? tribe, spoken by the Nsô? people (and even non - Nsô? people like the Oku people, and the family of Karl Grebe of Canada, to whom the major (existing) scientific works in Lámnsô? are attributed). The Nsô? people are located mainly in Bui Division, in the three subdivisions mentioned above. However, we do find large communities of Nsô? people spotted all over the national territory and even in other countries like Nigeria, Germany, and the United States of America.

The locality of Ns ô? covers an area of about 2300 square kilometers, with a population of about 250,000 people (CHEM - LANGH2 and FANSO V.G, 1997, 43)

Below, in Figure 1, is an administrative map of Cameroon which situates Bui Division within the vast territory of Cameroon. The map is graduated into provinces, and the North West Province is further graduated into divisions.
LOCATION OF BUI DIVISION IN CAMEROON

KEY

North West province

Bui Division

International boundary

Provincial boundary

Divisional boundary

National Capital

1 Doga - Mantum
2 Menchum
3 Boyo
4 Momo
5 Mezam
6 Ngo-Ketunjia

0 — 200KM

SOURCE: Adapted from NJODZEKA: 1996, 8

Fig. 1
The purpose of Figure 1 is to locate, pictorially, Bui Division which is the seat of Lamnsô$, in Cameroon. As shown in Figure 1 above, Bui Division is one of the seven divisions that make up the North West Province of Cameroon.

Figure 2 below is a map of Bui Division divided into the five subdivisions that make up the division. The purpose of this map is to indicate pictorially, the three subdivisions of Bui Division in which Lamnsô$ is the sole, if not, the major language of communication, and also to indicate neighbouring languages to Lamnsô$.

As shown in Figure 2 below, Lamnsô$ is bounded to the North by the Limbum Language spoken in Donga Mantum division, to the North East by Mbe and Tikari, spoken in Nwa subdivision in Donga Mantum division, to the East, South East and South by Shupamom, the language of the Bamoun people spoken mainly in the Noun Division of the Western province, to the South West by Wushi and Bapakum (Mungaka) spoken in Ngo-ketunja Division and to the North West by Kuo (Oku) and Noni respectively, spoken respectively in the Oku and Noni Subdivisions of Bui Division.
1.4.1.2 Linguistic Location

The Linguistic Location of Lámnso? is based on the classification of African languages by Greenberg (1966). He classified African languages from top to bottom into: phyla, sub-phyla, families, sub-families, branches, sub-branches, groups and specific languages. His classification was based on a comparative study of vocabularies that grouped African languages into affinity groups.

Although Greenberg (1966) did not mention Lámnso? in his classification, Lámnso? has been classified following his approach. The classification of Lámnso? in this work follows from the results of the preliminary inventory of the Linguistic Atlas of Cameroon (ALCAM) --- a national programme involved in research in national Languages. This programme, which was born in the University of Yaounde in 1971, set out to make an inventory and classification of all Cameroonian languages, and to do detailed research in these languages. By 1983, this programme had identified up to 237 languages in Cameroon, and after further research, the number rose to 248 by 1993. All these languages have been given a fresh classification (ALCAM, 1983).

Lámnso?, which is numbered in ALCAM (1983) as 830, can be traced from the Niger Kordofan phylum, to the Niger Congo sub-phylum, to the Benue Congo family, to the Bantoid subfamily, to the Western Grassfield Bantu sub-branch, to the East Ring group and finally to Lámnso? itself. The above classification is captured pictorially in Figure 3 below which shows a genealogical tree of Lámnso? based on Greenberg’s classification of African languages. Lámnso?, unlike most African languages, has no dialectal variations (Grebe:1984)

1 The three-figure ALCAM numbers have some significance. The first figure corresponds to one of the nine geographical zones of The Preliminary Inventory (ALCAM 1983), the second figure to a group of languages genetically similar and the third figure corresponds to the language proper, in the interior of the genetic group (BRETON, Roland and Fohtung BIKIA 1991).
The genealogical tree of Lámmso? based on Greenberg's classification of African Languages

Source: Adapted from ALCAM (pages: 352, 360, and 362)
1.4.2 SOUNDS AND GRAPHEMES OF Lāmnənəʔ?

1.4.2.1 Vowels

There are six short vowel sounds in Lāmnənəʔ. These vowel sounds are included in figure 4 below.

```
<table>
<thead>
<tr>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td>a</td>
<td>-round +round</td>
</tr>
</tbody>
</table>
```

Figure 4: The Lāmnənəʔ Vowel chart (Source: GREBE, 1984)

The six vowel sounds above are represented by six graphemes which are identical to the sounds, that is, /i/ is represented orthographically by “i”, /e/ by “e”, /a/ by “a”, /o/ by “o”, /a/ by “a”, and /u/ by “u.”

Vowel length is distinctive as in (1) below.

(1) a) sū "to wash"
    b) suū "to harvest completely"
    c) dā "tall"
    d) dāā "to make a bridge"
    e) bī "bad"
    f) bīī "hole"
As shown in example (1) above, a long vowel is written as a vowel geminate.

1.4.2.2 Consonants

If we include prenasalized sounds and labialized sounds there will be altogether 53 consonants in Lámnsó at the phonetic level. All these sounds are represented below in figure 5.

All the sounds in figure 5 below are similar to their corresponding graphemes except in the following cases where the sounds differ from the graphemes: [ɲ] = “ny” [ʃ] = “sh” [ɣ] = “gh” [tʃ] = “c” [dʒ] = “j” [ʔ] = “?” or “’” but in this work we will use “?.”

As figure 5 below indicates, we will use C in this work to refer to simple consonants as in go “to hit” and to complex consonants as in CVC

<table>
<thead>
<tr>
<th>CVC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ngəŋ</td>
<td>“fool”</td>
</tr>
<tr>
<td>gwər</td>
<td>“to cut”</td>
</tr>
<tr>
<td>ngvəv</td>
<td>“fowl”</td>
</tr>
</tbody>
</table>

(CVC)

There are only seven consonants in Lámnsó that can occur at word final position. These include [ʔ, m, n, ɲ, y, r, v]
<table>
<thead>
<tr>
<th>Place of Articulation</th>
<th>Articulator</th>
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<tr>
<td>Velars</td>
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<tr>
<td>Labial</td>
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<td>Alveolar</td>
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<td>Palatal</td>
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<tr>
<td>Labiodental</td>
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<tr>
<td>Dentoalveolar</td>
<td>Dentoalveolar</td>
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<td>Dentoalveolar</td>
</tr>
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1.4.2.3 Tones

Lámnso? is a complex language in terms of its tonal structure. Research done so far puts the register tones at five and the contour tones at three (GREBE 1986 and the Language Committee). These tones include: two levels of High, a Mid tone, two levels of Low, a High-Low contour, High-Mid contour and a Low-High contour. We have used the following diacritics to mark the tones:

/ for the two levels of High as in kun "tail / beans"
- for Mid tone as in láv "house"
\ for the two levels of Low as in ndzayı "clothes / to delay"
^ for High-low contour as in sáy "grave"

The remaining tones that GREBE (1984) and GREBE (1986) called contours (that is, High-Mid as in dzây "road" and Low-High as in mbiír "bell") may not really be considered as contours since they occur only on long vowels and long vowels are bimoraic.

From the notation of tone above one can realize that we have not distinguished between the two levels of High and the two levels of Low. This is because in our analysis of reduplication in Lámnso? we did not find any processes motivated by tone height, and also, in most works written in Lámnso? (included in the literature review and Bibliography), theses distinctions have not been made.

The tone bearing unit is [+syllabic] segments which include the six vowels and a syllabic nasal [m] as in m-táár "thirty" and m "I (pronoun)"

[m] is the only surface syllabic nasal in Lámnso?; it is used as a prefix to mark numbers from twenty upwards as in m-báá "twenty," m-kwèè "forty" and sometimes it can be used as a word like the first person singular pronoun (m = I).

In this work all tones will be marked.
1.4.3 Syllable and word structures in Lāmnasō?

1.4.3.1 Syllable Structure

There are six types of syllables in Lāmnasō: V, VC, CV, CVC, CVV, CVVC. These structures are drawn below in (2), where σ =syllable, O = onset, R = rhyme, N = nucleus and Co = Coda

(2) a) σ
   | R
   | N
   | V
   à “you”
   à- prefix (as in à-báà = two)

The syllable form that has only the nucleus as in (a) above, can be found only in pronouns and affixes - especially in isolation

b) σ
   | R
   | N
   | Co
   V
   C
   è y! exclamation
   -i n} suffixes in isolation
   -i r}
This is a very rare form of syllable found only in interjections and suffixes (in isolation)

c
\[
\begin{array}{c}
\sigma \\
\downarrow \\
O \\
\downarrow \\
R \\
\downarrow \\
| \\
N \\
\downarrow \\
| \\
C \\
\uparrow \\
V \\
\end{array}
\]

b á “to weave”
d á “tall”

This is the core syllable in nouns, verbs, adjectives and adverbs (GREBE, 1984)

d
\[
\begin{array}{c}
\sigma \\
\downarrow \\
O \\
\downarrow \\
R \\
\downarrow \\
| \\
N \\
\downarrow \\
\bigwedge \\
C \\
\uparrow \\
V \\
\end{array}
\]

b í i “hole”
w è è “slowly”

This type of syllable is found in nouns, verbs, adjectives and adverbs.

e
\[
\begin{array}{c}
\sigma \\
\downarrow \\
O \\
\downarrow \\
R \\
\downarrow \\
\bigwedge \\
N \\
\downarrow \\
Co \\
\downarrow \\
| \\
C \\
\uparrow \\
V \\
\end{array}
\]

mb è “shoulder”
a m “language”
This is the most common syllable in Lánnso? particularly in monosyllabic words

(1) 

This is the maximum syllable in Lánnso?

1.4.3.2 Word Structure

We will view word structure in terms of the number of syllables per word and the number / type of morphemes that make up a word.

The number of syllables per word range from one syllable to five syllables as in (3) below

(3) 
a) mbám  
   CVC  
   "money"

b) saá. mbá  
   CVV.CV  
   "seven"

c) ñgá. shí. ñgá  
   CV. CV.CV  
   "cassava"

d) ki - ndzá. rá. ñkfá?  
   CV  CV. CV.CV  
   "measles"

e) ki - ñkù. úá. ýó. ýó  
   CV  CV. CV.CV.CV  
   "lizard"
In (3) above, the dots indicate syllable boundaries, the hyphens separate the prefix (which constitutes a syllable) from the stem. From (3) a to e, respectively we have monosyllabic, disyllabic, trisyllabic, four-syllable and five-syllable words.

Nouns, pronouns, adjectives and adverbs can have any of the number of syllables per word exemplified in (3) above. But verbs have only monosyllabic and disyllabic words; so far there is only one trisyllabic verb - cēkērē “to sift” which is also a noun meaning “sieve”

As far as the combination of morphemes to form words is concerned, Lámnsō? is mainly agglutinating, that is, many words consist of two or more morphemes (root and affixes).

The root or basic stem in Lámnsō? is monosyllabic (GREBE, 1984)

The main structure of nouns is prefix plus stem as in (4) below

(4) a) shi-ńăn “bird” (noun class 19)  
    b) mē-naŋ “politics” (noun class 6a)  
    c) ki-ngōm “banana” (noun class 7)  
    d) vi-lăn “stones” (noun class 8)  
    e) a-lūm “husbands” (nouns class 2)

Altogether Lámnsō? has five prefixes (shi-, mē-, ki-, vi-, a-) that mark some noun classes as indicated in (4) above. The other noun classes (classes 1, 3, 5, 9, 10) have zero prefixes. The noun classes in Lámnsō? were worked out by GREBE (1984). He brought out ten noun classes in Lámnsō?, using Proto-Bantu numbering, and following Hyman (1980: 248) who established the correspondences between the noun classes of Proto-Bantu and those of the Ring Languages of the Western Grassfield sub-branch.

The basic structure of verbs is stem plus suffix as in (5) below

(5) a) yi -kîr “to eat”  
    b) bâ? -tí “to gather”
GREBE (1984) brought out twelve suffixes in Lámsó?, which he classified into grammatical (-i, -in) and lexical suffixes. He further grouped the lexical suffixes into: distributive (-kir, -ti, -ri); causative (-ir, -si); inchoative (-sin, -in, -iy); reciprocal (-nin) and diminutive (-tir).

All words in Lámsó? can take both prefixes and suffixes, except verbs which only take suffixes (GREBE, 1984).

Lámsó? is also isolating and synthetic. It is isolating where the tense marker is expressed by a separate morpheme as in Bâá ki yikir “the father ate (today)”

It is synthetic following its pronoun system where a single form can be used to indicate person, number, feminine, masculine, case. For example wù “he/she” is used to express third person, singular, feminine, masculine, subject.

1.5 DEFINITION OF TERMS / CONCEPTS

1.5.1 Reduplication, template, base and reduplicate

Reduplication has been defined variously by different writers, for instance:

MARANTZ (1982) (in what he calls a tentative definition) defines it as “a morphological process, relating a base form of a morpheme or stem to a derived form that may be analyzed as being constructed from the base form via the affixation (or infixation) of phonemic material which is necessarily identical in whole or in part to the phonemic content of the base form.”
CRYSTAL (1986:259) defines reduplication as “a term in morphology for a process of repetition whereby the form of a prefix / suffix reflects certain phonological characteristics of the root.”

The above two definitions are sufficient for us to infer that reduplication is a process (morphological); it is affixation (MARANTZ 1982, McCARTHY and PRINCE (1986), MUTAKA and HYMAN (1990); it is repetition (partial or whole). Examples of reduplication in Lámnso? include:

(6) a) vi-kiy. vi-kiy “full of women”
    (vi-kiy = women)
b) ki-lēŋ.lēŋ “echo”
    (lēŋ = the flow)
c) shi-ngväŋväv “a very small fowl”
    (ŋväv = fowl)
d) tētēr “very easy / easily”
    (tēr = easy / easily)
e) lalán “net”

The template refers to the reduplicative affix (McCARTHY and PRINCE 1986). MUTAKA (1994) defines it as “.... A shape-invariant prosodic category on which melodic elements associate.” He, just like McCARTHY and PRINCE (1986), stipulates that templates consist of prosodic categories like word, syllable, foot; But MARANTZ (1982) considers a template as a C-V skeleton that may not necessarily make up a prosodic unit. In any case, a prosodic unit like syllable, foot, word, can still be specified at the level of the C-V Skeleton. The case of Lámnso? favours the argument that reduplicative affixes, or templates are prosodic units. For instance, there are four templates in Lámnso? (chapters two and three); a word; a syllable; a core syllable (an onset and a nucleus) and a heavy core syllable (an onset and two nuclei). Templates lack a segmental domain, so they trigger the copying of the melody of the units to which they attach.
A base is a unit to which a template is affixed; it can be a word, a stem or a root. On the other hand, a reduplicate is the material under the template. In a case of prefixation we have reduplicate - base as in

\[
\text{sháa} - \text{shár} \quad \text{“very little” (shär = little)}
\]

### 1.5.2 Categories of Speech

The categories or parts of speech that we have used in this work include: nouns, pronouns, verbs, adjectives and adverbs. The use of these categories here follows the definitions of PERRIN (1990).

A noun names a person, place, thing, idea, quality or condition. Examples of nouns in Lámsô? include:

(7) a) lükôŋ \quad \text{“name of person”}
b) Nsô? \quad \text{“name of place”}
c) lán \quad \text{“bowl”}
d) mè-nâŋ \quad \text{“politics”}
e) mè-ndzân \quad \text{“sorrow”}

Pronouns are those elements that can take the place of nouns, that is, they substitute for nouns, for example:

(8) a) wù \quad \text{“he/she”}
b) kí \quad \text{“it”}
c) shér \quad \text{“ours”}

Verbs can express action or a state of being. Some verbs in Lámsô? include:
Adjectives and adverbs are describing words. An adjective describes a noun or a pronoun while an adverb describes verbs, adjectives, other adverbs, phrases, clauses, and even sentences.

Examples of adjectives include:

(10) a) mòtò “one”
    b) dà “tall”
    c) tsám “short”
    d) ki-téq “wrong”

Most of what English considers as adjectives have been verbalized in Lámsó:\ for example:

(11) a) white = fà “to white” (to be white)
    b) good = bòq “to good” (to be good)
    c) black = són “to black” (to be black)

Examples of adverbs in Lámsó:\ include:

(12) a) lèn “now”
    b) ròq “down”
    c) ki-jàvodz “in the morning”

Many adjectives and adverbs overlap in Lámsó:\; for example:

(13) a) mbiy “first / ahead”
    b) tèr “easy / easily”
    c) jùq “good / well”
    d) ki-távin “strong / strongly”
e) nyááñ “peaceful / peacefully”
f) jééy “different / differently”
g) weè “slow / slowly”
h) cér “fast / quickly”

1.6 Literature Review

Most writers on Lámmso? recognise the fact that reduplication is a pertinent process going on in the language. But they just mention it in passing, without going into the intricacies of the process. For instance, GREBE (1984) in The Domain of Noun Tone rules in Lámmso? just mentions reduplication as one of the word formation processes in the Language. Dzelambong (1996: 55) in The influence of Mother Tongues on English Language Usage in Cameroon: A Case Study of Lámmso? talks of word reduplication in Lámmso?, but ends at the level of definition and a few functions. He defines word reduplication as “the process of doubling or repeating a word to express the fact that something happened time and again…” and goes further to say that reduplication shows “…degree or quantity of something…and … time of an action.” His aim is to show how native speakers of Lámmso? tend to transfer reduplication from Lámmso? into English, hence leading to the pidginization of English.

Although literature on reduplication in Lámmso? is very limited and scanty, it is worth mentioning that there exists a commendable literature, both technical and non-technical in Lámmso?. By technical, we refer to descriptive literature on the grammar or vocabulary of Lámmso?. By non-technical, we refer to literature written in Lámmso?, but not about Lámmso? itself.

Some of the technical literature (in addition to the two books mentioned above) include: A phonology of the Nso Language (1973) by GREBE, Karl and
GREBE, Winnie. It is a structural analysis of the phonology of Lámnso? using the approach proposed by Pike (1947) in *Phonemics*.


All these works indicate that the pace has been set for probing into Lámnso? grammar. It is therefore normal and logical that we contribute to the knowledge of this grammar by describing reduplication which is part of the grammar.


Also, Kintati Ke Lik Nsö? (the Nsö? Language Committee), is publishing “Saëka Nso” (a newspaper written in Lámnso?). Three editions are already published: the first one in November 1995; the second in March 1996; and the third in July 1996. The newspaper relates events in Nsö?, Cameroon and the other parts of the world. It also includes some lessons on the teaching of Lámnso?.

1.7 METHODOLOGY

1.7.1 Sources of Data

As a native speaker of Lámnso?, I was my main source of information or data. But, I equally depended on the data, and some verifications of my own data,
that I got from the field through my father, Audenyyu Solomon (85 years). Mrs Banadzam Relindis, a Lámnsö? teacher, and Mr. Miye Martin the Secretary of the Lámnsö? Language Committee.


1.7.2 Classification of data

After collecting data of about 300 reduplications (and pseudo-reduplications), and with a word list of about 2000 words (Banyee William (1992) at my reach, I classified the data into five categories of speech: nouns, pronouns, verbs, adjectives and adverbs: Then I classified each category of speech into tone groups and into syllable groups (monosyllabic, disyllabic, trisyllabic, etc.). Nouns were further classified tentatively into noun classes following Grebe (1984 ). All these classifications were in a bid to get all the possible influences on the reduplicative process in Lámnsö?.

The reduplicated forms were classified per category of speech into whole-word reduplication, whole-stem reduplications and partial reduplications.

In the analysis proper we proceeded to identify the different morphemes, that is, the bases and the reduplicates, and to posit how the reduplication process takes place at the segmental tier and at the tonal tier.
1.7.3 Theoretical Framework

The general theoretical framework used here is Generative, in the sense that surface phonetic structures are generated from underlying structures.

The theory of Generative Grammar was introduced by Noam Chomsky in his Syntactic Structures (1957) (Allerton 1979, 3). Chomsky’s first application of his approach was in syntax where he emphasized on the generation of surface structures of sentences from deep structures using transformational rules. He later applied this approach to phonology in The Sound Patterns of English (Chomsky and Halle 1968).

Nevertheless, reduplication is currently analyzed autosegmentally (Marantz 1982), McCarthy and Prince (1986), Mutaka and Hyman (1990). This approach emphasizes the independence of tiers, such that reduplication is analyzed as the affixation of a skeletal tier, that is, a tier not defined in the segmental tier, to a base morpheme or word.

Although Goldsmith (1976) originally propounded the autosegmental theory to analyse tone separately from segments, the theory has been expanded to englobe other domains like nasalization, labialisation, reduplication.

The idea of the generative approach here is equally employed very broadly to refer to the generation of surface structures from deeper more abstract structures.

1.8 PLAN OF WORK

This work is divided into four chapters:

Chapter one is the general introduction to the whole work. It introduces us to: the aim and scope of work; the motivation of the choice of topic; Lámnsôʔ (location, sounds, graphemes, syllable and word structures); Certain terms like reduplication, reduplicate, template, base, and categories of speech used; literature review of Lámnsôʔ; methodology used; and the plan of work.
Chapter two starts with the exploration of reduplication in Lámsō?, how it takes place in nouns and pronouns.

Chapter three is a continuation of our expedition on reduplication in Lámsō?, this time in verbs, adjectives and adverbs.

Chapter four concludes the work. It includes: other forms of reduplications (ideophonic, pseudo-, and syntactic reduplications) going on in Lámsō?, that may not be categorized in the frameworks of chapters two and three; and a general conclusion to the work.
CHAPTER TWO:

REDUPLICATION IN NOUNS AND PRONOUNS

This chapter shows how reduplication works in Lámsò in two speech categories - nouns and pronouns. It is divided into two sections, with each section devoted to reduplication in each category of speech. The sections are further divided into subsections, with each subsection analyzing a particular type of reduplication in a given category.

Reduplication will be analyzed here, as the addition of a phonemically bare affix to a base morpheme or word, which then triggers the mapping of the base's phonemic melody to the affix (Marantz 1982, McCarthy and Prince 1986).

As for the nature of the reduplicative affix we will define it in terms of what McCarthy and Prince (1986) call "authentic prosodic units," that is, word, stem, syllable, etc. But where need be, we will specify the C-V skeleton (Marantz 1982) composing the prosodic unit.

The analysis in each subsection will consist in seeking answers to the questions in (14), some of which are adapted from Mutaka and Hyman (1990).

14. A. What is the meaning of reduplication?
   B. What is the nature of the template or reduplicative affix?
   C. Is the template prefixed, infixed or suffixed?
   D. What is the melody copied?
   E. What is the direction of melody mapping to the template?
   F. What are the resulting phonological (segmental) processes?
   G. How is the tone assigned in reduplication?
2.1 REDUPLICATION IN NOUNS

There are three types of reduplication in Lámsó? nouns. We have named these:

a. whole-word reduplication
b. whole-stem reduplication
c. partial-stem reduplication

2.1.1 Whole-Word Reduplication

Lámsó? words which fall under “nouns” reduplicate entirely to mean “full of X,” or “like X” where X stands for the base word. Below are examples of whole-word reduplication for monosyllabic words (15), disyllabic words (16) and polysyllabic words (17). The examples are divided into three columns each: the first column is the base noun or word, the second column is the reduplication of the base, and the third column is the gloss.

15. a) lá lá.lá handle (of hoe)
   b) shúuí shúuí.shúuí mouth
   c) fúm fúm.fúm forehead
   d) ndzóy ndzóy.ndzóy clothe(s)
   e) mbiír mbiír .mbiír bell

16. a) kí-cií kí-cií.kí-cií tree
   b) à-ntá? à-ntá?. à-ntá? chairs
   c) mè-ndzóan mè-ndzóan .mè-ndzóan sorrow
   d) kává? kává?. kává? throne
| 17. | a) ki-bënri | ki-bënri , ki-bënri | rainwater |
|     | b) ki-ŋkãmálûr | ki-ŋkãmálûr , ki-ŋkãmálûr | spider (a species) |
|     | c) à-sàlãmàndà | à-sàlãmàndà , à-sàlãmàndà | shoes (a type of) |
|     | d) bvârângi | bvârângi , bvârângi | blanket |
|     | e) cèkèrè? | cèkèrè? , cèkèrè? | sieve |

The hyphens separate the prefixes from the stems while the dots show the boundary between the base and the reduplicate.

Before proceeding with the analysis of the data in (15,16,17), it is worth noting that all nouns in Lámsô? can undergo whole-word reduplication, whether they are monosyllabic, disyllabic or polysyllabic.

When we observe the second column of the data in (15,16, and 17), we cannot easily say which is the base noun and which is the reduplicate noun. But, if we take from Marantz (1982) that reduplication is simply affixation, and we take again from Grebe (1984) that the basic noun structure in Lámsô? is Prefix + Stem as in (18)

| 18. | Prefix - Stem |
| a. | ki - ngôm | banana |
| b. | à - lábá? | shoes |
| c. | mè - ndzév | water |

then we will have grounds to say that noun reduplication is simply prefixation and as such it has the structure
In (19) below, we will give derivations for

i) fům.fům “full of forehead(s)” or “like forehead”
ii) a-ntăʔ.â-ntăʔ “full of chains” or “like chains”
iii) ki-bʊŋri.ki-bʊŋri “full of rainwater” or “like rainwater”

to demonstrate how whole-word reduplication takes place in Lámnsōʔ nouns.

19. We have the base words

a) i. W ii. W iii. W Word

Syllable

Segments

Tones

“forehead” “chains” “rainwater”

We prefix the word reduplicative template to the base

b) i) W W ii) W W iii) W W

fům a-ntăʔ ki-bʊŋri

H L M L H H

H L M L H H
The phonemically bare prefix triggers the copying of the base melody to the left. Basing on the similarity between the tone in the reduplicate and that in the base, we copy the tone alongside the segments.

c) i) \[w \text{ W} \]
   | |
   \[\sigma \sigma \sigma \]
   \[\hat{\text{a-nta?}} \quad \hat{\text{a-nta?}} \quad \text{Ki-bu'ri} \quad \text{Ki-bu'ri} \]
   \[H \quad H \quad L \quad M \quad L \quad M \quad L \quad H \quad H \quad H \quad H \]

We assume that before mapping to the word template the copied material undergoes automatic syllabification after the base as follows:

d) i) \[w \text{ W} \]
   | |
   \[\sigma \sigma \sigma \sigma \]
   \[\hat{\text{a-nta?}} \quad \hat{\text{a-nta?}} \quad \text{Ki-bu'ri} \quad \text{Ki-bu'ri} \]
   \[H \quad H \quad L \quad M \quad L \quad M \quad L \quad H \quad H \quad H \quad H \quad H \]

We then map the syllable nodes to the word template from left to right:

e) i) \[w \text{ W} \]
   | |
   \[\sigma \sigma \sigma \sigma \]
   \[\hat{\text{a-nta?}} \quad \hat{\text{a-nta?}} \quad \text{Ki-bu'ri} \quad \text{Ki-bu'ri} \]
   \[H \quad H \quad L \quad M \quad L \quad M \quad L \quad H \quad H \quad H \quad H \quad H \quad H \quad H \quad H \quad H \quad H \]

full of foreheads
or
like forehead

full of chairs
or
like chairs

full of rainwater
or
like rainwater

To summarize whole-word reduplication in Lámsón nouns we will answer the analysis-questions in (14) thus:
A) Reduplication means full of X or like X where X is the reduplicating word or base word.

B) The template is a word

C) The word template is prefixed

D) The entire melody of the word is copied

E) The direction of melody mapping is left to right

F) No special phonological rule results from reduplication

G) The tone is copied alongside the segmental melody

2.1.2 Whole-Stem Reduplication

A monosyllabic noun stem in Lámnsô? reduplicates entirely to create a new lexical item from an existing one. Examples of whole-stem reduplication in Lámnsô? include:

20. a) géé “tiredness”  
     géé.géé “fifth day of the Nso week”

     b) ntāŋ “sticky substance”  
     ntāŋ.tāŋ “trouble”

     c) rōm “rainbow”  
     vi- rōm.rōm “October”

     d) tōŋ “navel”  
     vi- tōŋ.tōŋ “hiding places”

     e) sō? “fibre”  
     ki- sō?.sō? “bamboo stump”

     f) ki-ci “tree”  
     ci.ci-wār “flag” (wār - to shake)

When we look at (20) above, we may think that only (20f) ci.ci wār “flag” (from ki-ci “tree”) can be called stem reduplication, since the others seem just to be monosyllabic words. There are three reasons that have led us to entitle this subsection as whole-stem reduplication (and not whole-word reduplication): first, monosyllabic words (nouns) in Lámnsô? are potential stems because they have no inherent prefix. Hence our assumption here is that monosyllabic words quality to be
called stems. Secondly if the mono-syllabic words in (20a-e) were reduplicating as words, they will not have the meanings in (20), rather they will have the meanings in (21) below.

21. a. gêê.gêê “full of/like tiredness”
   b. ntâng.ntâng “full of/like sticky substance”
   c. râm.râm “full of/like rainbow”
   d. tôn.tôn “full of/like navel”
   e. sô?.sô? “full of/like fibre”

Thirdly, the fact that the reduplicated forms in (20) can still undergo reduplication at word level as in (22) below confirms that the title of this subsection as whole-stem reduplication is appropriate.

22. a. gêê.gêê, gêê.gêê “full of/like fifth day of the week”
   b. ntân.tân, ntân.tân “full of/like trouble”
   c. vi- râm.râm, vi- râm.râm “full of/like October”
   d. vi- tôŋ.tôŋ, vi- tôŋ.tôŋ “full of/like hiding places”
   e. kî sô?.sô?, kî- sô?.sô? “full of/like bamboo stump”

For the forms in (20c, d and e), which surface with a noun class prefix, we have assumed that the noun class prefix attaches only after whole-stem reduplication has taken place. We cannot say that these forms:

\[
\begin{align*}
&[\text{vi- râm.râm}] & [\text{vi- râm}*] \\
&[\text{vi- tôŋ.tôn}] & \text{come from } [\text{vi- tôŋ}^*] \text{ because the latter forms} \\
&[\text{ki- sô?.sô?}] & [\text{ki- sô?}^*] \\
\end{align*}
\]

have no meanings in Lámsô?, that is why they are starred; although they are possible future words because they have the structure of Lámsô? words.
We already assumed in subsection 2.1.1 above, that in noun reduplication the template is prefixed. Since whole-stem reduplication in Lámmso? involves only monosyllabic stems (because we did not find any examples for disyllabic and polysyllabic stems in the language), we will analyze it as the prefixation of a syllable template to a monosyllabic unit (stem). To show how this type of noun reduplication takes place, we will give illustrative derivations in (23) below, for

(23)  i) Gëe.gëe “fifth day of the week”  
       ii) ntæŋ.tæŋ “trouble”  
       iii) Ki-sô?.sô? “bamboo stump.”

We have the unreduplicated monosyllabic stems:

a)  i) σ  ii) σ  iii) σ  
    \[ \text{gee} \quad \text{ntæŋ} \quad \text{sô?} \]    Syllable
    \[ \text{“tiredness”} \quad \text{“sticky substance”} \quad \text{“fibre”} \]    Segments
    \[ \text{HL} \quad \text{L} \quad \text{H} \]    Tone

We prefix a syllable template

b)  i) σ σ  ii) σ σ  iii) σ σ  
    \[ \text{gee} \quad \text{ntæŋ} \quad \text{sô?} \]    
    \[ \text{HL} \quad \text{L} \quad \text{H} \]    

We copy the segmental melody to the left in a bid to specify the syllable template in the segmental domain (The tone just like in (19) c is copied alongside the segments)
We map the copied melody to the syllable template from left to right

The noun class prefix attaches to specify the noun class for the reduplicated form. (This is not obligatory)

At this stage we still have one problem, that of doing away with the prenasal of the onset of the second syllable in “ntâŋ.ntâŋ” so as to derive the surface structure ntâŋ.tâŋ (20b).” In this case we can posit a denasalization rule to denasalize the onset of the second syllable.

Rule 1: Denasalization (Dn) rule: a prenasalized consonant denasalizes when it follows a nasal consonant. The rule can be stated in features thus:

\[
[+\text{consonantal}] \rightarrow [\text{consonantal}] \quad \text{and} \quad [+\text{nasal}] \rightarrow [-\text{nasal}] 
\]
Hence the rule denasalizes the onset of the second syllable thus:

f) i) $\sigma\sigma$  

\[
\begin{array}{c c c}
\text{gee} & \text{gee} & \text{ntaq} \\
\text{HL} & \text{HL} & \text{L} \\
\text{L} & & \text{H} \\
\end{array}
\]

We therefore, have the surface structures:

g) i) "fifth day of week" ii) "trouble" iii) "bamboo stump"

There are some onomatopoeic reduplications in Lâmsô which can be accounted for in a similar way. Some of these onomatopoeic words are included in (24) below:

(24) a) pâmpâm "tin or can"  
(pám-noise made when an empty tin or can is hit)

b) kwâŋ.kwâŋ "An arrow shouting device"  
(kwâŋ-noise made when an arrow is shot)

c) shi-tüm.tüm "motorbike"  
(tüm-noise made by the engine of a motorbike when in motion)

To summarize whole-stem reduplication in nouns we will give the following answers to the questions in (14):
A. Reduplication means that a new lexical item is created from an existing monosyllabic stem (which more often is also a monosyllabic word).

B. The reduplicative template is a syllable

C. The one syllable template is prefixed

D. The entire melody of the stem is copied

E. The melody is mapped to the template, from left to right.

F. Reduplication results in the Denasalization rule

G. Tone is copied alongside the segments.

2.1.3. Partial-stem Reduplication in Nouns

Lámsóʔ noun stems reduplicate partially to intensify diminutives. The paradigms (25) (26) and (27) below show partial reduplications in monosyllabic, disyllabic and polysyllabic nouns respectively. The first column is the noun, the second column shows the diminutive of the noun, which means “a small x,” the third column is the reduplication which means “a very small x” where “x” refers to the respective noun in column one, then the last column is the gloss.

(25) a) cū shi-cū shi-cū-cū offering
b) bāā shi-bāā shi-bā.bāā father
c) Kūn shi-kūn shi-kū.kūn beans
d) nyōy shi-nyōy shi-nyō.nyōy cutlass
e) bvām shi-bvām shi-bvā.bvām stomach

(26) a) wānlē shi-wānlē shi-wā.wānlē child
b) būūnē shi-būūnē shi-bū.būūmē sleep
c) fōvtāʔ shi-fōvtāʔ shi-fōfōvtāʔ blackjack
d) lûmèn shî-lûmèn shî-lûlûmèn man
e) shûûlûv shî-shûûlûv shî-shû.shûûlûv door

(27) a) nsîâ bûlû shî-nsîâbûlû shî-nsâ.nsâbûlû soap
b) tsâmccère? shî-tsàmccère? shî-tsàtsàmccère? cricket
c) ngàshìngá shî-ngàshìngá shî-ngàngàshìngá cassava
d) bvàràngí shî-bvàràngí shî-bvà.bvàràngí blanket
e) wànyêêtô shî-wànyêêtô shî-wà.wànyêêtô Mongoose

We observe in the data above (25) (26) and (27), that diminutive prefixation precedes partial-stem reduplication in Lámnsô? grammar. Of course, we must first have diminutives before we can intensify them. The prefix shi-, in addition, to marking noun class 19 also marks the diminutive of nouns in Lámnsô? (GREBE (1984)). The first impression we make from simple observation of the type of reduplication in (25) (26) and (27) is that a syllable template with a fixed skeletal structure - an onset and a nucleus, is inserted between the diminutive prefix and the stem, that is

∅ \rightarrow \phi / \text{Diminutive} \quad \rightarrow \text{stem}
\wedge \text{prefix}

(Insert a syllable having only an onset and a nucleus between the diminutive prefix and the stem) such an insertion rule (as above) will be defined purely in a morphological environment, but it will not be surprising, as reduplication is morphophonological. However, there are many words in Lámnsô?, as in (28) below, which are reduplicated in a similar manner but they do not have diminutive prefixes.
The data in (28) above is analyzed under ideophonic reduplications in section 4.1.1. It shows reduplication which is similar to that in (25) (26) and (27), and can therefore be accounted for in the same way; so instead of inserting the syllable template between the diminutive prefix and the stem, we will consider that the template is prefixed, as illustrated in (30) below.

Nevertheless, before illustrating in (30) how the syllable template is prefixed, let us note that unlike whole-word reduplication and whole-stem reduplication where we did not specify the CV skeleton for the syllables, because we assumed that there was automatic syllabification of the copied material; here, with partial-stem reduplication, we have to deal with a situation where the syllable is limited only to an onset and a nucleus, in the C-V skeletal tier. In this case, we will specify the following rules or conditions in (29) (based on MARANTZ (1982,446-47)) for mapping copied segments to the C-V skeleton.

a) [-syllabic] segments can link only with C-slots and
[+syllabic] segments can link only with V-slots

b) Segments are linked to CV slots one to one, there can be no multiple attachments. Unattached segments are truncated

c) The association of segments to the CV skeleton is phoneme-driven, that is, each segment scans along the C-V skeleton until it finds an appropriate slot under condition (a) above.
We give in (30) below derivations for

i) shi-bvá.bvám “a very small stomach”
ii) shi-lúlúmén “a very small man”
iii) shi-nsá.nsaabulu “a very small soap”

to illustrate how partial-stem reduplication takes place in nouns.

We have the base nouns:

<table>
<thead>
<tr>
<th>(30)</th>
<th>a)</th>
<th>i)</th>
<th>ii)</th>
<th>iii)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word</td>
<td>Syllable</td>
<td>CV</td>
<td>Skeleton</td>
<td>Segments</td>
</tr>
<tr>
<td>“stomach” “man” “soap”</td>
<td>“a small stomach” “a small man” “a small soap”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We attach the diminutive prefix (since we must first have diminutive before intensifying it)

<table>
<thead>
<tr>
<th>(30)</th>
<th>b)</th>
<th>i)</th>
<th>ii)</th>
<th>iii)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word</td>
<td>Syllable</td>
<td>CV</td>
<td>Skeleton</td>
<td>Segments</td>
</tr>
<tr>
<td>“a small stomach” “a small man” “a small soap”</td>
<td>“a very small stomach” “a very small man” “a very small soap”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
c) i) $\sigma$ $\sigma$ 
$\sigma$ $\sigma$ $\sigma$ $\sigma$
CV CVC CV CV CVC

(shi)-bvam (shi)-lumen
\[ \text{HL} \]

The brackets in (c) above suggest that the diminutive prefix is prosodically circumscribed and thus rendered invisible to the syllable template. Hence, the template is prefixed to the stem (or base word).

d) i) $\sigma$ $\sigma$ $\sigma$
CV CVC CV CVC

shi-bvam shi-lumen
\[ \text{HL} \]

In order to specify the template in the segmental domain we copy the entire melody (STERIADE 1988) of the stem to the left.

e) i) $W$
$\sigma$ $\sigma$ $\sigma$ $\sigma$ $\sigma$
CV CVC CV CV CVC

shi-bvambvam shi-lumen lumen
\[ \text{HL} \]

The copied segments map to the template from left to right following the rules in (29) above.
The remaining segments have no skeletal slots to which to map so they are truncated (MUTAKA and HYMAN(1990))

We are, hence, left with the following structures

So far in the derivations, we have not marked tone in the reduplicates. This is because we have analyzed the reduplicates as being underlyingly toneless, that is, tone is not copied along with the
segmental melody. Consequently, the reduplicate gets the tone with which it surfaces from the tone of the stem through a process of tone spreading which we have captured in rule 2 below.

Rule 2: Regressive Tone Spreading (RTS) rule: a following tone spreads backwards (that is, regressively) to a preceding toneless mora - tone bearing unit.

The rule spreads the tones as follows:

\[
\begin{align*}
\text{i) } & \text{shi-bvabvam} & \text{ii) } & \text{shi-lumena} & \text{iii) } & \text{shi-nsa nsaa bu lu} \\
\text{L H L} & \text{L H L} & \text{L L H L}
\end{align*}
\]

We thus arrive at the phonetic structures below:

\[
\begin{align*}
\text{i) } & \text{W} & \text{ii) } & \text{W} & \text{iii) } & \text{W} \\
\text{\sigma \sigma \sigma} & \text{\sigma \sigma \sigma} & \text{\sigma \sigma \sigma} & \text{\sigma \sigma \sigma} & \text{\sigma \sigma \sigma} \\
\text{CV CV CVC} & \text{CV CV CVC} & \text{CV CV CVV CV CV CV} & \text{CV CV CVV CV CV CV} & \text{CV tier} \\
\text{shi-bvabvam} & \text{shi-lumena} & \text{shi-nsa nsaa bu lu} & \text{Segments} \\
\text{L H L} & \text{L H L} & \text{L L H L} & \text{Tones} \\
\end{align*}
\]

"a very small stomach" "a very small man" "a very small soap"

On the other hand, we could still say that the tone is copied along with the segments and we will have the structures in (k) below:

\[
\begin{align*}
\text{i) } & \text{shi-bvabvam} & \text{ii) } & \text{shi-lumena} & \text{iii) } & \text{shi-nsa nsaa bu lu} \\
\text{L H L H L} & \text{L H H L} & \text{L L L H L}
\end{align*}
\]

\[
\begin{align*}
\text{ii) } & \text{shi-bvabvam*} & \text{ii) } & \text{shi-lumlahen} & \text{iii) } & \text{shi-nsanisaabulu}
\end{align*}
\]
If we adopt tone copying as in (k) above, it will yield correct tones in (ii) and (iii) but it produces a faulty tonal melody in (i), as indicated by the star. Since our aim is to generate the language as it is spoken, without making any additions or subtractions, we can only maintain that the reduplicate gets its surface tone through regressive tone spreading as in (i) above, which gives us the correct tone everywhere. It is worth noting that in Lâmsô? daily speech, there is another means as in (31) below, which is used more frequently than partial reduplication to inflect especially disyllabic and polysyllabic nouns for intensity.

(31) a) shi-wá.wán shé lāv  “a very small house”  
   b) shi-wá.wán shē nàmà?  “a very small quantity of tobacco”  
   c) shi-wá.wán shé bënbîntë?'sâm  “a very small hypocrite”  
   d) shi-wá.wán shé cëkërë?  “a very small sieve”

Where the expression shi-wá.wán shé means “a very small child of” (shi-wán =a small child, wán = child) although it is translated here as “a very small” It is this other means in (31) above, which is solely used to inflect prefixed nouns for the same purpose of intensity. For example, (32) below:

(32) a) shi-wá.wán shé ki-yûv  “a very small cock”  
   b) shi-wá.wán shé ki-mánâmô?  “a very small quantity of corn pudding”  
   c) shi-wá.wán shé shi-nàn  “a very small bird”  
   d) më-wá.wán më â-ntā?  “very small chairs”  
   e) më-wá.wán me vi-kfûr  “very small cobs”

(shī-, class 19 and më-, class 6a form a double gender class)
Nevertheless, both forms of inflecting nouns, that is, partial-stem reduplication and the forms in (31) and (32) above, are all acceptable in Lámsôʔ grammar.

Partial-stem reduplication may be taken for whole-stem reduplication, especially in cases where the stem is monosyllabic and has only an onset and a nucleus, like in (33) below:

(33) a) shi-cúcû “a very small offering” (cû = offering)
   b) shi-lálâ “a very small handle” (lá = handle)
   c) shi-ncâ-ncâ “a very small antelope” (ncâ = antelope)
   d) shi-yóyó “a very small snake” (yó = snake)
   e) shi-kpú.kpú “a very small death” (kpú = death)

To conclude on Partial-Stem reduplication, we will answer the analysis-questions in (14)
A) Partial-stem reduplication means “very” that is it acts as an intensifier to noun diminutives.
B) The reduplicative template is one syllable which has a permanent structure of an onset and a nucleus. This is the core syllable for major syntactic categories like nouns, verbs, adjectives and adverbs. In other words the reduplicative template is the core syllable.
C) The core-syllable template is prefixed
D) The part of the melody copied is the initial CV of the stem.
E) The direction of melody mapping to the template is from left to right
F) No particular phonological (segmental) rules arise from partial stem reduplication
G) The tone is assigned to the reduplicate through regressive tone spreading of the base-stem tone.
2.1.4 Relationship between the Reduplication Forms in Nouns

We have seen above that there are three forms of reduplication in Lámsó? nouns: two at the level of stem - whole-stem reduplication and partial-stem reduplication; and one at the level of word - whole-word reduplication.

The relationship between these forms of nominal reduplications is that stem-level reduplications can still undergo word level reduplication as in (34) below

(34) a) pāmpām.pāmpām “full of / like tin(s)”
    b) ntāntāŋ.ntāntāŋ “full of / like trouble”
    c) ki-só?sa?.kisó?sa? “full of / like stump(s)”
    d) shi-fuʃuʃ.shi-fuʃuʃ “full of / like a very small forehead”
    e) shi-lālāv.shi.lālāv “full of / like a very small house”

But stem-level reduplications can no longer undergo any form of stem-level reduplication as in (35) below

(35) a) shi-pá.pámpām* “a very small tin”
    b) shi-ntā.ntāntāŋ* “a very small trouble”
    c) shi-gé.géégéé* “a very small fifth day”

The star indicates that such words are ungrammatical in Lámsó?.

Equally, word-level reduplication is not recursive so we cannot have for instance:

(36) a) fúmfúmfúmfúm* “full of full-of-foreheads”
    b) vi-ci vi-cí.vi-cí vi-ci* “full of full-of-trees”
2.2. REDUPLICATION IN PRONOUNS

Reduplication in Lámsó? pronouns is not only limited to whole-word reduplication, but is also limited to the reduplication of personal pronouns and possessive pronouns.

2.2.1 Personal Pronouns

Personal pronouns are those that substitute for nouns that name people or things. Below in (37), (38) and (39) are, respectively, monosyllabic, disyllabic and polysyllabic examples of personal pronouns and their reduplicated forms.

(37) a) mō “me” mō.mō “by myself”
    b) wò “you” wò.wò “by yourself”
    c) wūn “him/her” wūn.wūn “by himself / herself”
    d) vēr “we/us” vēr.vēr “by ourselves”
    e) vēn “you (plural) vēn.vēn “by yourselves”

(38) a) wōsō “we (a speaker and a listener)”
    wōsō.wōsō “by ourselves”
    b) vāsōn “we (speaker, listener, and referents)”
    vāsōn-vāsōn “by ourselves”
    c) vēnwūn “you (listener and referent)”
    vēnwūn.vēnwūn “by yourselves”

(39) a) āwūnē “they / them”
    āwūnē.āwūnē “by themselves”
    b) vērāwūnē “we (and them)”
    vērāwūnē.vērāwūnē “by ourselves”
The above examples indicate that only object personal pronouns reduplicate. They reduplicate to mean the adverbial expressions “by plus reflexive pronoun” as shown in (37), (38) and (39) above.

Subject personal pronouns like those in (40) below, do not reduplicate for any purpose.

(40) a) M “I” M.M*
b) à “you” à.à*
c) wù “he/she” wù.wù*
d) á “they” á.á*

The stars indicate that such reduplications are unacceptable.

The analysis of whole-word reduplication in pronouns is similar to that of whole-word reduplication in nouns (section 2.1.1). Moreover, pronouns are closely related to nouns, as they can be substituted for nouns. Below in (41), to illustrate how whole-word reduplication works in pronouns, we give derivations for

i) wùn-wùn “by himself/ herself”
ii) wòsò.wòsò “by ourselves”
iii) áwùn€.áwùn€ “by themselves”
(41) a) i) W
   |   σ
   \L
   \L
   \L
   wun
   woso
   M
   "him/her"
   "we/us"
   b) i) W
   |   σ
   \L
   \L
   \L
   wun
   woso
   M
   "they/them"
   ii) W
   |   σ
   \L
   \L
   \L
   wun
   woso
   M
   "we/us"
   c) i) W
   |   σ
   \L
   \L
   \L
   wun
   woso
   wun
   woso
   M
   M
   "by themselves"
   "by ourselves"
   "by himself / herself"
   "they/them"
   "we/us"
   "him/her"
   d) i) W
   |   σ
   \L
   \L
   \L
   wun
   woso
   wun
   woso
   M
   M
   "by themselves"
   "by ourselves"
   "by himself / herself"
   "they/them"
   "we/us"
   "him/her"
   e) i) W
   |   σ
   \L
   \L
   \L
   wun
   woso
   wun
   woso
   M
   M
   "by themselves"
   "by ourselves"
   "by himself / herself"
In (41) above, we have:

a) - the base pronouns,
b) - prefixation of a word template,
c) - copying of pronoun melody (segments and tones),
d) - automatic syllabification which follows from the base, and
e) - left to right mapping of the syllable nodes to the word template.

2.2.2 Possessive pronouns

Possessive pronouns are those that show possession or ownership. In Lámső?, they surface, already fused with the noun class concord for example kém “mine” for noun class seven with the prefix ki-, vém “mine” for noun class eight with the prefix vi-

Below are monosyllabic, disyllabic and polysyllabic examples of possessive pronouns and their reduplicated forms in (42), (43), and (44) respectively.

(42) a) shém “mine” shém-shém “only mine”
b) shé “yours” shé. Shé “only yours”
c) kfö “his/hers” kfö.kfö “only his/hers”
d) kër “ours” kër.kër “only ours”
e) vén “yours” vén.vén “only yours (plural)”
f) vëv “theirs” vëv.vëv “only theirs”

(43) a) kêsűn “ours” kêsűn.kêsűn “only ours”
b) vêsűn “ours (plural)” vêsűn.vêsűn “only ours”
Possessive pronouns reduplicate to mean "only" as shown above in (42) (43) and (44). In (43) and (44), we observe that possessive pronouns can be disyllabic and polysyllabic due to various formative processes that we will not discuss here because they are out of the scope of this work.

Apart from differences in meaning, whole-word reduplication is the same process in nouns and pronouns (personal and possessive). Consequently possessive pronouns can be analyzed in the same way as personal pronouns and nouns. To avoid repetition of one and the same process we refer the reader back to examples (41) and (19).

(44)  a) kévásōnáwûnê “ours (speakers + listeners + referents)”
      kévásōnáwûnê. Kévásōnáwûnê “only ours”
      b) vévénáwûnê “yours (listeners + referents)”
      vévénáwûnê. Vévénáwûnê “only yours”
CHAPTER THREE

REDUPLICATION IN VERBS, ADJECTIVES AND ADVERBS

In this chapter we will show how reduplication in Lámsío works in three categories of speech-verbs, adjectives and adverbs. The chapter is divided into three sections. Each section treats reduplication in a category, and where there are more than one form of reduplication in a category, the section is divided into subsections, with each subsection devoted to a particular type of reduplication in each category.

As already stated in chapter two, we will analyze reduplication as the addition of a phonemically bare affix which motivates the copying of a base's melody. Our analysis, also, will still consist in answering the questions in (14).

3.1 REDUPLICATION IN VERBS

At the level of morphology, Lámsío verb stems reduplicate to derive new lexical items as in (45) and (46) below, which represent respectively monosyllabic verbs and disyllabic verbs and their reduplicated forms. We did not find examples of polysyllabic verbs behaving as such in the language. Moreover, polysyllabic verbs are rare to find.

(45) a) tý “to stand” tý.tý “to delay”
    b) shém “to drop” shém.shém “to drop simultaneously and continuously”
Reduplication may also show a type of plurality and continuity as in (45 b and c), but what is important here, is that the reduplicated item has a lexical status of its own.

We will begin our analysis with monosyllabic verbs (45), which are at the same time the basic stems, or roots.

All along, we have analyzed reduplication as part of the normal affixation process (MARANTZ 1982). In chapter one (section 1.4.3.2) we did say that the structure of the verb is “stem plus suffix,” that is, Lámsó verbs do not take prefixes (like nouns) but suffixes (GREBE 1984). Reduplication in verbs is therefore suffixation. The behaviour of tone in verb reduplications as in (47) below will go ahead to confirm that reduplication in verbs is suffixation. We will hence analyze the reduplicated forms in (45) as the suffixation of a mono-syllabic template. We give derivations for i) tiytiy “to delay” and rāgrān “to darken” below in (47), in order to illustrate the process of reduplication in monosyllabic verbs.
(47) a) i) σ  
\[\text{Segments} \]
| \text{H} |
\[\text{Tones} \]
| \text{H} | \text{L} |
\[\text{to stand} \]“to stand”

b) i) σ  σ  
\[\text{Segments} \]
| \text{H} |
\[\text{Tones} \]
| \text{H} | \text{L} |
\[\text{to fling} \]“to fling”

c) i) σ  σ  
\[\text{Segments} \]
| \text{H} |
\[\text{Tones} \]
| \text{H} | \text{L} |

d) i) σ  σ  
\[\text{Segments} \]
| \text{H} |
\[\text{Tones} \]
| \text{H} | \text{L} |

e) i) σ  σ  
\[\text{Segments} \]
| \text{H} |
\[\text{Tones} \]
| \text{H} | \text{L} |

f) i) σ  σ  
\[\text{Segments} \]
| \text{H} |
\[\text{Tones} \]
| \text{H} | \text{L} |
\[\text{to delay} \]“to delay”

\[\text{to darken} \]“to darken”
In the derivation in (47) above, in (a) we have the base verbs, then in
b) the syllable template is suffixed. In
c) the segmental melody of the stem is
copied to the right.

We maintain in (c) that only the segmental melody is copied, because if
we copy the tone alongside the segments we will arrive at the wrong
result for ii) rāgrāŋ* “to darken.” In (d) the copied melody is
associated with the syllable template from right to left
(MARANTZ, 1982) McCARTHY and BROSELOW, 1985). In (e) the tone
of the base stem spreads to the toneless reduplicate. The tone process
in (e), we will call it progressive tone spreading, that is,
Rule 3: Progressive Tone Spreading (PTS) rule: which says that a
preceding tone spreads onto a following toneless mora, where the mora
is the tone bearing unit.

The phenomenon of progressive tone spreading is not new in the
Lámsŏl verb. GREBE (1984) observes that the lexical suffix (suffix₁)
is underlingly toneless, and therefore gets its surface tone in a similar
way, from the verb-stem tone. (f) = Surface Structure 5

Now we turn to the disyllabic verbs in (46). We observe that the
suffixes present in the base verbs are absent in the reduplicated forms.
The question we ask ourselves is “what happens to the suffix in the
base word when reduplication takes place?”

In order to understand how the base suffix is discarded in the
reduplicated form, we need to consider the verb structure which is

stem plus suffix₁ + suffix₂

In chapter one we said suffix₁ is a lexical suffix because it derives
elements that have to be included in the lexicon, while suffix₂ is a
grammatical suffix because it is assigned there by the grammar of the
language. If we observe the reduplicated forms in (45) and (46)

...
we realize that the reduplicate can be classified as a lexical suffix (suffix$_1$), since it derives lexical categories of verbs. To account for the reduplicated forms in (46) we have posited a suffix constraint in Lámső? which says that a verb stem can only accommodate one lexical suffix and/or one grammatical suffix at a time. This means that verbs with two lexical suffixes or two grammatical suffixes are prohibited in Lámső?. We can therefore have the structures

\[
\begin{align*}
    \text{stem} + \text{suffix}_1, \text{as in } \text{yi-kír} & \quad \text{“to eat continuously”} \\
    \text{stem} + \text{suffix}_2, \text{as in } \text{yi-ín} & \quad \text{“eaten”} \\
    \text{stem} + \text{suffix}_1, \text{suffix}_2, \text{as in } \text{yi-kír-ín} & \quad \text{“eaten continuously,“}
\end{align*}
\]

but we cannot have

\[
\begin{align*}
    \text{stem} + \text{suffix}_1 + \text{suffix}_1, \text{or} \\
    \text{stem} + \text{suffix}_2 + \text{suffix}_2, \text{or} \\
    \text{stem} + \text{suffix}_1 + \text{suffix}_1 + \text{suffix}_2, \text{or} \\
    \text{stem} + \text{suffix}_1 + \text{suffix}_2 + \text{suffix}_2,
\end{align*}
\]

because of this constraint.

It is this suffix constraint that we will use to account for the absence of the suffix in the reduplicated forms in (46)

Below in (48) we will derive

i) yáŋ-yáŋ “to worry” and

ii) báváv.báváv “to wink” in order to show how the suffix constraint works in Lámső?.
We have the bases:

a) i) \( \sigma \sigma \)     ii) \( \sigma \sigma \)  
\[ \begin{array}{c}
\text{yan-ri} \\
\hat{v}
\end{array} \] \[ \begin{array}{c}
\text{bvav-ri} \\
\hat{v}
\end{array} \]  
\( \text{H} \) \( \text{H L} \)  
Segments

(Stem + suffix) (stem + suffix)  
"to desire"  "to swindle"

We suffix a mono-syllabic template (which is another suffix)

b) i) \( \sigma \sigma \sigma \)     ii) \( \sigma \sigma \sigma \)  
\[ \begin{array}{c}
\text{yan-ri} \\
\hat{v}
\end{array} \] \[ \begin{array}{c}
\text{bvav-ri} \\
\hat{v}
\end{array} \]  
\( \text{H} \) \( \text{H L} \)  
(Stem + suffix + suffix) (stem + suffix + suffix)

The suffix constraint prohibits the structures in (b) above, so the former suffix \( -ri \), has to delete in order to make it possible for the stem to accommodate the latter suffix (syllable template):

c) \( \sigma \sigma \sigma \)     \( \sigma \sigma \sigma \)  
\[ \begin{array}{c}
\text{yan-ri} \\
\hat{v}
\end{array} \] \[ \begin{array}{c}
\text{bvav-ri} \\
\hat{v}
\end{array} \]  
\( \text{H} \) \( \text{H} \) \( \text{H L} \) \( \phi \)  

When the suffix constraint conditions the deletion of the former suffix then we are left only with the stem and the latter suffix - which is the syllable template
d) i) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
yaq \\
H
\end{array}
\]

(Stem + suffix$_1$)

ii) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
\Lambda \\
\Lambda \\
H \\
H \ L
\end{array}
\]

(Stem + suffix$_1$)

The stem melody is copied to the right

e) i) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
yaq \\
H
\end{array}
\]

ii) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
\Lambda \\
H \\
H \ L
\end{array}
\]

The copied melody maps to the template from right to left:

f) i) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
yaq \\
H
\end{array}
\]

ii) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
\Lambda \\
\Lambda \\
H \\
H \ L
\end{array}
\]

The base stem tone spreads to the toneless reduplicate:

g) i) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
yaq-yaq \\
H
\end{array}
\]

ii) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
\Lambda \\
\Lambda \\
H \\
H \ L
\end{array}
\]

We thus have the surface structures:

h) i) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
yaq-yaq \\
H
\end{array}
\]

"to worry"

ii) $\sigma \sigma$

\[
\begin{array}{c}
\Lambda \\
\Lambda \\
\Lambda \\
H \\
H \ L
\end{array}
\]

"to wink"
We conclude on reduplication in verbs by answering the analysis questions in (14).

A) Reduplication here means that a new lexical item is created from an existing one.
B) The reduplicative template is one syllable
C) The mono-syllabic template is suffixed
D) The whole melody of the stem is copied
E) The copied melody is mapped to the template from right to left
F) No segmental phonological rules result from reduplication
G) The tone is assigned to the reduplicate through the Progressive Tone Spreading (PTS) rule (rule 3):

3.2 REDUPLICATION IN ADJECTIVES

There are three types of reduplication processes going on in Lánímsö adjecitves. These processes are entitled: whole-word reduplication, whole-stem reduplication and Partial-Stem reduplication.

3.2.1 Whole-Word Reduplication

Whole-word reduplication in adjectives is similar to that which occurs in nouns (section 2.1.1). Below in (49) (50) and (51) are, respectively, monosyllabic, disyllabic and polysyllabic examples of whole-word reduplication in adjectives:

(49) a) júŋ “good” jündjúŋ “very good”
b) jééy “different” jééy.jééy “different (referring to many things)”
When we look at the data above, the first thing we remark, is the presence of prefixes. It is as if we were dealing with nouns. Since these prefixes are the same as those that mark noun classes. In fact, the prefix is a type of concord or agreement relating the adjective to a noun class. This prefix fuses with the adjective in such a way that when an adjective is uttered in isolation, it is accompanied by the prefix. Nevertheless, whether or not the prefix is there, does not affect the meaning of the adjective for example $bàà = à-bàà = vi-bàà = mè-bàà = two$.

Làmnsò? adjectives use whole-word reduplication to do a lot of things, for example:
to show intensity of a quality as in (49) jūŋ.jūŋ “very good”
to express a regular activity as in (49) mbiy.mbiy “always first”
to show emphasis as in (49,c) dā.dā “quite tall”
to indicate a type of plurality as in (51) ki-tērī.ki-tērī “small,”
and to derive adverbial expressions as in (50) à-bā̀.ābā̀ “in pairs”

Whole-word reduplication in adjectives can be analyzed in the same way as in nouns (section 2.1.1), since adjectives do not only describe nouns, but tend to surface with (concord) noun class prefixes and reduplicate with these prefixes.
Given that we had elaborated on whole-word reduplication in section 2.1.1 of this very chapter, we will, in brief, give derivations for
i) mbiy.mbiy “always first”
ii) shi-shār.shi-shār “in bits”
iii) à-mō?ón à-mō?ón “one by one,”
in (52) below, to show how whole-word reduplication takes place in adjectives.

(52) We have the base adjectives

\[ \begin{array}{cccc}
\text{a) } & \text{W} & \text{W} & \text{W} \\
\sigma & \sigma & \sigma \\
& \text{mbiy} & \text{shi-shar} & \text{a-mō?ón} \\
\text{L} & \text{L} & \text{L} & \text{L} \\
\text{“first”} & \text{“little”} & \text{“one”} \\
\end{array} \]
We prefix a word template

b) W W W W W
   \sigma \sigma \sigma \sigma
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{m\text{biy}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{shi-shar}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{a-mo?on}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{L \ L \ L \ L \ H}}}}}
   \text{“first” “little” “one”}

We copy the entire word melody to the left (Tones are copied alongside the segments; tones are always copied in Lámmosó whole-word reduplication)

c) i) W W ii) W W iii) W W
   \sigma \sigma \sigma \sigma
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{m\text{biy}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{shi-shar}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{shi-shar}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{a-mo?on}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{L \ L \ L \ L \ H}}}}}

The copied melody undergoes automatic syllabification (after the base)

d) i) W W ii) W W iii) W W
   \sigma \sigma \sigma \sigma
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{m\text{biy}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{shi-shar}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{shi-shar}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\text{a-mo?on}}}}}}
   \overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{\overset{\mu}{L \ L \ L \ L \ H}}}}}
Then the syllable nodes map to the word template from left to right

```
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>σ</td>
<td>σ</td>
<td>σ</td>
</tr>
<tr>
<td>σ</td>
<td>σ</td>
<td>σ</td>
</tr>
<tr>
<td>σ</td>
<td>σ</td>
<td>σ</td>
</tr>
</tbody>
</table>
```

Then the syllable nodes map to the word template from left to right

```
e) i) W W ii) W W iii) W W
σ σ σ σ σ σ σ σ
mbiy mbiy shi-shar shi-shar a-mo?on a-mo?on
L L L L H L L H
```

"always first"  "bit by bit"  "one by one"

### 3.2.2 Whole-Stem Reduplication

Just as in nouns (section 2.1.2) and in verbs (section 3.1) whole-stem reduplication in adjectives is undergone by monosyllabic stems. (53) below shows examples of whole-stem reduplication in adjectives

(53) a) jééy "different" jééyjééy "difference"
b) rég "right" régrég "same"
c) cér "fast" cércér "faster"
d) tsom "short" ki-tsóntsó "quite short"
e) wán "little" shi-wánwán "quite short (and fat)"
f) láy "minute/hidden" shi-láyláy "very minute"

Whole-stem reduplication in adjectives has diverse functions.

A monosyllabic adjective-stem reduplicates wholly to derive a noun as in (53 a)
jééy "different" jééyjééy "difference"

adjective ................> noun
It may reduplicate just to derive another adjective as in (53 b)

réŋ “right” .... > réŋ.réŋ “same”

It may also reduplicate to show the comparative as in (53 c)

cér ....... > cércér

“fast” “faster”

Sometimes it reduplicates to indicate intensity for example

tsám ....... > (ki) tsám.tsám

“short” “quite short”

Whole-stem reduplication in adjectives is similar to whole-stem reduplication in nouns (section 2.1.2)

The derivations of i) jééy.jééy “difference” and

ii) ki-tsám.tsám “quite short” below in (54)

illustrates whole-stem reduplication in adjectives

(54) The base stems are:

a) i)  

\[
\begin{array}{c}
\text{σ} \\
\downarrow \\
\text{jééy (different)} \\
\text{H}
\end{array}
\quad \begin{array}{c}
\text{σ} \\
\downarrow \\
\text{tsám (short)} \\
\text{H}
\end{array}
\]

A syllable template is prefixed.

b) i)  

\[
\begin{array}{c}
\text{σ} \\
\downarrow \\
\text{jééy} \\
\text{H}
\end{array}
\quad \begin{array}{c}
\text{σ} \\
\downarrow \\
\text{tsám} \\
\text{H}
\end{array}
\]

The base melody (tone and segments) is copied to the left

c) i)  

\[
\begin{array}{c}
\text{σ} \\
\downarrow \\
\text{jééy} \\
\text{H}
\end{array}
\quad \begin{array}{c}
\text{σ} \\
\downarrow \\
\text{jééy} \\
\text{H}
\end{array}
\]

\[
\begin{array}{c}
\text{σ} \\
\downarrow \\
\text{tsám} \\
\text{H}
\end{array}
\quad \begin{array}{c}
\text{σ} \\
\downarrow \\
\text{tsám} \\
\text{H}
\end{array}
\]
Mapping of the copied melody to the syllable template is done from left to right.

```
\[ \sigma \quad \sigma \quad \sigma \quad \sigma \quad \sigma \quad \sigma \]

Optional prefixation takes place to give

```
\[ \sigma \quad \sigma \quad \sigma \quad \sigma \quad \sigma \quad \sigma \]
```

"difference" "quite short"

3.2.3 Partial-Stem Reduplication

Adjective stems in Lámrnsô? reduplicate partially to indicate intensity of the quality. The paradigms in (55) and (56) below include, respectively, monosyllabic and disyllabic examples of adjectives and their partially reduplicated forms.

The first column contains the bases, the second column contains the reduplicated forms which means "very X" where X is the corresponding base; the third column is the gloss.

(55) a) bí búbí bad
b) wán wááwán small
c) wíy wííwíy big
d) mā màmà large
e) mbíy mbíùmbíy first
f) dzám dzàádzàm all
g) shār shàáshàr little
h) dā dáádā tall
i) jūnj jùùjùŋ good
We observe in (55) and (56) that partial-stem reduplication in adjectives involves the copying of the initial CV of the stem, just like in nouns (section 2.1.3) but unlike in nouns the copied V is lengthened.

In (56) a, b and e, the suffixes constitute part of the stems because we cannot utter the stems in isolation without them. But the prefixes in (56) c and d are optional and we assume here that they can only attach after reduplication has taken place. We have posited the reduplicative template to be one syllable having an onset and two nuclei, that is

\[ \sigma: \text{Syllable} \]
\[ \uparrow \]
\[ CVV: \text{C-V Skeleton} \]

In order to account for the nature of the template in partial-stem reduplication in adjectives, we will introduce here the notion of syllable weight in Lámsō?. For a tone language like Lámsō?, a heavy syllable simply refers to that which contains two moras and a light syllable refers to that which contains one mora (HYMAN 1985). We have seen in chapter one (section 1.4.3.1) that the Lámsō? syllable has six forms

<table>
<thead>
<tr>
<th>a) σ</th>
<th>b) σ</th>
<th>c) σ</th>
<th>d) σ</th>
<th>e) σ</th>
<th>f) σ</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>V</td>
<td>CV</td>
<td>CVC</td>
<td>CVV</td>
<td>CVVC</td>
</tr>
<tr>
<td>à</td>
<td>áy</td>
<td>bā</td>
<td>rē</td>
<td>ná</td>
<td>nyāng</td>
</tr>
</tbody>
</table>

"you" "exclamation" "to weave" "yam" "to cook" "peaceful"
Given that syllable codas are not moraic in Lámsó?, and following the definitions of light and heavy syllables above, we will group Lámsó? syllables following weight thus:

- light syllables: V, VC, CV, CVC,
- heavy syllables: CVV, CVVC

That is, four forms of light syllables and two forms of heavy syllables. We notice, therefore, that the difference between the reduplicative template in partial-stem reduplication in adjectives and that in nouns (section 2.1.3), is that the template is a heavy syllable in adjectives and a light syllable in nouns.

In section 2.1.3, we said that the reduplicative template is identical with the core syllable in major syntactic categories (Nouns, verbs, adjectives, adverbs) we will add here that it is a "light core-syllable." Therefore, in adjectives the reduplicative template is equally a core syllable, but a "heavy core-syllable" we strongly feel that the templates in partial-stem reduplication in adjectives and nouns come from a common source (core syllable) because they have a common meaning - "very" as in:

ii) sháá.sháá “very little” (sháá -little)

Hence, we will analyze partial-stem reduplication in adjectives (as in (55) and (56)) to be the prefixation of a heavy core-syllable template to the adjective stem. Since the core syllable is one onset and one nucleus, it is but logical that a heavy - core syllable will just involve some vowel lengthening (Katamba 1989: 177) which yields one onset, two nuclei.
We give derivations in (57) below, for
i) bībī ii) jūjūŋ and iii) tātāvīŋ

to illustrate the process of partial-stem reduplication in Lāmnsoŋ's adjectives.

(57) The bases include:

a) i) σ CV
   ii) CVC
   iii) CVCVC
   С-V Skeleton

   b) i) σ CVV
   ii) σ CVV CVC
   iii) σ CVV CV CVC
   Segments

   c) i) σ CVV
   ii) σ CVV CVC
   iii) σ CVV CV CVC
   Tones

   "bad" "good" "strong"

The mono-syllabic template is prefixed:

b) i) σ CVV
   ii) σ CVV CVC
   iii) σ CVV CV CVC

   "bad" "good" "strong"

The whole stem melody is copied to the left (we suppress tone here, to explain later in the work)
Mapping is done from left to right following the conditions in (29)

\[
\begin{array}{ccc}
\text{d) i) } & \sigma & \sigma \\
\text{CVV} & \text{CV} & \text{CVV} \\
\text{bi} & \text{bi} & jujujug \\
\text{tavin} & \text{tavin} \\
\end{array}
\]

The associated [+syllabic] segment of the template spreads to the floating V of the template

\[
\begin{array}{ccc}
\text{e) i) } & \sigma & \sigma \\
\text{CVV} & \text{CV} & \text{CVV} \\
\text{bi} & \text{bi} & jujujug \\
\text{tavin} & \text{tavin} \\
\end{array}
\]

In ii) [η] is [-syllabic] and so cannot associate with the V-slot remaining (condition 29 a), the same thing too with [V] in (iii); moreover, [V] blocks any other remaining segments from attaching to the template since the linking is phoneme-driven (condition 29 c). So the remaining segments simply truncate

\[
\begin{array}{ccc}
\text{f) i) } & \sigma & \sigma \\
\text{CVVCV} & \text{CVV} & \text{CVV} \\
\text{bi} & \text{bi} & jujujug \\
\text{tavin} & \text{tavin} \\
\end{array}
\]

Then we have the surface structures:

\[
\begin{array}{ccc}
\text{g) i) } & \sigma & \sigma \\
\text{CVVCV} & \text{CVVCV} & \text{CVVCV} \\
\text{bi} & \text{bi} & jujujug \\
\text{tavin} & \text{tavin} \\
\end{array}
\]

"very bad"  "very good"  "very strong"
What makes partial-stem reduplication in adjectives a unique process is its iterativeness, that is, it is recursive, as in (58) below:

(58) a) wán “small”
b) wáá wán “very small”
c) wáá wáá­’wán “very very small”
d) wáá wáá­’wáá wán “very very very small”

etc.

This implies that once the reduplication process is completed at one stage, the reduplicated form serves as input to the next stage. For example, the reduplicated forms in (57g) can serve as the bases for the derivations in (59) below:

(59) bases include:

a) i) σ σ 
   CVVCV
   || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || || |
The copied melody maps to the template left to right

The unmapped material truncates

The surface structures remain (with grammatical tones)

“very very bad”  “very very good”  “very very strong”
As far as the behaviour of tone is concerned, partial-stem reduplication in adjectives is a very complex process. Each tone tends to have an independent and sometimes varied behaviour, that cannot be easily accounted for by phonological rules; this is exemplified in (60) for High tones and (61), for Low tones and (62) for falling tones.

<table>
<thead>
<tr>
<th>&quot;X&quot;</th>
<th>veryX</th>
<th>very veryX</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>(60)</td>
<td>a) nën</td>
<td>nënënën</td>
<td>nënënën</td>
</tr>
<tr>
<td></td>
<td>b) térf</td>
<td>téértérf</td>
<td>téértérf</td>
</tr>
<tr>
<td>(61)</td>
<td>a) shār</td>
<td>shāāshār</td>
<td>shāāshāshār</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shāāshār</td>
<td>shāāshāshār</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shāāshāhār</td>
<td>shāāshāhāshāhā</td>
</tr>
<tr>
<td></td>
<td>b) tēr</td>
<td>téértéér</td>
<td>téértééér</td>
</tr>
<tr>
<td>(62)</td>
<td>a) dā</td>
<td>dādādā</td>
<td>dādādādā</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dādādādā</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) kū?ūn</td>
<td>kūkūkū?ūn</td>
<td>kūkūkūkū?ūn</td>
</tr>
<tr>
<td>o)</td>
<td></td>
<td>kūkūkūkū?ūn</td>
<td>kūkūkūkūkū?ūn</td>
</tr>
</tbody>
</table>

Following the complexity (and unpredictability) with which the tone behaves, especially as in (61) and (62), we will assume here that tone is assigned in partial-stem reduplication in adjectives, by the grammar of the language. We are not in a position here to explain how this grammatical assignment of tone works, because it obviously demands: a general phonetic study of tone, a semantic study and possibly an etymological
study of words - these fields are not only out of the scope of the present study but we are constrained by the limited time given for this study.

3.3 REDUPLICATION IN ADVERBS

If we have to include a whole section on reduplication in adverbs, it is just for the sake of formality because reduplication in adverbs is very similar, if not identical to reduplication in adjectives. We have not mixed adjectives and adverbs in the preceding section (3.2) for fear of overcharging the section. Most, or all of the analyses used for reduplication in adjectives are relevant for reduplication in adverbs. Moreover, the concepts of adjective and adverb overlap in many Lámnsoñ words, that is, these words are used in some contexts as adjectives and in others as adverbs. Some of these words are included in (63) below.

(63)  a) jééy "different / differently"
b) wèè "slow / slowly"
c) cér "quick / quickly"
d) nyáán "peaceful / peacefully"
e) fótèr "easy / easily"
f) ki-bí "bad / badly"
g) ki-távín "strong / strongly or aloud"

As in adjectives, there are three types of reduplication in adverbs; whole-word reduplication; whole-stem reduplication, and Partial-Stem reduplication. If we proceed to analyze these reduplication types in adverbs separately, there will be a lot of repetition of the analysis in the preceding section (3.2), so we will just give examples of each type of
reduplication and then answer the analysis-questions in (14), or just give an illustrative derivation.

### 3.3.1 Whole-Word Reduplication

We include (64), (65) and (66) below, monosyllabic, disyllabic and polysyllabic examples respectively.

**(64)**

- a) jeéy “differently” jééy. Jééy “differently” (referring to more than one thing)
- b) wëè “slowly” wëè. Wëè “very slowly”
- c) shí “anxiously” shí. shí “very anxiously”
- d) nyááŋ “peacefully” nyááŋ. Nyááŋ “very peacefully”
- e) cáʔ “only” cáʔ. cáʔ “only (emphatic)”

**(65)**

- a) yōñi “yesterday” yōñi yōñi “just yesterday”
- b) f ōtēr “easily” fōtēr. fōtēr “very easily”
- c) ki-bi “badly” ki-bi ki-bi “very badly”
- d) ki-jūŋ “well” ki-jūŋ ki-jūŋ “very well”

**(66)**

- a) ki-jāvndzā “in the morning” ki-jāvndzā. ki-jāvndzā “very early in the morning”
- b) ki-távín “loudly” ki-távín. ki-távín “very loudly”
- c) ki-bvásší “tomorrow” ki-bvásší. ki-bvásší “in the nearest future”

From the data in (64) (65) and (66) above, we proceed to answer the analysis questions in (14):
A) Whole-word reduplication in adverbs has many meanings: it may mean some plurality, as in (64a) or intensity as in (64b,c and d), or emphasis as in (64e).

B) The reduplicative template is a word, which may be monosyllabic (64), disyllabic (65) or polysyllabic (66).

C) The word template is prefixed (following from nouns and adjectives).

D) The whole-melody of the word is copied to the left.

E) The direction of melody mapping is from left to right.

F) No phonological rules result from whole-word reduplication in adverbs.

G) The tone is copied alongside the segments.

We will give derivations of i) \textsc{wèè} \textsc{wèè} "very slowly" and ii) \textsc{fòòrèr} \textsc{fòòrèr} "very easily" in (67) below, to illustrate the above answers.

\begin{align*}
\text{(67) a) i)} & \quad \text{\textsc{wèè} \textsc{wèè}} \\
& \quad \text{\textsc{fòòrèr} \textsc{fòòrèr}} \\
\text{ii)} & \quad \text{\textsc{wèè} \textsc{wèè}} \\
& \quad \text{\textsc{fòòrèr} \textsc{fòòrèr}}
\end{align*}

\begin{align*}
\text{(67) b) i)} & \quad \text{\textsc{wèè} \textsc{wèè}} \\
& \quad \text{\textsc{fòòrèr} \textsc{fòòrèr}} \\
\text{ii)} & \quad \text{\textsc{wèè} \textsc{wèè}} \\
& \quad \text{\textsc{fòòrèr} \textsc{fòòrèr}}
\end{align*}
3.3.2 Whole-Stem Reduplication

Examples in (68) below.

(68) a) lán “today” lán.lán “recently”
b) lèn “now” lèn.lèn “soon”
c) báム “behind” báム-báム “secretly”
d) nị́g “vainly” nị́g.nị́g “vainly (emphatic)”
e) cér “quickly” cér.cér “very quickly”
f) fó “there “ fófó “repeatedly”
Whole-stem reduplication is mainly derivational in that new adverbs with different meanings are derived from existing ones. Nevertheless, there are still cases of inflection where more is added to the existing meaning in terms of intensity or emphasis. (The cases of (68d and e) above. We will give derivations for

i) nténté - 'vainly'
ii) fófó - 'repeatedly' below in (69)

(69) a) i)  
\[
\begin{array}{c}
\sigma \\
\sigma \\
\sigma \\
\sigma \\
\sigma
\end{array}
\]
\[
\begin{array}{c}
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén}
\end{array}
\]
\[
\begin{array}{c}
\text{H} \\
\text{H} \\
\text{H} \\
\text{H} \\
\text{H}
\end{array}
\]

"vainly" "there"

b) i)  
\[
\begin{array}{c}
\sigma \\
\sigma \\
\sigma \\
\sigma \\
\sigma
\end{array}
\]
\[
\begin{array}{c}
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén}
\end{array}
\]
\[
\begin{array}{c}
\text{H} \\
\text{H} \\
\text{H} \\
\text{H} \\
\text{H}
\end{array}
\]

(prefixion of monosyllabic template as in nouns and adjectives)

c) i)  
\[
\begin{array}{c}
\sigma \\
\sigma \\
\sigma \\
\sigma \\
\sigma
\end{array}
\]
\[
\begin{array}{c}
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén}
\end{array}
\]
\[
\begin{array}{c}
\text{H} \\
\text{H} \\
\text{H} \\
\text{H} \\
\text{H}
\end{array}
\]

(d) i)  
\[
\begin{array}{c}
\sigma \\
\sigma \\
\sigma \\
\sigma \\
\sigma
\end{array}
\]
\[
\begin{array}{c}
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén}
\end{array}
\]
\[
\begin{array}{c}
\text{H} \\
\text{H} \\
\text{H} \\
\text{H} \\
\text{H}
\end{array}
\]

(left to right mapping of copied melody to template)

e) i)  
\[
\begin{array}{c}
\sigma \\
\sigma \\
\sigma \\
\sigma \\
\sigma
\end{array}
\]
\[
\begin{array}{c}
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén} \\
\text{ntén}
\end{array}
\]
\[
\begin{array}{c}
\text{H} \\
\text{H} \\
\text{H} \\
\text{H} \\
\text{H}
\end{array}
\]

(Denasalization rule applies)
3.3.3 Partial-Stem Reduplication

Examples below in (70). Column one stands for “X”

Column two means “very X”

Column three means “very very X” “Where X is the base adverb, column four is the gloss

(70) a) cér céécér céécécér quickly

b) mbiy mbiymbiy mbiymbiy mbiymbiy ahead

c) bí bíbí bíbíbí badly

d) júŋ jújúŋ [jújújújúŋ] well

[ jújújújúŋ] well

e) tāvín tātāvín tātātātāvín loudly

This type of reduplication as in (70) takes place only in adjectives and adverbs. We will give a derivation of céécécér “very very quickly “below” in (71)

(71) a) CVC

b) CVVC

(base)

(heavy core - syllable template is prefixed)
Because Partial- Stem reduplication is iterative the reduplicated structure becomes the new base.

h) \( \sigma \quad \sigma \quad \sigma \)

(template is prefixed to the new base)
i) \( \sigma \sigma \sigma \)
\[
\text{CVV} \quad \text{CVV CVC}
\]
\[
\text{ceecer ceecer}
\]
(meody is entirely copied to the left)

j) \( \sigma \sigma \sigma \)
\[
\text{CVV} \quad \text{CVV CVC}
\]
\[
\text{ceecer ceecer}
\]
(left to right mapping)

k) \( \sigma \sigma \sigma \)
\[
\text{CVV} \quad \text{CVV CVC}
\]
\[
\text{ceecer ceecer}
\]
(unmapped segments truncate)

l) \( \sigma \sigma \sigma \)
\[
\text{CVV CVV CVC}
\]
\[
\text{ceecer ceecer}
\]
\[
\text{H H H}
\]

"very very quickly"
CHAPTER FOUR

OTHER FORMS OF REDUPLICATION and GENERAL CONCLUSION

This chapter is meant to be a concluding chapter, but we cannot conclude without alluding to the fact that reduplication in Lámnsõ? is vast and varied, and sometimes very confusing. In the preceding chapters (chapters 2 and 3) we have talked about reduplication in nouns, pronouns, verbs, adjectives and adverbs; indeed, the forms of reduplication processes described in chapters two and three are what we can call “normal” reduplication processes in Lámnsõ?.

“Normal,” because these processes are very frequently used in the language and it is easy to identify the reduplicating base and its independent meaning. This chapter, as indicated by the title, is divided into two main sections: Other forms of reduplications; and General Conclusion. In section one dealing with other forms of reduplications, we will explore, in a sketchy manner, what we have called here ideophonic reduplications, pseudo-reduplications and syntactic reduplications. Section two comprises the General conclusion on reduplication in Lámnsõ?: it recapitulates the types of reduplicative processes in Lámnsõ?, their functions, the relationship between these processes, and the phonological and tonal processes resulting from Lámnsõ? reduplication.

Section one of this chapter - other forms of reduplication gives us a claim to completeness in this work, since all forms of reduplication in the language have been treated, if not mentioned.

4.1 OTHER FORMS OF REDUPLICATIONS

4.1.1 Ideophonic Reduplications

An ideophone can be defined as a “vivid representation of an idea in sound” (MUTAKA 1995:240).

The word “ideophonic reduplications” is used in this work to refer to those reduplications in which we find a lot of difficulty in separating the reduplicate from the reduplicating morpheme, because what seems to be the reduplicating morpheme or base has not got a clear independent meaning. In fact, the base
is an idea captured in sounds and there seems to be no consensus amongst the native speakers about the nature of the idea: consequently, it is as if the word can only have meaning in its reduplicated form.

YIWOLA (1989), while treating reduplication in Yoruba with respect to the status of the ideophone, proposed that ideophones be made an independent lexical category with the same rank as nouns, verbs, adjectives and adverbs. Examples of ideophonic reduplications in Lámsó? are included below in (72) and (73)

(72)  a) lálà? “butterfly”  
b) lálán “net”  
c) lálán “flat intestine”  
d) bábá “pneumonia”  
e) tútú? “football, or a type of swollen fruit”  
f) nyá.nyá “plenty or to tickle”  
g) ki-tó.tór “tube of pen or pen container”  
h) ki-kókór “hard part”

(73)  a) gwágwá “duck”  
b) ọkọkọ “too much”  
c) ntíntí “middle”  
d) ki-lélé “a joke”  
e) kwárá kwárá “mat”  
f) kwárá kwárá “completely”  
g) féyi féyi “really”  
h) ki-mátiám ki-mátiá “very large”

When we observe the data in (72) above, we find that the type of reduplication process going on is similar to partial-stem reduplication in nouns (section 2.1.3) where initial CV of a stem is copied to the left of the stem as a prefix. If from this similarity we suppose that ideophonic reduplications behave like noun reduplications, we can conclude that the reduplication process in (73) involves whole-base reduplication which should be similar to that taking place in sections 2.1.1 and 2.1.2.
Some of the surface structures in (2) like
i) ηκόηκόη “too much”
ii) ntintin “middle”
can be said to have undergone the Denasalization rule thus:

UR / ntintin ηκόηκόη /
   : : :
   DN rule Ø Ø
   PR [ntintin ηκόηκόη]

4.1.2 Pseudo-Reduplications

The word “pseudo” is an adjective (prefix) which means “false.” Hence pseudo-reduplications is synonymous with false reduplications.

Pseudo-reduplications in Lámnső refer to those word forms which on the surface are reduplications but which, underlyingly, do not result from reduplicative processes. Rather, these word forms result from other morphological processes like affixation, borrowing, compounding or possession.

The term pseudo-reduplication is a cover term which gives us the opportunity to mention the irregular forms of reduplication in Lámnső, if we consider, as we have already done, that the forms in chapters two and three are the regular forms of reduplication in Lámnső.

4.1.2.1 Affixation

Affixation can be defined as a process in morphology, whereby a morpheme-called an affix, and usually a bound morpheme, is added to another morpheme-which is more often a free morpheme (and can be a root, a stem or even a
word). When the bound morpheme is added word initially, it is a prefix, when it is added word medially, it is an infix, and when it is added word finally it is a suffix. Some affixes in Lámnsó? are similar phonemically to certain stems to which they attach, not because reduplication has taken place, but because of coincidence or an historical accident.

Such affixations are included in example (74) below

<table>
<thead>
<tr>
<th>(74)</th>
<th>Prefix</th>
<th>Stem (root)</th>
<th>Suffix</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td><code>ki-</code></td>
<td><code>kim</code></td>
<td></td>
<td>“crab”</td>
</tr>
<tr>
<td>b)</td>
<td><code>ki-</code></td>
<td><code>kiv</code></td>
<td><code>-fr</code></td>
<td>“cub of corn”</td>
</tr>
<tr>
<td>c)</td>
<td><code>shí-</code></td>
<td><code>shív</code></td>
<td></td>
<td>“a small quantity of medicine”</td>
</tr>
<tr>
<td>d)</td>
<td></td>
<td><code>mē</code>m`</td>
<td><code>-e</code></td>
<td>“to rest”</td>
</tr>
<tr>
<td>e)</td>
<td><code>yi</code>y`</td>
<td><code>yi</code>y`</td>
<td><code>-i</code></td>
<td>“to yawn”</td>
</tr>
<tr>
<td>f)</td>
<td><code>si</code>y`</td>
<td><code>si</code>y`</td>
<td><code>-si</code></td>
<td>“to arrange”</td>
</tr>
</tbody>
</table>

The similarity between the affixes and stems makes it obvious to take the surface forms in (74), for reduplications. But when we consider that these forms result from the addition of the prefixes `ki-` and `shí-` to the stems, as in 74 (a,b and c); and from the addition of the suffixes `-i` and `-si` to the stems, as in 74 (d,e and f) we can only say that these are pseudo-reduplications because they are not a consequence of reduplicative processes.

In the preceding paragraph, we have only mentioned two suffixes `-i` and `-si`, while in fact we have three of them `-e`, `-i` and `-si` in example (74) above. This can be justified by the fact that the suffix `-e` in (74d) is derived from the underlying suffix `-i` by rule.

This rule we have called rule 4: Vowel Lowering (VL) rule:

\[
[+\text{syllabic}] \quad \cdots > [-\text{high}] / [+\text{nasal}] - \\
[+\text{high}] \quad [-\text{low}]
\]

The rule says that a [high] vowel becomes one step lower when it follows a [high] consonant.

Thus the addition of the suffixes `/i/`, `/ir/` and `/in/` gives respectively `/e/`, `/er/` and
[-en] in the surface structures in (75) below, due to the vowel lowering rule above.

(75)  
\[ \begin{array}{ll}
\text{a)} & \text{m}\text{èèm -è} \quad \text{"to rest"} \\
\text{b)} & \text{nèèm -è} \quad \text{"sleeping/ lying down"} \\
\text{c)} & \text{sàn -èr} \quad \text{"to blacken"} \\
\text{d)} & \text{bôn -èr} \quad \text{"to make good"} \\
\text{e)} & \text{bém -èr} \quad \text{"to frighten"} \\
\text{f)} & \text{nyèn -èn} \quad \text{"smashed"} \\
\text{g)} & \text{fèn -è} \quad \text{"flown"} \\
\end{array} \]

We want to remark here that this vowel lowering rule exerts a considerable effect on the production of English Speech by Lamnso? native speakers as they tend to lower /i/ to /e/ and /u/ to /o/ in their pronunciation as in (76) below.

(76)  
\[ \begin{array}{lll}
\text{RP} & \text{CamE} & \text{Gloss} \\
\text{a)} & /\text{mit}/ & /\text{met}/ & \text{meat} \\
\text{b)} & /\text{mi}/ & /\text{me}/ & \text{me} \\
\text{c)} & /\text{minit}/ & /\text{menet}/ & \text{minute} \\
\text{d)} & /\text{njud}/ & /\text{pas}/ & \text{news} \\
\text{e)} & /\text{mud}/ & /\text{mo:d}/ & \text{mood} \\
\end{array} \]

In (76) above, RP stands for Received Pronunciation which is purported to be the standard pronunciation of English. CamE stands for Cameroon English which represents the pronunciation of English by Lamnso? native speakers.

4.1.2.2 Borrowings

Borrowings are words adopted from other languages that the target language is in contact with (MUTAKA 1995, 231). These borrowings are very often used to designate new phenomena.

The “mispronunciation” or localization of the phonological realizations of certain borrowed words has yielded reduplicative structures in Lamnso? as in (77) below.
Localization or “mispronunciation” here refers to the tendency where target speakers tend to adapt the borrowed words or loanwords to the sound structure of their language. The target speaker is the borrower of the word.

<table>
<thead>
<tr>
<th>Borrowing</th>
<th>Gloss</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>(77)</td>
<td>(77)</td>
<td></td>
</tr>
<tr>
<td>a) sásár / sísár</td>
<td>scissors</td>
<td>English</td>
</tr>
<tr>
<td>b) pòpò</td>
<td>pawpaw</td>
<td>English</td>
</tr>
<tr>
<td>c) cicà (cià)</td>
<td>teacher</td>
<td>English</td>
</tr>
<tr>
<td>d) nánár</td>
<td>pineapple</td>
<td>French</td>
</tr>
</tbody>
</table>

The words in (77) above can be classified as pseudo-reduplications because they do not result from Lámnsōʔ reduplicative processes.

However, the words behave like partial reduplication in nouns (section 2.1.3) in that the first CV is prefixed to a pseudo base as in sa.sar (scissors) and na.nar (pineapple) where we can consider “sar” and “nar” respectively to be the bases.

4.1.2.3 Compounding

A compound word is a word composed of two or more lexical items - free morphemes.

Compounding therefore refers to the morphological process whereby two or more lexical items combine to form another lexical item. Some of the surface reduplications in Lámnsōʔ, as in example (78) below, result from the process of compounding.

| (78) | a) sâ?sâ?  | “trouble maker” |
|      | (sâ? - to find fault, sê? - trouble) |
| b) kâm kâm | “stingy person” |
|      | (kâm - to be stingy, kâm-stinginess) |
| c) nyômnyôm | “an insect, or something which is sweet” |
|      | (nyôm - to be sweet, nyôm - sweetness) |
| d) fân fân | “coward” |
|      | (fân - to fear, fân - fear) |
The words in (78) above are compound words composed of verbs (perfective) plus nouns.

The kind of reduplication that can be detected in these compound words in (78) is whole-stem reduplication (sections 2.1.2, 3.1, 3.2.2, 3.3.2) where a monosyllabic item is added to another monosyllabic item.

4.1.2.4 Possession

Possession simply means showing ownership. Some Lámnso? nouns with a zero prefix (noun classes 1, 3, 5, 9) often possess themselves to form possessive words, (or structures) and they do so without any feasible or segmental possessive markers as in example (79) below

(79) a) wânwân “grand child” (wân-child (genitive)
   b) wónwôn “grand children” (wón - children)
   c) bàábáá “grand father” (báá - father)
   d) màmìmàmì “grand mother” (màmì - mother)
   e) yááyáá “great great grand mother” (yáá - grand mother)
   f) yááyáá “the queen's queen” (yáá - queen)

GREBE (1984:82) posits a low tone morpheme as the possessive marker in the cases in (79) above.

The floating low tone morpheme (possessive marker) has two phonological effects: a downstepping effect as shown in the derivation of i) wânwân “grand child” and ii) wónwôn “grand children” in (80) below; and tone docking as in the derivation of bàábáá “grandfather” and ii) màmìmàmì “grand mother” in (81) below:

We have the words

(80) a) i) \( \overline{HL} \) \( \sqrt{wan} \) “child (genitive)” ii) \( H \) \( \overline{won} \) “children”
The words possess themselves then:

b) i) \[ H \text{L} H \text{L} \]
\[ \wedge \wedge \]
\[ \text{wan} \text{wan} \]
ii) \[ H \text{L} H \]
\[ \text{won} \text{won} \]

The low floating tone causes downstep on the following tones

c) i) \[ H \downarrow \text{L} \text{H} \]
\[ \wedge \wedge \]
\[ \text{wan} \text{wan} \]
ii) \[ H \downarrow H \]
\[ \text{won} \text{won} \]

\[ H \text{L} \] contour is downstepped to L and H to M

d) i) \[ H \text{L} \]
\[ \wedge \]
\[ \text{wan} \text{wan} \]
ii) \[ H \text{M} \]
\[ \text{won} \text{won} \]

"grand child"

"grand children"

GREBE (1984, 90) expressed this downstepping using the following formulas
(which he called rules)

a) \( L + H \text{L} \text{H} = L \)
b) \( L + H = M \)

meaning that; (a) a floating low tone merges with a following HL contour to produce a low tone and (b) a floating low tone merges with a H tone to produce a mid tone.

We have the words

(81) a) i) \[ L \text{H} \]
\[ \text{baa} \]
ii) \[ L \text{H} \]
\[ \text{mami} \]

"father"

"mother"

The words possess themselves:

b) i) \[ baa \text{ baa} \]
ii) \[ mami \text{ mami} \]
The floating low tone in (b) above cannot downstep the following tone any further since it is already a low tone, and a low tone may not go lower than low except that it falls in final position. But the floating low tone seems to be determined to make its presence felt, instead of just fusing with the following low tone, it rather docks on the preceding mora as in (c) below, producing a HL contour.

\[
\begin{align*}
\text{LHLLH} & \quad \text{L HL LH} \\
| | & | \\
(c) \ i) & \text{baa baa} & \text{ii) mami mami (tone docking)} \\
& \text{"grand father"} & \text{\textquoteleft \textquoteleft grand mother\textquoteright \textquoteright} \\
\end{align*}
\]

The point we want to make here, in the above derivations (80) and (81), is that some words that are reduplications in Lámsó? are in fact resulting from possessive processes, and sometimes the tones of the words can help us to determine their source - possession.

4.1.3 Syntactic Reduplications

It is true that this study is a morphophonological study, but we need to make mention of other reduplications existing in the language, and which we have not analyzed in any detail, because they do not fall within our domain of study. So the inclusion of syntactic reduplications here is merely for information, and we leave the task of the description of the process involved in this form of reduplication, to syntacticians.

Syntactic reduplications refer simply to those reduplications which can be analyzed at the level of syntax, that is, at the level of sentences, and not words.

Most syntactic reduplications in Lámsó? fall under the category of phrases. "A phrase is a group of related words which are part of a sentence (WARRINER and MERSAND and GRIFFITH (1963))
There are two types of syntactic reduplications in Lámsó?: Pronoun phrases and verb phrases.
4.1.3.1 Pronoun Phrases

A pronoun phrase is a pronoun of more than one word. Pronoun phrases in Lámsõ? which are syntactic reduplications are included in (82) below:

\[(82)\]

(a) mō mō "I, myself" (mō = me)
(b) wō wō "you, yourself" (wō = you)
(c) wūn wūn "he/she, himself/herself" (wūn = him/her)
(d) vēn vēn "you, yourselves" (vēn = you (plural))

These pronoun phrases, very often, occur sentence initially.

4.1.3.2 Verb Phrases

A verb phrase is a verb of more than one word, which obviously, forms part of a sentence. There are two types of verb phrases which are syntactic reduplications in Lámsõ?. The first type of verb phrase contains a verb and noun as in (83) below:

\[(83)\]

(a) līm līm "to be doing some work" (work work)
(b) dū dū "to be going on a particular journey" (go go)
(c) wīy wīy "to come in a particular way" (come come)
(d) bān bān "to shine in a certain manner" (shine shine)

A sample sentence would be:

Wū līm līm "he/she is doing some work" (he/she work work)

The second type of verb phrase is composed of a verb and its past participle as in (84) below.
At one point in our analysis, we were tempted to analyse the reduplications in (84) as a morphological process, but the fact that the verb can be separated from its past participle as in the sentences in (85) below, shows that these reduplications can only be analyzed at the level of the sentence (syntax).

(84) a) bá bān “to just plait”
  (plait plaited)
b) fęŋ fęŋén “to just fly”
c) bēe bēeën “to just shelter”
  (shelter sheltered)
d) bāʔtf bāʔtín “to just gather”
  (gather gathered)
e) yīkır yīkírin “to just eat”
  (eat eaten)
f) bānén bānén “to just assemble”
  (assemble assembled)

(85) a) wù bā kitu bān “He/she is just plaiting the hair”
  (He/she plait head plaited)
b) wù bēe wūu bēeën “He/she is just sheltering from rain”
  (He/she shelter rain sheltered)
c) shūy bān làn bānén kishifíy kifür
  (sun shone today shone day full)
  “The sun shone today the whole day”
d) wù dzǔs nāa vifá vē yì nāán “He is still cooking food”
  (He/she still cook things-of-eat cooked)
e) shínán shin šf yì fęŋ gḥán sì dzăm fęŋén
  (bird this it do fly time all flown
  “This bird always flies (all the time)”

Reduplication analyzable at the level of the word (morphology) would not undergo such separation as in the sentences in (85) above.
4.2 GENERAL CONCLUSION

As a general conclusion on reduplication in Lámső?, we can say that Lámső? is very rich in reduplications. There are four forms of regular reduplicative processes in the language (where “regular” stands for those reduplications resulting from the affixation of a skeletal morpheme). These processes include: whole-word reduplication which takes place in nouns - ső?.só? “full of like fibre” (ső? = fibre), pronouns - wůn.wůn” by himself/herself” (wůn = him/her), adjectives - jéey.jéey “different (of many things)” (jéey = different), and adverbs - shů.shů “very anxiously “ (shů = anxiously); whole-stem reduplication which occurs in nouns - ki-ső?.ső? “bamboo stump”, verbs - kǎŋkǎŋ “to worry” (kǎŋ = to claim), adjectives - jéey.jéey “difference”, and adverbs - lěn.lěn “soon” (lěn = now); partial-stem reduplication in nouns, where initial CV of stem is prefixed to the stem for example: shǐ-sů.sů? “a very small fibre”; and partial-stem reduplication in adjectives and adverbs where initial CVV of stem is prefixed to the stem, for example táátávin “very strong/strongly “ (távin = strong/strongly).

Reduplications (irregular reduplications ) also result from other morphological processes like possession, compounding, borrowing and (non-reduplicative) affixation.

Reduplication can function derivationally, like whole-stem reduplication which results in the creation of new lexical items from existing ones for example géégéé “fifth day of the week” (géé = tiredness). It can function inflectionally like whole-word reduplication - lám.lám “full of languages” (lám = language) partial-stem reduplication in nouns -shů-lůlů “a very small language” and partial - stem reduplication in adjectives and adverbs - júůjúů “very good/well,” which only result in the addition of more meaning to existing lexical items.

The reduplicative affixes or templates in Lámső? are not just any string of C-Vs, but they can be captured in terms of prosodic units; in whole-word reduplication, the template is a word, in whole-stem reduplication it is a syllable, in partial-stem reduplication in nouns it is a core syllable and in partial-stem reduplication, in adjectives and adverbs it is a heavy core-syllable.

The templates are prefixed in nouns, pronouns adjectives and adverbs, but suffixed in verbs.
Whole-stem reduplication results in the Denasalization rule (rule 1) where a prenasalized consonant denasalises when it follows a nasal. It has equally led us to develop the suffixation constraint in verbs (section 3.1) specifically, where a verb cannot accommodate two lexical suffixes.

In all of whole-word reduplication, the tone is always copied alongside the segments as in $\text{bv\text{\texttie}m si\.bv\text{\texttie}m si}$ “full of stomachs” ($\text{bv\text{\texttie}m si} = \text{stomachs}$)

In whole-stem reduplication tone is copied along with the segments in nouns, adjectives and adverbs, for example $\text{l\text{\texttie}n.l\text{\texttie}n}$ “recently” ($\text{l\text{\texttie}n} = \text{today}$), but not copied in verbs where reduplicate stems obtain their surface tones through the Progressive Tone Spreading rule (rule 3) as in

$$\text{HL} \downarrow \\text{kâŋkâŋ} \quad \text{“to worry”} \quad (\text{kâŋkâŋ})$$

In partial-stem reduplication in nouns, the tone is not copied along with the segments, the reduplicate material gets its tone through the regressive tone spreading rule (rule 2) as in

$$\text{HL} \downarrow \\text{shì-bvâ\text{\texttie}bvâ\text{\texttie}m} \quad \text{“a very small stomach”}$$

In partial-stem reduplication in adjectives and adverbs the behaviour of tone is much more varied and complicated and can be explained more by a grammatical study than by phonological processes.

However, from simple observation we can bring out general tendencies: we could say that the tone is copied along with the segments, and a super high tone is associated with the second V to mark reduplication, as in the following data

(86) a) $\text{bi\text{\texttie}bi}$ “very bad” ($\text{bi} = \text{bad}$)  
b) $\text{nēnēn}$ “very plenty” ($\text{nēn} = \text{plenty}$)  
c) $\text{bâ\text{\texttie}bâ\text{\texttie}m}$ “right behind” ($\text{bâ\text{\texttie}m} = \text{behind}$)  
d) $\text{rō\text{\texttie}rō\text{\texttie}ŋ}$ “right down” ($\text{rō\text{\texttie}ŋ} = \text{down}$)  
e) $\text{yū\text{\texttie}yū\text{\texttie}v}$ “right up” ($\text{yū\text{\texttie}v} = \text{up}$)  
f) $\text{mvō\text{\texttie}mvō\text{\texttie}m}$ “right inside” ($\text{mvō\text{\texttie}m} = \text{inside}$)

The above assumption can account for all bases with high tones and most of the bases with low tones but it will not account for variations from the above data.
such as a) yuuyu “right up”
b) mv5mv5m “right inside”
where mid tone bases can also obtain mid tone in the reduplicates;

Bases with HL contour tones obtain HL in the reduplicates and L in the bases as in

a) dá “tall” dáádá “very tall”
b) jùŋ “good” júújúŋ “very good”

The peculiarity with partial-stem reduplication in adjectives and adverbs is that it is iterative, (unlike all other reduplications for example).

wì “much”
wìwì “very much”
wìwìwì “very very much”
wìwìwìwì “very very very much” etc.

Finally, we note that reduplication cannot take place twice at the same level. Morphemes or items that have undergone stem-level reduplication can no longer undergo any form of stem reduplication, be it whole or partial; and words that have undergone whole-word reduplication can no longer undergo any form of reduplication, but stem-level reduplications can still undergo word-level reduplication as below

a) sà:sà:. sà:sà: “full of bamboo stumps” (sà:sà: = bamboo stumps)
b) shi:sà:sà:. shi:sà:sà: “full of/like a very small fibre”
   (shi:sà:sà: = a very small fibre)
c) jùújùŋ,jùújùŋ “very good (emphatic)” (jùújùŋ = very good)
BIBLIOGRAPHY


