Chapter One
Introduction

This thesis aims at investigating interrogative constructions of Plngawan Atayal (henceforth Plngawan). In the following, a brief introduction of Plngawan is given. We also briefly explain the goals of this thesis, the methodology adopted and the general outline of the present study.

1.1 Genetic classification and geographical distribution of Plngawan

Atayal is divided into two major dialects, Squliq and C’uli’, which are further divided into various sub-dialects. According to Li (1985a) and Huang (2006), Plngawan, spoken in Nantou County, belongs to the C’uli’ dialect. Atayal is genetically close to Seediq (itself being divided into three dialects, Tkdaya (or Paran), Truku and Toda). They form one of the major subgroups among Formosan languages, i.e. Atayalic (see also Li 1985b, Starosta 1995 and Blust 1999). The linguistic position of Plngawan is schematized below.

![Figure 1.1 Genetic classification of Plngawan](image)

The population of Plngawan is around 1,000. They mainly live in Wanda and Qin-ai communities, both of which are located in Qin-ai village, Ren-ai Township, Nantou County, as shown in Map 1.1 to 1.3 below.
As shown in Map 1.3, Plngawan is spoken in Wanda and Qin-ai, and it is surrounded by communities of non-C’uli’ Atayalic speakers, such as Squliq Atayal in Ruiyan, Toda Seediq in Chunyang, Inago Seediq in Sunglin and Tkdaya Seediq in Meiyuan and Wushe. Being located in such a multi-linguistic area, it is found that many Plngawan people become fluent bi-/tri-lingual speakers through intermarriage and population movement. That is, they may speak Plngawan and other Seediq dialects and/or Squliq Atayal.
In terms of linguistic ability, however, it seems to decrease with age, i.e. while most Plngawan people older than fifty are native speakers of Plngawan and/or fluent bi-/tri-lingual speakers, those around their thirties to fifties become semi-speakers who may understand Plngawan and/or other Atayalic languages/dialects through hearing but seldom speak well themselves; those under thirty may be unable to understand any Atayalic languages/dialects at all.

Being in contact with so many non-C’uli’ Atayalic languages/dialects, Plngawan also provides a rich platform for socio-linguistic studies on issues like language contact and language change (cf. for instance Rau 2004), as will be reviewed below.

1.2 Previous studies on Plngawan

Plngawan has been mentioned in three articles, i.e. Li (1985a), Rau (2004) and Huang (2006). The first two investigate phonological and lexical features in an attempt to clarify the position of Plngawan in the Atayalic family, and the last is concerned with the case marking system of Plngawan.

Li (1985a) presents both phonological and lexical criteria for the classification of Atayalic dialect groups. He shows that Plngawan shares with Seediq four of the six phonological features that distinguish Seediq from Atayal. However, since Plngawan retains the basic vocabulary stock of most other Atayal dialects, it has to be subgrouped under Atayal rather than Seediq.

Rau (2004) conducts a socio-linguistic survey of three Atayalic dialects in Ren-ai Township, including Plngawan, Mstbaun (Squliq) Atayal and Inago Seediq. It is found that while Plngawan is more similar to Mstbaun Atayal in terms of shared vocabulary counting and cognates, Mstbaun Atayal is more similar to Inago Seediq. Thus, Rau suggests that instead of being classified as a C’uli’ Atayal dialect, Plngawan is better treated as “another Atayalic dialect at the periphery of the dialect chain” (Rau 2004:74).
Huang (2006) is the first article dedicated to a syntactic analysis of Plngawan. It focuses on the case marking of Plngawan, with a comparison with two other dialects, Wulai (Squliq) and Mayrinax (C’uli’) Atayal.

1.3 Goals of the thesis and methodology

In order for readers to understand our description of interrogative constructions, we first give a sketch grammar that provides a general overview of Plngawan, covering linguistic aspects relevant to the topic of this thesis. And then, we investigate both morphosyntactic and phonological aspects of Plngawan interrogative constructions. While it may apparently only supply one more additional study on this topic, we hope that this research will actually provide a more detailed analysis of intonation of interrogative sentences than what has been previously carried out.

The following methodological steps were undertaken:

First, a corpus was collected through fieldwork and web search. Fieldwork was carried out in Wanda, Qin-ai and Wushe from September 2005 to May 2008. We have worked with four major informants, as shown in Table 1.1.

<table>
<thead>
<tr>
<th>Atayal name</th>
<th>Chinese name</th>
<th>Gender</th>
<th>Year of Birth</th>
<th>Place of living</th>
<th>Language/Dialect spoken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watan Nawi</td>
<td>乃明東</td>
<td>Male</td>
<td>1946~2006</td>
<td>Wanda</td>
<td>Plngawan Mandarin Chinese</td>
</tr>
<tr>
<td>Yuma Watan</td>
<td>張美花</td>
<td>Female</td>
<td>1961~</td>
<td>Wushe</td>
<td>Plngawan Toda Seediq Mandarin Chinese</td>
</tr>
<tr>
<td>Kumuy</td>
<td>乃阿端</td>
<td>Female</td>
<td>1940~</td>
<td>Puli</td>
<td>Plngawan (a bit) Mandarin Chinese</td>
</tr>
<tr>
<td>Yumin</td>
<td>洪成家</td>
<td>Male</td>
<td>1948~</td>
<td>Qin-ai</td>
<td>Plngawan Mandarin Chinese</td>
</tr>
</tbody>
</table>
In addition to fieldwork, data were also collected from the textbooks of aboriginal languages published by the Ministry of Education and learning materials attached to the website of the Council of Indigenous Peoples (http://61.31.235.34/).

Second, Praat\(^1\) was used to carry out the phonetic analysis and draw figures. We also used Praat for pitch manipulation, pause/stress detection, etc.

The theoretical framework adopted in the thesis is a semantic functional approach, i.e. elements and syntactic structures are analyzed and interpreted based on their meanings and semantic/syntactic functions.

1.4 Outline of the thesis

This thesis contains six chapters. In Chapter 1, an introduction of Plngawan is given. Chapter 2 provides a sketch grammar that serves as a basis for further analysis and discussion of Plngawan interrogative constructions. Chapter 3 offers a review of previous studies on interrogative constructions from both a typological (general linguistics) and a Formosan perspective. In Chapter 4, we conduct a morphosyntactic analysis and investigate both formation and function of Plngawan interrogative sentences. In Chapter 5, we not only examine intonation patterns of interrogative sentences in more detail but also discuss how intonation enables interrogative sentences to be interpreted as non-questions and how it helps speakers to express attitudinal implications. A summary of the previous chapters and suggestions for further studies are given in Chapter 6. Finally, all the examples from Plngawan in this thesis were digitally recorded and are contained in the CD joined to this thesis. The file names correspond to the numbers of the examples.

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\(^1\) Praat was built up by Paul Boersma and David Weenink and can be downloaded for free from the following website http://www.fon.hum.uva.nl/praat/.
Chapter Two

A Sketch Grammar of Plngawan Atayal

In this chapter, a sketch grammar of Plngawan is provided, which covers phonology, morphology, syntax and their interfaces, e.g. morphophonemics.

2.1 Phonology

In this section, we investigate Plngawan phonology from three aspects, including (i) phoneme inventory, (ii) syllable structure and stress, and (iii) intonation patterns.

2.1.1 Phoneme inventory

There are 18 consonants in Plngawan, as shown in Table 2.1.

Table 2.1 Consonants in Plngawan

<table>
<thead>
<tr>
<th>Consonants</th>
<th>Labial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>'</td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td>ng</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>Voiceless</td>
<td>s</td>
<td>x</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voiced</td>
<td>b</td>
<td></td>
<td>g</td>
<td></td>
</tr>
<tr>
<td>Affricate</td>
<td>c</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>
</tr>
<tr>
<td>Trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flap</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glide</td>
<td>w</td>
<td>y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The orthography of each consonant is described in the following examples.

(2.1) p is a voiceless bilabial stop, e.g. pawas ‘sing’
      t is a voiceless alveolar stop, e.g. tanux ‘outside’, mit ‘goat’

2 Based on the Orthographic Systems of Formosan Languages published by the Council of Indigenous Peoples and the Ministry of Education in December 2005, there are 19 consonants in Plngawan. The consonant that is not found in our data and not listed in Table 2.1 is the uvular stop q. According to Li (1981), k and ’ in Plngawan are two reflexes of the Proto-Atayal uvular stop q, as shown below.

<table>
<thead>
<tr>
<th>Proto-Atayal</th>
<th>Plngawan</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. *qusiya’</td>
<td>’usye’</td>
<td>‘water’</td>
</tr>
<tr>
<td>b. *calaq</td>
<td>calak</td>
<td>‘mud, field’</td>
</tr>
</tbody>
</table>
k is a voiceless velar stop, e.g. kani’ ‘eat’, tehuk ‘arrive’
’ is a voiceless glottal stop, e.g. ucuyux ‘fish’, uled ‘child’
m is a voiced bilabial nasal, e.g. mama’ ‘uncle’
n is a voiced alveolar nasal, e.g. ni’un ‘food’, kaman ‘grass’
ng is a voiced velar nasal, e.g. ngahi ‘sweet potato’, tuting ‘beat’
s is a voiceless alveolar fricative, e.g. sasiy ‘shade’, ramas ‘good’
x is a voiceless velar fricative, e.g. muxal ‘sick’, awax ‘wash’
h is a voiceless glottal fricative, e.g. huril ‘dog’, awah ‘come’
b is a voiced bilabial fricative, e.g. box ‘uncooked rice’
g is a voiced velar fricative, e.g. gong ‘river’
c is a voiceless alveolar affricate, e.g. cuxan ‘tomorrow’
l is a voiced lateral, e.g. lukus ‘clothes’, amol ‘what’
r is a voiced trill, e.g. ralu’ ‘name’
r is a voiced flap, e.g. rungiy ‘monkey’, malikur ‘male’
w is a voiced bilabial glide, e.g. wagiy ‘sun’, morow ‘house’
y is a voiced palatal glide, e.g. yaya’ ‘mother’, runuy ‘shake’

Some (near) minimal pairs of the consonants in Plngawan are shown in (2.2).

(2.2)a.  p vs b  pila ‘money’
    bilak ‘few’

b.  t vs s  ta’ ‘1Pl.Nom’
    musa’ ‘AF.go’
    vs c  ca’ ‘particle’

c.  k vs ’ kutux ‘the first’
    ’utux ‘one’
    vs g  ’aguw ‘wine’

d.  m vs n  mami ‘rice’
    mani ‘AF.eat’
    vs ng  mangilis ‘AF.cry’

e.  r vs r  ’uri ‘white hair’
    ’uri ‘also’
    vs l  tuli ‘stand up’

f.  x vs h  ’awax ‘wash (dishes)’
    awah ‘come’

3 Words ending with consonants m, b and p are not found in Plngawan. As Li (1985b) suggests, Plngawan shares a phonological change with Seediq in that Proto-Atayalic labial sounds have changed to velars in word-final position: *-p and *-b > -k, *-m > -ng.
Plngawan exhibits five vowels i, u, e, o and a, as shown in Table 2.2 and described in (2.3).

Table 2.2 Vowels in Plngawan

<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>e</td>
<td></td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

(2.3)  

i is a high front vowel, e.g. 'ima ‘who’, mit ‘goat’, sani ‘here’

u is a high back vowel, e.g. 'ule ‘child’, tugal ‘three’, temu ‘Temu’

e is a mid front vowel, e.g. 'enpicu ‘pencil’, temi ‘Temi’ ne ‘wait’

o is a mid back vowel, e.g. 'olit ‘mouse’, kanon ‘when’, ho ‘yes’

a is a low central vowel, e.g. 'atiy ‘corn’, mami ‘rice’, kora ‘all’

As shown in (2.3), vowels cannot occur in word-initial position. This suggests that Plngawan forbids onsetless syllables. Some (near) minimal pairs of the five vowels are given in (2.4).

(2.4)

a. i vs u
'ini ‘Neg.Rea’
'INU ‘where’

vs e
rungiy ‘monkey’

vs o
kira ‘today’

vs a
nanahi ‘mountain’

b. u vs e
hungu ‘bridge’
cange ‘ear’

vs o
yutas ‘grandfather’

vs a
tunux ‘head’
tanux ‘outside’

c. e vs o
kanel ‘female’

kanon ‘when’
d. **vs a sani** ‘here’

t. **2.1.2 Syllable structure and stress**

In Plngawan, a syllable is composed of an initial consonant (C), a vowel (V) and an optional final consonant, represented as CV(C), such as **mu** ‘1S.Gen’ and **mit** ‘goat’. Three common types of combination of two syllables are shown in (2.5).

(2.5) a. CV.CV e.g. **'ima** ‘who’, **ngahi** ‘sweet potato’
    b. CV.CVC e.g. **pawas** ‘sing’, **rayas** ‘face’
    c. CVC.CVC e.g. **nabkis** ‘old person’, **pahpuy** ‘cook’

As shown in (2.5c), consonants may occur in juxtaposition only when they belong to two different syllables. Neither consonant nor vowel clusters are allowed in Plngawan. When two vowels occur in sequence, they either form a single syllable composed of a vowel and a glide (G) or are separated as two syllables with the insertion of a glide or a glottal stop, as illustrated in (2.6).

(2.6) VV one-syllable (GV/VG) two-syllable (V.*V/V.GV)
    a. **iu** → **'ucyux** ‘fish’
       **ci’ali** ‘person’
    b. **ia** → **sanahyagal** ‘delicious’
       **'iya** ‘no’
    c. **ai** → **cubay** ‘real’
       **ga’loh** ‘banana’
    d. **au** → **salahaw** ‘play’
       **payux** ‘many’
    e. **ui** → **rumuy** ‘shake’
       **tu’ilung** ‘pine tree’
    f. **ua** → **wanux** ‘bull’
       **puyaya** ‘female’

Stress falls on the last syllable if it is heavy, i.e. when the syllable ends with a consonant or a long vowel (a vowel-glide sequence), e.g. **pawas** ‘sing’, **'ucyux** ‘fish’ and **'atīy** ‘corn’. For words ending with a short vowel, i.e. a light syllable, stress falls on the penultimate syllable, e.g. **'ima** ‘who’ and **mabahu** ‘wash’.
2.1.3 Intonation

Three major types of intonation contours are identified, including final-falling, final-rising and final-rising-falling. Declarative and imperative sentences usually show a final-falling contour, as shown in (2.7)-(2.8) and Figure 2.1 to 2.4.

(2.7)a. \( \text{ba'}=\text{cu mawas.} \)
\begin{align*}
\text{know.AF}=\text{1S.Nom} & \quad \text{AF.sing} \\
\text{‘I can sing.’}
\end{align*}

Figure 2.1 Intonation contour of (2.7a)

b. \( \text{‘ini}=\text{cu kaba’ mawas.} \)
\begin{align*}
\text{Neg}=\text{1S.Nom} & \quad \text{know} \quad \text{AF.sing} \\
\text{‘I cannot sing.’}
\end{align*}

Figure 2.2 Intonation contour of (2.7b)

(2.8)a. \( \text{‘usa’ mawas!} \)
\begin{align*}
\text{go} & \quad \text{AF.sing} \\
\text{‘Go singing!’}
\end{align*}

Figure 2.3 Intonation contour of (2.8a)
The pieces of curves in the figures indicate the pitch value of words and can be connected as a line to show the intonation contour of the whole sentence. As shown in Figure 2.1 to 2.4, there is an obvious dropping curve toward the end of the sentence, which usually reaches the lowest pitch value of a sentence. The dropping curves may be preceded by a slight rising contour, but since these peaks remain lower than sentence-initial ones, we still treat them as final-falling to make a clear distinction from yes-no questions whose final-rising-falling contours show a sharply raised peak that usually reaches the top of the pitch range.

Final-rising and final-rising-falling contours are usually observed in interrogative sentences, which will be discussed in Chapters 4 and 5.

2.2 Morphology

Morphemes in Plngawan are divided into free and bound categories, the latter of which includes affixes and clitics. In this section, we investigate two morphological processes, i.e. affixation and reduplication, and three types of morphophonemic rules.

2.2.1 Morphological processes

2.2.1.1 Affixation

Affixation is a productive process whereby new words are derived. In terms of distribution, affixes are classified as prefixes, infixes and suffixes, as exemplified below.
(2.9) Prefixation\(^4\)

a. **muga**- ‘transform into’

b. **la**- ‘plurality’

(2.10) Infixation

a. **<um>** ‘agent focus’

b. **<in>** ‘perfective’

(2.11) Suffixation

a. **-an** ‘locative focus’

b. **-an** ‘locative case’

4 In Plngawan, the number of prefix is much higher than that of suffix and infix, but for ease of illustration, only two examples are given for each type of affixation. This listing is far from being exhaustive. The issue of Plngawan affixation may deserve further investigation.
The two AF markers are phonological allomorphs with <um> occurring before vowels and <un> before consonants.

### 2.2.1.2 Reduplication

Two types of reduplication are found in Plngawan, i.e. CVC-reduplication and Ca-reduplication. In CVC-reduplication, the first syllable of a word is reduplicated, which is found in the marking of plurality of certain nouns and numerals, as shown in (2.13).

\[
\begin{array}{lll}
\text{Base form} & \text{Gloss} & \text{Derived form} & \text{Gloss} \\
\hline
\text{a.} & \text{‘ule} & \text{‘child} & \sim & \text{‘ul-‘ule} & \text{‘children} \\
\text{b.} & \text{‘utux} & \text{‘one} & \sim & \text{‘ut-‘utux} & \text{‘every one} \\
\end{array}
\]

In Ca-reduplication, the first consonant of a word and the vowel a are reduplicated. NAF verbs are marked as irrealis via Ca-reduplication on their NAF forms, as shown in (2.14).

\[
\begin{array}{lll}
\text{Base form} & \text{Gloss} & \text{Derived form} & \text{Gloss} \\
\hline
\text{a.} & \text{tahk-un} & \text{‘be cooked} & \sim & \text{ta-tahk-un} & \text{‘will be cooked} \\
\text{b.} & \text{hicol-an} & \text{‘do what to} & \sim & \text{ha-hicol-an} & \text{‘will do what to} \\
\text{c.} & \text{ta-tahk-un=mu} \text{ ka’} & \text{‘ucyux hani} & &  \\
\end{array}
\]

\[
\begin{array}{l}
\text{Red-cook-PF-1S.Gen Nom fish this} \\
\text{‘The fish will be cooked by me.’}
\end{array}
\]

### 2.2.2 Morphophonemic rules

Three types of morphophonemic rules are discussed in this section, including insertion, alternation and monophthonization.

#### 2.2.2.1 Insertion

In § 2.1.2, we showed that glides or the glottal stop are inserted between two adjacent vowels to avoid vowel clusters. The other type of insertion occurs when the
vowel a is inserted between two adjacent consonants, as illustrated in (2.15).

(2.15)  

a. sakisli’ ‘like’ < *skisli’ (as in ma-skisli’ Rec-like ‘like each other’)  

b. sababa’ ‘learn’ < *sba’ (as in pa-sba’ Cau-learn ‘teach’)

We consider that the form sakisli’ ‘like’ results from the insertion of the vowel a in the verb root *skisli’ ‘like’. An alternative analysis consisting in positing the deletion of a and assuming that the root is sakisli’ would not properly account for the AF-marked s<un>kisli’ (and not s<um>akisli’).

2.2.2.2 Alternation

Alternation refers to the change of sounds in specific phonetic environments. Four types of alternation rules are discussed below.

First, verbs initiated with consonants like p-, b-, k-, g- and ’- are AF-marked by replacing these consonants with m- ‘AF’, as illustrated in (2.16).

(2.16)  
<table>
<thead>
<tr>
<th>Verb root</th>
<th>Gloss</th>
<th>AF-form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. pawas</td>
<td>‘sing’</td>
<td>~ mawas</td>
<td>‘AF.sing’</td>
</tr>
<tr>
<td>b. bahiy</td>
<td>‘hit’</td>
<td>~ mahiy</td>
<td>‘AF.hit’</td>
</tr>
<tr>
<td>c. kani’</td>
<td>‘eat’</td>
<td>~ mani’</td>
<td>‘AF.eat’</td>
</tr>
<tr>
<td>d. galuw</td>
<td>‘together’</td>
<td>~ maluw</td>
<td>‘AF.together’</td>
</tr>
<tr>
<td>e. ’usa’</td>
<td>‘go’</td>
<td>~ musa’</td>
<td>‘AF.go’</td>
</tr>
</tbody>
</table>

The second type is concerned with the alternation between m and n. As shown in (2.12), two AF markers <um> and <un> are phonological allomorphs in that <um> occurs before vowels and <un> before consonants. It is also observed in some words undergoing CVC-reduplication that m is replaced by n when occurring before consonants, as shown in (2.17).

(2.17)  

a. ’in-’ima ‘Red-who’ < *’im-’ima < ’ima ‘who’  

b. ’an-’amol ‘Red-what’ < *’am-’amol < ’amol ‘what’
Third, consonants may change when occurring in different positions in a syllable. Consider (2.18).

(2.18) In syllable-final position | In syllable-initial position
--- | ---
Surface | Syllable | Gloss | Surface | Syllable | Gloss
--- | --- | --- | --- | --- | ---
a. ma-ha’ [ma.ha'] ‘AF-go’ | hal-an [ha.an] | ‘go-LF’
a’. haco’ [ha.co'] ‘do what’ | haco-l-un [ha.co.un] | ‘do what-PF’

As shown in (2.18), while consonants ’ and w occur syllable-finally, l and g appear before vowels, i.e. in syllable-initial position.

The fourth type deals with the alternation between vowels, as exemplified by the i–e alternation in (2.19).

(2.19) a. kan'i’ ‘eat’ ~ na-ne'-an ‘Red-eat-LF’
b. ak'i’ ‘stay’ ~ kel-an ‘stay-LF’

As shown in (2.19), the high front vowel i is lowered as e when the low vowel a occurs in the next syllable.

2.2.2.3 Monophthonization

When a high vowel i/u is adjacent to a or when they are separated by the glottal stop, the process of monophthonization may occur, as shown in (2.20).

(2.20) a. temu + -an ‘Temu’ + ‘Loc’ ~ tem-on ‘Temu-Loc’
a’. yawi’ + -an ‘Yawi’ + ‘Loc’ ~ yaw-en ‘Yawi-Loc’
b. bahiy + -an ‘hit’ + ‘LF’ ~ b<in>ah-en ‘hit<Prf>hit-LF’
b’. pana’ + -un ‘wait’ + ‘PF’ ~ n-on ‘wait-PF’

The other example lies in the monophthonization of awa to o when occurring after the labial nasal m, as illustrated in (2.21).
(2.21) a. ‘awah ‘come’ > moh ‘AF.come’  
b. ‘awalax ‘rain’ > ’<um>olax ‘rain<AF>rain’

All the morphophonemic rules discussed above are schematized in (2.22).

(2.22) a. Insertion

\[ \emptyset \rightarrow g', /V__V \]
\[ \emptyset \rightarrow a /C_C \]

b. Alternation

\[ p, b, k, g, \rightarrow m /__V \text{ (AF form)} \]
\[ m \rightarrow n /__C \]
\[ \rightarrow l /__V \]
\[ w \rightarrow g /__V \]
\[ i \rightarrow e /__Ca \]

c. Monophthonization\(^5\)

\[ ua, au, a’u, awa \rightarrow o /N__ \text{ or } __N \]
\[ ia, iya, i’a \rightarrow e /__N \]

2.3 Syntax

In this section, we investigate the basic word order and four major syntactic issues of Plngawan, including case marking, pronouns, focus markers and tense/aspect/mood system.

2.3.1 Word order

Plngawan is basically a predicate-initial and subject-final language, as shown in (2.23).

\(^5\) The alternations between ia/ai/ya/ay ~ e and ua/au/wa/aw ~ o are also observed when we compare certain lexical items in Mayrinax Atayal and Plngawan, as illustrated below.

<table>
<thead>
<tr>
<th>Mayrinax</th>
<th>Plngawan</th>
<th>Gloss</th>
<th>Mayrinax</th>
<th>Plngawan</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>kanalil</td>
<td>kanel</td>
<td>‘female’</td>
<td>sawni</td>
<td>soni</td>
<td>‘today’</td>
</tr>
<tr>
<td>kararilax</td>
<td>karirex</td>
<td>‘every day’</td>
<td>kowra</td>
<td>kora</td>
<td>‘all’</td>
</tr>
<tr>
<td>ragijux</td>
<td>ragex</td>
<td>‘mountain peak’</td>
<td>kanuwan</td>
<td>kanon</td>
<td>‘when’</td>
</tr>
</tbody>
</table>
(2.23)  a.  \textit{t<um>ahuk ci 'ucyux ka' yaya'}.  
\begin{tabular}{llll}
\text{cook<AF>cook} & \text{Acc} & \text{fish} & \text{Nom} \text{ mother} \\
\end{tabular}
\begin{tabular}{l}
\text{‘Mother cooks fish.’} \\
\end{tabular}

b.  \textit{ta-tahk-un=mu ka' 'ucyux hani.}  
\begin{tabular}{llll}
\text{Red-cook-PF=1S.Gen} & \text{Nom} & \text{fish} & \text{this} \\
\end{tabular}
\begin{tabular}{l}
\text{‘The fish will be cooked by me.’} \\
\end{tabular}

However, sentences can end with non-subject arguments when nominative pronouns are cliticized to sentence-initial predicates as in (2.24a) or when temporal nouns occur sentence-finally as in (2.24b).

(2.24)  a.  \textit{mani'=cu ci 'ucyux.}  
\begin{tabular}{llll}
\text{AF.eat=1S.Nom} & \text{Acc} & \text{fish} \\
\end{tabular}
\begin{tabular}{l}
\text{‘I eat fish.’} \\
\end{tabular}

a'.  \textit{* t<um>ahuk ci 'ucyux cu.}  
\begin{tabular}{llll}
\text{cook<AF>cook} & \text{Acc} & \text{fish} & \text{1S.Nom} \\
\end{tabular}

b.  \textit{pa-kani' ci 'ucyux ka' yaya' cuxan.}  
\begin{tabular}{llll}
\text{Irr.AF-eat} & \text{Acc} & \text{fish} & \text{Nom} \text{ mother} \text{ tomorrow} \\
\end{tabular}
\begin{tabular}{l}
\text{‘Mother will eat fish tomorrow.’} \\
\end{tabular}

Sentences that are initiated with verbal predicates like (2.23) and (2.24) are usually considered as verbal sentences. In equational constructions,\textsuperscript{6} predicates are realized by nouns. Consider (2.25).

(2.25)  a.  \textit{watan ka' ci'uli' hani.}  
\begin{tabular}{llll}
\text{Watan} & \text{Nom} & \text{person} & \text{this} \\
\end{tabular}
\begin{tabular}{l}
\text{‘This person is Watan.’} \\
\end{tabular}

b.  \textit{yaya' ka' t<um>ahuk ci 'ucyux.}  
\begin{tabular}{llll}
\text{mother} & \text{Nom} & \text{cook<AF>cook} & \text{Acc} \text{ fish} \\
\end{tabular}
\begin{tabular}{l}
\text{‘Mother cooks fish.’} \text{ Lit: ‘It is mother who cooks fish.’} \\
\end{tabular}

\textsuperscript{6} An equational construction refers to “a type of sentence where a verb places two noun phrases into a relationship of identity (Chang 1998:16).” As there is no copula verb in Plngawan, an equational construction becomes an NP-NP clause, with the first NP serving as the predicate and the second NP as the subject preceded by the nominative case marker \textit{ka’}.\textsuperscript{6}
In equational sentences, predicate nouns may precede subjects consisting of a single noun as in (2.25a), a nominalized verbal clause whose subject is fronted initially as the predicate as in (2.25b) or a complete verbal clause as in (2.25c).

As shown in (2.24a), pronoun clitics must be attached to the sentence-initial elements that are usually verbal predicates. Predicate nouns may also attract pronoun clitics that co-refer with them or indicate possessors of them, as shown in (2.26a-b) respectively.

(2.26)  a. _watan=cu  kung._  
        Watan=1S.Nom  1S.Neu  
        ‘I am (the person) Watan.’

  b. _yaya'=mu  ka’  t<um>ahuk  ci  'ucyux._  
      mother=1S.Gen Nom cook<AF>cook Acc fish  
      ‘My mother cooks fish.’

When pronoun clitics neither co-refer with predicate nouns nor indicate possessors of them, they are attracted to the first element of the nominalized verbal clause instead, as shown in (2.27).

(2.27)  a. _tugal  wal=mu  ni’-un._  
        three Prf=1S.Gen eat-PF  
        ‘I have eaten three.’

  a’. * _tugal=mu  wal  ni’-un._  
      three=1S.Gen Prf eat-PF
2.3.2 Case marking system

Participants represented by full NPs depend on case markers (and/or focus markers) to express their grammatical and/or semantic relations to the predicate.

In Plngawan, five case markers are identified, as shown in Table 2.3.

Table 2.3 Case marking on nouns

<table>
<thead>
<tr>
<th>Cases</th>
<th>Nouns</th>
<th>Nominative</th>
<th>Accusative/ Comitative</th>
<th>Genitive</th>
<th>Locative</th>
<th>Instrumental/ Benefactive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper nouns</td>
<td>ka’</td>
<td>ci/cika’</td>
<td>ni/nika’</td>
<td>-an</td>
<td>(ni) -an</td>
<td></td>
</tr>
<tr>
<td>Common nouns</td>
<td></td>
<td></td>
<td>na/naka’</td>
<td>---</td>
<td>na</td>
<td></td>
</tr>
</tbody>
</table>

As shown in (2.23) and (2.25), the nominative case marker ka’ may occur before proper/common nouns and nominalized verbal clauses to mark them as the grammatical subject. It is noted that ka’ can be optional when there is only one subject in a sentence. When two ka’ occur simultaneously in a sentence where one marks the subject of the main clause and the other marks the subject of an embedded clause, only one ka’ is allowed to appear. Examples are given in (2.28).

(2.28)  a. ta-tahk-un=mu (ka’) ’ucyux hani.
Red-cook-PF=1S.Gen (Nom) fish this
‘The fish will be cooked by me.’

b. cuxan ø ma-moh ka’ watan.
tomorrow Red-come Nom Watan
‘Watan will come tomorrow.’

b’. *cuxan ka’ ma-moh ka’ watan.
tomorrow Nom Red-come Nom Watan

---

7 In Huang (2006), five case markers in Plngawan are identified: nominative ka’, accusative ci/cika’, comitative ci/cika’, genitive ni/na and instrumental/beneficiary ni/na. The suffix -an is regarded as an accusative case suffix. In the present study, we treat the accusative and the comitative ci/cika’ as one case marker because their semantic representations, i.e. patients and comitative participants, are in complementary distribution syntactically. The suffix -an is regarded as the locative case marker because it not only marks proper nouns as patients but also as possessive or locative pronouns. Besides, the benefactive case marker for proper nouns is found to be (ni) -an rather than ni as presented in Huang (2006).

8 Both the genitive case marker ni/na and the accusative/comitative case marker ci have nika’/naka’ and cika’ as their variants, whose semantic differences may deserve further research.
The accusative/comitative case markers *ci* and *cika’* show no proper/common
distinction, and they mark the following noun as a patient or a comitative participant,
as shown in (2.29).

(2.29)  
a. \(m\text{<in>ahiy} \; ci \; \text{watan} \; \text{ka’} \; \text{walis}.\)  
AF<Prf>hit  Acc  Watan  Nom  Walis  
‘Walis hit Watan.’

b. \(ma\text{-}moh\text{=min} \; \text{cami} \; ci \; \text{watan} \; \text{cuxan}.\)  
Red-AF.come=1PE.Nom 1PE.Neu Com  Watan tomorrow  
‘I will come with Watan tomorrow.’

Genitive case markers *ni* and *nika’* are used for proper nouns, i.e. personal nouns
and kinship terms, and *na/naka’* for common nouns. Functionally, they mark nouns
as possessors or agents in NAF sentences, as shown in (2.30) and (2.31).

(2.30)  
a. \(m\text{<in>ani=}\text{cu} \; ci \; \text{’ucyux} \; \text{ni} \; \text{watan}.\)  
AF<Prf>eat=1S.Nom  Acc  fish  Gen  Watan  
‘I ate Watan’s fish.’

b. \(c\text{yel} \; \text{saca} \; \text{ka’} \; \text{patas} \; \text{na} \; \text{’ule’} \; \text{haca}.\)  
Exi.Rem  there  Nom  book  Gen  child  that  
‘The child’s book is there.’

(2.31)  
a. \(t\text{<in>ahuk} \; \text{ni} \; \text{yaya’} \; \text{ka’} \; \text{’ucyux}.\)  
cook<Prf.PF>cook  Gen  mother  Nom  fish  
‘The fish was cooked by Mother.’

b. \(k\text{<in>aec-an} \; \text{na} \; \text{banga’} \; \text{ka’} \; \text{’aba’=}\text{mu}.\)  
bite<Prf>bite-LF  Gen  bee  Nom  hand=1S.Gen  
‘I was stung on my hand by a bee.’
The suffix -an is used for proper nouns that bear locative case. Consider the following examples in (2.32).

(2.32) a. 'ini=cu pasye’ watan-an.
   Neg=1S.Nom laugh at Watan-Loc
   ‘I did not laugh at Watan.’

   a’. * 'ini=cu pasye’ ci watan-an.
   Neg=1S.Nom laugh at Acc Watan-Loc

b. m<in>ahiy ci watan-an ka’ walis.
   AF<Prf>hit Acc Watan-Loc Nom Walis
   ‘Walis hit Watan’s (dog, child, etc.).’

c. m<in>sa’=cu watan-an hira.
   AF<Prf>go=1S.Nom Watan-Loc yesterday
   ‘I went to Watan’s place yesterday.’

As shown in (2.32a-a’), when the suffix -an is attached to a proper noun interpreted as a patient, the noun cannot be preceded by the accusative case marker ci simultaneously. The co-occurrence of ci and -an is possible only if the proper noun is interpreted as referring to a possessor, as in (2.32b). In (2.32c), the proper noun marked with the locative suffix -an is interpreted as a location.

The instrumental/benefactive case markers (ni) -an and na are used for proper and common nouns respectively. The representations of being a beneficiary or an instrument are in complementary distribution semantically, i.e. while nouns referring to human beings may function as beneficiary, those referring to non-human entities usually serve as instruments. Examples are given in (2.33).

(2.33) a. t<um>ahuk=cu (ni) watan-an ci ’ucyux.
   cook<AF>cook=1S.Nom (Ben) Watan-Ben Acc fish
   ‘I cook fish for Watan.’

   a’. paston na ’ule’ ka’ yaya’.
   prepare to cook.AF Ben child Nom mother
   ‘Mother prepares to cook for the child.’
Finally, nouns referring to time and place are usually not preceded by case markers of any type. Only temporal nouns that indicate past time can be preceded by ci\(^9\). Consider the following examples in (2.34).

\[(2.34)\]
\[
\text{a. } \text{ma-ma-ha’ } ø \text{ tayhoku } ø \text{ cuxan } \text{ ka’ } \text{ temu.}
\]
\[
\text{Red- AF-go Taipei tomorrow Nom Temu}
\]
\[\text{‘Temu will go to Taipei tomorrow.’}\]
\[
\text{b. } \text{m<in>sa’ } ø \text{ tayhoku (ci) hira } \text{ ka’ } \text{ temu.}
\]
\[
\text{AF<Prf> go Taipei (CI) yesterday Nom Temu}
\]
\[\text{‘Temu went to Taipei yesterday.’}\]

The non-occurrence of case markers before temporal and locational nouns may be explained as follows. Since they do not refer to core participants involved in an event and are usually semantically identifiable, they do not need case markers to indicate their grammatical and/or semantic relations to the predicate.

2.3.3 Pronouns

Participants expressed by personal pronouns are not preceded by case markers mentioned above, but instead, are divided into four case-embedded categories, including nominative, genitive, locative and neutral. The first two types are bound clitics and the latter two are free forms, as shown in Table 2.4 below.

\(^9\) For the time being, we cannot tell whether the past ci is semantically and/or syntactically identical or different from the accusative ci, but just like Plngawan speakers allow only one occurrence of ka’, it is impossible for the accusative ci to co-occur simultaneously with the past ci. Consider the following examples:

(i) \[\text{m<in>ani’ } \text{ ci } ’ucyux } ø \text{ hira } \text{ yesterday Ka’ Temu.}\]
\[\text{AF<Prf> eat Acc fish yesterday Nom Temu}\]
\[\text{‘Temu ate fish yesterday.’}\]

(ii) \[\text{m<in>ani’ } ø \text{ ’ucyux ci hira } \text{ ci } \text{ ka’ temu.}\]
\[\text{AF<Prf> eat fish CI hira CI ka’ Temu}\]
\[\text{‘Temu ate fish yesterday.’}\]

(iii) \[\text{*m<in>ani’ } \text{ ci } ’ucyux ci hira } \text{ ci } \text{ ka’ temu.}\]
\[\text{AF<Prf> eat Acc fish CI hira CI ka’ Temu}\]
Like lexical nouns preceded by ka’, nominative pronouns refer to the subject of a sentence and are always attached to sentence-initial predicates, as illustrated in (2.35)

(2.35)  
   a. ma’as=cu.  
       AF.happy=1S.Nom  
       ‘I am happy.’  
   b. watan=cu.  
       Watan=1S.Nom  
       ‘I am Watan.’

Genitive pronoun clitics may refer to agents in NAF sentences as in (2.36a) or possessors as in (2.36b-b’) below.

(2.36)  
   a. kisli’=mu      ka’      watan.  
       like.PF=1S.Gen   Nom   Watan  
       ‘I like Watan.’
b. 'ule'=mu  ka’  watan.
   child=1S.Gen  Nom  Watan
   ‘Watan is my child.’
b'. s<un>kisli’  ci  'ule'=mu  ka’  watan.
   like<AF>like  Acc  child=1S.Gen  Nom  Watan
   ‘Watan likes my child.’

In Plngawan, when a nominative and a genitive personal pronoun occur simultaneously, they may be contracted as one clitic and attached to sentence-initial predicates, as exemplified in (2.37).

(2.37) a. kisli’=misu.
   like.PF=1S.Gen:2S.Nom
   ‘I like you.’
b. malikur=cini.
   male=1S.Nom:3S.Gen
   ‘I am her husband.’

Locative pronouns are free forms, and like proper nouns suffixed with -an, they may refer to patients, benefactive roles or function as locative and possessive pronouns, as illustrated in (2.38a-d).

(2.38) a. s<un>kisli’  sinang  ka’  watan.
   like<AF>like  2S.Loc  Nom  Watan
   ‘Watan likes you.’
b. b<in>iniy=mu  sinang  ka’  lukus  hani.
   buy<Prf.PF>buy=1S.Gen  2S.Loc  Nom  clothes  this
   ‘I bought the clothes for you.’
c. ma-ha’=cu  sinang  cuxan.
   AF-go=1S.Nom  2S.Loc  tomorrow
   ‘I will go to your place tomorrow.’
d. sinang  ka’  patas  hani.
   2S.Loc  Nom  book  this
   ‘This book is yours.’
Pronouns classified as “neutral case” seem to bear a looser grammatical relation to the predicate and thus do not need to be assigned a specific case. In terms of function, they may serve as topics and emphatic pronouns or provide short responses to questions, as exemplified in (2.39)-(2.41) respectively.

(2.39) Topics
a. \textit{kuring/*kung ga watan.}
   1S.Neu Top Watan
   ‘As for me, I am Watan.’

b. \textit{hiya ga malikur=mu.}
   3S.Neu Top male=1S.Gen
   ‘As for him, he is my husband.’

(2.40) Emphatic pronouns
a. \textit{watan=cu kung/*kuring.}
   Watan=1S.Nom 1S.Neu
   ‘I am the person Watan.’

b. \textit{’ima=su (ka’) ’isu?}
   who=2S.Nom (Nom) 2S.Neu
   ‘Who are YOU?’

(2.41) Responses
Q: \textit{’ima ma-ma-ha’?}
   who Red-AF-go
   ‘Who will go?’

A: \textit{kuring/kung!}
   1S.Neu
   ‘I!’

Two things are noted from the above examples. First, only the first person neutral pronoun has two forms, i.e. \textit{kuring} as a topic and \textit{kung} an emphatic pronoun, but they can both be used as a response to questions. Second, emphatic pronouns can be preceded by the nominative case marker \textit{ka’} as in (2.40b), which confirms that they do not bear cases themselves.
Demonstrative pronouns **hani** ‘this’ and **haca** ‘that’ may function as case-marked arguments or as post-nominal modifiers, as shown in (2.42).

(2.42) a. \textit{m\textless in\textgreater ani’ ci hani la ga, ramas tax-an la.}  
\textit{AF\textless Prf\textgreater eat Acc this Part Top good.AF see-LF Part}  
‘After eating this, she becomes beautiful.’

b. \textit{watan-an \textasciitilde ka’ patas hani.}  
\textit{Watan-Loc Nom book this}  
‘This book is Watan’s.’

When referring to subjects, demonstrative pronouns are either preceded by \textit{ka}’ or undergo contraction with \textit{ka}’ and become **kani** ‘Nom.this’ and **kaca** ‘Nom.that’. Thus, the co-occurrence of \textit{ka}’ and nominative-marked demonstrative pronouns is ungrammatical, as shown in (2.43).

(2.43) a. \textit{watan-an \textasciitilde ka’ hani.}  
\textit{Watan-Loc Nom this}  
‘This is Watan’s.’

b. \textit{watan-an (\textasciitilde ka’ \textasciitilde) kani.}  
\textit{Watan-Loc (*Nom) Nom.this}  
‘This is Watan’s.’

**2.3.4 Focus markers**

Focus markers are affixes attached to verbal predicates that indicate semantic roles of the grammatical subject. They are classified into four categories, i.e. agent, patient, locative and instrumental/benefactive focus, as shown in Table 2.5.

---

Focus markers used in negative and imperative sentences usually show different forms, for example:

(i) \textit{ras-ani=cu!}  
\textit{take-\textasciitilde BF=1S.Nom}  
‘Take it for me!’

The benefactive focus marker is \textit{-ani} rather than \textit{si-} in an imperative sentence. So far, we only present focus markers used in affirmative declarative sentences because they are identical to those used in interrogative constructions in Plngawan.
Table 2.5 Focus markers used in affirmative declarative sentences

<table>
<thead>
<tr>
<th>Focus</th>
<th>Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent focus (AF)</td>
<td>\textit{m-}, \textit{&lt;um&gt;} (&lt;un&gt;), \textit{ma-}, \textit{Ø}</td>
</tr>
<tr>
<td>Patient focus (PF)</td>
<td>\textit{-un} (-on), \textit{Ø}</td>
</tr>
<tr>
<td>Locative focus (LF)</td>
<td>\textit{-an} (-en)</td>
</tr>
<tr>
<td>Instrumental/Benefactive focus (I/BF)</td>
<td>\textit{si-}</td>
</tr>
</tbody>
</table>

Verbal predicates are marked as AF when subjects refer to agents of an event. The use of various AF markers is sensitive to verbal semantics, i.e. degree of dynamicity. Dynamic verbs tend to be marked with \textit{m-/<um>/<un>}, e.g. \textit{k<un>rak} ‘catch<AF>catch’ and less dynamic or stative verbs with \textit{ma-/œ}, e.g. \textit{maluw} ‘AF.be together’.\textsuperscript{11} The choice among \textit{m-}, \textit{<um>} and \textit{<un>} is phonologically conditioned, as shown in (2.12) and (2.19) discussed above; the choice between \textit{ma-} and \textit{œ}, however, seems to be lexically determined. Examples are given in (2.44).

\begin{enumerate}
\item \textit{mani’ ci ’ucyux ka’ watan.}  \textit{(< kani’ ‘eat’)}
\begin{itemize}
\item AF:eat Acc fish Nom Watan
\hfill ‘Watan eats fish.’
\end{itemize}
\item \textit{t<um>uting ci ’ule’ ka’ watan.}  \textit{(< tuting ‘beat’)}
\begin{itemize}
\item beat<AF>beat Acc child Nom Watan
\hfill ‘Watan beats the child.’
\end{itemize}
\item \textit{s<un>bale’ ci rakat ka’ watan.}  \textit{(< sabale’ ‘make’)}
\begin{itemize}
\item make<AF>make Acc chair Nom Watan
\hfill ‘Watan makes a chair.’
\end{itemize}
\item \textit{ma-tanah ka’ lukus=mu.}  \textit{(< tanah ‘red’)}
\begin{itemize}
\item AF-red Nom clothes=1S.Gen
\hfill ‘My clothes are red.’
\end{itemize}
\item \textit{œ-yotas ka’ morow=su.}  \textit{(< yotas ‘big’)}
\begin{itemize}
\item AF-big Nom house=2S.Gen
\hfill ‘Your house is big.’
\end{itemize}
\end{enumerate}

\textsuperscript{11} The phenomenon that verbs of different degree of dynamicity take different AF markers is also found in Mayrinax Atayal. According to Huang (2000), in Mayrinax Atayal, verbs manifesting dynamic events are affixed with \textit{m- or <um>}, e.g. \textit{m-astatail} ‘AF-jump’; those designating less dynamic events or states are affixed with \textit{ma- or œ}, e.g. \textit{ma-qilaap} ‘AF-sleep’.
When subjects refer to patients, verbal predicates are marked with PF -un, -on or ø, with the first two as phonological allomorphs, i.e. a’-un > -on, as shown in (2.45).

(2.45) a. *tahk*-un=*mu* *ka’* *’ucyux.*  (< tahuk ‘cook’)
   cook-PF=1S.Gen Nom fish
   ‘I cook fish.’

   b. *wal=*mu *bak*-on *ka’* *rating.*  (< baka’ ‘break)
   Prf=1S.Gen break-PF Nom bowl
   ‘I broke the bowl.’

   c. *kisli’-*ø=*mu *ka’* *watan.*  (< sakisli’ ‘like’)
   like-PF=1S.Gen Nom Watan
   ‘I like Watan.’

The two LF markers -an and -en are also phonological allomorphs, i.e. iy-an > -en. They both denote subjects as locations or patients that can be conceptually realized as locations to which an event happened, as shown in (2.46).

(2.46) a. ’<in>*tax-*an* *ni* *walis* *ka’* *watan.*  (< katox ‘see’)
   see<Prf>see-LF Gen Walis Nom Watan
   ‘Walis saw Watan.’

   b. <in>*ah-*en* *ni* *temu* *ka’* *watan.*  (< bahiy ‘hit’)
   hit<Prf>hit-LF Gen Temu Nom Watan
   ‘Temu hit Watan.’

The I/BF marker si- has no phonological variant, and it marks the subject as an instrument or a beneficiary, as shown in (2.47).

(2.47) a. *si-*culing=*mu* *ci* *’ucyux* *ka’* *beloh.*  (< culing ‘roast’)
   IF-roast=1S.Gen Acc fish Nom charcoal
   ‘I roast the fish with charcoal.’

   b. *si-*pawas *ni* *yaya’* *ka’* *’ule’.*  (< pawas ‘sing’)
   BF-sing Gen mother Nom child
   ‘Mother sings for the child.’
2.3.5 Tense/aspect/mood (TAM) marking system

Plngawan does not grammaticalize the concept of tense, but it distinguishes realis/non-future from irrealis/future mood and shows aspectual distinctions among perfective, progressive and habitual.

2.3.5.1 Realis mood

Events that have been completed or have taken/is taking place are marked as realis, which is further divided into perfective, progressive and habitual aspects.

Perfective aspect is usually marked with the infix <in>, as shown in (2.48).

(2.48) a. m<in>ani ’ ci ’ucyux ka’ watan.
    AF<Prf>eat Acc fish Nom Watan
    ‘Watan ate the fish.’

b. t<in>ahuk ni yaya’ ka’ ’ucyux.
    cook<Prf>PF cook Gen mother Nom fish
    ‘Mother cooked the fish.’

c. ’<in>tax-an=mu tayhoku watan.
    see-Prf-see-LF=1S.Gen Taipei Watan
    ‘I saw Watan in Taipei.’

Mrs. Yuma Watan, our major informant, did not accept this utterance, though the co-occurrence of <um> and <in> as in (2.48a’) was actually acceptable to late Mr. Watan Nawi (aged 60 in 2006). However, as he suggested, such forms were used in Plngawan in earlier times. Nowadays, it seems that the two infixes <um> and <in> have undergone phonological contraction as <un> ‘AF.Prf’, as illustrated in the following examples:

(i) a. r<um>anga’ ‘raise<AF>raise’
    b. r<un>anga’ ‘raise<AF.Prf>raise’

(ii) a. ’<um>olax tanux na.
    rain<AF>rain outside still
    ‘It is still raining outside.’

    b. ’<un>olax tanux la.
    rain<AF.Prf>rain outside Part
    ‘It has rained outside (so the ground is wet)

Thus, we may propose two sources of the AF infix <un>, i.e. first, <un> is the phonological allomorph of <um> before consonants, and second, <un> is the contraction of <um> ‘AF’ and <in> ‘Prf’.
Regarding the perfective infix <in>, it is noted that (i) <in> may co-occur with the AF marker m- but not <um>, (ii) as shown in (2.48b), it may be treated as a portmanteau serving both as a perfective marker and a PF marker, and (iii) the I/BF marker is zero form when predicates are marked with <in> simultaneously.

The other strategy used to mark perfective is by means of the auxiliary wal/waral that is grammaticalized from the motion verb waral ‘go’ and can be shortened as wal. Unlike the perfective infix <in>, wal may co-occur with verbs marked with all types of focus markers, as illustrated in (2.49).

(2.49) a. waral t<um>uting ci walis ka’ watan.
    Prf beat<AF>beat Acc Walis Nom Watan
    ‘Watan has beaten Walis.’

b. wal=mu ni’-un ka’ tugal rating mami’.
    Prf=1S.Gen eat-PF Nom three bowl rice
    ‘I ate three bowls of (cooked) rice.’

c. wal=mu tax-an ka’ ’ule’ ni watan.
    Prf=1S.Gen see-LF Nom child Gen Watan
    ‘I saw Watan’s child.’

d. wal=mu si-pakacik watan ka’ patas=mu.
    Prf=1S.Gen IF-lend Watan Nom book=1S.Gen
    ‘I lent Watan my book.’

Progressive aspect is marked explicitly by the auxiliaries nel and cyel that are grammaticalized from existential verbs nel13 ‘be here’ and cyel ‘be there’, as illustrated in (2.50).

13 As observed by Prof. L. Huang, in Watan’s speech, the word “be here” was pronounced as nyel, but in Yuma’s speech, all of the occurrences of nyel are pronounced as nel.
Verbs affixed only with focus markers are usually interpreted as habitual or states of facts, as shown in (2.51).

(2.51) a. \textit{t<um>ahuk ci 'ucyux ka' yaya'}.  
\text{cook<AF>cook Acc fish Nom mother}  
‘Mother cooks fish.’  
\text{(Context: Mother often cooks fish, or Mother knows how to cook fish.)}

b. \textit{ni'-un=mu ka' 'ucyux}.  
\text{eat-PF=1S.Gen Nom fish}  
‘I eat fish.’  
\text{(Context: I often eat fish, or I am not afraid of eating fish.)}

In terms of habitual reading, the distinction between past and present is marked explicitly by temporal adjuncts, as shown in (2.52).

(2.52) a. \textit{mani'=cu ci 'ucyux karirex}.  
\text{AF.eat=1S.Nom Acc fish every day}  
‘I often eat fish.’

b. \textit{mani'=cu ci 'ucyux karirex rali hang}.  
\text{AF.eat=1S.Nom Acc fish every day before Part}  
‘I used to eat fish often before.’

\textbf{2.3.5.2 Irrealis mood}

Events that are about to take place or may happen in the future are marked as irrealis either with the prefix \textit{pa-} that marks verbs both as AF and irrealis or through \textit{Ca-reduplication}, as shown in (2.53).
(2.53) a. pa-kani’ ci ’ucyux cuxan ka’ lawa.
Irr.AF-eat Acc fish tomorrow Nom Lawa
‘Lawa will eat fish tomorrow.’
b. ba-bah-en ni watan ka’ ’ule’ hani.
Red-hit-LF Gen Watan Nom child this
‘Watan will hit the child.’

The discussion about the tense/aspect/mood system of Plngawan is summarized in Table 2.6 with the exemplification of kani’ ‘eat’ or tahuk ‘cook’.

Table 2.6 Tense/aspect/mood marking system

<table>
<thead>
<tr>
<th>Mood</th>
<th>Realis</th>
<th>Irrealis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect</td>
<td>Perfective</td>
<td>Habitual</td>
</tr>
<tr>
<td>V-AF &lt;in&gt;, wal/waral</td>
<td>Ø</td>
<td>nel/cyel</td>
</tr>
<tr>
<td>Examples</td>
<td>m&lt;in&gt;ani’ ‘ate/ have eaten’</td>
<td>mani’ ‘eat’</td>
</tr>
<tr>
<td>V-NAF &lt;in&gt;, wal/waral</td>
<td>Ø</td>
<td>nel/cyel</td>
</tr>
<tr>
<td>Examples</td>
<td>t&lt;in&gt;ahuk ‘was/ has been cooked’</td>
<td>ni*-un ‘is eaten’</td>
</tr>
</tbody>
</table>

2.4 Summary

In this chapter, we have provided a sketch grammar covering the phonology, morphology and syntax of Plngawan. Based on the discussion in this chapter, we will investigate the formation and functions of interrogative constructions in Chapter 4 and their intonation contours in Chapter 5. In Chapter 3, we will review how interrogative constructions are discussed in both general and Formosan linguistics.

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14 Tense/aspect/mood markers may have different forms in negative or imperative sentences, which we leave for further study. Only those used in affirmative declarative sentences are shown in Table 2.6.
Chapter Three

Literature Review

According to Siemund (2001), nearly all human languages make use of three major syntactic constructions to fulfill our basic needs of communication, including declarative, imperative and interrogative sentences. They enable us to state facts, give commands and seek for information. In § 3.1, a brief overview about how interrogative constructions are analyzed in general linguistics is provided. In § 3.2, similar issues discussed in Formosan linguistics are reviewed.

3.1 Interrogative constructions in general linguistics

3.1.1 Types of interrogative sentences

Depending on the kind of information being inquired, interrogative constructions can be categorized into three types, namely, yes-no questions, alternative questions and information questions,\(^{15}\) as illustrated in (3.1a-c) below.

\[(3.1)\]

\[\begin{align*}
\text{a. } & \text{Q: Do you major in linguistics?} \\
& \text{A: Yes, I do.} \\
\text{b. } & \text{Q: Do you major in linguistics or medicine?} \\
& \text{A: (I major in) linguistics.} \\
\text{c. } & \text{Q: What is your major?} \\
& \text{A: (My major is) linguistics.}
\end{align*}\]

In (3.1a), the yes-no question is used to seek for agreement or disagreement from the addressee, and thus only a simple answer “yes” or “no” is expected. In (3.1b), the speaker uses an alternative question to ask the addressee to pick up one of the two choices. To answer information questions such as (3.1c), more specific information about persons, objects, time, etc. are required to fulfill the gap in the speaker’s

\(^{15}\) In previous studies, yes-no questions are also referred to as “polar” or “general” questions; alternative questions as “disjunctive” questions, and information questions as “content”, “constituent”, “wh-”, or “special” questions (cf. Siemund 2001).
knowledge.

3.1.2 Formation of interrogative constructions

Strategies concerning the formation of interrogative sentences can be phonological or morphosyntactic. The former may include intonation, pitch accent or other phonemic properties, e.g. vowel length; the latter covers a wider range of techniques, including question particles, question words, inversion, tags, verbal inflections and disjunctive structure. In the following, we will show how the various strategies are used to form yes-no, alternative and information questions.

3.1.2.1 Yes-no questions

In English, a declarative sentence like (3.2a) below may be turned into a yes-no question via (i) contour modification from final-falling to final-rising pattern as in (3.2b), (ii) the inversion between subject and auxiliary as in (3.2c), or (iii) the occurrence of question tags as in (3.2d).

\[(3.2) \quad \begin{align*}
a. \quad & \text{Cindy majors in linguistics. (Falling intonation)} \\
b. \quad & \text{Cindy majors in linguistics? (Rising intonation)} \\
c. \quad & \text{Does Cindy major in linguistics?} \\
d. \quad & \text{Cindy majors in linguistics, doesn’t she?}
\end{align*} \]

Sentence (3.2b) is called a “declarative question” because it is syntactically identical to the declarative sentence, and the two sentences differ only in terms of intonation contours. Sentences like (3.2d) are also called “tag questions”. In English, tags may have the same or reverse polarity with the preceding clause. Bolinger (1989:116) suggests that reverse polarity tags are used when speakers expect agreement from addressees.

The other two strategies, i.e. question particle and verbal inflection, are illustrated in (3.3)-(3.4):
As shown in (3.3), a declarative sentence in Mandarin Chinese is turned into a yes-no question with the occurrence of the sentence-final question particle ma. In West Greenlandic, part of the verbal morphology is modified, i.e. from -vutit to -vit.

In most languages, yes-no questions are answered with morphemes meaning “yes/no”, as exemplified in (3.5).
3.1.2.2 Alternative questions

According to Siemund (2001), alternative questions can be analyzed as the coordination of two yes-no questions that differ from each other with respect to only one of the constituents. Consider the English example in (3.6).

(3.6) Q: Is Cindy a teacher or (is she) a student?
A: She is a student.
A’: *Yes, she is a student.

Alternative questions in English are formed by connecting two yes-no questions with the disjunctive coordinator or. As shown in (3.6), two things are noted: (i) they cannot be answered with “yes” or “no” like yes-no questions, and (ii) identical parts in the second yes-no clause usually have to be deleted to avoid redundancy.

In Mandarin Chinese, alternative questions are also formed by means of such a disjunctive structure. Consider (3.7).

(3.7) Mandarin Chinese
a. 你 是 學生 還是 (你 是) 老師？
i shi xuesheng haishi (ni shi) laoshi?
you are student or (you are) teacher
‘Are you a student or (are you) a teacher?’
b. * 你 是 學生 嗎 還是 (你 是) 老師 嗎？
i shi xuesheng ma haishi (ni shi) laoshi ma?
you are student QP or (you are) teacher QP

As shown in (3.7), when the two yes-no questions are connected by the disjunctive coordinator haishi ‘or’ to form an alternative question, they cannot end with the question particle ma.

The two yes-no questions in (3.7a) differ in terms of the predicate noun, i.e. student vs. teacher. They may also differ in terms of polarity, as shown in (3.8).
Siemund (2001:1016) suggests that such a disjunctive structure with ellipsis as in (3.8a) may be grammaticalized as an $A$-(or-)not-$A$ expression, which can be another strategy to form yes-no questions as in (3.8b). Thus, the co-occurrence of an $A$-not-$A$ expression and the question particle $ma$ is ungrammatical, as shown in (3.8c).

3.1.2.3 Information questions

In a typological survey on interrogative constructions of 79 languages, Ultan (1978:228) finds that it is nearly universal for information questions to be formed by means of interrogative words which can be analyzed as “placeholders or variables in a proposition to be filled or assigned a value by the answer” (Siemund 2001:1018). Morphologically, interrogative words may be free or bound morphemes, as exemplified in (3.9) and (3.10).

(3.9)  
| a.  | *Who* majors in linguistics? |
| b.  | *Where* are you going? |

(3.10)  
| a.  | Iraqi Arabic (Ultan 1978:229) |
| b.  | ṣ-dataakul? |
|     | what-dataakul |
|     | ‘What are you eating?’ |
b. Rotuman (Ultan 1978:229)

\textit{hanue-s}  
\textit{hanue-which}  
‘Which country?’

In some languages, interrogative words share a similar stem like \textit{wh-} in English or \textit{qu-} in French; in others, they may be morphologically distinct from each other.

The number of question words also differs from language to language, depending on how many semantic distinctions are made. In English, for instance, the interrogative pronoun referring to human beings distinguishes nominative \textit{who} from accusative \textit{whom}; in Mandarin Chinese, however, only one form \textit{shei} ‘who’ is used for both cases. Besides, while some semantic distinctions are more universal, such as human/non-human, e.g. \textit{who/what} and countable/uncountable, e.g. \textit{how many/how much}, others may be more language-specific like source/goal, e.g. \textit{whence/whereto} and the distinction between past and non-past for temporal question words, etc.

Below we will discuss two other issues relevant to morphosyntactic properties of interrogative words, i.e. parts of speech and distribution.

\textbf{3.1.2.3.1 Parts of speech of interrogative words}

According to Anward (2001), a part of speech is the lexicalization of the semantic-syntactic mapping relations of words. For example, when a word can semantically denote a person or an object and syntactically function as an argument, it may be determined as a “noun”. Some major parts of speech are shown in Table 3.1.
Table 3.1 Parts of speech (Based on Anward 2001:727)

<table>
<thead>
<tr>
<th>Parts of speech</th>
<th>Semantic classes</th>
<th>Major syntactic functions</th>
<th>English examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>person, object</td>
<td>argument</td>
<td>man, dog, book,</td>
</tr>
<tr>
<td>Pronoun</td>
<td></td>
<td></td>
<td>he, it</td>
</tr>
<tr>
<td>Verb</td>
<td>action, state, event</td>
<td>predicate</td>
<td>jump, sleep, break</td>
</tr>
<tr>
<td>Adverb</td>
<td>location, time, manner</td>
<td>adjunct, adverbial modifier</td>
<td>here, now, quickly,</td>
</tr>
<tr>
<td>Adjective</td>
<td>property</td>
<td>argument, predicate, adnominal modifier</td>
<td>red, big, happy</td>
</tr>
<tr>
<td>Demonstrative</td>
<td>property</td>
<td>argument, predicate, adnominal modifier</td>
<td>this</td>
</tr>
<tr>
<td>Quantifier</td>
<td>quantity</td>
<td>adnominal modifier</td>
<td>many</td>
</tr>
<tr>
<td>Numeral</td>
<td>quantity</td>
<td></td>
<td>two</td>
</tr>
<tr>
<td>Interjection</td>
<td>situation</td>
<td>root (a sentence)</td>
<td>ouch, hey, mhm</td>
</tr>
</tbody>
</table>

Ultan (1978:228-9) shows that all languages have question words that substitute for nouns and adverb-like elements indicating location, time, manner, etc. A few languages have question words that replace verbs, meaning “do what”, and some languages even have interrogative interjections, such as Tongan inē “What about it?”. Therefore, interrogative words are supposed to have identical parts of speech to the words they substitute for and hence exhibit similar syntactic functions. However, consider the use of what in (3.11) below.

(3.11)  a. Q: What did you buy yesterday?  
A: I bought a book.  
b. Q: *Whats did you buy yesterday?  
A: I bought books.  
c. Q: What are you doing?  
A: I am reading.  
d. Q: *What are you?  
A: I am reading.

As shown in (3.11a), what is classified as an interrogative noun because it denotes an object (book) and functions as the subject in (3.11aQ), but unlike book in (3.11b),
what cannot be pluralized with -s. In (3.11c-d), what serves as part of the interrogative verb do what, and both morphemes must be co-used to question about actions.

3.1.2.3.2 Distribution of interrogative words

In terms of distribution of interrogative words, languages are classified into three types (Cheng 1997). They include fronting, optional-fronting and in-situ languages, as illustrated in (3.12)-(3.14).

(3.12) Fronting languages: Ex. English
a. * Who saw Tom yesterday?
b. Who did Tom see yesterday?
b’. * Tom saw whom yesterday?

(3.13) Optional fronting languages: Ex. Tagalog (Aldridge 2002:394)
a. * b<um>abasa ng libro ang sino?
   Red<AF>read Obl book Nom who
   ‘Who is reading the book?’
a’. sino ang b<um>abasa ng libro?
   who Nom Red<AF>read Obl book
   ‘Who is reading the book?’
b. b<um>abasa ng ano ang maria?
   Red<AF>read Obl what Nom Maria
   ‘What is Maria reading?’

(3.14) In-situ languages: Ex. Mandarin Chinese
a. 誰 喜歡 小明？
   shei xihuan xiaoming?
   who like Xiaoming
   ‘Who likes Xiaoming?’
b. 小明 喜歡 誰？
   xiaoming xihuan shei?
   Xiaoming like who
   ‘Who does Xiaoming like?’

In fronting languages like English, interrogative words are fronted obligatorily to
sentence-initial position. In optional-fronting languages like Tagalog, question words referring to the subject have to be fronted, but those serving as objects may stay in-situ. In Mandarin Chinese, an in-situ language, question words always remain in-situ irrespective of their syntactic functions as subject or object.

Ultan (1978) demonstrates that 73.4% of 53 sample languages show a strong tendency to front question words to sentence-initial position, and only 25% are in-situ languages. Such a preference is accounted for by the fact that when occurring sentence-initially, words draw the most attention, emphasis and focus (Ultan 1978:223). Thus, even interrogative words can remain in-situ, they may also be fronted sentence-initially to draw emphasis, which, however, usually results in change of syntactic structures and/or verbal morphology. Consider (3.15).

(3.15) Bahasa Indonesia (from Saddy 1990, adopted from Chang 2000:8)
   a. sally men-cintai siapa?
      Sally  pre-loves who
      ‘Who does Sally love?’
   b. siapa yang sally cintai?
      who  that  Sally loves
      ‘Who does Sally love?’

In (3.15a), the question word siapa ‘who’ remains in-situ, i.e. in sentence-final position; when it is fronted as in (3.15b), the remaining clause will be headed by yang and the prefix men- of the verb is deleted as well.

3.1.3 Functions of interrogative constructions

In addition to asking questions, as discussed in § 3.1.1, interrogative sentences may be used non-canonically in three conditions.

First, in Mandarin Chinese, for instance, when interrogative words co-occur with a question particle, they are usually interpreted as indefinites, as illustrated in (3.16).
Second, question words used in sentences that are not syntactically qualified as an interrogative construction usually display different functions. Consider (3.17).

(3.17) Non-interrogative constructions

a. Echo question
   A: I’ve seen a ghost.
   B: You’ve seen what?

b. Exclamation
   (i) What a beautiful girl!
   (ii) How tall the building is!

c. Relative sentence
   I knew the man who you saw yesterday.

d. Indefinite
   Wherever you go, I will go.

In (3.17aB), the interrogative word what remains in-situ and forms an echo question that is used when speakers feel surprised or miss certain information given by addressees. In (3.17b), neither of the sentences are interrogative constructions; they are used to express exclamation rather than to seek for information.

As for (3.17c-d), it has been observed that question words can be sources of the derivation of relative pronouns and indefinites (Ultan 1978, Siemund 2001). In (3.17c), who is used as a relative pronoun that initiates a relative clause. In (3.17d), wherever is interpreted as indefinite via the affixation of -ever. Haspelmath (1997) has mentioned that interrogative words are interpreted as indefinites only when they occur in contexts where they are interpreted non-specifically, such as yes-no questions,
conditionals, negative sentences, imperatives, future/irrealis clauses and non-factive statements. Tsai (1997) also shows how interrogative words are used as indefinites in donkey sentences.

Finally, interrogative constructions may also exhibit speech acts other than to ask question when they are used in certain communicational contexts, as shown in (3.18).

(3.18) In specific communicational contexts
   a. Directive speech act
      Could you pass the salt?
   b. Rhetorical question
      *Who* cares, anyway?
   c. Greeting
      *How* are you?

In (3.18a), the yes-no question serves as a polite request. Sentence (3.18b) is a rhetorical question, i.e. an interrogative sentence that contains the answer to the question asked (Siemund 2001:1026); thus, by uttering (3.18b), the speaker actually means that “no one will care”. It is also common for interrogative sentences to be used as greetings as in (3.18c) because addressees are expected to respond to questions, which enables speakers to express concern or show interests in their whereabouts through the following conversations.

### 3.2 Interrogative constructions in Formosan languages

3.2.1 Yes-no questions

Yes-no questions in Formosan languages may be formed by means of contour modification, question particle and verbal inflection.

Phonologically, intonation contours of yes-no questions may be final-rising as in Paiwan (3.19a), final-falling as in Labuan Rukai (3.19b), level-rising-falling as in Puyuma (3.19c) or leveling as in Maga Rukai (3.19d), as illustrated below.

(3.19) Intonation contours of yes-no questions (Huang et al. 1999: 642-643)

a. Paiwan

\[\text{ti} \quad \text{palang} \quad \text{timadju?}\
\]
Nom Palang 3S.Nom
‘Is he Palang?’

b. Labuan Rukai

\[\text{masipepelenge=} \text{su?}\]
\text{tired:already=}2S.Nom
‘Are you tired?’

c. Puyuma

\[\text{nu-pakan-ay} \quad \text{la} \quad \text{na} \quad \text{walak?}\]
2S.Gen-feed-PF Part Nom child
‘Did you feed the child?’

d. Maga Rukai

\[\text{u-tubi} \quad \text{musuu?}\]
Act.Rea-cry 2S.Nom
‘Have you cried? / Did you cry?’

In addition to contour modification, stress shift and vowel lengthening are detected. In Paiwan, stress shifts from the penultimate syllable of a declarative
sentence to the final syllable of a yes-no question, while in Puyuma, stress shifts from final to penultimate syllable, as italicized above. In Maga Rukai, the last vowel in an open syllable in a yes-no questions is lengthened, as shown in (3.19d).

The use of question particle, e.g. quw in Mayrinax Atayal, and verbal inflection, e.g. -ka in Mantauran Rukai, are illustrated in (3.20).

(3.20)  a. Mayrinax Atayal (Huang 1996:265)
\[
\text{m-a’usa’=si’ m-aniq quw?}
\]
AF-go=2S.Nom AF-eat QP
‘Are you going to eat?’

b. Mantauran Rukai (Zeitoun 2007:356)
\[
\text{’oponoho-ka’o?}^{16}
\]
Mantauran-Neg-2S.Gen
‘Are you Mantauran?’

Notice that question particles in different Formosan languages may occur in different positions. Consider (3.21)

(3.21)  a. Mayrinax Atayal (Huang 1996:265)
\[
\text{m-a’usa’=si’ m-aniq quw?}
\]
AF-go=2S.Nom AF-eat QP
‘Are you going to eat?’

b. Paran Seediq (Chang 1996:66)
\[
\text{yee t<m>atak sudu ka tama?}
\]
QP cut<AF>cut grass Nom father
‘Is Father cutting grass?’

\footnote{16 In Mantauran Rukai (Zeitoun 2007:356), the affix -ka is used to form yes-no questions as in (a), but when the free morpheme ka occurs in the same sentence, the affix -ka functions as a negator as in (b):}

(a)  \[
\text{’oponoho-ka’o?}
\]
Mantauran-Neg-2S.Gen
‘Are you Mantauran?’

(b)  \[
\text{ka ’oponoho-ka-il.}
\]
Neg Mantauran-Neg-1S.Gen
‘No, I am not Mantauran.’
c. Saisiyat (Huang et al. 1999:646)

\[
\text{So’o rengreng ay komita’ hi ’obay?}
\]

2S.Nom often QP see.AF Acc ’obay

‘Do you often see ’Obay?’

As shown in (3.21), the question particle of Mayrinax Atayal quw occurs sentence-finally; in Paran Seediq, yee has to occur sentence-initially; in Saisiyat, ay may occur in middle position and bears a rising-falling intonation contour as in (3.21c) or sentence-finally with a final-rising contour. Chiang (1996) has carefully studied the intonation of yes-no questions in Atayal and Seediq spoken in Nantou. This study will be reviewed in Chapter 5.

In most Formosan languages, yes-no questions are answered with morphemes meaning “yes” and “no”, such as aw and iyat in Squiliq Atayal, as in (3.22).

(3.22) Squiliq Atayal (CIP)

Q: \[ \text{wagiq balay qu watan ga?} \]

\[
\text{tall very Nom Watan QP}
\]

‘Is Watan tall?’

A: \[ \text{aw, wagiq balay qu watan.} \]

\[
\text{yes tall very Nom Watan}
\]

‘Yes, Watan is very tall.’

A’: \[ \text{iyat, rroq balay qu watan.} \]

\[
\text{No short very Nom Watan}
\]

‘No, Watan is very short.’

3.2.2 Alternative questions

Alternative questions in most Formosan languages are also analyzed as the coordination of two yes-no questions. Consider (3.23).

(3.23) a. Labuan Rukai (Huang et al. 1999:651)

\[ \text{ay-ungulu=su ku acilay ay-kane=su ku aga?} \]

\[
\text{Irr-drink=2S.Nom Obl water Irr-eat=2S.Nom Obl rice}
\]

‘Will you drink water or eat rice?’
b. Paiwan (Huang et al. 1999:652)

\[\text{uri semataihuku}=\text{sun} \quad \text{manu} \quad \text{uri sematakaw}=\text{sun}?\]

will go.Taipei=2S.Nom or will go.Kaohsiung=2S.Nom

‘Will you go to Taipei or Kaohsiung?’

c. Mayrinax Atayal (Huang 1996:266)

\[\text{pa-qaniq}=\text{su}' \quad \text{quw ga'} \quad \text{pa-qilaap}=\text{su’}?\]

Fut.AF-eat=2S.Nom QP Top Fut.AF-sleep=2S.Nom

‘Will you eat or sleep?’

As shown in (3.23), two yes-no questions are juxtaposed without any connector in Labuan Rukai, whereas in Paiwan, the disjunctive coordinator manu ‘or’ is used. In Mayrinax Atayal, however, it is the topic marker ga’ that connects the two yes-no questions. Note also that the question particle quw in the second clause is deleted.

Identical parts in one of the two yes-no clauses in an alternative question are usually deleted to avoid redundancy. Consider the Mayrinax examples below.

(3.24) Mayrinax Atayal (Huang 1996:267-8)

a. \[\text{s<um>iuwaal}=\text{si’} \quad \text{cu’} \quad \text{pila’} \quad \text{quw ga’} \quad \text{kinkyanux}?\]

like<AF>like=2S.Nom Obl money QP Top life

‘Do you want money or life?’

b. \[\text{'i’} \quad \text{tali’} \quad \text{quw ga’} \quad (\text{'i’}) \quad \text{yumin ku’} \quad \text{t<um>uting} \quad \text{'i’} \quad \text{limuy?}\]

Neu Tali QP Top (Neu) Yumin Nom beat<AF>beat Obl Limuy

‘Was it Tali’ or Yumin that beat Limuy?’

Three points are worthy of notice from (3.24): (i) deletion may occur in the second clause of an alternative question, i.e. forward deletion, or in the first one, i.e. backward deletion, (ii) deleted parts can be a predicate as in (3.24a) or a subject (a nominalized verbal clause) as in (3.24b), and (iii) the first clause shows a rising contour on the topic maker ga’, and the second yes-no question retains the final-falling contour even without the occurrence of quw ‘QP’.
Alternative questions cannot be answered with “yes” or “no”, as shown in (3.25).

(3.25) Mayrinax Atayal (Huang 1996:267)

Q: $s<um>iwaal=si’ cu’ pila’ quw ga’ kinkyanux?$
   like<AF>like=2S.Nom Obl money QP Top life
   ‘Do you want money or life?’

A: (*iqaat,) $s<um>iwaal=ci’ cu’ kinkyanux.$
   (*no) like<AF>like=1S.Nom Obl life
   ‘(*No,) I want life.’

3.2.3 Information questions

In nearly all Formosan languages investigated so far, interrogative words used to form information questions are free forms. Morphologically, certain question word in different Formosan languages seems to be cognates. For example, $piya$ ‘how many’ in Seediq, $pira$ in Mayrinax, $pina$ in Amis and $piza$ in Saisiyat all have similar forms and are cognates. Others may show great cross-linguistic variation, such as $maanu$ ‘what’ in Seediq and $cuma$ ‘what’ in Tsou.

In terms of semantic distinctions, it is noted that most Formosan languages display the “when-past/when-future” distinction, such as $kangida/nungida$ in Paiwan, $nehomna/hohomna$ in Tsou, $sknuwan/knuwan$ in Seediq and $kuygane/luygane$ in Kucapungan Rukai. Cross-linguistic variation, however, is still detected. For example, while Mayrinax Atayal exhibits a human/non-human distinction as in $papiya’/piya’$ ‘how many’, Saisiyat distinguishes $piza$ ‘how many’ from $koza$ ‘how much’ in terms of countability.

In the following, we explore two other issues, parts of speech and distributional characteristics, of interrogative words in some Formosan languages.

3.2.3.1 Parts of speech of interrogative words

As discussed in § 3.1, parts of speech of interrogative words are identical to those of the constituents they substitute for. That is, question words referring to
nominal entities are classified as nominal interrogative words\textsuperscript{17} and are supposed to behave like nouns morphosyntactically. In Formosan languages, interrogative words may be classified as nominal, verbal and adverbial.

3.2.3.1.1 Nominal interrogative words

In Mayrinax Atayal, for instance, nouns exhibit two major functions, i.e. as nominal predicates in equational constructions or as case-marked arguments. Examples are given in (3.26).

\[(3.26)\text{ Mayrinax Atayal (Huang 1995:88(a), 103(b))}\]
\[\begin{align*}
a. \text{itaal ku’ nabakis.} \\
&\text{Atayal Nom old man} \\
&\text{‘The old man is Atayal.’}
b. \text{binas-un=mu ki’ watan ku’ siuing.} \\
&\text{sell-PF=1S.Gen Obl Watan Nom clothes} \\
&\text{‘I sold the clothes to Watan.’}
\end{align*}\]

The interrogative word \text{ima’} ‘who’ is classified as nominal because it also exhibits the two functions, i.e. nominal predicates and case-marked arguments, as shown in (3.27).

\[(3.27)\text{ Mayrinax Atayal (Huang 1996:269-271)}\]
\[\begin{align*}
a. \text{ima’ ku’ cuqliq ka’ haca?} \\
&\text{who Nom person Lin that} \\
&\text{‘Who is that person?’}
b. \text{binas-un ki’ ima’ ni’ yumin ku’ ruwas?} \\
&\text{sell-PF Obl who Gen Yumin Nom book} \\
&\text{‘Whom did Yumin sell the book to?’}
\end{align*}\]

In addition to being heads, nominal interrogative words may also serve as

\textsuperscript{17} In previous studies, a question word meaning “who” used to be labeled as “a nominal interrogative word” or “an interrogative noun”. When we focus more on semantic interpretations of question words, labels such as nominal, verbal or adverbial interrogative words are used; when morphosyntactic properties are emphasized, terms like interrogative nouns, verbs or adverbs are preferred.
adnominal modifiers when co-occurring with head nouns. Consider (3.28).

(3.28) Paran Seediq (Chang 1996:35)

a. *kenu ka hma-un na swai rseno?*
   which Nom plant-PF Gen brother man
   ‘Which is planted by the brother?’

b. *kenu qhuni (ka) hma-un na swai rseno?*
   which three Nom plant-PF Gen brother man
   ‘Which tree is planted by the brother?’

c. *m-huma qhuni kenu (ka) swai rseno?*
   AF-plant tree which Nom brother man
   ‘Which tree does the brother plant?’

In (3.28a), the nominal interrogative word *kenu* ‘which’ is a head that serves as the nominal predicate, but in (3.28b-c), it functions as an adnominal modifier. It is also noted that when the whole NP serves as the nominal predicate as in (3.28b), *kenu* ‘which’ precedes the head noun it modifies; when serving as an internal argument as in (3.28c), *kenu* ‘which’ becomes a post-nominal modifier.

### 3.2.3.1.2 Verbal interrogative words

Verbs in Mayrinax Atayal display the following features. First, they usually occur sentence-initially as predicates and attract pronoun clitics. Second, they can be inflected with focus markers and/or TAM affixes. The question word *humicuwa’* ‘how’ is classified as a verbal interrogative word for it displays the above-mentioned features similar to ordinary verbs, as shown in (3.29).


a. *<um><in>uting=ci’ cu’ ngiyaw.*
   beat<AF><Prf>beat=1S.Nom Acc cat
   ‘I beat a cat.’

b. *<um><in>icuwa’=si’ m-usa’?*
   how<AF><Prf>how=2S.Nom AF-go
   ‘How did you go?’
In (3.29), humicuwa ‘how’ behaves identically to the verb tumuting ‘beat’ in that they both occur sentence-initially as predicates and attract pronoun clitics. They are also affixed with the perfective <\textit{in}> and the agent focus marker <\textit{um}>.

When occurring in serial verb constructions, humicuwa ‘how’ also observes constraints like ordinary verbs. Consider (3.30).


\begin{itemize}
  \item[a.] naqaru-un ‘i’ m-aniq ni’ yumin ku’ qulih la.
  \hfill finish-PF Lin AF-eat Gen Yumin Nom fish Part
  ‘Yumin has finished eating the fish (already).’
  \item[b.] hacuwal-un=si’ m-aniq ku’ qulih?
  \hfill how-PF=2S.Gen AF-eat Nom fish
  ‘How did you eat the fish?’
\end{itemize}

In both (3.30a-b), tense is marked on the first verb, and the second verb is always in AF form. Besides, there is a linker ‘i’ between the two verbs in sequence, which is contracted with su’ and becomes si’ in (3.30b).

\textbf{3.2.3.1.3 Adverbial interrogative words}

Semantically, question words used to elicit information about time, place, reason and manner are considered as adverbial. In most Formosan languages, however, it is difficult to establish specific criteria for the determination of words as adverbs. In Kucapungan Rukai, for instance, inu ‘where’ is considered as an adverbial interrogative word simply because it behaves neither like a noun nor like a verb. Consider (3.31).

(3.31) Kucapungan Rukai (Chen 1999:47-8)

\begin{itemize}
  \item[a.] * inu ku tu-kiukay kay suakucapungan?
    \hfill where Nom make-church Dem people of Kucapungan
    ‘Where do the Kucapungan people build the church?’
\end{itemize}
b. * ma-dalame=su ki inu?
   Stat-like=2S.Nom Obl where
   ‘Where do you like?’

c. Li-kay=su inu apece?
   Fut-exist=2S.Nom where sleep
   ‘Where will you sleep?’

As shown above, inu ‘where’ can neither serve as the predicate of an equational sentence, as in (3.31a), nor be preceded by a case marker, as in (3.31b). In (3.31c), the future marker Li- and the pronoun clitic =su are attached to the existential verb kay rather than inu ‘where’. Thus, inu ‘where’ is classified as an adverbial interrogative word.

In Paran Seediq, however, the same question word inu ‘where’ is considered as a nominal interrogative word for it may serve as a nominal predicate, as shown below.

(3.32) Paran Seediq (Chang 1996:17-19)

\[
\text{inu (ka) mah-an qsiya riso?}
\]
\[\text{where Nom drink-LF water young man}\]

‘Where did the young man drink water?’

As for micuwa’ ‘why’ in Mayrinax Atayal, although it is used to seek for circumstantial information, i.e. reason, it is classified as an interrogative verb because it always occurs sentence-initially as a predicate and attracts pronoun clitics like a verb, as illustrated in (3.33) below.

(3.33) Mayrinax Atayal (Huang 1996:281)

a. micuwa’=su’ ka’ ba-bahiy-un ’i’ ba’ay?
   why=2S.Gen Lin Red-beat-PF Nom Ba’ay
   ‘Why did you beat Ba’ay?’

b. * ma-bainay ka’ micuwa’ cu’ situing ’i’ ba’ay?
   AF-buy Lin why Obl clothes Nom Ba’ay
3.2.3.1.4 More about parts of speech of interrogative words

Regarding parts of speech of interrogative words, two other points are worthy of further discussion. First, interrogative words may undergo nominalization or verbalization and thus change their parts of speech and morphosyntactic properties. In Kucapungan Rukai, for example, verbal interrogative words may undergo nominalization and behave like nominal question words. Consider (3.34).

(3.34) Kucapungan Rukai (Chen 2002:378-384)

a. w-a-tumane=su?
   Act-NF-do what=2S.Nom
   ‘What did you do?’

b. manemane ku ta-tuman-ane=su?
   what   Nom    NF-do what-Nmz=2S.Gen
   ‘What did you do?’ (Context: used as a reprehension to the hearer)

According to Chen (2002), in (3.34a), the verbal interrogative word watumane ‘do what’ is affixed with the active voice marker w-, the tense marker -a- and attracts the nominative pronoun =su. In (3.34b), the nominalized interrogative word tatumanane ‘do what’ is no longer marked with voice affixes. Also note that (i) tense is marked with the prefix ta- rather than the infix -a- in the stem, and (ii) tatumanane ‘do what’ may serve as the grammatical subject and be preceded by the nominative case marker ku.

Second, interrogative words may be assigned different parts of speech when they are used in different contexts and thus exhibit different morphosyntactic features. Take the interrogative word humicuwa’ in Mayrinax Atayal for example:

(3.35) Mayrinax Atayal (Huang 1996:276(a), 286(b), 279(c))

a. pa-’agal  cku’ humicuwa’  ka’ situing  ’i’  ba’ay?
   Fut.AF-take   Obl what kind   Lin clothes   Nom   Ba’ay
   ‘What kind of clothes does Ba’ay want?’
b. pa-bainay 'i' humicuwa’ cu’ situing 'i’ ba’ay?
Fut.AF-buy Part when Obl clothes Nom Ba’ay
‘When will Ba’ay buy clothes?’

c. h<um>icuwa’=si’ cu’ m-usa=si’ taypak?
how<AF>how=2S.Nom Lin AF-go=2S.Nom Taipei
‘How did you go to Taipei?’

In (3.35a), humicuwa’ ‘what kind’ is classified as a nominal interrogative word because it functions as a case-marked argument. In (3.35b), humicuwa’ is categorized as an adverbial interrogative word for it inquires temporal information; in (3.35c), humicuwa’ ‘how (manner)’ is regarded as a verbal interrogative word because it can be affixed with the agent focus marker <um>.

In the next section, we turn to discuss the distributional characteristics and constraints of interrogative words in Formosan languages.

3.2.3.2 Distribution of interrogative words

As shown in previous studies, there is no Formosan language in which all interrogative words are required to occur in sentence-initial position. Only in-situ and optional-fronting languages are found. In-situ languages may include Amis, Puyuma and Budai Rukai,\(^{18}\) as illustrated in (3.36).

(3.36) Kucapungan Rukai (Chen 1999:70-73)

a. w-a-kela kucapungan ku aneane?
Act-NF-come Kucapungan Nom who
‘Who comes to Kucapungan?’

b. ma-dalame ki aneane ka lasu?
Stat-like Obl who Nom man
‘Who does the man like?’

In (3.36), the nominal interrogative word aneane ‘who’ remains in-situ irrespective of

\(^{18}\) According to Chen (1999:71), both Amis and Puyuma (cited from Tan 1997) permit interrogative words to occur in-situ. Prof. Joy Wu pointed out that in certain Amis dialects, interrogative words referring to core arguments are required to be fronted sentence-initially and only those referring to adjuncts may remain in-situ.
its function as the subject in (3.36a) or the object in (3.36b).

Optional-fronting languages are exemplified by Mayrinax Atayal as in (3.37).

(3.37) Mayrinax Atayal (Huang 1996:276)

a. * 'a-gal-un=su’ ka’ situing ku’ ainu’?
Red-take-PF=2S.Gen Lin clothes Nom which

a’. ainu’ ku’ 'a-gal-un=su’ ka’ situing?
which Nom Red-take-PF=2S.Gen Lin clothes
‘Which clothes do you want?’

Lit: ‘Which are the clothes that you will take?’

b. pa-'agal cku’ ainu’ ‘i’ ba’ay?
Fut.AF-take Obl which Nom Ba’ay
‘Which one will Ba’ay take?’

In Formosan languages like Mayrinax Atayal and Seediq, such phenomenon as “optional-fronting” actually observes the “subject-sensitive constraint”. According to Chang (2000:4), “the preposing of a wh-word is subject-sensitive, i.e. the fronted wh-word must function as the sentence subject.” Thus, as shown in (3.37), when ainu’ ‘which’ refers to the subject of a sentence, it has to be fronted as a nominal predicate; when referring to non-subject arguments as in (3.37b), it remains in-situ.

3.2.4 Functions of interrogative constructions

In addition to asking questions, interrogative sentences in Formosan languages also display non-canonical functions when they are (i) formed by means of multiple strategies simultaneously, (ii) occurring in specific syntactic structures, and (iii) used in special communicational contexts.

3.2.4.1 The use of multiple strategies

In Amis, speakers express their strong doubt or suspicion when they ask a yes-no question that is co-marked with the question particle sau and a level-rising-falling contour, as shown in (3.38).
(3.38) Amis (Huang et al. 1999:643-645)

\[
\begin{align*}
\text{ci} & \quad \text{panay} & \quad \text{kisu} & \quad \text{sau}？ \\
\text{Neu} & \quad \text{Panay} & \quad 2\text{S.Nom} & \quad \text{QP}
\end{align*}
\]

‘Are you Panay?’

In Paran Seediq, when interrogative words co-occur with the question particle yee in a sentence, they are interpreted as indefinites, as shown in (3.39).

(3.39) Paran Seediq (Chang 1996:78)

\[
yee=\text{su} & \quad \text{ma-ha} & \quad \text{ani} & \quad \text{inu}？ \\
\text{QP}=2\text{S.Nom} & \quad \text{Fut-go} & \quad \text{any where}
\]

‘Are you going somewhere?’

In (3.39), the interrogative word inu ‘where’ is licensed by the question particle yee and thus is interpreted as an indefinite pronoun meaning ‘somewhere’.

3.2.4.2 Specific syntactic structures

As mentioned in § 3.1.3, interrogative words are interpreted as indefinites when occurring in sentences where they are interpreted non-specifically. In Formosan languages, such syntactic conditions may include negative, modal, conditional and donkey sentences. Consider (3.40).

(3.40) a. Paran Seediq (Chang 1996:75)

\[
iya & \quad \text{angan} & \quad \text{ani} & \quad \text{maanu}！
\]

Neg take any what/thing

‘Don’t take anything!’

b. Paran Seediq (Chang 1996:77)

\[
\text{ani} & \quad \text{ima} & \quad (k) & \quad \text{naka} & \quad \text{sluhe} & \quad \text{kari} & \quad \text{seediq}.
\]

any who Nom should learn language Seediq

‘Anyone should learn the Seediq language.’
c. Kucapungan Rukai (Chen 1999:80)

\[ \text{alaiyasi} \text{ Li-kela ku aneane tara-peLa-eLa nakuane.} \]

If Fut-come Nom who Mod-tell-Red 1S.Obl

‘If anyone comes, you must tell me.’

Lit: If someone comes, you must tell me.

d. Squiliq Atayal (Lin 2005:77)

\[ \text{(ana) ima meliq kbal ga (ana) ima qu kmal jel.} \]

any who raise hand Top any who Nom speak may

‘Whoever raises hands may speak.’

As shown in (3.40), interrogative words are properly licensed by negative polarity items, such as the negator \text{iya} in (3.40a), the modal \text{naka} ‘should’ in (3.40b), the conditional word \text{alaiyasi} ‘if’ in (3.40c) and the donkey sentence in (3.40d). Thus, they are interpreted as indefinites.

3.2.4.3 Special communicational contexts

In some Formosan languages, interrogative sentences may be used to perform speech acts other than to ask questions, such as exclamation and greetings, as shown in (3.41).

\begin{enumerate}
  \item Kucapungan Rukai (Chen 1999:56)
    \[ \text{ani ya ku zali ma-ruDange-nga!} \]
    why say Nom Zali Stat-marry-Asp
    ‘Why, Zali said that (he/somebody) got married!’
  \item Mantauran Rukai (Zeitoun 2007:355)
    \[ \text{'omaca-nga-ka'-o?} \]
    Dyn.Fin:wake up-already-Neg-2S.Gen
    ‘Good morning!’
    \[ \text{(Lit: Have you waken up already?)} \]
\end{enumerate}

Though (3.41a) is initiated by an interrogative word \text{ani} ‘why’, Chen (1999) analyzes it as a declarative sentence with an exclamation, which is used by the speaker to show
surprise. In Mantauran Rukai (Zeitoun 2007), the daily greeting expression (3.41b) is structurally identical to a yes-no question.

3.3 Summary

In this chapter, we have reviewed both formation and function of three types of interrogative constructions in general and Formosan linguistics, including yes-no, alternative and information questions. Strategies may either be phonological or morphosyntactic, and non-canonical functions in addition to asking questions, such as indefinites, exclamation and greetings are also detected. In Chapter 4, we turn to the investigation of the formation and function of interrogative constructions in Plngawan. This study will cover major issues discussed in Chapter 3.
In Plngawan, interrogative constructions may be classified into four types: yes-no questions (§4.1), tag questions (§4.2), alternative questions (§4.3), and information questions (§4.4). They differ from each other mainly in terms of the piece of information being inquired, strategies being used, and intonation contours.

4.1 Yes-no questions

Yes-no questions are used to seek for agreement or disagreement from addressees. In Plngawan, they can be formed phonologically with a final-rising-falling contour or lexically by means of a sentence-initial question particle ya’. Consider the examples in (4.1) and the intonation contours in Figure 4.1 to 4.3.

(4.1) a. k<um>aral=cu ci ke’ na 'itaral.
speak<AF>speak=1S.Nom Acc language Gen Atayal
‘I speak Atayal.’

Figure 4.1 Intonation contour of (4.1a)

b. k<um>aral=su ci ke’ na 'itaral?
speak<AF>speak=2S.Nom Acc language Gen Atayal
‘Do you speak Atayal?’

Figure 4.2 Intonation contour of (4.1b)
c. \( \text{ya}'=\text{su} \ \text{k<um>ar} \ \text{ci} \ \text{ke' na 'itagal?} \)

\[
\begin{array}{llll}
\text{QP=2S.Nom} & \text{speak<AF> speak Acc} & \text{language Gen Atayal} \\
\end{array}
\]

‘Do you speak Atayal?’

![Figure 4.3 Intonation contour of (4.1c)](image)

As shown in Figures 4.1 and 4.2, the final-falling contour is modified as final-rising-falling when a declarative sentence is turned into a yes-no question. Such a contour modification usually occurs within the last two syllables of a sentence and may be applied to all types of declarative sentences such as negative, existential, serial verb constructions, etc. to form corresponding yes-no questions.

Yes-no questions headed by \( \text{ya}' \) usually show a final-falling contour like declarative sentences, as shown in Figure 4.3. Regarding the question particle \( \text{ya}' \), four things are noteworthy. First, \( \text{ya}' \) shows a rising contour itself, and thus, \( \text{ya}' \)-initiated yes-no questions usually start with low pitch value. Second, \( \text{ya}' \) may attract pronoun clitics because it always appears sentence-initially, as shown in (4.1c). Third, structurally, \( \text{ya}' \) may precede both verbs and nouns in verbal and equational sentences, as shown in (4.2).

(4.2)  

\[
\begin{array}{ll}
\text{a. } & \text{ya'} \ \text{mabel ka' lawa?} \\
\text{QP AF.sleep Nom Lawa} \\
\text{‘Is Lawa sleeping?’} \\
\text{b. } & \text{ya'} \ \text{malikur ka' b<in>ah-en haca?} \\
\text{QP male Nom hit<Prf>hit-LF that} \\
\text{‘Is the one that was hit a male?’} \\
\end{array}
\]

Finally, in addition to being used alone as independent yes-no questions, \( \text{ya}' \)-initiated clauses may serve as part of alternative questions, as shown in (4.3).
In (4.3), the ya'-clause is not a complete yes-no question because both the predicate eyel matas and the case marker ka’ are deleted. In Chapter 5, we will show that ya’ used in such incomplete clauses displays phonological features that are different from ya’ heading independent yes-no questions.

Concerning responses, yes-no questions in Plngawan can be answered affirmatively with ho’ ‘yes’ and negatively with the negators ‘ini ‘Neg.Rea’, ’agat ‘Neg.Irr’, ’ungat ‘Neg.Exi’ or ’iya ‘Neg.Imp’, as illustrated in (4.4a-c) below.

(4.4)  a. Q: ’anak=cu musa’ morow19 ni lawa?
    may=1S.Nom AF.go house Gen Lawa
    ‘May I go to Lawa’s home?’
A: ho’, ’anak=su musa’.
    yes may=2S.Nom AF.go
    ‘Yes, you may go.’
A’: ’iya!’ ’iya ’usa’ hang.
    Neg.Imp Neg.Imp go Part
    ‘No! Don’t go yet.’

b. Q: ba’=su mawas?
    know.AF=2S.Nom AF.sing?
    ‘Can you sing?’
A: ho’ (ca’).
    yes (Part)
    ‘Yes (of course).’
A’: ’ini (’ini=cu kaba’ mawas).
    Neg (Neg=1S.Nom know AF.sing)
    ‘No (I cannot sing).’

19 The word meaning “house” can be pronounced as morow or morong by most Plngawan speakers.
c. Q: kelan na ’ule’ ka’ labos=ni?
    Exi Gen child Nom belly=3S.Gen
    ‘Is she bearing a child?’

A’: ho’, *(kelan).
    yes *(Exi)
    ‘Yes, there is (a child in her belly).’

A’’: ungat.
    Neg.Exi
    ‘No, there is not.’

As shown in (4.4a-b), the affirmative answer ho’ ‘yes’ may be used alone or with the particle ca’ for emphasis. To answer yes-no questions formed from existential sentence as in (4.4c), the co-occurrence of ho’ ‘yes’ and the existential word kelan ‘Exi’ is required.

4.2 Tag questions

To our knowledge, tag questions have never been investigated in any Formosan languages. In Plngawan, they are singled out as a different class from yes-no questions for two reasons.

First, tag questions are marked with ‘aw that occurs sentence-finally, and they show a final-rising contour which is different from the final-rising-falling pattern found in yes-no questions, as illustrated below.

(4.5) a. ba’=su mawas?
    know.AF=2S.Nom AF.sing
    ‘Can you sing?’

Figure 4.4 Intonation contour of (4.5a)

20 Prof. L. Huang pointed out that in Wulai Squliq, the morpheme aw is interpreted as “yes” and is used to respond to yes-no questions. Thus, whether and how aw as an affirmative response in Wulai Squliq and ‘aw as a question tag in Plngawan Atayal are related may deserve further study.
b. \text{ba’}=\text{su} \quad \text{mawas} \quad '\text{aw}?

\begin{verbatim}
know.AF=2S.Nom AF.sing QTag
\end{verbatim}

‘You can sing, right?’

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4_5.png}
\caption{Intonation contour of (4.5b)}
\end{figure}

Second, in terms of function, in addition to being used to seek for agreement or disagreement from addressees, tag questions may also serve as requests, as illustrated in (4.6) and (4.7) respectively.

\begin{verbatim}
(4.6) Q: \text{k<um>aral}=\text{su} \quad \text{ci} \quad \text{ke’} \quad \text{na} \quad \text{’itaral} \quad '\text{aw}?
\end{verbatim}

\begin{verbatim}
speak<AF>speak=2S.Nom Acc language Gen Atayal QTag
\end{verbatim}

‘You speak Atayal, don’t you?’

A: \text{ho’ (k<um>aral}=\text{cu}).

\begin{verbatim}
yes (speak<AF>speak=1S.Nom)
\end{verbatim}

‘Yes (I do).’

A’: \text{’ini,} \quad \text{’ini}=\text{cu} \quad \text{karal}.

\begin{verbatim}
Neg.Rea Neg.Rea=1S.Nom speak
\end{verbatim}

‘No, I don’t speak (Atayal).’

(4.7) Q: \text{si-pawas}=\text{cu} \quad '\text{aw}?

\begin{verbatim}
BF-sing=1S.Nom QTag
\end{verbatim}

‘Sing for me, will you?’

A: \text{ho’}, \quad \text{si-pawas}=\text{misu}.

\begin{verbatim}
yes BF-sing=1S.Gen:2S.Nom
\end{verbatim}

‘Sure, I will sing for you.’

A’: \text{’arat/*’ini} \quad ('\text{arat}=\text{cu} \quad \text{pawas}).

\begin{verbatim}
Neg.Irr/*Neg.Rea (Neg.Irr=1S.Nom sing)
\end{verbatim}

‘No (I won’t sing).’

In (4.6), the tag question is answered affirmatively with \text{ho’} ‘yes’ and negatively with the negator \text{’ini} ‘Neg.Rea’. In (4.7), however, the tag question is used as a request that usually targets on events that have not taken place yet; thus, it has to be
responded negatively with the irrealis negator 'arət instead of the realis negator 'ini.

4.3 Alternative questions

Alternative questions are considered as the extension of yes-no questions in which more than one item is provided to seek for agreement or disagreement from addressees. Thus, they cannot be answered with ho* ‘yes’ or negators.

In Plngawan, an alternative question is analyzed as the juxtaposition of two yes-no questions without disjunctive coordinators. The first yes-no clause is marked phonologically and shows a final-rising-falling contour; the second one is initiated by ya' and shows a final-falling contour, as illustrated in (4.8) and Figure 4.6.

\[(4.8) \quad \text{pamukan=su} \quad \text{ya'=su} \quad \text{'itarəl?} \]
\[
\text{plain people=2S.Nom} \quad \text{QP=2S.Nom} \quad \text{Atayal}
\]
\`
Are you plain people or Atayal?'
\]

**Figure 4.6 Intonation contour of (4.8)**

In § 3.2.2, we showed that both forward and backward deletion of alternative questions are allowed in Mayrinax Atayal. In Plngawan, however, only forward deletion that occurs in the ya’-initiated clause is grammatical, as shown in (4.9).

\[(4.9) \quad \begin{align*}
a. & \quad \text{puyaya ka’ huril haca ya’ tabarəng (ka’…)?} \\
& \text{female Nom dog that QP male (Nom…)}
\end{align*} \]
\`
Is that dog female or male?’
\]

b. * \[
\text{kanel (ka’…)} \quad \text{ya’ malikuŋ ka’ k<in>ac-an haca?}
\]
\[
\text{female (Nom…)} \quad \text{QP male Nom bite<Prf>bite-LF that}
\]
\`
Was the person bitten female or male?’
\]

Concerning forward deletion in the ya’-clause, two things are noted. First,
pronoun clitics can be optionally attached to ya’ when the remaining alternative in the ya’-clause is a predicate or a negator; otherwise, they must be deleted to avoid redundancy, as shown in (4.10).

(4.10) a. s<in>bale’=su ka’ rakat ya’=su b<in>iniy?
   <Prf.PF>make=2S.Gen Nom chair QP=2S.Gen buy<Prf.PF>buy
   ‘Was the chair made or bought by you?’
   a’. kisli’=su mani’ ka’ ‘ucyux ya’(=su) ‘ini?
      like.PF=2S.Gen AF.eat Nom fish QP(=2S.Nom) Neg
      ‘Do you like to eat fish or not?’
   b. s<un>kisli’=su mawas ya’(*=su) ma-yugi’?
      like<AF>like=2S.Nom AF .sing QP(*=2S.Nom) AF-dance
      ‘Do you like to sing or to dance?’

Second, case markers before arguments in the ya’-initiated clause are deleted obligatorily when forward deletion occurs. Consider (4.11).

(4.11) a. cyel matas ka’ lawa ya’ (*ka’) yuma?
   Exi.Rem AF.draw Nom Lawa QP (*Nom) Yuma
   ‘Is Lawa or Yuma drawing?’
 b. m<in>ani’ ci ‘ucyux ka’ lawa ya’ (*ci) gilung?
   AF<Prf>eat Acc fish Nom Lawa QP (*Acc) chicken
   ‘Did Lawa eat fish or chicken?’

As shown in (4.11), case markers cannot remain in the ya’-initiated yes-no clause after forward deletion. This may cause the ambiguous interpretation of nominal arguments in the ya’-clause as in (4.12) below.

(4.12) m<in>ahiy ci lawa ka’ watan ya’ walis?
   AF<Prf>hit Acc Lawa Nom Watan QP Walis
   ‘Did Watan or Walis hit Lawa?’
   ‘Did Watan hit Lawa or Walis?’
Without an overt case marker, the argument *walis* in (4.12) may be interpreted as the subject/agent or the object/patient in the *ya’*-initiated yes-no question. There are three ways to disambiguate sentence (4.12). First, if *walis* refers to the patient, we may mark it as locative with the suffix -*an*, as shown in (4.13).

(4.13) a.  
\[
\text{m<Prf>hit Lawa-Loc Nom Watan QP Walis-Loc}
\]
‘Did Watan hit Lawa or Walis?’

The second strategy is to front the argument for comparison to sentence-initial predicate position in the first yes-no clause. It is because elements occurring right after *ya’* are usually regarded as the predicate of a *ya’*-initiated clause and may correspond naturally to the predicate in the first yes-no clause, as shown in (4.14).

(4.14) a.  
\[
\text{walis b<Prf>hit-LF Gen Watan QP Lawa}
\]
‘Was it Walis or (was it) Lawa that was hit by Watan?’

b.  
\[
\text{watan m<Prf>hit Acc Lawa QP Walis}
\]
‘Was it Watan or (was it) Walis that hit Lawa?’

Third, two alternative arguments may be juxtaposed together after a topicalized clause or an independent information question, as illustrated in (4.15).

(4.15) a.  
\[
\text{b<Prf>hit-LF that Top male QP female}
\]
‘As for the one being hit, is that male or female?’

b.  
\[
\text{’ima ka’ m<Prf>hit Acc Lawa Watan QP Walis}
\]
‘Who hit Lawa? Watan or Walis?’

Besides agents and patients, arguments referring to instrument, time and location may also serve as the remaining alternative in the *ya’*-clause, as shown in (4.16).
(4.16) a. **ma’-abuw=su na kopu ’usye’ ya’ rating?**  
AF-drink=2S.Nom Ins cup water QP bowl  
‘Do you drink water with a cup or a bowl?’

b. **s<un>kisli’ mawas morow ka’ lawa ya’ tanux?**  
like<AF>like AF.sing house Nom Lawa QP outside  
‘Does Lawa like to sing at home or outside?’

c. **mumarah ’alen ka’ lawa ya’ malahngan?**  
AF.work daytime Nom Lawa QP night  
‘Does Lawa work in the day time or at night?’

Finally, as mentioned in the beginning of this section, alternative questions cannot be answered with **ho’ ‘yes’ or negators. Addressees need to pick up one of the choices provided and answer with a word or a complete clause, as shown below.

(4.17) **Q:** **s<un>kisli’=su mani’ ci ’ucyux ya’ gilung?**  
like<AF>like=2S.Nom AF.eat Acc fish QP chicken  
‘Do you like to eat fish or chicken?’

**A:** * **ho’/’arat.**  
yes/no

**A’:**  * **’ucyux (ka’ kisli’=mu).**  
fish (Nom like.PF=1S.Gen)  
‘(I like) fish.’

### 4.4 Information questions

Information questions are used to elicit specific pieces of information about participants or events. In Plngawan, they are formed by means of interrogative words and usually exhibit a final-rising contour that is different from the final-rising-falling pattern of a yes-no question, as shown in (4.18) and Figure 4.7.
(4.18) a. Yes-no question

\[
\text{watan=}\text{su} \quad \text{'isu}?
\]

\Watan=2S.Nom \quad 2S.Neu

‘Are you Watan?’

Figure 4.7 Intonation contour of (4.18a)

b. Information question

\[
\text{'ima=}\text{su} \quad \text{'isu}?
\]

\who=2S.Nom \quad 2S.Neu

‘Who are you?’

Figure 4.8 Intonation contour of (4.18b)

More details about intonation of information questions are given in Chapter 5.

In the following, we focus on parts of speech, distributional constraints, and indefinite uses of interrogative words in Plngawan.

4.4.1 Parts of speech of interrogative words

As discussed in Chapter 3, parts of speech of interrogative words are determined by their semantic-syntactic mapping relations and are basically identical to those of words they substitute for. In Plngawan, we may categorize question words into two major word classes, nouns and verbs, as shown in Table 4.1.
In Plngawan, nouns differ from verbs in several respects:

(i) As predicates, verbs always attract pronoun clitics, while nouns only attract co-referring pronouns, e.g. *watan=cu kung* ‘I am Watan’ or pronouns that indicate possessors, e.g. *yaya’=mu ka’ lawa* ‘Lawa is my mother’. Besides, verbs may be inflected with focus and/or TAM markers, but nouns do not.

(ii) As non-predicates, proper and common nouns may be preceded by case markers, but temporal and locational nouns are not. Verbs never occur after case markers unless they head nominalized verbal clauses, e.g. *lawa ka’ m<in>ani’ ci ‘ucyux* ‘It is Lawa who ate the fish’.

Interrogative words in Plngawan are also classified into nouns and verbs based on these morphosyntactic features, as demonstrated in § 4.4.1.1 and § 4.4.1.2.

### 4.4.1.1 Interrogative nouns

Interrogative nouns may function as predicates of equational constructions and

<table>
<thead>
<tr>
<th>Parts of speech</th>
<th>Interrogative Words</th>
<th>Gloss</th>
<th>Information being inquired</th>
<th>Syntactic functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noun</td>
<td>'ima</td>
<td>who</td>
<td>person/name</td>
<td>predicate argument</td>
</tr>
<tr>
<td></td>
<td>'ima-n</td>
<td>whom/whose</td>
<td>person/possession</td>
<td></td>
</tr>
<tr>
<td></td>
<td>'amol</td>
<td>what/what kind</td>
<td>object/gender/reason</td>
<td></td>
</tr>
<tr>
<td></td>
<td>'inu</td>
<td>where/which</td>
<td>location/choice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>kanon</td>
<td>when</td>
<td>time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pira’</td>
<td>how many/much</td>
<td>quantity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>kito’</td>
<td>how many/much</td>
<td>quantity/measurement</td>
<td></td>
</tr>
<tr>
<td>Verb</td>
<td>hunco’</td>
<td>why</td>
<td>reason</td>
<td>predicate</td>
</tr>
<tr>
<td></td>
<td>haco’/hico’</td>
<td>do what</td>
<td>action/state</td>
<td>predicate, second verb in a SVC</td>
</tr>
<tr>
<td></td>
<td>h&lt;un&gt;aco’</td>
<td>how</td>
<td>condition/manner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>maga’amol</td>
<td>how</td>
<td>condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pa-sa’no</td>
<td>how</td>
<td>manner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>makpira’</td>
<td>how long</td>
<td>time duration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>minpira’</td>
<td>how many times</td>
<td>frequency</td>
<td></td>
</tr>
</tbody>
</table>
precede subjects formed by a noun or a nominalized verbal clause, as exemplified by ‘ima ‘who’ and ‘amol ‘what’ in (4.19)-(4.20).

(4.19) a. ‘ima ka’ ‘ule’ hani?  
who Nom child this  
‘Who is this child?’

a’. ‘ima (ka’) ralu=’su?  
who (Nom) name=2S.Gen  
‘What is your name?’

b. ‘ima ka’ cyel t<um>ahuk ci ‘ucyux?  
who Nom Exi.Rem cook<AF>cook Acc fish  
‘Who is cooking fish?’

b’. ‘ima ka’ b<in>ah-en ni watan hira?  
who Nom hit<Prf>hit-LF Gen Watan yesterday  
‘Who was hit by Watan yesterday?’

(4.20) a. ‘amol ka’ haca?  
what Nom that  
‘What is that?’

a’. ‘amol ka’ ‘ule’=’su?  
what Nom child=2S.Gen  
‘What gender is your child?/*What is your child?’

b. ‘amol ka’ cyel=’su tahk-un?  
what Nom Exi.Rem=2S.Nom cook-PF  
‘What are you cooking?’

b’. ‘amol (ka’) wah-an=’su saní?  
what (Nom) come-LF=2S.Gen here  
‘Why do you come here?’

Lit: ‘What do you come here for?’

As shown in (4.19), ‘ima ‘who’ is used to question about personal names or identity of the agent or patient of an event. When ‘amol ‘what’ precedes subjects referring to human beings as in (4.20a’), it is used to inquire gender; when preceding verbal clauses initiated by LF-marked motion verbs as in (4.20b’), ‘amol ‘what’ is used to
Examples of other interrogative nouns as predicates are given in (4.21)-(4.24).

(4.21)  
'ima-n ka’ pila haca?
who-Loc Nom money that
‘Whose is the money?’

(4.22)  
a. 'INU  ka’ patas=SU?
which Nom book=2S.Gen
‘Which is your book?’
b. 'INU  ka’ t<IN>ahuk=SU?
which Nom cook<Prf.PF>cook=2S.Gen
‘Which did you cook?’
c. 'INU  ka’ t<IN>ahk-an=SU?
where Nom cook<Prf>cook-LF=2S.Gen
‘Where did you cook?’

(4.23)  
a. pira’/kito’ ka’ patas =ni?
how many Nom book =3S.Gen
‘How many books does he have?’
b. pira’/kito’ ka’ ’aguw cyel rating haca?
how much Nom wine Exi.Rem bowl that
‘How much wine is there in the bowl?’
c. kito’/*pira’ k<IN>yotas ka’ morow=SU?
how much Stat<Prf>big Nom house=2S.Gen
‘How big is your house?’

(4.24)  
a. kanon kaca hang?
when Nom.that Part
‘When did that happen?’
b. kanon (*ka’) m<IN>sa’ tayhoku ka’ temu?
when (*Nom) AF<Prf>go Taipei Nom Temu
‘When did Temu go to Taipei?’

---

21 In Chang (1996), it is mentioned that in Squliq Atayal, Mayrinax Atayal and Paran Seediq, when the interrogative word meaning “what” occurs before LF-marked motion verbs, it can be interpreted as “why” and used to seek for reasons. In Paran Seediq, both LF-marked and PF-marked verbs such as mah-an ‘drink-LF’, mah-un ‘drink-PF’ and lawa-an ‘yell-LF’, lawa-un ‘yell-PF’ can make the preceding maanu ‘what’ interpreted as “why”.

73
Regarding the semantic analysis of interrogative nouns, three things are noted.

(i) As a nominal predicate, when 'inu refers to the subject of a verbal clause headed by a LF-marked verb as in (4.22c), it is interpreted as “where”; otherwise, the predicate 'inu is usually translated as “which”.

(ii) Both pira’ and kito’ may refer to unknown quantity of countable and uncountable nouns, as shown in (4.23a-b). However, only kito’ can be used to inquire information about measurement.

(iii) The temporal interrogative word kanon ‘when’ may precede a demonstrative pronoun that refers to an event, as in (4.24a). While kanon ‘when’ precedes a complete verbal clause headed by ka’, it is noted that only one of the two nominative case markers ka’ may appear, as shown in (4.24b-b’).

As predicates, interrogative nouns may attract pronoun clitics that co-refer with them or indicate possessors of them, as shown in (4.25).

(4.25) a. 'ima=su  'isu?
   who=2S.Nom   2S.Neu
   ‘Who are you?’

   b. 'ima=ku  ka’  yuma?
   who=2S.Gen Nom Yuma
   ‘Who is Yuma to you?’

When pronoun clitics neither co-refer with interrogative nouns as predicates nor indicate possessors of them, they have to be attached to the main verb of the nominalized verbal clause, as illustrated in (4.26).

---

22 In Huang (1996), piya’ ‘how much’ in Mayrinax Atayal is regarded as an interrogative verb because the predicate piya’ may attract pronoun clitics. In Plngawan, however, attracting pronoun clitics seems not to be an appropriate criterion for distinguishing interrogative verbs from nouns.
In addition to being predicates in equational sentences, interrogative nouns referring to non-subject arguments may remain in-situ and be preceded by case markers or suffixed with -an. Some examples of interrogative nouns as arguments are given in (4.27)-(4.29) for illustration.

(4.26)  
a. \textit{pira’} \textit{gal-un=su} \textit{la}?  
how many/much \textit{take-PF=2S.Gen} Part  
‘How many/much did you take?’

a’. * \textit{pira’}=\textit{su} \textit{gal-un} \textit{la}?  
how many/much=2S.Gen \textit{take-PF} Part

b. ‘\textit{inu} \textit{ka’} ’<\textit{in}>\textit{tax-an=su}?  
where Nom see<Prf>see-LF=2S.Gen  
‘Where did you look at?’

b’. * ‘\textit{inu}=\textit{su} \textit{ka’} ’<\textit{in}>\textit{tax-an}?  
where=2S.Gen Nom see<Prf>see-LF

c. \textit{kanon} \textit{musa’}=\textit{su} \textit{tayhoku}?  
when \textit{AF.go=2S.Nom} Taipei  
‘When do you go to Taipei?’

c’. * \textit{kanon}=\textit{su} \textit{musa’} \textit{tayhoku}?  
when=2S.Nom \textit{AF.go} Taipei

(4.27)  
a. \textit{mak-magiy laha ci ‘ima ka’ watan}?  
want-\textit{AF.leave} 3P.Neu Com who Nom Watan  
‘Who does Watan want to leave with?’

b. t<\textit{in}>\textit{ahuk ni ‘ima ka’ ‘ucyux hani}?  
cook<Prf.PF>cook Gen who Nom \textit{fish} this  
‘Who cooked this fish?’

c. m<\textit{in}>\textit{ahiy ‘ima-n ka’ watan}?  
\textit{AF<Prf>hit who-Loc} Nom \textit{Watan}  
‘Who did Watan hit?’

d. t<\textit{in}>\textit{ahuk}=\textit{su} (ni) ‘ima-n ka’ ‘ucyux hani?  
cook<Prf.PF>cook=2S.Gen (Ben) who-Ben Nom \textit{fish} this  
‘For whom did you cook this fish?’
Two points are noted from examples in (4.27)-(4.29).

(i) Both ‘ima ‘who’ and ‘amol ‘what’ may be preceded by the accusative case marker ci that marks the following noun as a comitative member as in (4.27a) or a patient as in (4.28a). However, ‘ima ‘who’ behaves like a proper noun because it can be marked as locative with the suffix -an, while ‘amol ‘what’ is like a common noun that is marked as genitive with na.

(ii) Interrogative nouns referring to non-core participants, such as location (‘inu ‘where’) and time (kanon ‘when’), are usually not preceded by case markers. However, as shown in (4.29c’-c’’), kanon ‘when’ can be preceded by ci when inquiring time in the past. It is noted that such a ci cannot co-occur with the
accusative case marker ci in a sentence (see also footnote 10 on p.23).

In the above discussion, interrogative nouns are all used as head nouns that may serve either as predicates or arguments. When co-occurring with other nouns, they may function as adnominal modifiers except for kanon ‘when’. Compare the following pairs of examples.

book \ Gen \ Lawa \ Nom \ this
‘This is Lawa’s book.’\linebreak[4] a’. \textit{patas ni ‘ima ka’ hani?}\linebreak[4] book \ Gen \ who \ Nom \ this
‘Whose book is this?’

b. \textit{’ucyux cubay ka’ cyel=mu tahk-un.}\linebreak[4] fish \ real \ Nom \ Exi.Rem=1S.Gen \ cook-PF
‘What kind of fish are you cooking?’

c. \textit{’alang haca ka’ cyel=mu kel-an.}\linebreak[4] village \ that \ Nom \ Exi.Rem=1S.Gen \ stay-LF
‘Which village do you live in?’

d. \textit{tugal ngahi ka’ ni’-un=mu.}\linebreak[4] three \ sweet potato \ Nom \ eat-PF=1S.Gen
‘How many sweet potatoes did you eat?’

\footnote{In Plngawan, people refer to the traditional food they love to eat most as \textit{raguw cubay} [vegetable real] ‘real vegetable’ or \textit{’ucyux cubay} [fish real] ‘real fish’. In Mandarin Chinese, \textit{’ucyux cubay} can be translated as \textbf{苦花魚} \textit{ku-hua} fish.}
As shown in (4.30), while ‘ima ‘who’ has to be preceded by the genitive case marker ni to refer to possessors of the preceding noun, ‘amol ‘what kind’ and ‘inu ‘which’ occur right after nouns they modify. Like numerals, however, pira’ ‘how many/much’ precedes nouns it modifies.

In addition to being predicates as in (4.30), NPs composed of head nouns and interrogative nouns as modifiers may also serve as case-marked non-subject arguments in which the order between the two cannot be reversed, as shown in (4.31).

(4.31) a.  m<in>ani=su  ci  ‘ucyux  ni  ‘ima?
AF<Prf>eat=2S.Nom  Acc  fish  Gen  who
‘Whose fish did you eat?’
b.  t<um>ahuk=su  ci  ‘ucyux  ‘amol?
cook<AF>cook=2S.Nom  Acc  fish  what kind
‘What kind of fish do you cook?’
c.  cyel=su  maki’  ‘alang  ‘inu?
Exi.Rem=2S.Nom  AF.live  village  which
‘Which village do you live in?’
c’. * cyel=su  maki’  ‘inu  ‘alang?
Exi.Rem=2S.Nom  AF.live  which  village
d.  m<in>ani=su  ci  pira’  ngahi?
AF<Prf>eat=2S.Nom  Acc  how many/much  sweet potato
‘How many sweet potatoes did you eat?’

Finally, it is found that while ‘ima ‘who’, ‘amol ‘what’, ‘inu ‘where/which’ and kanon ‘when’ may undergo CVC-reduplication to mark plurality or emphasis, there is no such a form as *pir-pira’ or *kit-kito’ ‘how many/much’, as shown in (4.32).

(4.32) a.  ‘in-‘ima  ka’  b<in>ah-en  ni  yaba’?
Red-who  Nom  hit<Prf>hit-LF  Gen  father
‘Who and who did Father hit?’
b.  ‘an-‘amol  ka’  ’<in>aras=su?
Red-what  Nom  bring<Prf.PF>bring=2S.Gen
‘What and what have you brought?’
c. ’in-’inu ka’ ’<in>sal-an=su?
   Red-where Nom go<Prf>go-LF=2S.Gen
   ‘Where and where have you been to?’

d. kan-kanon kaca hang?
   Red-when Nom.that Part
   ‘When on earth did that happen?’

e. * pir-pira’ ka’ ci’uli’ hani la?
   Red-how many/much Nom person this Part
   ‘How many in total are these people?’

e’. pir’a kora ka’ ci’uli’ hani la?
   how many/much all Nom person this Part
   ‘How many in total are these people?’

The reason for the lack of *pir-pira’ and *kit-kito’ is obvious. While we may treat ‘ima ‘who’ as referring to a single participant and ’in-’ima ‘who and who’ as its plural counterpart, it seems unreasonable to posit that pir’a ‘how many/much’ refers to a single entity. Thus, instead of being reduplicated to mark plurality, pir’a ‘how many/much’ is modified by the quantifier kora ‘all’ when the total number of entities is inquired, as shown in (4.32e’).

In this section, we have shown that interrogative nouns may serve as predicates in equational sentences and attract pronoun clitics that co-refer with them or indicate possessors of them. Besides, they may function as case-marked non-subject arguments or as adnominal modifiers. Morphologically, ’ima ‘who’ may be affixed with the locative case suffix -an, and most interrogative nouns may undergo CVC-reduplication to mark plurality or emphasis except for pir’a ‘how many/much’ and kito’ ‘how many/much’. All these criteria help characterize the

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24 As mentioned in Chapter 3, in some Formosan languages, the question word meaning “how many/much” can be reduplicated when the quantity of human beings is inquired, as shown below:

<table>
<thead>
<tr>
<th>Language</th>
<th>non-human</th>
<th>human</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Mayrinax Atayal</td>
<td>piya’</td>
<td>pa-piya’</td>
</tr>
<tr>
<td>(ii) Amis</td>
<td>pina</td>
<td>pa-pina</td>
</tr>
<tr>
<td>(iii) Seediq</td>
<td>piya</td>
<td>ppiya</td>
</tr>
</tbody>
</table>

(Huang et al. 1999:665)

Thanks to Prof. L. Huang and Prof. Joy Wu for this reminder.
above-mentioned interrogative words as nouns rather than verbs.

4.4.1.2 Interrogative verbs

In terms of syntactic function, interrogative verbs usually serve as predicates that attract pronoun clitics, and they may also function as the second verb of a serial verb construction. Morphologically, they may bear various focus markers, aspectual affixes and/or undergo Ca-reduplication to be marked as irrealis. Based on semantic differences, we will discuss each interrogative verb in more detail below.

4.4.1.2.1 haco’/hico’ ‘do what’

Interrogative verbs meaning “do what” are derived from the verb stem haco’ ‘do what’ or its variant hico’ ‘do what’, as shown in (4.33).

(4.33) 'ini=cu haco’/hico’.
Neg.Rea=1S.Nom do what/do what ‘I am alright.’
Lit: ‘I did not do what/anything.’

The variation between the vowel a and i in haco’/hico’ ‘do what’ is also attested in pasco’/pisco’ ‘Irr.AF.do what’25. Consider (4.34).

(4.34) a. pasco’=su cuxan?
   Irr.AF.do what=2S.Nom tomorrow ‘What will you do tomorrow?’

b. pisco’=su rali la?
   Irr.AF.do what=2S.Nom later Part ‘What will you do later?’

It is noted that haco’ ‘do what’ might be derived from the very basic root form

25 It may be hypothesized that the difference between haco’/hico’ and pasco’/pisco’ lies in the concept of distance as in saca/sani ‘there/here’ and haca/hani ‘that/this’. To be more specific, while pisco’ ‘do what’ refers to events that will happen in the near future, pasco’ ‘do what’ indicates that events will happen in the further future. According to our informants, people usually say pisco’=cu la? rather than pasco’=cu la? ‘What should I do?’ when they encounter difficulties and are trying to ask for help immediately. Most of the time, however, the two forms are used interchangeably without causing semantic differences. Further evidence is necessary to support such a hypothesis.
*hco’ with the insertion of the vowel a to avoid consonant clusters, which is because
the AF-marked form of haco’ ‘do what’ is h<un>co’ ‘do what’ rather than
*h<um>aco’ (see also example 2.15 in § 2.2.2.1).

As an interrogative verb, h<un>co’ ‘do what’ usually occurs sentence-initially as
the predicate and attracts pronoun clitics. It may also be marked as perfective with
<in> or wal, as shown in (4.35).

(4.35) a. h<un>co’=su     la?
do what<AF>do what=2S.Nom   Part
‘What are you doing?/What happened to you?’
b. h<in>co’=su     mor  hira?
do what<Prf>do what=2S.Nom  house  yesterday
‘What did you do at home yesterday?’
c. wal  h<un>co’   ka’  watan?
Prf  do what<AF>do what   Nom  Watan
‘What has Watan done?’

When patients of an event being inquired by haco’/hico’ ‘do what’ are
identifiable, the interrogative verb may be marked with PF -un or with LF -an, which
are in turn marked as irrealis via Ca-reduplication and as perfective with <in> or wal.
Examples are given in (4.36).

(4.36) a. hicol-un= su     ka’  pila  hani?
do what-PF=2S.Gen   Nom  money  this
‘What did you do with the money?’
b. hacol-un=ni     ka’  patas=su?
do what-PF=3S.Gen   Nom  book=2S.Gen
‘What did he do to your book?’
c. ha-hacol-un= su     mani’   ka’  ’ucyux  hani?
Red-do what-PF=2S.Gen  AF.eat  Nom  fish  this
‘What will you do to eat this fish?’
(Context: without any instrument)
d. \textit{h<in>col-an ka’ 'aba’=su?}
do what<Prf>do what-LF Nom hand=2S.Gen
‘What happened to your hand?’
e. \textit{wal=su hicol-un ka’ huril ni watan?}
Prf=2S.Gen do what-PF Nom dog Gen Watan
‘What have you done to Watan’s dog?’

In a serial verb construction, the second verb \textit{haco} ‘do what’ has to be
AF-marked as \textit{h<un>co} ‘do what’, as shown in (4.37).

\begin{equation}
\text{(4.37) m<in>sa’=su h<un>co’ tayhoku hira?} \\
\text{AF<Prf>go=2S.Nom do what<AF>do what Taipei yesterday} \\
\text{‘What did you go to Taipei to do yesterday?’}
\end{equation}

4.4.1.2.2 \textit{h<un>aco} ‘how (condition/manner)’ and \textit{maga’amol} ‘how (condition)’

Interrogative verbs \textit{h<un>aco} ‘how’ and \textit{maga’amol} ‘how’ are used to question
about states, e.g. weather, health conditions or results of an action/event.

As sentence-initial predicates, both \textit{h<un>aco} ‘how’ and \textit{maga’amol} ‘how’
may attract pronoun clitics and be affixed with the perfective marker <\text{in}>, as shown
in (4.38).

\begin{equation}
\text{(4.38) a. h<un>aco’=su?} \\
\text{how<AF>how=2S.Nom} \\
\text{‘How are you?’} \\
\text{a’. h<in>aco’=su soni la?} \\
\text{how<Prf>how=2S.Nom today Part} \\
\text{‘How were you today?’} \\
\text{b. maga’amol hari yaya’=su la?} \\
\text{AF.how a little bit mother=2S.Gen Part} \\
\text{‘How is your mother? (Does she feel a little bit better?)’} \\
\text{b’. m<in>ga’amol ka’ karal hira?} \\
\text{AF<Prf>how Nom sky yesterday} \\
\text{‘How was the weather yesterday?’}
\end{equation}
When they are used to question about results of an event that will take place in the future, h<un>aco’ ‘how’ cannot be marked as irrealis with pa- ‘Irr.AF’ as *pa-h<un>aco’ or via Ca-reduplication as *ha-h<un>aco’. Only maga’amol ‘how’ can be marked as irrealis with p(a)-, as shown in (4.39).

(4.39) labuw tongan ci tanah ga, paga’amol tax-an la?
     white add Acc red Top Irr.AF/how see-LF Part
     ‘As for red plus white, how will it look?’

Besides, h<un>aco’ ‘how’ has no NAF-marked forms because it is usually used as an intransitive verb in a sentence where no patients are involved.

When occurring in a SVC, h<un>aco’ ‘how’ forces the second verb to be AF-marked, and it is usually used to question about manners by which an event or an action denoted by the second verb is carried out, as shown in (4.40).

(4.40) a. ’<um>olax ka’ tanux, h<un>aco’=su moh la?
      rain<AF>rain Nom outside how<AF>how=2S.Nom AF.come Part
      ‘It is raining outside, how do you come?’

     b. h<in>aco’=su tehuk morow la?
        how<Prf>how=2S.Nom AF.arrive home Part
        ‘How did you get home?’

Finally, since h<un>aco’ ‘how’ has neither irrealis-marked nor NAF-marked forms, manners of events that will take place in the future have to be inquired by means of the other interrogative verb pa-sa’ no ‘how’, as discussed below.

4.4.1.2.3 pa-sa’ no ‘how (manner)’

The interrogative verb pa-sa’ no ‘how (manner)’ is used to question about manners. It is marked both as AF and irrealis with the prefix pa-, and there is no such a root form as *sa’ no. Besides, the two morphemes must co-occur and cannot be used with reversed order, as shown in (4.41) below.
Unlike pa-sa’ no ‘how’, its PF-marked form s-un no ‘how’ may be used with two morphemes reversed, but it is always the first morpheme that attracts pronoun clitics and undergoes Ca-reduplication to be marked as irrealis, as illustrated in (4.42).

(4.42) a. s-un=mu no t<um>ahuk ka’ ’ucyux hani?
how-PF=1S.Gen how cook<AF>cook Nom fish this
‘How should I cook this fish?’

= a’. no=mu s-un t<um>ahuk ka’ ’ucyux hani?
how=1S.Gen how-PF cook<AF>cook Nom fish this
‘How should I cook this fish?’

b. sa-s-un=su no k<un>rak ka’ ’ucyux hani?
Red-how-PF=2S.Gen how catch<AF>catch Nom fish this
‘How will you catch this fish?’

= b’. na-no=su s-un k<un>rak ka’ ’ucyux hani?
Red-how=2S.Gen how-PF catch<AF>catch Nom fish this
‘How will you catch this fish?’

In addition, pa-sa’ no ‘how’ and s-un no ‘how’ force verbs occurring after them in a SVC to be AF-marked. Thus, it is legitimate to consider them as interrogative verbs.

4.4.1.2.4 makpira’ ‘how long’ and minpira’ ‘how many times’

The other two interrogative verbs makpira’ ‘how long’ and minpira’ ‘how many times’ are derived from the interrogative noun pira’ ‘how many/much’ affixed with mak- ‘duration’ and min- ‘frequency’. They behave like verbs in that (i) they are AF-marked with m- in themselves and can be marked as irrealis with p(a), (ii)
they usually function as predicates that attract pronoun clitics, and (iii) when serving as the second verb in a SVC, they have to be AF-marked, as shown in (4.43)-(4.44).

(4.43) a. *makpira*=su maki’ la?
    AF:how long=2S.Nom AF:stay Part
    ‘How long have you stayed here?’

    b. *pinpira*=su moh na?
    Irr.AF:how many times=2S.Nom AF:come still
    ‘How many times will you still come?’

(4.44) a. ma-ha’ makpira’ tayhoku ka’ yuma?
    AF:go AF:how long Taipei Nom Yuma
    ‘How long will Yuma go to (and stay in) Taipei?’

    b. ma-ha’ minpira’ moh lawa na?
    AF:go AF:how many times AF:come Lawa still
    ‘How many times will Lawa still come?’

However, it is noted that *makpira* ‘how long’ seems to retain certain properties of being an interrogative noun like *pira* ‘how many/much’ in that it may precede a temporal noun such as *rex* ‘day’ and serve as an adnominal modifier, as shown below.

(4.45) *makpira*=su rex moh morong tutux?
    AF:how long=2S.Nom day AF:come home once
    ‘How long (how many days) do you come home once?’
    *Lit:* ‘How often do you come home once?’

4.4.1.2.5 *hunco* ‘why’

Morphologically, *hunco* ‘why’ is identical to the AF-marked form of *haco* ‘do what’, i.e. *h<un>co* ‘do what’, and both of them may function as predicates that attract pronoun clitics, as shown in (4.46).

(4.46) a. *hunco*=su musa’ tayhoku hira?
    why=2S.Nom AF:go Taipei yesterday
    ‘Why did you go to Taipei yesterday?’
b.  \texttt{h\textless un\textgreater co’=su la?}
    \begin{tabular}{lll}
    do what<AF> & do what=2S.Nom & Part \\
    \end{tabular}
    ‘What are you doing?/What happened to you?’

However, while \texttt{h\textless un\textgreater co’} ‘do what’ may bear aspectual markers or function as the second verb in a SVC, \texttt{hunco’} ‘why’ can never bear any markers and must occur sentence-initially as the predicate, as shown in (4.47).

\begin{enumerate}
\item[(4.47)]
\begin{enumerate}
\item a.  \texttt{h\textless in\textgreater co’=su morow hira?}
    \begin{tabular}{llll}
    do what<Prf> & do what=2S.Nom & house & yesterday \\
    \end{tabular}
    ‘What did you do at home yesterday?’

\item a’.  * \texttt{h\textless in\textgreater co’=su musa’ tayhoku hira?}
    \begin{tabular}{llll}
    why<Prf> & why=2S.Nom & AF.go & Taipei & yesterday \\
    \end{tabular}

\item b.  \texttt{m\textless in\textgreater sa’=su h\textless un\textgreater co’ tayhoku hira?}
    \begin{tabular}{llll}
    AF<Prf> & go=2S.Nom & do what<AF> & do what & Taipei & yesterday \\
    \end{tabular}
    ‘What did you go to Taipei to do yesterday?’

\item b’.  * \texttt{m\textless in\textgreater sa’=su hunco’ tayhoku hira?}
    \begin{tabular}{llll}
    AF<Prf> & go=2S.Nom & why & Taipei & yesterday \\
    \end{tabular}
\end{enumerate}
\end{enumerate}

In addition to being predicates of SVCs as in (4.46a), \texttt{hunco’} ‘why’ may precede a complete verbal clause headed by \texttt{ka’} as the grammatical subject like \texttt{kanon} ‘when’. Consider (4.48).

\begin{enumerate}
\item[(4.48)]
\begin{enumerate}
\item a.  \texttt{hunco’ ka’ ma-ngilis (*ka’) ’ule=su karirex?}
    \begin{tabular}{llll}
    why & Nom & AF-cry & (*Nom) & child=2S.Gen & every day \\
    \end{tabular}
    ‘Why does your child cry every day?’

\item a’. \texttt{kanon ka’ ma-moh (*ka’) ’ule=su cuxan?}
    \begin{tabular}{llll}
    when & Nom & Red-AF.come & (*Nom) & child=2S.Gen & tomorrow \\
    \end{tabular}
    ‘When will your child come tomorrow?’

\item b.  \texttt{hunco’=su ka’ ma-ngilis karirex?}
    \begin{tabular}{llll}
    why=2S.Nom & Nom & AF-cry & every day \\
    \end{tabular}
    ‘Why do you cry every day?’

\item b’.  * \texttt{kanon=su ka’ ma-moh cuxan?}
    \begin{tabular}{llll}
    when=2S.Nom & Nom & Red-AF.come & tomorrow \\
    \end{tabular}
\end{enumerate}
\end{enumerate}
As shown in (4.48a-a’), both hunco’ ‘why’ and the interrogative noun kanon ‘when’ may precede a nominalized verbal clause in which the nominative case marker ka’ is deleted to avoid co-occurrence of two identical case markers in a sentence. However, when the subject is realized by a nominative pronoun as in (4.48b-b’’), it is attached to hunco’ ‘why’ but to the predicate of the nominalized verbal clause occurring after kanon ‘when’.

To sum up, although hunco’ ‘why’ can neither bear focus/aspectual markers nor serve as the second verb in a SVC, it is still qualified as an interrogative verb because hunco’ ‘why’ can only occur sentence-initially as the predicate, and unlike interrogative nouns, hunco’ ‘why’ may attract pronoun clitics without considering whether there are relations of co-reference or possession.

All the seven interrogative verbs discussed above are summarized in Table 4.2.

Table 4.2 Interrogative verbs in Plngawan

<table>
<thead>
<tr>
<th>TAM&amp; Focus Verb root</th>
<th>Realis</th>
<th>Irrealis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfective</td>
<td>Habitual/Progressive</td>
</tr>
<tr>
<td></td>
<td>AF</td>
<td>NAF</td>
</tr>
<tr>
<td>haco’/hico’ do what</td>
<td>h&lt;in&gt;&lt;co’/wal h&lt;un&gt;&lt;co’</td>
<td>h&lt;in&gt;&lt;col-an</td>
</tr>
<tr>
<td>hunaco’ how</td>
<td>h&lt;in&gt;&lt;aco’</td>
<td>---</td>
</tr>
<tr>
<td>maga’amol how-condition</td>
<td>m&lt;in&gt;ga- ‘amol</td>
<td>---</td>
</tr>
<tr>
<td>*sa’ no How- manner</td>
<td>---</td>
<td>wal s-un no wal no s-un</td>
</tr>
<tr>
<td>makpira’ how long</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>minpira’ how many times</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>hunco’ why</td>
<td>hunco’</td>
<td></td>
</tr>
</tbody>
</table>
4.4.2 Distribution of interrogative words

In this section, we discuss several distributional characteristics of interrogative nouns and verbs and the subject-sensitive constraint.

First, the freedom of distribution seems to differ among various interrogative words. For example, while *hunco* ‘why’ is restricted to occur sentence-initially as the predicate, *kanon* ‘when’ may appear in sentence-initial, medial, and final positions, as illustrated in (4.49).

(4.49) a. kanon m<in>s’a tayhoku ka’ temu?
    when AF<Prf>go Taipei Nom Temu
    ‘When did Temu go to Taipei?’
b. m<in>s’a kanon tayhoku ka’ temu?
    AF<Prf>go when Taipei Nom Temu
    ‘When did Temu go to Taipei?’
c. m<in>s’a tayhoku kanon ka’ temu?
    AF<Prf>go Taipei when Nom Temu
    ‘When did Temu go to Taipei?’
d. ma-moh=su kanon?
    Red-AF.come=2S.Nom when
    ‘When will you come?’

Second, all interrogative verbs may occur in sentence-initial position because it is the most unmarked place for verbs in Plngawan. Some of them can be preceded by aspectual markers like *wal* ‘perfective’ or by another verb in a SVC and occur sentence-medially. They may even appear sentence-finally when nominative pronouns are cliticized to sentence-initial elements, as exemplified by *h<un>co* ‘do what’ in (4.50).

(4.50) a. h<un>co’su la?
    do what<AF>do what=2S.Nom Part
    ‘What are you doing?/What happened to you?’
b. **wal** h<un>co’  ka’  watan?
   Prf  do what<AF>do what  Nom  Watan
   ‘What has Watan done?’

b’. **m<in>sa’=su**  h<un>co’  tayhoku hira?
   AF<Prf>go=2S.Nom  do what<AF>do what  Taipei  yesterday
   ‘What did you go to Taipei to do yesterday?’

c. **cyel=su**  h<un>co’?
   Exi.Rem=2S.Nom  do what<AF>do what
   ‘What are you doing?’

For interrogative nouns referring to non-subject arguments or serving as
adnominal modifiers of non-subject nouns, they tend to occur in the most unmarked
sentence-medial position or occur sentence-finally when nominative pronouns are
criticized to predicates. When they are fronted initially as predicates, however, focus
of the verbal predicate of the nominalized clause has to be modified to make the
fronted interrogative noun refer to the grammatical subject, as shown in (4.51c-c’).

(4.51) a. **t<um>ahuk**  ci  ’amol  ka’  yaya’?
   cook<AF>cook  Acc  what  Nom  mother
   ‘What does Mother cook?’

b. **t<um>ahuk=su**  ci  ’ucyux  ’amol?
   cook<AF>cook=2S.Nom  Acc  fish  what
   ‘What kind of fish do you cook?’

c. ’amol  ka’  cyel=su  tahk-un?
   what  Nom  Exi.Rem=2S.Gen  cook-PF
   ‘What are you cooking?’

c’.  * ’amol  ka’  cyel=su  t<um>ahuk?
   what  Nom  Exi.Rem=2S.Nom  cook<AF>cook

As (4.51c-c’) suggest, we may infer that Plngawan is an optional-fronting language
that observes the subject-sensitive constraint, i.e. fronted interrogative words must be
the grammatical subject of a sentence. In other words, interrogative nouns referring
to subjects or serving as modifiers of subject nouns cannot remain in-situ, i.e. in
sentence-final position, as exemplified in (4.52).

\[(4.52)\] 
a. * na-ni’-un ni yaya’ ka’ ’amol?
   Red-eat-PF Gen mother Nom what
   ‘What will Mother eat?’

b. * cyel=su tahk-un ka’ ’ucyux ’amol?
   Exi.Rem=2S.Gen cook-PF Nom fish what kind
   ‘What kind of fish are you cooking?’

Such a constraint may be accounted for by the fact that subjects usually have to be realized by specific and definite information. Thus, interrogative nouns that denote unknown and indefinite information have to be fronted initially to draw focus and emphasis.

The same constraint is observed in the distribution of the interrogative noun kanon ‘when’. Consider examples in (4.53).

\[(4.53)\] 
a. ma-moh ka’ watan cuxan?
   Red-AF.come Nom Watan tomorrow
   ‘Will Watan come tomorrow?’

b. * ma-moh ka’ watan kanon?
   Red-AF.come Nom Watan when

b’. kanon ma-moh ka’ watan?
   when Red-AF.come Nom Watan
   ‘When will Watan come?’

As shown in (4.53), while the temporal noun cuxan ‘tomorrow’ may occur in sentence-final position, the temporal question word kanon ‘when’ has to be fronted sentence-initially even though it does not refer to the subject.

The discussion in this section may be summarized in Table 4.3.
Table 4.3 Distribution of interrogative words in Plngawan

<table>
<thead>
<tr>
<th>Question word</th>
<th>Initial</th>
<th>Medial</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘ima</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>‘ima-n</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>‘amol</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>‘inu</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Kanon</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>pira’</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>kito’</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>haco’/hico’</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>h&lt;un&gt;aco’</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>maga’amol</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>pa-sa’ no</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>makpira’</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>minpira’</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>hunco’</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

4.4.3 Interrogative words used as indefinites

In Plngawan, interrogative words may be interpreted as indefinites in four contexts. Consider examples in (4.54).

(4.54) a. pira’ mak-ni’-un=su ga, ’agal nak.
   how many/much want-eat-PF=2S.Gen Top take self
   ‘No matter how much you want to eat, take it yourself.’

b. h<un>aco’=su moh ga, hico’ nak magiy lurj.
   how<AF>how=2S.Nom AF.come Top do what self AF.leave also
   ‘You may leave as the way how you come.’

c. ’ini=cu haco’.
   Neg.Rea=1S.Nom do what
   ‘I did not do anything.’

d. ’ana’=su musa’ ’inu ’iya rung-i’ ka’ ke’=ta’.
   any=2S.Nom AF.go where Neg forget-PF Nom language=1PI.Gen
   ‘Wherever you go, do not forget our language.’

In (4.54a-d), all the interrogative words are properly licensed either because they occur in a specific syntactic structure, e.g. a topic sentence (4.54a), a donkey sentence
(4.54b), a negative sentence (4.54c) or because they co-occur with the quantifier 'ana' `any` in (4.54d). Interrogative words are interpreted non-specifically in these conditions and thus are considered as indefinites rather than interrogative words that are used to seek for information.

4.5 Summary

In this chapter, we have investigated both formation and function of four types of interrogative constructions in Plngawan. Major findings are summarized below.

First, while yes-no questions and tag questions are used to seek for agreement or disagreement from addressees and can be answered with “yes/no”, alternative and information questions need to be responded by providing more specific information.

Second, strategies being used may be (i) phonological, e.g. contour modification for yes-no questions, (ii) lexical, e.g. ya’ for yes-no questions, ’aw for tag questions and interrogative words for information questions, or (iii) syntactic, e.g. a disjunctive structure for alternative questions.

Third, with respect to intonation contours, yes-no questions usually exhibit a final-rising-falling contour, tag and information questions tend to display a final-rising pattern, and both ya’-initiated yes-no questions and alternative questions end with a final-falling contour like declarative sentences.

Finally, regarding interrogative words in Plngawan, it is noted that (i) they may be categorized into nouns and verbs based on their morphosyntactic features, (ii) they observe the subject-sensitive constraint in that fronted interrogative nouns must refer to the grammatical subject, and (iii) they may be interpreted as indefinites when occurring in a topicalized, donkey or negative sentence or when they co-occur with the quantifier 'ana' `any`.

92
Chapter Five
Intonation of Interrogative Constructions

In Chapter 4, we presented how intonation functions to differentiate declarative sentences from yes-no questions and to distinguish among various types of interrogative constructions. In this chapter, we will not only investigate intonation of four types of interrogative sentences in more detail (§ 5.1) but also discuss how intonation and syntactic features are co-used to mark interrogative sentences as non-questions (§ 5.2), and how intonation enables speakers to express their attitudes while asking questions at the same time (§ 5.3).

5.1 Intonation of four types of interrogative sentences

5.1.1 Phonologically-marked yes-no questions

As discussed in Chapter 4, yes-no questions in Plngawan are phonologically marked via contour modification on the last two syllables to show a final-rising-falling contour. Consider (5.1), Table 5.1 and Figure 5.1.

(5.1)a. ba’=cu mawas.\(^{26}\)
   b. ba’=su mawas?

<table>
<thead>
<tr>
<th>5.1</th>
<th>ba’ 1</th>
<th>ba’ 2</th>
<th>cu/su1</th>
<th>cu/su2</th>
<th>ma 1</th>
<th>ma 2</th>
<th>was 1</th>
<th>was 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>255.4</td>
<td>250.0</td>
<td>239.4</td>
<td>173.2</td>
<td>175.9</td>
<td>186.3</td>
<td>237.1</td>
<td>171.8</td>
</tr>
<tr>
<td>b</td>
<td>239.3</td>
<td>240.4</td>
<td>215.8</td>
<td>163.6</td>
<td>167.6</td>
<td>187.3</td>
<td>326.7</td>
<td>275.1</td>
</tr>
</tbody>
</table>

(1: the beginning of the syllable, 2: the end of the syllable)

\(^{26}\) Glosses and translations of the examples presented in § 5.1 are given in the Appendix.
In (5.1a), the accent, i.e. the syllable that has the highest pitch value of a sentence, falls on the beginning of the first syllable ba’. In its corresponding yes-no question (5.1b), the accent is shifted to the beginning of the final syllable was. Besides, while (5.1a) shows a final-falling contour, the peak of (5.1b) is sharply raised thus forms a final-rising-falling contour. Thus, we may suggest that the phonological strategy used to form Plngawan yes-no questions involves two steps: (i) accent placement, i.e. accent has to be located on/near the boundary of the last two syllables, and (ii) contour modification, i.e. the peak formed by the last two syllables of a yes-no question must be raised higher than that of its corresponding declarative sentence.

In Seediq spoken in Nantou, Chiang (1996) finds that yes-no questions are also formed phonologically. That is, the accent of a declarative sentence is shifted to the rightmost syllable within a specific domain, the pitch accent phrase (PAP), to form the corresponding yes-no question. Unlike Plngawan where contour modification occurs predictably within the last two syllables, PAPs in Seediq are not easy to identify. However, while the accent is regularly shifted to the rightmost syllable within a PAP in Seediq, the accent placement in Plngawan is not rule-governed; it is

---

27 Without considering temporal duration of each syllable, the contour shown in Figure 5.1 does not represent real pitch contours of the sentences.

28 Though there is also a clear rising contour in the end of the declarative sentence, since the peak is not raised so high to reach the top of the pitch range, we treat the whole contour as final-falling instead of final-rising-falling (see also discussion in § 2.1.3 on p.12).
determined by syllable structure and stress pattern of the last two syllables.

In the following, we first investigate the relation between syllable structure and accent placement in § 5.1.1.1, and then we discuss how contour modification differs in terms of gender in § 5.1.1.2.

5.1.1.1 Accent placement and syllable structure

To examine how syllable structure and stress pattern of the last two syllables may influence accent placement in yes-no questions, we designed seven pairs of sentences whose last two syllables form a word, form part of a word or belong to different words. Each pair contains a declarative sentence and the corresponding yes-no question. All the 14 sentences were read twice by Yuma and recorded for analysis with Praat. Pitch value of the last two syllables of each sentence is shown in Table 5.2.
As shown in Table 5.2, two points regarding accent placement in Pngawan yes-no questions are discussed below.

29 In Chapter 5, stressed syllables are marked through italicization when necessary.
First, irrespective of syllable structures, accent of a yes-no question must fall on/near the boundary of the last two syllables. What is influenced by syllable structure is the exact position of the accent, i.e. when the last two syllables belong to a word as in (5.2-5) or two words as in (5.8), accent falls either on the end of the penultimate syllable or on the beginning of the last syllable; when the penultimate syllable forms part of a word, accent falls on the beginning of it, i.e. ni’1 in (5.6b) and ya1 in (5.7b).

Second, stress pattern of the last two syllables may show influences on accent placement and contour modification in two respects when they belong to the same word as in (5.2-5). That is, accent falls on/near the beginning of the last syllable of stress-final words, mawas in (5.2) and karirex in (5.4), but on/near the end of the penultimate syllable of stress-penultimate words, haca in (5.3) and mabahu in (5.5). Besides, if we regard sounds with pitch value lower than 200 Hz as low sounds (L), those between 200 Hz and 300 Hz as high sounds (H) and those higher than 300 Hz as extra-high sounds (H+), we may find that both stress-final and stress-penultimate words show a LHL contour when occurring in declarative sentences, but while mawas and karirex display a LH+H contour in yes-no questions, haca and mabahu exhibit a HH+H pattern.

5.1.1.2 Contour modification and pitch range

In the previous section, we found that whether the contour of yes-no questions is LH+H or HH+H, the accent H+ usually has a pitch value higher than 300 Hz. In order to explore whether the pitch height of 300 Hz is obligatory for accents of Plingawan yes-no questions, we first elicited natural readings of the two sentences in (5.9). Then, we used Praat to manipulate pitch height of the last two syllables to derive six other test items. Finally, with eight other filler sentences (4 declaratives and 4 yes-no questions), we randomized the 16 sentences and asked Yuma to respond
with **ho’** ‘yes’ and repeat the sentence if she perceived what she heard as a yes-no question (Q) and with a yes-no question when she felt it to be a declarative sentence (D). Consider results of the perception and production tasks in Table 5.3.

(5.9)a.  *cyel mani’ ka’ watan.*  (T2)

b.  *cyel mani’ ka’ watan?*  (T7)

### Table 5.3 Pitch value of *watan* in the perception and production tasks

<table>
<thead>
<tr>
<th></th>
<th>wa 1</th>
<th>wa 2</th>
<th>tan 1</th>
<th>tan 2</th>
<th>Pe</th>
<th>Pr</th>
<th>wa 1</th>
<th>wa 2</th>
<th>tan 1</th>
<th>tan 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>171.8</td>
<td>166.3</td>
<td>160.6</td>
<td>119.9</td>
<td>D</td>
<td>Q</td>
<td>168.7</td>
<td>322.7</td>
<td>253.9</td>
<td>218.3</td>
</tr>
<tr>
<td>T2</td>
<td>182.4</td>
<td>198.6</td>
<td>186.8</td>
<td>131.9</td>
<td>D</td>
<td>Q</td>
<td>167.6</td>
<td>333.6</td>
<td>354.4</td>
<td>227.4</td>
</tr>
<tr>
<td>T3</td>
<td>193.0</td>
<td>230.9</td>
<td>213.0</td>
<td>143.9</td>
<td>D</td>
<td>Q</td>
<td>157.2</td>
<td>337.9</td>
<td>348.3</td>
<td>228.8</td>
</tr>
<tr>
<td>M</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>164.5</td>
<td>331.4</td>
<td>352.2</td>
<td>224.8</td>
</tr>
<tr>
<td>T4</td>
<td>203.6</td>
<td>263.2</td>
<td>239.2</td>
<td>155.9</td>
<td>Q</td>
<td>D</td>
<td>193.4</td>
<td>212.7</td>
<td>187.9</td>
<td>133.8</td>
</tr>
<tr>
<td>T5</td>
<td>214.2</td>
<td>295.5</td>
<td>265.4</td>
<td>167.9</td>
<td>Q</td>
<td>D</td>
<td>180.6</td>
<td>208.3</td>
<td>186.1</td>
<td>130.0</td>
</tr>
<tr>
<td>T6</td>
<td>224.8</td>
<td>327.8</td>
<td>291.6</td>
<td>179.9</td>
<td>Q</td>
<td>D</td>
<td>158.2</td>
<td>188.0</td>
<td>180.3</td>
<td>131.0</td>
</tr>
<tr>
<td>T7</td>
<td>235.8</td>
<td>360.2</td>
<td>318.0</td>
<td>192.0</td>
<td>Q</td>
<td>D</td>
<td>170.5</td>
<td>185.1</td>
<td>168.6</td>
<td>131.5</td>
</tr>
<tr>
<td>T8</td>
<td>246.4</td>
<td>392.5</td>
<td>344.2</td>
<td>204.0</td>
<td>Q</td>
<td>D</td>
<td>159.4</td>
<td>184.7</td>
<td>184.5</td>
<td>134.9</td>
</tr>
<tr>
<td>M</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>172.4</td>
<td>195.8</td>
<td>181.5</td>
<td>132.0</td>
</tr>
</tbody>
</table>

(T: test item; D: declarative sentence; Q: yes-no question; M: mean; Pe: perception; Pr: production)

As shown in Table 5.3, three things are noted. First, both accents of the declarative sentence (5.9a)/T2 and the yes-no question (5.9b)/T7 fall on the same position, i.e. *wa2*. Second, in terms of perception (the grey area in Table 5.3), sentences are interpreted as yes-no questions when their accent shows a pitch value higher than 250 Hz as in T4-T8. Those have accents lower than 250 Hz are perceived as declarative sentences. Finally, in terms of production, while accent may fall on *wa2* or *tan1*, the average pitch value of the accent of a yes-no question is higher than 300 Hz and that of a declarative sentence is lower than 200 Hz.
From these findings, we may suggest that 250 Hz\textsuperscript{30} of the accent seems to be the threshold for sentences to be interpreted as yes-no questions instead of declarative sentences, but for ease of interpretation, speakers tend to raise the accent of yes-no questions to a H\textsuperscript{+} sound and that of declarative sentences a L sound.

To further examine whether there are gender differences with respect to the above-mentioned features, we compared pitch value of the LH\textsuperscript{+}H/HH\textsuperscript{+}H contours of yes-no questions (5.2)-(5.9) read by Yuma and by the other male speaker Yumin. The increase between LH\textsuperscript{+}/HH\textsuperscript{+} and the decrease between H\textsuperscript{+}H were also evaluated, as shown in Table 5.4.

<table>
<thead>
<tr>
<th>Table 5.4 Gender and pitch range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.2b) ba\textsuperscript{=}su mawas?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.3b) watan ka\textsuperscript{c}i\textsuperscript{u}li\textsuperscript{\textquoteright}haca?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.4b) musa\textsuperscript{=}su hori\textsuperscript{\textquoteright}kar\textsubscript{irez}x?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.5b) eyel\textsuperscript{=}su mabahu?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.6b) \textsuperscript{\textquoteright}ini\textsuperscript{=}su kan\textsuperscript{\textquoteright}na?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.7b) eyel mani\textsuperscript{\textquoteright}hiya la?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.8b) m&lt;in&gt;ani\textsuperscript{=}su la?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(5.9b) eyel mani\textsuperscript{\textquoteright}ka\textsuperscript{=}watan?</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

(F: female; M: male)

\textsuperscript{30}Prof. Hui-shan Lin suggested that a carefully designed psychological experiment may help us derive a more precise pitch value of the accent for sentences to be interpreted as yes-no questions. The threshold of 250 Hz is proposed based on current findings and for convenience of presentation.
As shown in Table 5.4, gender may cause three types of differences in terms of contour modification in Plngawan yes-no questions.

First, with respect to accent, while it always reaches higher than 300 Hz (H⁺) in yes-no questions uttered by the female speaker Yuma, it usually falls within the range between 250 Hz and 300 Hz in yes-no questions read by the male speaker Yumin except in 5.2b. Thus, we may confirm that the pitch value of 250 Hz of the accent is the threshold for sentences to be interpreted as yes-no questions.

Second, generally speaking, female speakers tend to use a higher pitch level than males thus pronounce sounds, L or H, with a higher pitch value than males, as shown in Table 5.4 under the column “pitch value”.

Finally, in addition to having a higher pitch level, the female speaker also uses a wider pitch range as shown in Table 5.4 under the column “pitch range”. That is, she not only pronounces every sound with higher pitch value than the male speaker but also shows a larger increase and decrease when modifying the LHL/LHH contour of a declarative sentence to a LH’H/HH’H contour of a yes-no question.

5.1.2 ya’-initiated yes-no questions and tag questions

Both ya’-initiated yes-no questions and tag questions are syntactically marked, thus their intonation contours are expected to be unmarked, i.e. showing a final-falling pattern similar to that of declarative sentences. However, since ’aw shows a LH (rising) contour, the whole tag question usually ends with a LHH⁺ (rising) contour.

With respect to relations between syntactic markers and intonation contours of interrogative sentences, Chiang (1996) shows that the two question particles ga and pi in Atayal spoken in Nantou may influence contours in several ways. First, the pitch value of the syllable preceding ga and pi is usually raised higher. However, while accent falls on pi in pi-marked yes-no questions, it falls on the syllable preceding ga in ga-marked yes-no questions. Second, yes-no questions usually show a
final-falling contour, but when $\text{pi}$ occurs sentence-finally, a final-rising contour is
detected. Third, the phenomenon of downdrift suspension$^{31}$ is observed to stop
before the question particles $\text{ga}$ and $\text{pi}$.

In order to examine how intonation contours are influenced by the occurrence of
$\text{ya}'$ or $\text{'aw}$ in Plngawan and also the phenomenon of downdrift suspension, we
designed three sets of examples in (5.10). Each set contains four sentences with
different length that were read twice by Yuma. Pitch value of every syllable listed in
Table 5.5 is the average of all occurrences in (5.10).

(5.10) Declarative sentences and corresponding $\text{ya}'$-questions and tag questions
a.  $\text{sunkisli'} \text{ mawas ka'} \text{ yuma}$. 

b.  $\text{sunkisli'} \text{ carung mawas ka'} \text{ yuma}$. 

c.  $\text{sunkisli'} \text{ carung mawas ci hani ka'} \text{ yuma}$. 

d.  $\text{sunkisli'} \text{ carung mawas ci 'awas hani ka'} \text{ yuma}$. 

a’.  $\text{ya'} \text{sunkisli'} \text{ mawas ka'} \text{ yuma}$?

b’.  $\text{ya'} \text{sunkisli'} \text{ carung mawas ka'} \text{ yuma}$?

c’.  $\text{ya'} \text{sunkisli'} \text{ carung mawas ci hani ka'} \text{ yuma}$?

d’.  $\text{ya'} \text{sunkisli'} \text{ carung mawas ci 'awas hani ka'} \text{ yuma}$?

a’’.  $\text{sunkisli'} \text{ mawas ka'} \text{ yuma 'aw}$?

b’’. $\text{sunkisli'} \text{ carung mawas ka'} \text{ yuma 'aw}$?

c’’. $\text{sunkisli'} \text{ carung mawas ci hani ka'} \text{ yuma 'aw}$?

d’’.  $\text{sunkisli'} \text{ carung mawas ci 'awas hani ka'} \text{ yuma 'aw}$?

---

$^{31}$ According to Chiang (1996), downdrift refers to the phenomenon that, in a sequence of HLHLHL…
sounds, the pitch value of each H is lower than that of its preceding H due to the occurrence of L
between them. As for downdrift suspension, the decrease of pitch value between two H tends to
become smaller toward the end of a sentence.
Table 5.5 Pitch value of the peaks and syllables adjacent to ya’ and ’aw

<table>
<thead>
<tr>
<th>Peaks</th>
<th>ya’</th>
<th>sun</th>
<th>li’</th>
<th>rung</th>
<th>was¹</th>
<th>was²</th>
<th>ni</th>
<th>yu</th>
<th>ma</th>
<th>’aw</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>---</td>
<td>217.1</td>
<td>340.8</td>
<td>284.4</td>
<td>265.8</td>
<td>254.1</td>
<td>251.7</td>
<td>218.9</td>
<td>155.4</td>
<td>---</td>
</tr>
<tr>
<td>ya’-YNQ</td>
<td>286.2</td>
<td><strong>234.3</strong></td>
<td><strong>322.2</strong></td>
<td>276.9</td>
<td>257.0</td>
<td>258.0</td>
<td>249.6</td>
<td>230.0</td>
<td>159.5</td>
<td>---</td>
</tr>
<tr>
<td>TagQ</td>
<td>---</td>
<td>217.8</td>
<td>348.3</td>
<td>283.6</td>
<td>267.9</td>
<td>252.6</td>
<td>246.8</td>
<td>233.4</td>
<td><strong>254.0</strong></td>
<td>360.2</td>
</tr>
</tbody>
</table>

Table 5.6 Pitch range between two H and downdrift suspension

<table>
<thead>
<tr>
<th>H-H</th>
<th>ya’-li’</th>
<th>li’-rung</th>
<th>rung-was¹</th>
<th>was¹-was²</th>
<th>was²-ni</th>
<th>ni-yu/ma</th>
<th>yu/ma-’aw</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ya’-YNQ</td>
<td>-36.0</td>
<td><strong>45.3</strong></td>
<td>19.9</td>
<td><strong>-1.0</strong></td>
<td>8.4</td>
<td>19.6</td>
<td>---</td>
</tr>
<tr>
<td>TagQ</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(D: declarative sentence; ya’-YNQ: ya’-marked yes-no question; TagQ: tag question)

As shown in Table 5.5, the occurrence of ya’ and ’aw may influence intonation contours in several ways.

First, both ya’ and ’aw show a rising (LH) contour and thus may produce a raising effect on their adjacent syllables, i.e. sun after ya’ and ma before ’aw both have a higher pitch value than sun and ma occurring without being adjacent to ya’ and ’aw as in (5.10a-d).

Second, due to such a raising effect of ’aw, stress of yuma in the tag question shifts from yu to ma while remains on yu in declarative and ya’-initiated sentences.

Finally, the peak li’ in the ya’-sentence has a lower pitch value (322.2 Hz) than li’ in the other two (340.8 Hz/348.3 Hz), which may be explained as that since there are two comparatively low syllables sun and ki occurring between two high syllables ya’ and li’, the phenomenon of downdrift may take place.

Concerning downdrift suspension, we may discuss several points. First, since li’ in ya’-sentence has a lower pitch than li’ in declarative and tag questions, the decrease between li’ and its following H in the ya’-sentence is also smaller (a decrease of 45.3 Hz). In addition, since ’aw causes an increase of pitch value of its preceding syllable ma, the last H ma reaches an even higher pitch value.
than its preceding H \textit{ni} (an increase of 7.2 Hz) and thus reverses the phenomenon of downdrift.

Second, downdrift suspension is found in all three types of sentences in Plngawan, and it seems to stop before the last two H, i.e. \textit{ni-yu/ma}. It may be accounted for by the fact that while we need to decline our transglottal pressure to save breath in our lungs during the utterance, which results in the phenomenon of downdrift suspension, we can release the air altogether when we come to utter the last few syllables and thus show a sharp decrease of pitch value between the last two H (a decrease of 32.8 Hz in the declarative sentence and 19.6 Hz in \textit{ya’}-sentence).

Finally, while the decrease between \textit{was}^1 and \textit{was}^2 in declarative and tag question is still large (11.7 Hz and 15.3 Hz), in \textit{ya’}-sentence, downdrift has suspended before \textit{was}^1, and \textit{was}^2 even shows a higher pitch value than \textit{was}^1 thus reverses the phenomenon of downdrift. It is probably because the breath has been used up before \textit{was}^1 and \textit{was}^2 in the \textit{ya’}-sentence for there is one more peak involved in the sentence, i.e. \textit{ya’}. Thus, speakers need to have a pitch reset, i.e. to restart from a higher pitch value on \textit{was}^2, so that they can continue the utterance with enough breath.

5.1.3 Alternative questions

In this section, two aspects of intonation contours of alternative questions are investigated, including (i) the difference between yes-no questions used alone and those used in alternative questions, and (ii) the difference between alternatives as predicates and arguments. We divided data into five pairs. The first two pairs in (5.11) contain alternatives as predicates, the third pair (5.12) has the second verb of a SVC, and the last two pairs in (5.13) have arguments. Each pair consists of an independent yes-no question and an alternative question, as shown below.
Two points are worthy of discussion if we consider Table 5.7.

First, phonologically-marked yes-no clauses used in alternative questions tend to end with a higher pitch value than those used alone, e.g. wa2 has 305.3 Hz in (5.11a’) but only 271.1 Hz in (5.11a). Such a higher pitch value may suggest that the clause in not completed yet, and there is more information to follow up.
Second, when the second alternative in the ya’-clause is a predicate as in (5.11), it is found that (i) there is no pause between ya’ and the following predicate, (ii) ya’ starts with pitch value lower than 100 Hz, and (iii) the pause between ya’ and its preceding elements is about 0.29 seconds. When the second alternatives are non-predicate elements as in (5.12-13), the above-mentioned three features are reversed, i.e. (i) there is a pause about 0.27 seconds between ya’ and following non-predicate elements, (ii) ya’ starts with a much higher pitch value, and (iii) the pause between ya’ and preceding elements is shorter, about 0.18 seconds.

The differences caused by the predicate/non-predicate distinction may be explained as follows. While ya’ precedes a predicate, the clause retains the basic word order, ya’-predicate-subject, suggesting that there is nothing deleted between ya’ and the predicate (thus, no pause), and the ya’-clause serves as an independent yes-no question (thus, ya’ begins with lower pitch value and the pause between ya’ and preceding clause is longer). When ya’ precedes non-predicate elements, we may infer that there are deleted parts, i.e. predicates, between ya’ and remaining alternatives (thus, there is a pause), and the ya’-clause is an incomplete yes-no question that needs to be bound to the preceding clause (thus, ya’ begins with higher pitch value, and the pause between ya’ and preceding clause is shorter). Intonation contours of (5.11a’), (5.12a’) and (5.13a’), repeated here as (5.14-16), are shown in Figures (5.2) to (5.4).

(5.14) matas ka’ lawa ya’ mabel (…)?

Figure 5.2 Intonation contour of (5.14)
(5.15) s<un>kisli'=su mawas ya’ (... ma-yugi’?

![Figure 5.3 Intonation contour of (5.15)](image)

(5.16) cyel matas ka’ lawa ya’ (... yuma?

![Figure 5.4 Intonation contour of (5.16)](image)

5.1.4 Information questions

In this section, we discuss how intonation contours of information questions are influenced by the syllable structure and position of occurrence of interrogative words.

Based on stress pattern, interrogative words may be divided into three types, including (i) stress-penultimate words that show a HHL (level-falling) contour, such as ‘ima ‘who’, ‘inu ‘where’, pira’ ‘how many/much’, (ii) stress-final words that show a LHL (rising-falling) contour like ‘amol ‘what’, kanon ‘when’, and (iii) stress-final words that show a HLHL (falling-rising-falling) contour, e.g. hunco’ ‘do what’. Their pitch contours are shown in Figure 5.5.
We designed three sentences for each of the above-mentioned six interrogative words, in which question words occur sentence-initially, medially and finally. Pitch value of all the occurrences of interrogative words in (5.17)-(5.22) (see Appendix) are shown in Table 5.8 and compared to pitch value of their citation forms, i.e. question words read in isolation (those that are marked grey in Table 5.8).

**Figure 5.5 Intonation contour of interrogative words**
Table 5.8 Pitch value of interrogative words in information questions

<table>
<thead>
<tr>
<th></th>
<th>i 1</th>
<th>i 2</th>
<th>ma 1</th>
<th>ma 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>'ima</td>
<td>218.9</td>
<td>245.9</td>
<td>253.4</td>
<td>177.3</td>
</tr>
<tr>
<td>I</td>
<td>213.4</td>
<td>242.6</td>
<td>299.9</td>
<td>248.0</td>
</tr>
<tr>
<td>M</td>
<td>209.5</td>
<td>224.5</td>
<td>278.0</td>
<td>213.9</td>
</tr>
<tr>
<td>F</td>
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<td>162.2</td>
<td>288.1</td>
<td>184.9</td>
</tr>
<tr>
<td>I</td>
<td>225.7</td>
<td>182.4</td>
<td>289.3</td>
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<td>231.4</td>
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<tr>
<td>F</td>
<td>188.9</td>
<td>188.3</td>
<td>295.1</td>
<td>185.5</td>
</tr>
</tbody>
</table>

(I: initial; M: middle; F: final)

Regarding relations between intonation and position of interrogative words in a sentence, we may discuss two points.

First, interrogative words do show different contours when occurring in different positions. Take 'ima ‘who’ for example, it shows a HHL contour most similar to its
citation form when occurring in medial position, a \( \text{HH}^+\text{L} \) contour in initial position and a \( \text{HHH}^+ \) pattern in final position. Similar contour differences are observed in ‘\( \text{imu} \) ‘where’, ‘\( \text{amol} \) ‘what’ and \( \text{kanon} \) ‘when’.

Second, when interrogative words remain in-situ, e.g. verbs in sentence-initial position as predicates and nouns in sentence-medial position as arguments, they tend to retain contours similar to their citation forms. On the other hand, when question words occur in a marked position, e.g. interrogative nouns being fronted to the predicate position or interrogative verbs being left sentence-finally due to the cliticization of nominative pronouns, their pitch contours are usually modified to mark emphasis. For example, when ‘\( \text{amol} \) ‘what’ and ‘\( \text{hunco} \) ‘do what’ occur in-situ, their peaks reach 239.8 Hz and 289.3 Hz which are similar to those of their citation forms, i.e. 244.8 Hz and 288.1 Hz. When they occur in a marked position, their peaks are raised for emphasis and reach 288.5 Hz and 295.1 Hz respectively.

Syllable structure of interrogative words also influences contours of the whole sentence. When sentence-final interrogative words end with a non-sonorant sound, e.g. stops (‘\( \text{pira} \) ‘how many/much’, ‘\( \text{hunco} \) ‘do what’), the whole sentence shows a final-falling contour. The final-rising (\( \text{HH}^+ \) or \( \text{LH}^+ \)) contour of information questions is retained when information questions end with interrogative words that have a sonorant coda, e.g. vowels (‘\( \text{ima} \) ‘who’, ‘\( \text{imu} \) ‘where’), nasals (‘\( \text{kanon} \) ‘when’) or laterals (‘\( \text{amol} \) ‘what’). Intonation contours of (5.17c) and (5.19c) are given in Figure 5.6 and 5.7 for illustration.

![Figure 5.6 Intonation contour of (5.17c) m<in>ahiy=su ci ‘ima?](image-url)
5.1.5 Interim summary

In § 5.1, we have explored intonation contours of four types of interrogative sentences in more detail. Major points are summarized as follows.

First, phonologically-marked yes-no questions are formed via accent shift and contour modification within the last two syllables of a sentence. Accent placement is sensitive to both structure and stress pattern of the last two syllables, and contour modification may show gender differences, i.e. females tend to use a higher pitch level and a wider pitch range than males. Finally, an accent of 250 Hz seems to be the threshold for sentences to be interpreted as yes-no questions instead of declaratives.

Second, the occurrence of ya’ and ’aw may influence contours in three ways: (i) pitch value of syllables adjacent to them is usually raised higher, (ii) pitch value of the peak occurring next to ya’ tends to be lower than the same peak in non-ya’-initiated clauses, and (iii) ’aw may cause stress shift in its preceding word, i.e. to shift from penultimate syllable to the final syllable adjacent to ’aw. In terms of downdrift suspension, it is found that (i) downdrift suspension may occur in both declarative, yes-no questions and tag questions, and it tends to stop before the last two H sounds, (ii) suspension occurs earlier in ya’-initiated clauses, thus a pitch reset in the middle of the ya’-sentence is expected, and (iii) suspension may be reversed in tag questions, i.e. the H before the question tag ’aw shows an even higher pitch value than its preceding H.
Regarding alternative questions, it is noted that yes-no questions used in alternative questions usually end with a higher pitch value, implying the incompletion of a clause. Besides, three phonological features are observed to reflect the predicate/non-predicate distinction of the remaining alternative in the ya’-clause, as shown in Table 5.9 below.

Table 5.9 The predicate/non-predicate distinction

<table>
<thead>
<tr>
<th>Features</th>
<th>The remaining alternatives</th>
<th>Predicate</th>
<th>Non-predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pause between ya’ and following alternatives</td>
<td>no</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Pitch value of the beginning of ya’</td>
<td>lower</td>
<td>higher</td>
<td></td>
</tr>
<tr>
<td>Pause between ya’ and preceding clauses</td>
<td>longer</td>
<td>shorter</td>
<td></td>
</tr>
<tr>
<td>Function of the ya’-clause</td>
<td>independent yes-no question</td>
<td>bound/incomplete yes-no clause</td>
<td></td>
</tr>
</tbody>
</table>

Finally, position in a sentence and stress pattern of interrogative words may influence intonation contours of information questions in two respects: (i) when occurring in-situ, question words retain contours most similar to their citation forms, when occurring in a marked position, e.g. nouns being fronted initially or verbs being left finally due to cliticization of pronouns, they tend to show a peak of higher pitch value, (ii) when sentences end with interrogative words that end with a sonorant sound, the final-rising contour is retained; otherwise, a final-falling pattern is detected when the sentence-final interrogative words end with a non-sonorant sound.

5.2 Interrogative sentences interpreted as non-questions

In this section, four types of non-question readings of interrogative sentences are discussed, including indefinite, rhetorical question, exclamation and hesitation. They are considered as non-questions because (i) no responses from addressees are expected to these interrogative sentences, and (ii) they are usually marked both syntactically and phonologically different from questions that deserve answers.
The first type is concerned with interrogative words that are interpreted as indefinites. Consider (5.23) and their intonation contours in Figure 5.8 and 5.9.

\[(5.23)\]  

a. **ma-ha’=su**  ’inu?  
AF-go=2S.Nom where  
‘Where are you going?’

![Figure 5.8 Intonation contour of (5.23a)](image)

b. **’arat=cu**  ma-ha’  ’inu.  
Neg.Irr=1S.Nom AF-go where  
‘I am not going anywhere.’

![Figure 5.9 Intonation contour of (5.23b)](image)

In (5.23a), ’inu ‘where’ is used to form an information question that needs to be answered, thus sentence (5.23a) shows a final-rising contour\(^{32}\). However, ’inu ‘where’ in (5.23b) is interpreted non-specifically as indefinite because it is properly licensed by the negator ’arat, thus (5.23b) shows a final-falling contour instead.

The second type refers to rhetorical questions that, as defined in Chapter 3, contain an answer in themselves. Consider the use of ’amol ‘what’ in (5.24).

\[^{32}\text{Sometimes a final-rising contour may be followed by a slight fall, as shown in Figure (5.8) and some figures in the following discussion. Such a pitch decrease is usually not detectable auditorily and thus is considered simply as a boundary tone that indicates the completion of an utterance.}\]
(5.24) a. ’amol ka’ kicug-un=su?
   what Nom fear-PF=2S.Gen
   ‘What are you afraid of?’

![Figure 5.10 Intonation contour of (5.24a)](image)

b. ’amol la kicug-un=su?
   what Part fear-PF=2S.Gen
   ‘What are you afraid of?’
   *Lit:* There is nothing to be afraid of.

![Figure 5.11 Intonation contour of (5.24b)](image)

In (5.24a), ’amol ‘what’ precedes a nominalized verbal clause headed by ka’ as the subject, and the sentence shows a final-rising contour. In (5.24b), it is the particle la that occurs between ’amol ‘what’ and the verbal clause; besides, the sentence shows a final-falling contour, which may suggest that (5.24b) is not regarded as an information question. Semantically, (5.24a) is addressed as a true question when, for example, people are talking about things they are afraid of. By uttering (5.24b), however, the speaker actually tells the addressee that there is nothing to fear for.

Third, interrogative sentences may sometimes be used to express exclamation. Consider the two sentences in (5.25).
(5.25)  

a.  

\[ 'amol\ ka'\ 'ule'=su?\]  
what\ Nom\ child=2S.Gen  
‘What gender is your child?’  

\[ \text{Low: 217.15 Hz} ~ \text{High: 281.88 Hz (-mol)} \]  

Figure 5.12 Intonation contour of (5.25a)  

b.  

\[ 'amol\ na\ ci'uli'\ kani/*hani!\]  
what\ Gen person\ Nom.this/*this  
‘What kind of person this is!’  

\[ \text{Lit: The person should not behave like this.} \]  

\[ \text{Low: 135.07 Hz} ~ \text{High: 329.85 Hz (-mol)} \]  

Figure 5.13 Intonation contour of (5.25b)  

Sentence (5.25b) is interpreted as an exclamation, and it differs from the information question (5.25a) in three respects. First, it shows a final-falling rather than a final-rising contour. Second, the peak of 'amol ‘what’ in (5.25b) is raised sharply to 329.85 Hz, while it only reaches 281.88 Hz in (5.25a). Third, 'amol ‘what’ in (5.25b) functions neither as a head noun that occurs alone as the predicate in (5.25a) nor as a modifier that has to occur after head nouns without case markers, e.g. ‘ucyux ‘amol ‘what kind of fish’. Based on these syntactic and phonological differences, it is reasonable to consider (5.25b) as a non-question.

The last type of non-question reading of interrogative sentences refers to hesitation. That is, speakers may utter an information question ending with ca’ to show that they feel hesitant and are trying to figure out the answer to the question by themselves. Consider (5.26)
As an information question, sentence (5.26a) exhibits a final-rising contour, and the question word 'ima 'who' shows a leveling (HH) contour. In (5.26b), however, the whole sentence shows a final-falling contour, and 'ima 'who' is raised sharply to 388.6 Hz. Besides, as the translation shows, it is the speaker himself that is expected to provide an answer to the question (5.26b), not the addressee.

5.3 Speakers’ attitudes expressed via intonation modification

As discussed in § 5.2, contour modification that makes interrogative sentences interpreted as non-questions usually has to involve a global change, i.e. to shift from final-rising to a completely different final-falling contour. When contour modification occurs locally, e.g. on specific question words, interrogative sentences are still interpreted as questions, but speakers may express attitudinal implications by means of such a local contour modification. Three examples are given in this
section for illustration of such a phenomenon.

In (5.27), both questions are glossed as “what did you say”, but consider the contour of the syllable su in Figure 5.16 and 5.17.

(5.27)  

a. \( 'amol\ mi\ isu? \)  
what AF.say 2S.Neu  
‘What did you say? (Context: I did not hear it clearly.)’

High: 365.48 Hz ~ Low: 182.28 Hz (-su)

![Figure 5.16 Intonation contour of (5.27a)](image)

b. \( 'amol\ mi\ isu? \)  
what AF.say 2S.Neu  
‘What did you say? (Context: If you dare, say that again!)’

High: 414.57 Hz ~ Low: 328.46 Hz (-su)

![Figure 5.17 Intonation contour of (5.27b)](image)

While both (5.27a) and (5.27b) show a final-rising contour that is typical of an information question, two different features between them are observed: (i) the pitch value of the accent in (5.27b) is raised to an ultra high pitch value of 414.57 Hz, while it only reaches 365.48 Hz in (5.27a), and (ii) the boundary of the intonation of (5.27a) is so low (182.28 Hz) that even reaches the bottom of the pitch range of the whole sentence, but in (5.27b), the boundary is still quite high (328.46 Hz). With such an exaggerated high-pitched accent, it seems that speakers may address the question (5.27b) in an accusatory or threatening tone, as the translation shows.

The second situation is concerned with the emphasis of interrogative sentences
by means of carung ‘very’. Consider (5.28) below.

(5.28) a. 'ima ka’ m<in>ahiy ci ’ule’ haca?
who Nom AF<Prf>hit Acc child that
‘Who hit that child?’

[Graph showing pitch and time with 'ima ka’ m<in>ahiy ci ’ule’ haca?]

b. 'ima carung ka’ cyel mawas haca?
who very Nom Exi.Rem AF.sing that
‘Who on earth is (the person that is) singing?’

[Graph showing pitch and time with 'ima carung ka’ cyel mawas haca?]

As shown in Figure 5.18, 'ima ‘who’ shows a leveling (HHH) contour similar to its citation form (HHL) when the question is addressed with a normal tone. When the whole question is emphasized by carung ‘very’, 'ima ‘who’ has its peak raised to 317.3 Hz and shows a HH’H contour to draw emphasis.

In the third example, when addressees fail to hear clearly and ask speakers to repeat, the same question (5.29) may be uttered with an accent of much higher pitch value (385.4 Hz) and longer duration (0.39 seconds) to show emphasis or impatience. Compare sentence (5.29) addressed for the first and second time in Figure 5.20 and 5.21.
Finally, we find that certain interrogative sentences may function as greetings or formulaic expressions because of their high frequency of occurrence in daily conversations. Basically, they show intonation contours similar to those found in other interrogative sentences of the same type, e.g. final-rising-falling for yes-no questions and final-rising for information questions. Examples are given in (5.30) and Figure 5.22 and 5.23.

(5.30)  a.  **ramas=**su?
        good.AF=2S.Nom
        ‘Are you okay?’

Figure 5.22 Intonation contour of (5.30a)
b. \textit{\textbf{\textasciitilde ima=\textbf{su}}} \textit{\textbf{\textasciitilde isu?}}

\begin{center}
who=2S.Nom \quad 2S.Neu
\end{center}

\textit{‘Who are you?’}

Sentence (5.30a) has been lexicalized as an expression of greeting, and it retains the final-rising-falling contour of a yes-no question. Sentence (5.30b) is also used frequently to seek for identity of addressees in daily conversations, thus the pronunciations of \textit{=su} ‘2S.Nom’ and the first syllable of \textit{\textbf{isu}} ‘2S.Neu’ are usually contracted as one syllable \textit{si} in fast speech, which leaves the second syllable, i.e. \textit{-su} alone in sentence-final position, as shown in Figure 5.23.

5.4 Summary

In this chapter, we have investigated intonation contours of interrogative sentences in more detail. Besides major findings summarized in § 5.1.5, it is also important to note that we should take other aspects into consideration while examining intonational phenomena of interrogative sentences, such as phonetics (sound quality, stress pattern), syntax (structure, position), semantics and pragmatics (implicational meaning, contexts of use and gender), etc.

In § 5.2 and § 5.3, we have demonstrated that (i) global contour modification along with syntactic markings may enable us to interpret interrogative sentences as non-questions such as indefinite, rhetorical question, exclamation and hesitation; (ii) local contour modification helps speakers to express attitudinal implications like threatening, impatience or emphasis while asking questions at the same time.

Finally, intonation in Plngawan interrogative sentences may exhibit at least four
functions, including (i) distinguishing among various types of illocutionary forces, e.g. to turn a statement into a yes-no question or an information question to exclamation, (ii) distinguishing among different types of interrogative sentences, (iii) deriving non-question interpretations of interrogative sentences (syntactic markers are also necessary), and (iv) helping speakers express attitudinal implications.
Chapter Six
Concluding Remarks

6.1 Summary of previous chapters

Issues on the morphosyntax of interrogative constructions have been extensively discussed in Formosan linguistics, but very few studies focused on the phonological aspect of interrogative sentences. Thus, the current study is dedicated to both morphosyntactic and phonological aspects of interrogative constructions in Plngawan.

In Chapters 1 and 2, we have provided a brief introduction to the genetic classification, distribution and grammar of the target language, i.e. Plngawan. We have also reviewed studies on this issue from both general and Formosan perspectives in Chapter 3. Major points can be summarized as follows:

(i) In terms of the piece of information being inquired, interrogative sentences may be divided into yes-no questions, alternative questions and information questions. They may also exhibit both speech acts as questions and non-questions, e.g. request, exclamation, greeting, etc.

(ii) Strategies used to form interrogative sentences may be phonological and/or morphosyntactic. While the adoption of certain strategy may be universal, e.g. to form information questions by means of interrogative words, relevant issues such as parts of speech and distributional features of question words should be discussed language-specifically.

In Chapter 4, we have shown how the four types of interrogative sentences are formed in Plngawan, as summarized below.

(i) Yes-no questions may be formed via contour modification, showing a final-rising-falling contour, or by means of the sentence-initial question particle ya’.
Tag questions are singled out as a class because they are marked with 'aw and show a final-rising contour. When they function as requests, they must be answered negatively with 'arat instead of 'ini.

Only forward deletion is allowed in Plngawan alternative questions. Besides, ambiguous interpretations of the remaining argument in the ya’-initiated yes-no clause may occur without an overt case marker.

Interrogative words used in Plngawan may be classified as nouns and verbs based on their morphosyntactic properties. In terms of distribution of question words, Plngawan is an optional-fronting language that observes the subject-sensitive constraint.

Interrogative words may be interpreted as indefinites when occurring in topicalized, negative, donkey sentences or when co-occurring with the quantifier 'ana ‘any’.

In Chapter 5, we have explored intonation patterns of interrogative sentences in more detail, finding that:

(i) Accent placement and contour modification of yes-no questions always occur within the last two syllables, and they may be influenced by factors like syllable structure, stress pattern and gender.

(ii) Downdrift suspension is detected in declarative sentences, ya’-initiated yes-no questions and tag questions, but it seems to stop before the last two syllables and the question tag 'aw.

(iii) Yes-no clauses used in alternative questions tend to end with a higher pitch value, implying the incompleteness of a sentence. The distinction between predicate and non-predicate of the remaining alternative in the ya’ clause is also reflected phonologically in terms of pause and pitch height of ya’.
(iv) Interrogative words display contours most similar to their citation forms when appearing in-situ; when occurring in marked positions, their contours may be modified with the peaks raised higher to draw emphasis and focus. Information questions usually show a final-rising contour except for those ending with interrogative words that have a non-sonorant coda, i.e. pira’ ‘how many/much’ and hunco’ ‘why’.

Furthermore, we have shown that when interrogative sentences are interpreted as non-questions, they usually need to undergo a global contour modification and bear different syntactic markings. On the other hand, local contour modification that involves a pitch raise or longer duration within a specific domain may help speakers to express attitudinal implications while asking questions.

6.2 Suggestions for further research

During our research, several interesting issues were found to deserve further studies, which may be classified into three major types.

First, compared to other Atayal dialects such as Mayrinax and Squilq, Plngawan has received little notice and is in need of a more comprehensive description.

Second, it is worthwhile to conduct a cross-linguistic comparative study on the morphosyntax of interrogative constructions of Atayalic languages/dialects because there are now enough studies to carry out such a research plan. Also, there are a number of phenomena that have not been fully investigated, for example:

The question particle ya’ in Plngawan is both phonologically and syntactically similar to yee in Tkdaya Seediq; besides, according to our informant Yumin, the question particle ya’ is pronounced as ye’ by some Plngawan native speakers. Consider (6.1).
(6.1)a. Plngawan (CIP)

\[ \text{ya'=}\text{su k<um>aral karirex ci ke'} na 'itaral?} \]
\[
\text{QP=2S.Nom speak<AF> every day Acc language Gen Atayal}
\]
‘Do you often speak Atayal?’

b. Tkdaya Seediq (CIP)

\[ \text{yee=}\text{su r<m>engo kari seediq klaali ka isu?} \]
\[
\text{QP=2S.Nom speak<AF> language Seediq every day Nom 2S.Neu}
\]
‘Do you often speak Seediq?’

In addition, while the interrogative word meaning “what” seems to share a similar form in most Atayalic languages, such as nanuwan in Mayrinax Atayal, nanu in Squiliq Atayal, maanu in Tkdaya Seediq and manu in Truku, the form ‘amol ‘what’ in Plngawan seems to be quite unique. For a discussion on the grammaticalization of nanu and the development of nanuwan in Mayrinax Atayal, one may refer to Tseng (2008).

Finally, regarding intonation of interrogative constructions, three directions for future research are suggested:

(i) A statistical analysis may help explain how and to what extent do factors such as stress pattern, syllable structure, gender, etc influence modification of intonation contours.

(ii) From a discourse perspective, we may explore how intonation helps with marking of constituency boundary, turn takings in conversations and/or distribution of old/new information.

(iii) Studies on interfaces among syntax, semantics, phonology and morphology may provide new perspectives for future studies on the same issue, i.e. form and function of interrogative constructions.
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**Webpages:**


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Appendix

Glosses and translations of the examples used in § 5.1

(5.1) a. ba’=cu mawas.
   know.AF=1S.Nom AF.sing
   ‘I can sing.’

(5.2) b. ba’=su mawas?
   know.AF=2S.Nom AF.sing
   ‘Can you sing?’

(5.3) a. watan ka’ ci’uli’ haca.
   Watan Nom person that
   ‘That person is Watan.’

b. watan ka’ ci’uli’ haca?
   Watan Nom person that
   ‘Is that person Watan?’

(5.4) a. musa’=cu hori’ kar irex.
   AF.go=1S.Nom Hori’ every day
   ‘I go to Hori’ every day.’

b. musa’=su hori’ kar irex?
   AF.go=2S.Nom Hori’ every day
   ‘Do you go to Hori’ every day?’

(5.5) a. nel=cu mabahu.
   Exi.Imm=1S.Nom AF.wash
   ‘I am washing (dishes).’

b. cyel=su mabahu?
   Exi.Rem=2S.Nom AF.wash
   ‘Are you washing (dishes)?’

(5.6) a. ’ini=cu kani’ na.
   Neg.Rea=1S.Nom eat still
   ‘I did not eat yet.’

b. ’ini=su kani’ na?
   Neg.Rea=2S.Nom eat still
   ‘Didn’t you eat yet?’
(5.7) a. cyel mani’ hiya la.  
Exi.Rem AF.eat 3S.Neu Part  
‘He is eating.’  
b. cyel mani’ hiya la?  
Exi.Rem AF.eat 3S.Neu Part  
‘Is he eating?’

(5.8) a. m<in>ani’=cu la.  
AF<Prf>eat=1S.Nom Part  
‘I have eaten.’  
b. m<in>ani’=su la?  
AF<Prf>eat=2S.Nom Part  
‘Have you eaten?’

(5.9) a. cyel mani’ ka’ watan.  
Exi.Rem AF.eat Nom Watan  
‘Watan is eating.’  
b. cyel mani’ ka’ watan?  
Exi.Rem AF.eat Nom Watan  
‘Is Watan eating?’

(5.10) Declarative sentences and corresponding ya’-questions and tag questions  
d. s<un>kisli’ carung mawas ci ’awas hani ka’ yuma.  
like<AF>like very AF.sing Acc song this Nom Yuma  
‘Yuma likes to sing this song very much.’  
d’. ya’ s<un>kisli’ carung mawas ci ’awas hani ka’ yuma?  
QP like<AF>like very AF.sing Acc song this Nom Yuma  
‘Does Yuma like to sing this song very much?’  
d’’. s<un>kisli’ carung mawas ci ’awas hani ka’ yuma ’aw?  
like<AF>like very AF.sing Acc song this Nom Yuma QTag  
‘Yuma likes to sing this song very much, doesn’t she?’

(5.11) a’. matas ka’ lawa ya’ mabel?  
AF.draw Nom Lawa QP AF.sleep  
Is Lawa drawing or sleeping?’
b’. s<in>bale’=su  ka’ rakat ya’=su  b<in>iniy?
<Prf.PF>make=2S.Gen Nom chair QP=2S.Gen buy<Prf.PF>buy
‘Is the chair made or bought by you?’

(5.12) a’. s<un>kisli’=su  mawas ya’ ma-yugi’?
like<AF>like=2S.Nom AF.sing QP AF-dance
‘Do you like to sing or to dance?’

(5.13) a’. cyel  matas  ka’  lawa  ya’  yuma?
Exi.Rem AF.draw  Nom Lawa QP Yuma
‘Is Lawa drawing or Yuma?’
b’. ma-’abuw= su  na  kopu  ’usye’  ya’  rating?
AF-drink=2S.Nom Ins cup  water QP bowl
‘Do you drink water with a cup or a bowl?’

(5.17) a. ’ima  ka’  ’ule’  hani?
who Nom child this
‘Who is this child?’
b. b<in>ah-en  ni  ’ima  ka’  watan?
hit<Prf>hit-LF  Gen who  Nom Watan
‘Who hit Watan?’
c. m<in>ahiy= su  ci  ’ima?
AF<Prf>hit=2S.Nom Acc who
‘Who did you hit?’

(5.18) a. ’inu  ’<in>sal-an= su  hira?
where go<Prf>go-LF=2S.Gen yesterday
‘Where did you go yesterday?’
b. m<in>sa’  ’inu  hira  ka’  watan?
AF<Prf>go where yesterday Nom Watan
‘Where did Watan go yesterday?’
c. m<in>sa’= su  ’inu?
AF<Prf>go=2S.Nom where
‘Where did you go?’

(5.19) a. pira’  ka’  ni’-un= su?
how many/much Nom eat-PF=2S.Gen
‘How many did you eat?’
b. **m<in>ani’ ci pir’’ ka’ watan?**
   AF<Prf>eat Acc how many/much Nom Watan
   ‘How many did Watan eat?’

c. **m<in>ani’=su ci pir’’?**
   AF<Prf>eat=2S.Nom Acc how many/much
   ‘How many did you eat?’

(5.20) a. **’amol ka’ cyel=su tahk-un?**
   what Nom Exi.Rem=2S.Gen cook-PF
   ‘What are you cooking?’

   b. **t<um>ahuk ci ’amol ka’ yaya’?**
   cook<AF>cook Acc what Nom mother
   ‘What does Mother cook?’

   c. **t<um>ahuk=su ci ’amol?**
   cook<AF>cook=2S.Nom Acc what
   ‘What do you cook?’

(5.21) a. **kanon ma-moh ka’ watan?**
   when Red-AF.come Nom Watan
   ‘When will Watan come?’

   b. **ma-moh kanon ka’ watan?**
   Red-AF.come when Nom Watan
   ‘When will Watan come?’

   c. **ma-moh=su kanon?**
   Red-AF.come=2S.Nom when
   ‘When will you come?’

(5.22) a. **h<in>co’=su morow hira?**
   do what<Prf>do what=2S.Nom house yesterday
   ‘What did you do at home yesterday?’

   b. **wal h<un>co’ hira ka’ watan?**
   Prf do what<AF>do what yesterday Nom Watan
   ‘What has Watan done yesterday?’

   c. **cyel=su h<un>co’?**
   Exi.Rem=2S.Nom do what<AF>do what
   ‘What are you doing?’