1. INTRODUCTION

The purpose of this paper is to describe the phonemics and morphophonemics of Northern Subaanan, a member of the Subanon subgroup of the Southern Philippine languages. Northern Subaanan displays a number of phonological features that are of interest. The most striking of these is a complex set of alternations triggered by G, a voiced velar stop, when it is followed by another consonant. These alternations include partial assimilation, weakening, backing, laryngealization, and deletion. Another feature of interest is laryngealization which occurs in one consonant [k], an allophone of /k/, and is triggered by [k], [k] and [ŋ] in all contiguous vowels. Also of interest are the long vowels [æ:] and [ɔ:]. Although [æ:] and [ɔ:] are present in other Philippine languages including Tagalog, their greater relative frequency in Northern Subaanan and their more transparent development from the sequences /ai/ for [æ:] and /au/ for [ɔ:] are also noteworthy. The data are presented here in a classic phonemic analysis in order to make the data available to the general linguistic community.

2. WORD

The unit of analysis in this study is the phonological word. In Northern Subaanan a phonological word consists of one or more syllables. If a phonological word consists of more than one syllable, the penultimate syllable is stressed; however, if the nucleus of the penultimate syllable is occupied by the mid central vowel /ɑ/, stress falls on the ultimate syllable.
3. SYLLABLE

A syllable is a phonological unit that bears only one mora, or beat. In Northern Subaan an a syllable consists of an obligatory nucleus filled by a vowel and optional margins filled by one consonant as onset and/or one consonant as coda. The four basic syllable types are: CV, CVC, V, and VC. The syllables CV and CVC are unambiguous, as shown in:

- **CV**
  - /qi.tu/ 'dog'
  - /ba.li.1id/ 'to lie down'
  - /mi.mu.la/ 'planted'
  - /la.ku/ 'to jump'

- **CVC**
  - /gan.da/ 'a bulb, an indigenous spice'
  - /gun.lu/ 'giant'
  - /bu.nak/ 'to wash clothes'
  - /du.pi/ 'rain'

The syllables V and VC are posited on the basis of the analysis of vowel sequences having a high vowel. (See Section 4.4 for a discussion of vowel sequences.) Examples are:

- **V**
  - /?u.a.nan/ 'will get'
  - /si.a/ 'desirably, an expression'
  - /?u.j.tan/ 'will bring'
  - /ni.u/ 'you, yours (PL)'

- **VC**
  - /da.lu.an/ 'hen'
  - /bu.at/ 'to get up' or 'to come from'
  - /si.ak/ 'to chop wood'
  - /mi.mi.an/ 'passed by'
  - /?u.it/ 'to bring'
  - /si.uk/ 'to reach up to something'
  - /mi.k.a.la.mi.un/ 'rotten'
Surface syllable types CCV and CCVC occur in word-initial position in the citation form of many nouns; however, due to their highly limited distribution and certain morphophonemic evidence, they are not posited as syllable types of the language. (See Section 4.1. for the interpretation of these consonant clusters.)

4. INTERPRETATION

Northern Subaanan has several ambiguous segments and sequences which require interpretation: consonant clusters, long consonants, high vowels, vowel sequences, and long vowels.

4.1. Consonant Clusters

Northern Subaanan has no unambiguous consonant clusters. For those clusters that occur in word-medial position, the two contiguous consonants are interpreted as belonging to separate syllables, as in:

- /tim.pəŋ/ 'to cover'
- /?əg.buŋ/ 'to bite'
- /san.taŋ/ 'how many'
- /?əd.luŋ/ 'to hide'
- /suŋ.kiŋ/ 'to reach with a stick'

For those clusters that occur in word-initial position, the analysis is more complex. In the available data, consonant clusters occur in word-initial position in the citation form of nouns only, as in:

- /gba.din/ 'cat'
- /ksi.san/ 'cockroach'
- /ŋmu.loŋ/ 'face'

Although the vast majority of nouns have consonant clusters in their citation form, not all do. Consider the following words. 'Earthworm' and 'earth' are a unique contrastive pair.

- /gu.bi/ 'sweet potato'
- /kə.luŋ/ 'riverine crab'
Word-initial consonant clusters are problematic in that the presence of such clusters may be taken as evidence for the existence of two more syllable types, namely CCV and CCVC. On the other hand, since such consonant clusters occur only word-initially and only in nouns, the limited distribution suggests that a word-initial consonant cluster may not belong to the onset of a single syllable. This hypothesis is supported by the observation that the initial consonant in such clusters triggers phonological alternations identical to those triggered by affixes ending in G (see Section 6.2.). This suggests that word-initial consonant clusters are the result of the addition of the segment G to the initial consonant of a noun stem. (See Sanicas-Daguman (1996) for an analysis of G as a 'syntactic category marker'.) On the basis of this evidence, word-initial consonant clusters are interpreted as a sequence of two consonants which are separated by a morpheme boundary, and not as a sequence of consonants in the onset of a single syllable.

4.2. Long Consonants

In Northern Subaanon the segment [d] can lengthen. Following the pattern for consonant clusters, a lengthened consonant is interpreted as a sequence of two identical consonants and a syllable break is placed between them, as in:

- [gɔdːən] /ɡɔdːən/ 'ladder'
- [ɡɔdːəb] /ɡɔdːəb/ 'chest'
- [mə.tɔdːəw] /mə.tɔdːəw/ 'cold'

To date, consonant length has been noted for the segment [d] only. This raises the question of whether [dː] is underlyingly a long consonant. If Northern Subaanon words containing [dː] are compared with cognates in other Subanon languages and in Cebuano, another Southern Philippine language that is geographically close to Northern Subaanon, the cognate forms are found to have [gd] where Northern Subaanon has [dː]. This suggests that [dː] in Northern Subaanon is underlyingly the sequence [gd], and that [g] assimilates completely to [d] when it is followed by [d]. Examples are given below. (See the discussion of /d/ in Section 5.2.1. for another alternation involving [gd].)
It should be noted here that in certain words in Northern Subaanon [d:] varies freely with [d], as in the following examples:

\[
\begin{align*}
  [mə.łaə dol] & \sim [mə.łaə dol] & /mə.łaə dol/ & \text{‘will sink’} \\
  [mə.łaə dəg] & \sim [mə.łaə dəg] & /mə.łaə dəg/ & \text{‘straight’}
\end{align*}
\]

The following cognate forms suggest that [d:], or [d], in these words is also underlyingly [gd]. Further discussion on this matter is found in Section 5.2.1.

\[
\begin{align*}
  /mə.łuə dan/ & \quad \text{‘will sink’} & \text{Cebuano} \\
  /mo.łuə dəw/ & \quad \text{‘straight’} & \text{Western Subanon}
\end{align*}
\]

### 4.3. High Vowels

High vowels are interpreted as vowels /i/ and /u/ when they occur as syllable nucleus and bear a mora. They are interpreted as semi-vowels /y/ and /w/ when they occur as syllable margin and do not bear a mora. Hence, the following words are interpreted as:
4.4. Vowel Sequences

Northern Subaanon has no unambiguous vowel sequences; all vowel sequences contain a high vowel. Furthermore in such sequences, the high vowel may bear a mora and may be stressed. Together, these facts are taken as evidence that each vowel in the sequence is the nucleus of a separate syllable, as shown below:

- ['bian] /'bi.an/ ‘to pass by’
- ['tau?] /'tu.a?/ ‘to appear’
- ['?ui'] /'?u.it/ ‘to bring’
- ['miu?] /'mi.u?/ ‘will urinate’

The sequences [ai] and [au] do not occur in Northern Subaanon and their absence is accounted for in Section 4.6.

4.5. Long Vowels [ai], [i], [a], and [u]

The short vowels [a], [i], [ə], and [u] have lengthened counterparts, i.e. [a:], [i:], [ə:], and [u:]. All long vowels have two moras. Following the analysis of non-identical vowel sequences, long vowels are interpreted as a sequence of identical vowels, each of which is the nucleus of a separate syllable, as in:

- [gina:] /gi.na.a/ ‘feeling’, literally, ‘breath’
- [ba:lan] /ba.a.la:n/ ‘will make’ or ‘will do’
- [go:pa:] /go.pa.at/ ‘four’
- [ga:bi:] /ga.bi.i/ ‘evening’
- [di:n] /di.in/ ‘there’
- [di:tu?] /di.i.tu?/ ‘yonder’
This interpretation is supported by the observation that when a word ending in /u/ and one beginning in /u/ occur next to each other across a morpheme boundary, [u:] results, as in the following examples:

\[
\begin{align*}
/məg.ba.yu/ + /-u/ & \rightarrow [məgbayu:] \\
\text{‘will pound rice’} + \text{‘I’} & \rightarrow \text{‘I will pound rice’}
\end{align*}
\]

\[
\begin{align*}
/gu.lu/ & + /-u/ \rightarrow [gulu:] \\
\text{‘head’} + \text{‘my’} & \rightarrow \text{‘my head’}
\end{align*}
\]

4.6. Long Vowels [æː] and [ɔː]

In contrast to other long vowels, [æː] and [ɔː] do not have short counterparts. The absence of the vowel sequence [ai] and [au] suggests that underlyingly [æː] may be the vowel sequence [ai], and [ɔː] the sequence [au]. Free variation between [ɔː] and [au] in the word ‘knowledgeable’ [mə.toː] and [mə.ta.u] offer support for this interpretation. Furthermore, when /a/ and /i/, and /a/ and /u/ occur next to each other across a morpheme boundary, /a/ and /i/ become [æː], and /a/ and /u/ become [ɔː], as in:

\[
\begin{align*}
/ma/ + /-in/ & \rightarrow [mæːn] \\
\text{EMPH} + \text{‘that’} & \rightarrow \text{‘that’ (emphatic)}
\end{align*}
\]

\[
\begin{align*}
/pa/ + /-in/ & \rightarrow [pæːn] \\
\text{‘yet’} + \text{‘that’} & \rightarrow \text{‘that...yet’}
\end{align*}
\]

\[
\begin{align*}
/mə.nim.ba/ + /-ita/ & \rightarrow [mə.nim.bæːta] \\
\text{‘to go to church’} + \text{‘we’}1PL INCL & \rightarrow \text{‘let us go to church’}
\end{align*}
\]
DAGUMAN AND SANICAS-DAGUMAN

\[ /pa/ \quad + \quad /-u/ \quad \rightarrow \quad [pæ] \]

'yet'

\[ /ma.ta/ \quad + \quad /-u/ \quad \rightarrow \quad [ma.to:] \]

'eye'

Cognates in other Subanan languages and in Cebuano provide additional support for this analysis. Occurrences of Northern Subanan [æ:] correspond to the sequence [a?i] or [aki] in certain cognates. Similarly, Northern Subanan [ɔ:] corresponds to the sequence [a?u] or [aku] in other cognates, as in:

<table>
<thead>
<tr>
<th>Northern Subanan</th>
<th>Southern Subanan</th>
<th>Western Subanon</th>
<th>Cebuano</th>
</tr>
</thead>
<tbody>
<tr>
<td>[dlæ:]</td>
<td>'male'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[dla.?i]</td>
<td>'male'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[gla.ki]</td>
<td>'male'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[la.ki]</td>
<td>'male'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[æː]</td>
<td>'a mutual help system in farming'</td>
<td>Northern Subanan</td>
<td>Cebuano</td>
</tr>
<tr>
<td>[ɔː?u]</td>
<td>'a mutual help system in farming'</td>
<td>Cebuano</td>
<td></td>
</tr>
<tr>
<td>[ɔːp]</td>
<td>'to scoop by hand'</td>
<td>Northern Subanan</td>
<td>Cebuano</td>
</tr>
<tr>
<td>[ha.ku]</td>
<td>'to scoop by hand'</td>
<td>Cebuano</td>
<td></td>
</tr>
</tbody>
</table>

Taken together, both language internal evidence and comparative evidence indicate that [æ:] is underlyingly the sequence /ai/ and [ɔ:] the sequence /au/; therefore, [æ:] is interpreted as /ai/, and [ɔ:] as /au/.

5. PHONEMES: CONTRASTS AND DESCRIPTION

Northern Subanan has eighteen phonemes: fourteen are consonants, and four are vowels. The consonants are: /p, t, k, ?, b, d, q, m, n, η, s, l, y/, and /w/ and the vowels are: /a, i, u, and /a/. Table 1 includes all Northern Subanan phonemes and their allophones except [æ:] and [ɔ:] (cf. Section 4.6.).
Table 1. Phonetic Segments in Northern Subaanan

<table>
<thead>
<tr>
<th>Consonants</th>
<th>bilabial</th>
<th>alveolar</th>
<th>alveo-palatal</th>
<th>velar</th>
<th>back velar</th>
<th>laryngeal</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>voiceless stop</td>
<td>p</td>
<td>t</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>released</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>k</td>
<td>k</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>voiced stop</td>
<td>b</td>
<td>d</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>released</td>
<td>b</td>
<td>d</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voiced fricative</td>
<td>b</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>voiceless fricative</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nasal</td>
<td>m</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>flap</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>semi-vowel</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vowels</th>
<th>front</th>
<th>central</th>
<th>back</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>i</td>
<td>iː</td>
<td>u</td>
</tr>
<tr>
<td></td>
<td>j</td>
<td></td>
<td>y</td>
</tr>
<tr>
<td>mid</td>
<td>ɐ</td>
<td>ɐː</td>
<td>ɐ</td>
</tr>
<tr>
<td>low</td>
<td>a</td>
<td>aː</td>
<td>ɐ</td>
</tr>
</tbody>
</table>

Note: 1. V represents a short non-laryngealized vowel
2. V: represents a long vowel
3. V represents a short laryngealized vowel, V being pronounced slightly lower than the nonlaryngealized counterpart.

5.1. Evidence for Separation of Phonemes

The following are pairs that show contrast between phonemes.
5.1.1. Consonants

<table>
<thead>
<tr>
<th>Phone</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>/ma.la.puʔ/</td>
<td>‘will be detached’</td>
</tr>
<tr>
<td></td>
<td>/ma.la.buʔ/</td>
<td>‘will be delayed’</td>
</tr>
<tr>
<td>/t/</td>
<td>/tu.aʔ/</td>
<td>‘to appear’</td>
</tr>
<tr>
<td></td>
<td>/du.aʔ/</td>
<td>‘two’</td>
</tr>
<tr>
<td>/d/</td>
<td>/du.aʔ/</td>
<td>‘two’</td>
</tr>
<tr>
<td></td>
<td>/lu.aʔ/</td>
<td>‘to spit’</td>
</tr>
<tr>
<td>/k/</td>
<td>/ka.mos/</td>
<td>‘a weed’</td>
</tr>
<tr>
<td></td>
<td>/ga.mos/</td>
<td>‘a child’s diaper’</td>
</tr>
<tr>
<td>/ʔ/</td>
<td>/ma.mu.naʔ/</td>
<td>‘will replant rice (upland)’</td>
</tr>
<tr>
<td></td>
<td>/ma.mu.nak/</td>
<td>‘will wash clothes’</td>
</tr>
<tr>
<td>/m/</td>
<td>/ma.an/</td>
<td>‘will eat’</td>
</tr>
<tr>
<td></td>
<td>/na.an/</td>
<td>‘mine’</td>
</tr>
<tr>
<td>/n/</td>
<td>/pa.la.nən/</td>
<td>‘a type of cooking’</td>
</tr>
<tr>
<td></td>
<td>/pa.la.nən/</td>
<td>‘will put out the fire’</td>
</tr>
</tbody>
</table>

5.1.2. Vowels

<table>
<thead>
<tr>
<th>Phone</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/</td>
<td>/mik.tu.luq/</td>
<td>‘slept/ is sleeping’</td>
</tr>
<tr>
<td></td>
<td>/mak.tu.luq/</td>
<td>‘will sleep’</td>
</tr>
<tr>
<td>/a/</td>
<td>/ma.kə.la.nət/</td>
<td>‘irksome’</td>
</tr>
<tr>
<td></td>
<td>/ma.kə.la.nət/</td>
<td>‘crispy’</td>
</tr>
<tr>
<td>/u/</td>
<td>/ga.lut/</td>
<td>‘a wild root crop, edible’</td>
</tr>
<tr>
<td></td>
<td>/ga.lat/</td>
<td>‘boundary’</td>
</tr>
</tbody>
</table>

5.2. Description of Phonemes and their Allophones

The following is a description of the articulatory features of Northern Subaanan phonemes and their allophones, and a description of their distribution.
5.2.1. Consonants

/p/ is a voiceless bilabial stop, which has two allophones, \([p]\) and \([p]\).

\([p]\) is unreleased and occurs word finally.

- \(\text{[tə.gi.na]}/\text{[tə.gi.na]}/\) ‘to dream’
- \(\text{[sə.la]}/\text{[sə.la]}/\) ‘for cooking rice to dry’

\([p]\) is released and occurs elsewhere.

- \(\text{[pə.tə]}/\text{[pə.tə]}/\) ‘to cut’
- \(\text{[sə.pa]} /\text{[sə.pa]} /\) ‘to chew’
- \(\text{[dəm.pə]} /\text{[dəm.pə]} /\) ‘frog’

/b/ is a voiced bilabial stop, which has three allophones, \([b]\), \([b]\) and \([b]\).

\([b]\) is unreleased and occurs word finally.

- \(\text{[su]}/\text{[su]} /\) ‘clothes’
- \(\text{[gəd.la]} /\text{[gəd.la]} /\) ‘wild boar’

\([b]\) is a fricative and occurs intervocalically.

- \(\text{[sə.bu]} /\text{[sə.bu]} /\) ‘to boil’
- \(\text{[sə.bi]} /\text{[sə.bi]} /\) ‘to ask for something’

\([b]\) is released and occurs elsewhere.

- \(\text{[bə.li.lə]} /\text{[bə.li.lə]} /\) ‘to lie down’
- \(\text{[dəm.bu]} /\text{[dəm.bu]} /\) ‘dull’

/t/ is a voiceless alveolar stop, which has two allophones, \([t]\) and \([t]\).

\([t]\) is unreleased and occurs word finally.

- \(\text{[bə.ɾi]} /\text{[bə.ɾi]} /\) ‘to tear’
- \(\text{[sə.lu]} /\text{[sə.lu]} /\) ‘to join’

\([t]\) is released and occurs elsewhere.

- \(\text{[tə.lu]} /\text{[tə.lu]} /\) ‘to speak’
- \(\text{[bə.na.tək]} /\text{[bə.na.tək]} /\) ‘tied together’
- \(\text{[bən.tu]} /\text{[bən.tu]} /\) ‘to hit with a stick’
/d/ is a voiced alveolar stop, which has three allophones, [d̪], [f̪] and [d].

[d̪] is unreleased and occurs word finally.
- [gʊ.na̱d̪] /gʊ.na̱d/ ‘flesh’
- [gəd.lu̱d̪] /gəd.lud/ ‘to hide’

[f̪] is a flap and occurs intervocally.
- [ba.ɾiŋ] /ba.diŋ/ ‘cat’
- [ŋu.ɾan] /ŋu.dan/ ‘younger sibling’

[d] is released and occurs elsewhere.
- [da.nas] /da.nas/ ‘a fish trap’
- [sin.dap] /sin.dap/ ‘for the sun to set’

The following words would appear to be exceptions to the rule that /d/ is [f] intervocally.
- [kti.dɔk] /kti.dɔk/ ‘mosquito’
- [ma.ga.də] /ma.ga.dat/ ‘to discuss seriously’

Cognates in other Subanon languages suggest that [d] in these words is underlyingly [gd], as in:
- /ktig.dık/ ‘mosquito’ Central Subanan
- /mo.gaq.dat/ ‘will converse argumentatively’ Western Subanan

Frequently when [g] and [d] are contiguous in Northern Subaanan, [g] assimilates completely to [d], resulting in [d]; however, in certain words [d] varies freely with [d] (see Section 4.2.). This may indicate that [d] is regularizing by becoming [d], hence accounting for the occurrence of word-medial intervocalic [d].

There is, however, another alternation affecting the sequence [gd] which may be a second pathway through which word-medial intervocalic [d] has come into the language. This alternation usually occurs across morpheme boundaries. Specifically, when a prefix ending in G attaches to a word beginning with [d], G is simply deleted, leaving only [d] (see Section 6.2.5.), as in the following examples.
PHONEMICS AND MORPHOPHONEMICS OF NORTHERN SUBAANEN

\[ m^{-G} \] + [d`u?] 'rain' \rightarrow \[ m^{-G} .d`u.pi? \] 'will rain'
\[ m^{-G} \] + [du`ni?] 'go with' \rightarrow \[ m^{-G} .d`u.ni ? \] 'will go with'
\[ m^{-G} \] + [da`fu] 'plow' \rightarrow \[ m^{-G} .da`fu \] 'will plow'

Since this alternation occurs across morpheme boundaries, there is a possibility that a similar alternation may occur within words, so that in the words [k`ti.d`ak] 'mosquito' and [m`a.qa.da?] 'to discuss seriously' where word-medial [d] is underlyingly [gd], [g] could have been deleted, leaving only [d].

These two pathways account for the presence of [d] in the word-medial intervocalic position. There is, also, evidence that an intervocalic [d] derived from an underlying [gd] sequence has started to alternate with [r̚] in this position. In the Northern Subaanen word /ba.dut/ 'to pull out' or 'to uproot', intervocalic [d] varies freely with [r̚], as in:

\[ ba.du? \] \sim \[ ba.ru? \] /ba.dut/ 'to pull out' or 'to uproot'

The Western Subanon cognate provides evidence that the intervocalic [d] in Northern Subaanen /ba.dut/ is underlyingly [gd].

/bog.dut/ 'to pull out' or 'to uproot' Western Subanon

This suggests that in at least one Northern Subaanen word, an intervocalic [d] derived from a [gd] sequence is now eligible to become [r̚].

One other exception to the distribution pattern for /d/ is [du.pi?.,ru.pi?] in which [r̚] occurs following a glottal stop.

/k/ is a voiceless velar stop, which has three allophones, [k], [k] and [k].

[k] is released and occurs following [ŋ].
\[ ma.lap.ka? \] /ma.lap.kat/ 'sticky'
\[ ma.lap.ka? \] /ma.lap.ka?/ 'lazy'

[k] is backed and occurs in syllable codas.
\[ ga.tuk \] /ga.tuk/ 'answer to a riddle'
\[ ma.nijik.laj \] /ma.nijik.lag/ 'to go river fishing'
[k] is laryngealized and occurs elsewhere.

\[
\begin{align*}
[\text{ka-ga\j}] & \quad /\text{ka-ga}/ & \text{'to crawl'} \\
[\text{ta-ka\j}] & \quad /\text{ta-ka}/ & \text{'to cover'} \\
\end{align*}
\]

/g/ is a voiced velar stop, which has three allophones, [g], [\dagger] and [g].

\[
\begin{align*}
[\text{?i-na\j-\j}] & \quad /\text{?i-na\j-\j}/ & \text{'invited'} \\
[\text{mo-\j-\j-gas}] & \quad /\text{mo-\j-\j-gas}/ & \text{'bright' or 'clear'} \\
\end{align*}
\]

[\dagger] is unreleased and occurs word finally.

\[
\begin{align*}
[\text{qi-ku\dagger}] & \quad /\text{qi-ku}/ & \text{'tail'} \\
[\text{?u-la\dagger}] & \quad /\text{?u-la}/ & \text{'to move'} \\
\end{align*}
\]

[g] is a fricative and occurs elsewhere.

\[
\begin{align*}
[\text{g-in-\dagger}] & \quad /\text{g-in-\dagger}/ & \text{'to stand'} \\
[\text{sa-gaw}] & \quad /\text{sa-gaw}/ & \text{'to cry'} \\
\end{align*}
\]

/\j/ [\j] is a glottal stop and occurs in syllable onsets and codas.

\[
\begin{align*}
[\text{?an-da\j}] & \quad /\text{?an-da\j}/ & \text{'negative'} \\
[\text{gu-ma-\j-an}] & \quad /\text{gu-ma-\j-an}/ & \text{'bolo case'} \\
\end{align*}
\]

/s/ [s] is a voiceless alveolar fricative and occurs in syllable onsets and codas.

\[
\begin{align*}
[\text{sa-sak}] & \quad /\text{sa-sak}/ & \text{'to be noisy'} \\
[\text{gu-pa-su-pas}] & \quad /\text{gu-pa-su-pas}/ & \text{'a mushroom'} \\
\end{align*}
\]

/m/ [m] is a voiced bilabial nasal and occurs in syllable onsets and codas.

\[
\begin{align*}
[\text{mo-mis}] & \quad /\text{mo-mis}/ & \text{'delicious'} \\
[\text{gin-sim}] & \quad /\text{gin-sim}/ & \text{'a tree'} \\
\end{align*}
\]

/n/ [n] is a voiced alveolar nasal and occurs in syllable onsets and codas.

\[
\begin{align*}
[\text{na-nu}] & \quad /\text{na-nu}/ & \text{'when'} \\
[\text{lan-dun}] & \quad /\text{lan-dun}/ & \text{'what'} \\
\end{align*}
\]
/ŋ/ is a voiced velar nasal, which has two allophones, [ŋ] and [ŋ].

[ŋ] occurs before [m], [n], and [ŋ].

<table>
<thead>
<tr>
<th>Word</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/mœ.œŋ.maʔ/</td>
<td>[mœ.œŋ.maʔ]</td>
<td>'river spirit'</td>
</tr>
<tr>
<td>/miŋ.na.naʔ/</td>
<td>[miŋ.na.naʔ]</td>
<td>'secreted pus'</td>
</tr>
<tr>
<td>/mœ.tiŋ.gas/</td>
<td>[mœ.tiŋ.gas]</td>
<td>'bright' or 'clear'</td>
</tr>
</tbody>
</table>

[ŋ] is backed and occurs elsewhere.

<table>
<thead>
<tr>
<th>Word</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ŋi.si/</td>
<td>[ŋi.si]</td>
<td>'teeth'</td>
</tr>
<tr>
<td>/mi.nœ.⁶rœŋ/</td>
<td>[mi.nœ.⁶rœŋ]</td>
<td>'put on a hat'</td>
</tr>
<tr>
<td>/buŋ.kul/</td>
<td>[buŋ.kul]</td>
<td>'for the head to bump on something'</td>
</tr>
</tbody>
</table>

The word [dœŋ.gik] /dœŋ.gik/ 'a plant' is an exception to this pattern in that [ŋ] occurs before [ŋ]. There are no occurrences of /ŋŋ/ in the data.

/l/ [l] is a voiced alveolar lateral and occurs in syllable onsets and codas.

<table>
<thead>
<tr>
<th>Word</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/la.lu.fan/</td>
<td>[la.lu.fan]</td>
<td>'to make a hole in something'</td>
</tr>
<tr>
<td>/ga.bœl/</td>
<td>[ga.bœl]</td>
<td>'smoke'</td>
</tr>
</tbody>
</table>

/y/ [y] is a voiced unrounded alveopalatal semi-vowel and occurs in syllable onsets and codas.

<table>
<thead>
<tr>
<th>Word</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/lu.ma.yu⁹/</td>
<td>[lu.ma.yu⁹]</td>
<td>'will fly'</td>
</tr>
<tr>
<td>/gi.la.yi.lay/</td>
<td>[gi.la.yi.lay]</td>
<td>'eyebrow'</td>
</tr>
</tbody>
</table>

/w/ [w] is a voiced rounded bilabial semi-vowel and occurs in syllable onsets and codas.

<table>
<thead>
<tr>
<th>Word</th>
<th>Phoneme</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>/da.wa/</td>
<td>[da.wa]</td>
<td>'millet, Setaria italica'</td>
</tr>
<tr>
<td>/nan.daw/</td>
<td>[nan.daw]</td>
<td>'now'</td>
</tr>
</tbody>
</table>
5.2.2. Vowels

/i/ is a high front unrounded vowel, which has two allophones, [i] and [i].

[i] is laryngealized and occurs contiguous to [k], [k] and [ŋ].

[i] occurs elsewhere.

/a/ is a low unrounded vowel, which has two allophones, [a] and [a].

[a] occurs elsewhere.
/u/ is a high back rounded vowel, which has two allophones, [y] and [u].

[y] is laryngealized and occurs contiguous to [k], [ŋ] and [ŋ].

- [du.luk] /du.luk/ ‘firewood’
- [ku.ti] /ku.ti/ ‘toy top’
- [ko.nu.ŋu] /ko.nu.ŋu/ ‘fingernail’
- [ŋu.ŋuŋ] /ŋu.ŋuŋ/ ‘younger sibling’
- [bu.ŋuŋ] /bu.ŋuŋ/ ‘a style of cooking’
- [bi.nu.ŋuŋ] /bi.nu.ŋuŋ/ ‘treated’

[u] occurs elsewhere.

- [ba.yu] /ba.yu/ ‘to pound rice’
- [du.nuŋ] /du.nuŋ/ ‘to go with’

/o/ is a mid central vowel, which has two allophones, [ə] and [ə].

[ə] is laryngealized and occurs contiguous to [k], [ŋ] and [ŋ].

- [gək.suŋ] /gək.suŋ/ ‘foot’
- [kə.laŋ?] /kə.laŋ?/ ‘frying pan’
- [tə.ŋəŋ] /tə.ŋəŋ/ ‘to cover’
- [ba.ŋəŋ] /ba.ŋəŋ/ ‘to be deaf’
- [gə.ŋəŋ] /gə.ŋəŋ/ ‘bracelet’

[ə] occurs elsewhere.

- [da.ləm] /da.ləm/ ‘new moon’
- [ʔəm.pa.nas] /ʔəm.pa.nas/ ‘will have fever’

All Northern Subaanan phonemes are shown in Table 2.
Table 2. Northern Subaanan Phonemes

<table>
<thead>
<tr>
<th>Consonants</th>
<th>bilabial</th>
<th>alveolar</th>
<th>alveo-palatal</th>
<th>velar</th>
<th>glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>voiceless stop</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td>voiced stop</td>
<td>b</td>
<td>d</td>
<td>g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fricative</td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nasal</td>
<td>m</td>
<td>n</td>
<td>t</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>semi-vowel</td>
<td>w</td>
<td></td>
<td>y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vowels</th>
<th>front</th>
<th>central</th>
<th>back</th>
</tr>
</thead>
<tbody>
<tr>
<td>high</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>mid</td>
<td></td>
<td>e</td>
<td></td>
</tr>
<tr>
<td>low</td>
<td></td>
<td></td>
<td>a</td>
</tr>
</tbody>
</table>

6. MORPHOPHONEMICS

Morphophonemic processes found in Northern Subaan are: nasal assimilation, phonological alternations involving /g/, vowel assimilation, vowel weakening, resyllabification, and metathesis.

6.1. Nasal Assimilation

When a nasal-final prefix is added to a stem, the nasal assimilates to the same point of articulation as the initial consonant of stems beginning with certain consonants. Following assimilation, the initial consonant of the stem may or may not be deleted.

6.1.1. Nasal assimilation involving *mağin/-miğin-* and *pəğin/-piğin-*

For the affixes *mağin/-miğin-* and *pəğin/-piğin-*, the final nasal assimilates to the point of articulation of the initial consonant of the stem when the initial consonant is other than the back consonants /g/ or /ʔ/ and the nasals /m/ or /n/. *Mağin/-miğin-* are verbal affixes that cross-reference Agents; *mağin-* is irrealis, and *miğin-* realis. *Pəğin-*
/pinin- are verbal affixes that cross-reference Non-nuclear Themes (Instruments); pənin-is irrealis, and pinin-realis.)

mənin- + pusaw → mənipusaw 'will gather wild food plant'
mənin- + bayul → mənimbayul 'will gather mat-making grass'

mənin- + tidyayuŋ → mənipididyayuŋ '... gathered melons'
mənin- + dulian → mənimindulian '... gathered durian'
pənin- + səraʔ → pəninsəraʔ 'will gather fish with ...'
pinin- + luya → pininluya '... gathered ginger with ...'
pənin- + kəluŋ → pəninkəluŋ 'will gather river crab with ...

When the initial consonant of the stem is the voiced back consonant /g/, the prefix nasal assimilates to the same point of articulation, and /g/ is deleted.

pənin- + galut → pənīgalut 'will gather wild rootcrops with ...'
pinin- + gulaŋ → pininluya '... gathered river shrimps with ...'

When the initial consonant of the stem is /ʔ/, the prefix nasal surfaces as /n/ and /ʔ/ is deleted.

mənin- + ?antul → mənin?antul 'will gather pomelos'

When the initial consonant of the stem is a nasal, the prefix nasal is deleted.

mənin- + nitaʔ → mənin?itaʔ 'will gather nita'
mənin- + maraŋ → mənimaraŋ 'will gather maraŋ'
pənin- + ṣay → pəninṣay 'will remove the fin of the fish with ...'

6.1.2. Nasal assimilation involving maN-/niN- and paN-/piN-

For the affixes maN-/niN- and paN-/piN-, the prefix nasal assimilates to the point of articulation of the initial consonant of the stem and the stem-initial consonant is deleted. (MaN-/niN- are verbal affixes that cross-reference Agents; maN- is irrealis, and niN- realis. PaN-/piN- are verbal affixes that cross-reference Non-nuclear Themes (Instruments); pəN-is irrealis, and piN-realis.)
DAGUMAN AND SANICAS-DAGUMAN

| məN-   | + pagas   | → | məməgas   | ‘will move fast’ |
| məN-   | + bunak   | → | məmunak   | ‘will wash clothes’ |
| miN-   | + tabuʔ   | → | minabuʔ   | ‘went marketing’ |
| miN-   | + siliŋ    | → | miniliŋ    | ‘swept the floor’ |
| pəN-   | + kali    | → | pənalı    | ‘will gather tubers with …’ |
| pəN-   | + gayu    | → | pənayu    | ‘will gather firewood with …’ |

### 6.2. Phonological Alternations Involving G

The syntactic category marker $G$ or any prefix ending in $G$ triggers a range of phonological alternations upon affixation. For this discussion, we have assumed that the underlying form of $G$ is a voiced velar stop. This is based on the fact that when $G$ occurs in a word-initial consonant cluster, it surfaces as a stop before seven out of ten indicating that $G$ is underlyingly a stop, as shown in the following examples:

- $G$- batu $→$ gbatu [gba.tu] ‘stone’
- $G$- walu $→$ gwalu [gwa.lu] ‘eight’
- $G$- pilit $→$ kpilit [kpi.li] ‘lizard’
- $G$- təluŋ $→$ kəluŋ [kə.lul] ‘eggplant’
- $G$- sisin $→$ ksisin [ksi.sij] ‘ring’
- $G$- luya $→$ dluya [dlu.ya] ‘ginger’
- $G$- yaʔuŋ $→$ dyaʔuŋ [dyə.ʔuŋ] ‘bowl’
- $G$- maʔis $→$ nmaʔis [ŋma.ʔis] ‘corn’
- $G$- nunuŋ $→$ nnuuŋ [ŋnu.uaŋ] ‘a tree’
- $G$- ?ulad $→$ gulad [gu.lo] ‘worm’

When $G$ attaches to a word beginning with a glottal stop, the glottal stop is deleted and $G$ surfaces as [g], indicating that it is a velar consonant, since vowels have no point of articulation to which the underlying form can assimilate, as in:

- $G$- ᵁanaʔanaʔ $→$ ganaʔanaʔ [ɡə.نا.ʔə.ناʔ] ‘idea’
- $G$- ᵁatuk $→$ gatuk [ɡa.ʈuk] ‘answer to a riddle’

The particular phonological alternation triggered by $G$ depends upon the initial consonant of the stem to which it is attached. These alternations are described below.
6.2.1. G surfaces as [g]

When a stem begins with the voiced bilabial stop /b/ or the bilabial semi-vowel /w/, G surfaces as [g].

<table>
<thead>
<tr>
<th>Stem</th>
<th>Original Form</th>
<th>Surface Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-</td>
<td>bata?</td>
<td>gbata?</td>
<td>'child'</td>
</tr>
<tr>
<td>maG-</td>
<td>baal</td>
<td>maqbaal</td>
<td>'will work'</td>
</tr>
<tr>
<td>paG-</td>
<td>babolagaan</td>
<td>pagbabolagaan</td>
<td>'will cook rice'</td>
</tr>
<tr>
<td>G-</td>
<td>wasay</td>
<td>gwasay</td>
<td>'axe'</td>
</tr>
<tr>
<td>miG-</td>
<td>wali</td>
<td>migwali</td>
<td>'preached'</td>
</tr>
</tbody>
</table>

6.2.2. G becomes [k]

When a stem begins with the voiceless consonants /p/, /t/, or /s/, G assimilates in voice and is backed, becoming [k].

<table>
<thead>
<tr>
<th>Stem</th>
<th>Original Form</th>
<th>Surface Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-</td>
<td>pais</td>
<td>kpais</td>
<td>'bolo'</td>
</tr>
<tr>
<td>maG-</td>
<td>pasok</td>
<td>makpasok</td>
<td>'will drive a pole into the ground'</td>
</tr>
<tr>
<td>G-</td>
<td>tadan</td>
<td>ktadan</td>
<td>'hat'</td>
</tr>
<tr>
<td>miG-</td>
<td>taap</td>
<td>miktaap</td>
<td>'winnowed'</td>
</tr>
<tr>
<td>G-</td>
<td>suun</td>
<td>ksuun</td>
<td>'nose'</td>
</tr>
<tr>
<td>piG-</td>
<td>siak</td>
<td>piksiak</td>
<td>'... chopped wood with ...'</td>
</tr>
</tbody>
</table>

6.2.3. G becomes [d]

When a stem begins with the alveolar lateral /l/ or the alveopalatal semi-vowel /y/, G assimilates to the alveolar point of articulation, becoming [d].

<table>
<thead>
<tr>
<th>Stem</th>
<th>Original Form</th>
<th>Surface Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-</td>
<td>libun</td>
<td>dlibun</td>
<td>'female'</td>
</tr>
<tr>
<td>maG-</td>
<td>lamot</td>
<td>madlamot</td>
<td>'will play'</td>
</tr>
<tr>
<td>G-</td>
<td>yugu</td>
<td>dyugu</td>
<td>'yoke'</td>
</tr>
<tr>
<td>piG-</td>
<td>yabi</td>
<td>pidyabi</td>
<td>'... unlocked with ...'</td>
</tr>
</tbody>
</table>
6.2.4. G becomes [ŋ]

When a stem begins with a non-back nasal, i.e. /m/ or /n/, G assimilates in manner of articulation, becoming the velar nasal [ŋ].

G- + manuk → ɳmanuk [ŋma.nyuk] 'chicken'
maG- + mama? → mœmama? [mœ.na.mə?] 'will chew betel nut'
G- + nigu → ɳnigu [ŋni.gu] 'winnowing basket'
mIG- + nanam → miŋnanam [miŋ.na.nam] 'tasted like'

6.2.5. G is deleted

When a stem begins with the back consonants /k/, /g/, and /ŋ/, G is deleted.

G- + kandin → kandin [kən.din] 'goat'
G- + quntiq → quntiq [qun.tiq] 'scissors'
G- + ŋudan → ŋudan [ŋu.ɾən] 'younger sibling'
G- + dupiʔ → dupiʔ [du.piʔ] 'rain'

One might wonder if the laryngealization of [ɬ], the weakening of 'g", and the backing of [ŋ] are phonological alternations triggered by G. The verb stems listed for [ɬ], [g], and [ŋ] in Section 5.2.1., however, verify that these phonetic segments can occur in verb stems (which do not occur with the syntactic category marker G), as well as nouns. We assume then that [ɬ], [g], and [ŋ] are underlyingly present in the above verb stems before G is attached, and that G is simply deleted.

6.2.6. G becomes [g]

When a stem begins with a glottal stop, the glottal stop is deleted and G becomes [ɡ].

G- + ?unad → gunad [ɡu.nəd] 'flesh'
G- + ?aan → gaan [ɡa:ŋ] 'food'
maG- + ?upad → magupad [ma.gu.pəd] 'will peel'
6.2.7. Alternations occurring within words

Since G triggers alternations when it attaches across morpheme boundaries to stems beginning with a consonant, this raises the question whether similar alternations occur within a word. If such alternations do not occur within a word, then we should find /g/ occurring as the first member of a word-medial consonant cluster with all or nearly all consonants.

A survey of word-medial consonant clusters shows that where /g/ is the first segment of the sequence, only the sequences /gb/ and /gw/ have been attested. The sequences /gt/, /gd/, /gk/, /gg/, /g/, /gs/, /gm/, /gn/, /gy/, /gl/, and /gy/ have not been attested. Also, there is only one known occurrence of the sequence /gp/, /gag.pas/ ‘to hurry’, and the sequence varies freely with /kp/, as in /gak.pas/ ‘to hurry’. These findings suggest that /g/ does trigger phonological alternations within a word when it is followed by another consonant.

Additional support for this claim is the cross-linguistic data noted previously which shows that in certain Northern Subaanen words, word-medial [d:] and word-medial [d] are underlingly /g/ (see Sections 4.2. and 5.2.1.). Other cross-linguistic data show that the word-medial sequence /dy/ in Northern Subaanen is /gy/ in Cebuano, suggesting that /dy/ in the Northern Subaanen words is underlingly /gy/, as shown below:

<table>
<thead>
<tr>
<th>Northern Subaanen</th>
<th>Cebuano</th>
</tr>
</thead>
<tbody>
<tr>
<td>/gbad.yu/</td>
<td>‘typhoon’</td>
</tr>
<tr>
<td>/bag.yu/</td>
<td>‘typhoon’</td>
</tr>
<tr>
<td>/ba.lad.ya/</td>
<td>‘to sell’</td>
</tr>
<tr>
<td>/ba.lig.ya/</td>
<td>‘to sell’</td>
</tr>
</tbody>
</table>

These facts strongly suggest that whereas some surface occurrences of word-medial sequences /kp/, /kt/, /dd/, /kd/, /gm/, /gn/, /dl/, and /dy/ and segments [d:] or [d], [g], [k], and [ŋ] are the same as their underlying forms, other surface occurrences may be underlingly /gp/, /gt/, /gd/, /gs/, /gm/, /gn/, /gl/, and /gy/, and /gd/, /gg/, /gk/, and /ŋ/ respectively which have undergone the same phonological alternations as those triggered by G across morpheme boundaries.

6.3. Vowel Assimilation

Vowel assimilation refers to the complete assimilation of the mid central vowel /a/ in affixes, to the nearest vowel of the root. This process is observed in two specific environments.
6.3.1. a in prefixes

When ma- (adjectivizer) or pa- (irrealis causative) is prefixed to a root beginning with a glottal stop /ʔ/, the glottal stop is deleted and /a/ in the prefix assimilates completely to the first vowel of the root.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Root</th>
<th>Result</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma-</td>
<td>ʔuləg</td>
<td>muuləg</td>
<td>'mobile'</td>
</tr>
<tr>
<td>ma-</td>
<td>ʔitut</td>
<td>miitut</td>
<td>'small'</td>
</tr>
<tr>
<td>ma-</td>
<td>ʔala</td>
<td>maala</td>
<td>'spicy'</td>
</tr>
<tr>
<td>pa-</td>
<td>ʔutanj</td>
<td>puutanj</td>
<td>'to lend money' or 'to cause someone to be indebted'</td>
</tr>
<tr>
<td>pa-</td>
<td>ʔitut</td>
<td>piitut</td>
<td>'to reduce' or 'to cause something to become small'</td>
</tr>
<tr>
<td>pa-</td>
<td>ʔagaw</td>
<td>paagaw</td>
<td>'to go' or 'to cause to be in'</td>
</tr>
</tbody>
</table>

In contrast, when ma- or pa- is prefixed to a root which does not begin with a glottal stop, /a/ in the prefix does not change.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Root</th>
<th>Result</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma-</td>
<td>lubad</td>
<td>malubad</td>
<td>'young'</td>
</tr>
<tr>
<td>pa-</td>
<td>tibul</td>
<td>patibul</td>
<td>'to cause something to become round'</td>
</tr>
<tr>
<td>ma-</td>
<td>dalag</td>
<td>madalag</td>
<td>'yellow'</td>
</tr>
</tbody>
</table>

6.3.2. a in suffixes

When -nan (3SG genitive pronoun) is suffixed to a root ending with a vowel, the initial consonant of the suffix is deleted and /a/ in the suffix assimilates completely to the final vowel of the root. (Northern Subaan roots do not end in /a/.)

<table>
<thead>
<tr>
<th>Root</th>
<th>Suffix</th>
<th>Result</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>gulu</td>
<td>-nan</td>
<td>guluun</td>
<td>'his/her head'</td>
</tr>
<tr>
<td>duma</td>
<td>-nan</td>
<td>dumaan</td>
<td>'his/her companion or spouse'</td>
</tr>
<tr>
<td>kulili</td>
<td>-nan</td>
<td>kuliliin</td>
<td>'his/her string instrument'</td>
</tr>
</tbody>
</table>

Although vowel assimilation is common, it is optional.

In contrast, when -ən (an allomorph of -nan) is suffixed to a consonant-final root, /a/ in the suffix does not change.
6.4. Vowel Weakening

When affix -an or -ən is attached to a stem in which the low central vowel /a/ is the nucleus of the penultimate stressed syllable, stress shifts one syllable to the right and /a/ of the destressed syllable weakens to /ɑ/, as the following examples illustrate. (When attached to a noun stem, -an signals that the nominal is a collective noun. When attached to a verb stem, -an is an irrealis verbal affix that cross-references a Location, and -ən is an irrealis verbal affix that cross-references a Theme (Patient).)

'saluy + -an → sa'luyan 'will buy something for someone'
'saluy + -ən → se'luyən 'will buy something'
'ləquy + -an → la'ŋuyan 'will swim in'
'gayu + -an → ga'yuan 'forest'
'kpaðan + -an → kpa'daŋan 'cogon field'
'kpalay + -an → kpa'layan 'rice field'

6.5. Resyllabification Involving /y/ and /w/

In certain environments, /y/ and /w/ resyllabify following affixation.

6.5.1. Resyllabification of final /y/ and /w/ following suffixation

When affix -ən or kə-ən is attached to a stem that ends in /ay/ or /aw/, the mid central vowel /a/ of the suffix is deleted and resyllabification takes place: /y/ or /w/ of the stem fills the nucleus of the final syllable, becoming /i/ or /u/ respectively, resulting in the sequences /ai/ and /au/. Following resyllabification, /ai/ becomes [æi] and /au/ becomes [ɑː].
### Resyllabification of /y/

<table>
<thead>
<tr>
<th>Stem</th>
<th>Affixation</th>
<th>Vowel Deletion</th>
<th>Resyllabification</th>
<th>Vowel Coalescence</th>
<th>Phonemic Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ba'gay</td>
<td>baqay + -an</td>
<td>baqayn</td>
<td>baqain</td>
<td>[ba'gæn]</td>
<td>/ba.ga.in/</td>
<td>'to give'</td>
</tr>
<tr>
<td>'suay</td>
<td>kə- 'suay + -an</td>
<td>kəsuayn</td>
<td>kəsuain</td>
<td>[kəsu'æn]</td>
<td>/kə.su.a.in/</td>
<td>'to get married'</td>
</tr>
</tbody>
</table>

### Resyllabification of /w/

<table>
<thead>
<tr>
<th>Stem</th>
<th>Affixation</th>
<th>Vowel Deletion</th>
<th>Resyllabification</th>
<th>Vowel Coalescence</th>
<th>Phonemic Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>'ksabaw</td>
<td>ksabaw + -an</td>
<td>ksabawn</td>
<td>ksabaun</td>
<td>[ksə'bæn]</td>
<td>/ksa.ba.un/</td>
<td>'soup'</td>
</tr>
<tr>
<td>so'gaw</td>
<td>kə- + so'gaw + -an</td>
<td>kəso'gawn</td>
<td>kəso'gaun</td>
<td>[kəso'gæn]</td>
<td>/kə.so.ga.un/</td>
<td>'to cry'</td>
</tr>
</tbody>
</table>

#### 6.5.2. Resyllabification of /y/ and /w/ following prefixation

When affix kə- -an is attached to a stem in which the first vowel is /a/ and /a/ is followed by an intervocalic /y/ or /w/, /a/ is deleted and resyllabification takes place: /y/ or /w/ of the stem fills the first vowel position of the stem and becomes /i/ or /u/ respectively.
Resyllabification of /y/

<table>
<thead>
<tr>
<th>Stem</th>
<th>Affixation</th>
<th>Vowel Deletion</th>
<th>Resyllabification</th>
<th>Vowel Coalescence</th>
<th>Phonemic Form</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>'sayaw</td>
<td>ka- + sayaw + -ən</td>
<td>kasyaun</td>
<td></td>
<td>[kasi:i:ən]</td>
<td>/kə.si.a.un/</td>
<td>'feel like dancing'</td>
</tr>
</tbody>
</table>

Resyllabification of /w/

<table>
<thead>
<tr>
<th>Stem</th>
<th>Affixation</th>
<th>Vowel Assimilation</th>
<th>Vowel Deletion</th>
<th>Resyllabification</th>
<th>Phonemic Form</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>'tawa</td>
<td>ka- + tawa + -ən</td>
<td>kətwaan</td>
<td></td>
<td>[kətu'aan]</td>
<td>/kə.tu.a.an/</td>
<td>'feel like laughing'</td>
</tr>
</tbody>
</table>

6.6. Metathesis

If a stem begins with a bilabial stop, the prefix ma- (irrealis, stative verbal affix, or adjectivizer) metathesizes, becoming ?am-, as in:

<table>
<thead>
<tr>
<th>ma-</th>
<th>baluy</th>
<th>?ambaluy</th>
<th>'will be done'</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma-</td>
<td>binai?</td>
<td>?ambinai?</td>
<td>'will be late'</td>
</tr>
<tr>
<td>ma-</td>
<td>buŋ</td>
<td>?ambuŋ</td>
<td>'will be broken'</td>
</tr>
<tr>
<td>ma-</td>
<td>panas</td>
<td>?ampanas</td>
<td>'will be sick with fever'</td>
</tr>
<tr>
<td>ma-</td>
<td>piid</td>
<td>?ampiid</td>
<td>'will be shy'</td>
</tr>
<tr>
<td>ma-</td>
<td>?ənuʔ</td>
<td>?ampənuʔ</td>
<td>'will be full'</td>
</tr>
</tbody>
</table>

Compare these examples with the following in which ma- is added to stems that do not begin with a bilabial stop and metathesis does not occur.

<table>
<thead>
<tr>
<th>ma-</th>
<th>maag</th>
<th>məmaag</th>
<th>'will advise'</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma-</td>
<td>naug</td>
<td>mənaug</td>
<td>'will go down'</td>
</tr>
<tr>
<td>ma-</td>
<td>tubuʔ</td>
<td>mətubuʔ</td>
<td>'will live'</td>
</tr>
<tr>
<td>ma-</td>
<td>gamay</td>
<td>məgamay</td>
<td>'tender'</td>
</tr>
<tr>
<td>ma-</td>
<td>?aan</td>
<td>məʔaan</td>
<td>'edible'</td>
</tr>
</tbody>
</table>
NOTES

*An earlier version of this paper is found in Daguman (1997).

There are approximately 20,000 speakers of Northern Subaanan. The data on which this study is based were gathered between 1990-1995 while the authors were living in Bgy. Bulawan, Katipunan, Zamboanga del Norte, Mindanao and interacting with Northern Subaanan speakers in Dipolog City, Sergio Osmeña Sr., Roxas, Polanco, and Piñan, under the auspices of the Translators Association of the Philippines, Inc. We would like to express our heartfelt appreciation to our language informants for having taken time to help us check our data: Mr. Martino Ansay, Mrs. Lita Ansay, Mrs. Esther Lumon and Miss Mercedes T. Cudas of Bgy. Bulawan, Katipunan, Zamboanga del Norte. We also acknowledge, with much gratitude, Miss Helen Madrid for her comments on our initial phonological analysis of the language, Dr. Howard P. McKaughan for the suggestions he made during the initial drafting of this paper, and Dr. Sherri Brainard for the encouragement and technical assistance she extended to us during the preparation of this paper for publication.

See Sanicas-Daguman’s (1996) discussion of the grammaticalization of G from a case marker to a syntactic category marker of nominals.

The voice quality referred to as ‘laryngealization’ matches best the description of a laryngealized sound in Ladefoged (1975: 123-124), and so has been labeled accordingly. Laryngealization is represented by the symbol: Č.

REFERENCES

