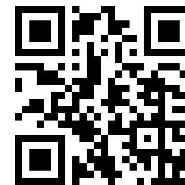


## Nasal Vowels in Solor Dialect of Lamaholot Language and Their Morpho-Syntactic Significance



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**ABSTRACT:** The Lamaholot language spoken in East Flores and Lembata has several interesting distinctive features, compared to its neighboring languages. One of these features is nasal vowels. Nasal vowels in this language are phonemic, in that they show distinct meanings in contrasted minimal-pair words. Because of this phonemic characteristic, the nasal vowels in the dialect have significant influences on the Lamaholot linguistics. This research will examine the importance of nasal vowels in Solor dialect of Lamaholot morphologically and syntactically. Two research problems this study has tried to answer are (1) what are the morphologic and syntactic significances of the nasal vowels of Solor Dialect of Lamaholot Language, and (2) what meanings do these nasal vowels indicate when they involve in morphological processes? Apart from being an additional linguistic reference for the study of languages in eastern Indonesia in particular, and Austronesian languages at a broader level, this research also contributes to the efforts to maintain regional languages in East Nusa Tenggara.

The approach to be used in this study is descriptive. The theory referred to is functional typology with the concepts of Basic Linguistic Theory based on generative structural grammar. References to the theory can be read, among others, in Payne (1997), Dixon (2010a), Comrie (1989) and Sopen (2007a, 2007b, 2007c). Data for this study was collected through recording and elicitation from the native speakers of Solor dialect. The collected corpus in the form of audio data is analyzed and stored electronically with the Praat application, and then transcribed into text form. The text data is sorted, then analyzed and stored electronically with the Toolbox application, which can later be used as additional data for the Solor – Lamaholot dialect dictionary database, which the author is currently working on.

The research results show that the presence of nasal vowels in the Solor dialect of the Lamaholot language gives very significant and influential contribution to the communication and speech of speakers of this dialect. This grammatical feature is so important that its presence can give rise to different interpretations by listeners. Morphosyntactically, the nasal vowels in Solor dialect of the Lamaholot language express five functions, namely (1) to express the pronominal form of ownership; (2) to express the form of alienable ownership; (3) to express the enclitic form of third person singular possession in common nouns; (4) to state the participial function derived from the verb; and (5) to express the attributive function of adjectives in the Solor dialect of the Lamaholot language.

**KEYWORDS:** Solor, Lamaholot, nasal vowels; morpho-syntactic significance.

### INTRODUCTION

Nasal vowels are found in many languages all over the world. Their existence in terms of geographical distribution is reported to concentrate in the equatorial regions of South America and Africa, the northern part of the South Asian subcontinent, and throughout vast area of North America (Hajek, 2005). This report indicates that out of 243 languages which are found to have nasal vowels, 179 have no nasal contrast, whereas the remainder 64 languages have oral versus nasal phonemic vowel contrast.

Although cross-world language observation has indicated that the number of contrastive nasal vowels is generally less than that of oral ones (Hajek, 2005), Solor dialect of Lamaholot Language (SL, hereafter) is different; it has the same quantity for each oral and nasal vowels. Compared to its neighboring languages including Sikka (Rosen, 1986), Ende (McDonnell, 2009), Nga'da (Djawanai, 1977), Kedang (Samely, 1991), Abui (Kratochvíl, 2007) and Teiwa (Klamer, 2010), which do not have such contrastive nasal vowels, Solor dialect of Lamaholot has the same number of nasal and oral vowels contrast. Some studies of Lamaholot dialects have also confirmed the presence of these nasal vowels. Lewolema dialect (Pampus, 1999) has six nasal vowels and Lewotobi dialect (Nagaya, 2011) has five nasal vowels.

Nasal vowels in SL are not only phonemic to their corresponding oral vowels but they are also meaningful morphemically to mark some grammar features. This phenomenon has captured the attention of some scholars including Keraf (1978), Nishiyama

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and Kellen (2007) and Nagaya (2011), yet it was left unexplained. They are not quite sure about the phonemic status of the nasal vowels, because they are not a typical feature of Austronesian languages.

This study investigates the importance of nasal vowels in Solor Dialect of the Lamaholot language. The research problems to be investigated are formulated into two questions as follows:

1. What are the significances of the nasal vowels of Solor Dialect of Lamaholot Language in the perspective of morphology and syntax?
2. What meaning do these nasal vowels indicate when they involve in morpho-syntactic processes?

### RESEARCH OBJECTIVES AND SIGNIFICANCE

This study has two purposes. On the one side, it aims at documenting Lamaholot language in a simple fashion. The data gathered are treated in the way documentary linguistics suggests doing, such as transcribing, annotating, translating into widely used language and storing the data electronically. On the other side, this study also aims at bringing Solor dialect of Lamaholot to the attention of wider linguistic community. Many Austronesianist agree that eastern Indonesia is known to have a diverse linguistic ecosystem with approximately 200-250 languages (Klamer, 2012a), yet the paucity of linguistic information regarding languages in this area has so far been an issue. This study is expected to add another volume to the body of linguistic information of eastern Indonesia languages. This study will bring some significance in the following ways. Firstly, being presented in the general linguistic framework and in the light of typology study, this description may hopefully be of some importance for general linguistics as well as for Austronesian studies. Secondly, working on a previously under-described dialect, this study is expected to bring out more linguistic features characterizing eastern Indonesia languages. Lamaholot has been considered a rich source of linguistic features for either proving or disproving typological features belonging to Austronesian languages in general and to Central Eastern Malayo-Polynesian sub-group in particular. Thirdly, being a documentary linguistics study, this study might be of help for pedagogical efforts to revitalize Lamaholot. This study is in favour of the program of the Ministry of Education and Culture of the Republic of Indonesia in the form of the Independent Learning Program Episode 17 concerning the Revitalization of Regional Languages. This research is expected to raise awareness of the importance of maintaining regional languages.

### REVIEW OF RELATED LITERATURE

The general theoretical framework used in this study belongs to descriptive linguistics; it describes nasal vowel phenomenon in SL. Within a descriptive linguistics framework, it is assumed that linguistic structures and categories are language specific (Payne, 1997) and (Dixon, 2010a), and therefore when these linguistic features are described, the description should be in terms of its language-specific properties; that is based on the primary data collected and gathered from the native speakers in the area where the language is spoken.

In addition to the general linguistic framework, typological perspectives within the Austronesian language family are also maintained. When analyzing and describing nasal vowels in SL, typological features of Austronesian languages, particularly of eastern Indonesian languages, are taken into account to argue against or for the features being described. The functional-typological perspectives, such as Comrie's (1989) and Sopen's (2007a, 2007b, 2007c), to mention a few, are referred to in the discussion and analysis of this study.

#### The Lamaholot language and Solor Dialect

Lamaholot (ISO code **slp**, (Lewis, Simons, & Fennig, 2014)) is spoken by about 150.000 – 200.000 people (Grimes, Therik, Grimes, & Jacob, 1997; Klamer, 2012b) on the easternmost part of Flores island and some neighboring small islands called Solor islands (Blust, 1993) as shown in Figure 1 below. The Solor islands, as Blust (1993) described, include Solor, Adonara and Lembata.

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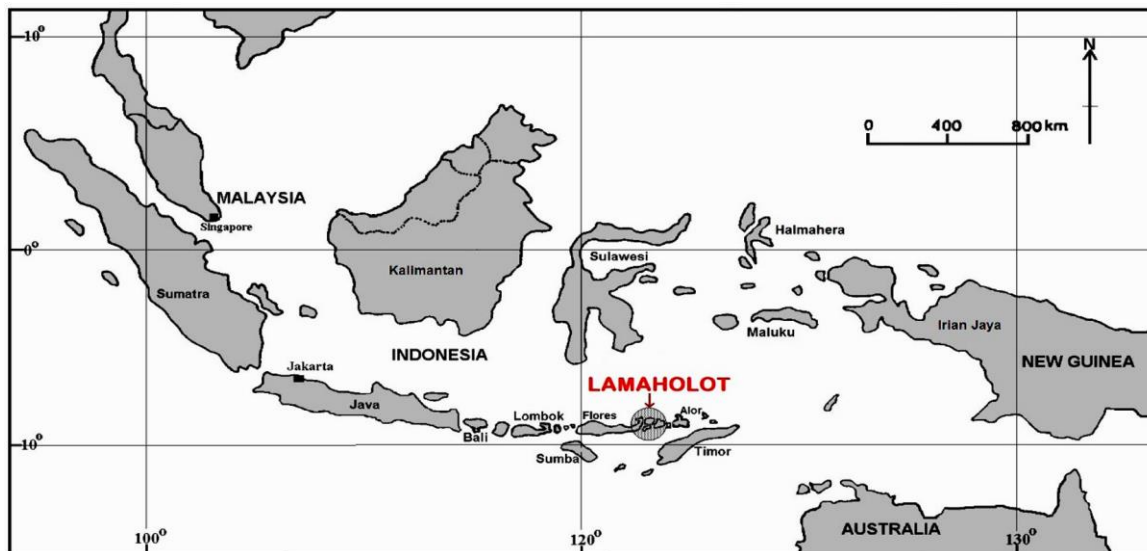
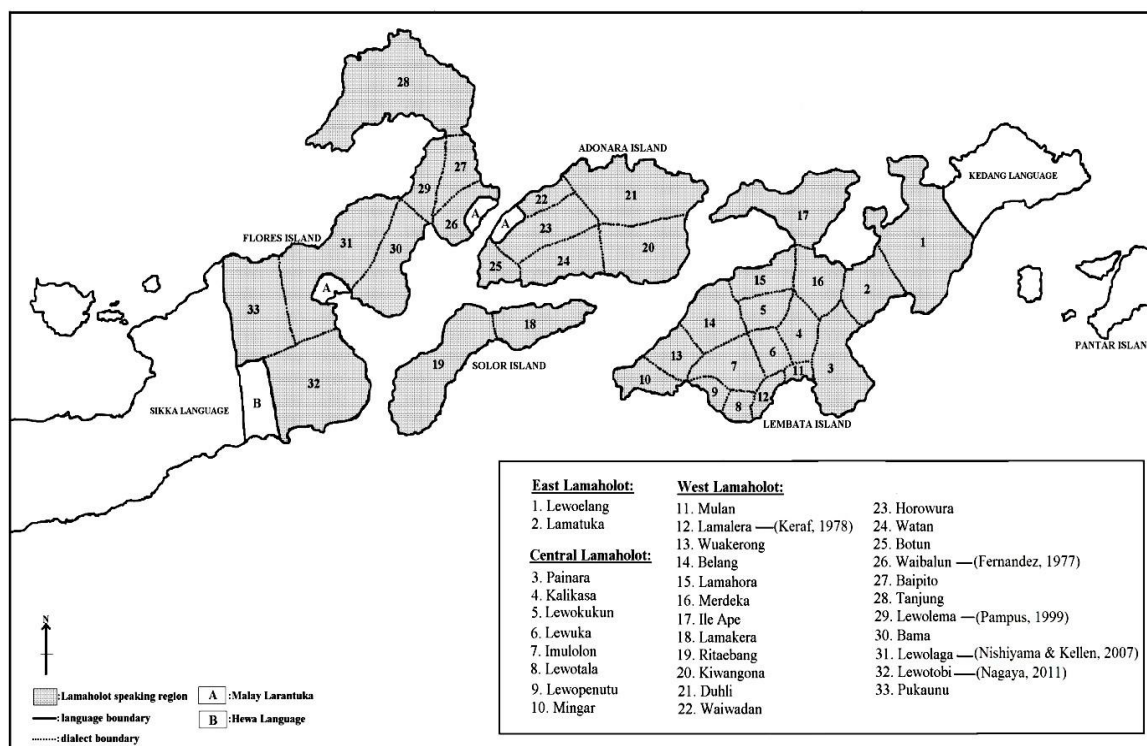


Figure 1 : The position of Lamaholot speaking region in relation of Indonesia islands.

Lamaholot language is better regarded as a chain of dialects. Keraf's (1978) Lamaholot dialects division is presented in Figure 2 below. Some of these dialects display significant differences which can bring about mutual incomprehension. The further a dialect from another dialect, the more substantial the dialectical differences between them appear. This phenomenon is also noted in Grimes et al. (1997). People of adjacent dialects can successfully communicate through the same language, but this, most of the time, does not apply to those of non-adjacent dialects. And this is true with Lamaholot; people from Solor dialect or other dialects in west Lamaholot cluster, for example, hardly understand dialects from eastern Lamaholot cluster.



Source: Keraf (1978)

Figure 2 : Dialect division of Lamaholot after Keraf (1978)

Out of these dialects, only a handful has been well-described. They are, unfortunately, only those of the western cluster spoken on Flores, namely Lewotobi dialect (Nagaya, 2011); Lewoingu (Lewolaga) dialect (Nishiyama & Kellen, 2007); Lewolema dialect (Pampus, 1999) and Ilemandiri (Waibalun) dialect (Fernandez, 1977). The only dialect external to Flores that has been intensively described is Lamalera of southern Lembata (Keraf, 1978). The rest 28 dialects, which are mostly spoken on the three small neighboring islands, remain unknown to wider linguistics community. Among these linguistically under-described dialects is Solor, spoken on almost entire Solor Island.

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Solor dialect of Lamaholot is spoken by approximately 20.000 people (Pemerintahan Kabupaten Flores Timur, 2009) in 32 villages, spreading on almost entire Solor Island. There are a few different accents, most of which are similar with only minor differences. A significantly distinctive accent, however, is the one spoken on the eastern north coast of the island. This accent is obviously distinctive when compared to others spoken on the same island and has been recognized as a dialect. Keraf (1978) called this distinct accent Lamakera dialect, and Grimes et al. (1997) Adonara dialect. This dialect is spoken in 7 coastal villages and very much closely related to the one spoken along the southern central coast of Adonara island.

The Solor dialect referred to in this study was introduced in Keraf (1978) as Ritaebang dialect. The term Ritaebang is actually the name of the capital village of the West Solor district, and to avoid misunderstanding regarding the coverage area of the dialect being concerned, the term Ritaebang is not used to refer to this dialect; the term Solor is used instead. The coverage of this dialect has been discussed in detailed in Kroon (2016, pp. 5 - 7), as shown in the following figures.

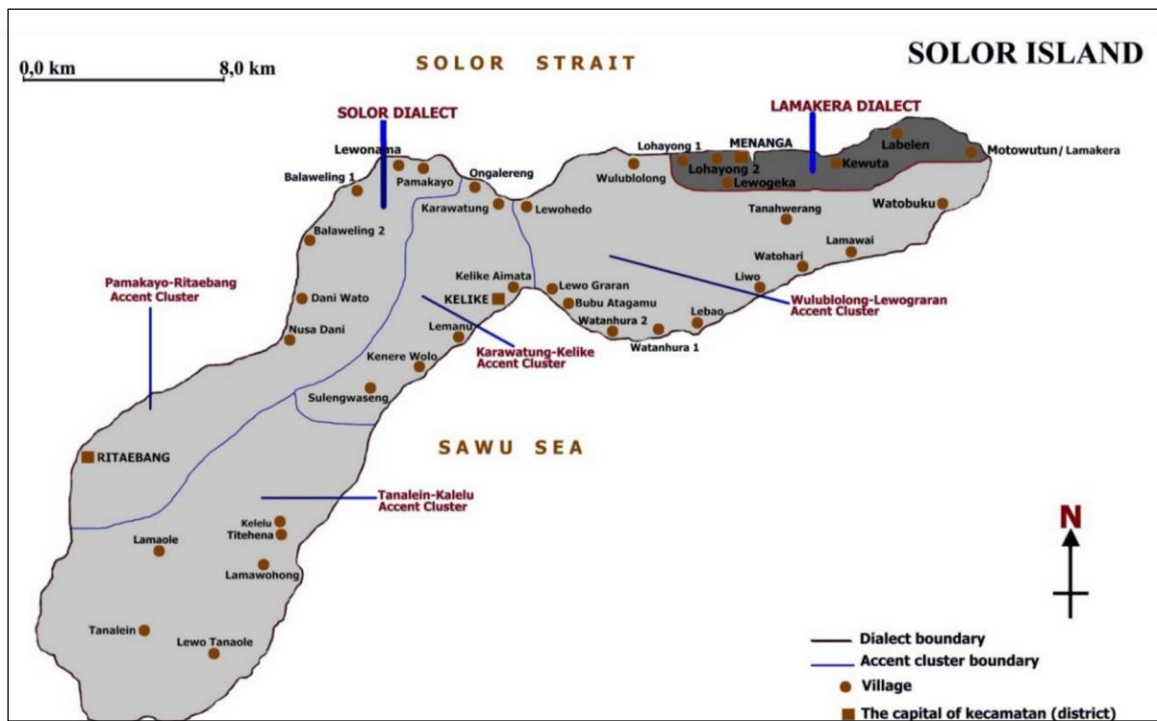


Figure 3. Solor Dialect speaking area and its accent clusters

This dialect had played an important role during the promotion of the Christianity on the island. Arndt (1951a, p. xxv) wrote that he would not have been successful in introducing local people Christianity if he never learned some of its basic vocabulary from Leekemer's (1893, pp. 421-461) early before he came to the island. His knowledge about the dialect might have helped him produce *Mengaji Kerus Laranē*, 'The prayer and the story of the crucifixion of Jesus Christ', which were used in Catholic churches on Solor Island. To date, this prayer is still used occasionally by a few churches.

### Nasal Vowels

Vowels are basically oral. When a vowel has nasal quality, the vowel is considered to have undergone a nasalization process. Nasalization is the production of the sound while the velum, that is the fleshy part of the palate near the back part of the mouth, is lowered, so that some air escapes through the nose during the production of the sound by the mouth. The effect is as if an [ŋ] sound were produced simultaneously with the oral sound. Most common nasalized sounds are the nasalized vowels. When nasal consonants (/m, n, ng/) occur after the vowel in a word, the vowel is usually nasalized for at least part of its duration.

Phonemically distinct nasal vowels are considered rare in Austronesian languages (Blust, 2013). A handful of Austronesian languages which are known to possess phonetically nasal vowels include those spoken in Borneo (Blust, 1997a). The nasal vowels in these languages, however, appear as a result of three phonological phenomena, which Blust (1997a) referred to as nasal harmony, nasal prelosion, and nasal postplosion.

None of these three vowel nasalization phenomena described in Blust (1997a), however, applies to nasal vowels in SL for these two reasons. Firstly, the three types of nasalization that occur in Borneo languages are phonetic, but those found in SL are phonemic. This can be seen clearly from the series of minimal pairs of nasal vowels versus oral vowel as proven in Kroon (2016, pp. 41-47). The vowel nasalization in the languages of Borneo occurs in complementary environments which are phonologically



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definable in relation to oral vowels, whereas those in SL occur in a word-final position only, the position where all the oral vowels can also occur, which in turn makes it possible to make contrasts through minimal pairs between oral and nasal vowels.

Secondly, the occurrence of vowel nasalization found in the languages of Borneo occurs in clearly defined environments. For example, nasal harmony occurs in the environment where there is a segment with a [+NASAL] feature, coming either before or after the nasalized vowel. This situation does not happen in SL where nasal vowels occur in the final position in a range of combination possibilities with any consonants.

The nasal vowel phenomenon in Lamaholot has been left unexplained in some previous studies such as Keraf (1978) and Nishiyama and Kellen (2007). Since it is not a typological feature of Austronesian, it may be explained in a wider perspective of linguistic analysis. It is reported that contrastive nasal vowels in the world's languages are not uncommon, and out of a total sample of 243 languages in Hajek's (2005) study, a quarter (64) have nasal-oral vowel contrasts. Geographically, contrastive nasal vowels are concentrated around the equatorial regions of South America and Africa, the northern part of the South Asian subcontinent, and throughout large parts of North America. Although in the distributional map of contrastive nasal vowels on the world's languages (Hajek, 2005, p. 48), no nasal vowels exist in Malayo-Polynesian languages, Durie (1985) reported that Acehnese, a WMP language spoken on the western most part of Sumatra, has contrastive nasal vowels. Nasal vowels in most of these languages, as Bhat (1975, p. 33) put it, occur "generally and preferably before a tautosyllabic (preconsonantal or final) nasal consonant. That is, their occurrence is most common in a closed syllable, which later becomes open through the deletion of the syllable-closing nasal." This phenomenon is, by Hombert (1986, p. 360) when analyzing nasal vowels in Teke, a language of Bantu, concluded as the most general diachronic process by which nasal vowels undergo a regressive assimilation; that is "an oral vowel becomes phonetically nasalized when it precedes a nasal consonant; [and] after the loss of the nasal consonant, nasalization of the vowel becomes distinctive". This can be presented as  $VN \rightarrow \check{V}N \rightarrow \check{V}$ .

This phonological process may be used to explain nasal vowels in SL by tracing the historical background of some current SL words with nasal vowels. First, referring to Blust's (1993) Swadesh 200-word list for Proto-Central Malayo Polynesian (PCMP), some roots containing nasal vowels in SL can be easily traced, and most of these forms originally ended in a phoneme having a [+NASAL] feature in the proto forms. Second, some loan words containing nasal vowels are easily analyzed as having undergone the same process, where in the source language, these words end in phonemes possessing a [+NASAL] feature. If the above explanation can be accepted, we can assume that SL originally had only oral vowels; the nasal ones are the allophone variants developed from these oral vowels by a nasalization process just described. After the nasalization process, the phonemes became lexicalized as they are now. These nasal vowels play important roles in SL morpho-syntactic processes to be described in the current study.

### RESEARCH METHOD

This research is descriptive in nature, and therefore the approach to be used is descriptive. In doing so, the nasal vowel phenomenon in SL is described in detailed along with their significance in the morphology and syntax of the Lamaholot language. The description is based on the corpus of data collected firsthand from the native speakers of SL through field research. The data were collected by recording and elicitation. The recording technique came up with audio-video and audio recordings, whereas the elicitation was carried out to collect such data as elicited phrases, clauses and sentences, and sound elicitation for phoneme distinction. Elicitation was also done for translation, lexical gathering, sentence reconstruction and consultation with a language consultant. A few bits of data were also gathered through participant observation and introspection.

### Research Findings

The presentation of the research findings starts with a brief explanation on nasal vowels in SL and followed with the discussion of the findings presented in the form of morphological functions that nasal vowels of SL indicate.

### Nasal Vowels of SL

Nasal vowels in SL are marked by a distinctive airflow through the nasal cavity during their production. This nasalization process is accompanied by a lowering of the velum, allowing air to pass through the nose simultaneously with the oral airflow. Nasalization is typically characterized by a reduction in the amplitude of the oral resonance, leading to a unique acoustic quality. This vocalic nasalization can be perceived audibly through a relative decrease in their intensity or by using instruments like acoustic spectrographs.

Kroon (2016) shows the distinction between oral and nasal vowels in the form of acoustic spectrographs from Praat (Boersma & Weenink, 1992) analysis. The comparison is made on the minimal pairs of the corresponding oral – nasal vowels, as adopted below.

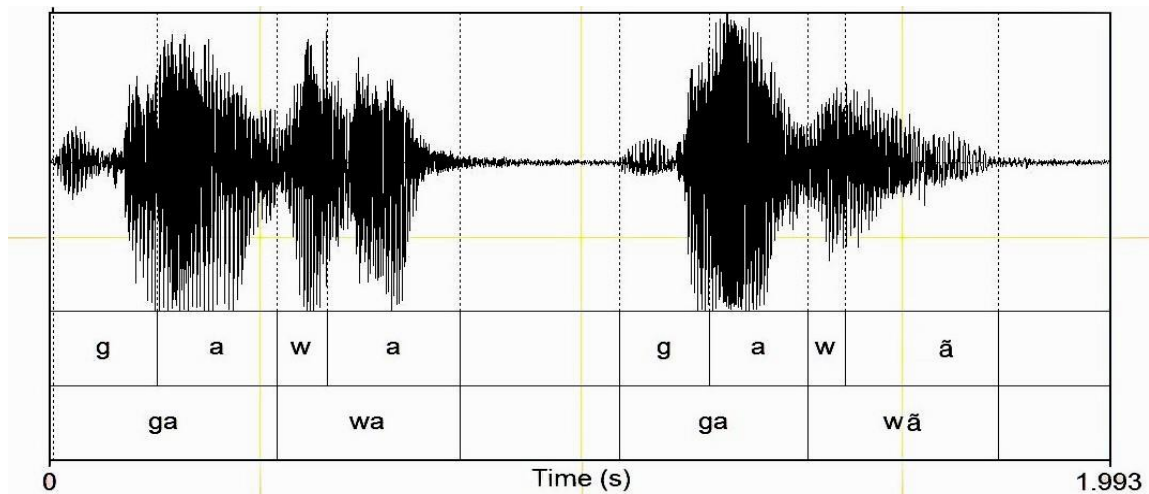


Figure 4 : Waveform distinguishing /a/ vs /ã/: *gawa* ‘hug’ vs. *gawã* ‘store’

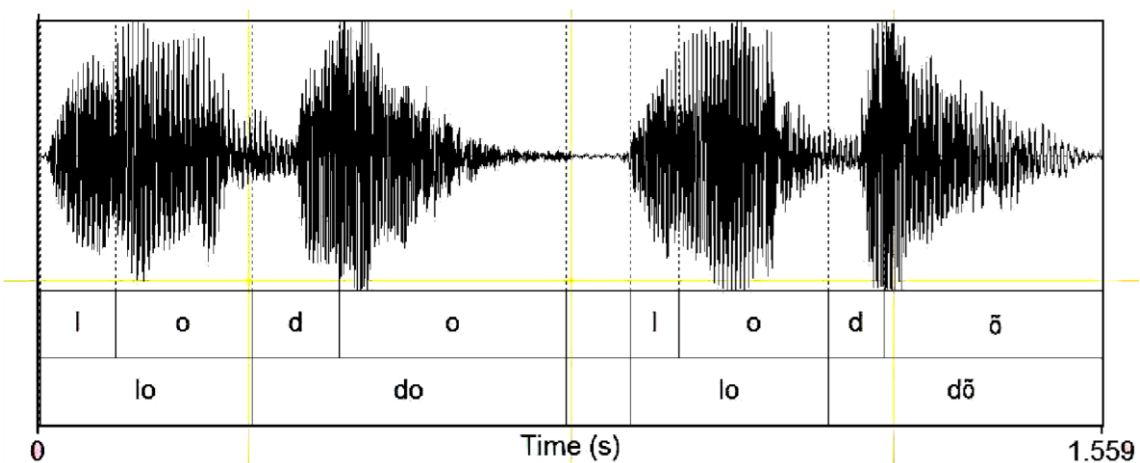


Figure 5 : Waveform distinguishing /o/ vs /õ/: *lodo* ‘descend’ vs. *lodõ* ‘insert’

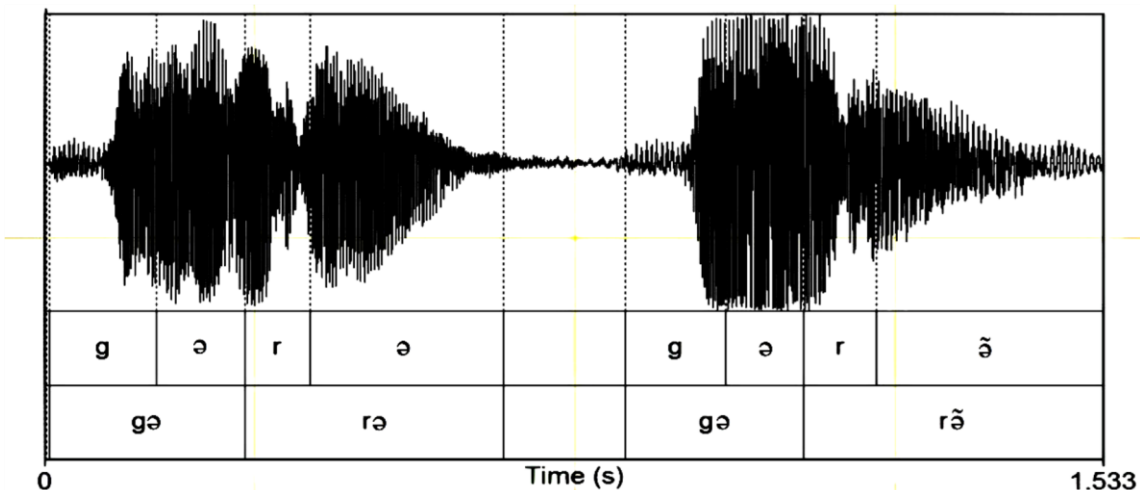


Figure 6 : Waveform distinguishing /ə/ vs /ẽ/: *gere* ‘call chicken’ vs. *gerẽ* ‘empty handed’

SL has six phonemic nasal vowels; each one corresponds to each of the six oral vowels of SL (Kroon, 2016). The pairs of the corresponding nasal and oral vowels can be seen in the following minimal pairs. For this presentation, slashes (/.../) is used to indicate phonemic representations, and square brackets ([...]) phonetic representations.

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- (1a). (/i/ [i] ~ /ĩ/ [ĩ]) : tahi [ˈtahi] ‘sea, ocean’ ~ tahĩ [ˈtahĩ] ‘prone’  
 tali [tali] ‘add’ ~ talĩ [ˈtalĩ] ‘rope of something’
- (1b). (/é/ [ɛ] ~ /ē/ [ē]) : géré [ˈgɛɛ] ‘ascend’ ~ géré [ˈgɛɛ̃] ‘hang a screen’  
 éké [ˈʔɛkɛ] ‘touch physically’ ~ éké [ˈʔɛkɛ̃] ‘ladder’
- (1c). (/a/ [a] ~ /ã/ [ã]) : gawa [ˈgawa] ‘hug’ ~ gawã [ˈgawã] ‘store; keep’  
 laka [ˈlaka] ‘jaw’ ~ lakã [ˈlakã] ‘disallow’
- (1d). (/e/ [ə] ~ /ẽ/ [ẽ]) : gere [gəˈrə] ‘call chicken’ ~ gerẽ [gəˈrẽ] ‘bring nothing’  
 tange [ˈtʌŋə] ‘attach’ ~ tangẽ [ˈtʌŋẽ] ‘uncooked’
- (1e). (/u/ [u] ~ /ũ/ [ũ]) : tau [ˈtau] ‘hit’ ~ taũ [ˈtaũ] ‘delouse’  
 hau [ˈhau] ‘come (seaward)’ ~ haũ [ˈhaũ] ‘sew’
- (1f). (/o/ [o] ~ /õ/ [õ]) : lodo [ˈlodo] ‘descend’ ~ lodõ [ˈlodõ] ‘insert’  
 liko [ˈliko] ‘Liko (name)’ ~ likõ [ˈlikõ] ‘protect’

Similar to most languages in the eastern Indonesia, Lamaholot has no specific orthography system; instead, the language speakers adopt Indonesian alphabets which were Latin origin to write in their local language. In term of phones and phonemes, Lamaholot and Indonesian, has little differences. The differences are, among others, the absence of some phonemes, including /c/, /j/, /ɲ/, /f/, /v/ and /z/. Since Indonesian does not have phonemic nasal vowels, the nasal vowels in SL are written differently in some studies on Lamaholot.

Some earlier studies on Lamaholot such as Keraf’s (1978), Arndt’s (1937, 1938, 1951a, 1951b) and (Nishiyama & Kellen, 2007), employed /n/ and /ŋ/ in practical orthography to represent a nasal vowel occurring in a word-final position. One can find in these sources forms such as *sorong* [sorõ] ‘give’, *wulan* [wulã] ‘moon’, *go’én* [go□ē] ‘my, mine’, *huleng* [hulē] ‘see’ and *ewung* [ewũ] ‘sweat’. This is unfortunate because there can be different personal perspective for the same form whether to use /n/ or /ŋ/. The form meaning ‘give’ for example, may be realized as *néing* [ˈnejiŋ] (Arndt, 1951a, p. 2) and *néin* [ˈnéjin] (Nishiyama & Kellen, 2007, p. 80). Even in the same source, one can find inconsistency of representing a final nasal vowel, such as in (Arndt, 1951a), the form meaning ‘even, complete’ is *getang* [gəˈtaŋ] in page 8 and *getan* [gəˈtan] in page 9.

To avoid the same problems, nasal vowels in this study are represented following those shown in Table 1 below. To distinguish the mid central vowel /ə/ from the mid front vowel /e/, previous studies used < e > and < é > respectively, see for example Keraf (1978), but for the current study, the nasal vowels use nasalized diacritic ~ above the oral one as displayed in the following table. The mid central nasal vowel is represented with < ẽ > and the mid front nasal one with < ē >.

**Table 1 : List of Corresponding Oral and Nasal Vowels of Solor Lamaholot**

	Front	Central	Back
Close	/i/ <i> /ĩ/ <ĩ>		/u/ <u> /ũ/ <ũ>
Open-mid	/ɛ/ <é> /ē/ <ē>	/ə/ <e> /ẽ/ <ẽ>	/o/ <o> /õ/ <õ>
Open		/a/ <a> /ã/ <ã>	

### The Importance of SL Nasal Vowels

Nasal vowels in SL play crucial roles in distinguishing meaning, either lexically or morphemically. Lexical meaning distinctions have obviously been shown in the list of the minimal pairs above. The section below discusses morpho-syntactic significance of the nasal vowels in SL.

#### 1. Indicating Possessive Pronoun

Nasalization of the oral vowel in the end of subject pronouns of SL changes the grammatical functions of the pronouns into possessive or genitive. As most bases of SL subject pronouns originally have a glottal before the final oral vowel, the nasalization process occurs immediately in the vowel right after the glottal. This, however, does not happen with the 1st-person plural, both

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inclusive and exclusive, because the subject form of this person has an onset voiced bilabial nasal stop /m/ and voiceless apico-dental stop /t/ on the final syllable, as seen in the table below.

**Table 2 : Nominative and Genitive Pronoun Forms of SL**

Singular	Nominative Pronoun	Genitive Pronoun	Plural	Nominative Pronoun	Genitive Pronoun
1	go'é 'I'	go'ē 'my, mine'	1(inc)	Tité 'we'	tité'ē 'our, ours'
2	mo'é 'you'	mo'ē 'your, yours'	1(exc)	Kamé 'we'	kamé'ē 'our, ours'
3	na'é 'he/she/it'	na'ē 'his/her, hers'	2	mi'o 'you'	mi'ō 'your, yours'
			3	ra'é 'they'	ra'ē 'their, theirs'

These genitive forms are used with alienable possessive nouns. The combination follows typical nominal phrases of CEMP languages (Klamer 2002): head-initial or the possessed noun precedes the possessor. They can function in two ways; the first use is roughly comparable to English possessive pronouns, such as 'mine' and 'ours' in (2a & 2b); and the other use to English possessive adjectives, such as 'my' and 'our' in (3a & 3b). To distinguish the genitive forms displayed in the table above from inalienable possessive enclitic form to be discussed below, I will gloss these genitive forms by adding **GEN** to the appropriate person of the pronoun form, as shown in the following examples.

(2a). Labu wé go'ē  
shirt that 1SGGEN  
That shirt is mine

(2b). Ikā wé tité'ē  
fish that 1PL(inc)GEN  
That fish are ours.

(3a). Labu go'ē wu'ū  
Shirt 1SGGEN new  
My shirt is new.

(3b). Lango tité'ē do'ē uli'ī  
house 1PL(inc)GEN far still  
Our house is still far away.

### 2. Indicating the 3<sup>rd</sup> Person Inalienable Possessive Enclitics

Human and animal body parts are inalienable nouns in SL. The possession of these body parts, which may also include their products, such as urine and sweat, is expressed with inalienable possessive enclitics. The full set of inalienable possessive enclitics along with their allomorphic forms presented in Kroon (2016, p. 67) is adopted below.

**Table 3 : SL inalienable possessive enclitic forms**

Enclitic form for root ending in...					Enclitic form for root ending in...					
Singular	oral	vowel	nasal	vowel	Plural	oral	vowel	nasal	vowel	con sonant
		consonant								
1	=k	=ne	=e		1(inc)	=te		=ne	=e	
2	=m	=nem	=em		1(exc)	=ke		=ne	=e	
3	=Ũ	=nē	=ē		2	=ké		=né	=é	
					3	=ka		=na	=a	

Unlike other persons, where the inalienable possessive is indicated by the addition of a mono-syllabic enclitic having onset being homorganic or similar to the consonant of the base (nominative) pronoun form with the mid central vowel /ə/ as its nucleus, the third singular person undergoes completely different way, as shown in the table above. This enclitic form undergoes nasalization, indicated in Kroon (2016, p. 69) as possessive nasalization, symbolized with Ũ (nasal vowel). The discussion presented here focuses on the possessive enclitic of the third person singular.



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The nasalization to express third person singular inalienable possessive enclitic occurs in four allomorphic ways, described below.

a. Body parts that end in oral vowels /i/, /u/ and /a/; the vowels are nasalized right away as shown in the examples below.

(4a). /i/→/ĩ/ : léi ‘foot’ > léĩ ‘his/her/its foot’  
weki ‘trunk’ > wekĩ ‘his/her/its trunk’

(4b). /a/→/ã/ : mata ‘eye’ > matã ‘his/her/its eye’  
lima ‘hand’ > limã ‘his/her/its hand’

(4c). /u/→/ũ/ : iru ‘nose’ > irũ ‘his/her/its nose’  
tilu ‘ear’ > tilũ ‘his/her/its ear’

b. Body parts that end in /é/ and /o/; the vowel is raised and then nasalized, as shown below.

(5a). /é/→/ĩ/ : taé ‘excrement’ > taĩ ‘his/her excrement’  
uté ‘penis’ > utĩ ‘his penis’  
méké ‘urine’ > mékĩ ‘his/her urine’

(5b). /o/→/ũ/ : poho ‘fart’ > pohũ ‘his/her/its fart’  
tuho ‘breast’ > tuhũ ‘his/her breast’

The vowel nasalization and raising processes can be presented in the following diagram.

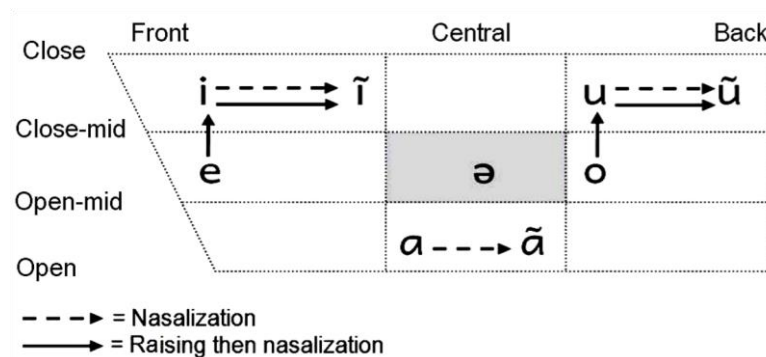


Figure 7 : SL vowel raising and nasalization diagram

c. Body part nouns that end in /e/; add glottal stop /ʔ/ and nasal mid central vowel /ẽ/, as shown in the following examples.

(6). ipe ‘tooth’ > ipeʔẽ ‘his/her/its tooth’ kote ‘head’ > koteʔẽ ‘his/her/its head’  
uwe ‘bottom’ > uweʔẽ ‘his/her bottom’

d. Body part nouns that end in a nasal vowel; the base is attached right away with the enclitic = nẽ, as shown in the following examples.

(7). narã ‘name’ > narã=nẽ ‘his/her/its name’  
keradũ ‘throat’ > keradũ=nẽ ‘his/her/its throat’  
hikũ ‘elbow’ > hikũ=nẽ ‘his/her elbow’

e. Body part nouns that end in a consonant; the base is attached right away with the enclitic =ẽ, as shown in the following examples.

(8). wéwél ‘tongue’ > wéwél=ẽ ‘his/her/its tongue’  
lotor ‘knee’ > lotor=ẽ ‘his/her/its knee’  
lahak ‘penis’ > lahak=ẽ ‘his/its penis’

### 3. Indicating the 3<sup>rd</sup> Person Possessive Enclitics

In addition to the 3<sup>rd</sup> person inalienable possessive enclitics for human and animal body parts, SL also expresses 3<sup>rd</sup> person possession of general noun in the form of enclitic. This enclitic form also undergoes vowel nasalization, yet with an additional glottal phoneme inserted between the noun base and the enclitic morpheme.

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Possessive expressed in this way may look similar to the inalienable form of the possession of human and animal body parts presented above. For persons other than the 3<sup>rd</sup> one, the possessive forms they take are exactly similar. The distinction between inalienable and alienable one is on the dependency status of the noun root. When the root cannot stand as a free word, it is inalienable, and therefore the possessive meaning is also inalienable. Consider the following examples.

(9a). *lima=m*  
hand=2SGPOSS  
'your hand'

(9b). *labu-m*  
shirt-2SGPOSS  
'your shirt'.

SL speakers readily identify that there is such a root as *labu* 'shirt' in SL, but not *lima* because this root is non-existent in SL. Furthermore, for the 3<sup>rd</sup>-person singular, one can have, for example, *limã* (hand=3SGPOSS) 'his/her hand' or *bapa limã* (father hand=3SGPOSS) 'father's hand', but no \**lima bapa na'ẽ* in comparison with, for example *labu bapa na'ẽ* (shirt father 3SGGEN) 'father's shirt'.

The 3<sup>rd</sup>-person singular possession of common noun described above is indicated here with -'ŵ ('glottal + nasalized final vowel of the root'). The allomorphs of this enclitic morpheme undergo similar morpho-phonemic processes as those used with body part nouns. This enclitic form is also used for both inalienable and alienable nouns. Inalienable nouns are those that are considered as part of a whole, as shown in (10) below. (10a) through (10c) show examples with the default form -'ŵ. Example (11) and (12) show the allomorphic occurrence of the enclitic form. (11) shows examples with base noun ending in a nasal vowel, and (12) shows examples with base noun ending in a consonant.

(a). Base nouns ending in an oral vowel

(10a). *kayo lepa=ã*  
tree leave=3SGPOSS  
'tree leaves'

(10b). *lango kenawé=ẽ*  
house door=3SGPOSS  
'house door'

(10c). *geré belodo='õ*  
bed crossbar=3SGPOSS  
'bed crossbar'

(b). Base nouns ending in a nasal vowel

(11a). *wai larã=nẽ*  
water street=3SGPOSS  
'water way'

(11b). *lango hikũ=nẽ*  
house elbow=3SGPOSS  
'house corner'

(c). Base nouns ending in a consonant

(12a). *kayo amut=ẽ*  
tree root=3SGPOSS  
'tree root'

(12b). *larã ha'ak=ẽ*  
street side=3SGPOSS  
'street side'

When this possessive enclitic form is used with alienable nouns, this structure may be expressed in other way by using the genitive form shown in Table 2 above. Consider the following examples, where the 3<sup>rd</sup> person possessive enclitic is used on the left



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(16). Those that are attached with **KeN-**

Root	(i)	(ii)	Example
tuno 'to bake'	tenunu (?)	tenut(u)-ũ	uwé tenut-ũ 'baked cassavas'
sikã 'to chase away'	senikã (?)	senikã-ně	kusĩ senikã-ně 'abandoned cat'
tali 'to add'	tenali (?)	tenali-ĩ	wata tenali-ĩ 'added rice'

(17). Those that undergo nasal substitution

Root	(i)	(ii)	Example
botĩ 'to pile up'	motĩ 'pile'	motĩ-ně	wato motĩ-ně 'a piled stones'
polot 'to roll'	molot 'roll'	molot-ě	lélu molot-ě 'rolled cotton'
po'ok 'to cut'	mo'ok 'cuts, pieces'	mo'ok-ě	kayo mo'ok-ě 'cut log'

Unlike the nasalization of common nouns where the relationship between the head and the nasalized noun is possessor - possessed as (13a) has illustrated, the nasalization process with derived nouns from verbs implies a participial attributive relationship; in that the nasalized derived nouns, or better referred to as participial form, provide additional information about their head. The notion they imply corresponds to either English past participle, such as 'baked' in 'baked potato' or present participle, such as 'boiling' in 'boiling water'.

### 5. Indicating attributive adjective

Nasalization phenomenon also occurs with some adjectival bases. Similar to participial forms just described, some adjective roots undergo the two processes above, but some other do not, in order to function attributively. Unlike the proses with verb base where the results of the first process may be used in utterances, the process with adjective bases only use the result of the second phase. The form resulted from the first process are linguistically unusable, thus are not used in utterances, as indicated with a question mark in the following example. Only the form of the second phase may be usable in utterances, as shown in (18) below.

(18). Root	(i)	(ii)	Example
gele 'tired'	kenele (?)	kenele-'ě	larã kenele-'ě 'a tiring journey'
gilo 'sour'	kenilu (?)	kenil(u)-ũ	pao kenilũ 'sour taste mango'
mia 'shy'	bemia (?)	bemi(a)-ã	ana bemiã'a 'shy kid'
kesu 'short'	knesu (?)	knesu-'ũ	ula knesu'ũ 'a short snake'
pait 'bitter'	penait (?)	penait-ě	oba penaitě 'bitter medicine'
milã 'dirty'	bemilã (?)	bemilã-ně	alé' bemilã-ně 'dirty clothes'

Some other adjective roots do not have to undergo the two phases described above in order to function attributively. These adjective roots undergo nasalization process (-'v ('glottal + nasalized final vowel of the root')) directly from the root form as shown in the following examples.

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(19). Root	ĩ	Example
béle 'big'	béle-'ě	ula béle'ě 'a big snake'
ana 'small'	ana-'ã	lango ana'ã 'a small house'
bura 'white'	bura-'ã	labu bura'ã 'white shirt'
platé 'hot'	plat(é)-ĩ	wai plati 'hot water'
belolo 'high, tall'	belolo-'õ	kayo belolo'õ 'a tall tree'
kelemur 'beautiful'	kelemur-ě	kebare kelemurě 'beautiful lady'

Although the root and the form with vowel nasalization process have the same adjectival meaning, the difference between the two lies in their syntactic use. The roots, such as *gele* in (18) above, are used predicatively as in (20a) and (20b), whereas the nasalized forms, such as *kenele'ě*, are used attributively as in (21a) and (21b). The nasalized form cannot be used predicatively as the ungrammaticality of (22) shows.

(20a). Go'é gele=ke kaé.  
1SG tired=1SG already  
I am already tired.

(20b). Labu mo'ě milã-na kaé  
shirt 2SGGEN dirty already.  
Your shirt has already been dirty.

(21a). Tité t=ele larã kenele'ě  
We 3PL(icl) road tired  
We took a tiring journey.

(21b). Ose wé ana bemiã'a  
Ose that child shy  
Ose is a shy girl.

(22). \*Go'é kenele'ě e kaé.  
1SG tired already  
I am already tired.

Interestingly, only the root form can undergo reduplication to indicate intensification (see Kroon, 2016, pp. 84-85) as in (23) as well as to express comparison with *di-* (see Kroon, 2016, p. 123) as in (24); a phenomenon which prove the property of pure adjective word category. The use of the nasalized form to express intensification and comparison with *di-* causes ungrammaticality, as shown in (25a) and (25b) below.

(23). Lango na'ě béle- béle  
house 3SGPOSS big-RED  
'His house is very big'

(24). Na'é pilé ikã di béle  
She choose fish COMPAR big  
She chose a bigger fish.

(25a). \*Lango na'ě béle'ě - béle'ě  
house 3SGPOSS big-RED  
'His house is very big'

(25b). \*Na'é pilé ikã di béle'ě  
she choose fish COMPAR big  
She chose a bigger fish.



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### CONCLUSIONS

Nasal vowel phenomenon is not uncommon to languages of Austronesian family group, yet the phenomenon in Solor dialect of Lamaholot language is different from those that are found in most Austronesian languages. Whereas in most Austronesian languages, the nasal vowels are allomorphic in nature as a result of some morpho-phonetic processes, those on SL are phonemic, even morphemic.

This study has investigated the vowel nasalization phenomenon, and the results show that the presence of nasal vowels in SL has remarkable linguistic significance and therefore are influential the language speakers communication. Morpho-syntactically, the presence of nasal vowels in the Solor dialect of the Lamaholot language aims to express five functions, namely (1) to express the pronominal form of ownership; (2) to state the form of inalienable possession; (3) to express the third person singular enclitic form of common nouns; (4) to express participial functions derived from verbs; and (5) to express the attributive function of adjectives in Solor dialect of the Lamaholot language.

### REFERENCES

- 1) Arndt, Paul. (1937). *Grammatik der Solor-sprache*. Ende, Flores: Arnoldus-Drukkerij.
- 2) Arndt, Paul. (1938). *Demon und Padzi; die Feindlichen Bruder des Solor-Archiples* (Translated by Paulus Sabon Nama - Demon dan Paji; Dua bersaudara yang bermusuhan di Kepulauan Solor (2002) into Indonesian ed.). Maumere - Flores: Puslit Candraditya.
- 3) Arndt, Paul. (1951a). *Religion auf Ostflores, Adonare und Solor* (Translated by Paulus Sabon Nama - Agama Asli di Kepulauan Solor (2009) into Indonesian ed.). Maumere - Flores: Puslit Candraditya.
- 4) Arndt, Paul. (1951b). *Religion auf Ostflores, Adonare und Solor* (Translated by Paulus Sabon Nama - Falsafah dan Aktivitas Hidup Manusia di Kepulauan Solor (2003) into Indonesian ed.). Maumere - Flores: Puslit Candraditya.
- 5) Bhat, D. N. S. (1975). Two studies in nasalization. In C. A. Ferguson, L. M. Hyman & J. J. Ohala (Eds.), *Nasalfest; Papers from a symposium on nasal and nasalization* (pp. 27-48). Stanford: Language Universal Project - Department of Linguistics, Stanford University.
- 6) Blust, Robert. (1993). Central and Central-Eastern Malayo-Polynesian. *Oceanic Linguistics*, 32(2), 241-293.
- 7) Blust, Robert. (1997a). Nasals and nasalization in Borneo. *Oceanic Linguistics*, 36(1), 149-179.
- 8) Blust, Robert. (2013). *The Austronesian languages*. Canberra: Asia-Pacific Linguistics. Retrieved from <http://pacling.anu.edu.au/materials/Blust2013Austronesian.pdf>
- 9) Boersma, Paul, & Weenink, David. (1992). Praat; Doing phonetics by computer (Version 5.3.78). Amsterdam: University of Amsterdam. Retrieved from <http://www.fon.hum.uva.nl/praat/>
- 10) Comrie, Bernard. (1989). *Language universal and linguistic typology* (2nd ed.). Chicago: The University of Chicago Press.
- 11) Dixon, R. M. W. (2010a). *Basic Linguistics Theory, Volume 1 : Methodology*. Oxford: Oxford University Press.
- 12) Djawanai, Stepahnus. (1977). A description of the basic phonology of Nga'da and the treatment of borrowings. *NUSA - Miscellaneous Studies in Indonesian and Languages in Indonesia Part IV, V*, 10-18.
- 13) Durie, Mark. (1985). *A grammar of Acehnese on the basis of a dialect of north Aceh*. Dordrecht-Holland/Cinnaminson-U.S.A: Foris Publications.
- 14) Fernandez, Inyo. (1977). *Struktur bahasa Lamaholot Ile Mandiri*. Graduate Thesis (Unpublished), University of Gajah Mada, Yogyakarta.
- 15) Grimes, Charles E, Therik, Tom, Grimes, Barbara D, & Jacob, Max. (1997). *A guide to the people and language of Nusa Tenggara*. Kupang, NTT - Indonesia: Artha Wacana Press.
- 16) Hajek, John. (2005). Vowel nasalization. In M. Haspelmath, M. S. Dryer, D. Gil & B. Comrie (Eds.), *The world atlas of language structures* (pp. 46-49). Oxford: Oxford University Press.
- 17) Hombert, Jean Marie. (1986). The development of nasalized vowels in the Teke language group (Bantu). In K. Bogers, H. van der Hulst & M. Mous (Eds.), *The phonological representation of suprasegmentals* (pp. 357-379). Dordrecht: Foris.
- 18) Keraf, Gregorius. (1978). *Morfologi dialek Lamalera*. Ende, Flores: Percetakan Offset Arnoldus.
- 19) Klamer, Marian. (2010). *A grammar of Teiwa*. Berlin: Mouton de Gruyter.
- 20) Klamer, Marian. (2012a). Tours of the past through the present of eastern Indonesia. In F. Seifart, G. Haig, N. P. Himmelmann, D. Jung, A. Margetts & P. Trilsbeek (Eds.), *Potentials of Language Documentation; Methods, Analyses and Utilization*. Honolulu: University of Hawai'i Press.
- 21) Klamer, Marian. (2012b). Papuan-Austronesian language contact; Alorese from an areal perspective. In N. Evans & M. Klamer (Eds.), *Melanesian languages on the edges of Asia: Challenges for the 21st century* (pp. 72-108). Hawaii: University of Hawaii Press.
- 22) Kratochvíl, František (2007). *A grammar of Abui; A Papuan language of Alor*. Janskerkhof - The Netherlands LOT.
- 23) Kroon, Yosep B. . (2016). *A Grammar of Solor - Lamaholot; A Language of Flores, Eastern Indonesia*. Doctorate, The University of Adelaide, Adelaide. Retrieved from <https://digital.library.adelaide.edu.au/dspace/handle/2440/102380>

## Nasal Vowels in Solor Dialect of Lamaholot Language and Their Morpho-Syntactic Significance

- 24) Leemker, H. H. O. (1893). *Woordenlijstje van de Soloreesche taal : (Soloreesch-Hollandsch) / Verzameld Door H. H. O. Leemker*. Batavia: Albrecht & Rusche.
- 25) Lewis, M Paul, Simons, Gary F, & Fennig, Charles D. (2014). *Ethnologue; Language of the World*. Seventeenth Edition. Retrieved 10 September 2014, from [www.ethnologue.com](http://www.ethnologue.com)
- 26) McDonnell, Bradley. (2009). A preliminary description of Ende phonology. *Journal of the Southeast Asian Linguistics Society*, 2, 195-226.
- 27) Nagaya, Naonori. (2011). *The Lamaholot language of eastern Indonesia*. Doctorate (Unpublished), Rice University, Houston, Texas.
- 28) Nishiyama, Kunio, & Kellen, Herman. (2007). *A grammar of Lamaholot, eastern Indonesia; The morphology and syntax of the Lewoingu dialect*. Muenchen: Lincom GmbH.
- 29) Pampus, Karl Heinz. (1999). *Koda kiwa: Dreisprachiges Wörterbuch des Lamaholot (Dialekt von Lewolema)*. Stuttgart: Steiner.
- 30) Payne, Thomas E. (1997). *Describing morphosyntax; A guide for field linguistics* (9th ed.). Cambridge UK: Cambridge University Press.
- 31) Pemerintahan Kabupaten Flores Timur. (2009). *Flores timur dalam angka tahun 2009*. Larantuka - Flotim: Badan Pusat Statistik Kabupaten Flores Timur.
- 32) Rosen, M. Joan. (1986). Phonemes, verb classes and personal endings in Maumere. *NUSA - Miscellaneous studies of Indonesian and other languages in Indonesia: Part VIII*, 25, 39-69.
- 33) Samely, Urusula. (1991). *Kedang (Eastern Indonesia): Some aspects of its grammar*. Hamburg: Helmut Buske Verlag
- 34) Shopen, Timothy (Ed.). (2007a). *Language typology and syntactic description; Volume 1: Clause structures* (2nd ed.). Cambridge: Cambridge University Press.
- 35) Shopen, Timothy (Ed.). (2007b). *Language typology and syntactic description; Volume 2: Complex constructions* (2nd ed.). Cambridge: Cambridge University Press.
- 36) Shopen, Timothy (Ed.). (2007c). *Language typology and syntactic description; Volume 3: Grammatical Categories* (2nd ed.). Cambridge: Cambridge University Press.



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