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Conventions

**Special typefaces**

*Italics* are used for (i) Wano forms when written orthographically, (ii) forms from languages other than English, such as: Dani, Walak, Nggem, Melayu-Papua, and Indonesian, and (iii) grammatical categories used in the glossary (appendix 1).

**SMALL CAPITALS** are used for (i) grammatical categories and (ii) stressed syllables where such detail is necessary. Exceptions are:

- *Adr*: addressee, in deictic markings
- *ds*: different sex, in translation for kinship relations
- *K.O.*: kind of..., or species of...
- *Sp*: speaker, in deictic markings
- *ss*: same sex, in translation for kinship relations

Number and numeral markings, in grammatical glosses, for singular and plural are presented as follows: In grammatical glosses, *s* and *p* indicate numbers, while *SG* and *PL* indicate numerals.

<table>
<thead>
<tr>
<th>Kit</th>
<th>Ninyaburi</th>
<th>Inyoku</th>
<th>Wano form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>kit</strong></td>
<td>n-in-abut-i</td>
<td>o-in-ot-k-u</td>
<td>Morphophonological form</td>
</tr>
<tr>
<td><strong>you</strong></td>
<td><strong>1s-p</strong>-child o.m-<strong>PL</strong></td>
<td>3s.U-p-hit-REAL-p.A</td>
<td>Grammatical gloss</td>
</tr>
</tbody>
</table>

‘You (plural) hit our children.’ Free translation

**Abbreviations**

- **A**: Agent
- **C**: Consonant, as in CV, CVC (CV-structure), or as in \( C_1C_2 \)
- **GEN**: Generic
- **HAB**: Habitual
- **INCEP**: Inceptive
- **IPN**: Inalienably Possessed Noun (inalienable possessee)
- **LATIN**: Latin (names in Latin taken from Peckover and Filewood (1976) and Beehler, Pratt, and Zimmerman (1986))
- **LOC**: Locative
- **N**: Nasal, Noun
- **o.f**: Of Female
- **o.m**: Of Male
- **PAUS**: Pausal
- **PM**: Papua-Melayu
- **pers. comm.**: Personal communication
- **PN**: Proper Name/Noun
- **POL**: Polar question
- **PRO**: Pronoun
PROG Progressive
PURP Purpose
Q Question marker
REAL Realis
REFL Reflexive
REM Remote
SI Standard(-ised) Indonesian
SPEC Specifier, Specific
TOP Topicaliser
U Undergoer
V Vowel, as in CV, CV (in CV-structure), V₁V₂ (in syllable-structures)

General Symbols

σ syllable
(...), or, optional entry
{...} morpho(-phono)logical representation/structure
/.../ phonological representation
[...] phonetic realisation
→ becomes
-/ in a phonological environment of
# word boundary
= clitic boundary
- morpheme boundary
: portmanteau morpheme boundary
. (1) syllable boundary, (2) grammatical gloss boundary as in SPEC.TOP reads ‘specific topic’
< is derived from, or is of
ø zero morpheme
+ obligatory element or constituent
± optional element or constituent
‘ ‘ meaning or free translation
“ ” direct speech
| short pause in discourse
|| long pause in discourse
\( (short) closure, end of an utterance
* unacceptable expression/form
? (1) questionable form or entry, (2) uncertain (in the interlinear gloss)
1 first person
2 second person
3 third person

IPA symbols and definitions used

Except prenasalised plosives, phonetic symbols with their definitions used in this study are of the Handbook of the International Phonetic Association – A Guide to the Use of the International Phonetic Alphabet (revised to 1993, updated 1999) – with comparison to Pullum and Ladusaw
(1996), Crystal (1997:xviii), and Carr (1993:11). Should a different definition be used, this will be indicated in the footnotes.

**Suprasegmental**

\- primary stress, located preceding stressed syllable
\- secondary stress, located preceding stressed syllable

**Non-pulmonic consonants**

\- voiced glottalic ingressive (i.e., implosive) bilabial stop
\- voiced glottalic ingressive (i.e., implosive) alveolar stop

**Pulmonic consonants**

\p\ - voiceless bilabial plosive
\b\ - voiced bilabial plosive
\m\ - voiced bilabial nasal
\β\ - voiced bilabial fricative
\d\ - voiced alveolar plosive
\t\ - voiceless alveolar plosive
\n\ - voiced alveolar nasal
\r\ - voiced alveolar flap
\z\ - voiced post-alveolar fricative
\n\ - voiceless palatal nasal
\ç\ - voiceless palatal fricative
\j\ - voiced palatal fricative
\j\ - voiced palatal approximant
\g\ - voiced velar plosive
\k\ - voiceless velar plosive
\γ\ - voiced velar fricative
\w\ - voiced labial-velar approximant
\?\ - glottal plosive

**No audible release (i.e., unreleased) consonants**

\p'\ - voiceless bilabial plosive
\b'\ - voiced bilabial plosive
\t'\ - voiceless alveolar plosive
\d'\ - voiced alveolar plosive
\k'\ - voiceless velar plosive

**Labialized consonants**

\p^\ - voiceless bilabial plosive
\k^\ - voiceless velar plosive
\g^\ - voiced velar plosive
\γ^\ - voiced velar fricative
Prenasalised consonants

\( \text{mb} \) voiced bilabial plosive
\( \text{nd} \) voiced alveolar plosive
\( \text{ng} \) voiced velar plosive
\( \text{ngw} \) voiced labio-velar plosive

Vowels

<table>
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<th>Back</th>
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</thead>
<tbody>
<tr>
<td>Close</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>Near-close</td>
<td>i</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close-mid</td>
<td>e</td>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>Open-mid</td>
<td></td>
<td>a</td>
<td></td>
</tr>
<tr>
<td>Open</td>
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</table>
Maps

Map 2: Wano and its neighbouring languages

Acknowledgements

Many people have contributed to this study. First and foremost, my appreciation goes to Enos Mirib who introduced me to the language of his people, Wano. Enos had been a good friend and language instructor during my early stage of learning the language. Despite his faithfulness and eagerness in helping me, he did not live to see his language in a written form. He passed away in 1992. Later in 1994, Barnabas Medenggwa became my main language teacher and has been ever since. Kit mbere kinyambit, wawi-o, nombawi wawi ki-o, kinyaye nak, iyetik-o.

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ABSTRACT

This paper presents a descriptive analysis of the phonological properties of Wano, a Papuan language of the Trans-New Guinea Phylum of the Dani-Kwerba stock. The analysis is based on data from the author’s personal fieldwork. The paper provides an initial framework of Wano phonemes and their graphemes. It is intended to be a starting point for future grammatical analysis. It also describes some socio-linguistic phenomena regarding the adaptation of Melayu-Papua (Papuan-Malay). A preliminary dictionary (Wano-English, English-Wano) and a sample wordlist are included as appendices.

1 INTRODUCTION

1.1 Background

This study is based on my understanding of the Wano language which I have gained through fieldwork since 1992. During my fieldwork, I regularly visited the villages of Iratoi (1992–1994) and Biricare (1994–1998). The length of each visit in the Wano area ranged from two weeks to three months, with three to four visits in a year. Since 1994, the study was mainly conducted in Biricare. The reason was that Biricare is central and has easy access to the Wano region. To go there, I fly from Sentain to Fawi, the nearest airstrip, by a single-engine Cessna for about one to two hours, depending on the wind. From Fawi, I walk about eight hours to Biricare. It rains almost every night. The temperature is around twenty-five to thirty degrees celcius in the daytime, and twenty degrees at night.

Wano was an unwritten language and so the language-learning situation has been nearly monolingual. There has been no comprehensive linguistic research published on the language. The purpose of the present study is therefore to provide a preliminary description on the phonological features of the language.

Previous works that supply some data on Wano are: (i) Swadesh wordlist by Larson and (ii) Survey report of Walker and Moxness (1988) as well as some short papers by Bromley (1967, 1973) and Larson (1977).

On our earlier visits in 1992, my wife Corrie and I also collected some Wano words, using the UnCen-SIL wordlist. I then used these together with Larson’s data (1977)

\[1\] Having completed an MA (in linguistics) in 1991 at the School of Oriental and African Studies (SOAS), University of London, I went to the province of Papua in Indonesia, with my wife Corrie and our two sons: Jonathan and Mark. This paper is a result of my fieldwork under the auspices of Queen’s Road Church, Wimbledon (Great Britain) and the Stichting Kabar Baik, Dordrecht (the Netherlands). Papua was then called Irian Jaya. The island was known as Nederlands Nieuw Guinea before 1963.
as the basis for my first phonological analysis. I found Larson’s wordlist and the data we gathered ourselves to be very much in agreement.

In their report, Walker and Moxness (1988) indicate that the villages of the Wanos are Iratoi, Turumo, Nggweri, and Lumo. Our research, however, indicates that of these villages, only Lumo is currently a Wano settlement. Around the 1970s, after the opening of government, as well as mission posts, some of the Wano migrated to the lowlands (which are Iratoi, Turumo, and Nggweri) with the hope of a new life. There were clinics for better treatment of health, and schools where their children could attend.

The self-referent term Wano ['wanɔ], refers to both the people and the language.³ It is a derivation of an interjection wa ‘greetings’ and the topic marker no ‘GEN.TOP’. According to Wano tradition, when the first Wano people came out of the earth, they greeted each other by saying: wa ... wa ... no ..., which roughly means “we welcome each other as a group of people belonging together.” When speaking of the language, the inalienably possessed noun follows the term: Wano inyone ‘Wano 3s-pl-voice’. When referring to the Wano people, the nominal term referring to ‘people, person, or man’ follows: Wano ap ‘Wano people/person/man’.

As recorded in the Smithsonian Institution Archives (SIA),⁴ in 1926 Matthew W. Stirling, an American archaeologist,⁵ conducted a Netherlands-American expedition⁶ (cf. Stirling 1934:1) with the following purpose: “…to penetrate the unknown parts of the Nassau range lying on the northern slope of the central chain.” (SIA: US consult report, dated Batavia, Java, February 5, 1926, page 3).⁷ The objective of the expedition was, according to Stirling, to find “the negritos of the central Nassau mountains” (SIA: Stirling’s letter to Wetmore, dated Upper Rouffaer River, September 9th. 1926).

Stirling experienced no difficulties finding the native people whom he identified as the Tapiro, the Pesechem, and the Nogullo, as well as the Ekaris and the Moni (Stirling 1934:12). Contact with the Pesechem people was reported earlier by Lorentz (1913). It is spelled Pesegem in Bromley (1973). Nogullo is mentioned in Bromley as the

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² A cooperative work between Universitas Cenderawasih and the Summer Institute of Linguistics, done in 1985. Appendix 2 is the example of the wordlist.
³ Bromley (1973) suggests that the outsiders also used the same term to refer both to the speakers and the language of Wano.
⁴ Record unit 7006, Alexander Wetmore Papers, 1898–1976 (unprocessed).
⁵ Some archives about this expedition were kindly given to me by Mike Moxness as I started the research on Wano.
⁶ The expedition was stimulated by the book of Dr. A. F. R. Wollaston (1912), Papians and Pygmies (SLA: US consult report, ibid.).
⁷ Nassau range is now Pegunungan Sudirman, Batavia is Jakarta, and Java is Jawa.
alternative name of upper *Jamo* – it is spelled *Nogolo*, the self-referent term for the Rouffaer River. There is no mention of *Tapiro* since Stirling’s expedition.

Stirling also made a note about the people who were living in the caves, whom he was not able to find. Could they be the *Wano* people? Lack of evidence makes it difficult to determine. However, during my time spent with the Wanos, I was once taken to some caves and was told that “our ancestors used to live here.” Bromley, as well as Larson, gives promising observations. In Bromley (1973:6) we read: “Wano is spoken on the north side of the Jamo valley” and in Larson (1977:6–7), he writes,

> The Wano, though dispersed over a rather large area, are the least in number of all members of the Greater Dani family. They occupy areas on the north side of the Jamo of the upper Rouffaer, and are also found in scattered pockets to as far north of Jamo as where the foothills join the Lakes Plains, and west of Jamo on into the lower Dugindoga.

By oral information, Bat Medenggwa8 claims that one of their original places was *Kimbin*, the name mentioned in Bromley (1973) as the area of Western Dani. Further, observing the geographical setting of Stirling’s journey and the Nieuw Guinea Kaartmateriaal of the Topographic Service 1941,9 it is not unreasonable to assume that the *Wano* people were in the area at the time of the expedition. Consider, for instance, names like Explorer Bivouac, which has about the same coordinate as *Wodegoduk*, a *Wano* village, as well as Bad-luck Bivouac for *Dukibeci*.

Due to its geographical surroundings, I was not able to personally visit the whole area on foot nor by other means of transportation, in order to identify the geographical boundaries of the region where the *Wano* people are found. In my attempt to draw the boundary lines, the Nieuw Guinea Kaartmateriaal is used, in comparison to the linguistic boundary provided by Wurm (1982:16–17). Then I stretched a line to link some villages which are located closest to some places of the neighbouring tribes and estimated their coordinates. The coordinates of some villages are by the courtesy of Roger Stuber (pers. comm.). Others are my own estimation.

Based on this evidence we can tentatively mark the boundaries of the *Wano* land (cf. map 1). For convenience, *e-l* reads east-longitude, *s-l* reads south-latitude, *alt* is altitude in metres above sea level. When different names are given to a place—those recorded in the Nieuw Guinea Kaartmateriaal (NGK) versus present names—they are indicated in brackets.

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8 Bat has been my language teacher since 1994.
If we take Biricare (Stuber, 137° 42' 13" e-l, 03° 18' 44" s-l, ± 650 alt) as the central point, we estimate that: the east-most position is somewhere between Kiagai (NGK, 137° 53' 05" e-l, 03° 35' 10" s-l, ± 1.500 alt) through Lumo\(^{10}\) (Stuber, 137° 53' 10" e-l, 03° 40' 25" s-l, ± 1.900 alt). The southeast-most position is Lumo. The south-most position is Weiga (NGK, 137° 45' 47" e-l, 03° 40' 41" s-l, ± 2.000 alt) through Puduk\(^{11}\) (NGK, 137° 34' 50" e-l, 03° 40' 55" s-l, ± 700 alt). The southwest-most position is east of the Jamo river (NGK, Upper Rouffaer, 137° 19' 50" e-l, 03° 40' 00" s-l, ± 500 alt). The west-most position is Wodegoduk (NGK, Explorer Bivouac, 137° 20' 05" e-l, 03° 35' 15" s-l, ± 700 alt). The northwest-most position is east of the Jamo river at the foot of the mountain around Kendo-kendo river (NGK, 137° 19' 02" e-l, 03° 24' 00" s-l, ± 600 alt) through Dukibeci (NGK, Bad-luck Bivouac, 137° 28' 48" e-l, 03° 23' 34" s-l, ± 700 alt). The northeast-most position should be Mbomban, a hamlet about four hours walking distance, south of Dagai. A significant place for the Wano people is Ye (NGK, 137° 49' 30" e-l, 03° 31' 10" s-l, ± 1.000 alt). It is the place where the stone axes (ye) were made and bartered with the Dani people from Mulia (Stuber, 137° 54' 47" e-l, 03° 42' 16" s-l, ± 1.900 alt). These people used to travel via Lumo and Kiagai to exchange ye for cowries (wu) or necklace-beads (dimit).

Other villages of the Wano are Wuduma, Tigit, Lumo (mixed with Western Dani), Kiruduno, Puduk, Mburumeiyome, Biricare, Mbomban, Yedome (or Ye), Acodi, Wanggiva, Kawaimu, Damuk, Anewaivi, Ambogobak, Tumbwi, Ngibasa, Nggbugani, Wandini, and Yevamu. Villages that have been deserted or become hamlets are Weiga, Dukibeci, Kembemu (NKG Kembu), Keramu, Mbidik, Mbowid, Mburu, Mocami, and Wodegoduk. Some of the Wano people are found living in Iratoi and Turumo (among the Elopi ethnic) and Fawi (with the lau people).\(^{13}\) Except for Ambogobak, Kembemu, Keramu, Dukibeci, Mbidik, Mbowid, Mburu, Mburumeiyome, Mocami, Wandini, Weiga and Wodegoduk, a mission church was found in every village.

Regarding its linguistic boundaries (see map 2), the Wano language is surrounded by languages of Duvele and Doutai (to the east), Nggem, Walak, Western Dani (southeast),

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\(^{10}\) The name for Dumo in Wano. It is Lumo on the map.
\(^{11}\) Referred to as Puluk by other tribes.
\(^{12}\) Cf. various episodes in the Wano oral texts (Burung 1994b).
\(^{13}\) The Elopi (or Edopi) and lau ethnic groups are referred to as Turu by the Wano people.
Silimo and Hupla (south), Damal, Dem, and Nduga (southwest), Moni and Wolani (west), Kiri-kiri and Fayu (northwest), Iau, Elopi, and Duvele (north).

Genetic relationships between Papuan languages, in terms of the Swadesh list, have been established by previous works in Wurm (1975a, 1982). This paper cites the works of Wurm (1972, 1975a, 1982), Voorhoeve (1975a), Wurm and McElhanon (1975), and Laycock (1975). Most Papuan languages are classified as affiliated with Trans-New Guinea Phylum (TNGP) languages—Foley (1986:229–245) for an overview of the different genetic groups, as well as Grimes (1996, 2000) for the listing of such groupings.

Wano is a Papuan language, a member of the Dani family spoken by approximately 7,000 native speakers. Among its sisters are Western Dani and Grand Valley Dani. According to Voorhoeve (1975a), the members of the Dani languages closely related to Wano are: Western Dani, Nggem, Walak, Silimo, and Hupla.

Regarding the relationship between Wano and Western Dani, Nggem, and Walak, Wurm, Laycock, and Voorhoeve (WLV, 1975) make some general observations on Papuan language features. Phonologically, the liquids [r] and [l] have no phonemic contrast, and are often allophones of a single phoneme. I found Wano lacks /l/ but has /r/ in the form of flaps. The others (Western Dani, Walak, and Nggem) make

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14 Traditionally, in order to establish the interrelatedness of languages, a standard wordlist of approximately two hundred non-cultural items is used (known as the Swadesh list). Two languages which share over 81% cognates are said to be dialects of the same language; languages sharing 29%–80% cognates are members of one and the same language family; languages sharing 12%–28% cognates belong to different families, but are related on stock level. Cognition percentages of 6%–11% place the languages in different stocks, but in the same phylum. Cognition percentages of less than 6% are not accepted as proof of genetic relationship (Wurm and McElhanon 1975:152). Loving (1977a) provides good examples on works on the genetic relationship by field linguists, such as Callister, Collier, Combs, Ezard, and Larzen.

15 The estimate is 3,000 in Larson (1977:7), 1,500 in Foley (1986:239), and is 3,500 in Grime’s Ethnologue (1996). My estimation is the result of counting family members of each clan in every village or hamlet. This was done by the method of consulting some Wano elders of some of the villages, during my visit to Mbomban and Yei. Some elders came to Biricare (where I mostly stayed) from Puduk, Acodi, Kiagai, and Lunto. They informed me of the names of the clans including the family members.

16 These observations are from wordlists and some phrases including counting. Data was collected on random dates and occasions. In 1992 I managed to get the wordlist of Western Dani. This was in Iratoi and Mulia. At the same time I visited Kobakma for the data on Nggem. I could only get some wordlists done. Later, more information on the language was provided courtesy of Paul Etherington, who was working in that area, mostly by email or personal communication when I visited Wamena. The data of Walak was obtained from Markus Kilungga (Pyramid 1994, Sentani 1999) and Elius Wantik (Sentani 1999). (These are wordlists whereby Markus Kilungga and Elius Wantik are the indigenous respondents.) For Western Dani, I have also consulted some works of Bromley, in particular, his 1961 M.A. thesis and the unpublished and undated manuscript on the Grand Valley Dani verb.
distinctions on both, disagreeing with what has been suggested in WLV. The implosives /b/ and /d/ are found in all languages. Nggem goes further, distinguishing these sounds with the preglottalised implosives. The /s/ is found in all the languages except Wano. All have prenasalisation of stops. As to the glottal fricative /h/, Nggem and Walak employ the sound while such is not found in Wano and Western Dani. Bilabial and velar fricatives, [β] and [ɣ] are found in all languages. The frequent interchange of /t/ and /k/, particularly in final position, is a typical feature. Sounds that are absent in these languages are retroflex and interdental. WLV have indicated that as to the consonant allophones, stops may have fricative allophones and vice-versa. I find this true in Wano and Nggem for /b/ to have [β]. Regarding the suprasegmental features, stress falls on the final syllable.

1.2 Purposes

The purposes of this study are to: (1) Formulate Wano phonology for a better solution to its orthography, (2) record Wano phonology as a written language, and (3) give general guidelines for further write-ups of a grammar of Wano.

This research offers only a limited amount of the phonological information. But it is my hope that this study will help to shed light on some universal features pertaining to Papuan languages, particularly those that belong to the Dani-Kwerba stock.

1.3 Summary

Phones are the “[physical] realisations of the phonemes,” whilst—“[phonic] variants were referred to as allophones of the phonemes.” (Crystal 1985:228). Sixteen phonemes are found in Wano. These consist of eleven consonants and five vowels.

The consonantal phonemes consist of five bilabials: /p, b, m, v, w/, three alveolars: /t, d, n/, one palatal: /j/, one velar: /k/, and the glottal stop: '/'. The vocalic phonemes are /i, e, a, o, u/. Table 1.1 outlines Wano phonemes.
Table 1.1: **Consonants and vowels**

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>b</td>
<td>p</td>
<td>d</td>
<td>t</td>
<td>k</td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>v</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td>j</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close</td>
<td>i</td>
<td>u</td>
<td></td>
</tr>
<tr>
<td>Open-mid</td>
<td>e</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td></td>
<td></td>
<td>a</td>
</tr>
</tbody>
</table>

Table 1.2 outlines the allophones of the consonantal phonemes, consisting of at least eight bilabials: [b, p, d, t, k, b’, d’, t’, k’], seven alveolars: [p, t, n, r], two palatals: [ił, j], four velars: [k, k’, ń, ń’], and the glottal: [ʔ].

Table 1.2: **Allophonic consonants**

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implosive</td>
<td>ɓ</td>
<td>ɗ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plosive</td>
<td>b</td>
<td>p</td>
<td>d</td>
<td>t</td>
<td>k</td>
</tr>
<tr>
<td>Nasal</td>
<td>b’</td>
<td>d’</td>
<td>t’</td>
<td></td>
<td>k’</td>
</tr>
<tr>
<td>Fricative</td>
<td>m</td>
<td>n</td>
<td>ń</td>
<td>ń’</td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>w</td>
<td>r</td>
<td>j</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When symbols appear in pairs, the right-most one represents a voiceless segment.

Coalescent (or reciprocal) assimilation is found. In a construction of /NASAL + STOP/, there are allophonic variants [“b], [“d], and [“g]. In a sequence of /ALVEOLAR + j/ /ji/ and [c] occur. In adjacent phones of /STOP + w/ /p[ŋ]/, [k[ŋ]/, and [ŋ[ŋ]/ occur. A juxtaposition of /NASAL + STOP + w/ gives [ŋ[ŋ]/. These assimilations are outlined in table 1.3. Detailed discussion is given in section 6.
Table 1.3: **Coalescent assimilation of phonemic consonants**

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>mb</td>
<td>a+d</td>
<td>g</td>
</tr>
<tr>
<td>/d/</td>
<td>i</td>
<td>ç</td>
<td></td>
</tr>
<tr>
<td>/t/</td>
<td>p[w]</td>
<td>i</td>
<td></td>
</tr>
<tr>
<td>/g/</td>
<td>g[w]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/k/</td>
<td></td>
<td>y[w]</td>
<td>kw</td>
</tr>
</tbody>
</table>

When symbols appear in pairs, the right-most one represents a voiceless segment.

The allophones of the vocalic phonemes are [i, ɪ, ə, ɔ, a], as shown in table 1.4.

Table 1.4: **Allophonic vowels**

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close</td>
<td>i</td>
<td>i</td>
<td>u</td>
</tr>
<tr>
<td>Close-mid</td>
<td>e</td>
<td>ø</td>
<td>o</td>
</tr>
<tr>
<td>Open-mid</td>
<td>a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two types of diphthongs are found. The rising-diphthong occurs when the second vowel is stressed (or more sonorous), that is, [ia]. The falling-diphthong is found when the first vowel is stressed (or more sonorous), that is, [ei], [ai], [au], [oi], [ʊi], and [uɪ]. (See Crystal 1997: 117 for the notion of rising- and falling-diphthongs.)

Table 1.5: **Diphthongs**

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Central</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rising diphthong</td>
<td>ia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falling diphthongs</td>
<td>eɪ</td>
<td>ɔ ɪ</td>
<td>ʊ ɪ</td>
</tr>
<tr>
<td></td>
<td>aɪ</td>
<td>aʊ</td>
<td></td>
</tr>
</tbody>
</table>
I shall describe each phoneme with its allophone(s) based on (i) articulatory criteria of voicing, that is voiced versus voiceless, (ii) place and manner of articulation, and (iii) air mechanism, that is, with ingressive or egressive pulmonic air. The following discussion is organised with respect to sets of points of articulation.

In section 2, I present the consonantal phonemes (that is, bilabial, alveolar, palatal, and velar positions). In section 3, the glottal stop is described. Section 4 deals with the approximant segments, /w/ and /j/, pertaining to their interpretation. Some illustrations on the phonemic contrast of the consonants are given in section 5. In section 6, I then turn to the vocalic phonemes. Observations on their phonemic contrast are given in section 6.4. In section 7, phonotactics is presented under four subheadings. Section 7.1 deals with syllabification. Section 7.2 discusses sequences of vowels. Section 7.3 discusses sequences of consonants. Section 7.4 presents complex sequences. Further, in section 8, patterns of word-stress are presented. A discussion on morphophonological features is given in section 9. Finally, in section 10, adaptation of Melayu-Papua (Papuan-Malay) by the Wano phonology is discussed. At least two examples of both monosyllabic and disyllabic words are given chronologically in accordance with their (i) phonemic structure, (ii) phonetic articulation, (iii) graphemes convention, and (iv) approximate English gloss. The graphemes, printed in italics, are the ones used throughout this study as the Wano orthography. The proposed orthography is given in table 1.6.

<table>
<thead>
<tr>
<th>Table 1.6: Wano orthography</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6a VOWELS</td>
</tr>
<tr>
<td>Phonemes</td>
</tr>
<tr>
<td>/i/</td>
</tr>
<tr>
<td>/e/</td>
</tr>
<tr>
<td>/a/</td>
</tr>
<tr>
<td>/o/</td>
</tr>
<tr>
<td>/u/</td>
</tr>
</tbody>
</table>
Table 1.6: Wano orthography

### 1.6b CONSONANTS

<table>
<thead>
<tr>
<th>Phonemes</th>
<th>Allophones</th>
<th>Graphemes</th>
<th>(Morpho)phonological Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>[p]</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[p’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[p”]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[p’w]</td>
<td>p + w</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[p:]</td>
<td>p# + #t</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[b₁]</td>
<td>p# + ŋ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[b₂]</td>
<td>b</td>
<td>m + p</td>
</tr>
<tr>
<td>/b/</td>
<td>[ɓ]</td>
<td>b# + ŋ</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[b’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/m/</td>
<td>[m]</td>
<td>m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[m’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[m”]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[m: ]</td>
<td>m# + #t</td>
<td></td>
</tr>
<tr>
<td>/v/</td>
<td>[β]</td>
<td>v</td>
<td></td>
</tr>
<tr>
<td>/w/</td>
<td>[w]</td>
<td>w</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[w’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/t/</td>
<td>[t]</td>
<td>t</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[t’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[r]</td>
<td>r</td>
<td>V-V, Vt+ #V, V# + #tV</td>
</tr>
<tr>
<td></td>
<td>[d]</td>
<td>d</td>
<td>n + t, n# + #t</td>
</tr>
<tr>
<td></td>
<td>[ç]</td>
<td>c</td>
<td>t + j</td>
</tr>
<tr>
<td></td>
<td>[Ø]</td>
<td>COVERT</td>
<td>t + k</td>
</tr>
<tr>
<td>/d/</td>
<td>[d’]</td>
<td>d</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[d’’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/n/</td>
<td>[n]</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[n’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ŋ]</td>
<td>ng</td>
<td>only for n in n + k</td>
</tr>
<tr>
<td></td>
<td>[ŋ]</td>
<td>ny</td>
<td>i + n, it + n</td>
</tr>
<tr>
<td>/j/</td>
<td>[j]</td>
<td>y</td>
<td></td>
</tr>
<tr>
<td>/k/</td>
<td>[k]</td>
<td>k</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[k’]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ɣ]</td>
<td>g</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[k’w]</td>
<td>kw</td>
<td>k + w</td>
</tr>
<tr>
<td></td>
<td>[g’w]</td>
<td>gw</td>
<td>Vk + wV</td>
</tr>
<tr>
<td></td>
<td>[ŋ’]</td>
<td>ng</td>
<td>n + k</td>
</tr>
<tr>
<td></td>
<td>[ŋ’w]</td>
<td>nggw</td>
<td>n + k + w</td>
</tr>
<tr>
<td>/’/</td>
<td>[ʔ]</td>
<td>‘</td>
<td>see section 3</td>
</tr>
<tr>
<td></td>
<td>[k]</td>
<td>k</td>
<td>see section 3</td>
</tr>
<tr>
<td></td>
<td>[Ø]</td>
<td>COVERT</td>
<td>see section 3</td>
</tr>
</tbody>
</table>
2 CONSONANTAL PHONEMES

The phonemes of the bilabial set are shown in sections 2.1–2.4.

2.1 /b/

There are two allophonic variants of the phoneme /b/, which are [b] when found in the position of #b (2.1a)–(2.1d) and VbV (2.1e)–(2.1h), and [b’] when in the position of b# (2.1i)–(2.1k).

(2.1) a. /bu/ [bu] bu ‘unwilling’
   b. /bok/ [bɔk’] bok ‘good’
   c. /ba.ki/ [ba’yi] bagi ‘K.O. cuscus’
   d. /bo.nko/ [bɔ’ŋgo] bonggo ‘crab’
   e. /ba.bo/ [bɔ’bɔ] babo ‘K.O. tree’
   f. /na.bi/ [na.bi] nabi ‘dream’
   g. /te bona/ [te’bɔn] tebon ‘fly (N)’
   h. /nke bak/ [nɛ̃’bɔk’] nggebak ‘canoe’
   i. /mi tib/ [mi’rib’] mirib ‘Mirib (PN)’
   j. /do nko/ [dɔ’ŋɡɔb’] donggob ‘wild chicken’
   k. /na neb/ [na’nɛb’] naneb ‘you (pl) eat (imperative)’

2.2 /p/

There are two allophonic variants of the phoneme /p/, which are [p] when in the positions of #p (2.2a)–(2.2d) and VpV (2.2e)–(2.2g), and [p’] when in the position of p# (2.2h)–(2.2k).

(2.2) a. /pit/ [pit’] pit ‘K.O tree’
   b. /pou/ [pɔw] pou ‘short’
   c. /po de/ [pɔ’de] pode ‘thin’
   d. /pa vuk/ [pa’βuk’] pavuk ‘bush’
   e. /a pu/ [a’pu] apu ‘desire to consume’
   f. /a pik/ [a’pik’] apik ‘all’
   g. /tu pu/ [tu’pu] tupu ‘K.O. tree’
   h. /ap/ [ap’] ap ‘people/person/man’
   i. /dip/ [di’p] dip ‘K.O. pandanus’
   j. /a nkup/ [a’ŋɡup’] anggup ‘pulp’
   k. /a nkop/ [a’ŋɡɔp’] anggop ‘tip’
2.3 /m/

The phoneme /m/ occurs as [m] in all environments. Thus it is found in the environments of 
\( \#m \) (2.3a)–(2.3d), \( VmV \) (2.3e)–(2.3g) and \( m\# \) (2.3h)–(2.3k).

(2.3) a. ./ma/ [ma] ma 'don’t (prohibitive)'
   b. ./mek/ [mek] mek ‘impossible’
   c. ./ma.de/ [ma’dɛ] made ‘arrow’
   d. ./mo.no/ [mo’no] mono ‘like that’
   e. ./da.mit/ [da’mit] damit ‘horse fly’
   f. ./di.mit/ [di’mit] dimit ‘necklace’
   g. ./na.mok/ [na’mɔk] namok ‘porcupine’
   h. ./wom/ [wɔm] wom ‘(domestic) pig’
   i. ./yum/ [yum] yum ‘net bag’
   j. ./ta.vom/ [tæ’ɔm] tavom ‘K.O. bird’
   k. ./ku.vem/ [kʊ’ɛm] kwem ‘afternoon’

2.4 /v/

The phoneme /v/ occurs as [β] in all environments. Thus it is found in environments of \( \#v \) 
(2.4a), \( VvV \) (2.4b)–(2.4e) and \( v\# \) (2.4f).

(2.4) a. ./vi.ju/ [βi’ju] viyu ‘fawn-breasted bower bird’
   b. ./e.ve/ [ɛ’βe] eve ‘body’, ‘also’
   c. ./ta.vi/ [tæ’βi] tavi ‘rain’
   d. ./ko.vu/ [kɔ’βu] kovu ‘tomorrow’
   e. ./di.vud/ [di’βud] divud ‘K.O. tree’
   f. ./duv/ [ɗuβ] duv ‘K.O. tree’
   g. ./a.wiv/ [a’wiβ] awiv ‘K.O. tree’

2.5 /w/

See section 4 for a more detailed discussion of approximants.

The phonemes of the alveolar set are shown in sections 2.6–2.8.

2.6 /d/

There are two allophonic variants of the phoneme /d/, which are [d] when in the 
environments of \( \#d \) (2.5a)–(2.5d) and \( VdV \) (2.5e)–(2.5h), and [d’] when in the 
environment of \( d\# \) (2.5i)–(2.5l).
(2.5) a. /de/ [dɛ] de ‘cry’
b. /dem/ [dɛm] dem ‘K.O. tree’
c. /da.ku/ [daˈyu] dagu ‘pandanus’
d. /do.nkob/ [dɔ̃ɡɔb] donggob ‘wild chicken’
e. /a.dom/ [aˈdom] adom ‘root’
f. /a.di/ [aˈdi] adi ‘treasure’, ‘secret’
g. /mu.di/ [muˈdi] mudi ‘leech’
h. /ke.de/ [keˈde] kede ‘rattan’
i. /t̚id/ [t̚id] tid ‘pig’s snout’
j. /baid/ [baˈd] baid ‘cuscus’
k. /deid/ [dɛˈd] deid ‘banana’
l. /mpo.wid/ [mboˈwid] mbowid ‘Mbowid (PN)’

2.7 /t/
There are three allophonic variants of the phoneme /t/, which are [t] in the environment of #t (2.6a)–(2.6d), [r] when VtV (2.6e)–(2.6h), and [t’] when in the environment of t# (2.6i)–(2.6l).

(2.6) a. /tu/ [tu] tu ‘path’
b. /tid/ [t̚id] tid ‘pig’s snout’
c. /ta.vo/ [taˈβɔ] tavo ‘tobacco’
d. /te.ben/ [teˈβen] teven ‘bat’
e. /bi.ti/ [biˈri] biri ‘white’
f. /bi.tu/ [biˈru] biru ‘lake’
g. /e.tuk/ [eˈrʊk] eruk ‘hair’
h. /ja.tak/ [jaˈrak] yarak ‘harvested garden’
i. /it/ [iˈt] it ‘they’
j. /kat/ [kaˈt] kat ‘you’
k. /ti.kit/ [tiˈɣit] tigit ‘K.O. tree’
l. /mpi.nit/ [mʼbiˈnit] mbinit ‘sand’

2.8 /n/
There are two allophonic variants of /n/, which are [n] and [n]. The variant [n] is found in all positions. Thus, it is found in the environments of #n (2.7a)–(2.7c), VnV (2.7d)–(2.7g), and n# in (2.7h)–(2.7k).
2.7 /ni/ [ni] ni ‘other’
b. /nit/ [nit] nit ‘we’
c. /na.kwan/ [nʌ'yan] nagwan ‘lord’
d. /o.ne/ [o'ne] one ‘voice’, ‘sound’
e. /a.nop/ [a'nop] anop ‘head’
f. /na.no/ [na'no] nano ‘what’
g. /ke.na/ [ke'na] kena ‘three’
h. /en/ [en] en ‘sugar cane’
i. /nkwen/ [ŋ'gen] nggwen ‘earth’
j. /di.an/ [di'an] dian ‘blood’
k. /a.nken/ [a'gen] anggen ‘fruit’

The variant [n] is found in the environment of $Vn#$ when the $V$ is either [i] (2.8a)–(2.8c) or [u] (2.8d)–(2.8f).

2.8 a. /min/ [mɪn] min ‘cold’
b. /oin/ [ɔ'ɪn] oin ‘husband’
c. /wein/ [we'ɪn] wein ‘bayan tree’
d. /wun/ [wʊn] wun ‘ash’
e. /i.nom/ [i'nɔm] inyom ‘with’
f. /wu.nom/ [wʊ'nɔm] wunyom ‘up high’

The /n/ remains [n] intervocalically, i.e., $VnV$, when both vowels are close vowels in a sequence of either /i + i/ (2.9a), /i + u/ (2.9b), /u + i/ (2.9c), or /u + u/ (2.9d).

2.9 a. /mpi.nit/ [mbi'nit] mbinit ‘inside’
b. /i.nu/ [i'nʊ] inu ‘sand’
c. /mu.ni/ [mu'nɨ] muni ‘that’
d. /pu.nu/ [pu'nʊ] punu ‘K.O. pigeon’

2.9 /j/
See section 4 for a more detailed discussion of approximants.

The phoneme of the velar set is shown in section 2.10.

2.10 /k/
There are three allophonic variants of the phoneme /k/, which are [k] when found in the environment of $#k$ (2.10a)–(2.10d), [ɣ] when in the environment of $VkV$ (2.10e)–(2.10h) and [k¿] when in the environment of $k#$ (2.10i)–(2.10l).
(2.10) a. /kit/ [kit'] kit ‘you(pl)'
b. /kup/ [kup'] kup ‘dark’
c. /ka.bi/ [ka'bi] kabi ‘iguana’
d. /ku.kwi/ [ku'yi'i] kugwi ‘witch’
e. /te.ken/ [te'yen] tegen ‘K.O. palm tree’
f. /ta.ket/ [ta'yet'] taget ‘spider’
g. /ju.kum/ [ju'yum] yugum ‘stone’
h. /ku.kup/ [ku'yup'] kugup ‘thick’
i. /jak/ [jak'] yak ‘after’, ‘afterward’
j. /mek/ [mek'] mek ‘impossible’
k. /wa.dik/ [wa'dik'] wadik ‘abandoned garden’
l. /ma.duk/ [ma'duk'] maduk ‘bad’, ‘evil’

3 GLOTTAL STOP

Only one member of the glottal set, that is, the phoneme ‘/, is found. The ‘/ usually only occurs in word-final position. It is possible in word medial position only when a word is inflected.

There are two things that need to be considered concerning the phonetic realisation of ‘/. First, we need to consider the variations in its allophonic expression, that is, [ʔ], [k’], or zero. (Bear in mind that zero realisation, indicated here by Ø, is not an allophone. The symbol Ø simply refers to the elision of ‘/.) Second, we need to consider its semantic function pertaining to its phonetic variants.

At the first impression, the realisation of ‘/ seems to be heavily dependent on the speaker. However, thorough observation suggests otherwise. There are at least six variations of ‘/ relating to its phonetic realisations as [ʔ], [k’], or Ø, as well as in some cases differences of meaning. Here, such variations are referred to as types 1–6. When present, they will determine whether the word with [ʔ] has the same meaning as or different meaning from its counterpart variants, that is, the same word with [k’] or Ø.

Table 3.1 outlines some constraints of ‘/ in word-final position pertaining to its phonetic realisation as [ʔ], [k’], and Ø. The following conventions read: = same meaning, ≠ different meaning, × versus or contrasts with, ~ fluctuates with, same meaning, ≈ fluctuates with, different meaning, and * not attested.
Table 3.1: Variant realisations of glottal stop in word-final position

<table>
<thead>
<tr>
<th>Realisation type</th>
<th>Variant realisations</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ k']</td>
<td>Ø</td>
</tr>
<tr>
<td>1</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td>2</td>
<td>~</td>
<td>×</td>
</tr>
<tr>
<td>3 /' / → ?</td>
<td>×</td>
<td>~</td>
</tr>
<tr>
<td>4</td>
<td>*</td>
<td>~</td>
</tr>
<tr>
<td>5</td>
<td>*</td>
<td>≈</td>
</tr>
<tr>
<td>6</td>
<td>≈</td>
<td>≈</td>
</tr>
</tbody>
</table>

Based on table 3.1, the following discussion is sufficient to demonstrate that [?] and [k'] are the allophones of the phoneme /' / when used in context, while at the same time it is possible to have Ø as well.

In Type 1, /' / is realised in free fluctuation with [?], [k'], and Ø. Given that, a word can be pronounced with either /[...?]#/ /[...k']#/ or /[...Ø]#/ without changing the meaning of the word. For example, the word for ‘be afraid of’ and the elevative deictics for ‘up’ and ‘down’ vary in their articulations.

(3.1) a. [ei?] ~ [eikut] ~ [e] ‘up’
    b. [o?] ~ [o'kut] ~ [o] ‘down’
    c. [i'di?] ~ [i'dikut] ~ [i'di] ‘be afraid of’

Type 2 illustrates that /' / of a same word is realised [?] ~ [k'] × Ø. Thus fluctuation occurs between [?] and [k'], but not with Ø. The latter conveys a different meaning. In terms of articulation, the formula /' / → [?] ~ [k'] × Ø is attested. In terms of meaning, [...?] = [...k'] ≠ Ø is the formula.

(3.2) a. [i'ru?] ~ [i'ruk'] × [i'ru] ‘hot’ × ‘hole’

Type 3 is the mirror image of type 2. Thus, /' / → [?] ~ Ø × [k'] in terms of articulation, and [...?] = Ø ≠ [...k'] in terms of meaning.

(3.3) a. [ja?] ~ [ja] × [jak'] ‘steal’ × ‘now’
    b. [a'ja?] ~ [a'ja] × [a'jak'] ‘awesome’ × ‘breast’
    c. [a'mo?] ~ [a'mø] × [a'møk'] ‘palm’ × ‘fat’
The elevative\textsuperscript{17} deictic ‘down’ in (3.1b) is sometimes found in type 3, since [s\textsuperscript{uk}'] may refer to a kind of bird as well as to ‘down’.

The fluctuation between [?] and Ø, as shown in type 4, is the most common one. In such a paradigmatic relation, there is no occurrence with [k']. The formula is: /’/ → [?] ~ Ø * [k'] and […?] = Ø * [k'].

\begin{align*}
(3.4) & \quad \text{a. } \text{[b\textsuperscript{e}']} \approx \text{[b\textsuperscript{e}]} * \text{[b\textsuperscript{ek}']} \quad \text{‘small’} \times * \\
& \quad \text{b. } \text{[”b\textsuperscript{e}’]} \approx \text{[”b\textsuperscript{e}]} * \text{[”b\textsuperscript{ek}']} \quad \text{‘secret’} \times * \\
& \quad \text{c. } \text{[i\textsuperscript{ni}di’]} \approx \text{[i\textsuperscript{ni}di]} * \text{[i\textsuperscript{ni}di’]} \quad \text{‘name’} \times * \\
& \quad \text{d. } \text{[ta\textsuperscript{e}’]} \approx \text{[ta\textsuperscript{e}]} * \text{[ta\textsuperscript{ek}']} \quad \text{‘lightning’} \times *
\end{align*}

In a speech community, we may come across expressions like [a'pu] ~ [a'pu’], meaning ‘desire to consume’, but never *[a'puk’]. Likewise, we may find [a'gya] ~ [a'gya’] ‘upset’, but *[a'gyak’] is not attested. For non-native speakers of Wano, the presence of the glottal stop is hardly heard; only when the enclitic =o ‘PAUS’ occurs is it clearly audible: for example, [a'puo] versus [a'puo’].

Type 5 exemplifies the presence and absence of the glottal stop bearing phonemic functions, whilst [k’] is not possible. The formulas are: /’/ → [?] = Ø * [k’] and […?] ≠ Ø * […k’].

\begin{align*}
(3.5) & \quad \text{[ma?] } \approx \text{[ma]} * \text{[mak’]} \quad \text{‘vomit’} \times \text{‘sacred’} \times *
\end{align*}

Finally, type 6 demonstrates that all three phonetic expressions are possible in conveying different semantics.

\begin{align*}
(3.6) & \quad \text{[wu?] } \approx \text{[wu]} \approx \text{[wuk’]} \quad \text{‘moth’} \times \text{‘cowrie’} \times \text{‘battle cry’}
\end{align*}

Type 6 as illustrated in (3.6) is, however, dubious. The reason being, that the expression for ‘battle cry’ is often realised with [?] instead of [k’]. Thus, [wu?] can be either ‘moth’ or an interjection to express a battle cry. The difference here is [wuk’] is the artificial form, while [wu?] is the actual phonetic expression. This is to say that, when talking about ‘battle cry’ either in a discourse or in artificial data elicitation, the form with [k’] is expressed. On the other hand, when it is orally expressed in a direct speech, the form with [?] is produced.

\textsuperscript{17} The term elevative is used to refer to elevational deictics which is a set of two-term systems – ‘up’ and ‘down’.
4 APPROXIMANTS /W/ AND /J/

The phonetic glides [w] and [j] may be interpreted as either consonants, /w/ and /j/, or vowels, /u/ and /i/. Thus, something like (4.1) and (4.2) are permissible:

(4.1) a. /#wV/ or /#uV/
    b. /VwV/ or /VuV/
    c. /Vw#/ or /Vu#/ 

(4.2) a. /#jV/ or /#iV/
    b. /VjV/ or /ViV/
    c. /Vj#/ or /Vi#/ 

If we base our analysis on (4.1a), for example, then the term for expressing ‘gratitude’ in Wano can be /wa/ or /ua/ and ‘cowrie’ can be /wu/ or /uu/. Likewise, referring to (4.2a), the word for ‘axe’ can be /je/ or /ie/ and ‘this’ can be either /ji/ or /ii/. In the medial position, the possessive form for ‘his cowrie’ can be /awu/ or /auu/ (see [4.1b]), and ‘spirit’ /aju/ as well as /aiu/ (see [4.2b]). In the final position, the elevative deictic ‘down’ can either be /ow/ or /ou/ (see [4.1c]), and ‘up’ can be /ej/ or /ei/ (see [4.2c]). In this section I will discuss possibilities to disambiguate /w/ and /j/ from /u/ and /i/.

Let me begin with their configurational properties. In word-initial position, Wano allows phonemic contrast between /w/ and /u/, since the word for ‘hawk’ is /wu/ while /wu/ is ‘cowrie’. Clearly, the term for ‘hawk’ is realised with the vocalic close-back rounded [u], and the term for ‘cowrie’ with [u] following the frictionless continuant [w], which yields [wu]. Such contrast holds for /j/ and /i/ as well.18 We have yi ‘this’ versus i ‘water’. Here, the term for ‘water’ is expressed simply by the vocalic close-front unrounded [i], as opposed to yi ‘this’ where the frictionless continuant [j] precedes the vowel, thus yielding [ji].

It is then appropriate to orthographically represent [wu] as /wu ‘cowrie’ and not /uu, as well as /ji/ as yi ‘this’ and not ii. Consider further examples below where /w/, given in (4.3), and /j/, in (4.4), precede a vowel. The asterisk indicates the undesirable form.

18 The approximant /j/ is produced with notable friction, but very softly, given that /j/ is, more or less, [z], a voiced alveo-palatal fricative (IPA: voiced alveolo-palatal median laminal fricative, Pullum and Ladusaw 1996:204), rather than merely an approximant. When occurring intervocically, the quality of friction is stronger, making it sound somewhere in between [j] and [j]. In this study, I will treat it as a voiced palatal approximant.
(4.3) a. /wu/ [wu] wu * uu ‘cowrie’
b. /we/ [we̞] we * ue ‘he/she/it comes’
c. /wi/ [wi] wi * ui ‘plural marker’
d. /wo/ [wɔ] wo * uo ‘soft’

(4.4) a. /ju/ [ju] yu * iu ‘they say’
b. /je/ [je] ye * ie ‘axe’
c. /ji/ [ji] yi * ii ‘this’
d. /jo/ [jɔ] yo * io ‘steal’

Contrast sequence in (4.3) and (4.4) with (4.5a), (b), (c), and (d), respectively.

(4.5) a. /u/ [u] u ‘hawk’, ‘desire’
b. /e/ [e] e ‘wood’, ‘tree’
c. /i/ [i] i ‘water’
d. /o/ [ɔ] o ‘place’

Evidence can also be found in word-medial position. There is phonemic contrast between /VwV/ and /VjV/ and /ViV/. Here, a clear distinction is audible with respect to the suprasegmental feature as well, in which primary stress falls on the final syllable in the following contrastive words.

(4.6) a. /a.wi/ [a'wi] awi *awi ‘house’
b. /ta.we/ [ta'we] tawe *tae ‘young’

(4.7) a. /a.je/ [a'je] aye *aie ‘penis’
b. /ta.je/ [ta'je] taye *taie ‘light’

Contrast the forms in (4.6) and (4.7) with (4.8a) and (b), respectively.

(4.8) a. /a.i/ [a'i] ai ‘eternal’
b. /ta.e/ [ta'e] tae ‘lightning’

In word-final position, however, such contrastive features are not possible. The problem for Vw# ~ Vu# (in 4.1c) and Vj# ~ Vi# (in 4.2c) remains unsolved, since the elevative deictic ‘down’ can be [ou] as well as [ow] (see [4.1c]) and ‘up’ can either be [ei] or [ej] (see [4.2c]). However, as has been pointed out in section 3, such deictics freely fluctuate with /k/ and ‘/’ in their phonetic realisation, that is, [ouk] ~ [ou?] and [eik] ~ [ei?]. The conventions ou ‘down’ and ei ‘up’ are preferred to ow and ej. Choosing the latter will provide us with the addition of CC-sequence in the coda.
position: owk ~ ow’ and ejk ~ ej’, whereas in sections 7 and 8 it will be clear that CC-sequence is not a permissible constituent in the coda position.

For such reasons, I conclude that the contrast between /w/ and /j/ with their vocalic counterparts /u/ and /i/ is neutralised in the word-final position. Therefore occurrences of any [w] or [j] in word-final position are considered to be vowels and are written as u and i, respectively.

Thus, the phonetic glides [w] and [j] are approximants /w/ and /j/ when found in word-initial and medial positions before a vowel. They are written orthographically as w and y. In word-final position, they are neutralised and are written u and i.\(^\text{19}\)

5 CONTRAST OF PHONEMIC CONSONANTS

Nearly minimal pairs, displaying the least contrast between phonemic consonants, are given in all possible distributions (initially, medially or intervocally, and finally) of each phoneme. Contrast between bilabial phonemes is given in section 5.1, and contrast of alveolar phonemes in section 5.2.

5.1 Contrast within bilabial phonemes

The contrast between /b/ and /p/ word-finally is either neutralised to [p'] or is hardly noticeable between [b'] and [p']. There is only one example found regarding contrast between /m/ and /v/ in word-final position (see wom ‘domestic pig’ [5.2c] and awiv ‘K.O. tree’ [5.8c]).

(5.1) /b/ /p/
   a. bu ~ bu’ ‘unwilling’ pu ‘to blow’
   b. a.but ‘child of male’ a.pu ‘desire to consume’
   c. wab ‘time’ ap ‘person’

(5.2) /b/ /m/
   a. be ‘small’, ‘little’, ‘few’ me ‘and’
   b. a.but ‘child of male’ a.mok ‘fat’
   c. wab ‘time’ wom ‘domestic pig’

(5.3) /b/ /v/
   a. be ‘small’, ‘little’, ‘few’ ve ‘lift up’
   b. ta.bi ‘K.O. vegetable’ ta.vi ‘rain’

\(^{19}\) For details on the notion of ‘neutralisation’, see Akamatsu 1988.
(5.4) 
<table>
<thead>
<tr>
<th>/b/</th>
<th>/w/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. bu ~ bu’ ‘unwilling’</td>
<td>wu, wu’ ‘cowrie’, ‘moth’</td>
</tr>
<tr>
<td>b. ta.bi ‘K.O. vegetable’</td>
<td>ta.we ‘young’</td>
</tr>
</tbody>
</table>

(5.5) 
<table>
<thead>
<tr>
<th>/p/</th>
<th>/m/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. pit ‘K.O. tree’</td>
<td>min ‘wet’</td>
</tr>
<tr>
<td>b. a.pik ‘all’</td>
<td>da.mit ‘horse fly’</td>
</tr>
</tbody>
</table>

(5.6) 
<table>
<thead>
<tr>
<th>/p/</th>
<th>/v/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. bu ~ bu’ ‘unwilling’</td>
<td>vi ‘mute’</td>
</tr>
<tr>
<td>b. a.but ‘child of male’</td>
<td>a.vud ‘abdomen’</td>
</tr>
</tbody>
</table>

(5.7) 
<table>
<thead>
<tr>
<th>/p/</th>
<th>/w/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. pa.vuk ‘bush’</td>
<td>wa.vud ‘snake’</td>
</tr>
<tr>
<td>b. a.but ‘child of male’</td>
<td>a.wu ‘his/her cowrie’</td>
</tr>
</tbody>
</table>

(5.8) 
<table>
<thead>
<tr>
<th>/m/</th>
<th>/v/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. me ‘and’</td>
<td>ve ‘lift up’</td>
</tr>
<tr>
<td>b. ma.duk ‘bad’, ‘evil’</td>
<td>va.vud ‘character’</td>
</tr>
<tr>
<td>c. wom ‘domestic pig’</td>
<td>a.wiv ‘K.O. tree’</td>
</tr>
</tbody>
</table>

(5.9) 
<table>
<thead>
<tr>
<th>/m/</th>
<th>/w/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. me ‘and’</td>
<td>we ‘he/she/it comes’</td>
</tr>
<tr>
<td>b. a.mu ‘home’</td>
<td>a.wu ‘his/her cowrie’</td>
</tr>
</tbody>
</table>

(5.10) 
<table>
<thead>
<tr>
<th>/v/</th>
<th>/w/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. a.vud ‘abdomen’</td>
<td>a.wot ‘his/her younger sibling ss’</td>
</tr>
<tr>
<td>b. da.vo ‘rack’</td>
<td>a.wo ‘still’, ‘not yet’</td>
</tr>
</tbody>
</table>

### 5.2 Contrast within alveolar phonemes

The contrast between /d/ and /t/ word-finally is either neutralised to [t'] or is hardly noticeable between [d’] and [t’].

(5.11) 
<table>
<thead>
<tr>
<th>/d/</th>
<th>/n/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. du ‘down-steep’</td>
<td>tu ‘path’</td>
</tr>
<tr>
<td>b. tid ‘pig’s snout’</td>
<td>mbit ‘moon’</td>
</tr>
</tbody>
</table>

(5.12) 
<table>
<thead>
<tr>
<th>/d/</th>
<th>/n/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. de ‘cry’</td>
<td>ne ‘specific topic marker’</td>
</tr>
<tr>
<td>b. ke.de ‘rattan’</td>
<td>e.ne ‘belonging’</td>
</tr>
<tr>
<td>c. deid ‘banana’</td>
<td>wein ‘bayan’</td>
</tr>
</tbody>
</table>
The phonemic properties of Wano vowels are /i, e, a, o, u/. These are the only permissible segments used to construct a nucleus and to bear primary stress in a syllable structure. All Wano vowels are found word-initially (—/#V), medially (—/CVC), and finally (—/V#), as well as in a minimal free form (—/#V#). This is to say that a vocalic phoneme, which is composed of a single nucleus, can be construed as a morphological word, taking for granted that, “…a word is the smallest unit that can exist on its own.” (Spencer 1991:43). The distribution of Wano vowels follows.

### 6.1 The phoneme /i/

The phoneme /i/ is found in the following environments: #i# (6.1a), #i (6.1b), i# (6.1c) and (6.1d), and CiC (6.1e) and (6.1f).

(6.1) a. /i/ [i] i ‘water’
b. /it/ [iːt] it ‘they’
c. /vi/ [vi] vi ‘mute’
d. /ni/ [ni] ni ‘as such’
e. /kin/ [kin] kin ‘visible’
f. /mpit/ [‘mbit] mbit ‘moon’

When /i/ is not a nucleus of a syllable that bears primary stress, it is sometimes articulated in free fluctuation with the centralised front-close vowel: [i].21 (see (6.2) as opposed to (6.3)).

(6.2) /i/ → [i] ~ [i] / σ ‘σ  
|                 |  i (C)CV

| a. /i.no/      | [i'nɔ] ~ [i'nɔ]  inyo ‘bread fruit’
| b. /i.ntu/     | [i'ndu] ~ [i'ndu] indu ‘fire’

---

20 See Dixon and Aikhenvald (2002b:1–14) for the definitions of a grammatical and phonological word.
21 IPA: Near-close, near-front unrounded (Pullum and Ladusaw 1996:87)
6.2 The phoneme /e/

The phoneme /e/ is found in the following environments: #e# (6.4a), #e (6.4b), e# (6.4c) and (6.4d), and CeC (6.4e) and (6.4f).

(6.4) a. /e/ [e] e 'wood', 'tree'
b. /en/ [en] en 'sugar cane'
c. /te/ [te] te 'he/she intends'
d. /ka.ne/ [ka'ne] kane 'firewood'
e. /dem/ [dɛm] dem 'K.O. tree'
f. /te.ben/ [te'bɛn] teben 'bat'

When /e/ is an interconsonantal (i.e., C1eC2) where C1 is a plosive and C2 is a liquid, the phoneme is realised as [ə].

(6.5) /ni.mpe.te/ [ni'bɔ're] nimbere 'two'

When preceding a sequence of consonants (i.e., eC1C2), both allophones [e] and [ə], are realised in free fluctuation.

(6.6) a. /e.mpet/ [ɛ'mbet] ~ [ə'mbet] embet 'sharp'
b. /e.nka/ [e'ŋga] ~ [ə'ŋga] engga 'leaf'

6.3 The phonemes /a/, /o/, and /u/

The phonemes /a/, /o/, and /u/ are found in the following environments: #V# (6.7a), (6.8a), and (6.9a), #V (6.7b), (6.8b), and (6.9b), V# (6.7c) and (6.7d), (6.8c) and (6.8d), (6.9c) and (6.9d), and CVC (6.7e) and (6.7f), (6.8e) and (6.8f), (6.9e) and (6.9f).

(6.7) The phoneme /a/
a. /a/ [a] a 'ah (interjection)'
b. /an/ [an] an 'I'
c. /nta/ [nda] nda 'here'
d. /pe.ka/ [pɛ'ya] pega 'K.O. fish'
e. /kat/ [kat] kat 'you(sg)'
f. /ja.tak/ [ja'rak] yarak 'harvested garden'
(6.8) The phoneme /o/
   a. /o/        [ɔ]        o                  ‘place’
   b. /op/       [ɔp']       op               ‘finished’
   c. /ntɔ/      [ⁿɗɔ]       ndo              ‘cave’
   d. /a.mo/     [ᵃ'mɔ]       amo              ‘palm’
   e. /mot/      [ᵐɔt']       mot              ‘short’
   f. /a.nkɔp/   [ᵃⁿ'ɡɔp']   anggɔp          ‘tip’

(6.9) The phoneme /u/
   a. /u/        [ʊ]        u                  ‘hawk’, ‘desire’
   b. /u'.jak/   [ʊ'jək']   u'jak            ‘K.O. bird’
   c. /wu/       [wʊ]       wu                ‘cowrie’
   d. /jo.ku/    [jə'yu]    yuɡu             ‘K.O. dove’
   e. /jʊd/      [jʊd']     yud               ‘tucan’
   f. /wæ.vud/   [wæ'vʊd']  wavud            ‘snake’

6.4 Contrast within vocalic phonemes

The nearly minimal pairs below illustrate the phonemic contrast of the Wano vowels in terms of their distribution.

(6.10) /i/              /e/
   a. i             ‘water’     e             ‘wood’, ‘tree’
   b. it            ‘they’      en            ‘sugarcane’
   c. wim          ‘arrow’     wem          ‘cricket’
   d. wi           ‘NOMINAL PLURAL’  we       ‘he/she/it comes’

(6.11) /i/              /a/
   a. i             ‘water’     a             ‘ah (interjection)’
   b. it            ‘they’      at            ‘he/she/it’
   c. wim          ‘arrow’     wab           ‘time’
   d. wi           ‘NOMINAL PLURAL’  wa       ‘greeting (interjection)’

(6.12) /i/              /o/
   a. i             ‘water’     o             ‘place’
   b. it            ‘they’      op            ‘finished’
   c. wim          ‘arrow’     wom          ‘domestic pig’
   d. wi           ‘NOMINAL PLURAL’  wo       ‘soft’

(6.13) /i/              /u/
   a. i             ‘water’     u             ‘hawk’, ‘desire’
   b. it            ‘they’      ut            ‘moss’
   c. wim          ‘arrow’     wun          ‘ash’
   d. wi           ‘NOMINAL PLURAL’  wu       ‘cowrie’
For the contrast among /e/, /a/, /o/, and /u/, see examples in (6.10a)–(6.10d) for /e/, (6.11a)–(c) for /a/, (6.12a)–(d) for /o/ and (6.13a)–(d) for /u/, respectively.

7 PHONOTACTICS

To discuss the definition of a well-formed phonological word (see Dixon and Aikhenvald 2002b:1–41), as indicated in section 1, the phonemes /b, p, m, v, d, t, n, k/ are found in initial, medial, and final positions. There is only one example of /v/ occurring in word-final position, that is, *awiv* ‘k.o. tree’. The phonemes /w/ and /j/ are not found in word-final position. Thus the sequences of */(C)CVw/ or */(C)CVj/ are not allowed. The glottal stop occurs only in word-final position. Section 7.2 describes sequences of vowels and section 7.3 describes sequences of consonants.

7.1 Syllabification

The structure of the syllable in Wano may be diagrammed as: (C)V(C), where the initial C could consist of one consonant or sequences of two or three consonants. This allows for eight syllable types: V(C), CV(C), CCV(C), CCCV(C), as shown in (7.1). In disyllabic words, the heavy-syllable22 is not found in the initial position.

(7.1) a. V /i/ \[i\] i ‘water’
b. CV /tu/ [tu] tu ‘path’
c. CCV /nka/ *[ŋa] ngga ‘where’
d. CCCV /nkwe/ *[ŋwɛ] nggwe ‘sound of pig’
e. VC /ut/ [ut’] ut ‘moss’
f. CVC /kat/ [kat’] kat ‘you(sg)’
g. CCVC /ntuk/ [*duk’] nduk ‘thunder’
h. CCCVC /nkwen/ *[ŋwɛn] nggwen ‘earth’

Vowels are the only permissible segments to construe a nucleus, that is, the central segment of the syllable. All consonants can occur as either an onset or a coda, except /w/ and /j/ which do not occur in the coda position (see section 4). As can be seen in (7.1), sequences of consonants are not possible in the coda position. Regarding syllable onset of (C)CC-sequence, the four corollaries follow.

Corollary 1: In the C₁C₂V(C) type, C₁ is a nasal (/m/ or /n/) and C₂ can be /p/, /t/, or /k/, yielding prenasalised segments as outlined in figure 7.1.

Corollary 2: Still, in the C₁C₂V(C) type, C₁ can be /p/ or /k/ and C₂ is a bilabial approximant /w/, yielding labialised segments. In the layered structure, corollary 2 appears to be a mirror image of corollary 1 as captured in figure 7.2.

22 For definition see Crystal 1997: 417–418.
Corollary 3: Likewise, in the \( C_1C_2V(C) \) type, \( C_1 \) can be /t/ or /d/ and \( C_2 \) is the palatal approximant /j/, as shown in figure 7.3.

Corollary 4: The type \( C_1C_2C_3V(C) \) is highly restricted to /nkw/ sequences, as given in figure 7.4.

\[
\begin{array}{c}
\sigma \\
\text{C}_1 \quad \text{C}_2 \\
/ m, n / \quad / p, t, k /
\end{array}
\]

\[
\begin{array}{c}
\sigma \\
\text{C}_1 \quad \text{C}_2 \\
/ p, k / \quad / w /
\end{array}
\]

Figure 7.1: Prenasalised segments

\[
\begin{array}{c}
\sigma \\
\text{C}_1 \quad \text{C}_2 \\
/ t, d / \quad / j /
\end{array}
\]

\[
\begin{array}{c}
\sigma \\
\text{C}_1 \quad \text{C}_2 \quad \text{C}_3 \\
/ n / \quad / k / \quad / w /
\end{array}
\]

Figure 7.3: Palatalised segments

7.2 Sequences of vowels

Sequences of vowels are outlined in table 7.1

<table>
<thead>
<tr>
<th>( V_1 )</th>
<th>( V_2 )</th>
<th>/i/</th>
<th>/e/</th>
<th>/a/</th>
<th>/o/</th>
<th>/u/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/i/</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>/e/</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>/a/</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>/o/</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>/u/</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

A word consisting of two juxtaposed vocalic segments \( (V_1V_2) \) can either be analysed as a monosyllabic word, thus construing a diphthong (as given in table 1.5), or as a
disyllabic word. What distinguishes the two is determined by where the stress is located in the word. If the stress falls on V₁, the vocalic sequence is a diphthong. When V₂ is more prominent than V₁, then the sequence comprises two syllables. For instance, a deictic word /ei/ ‘up’ is realised with the stress on V₁, [‘ei], but when artificially contrasted by locating stress on V₂, it is rejected: *[‘i]. This gives us an onset-less monosyllabic word with a diphthong as its nucleus. On the other hand, a morphologically derived proper noun /jei/ ‘Yei’ is realised with the stress on V₂, thus: [jei]. This realisation suggests a disyllabic word, of which the first syllable employs /e/ as its nucleus, whilst the last syllable has /i/. In this instance, we have evidence of a vocalic sequence: /ei/.

When constructing a single syllable, the sequences /ia/ and /au/ are not attested. Consider the contrast given in figures 7.5 and 7.6 with their examples in (7.2) and (7.3) respectively.

<table>
<thead>
<tr>
<th></th>
<th>syllable nuclei</th>
<th></th>
<th>syllable nuclei</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V₁ V₂ construing one nucleus</td>
<td></td>
<td>V₁ V₂ construing two nuclei</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>i + a</td>
<td>*</td>
<td>σ</td>
<td>σ</td>
</tr>
<tr>
<td>b.</td>
<td>e + i</td>
<td>/ei/</td>
<td>’ei’</td>
<td>ei</td>
</tr>
<tr>
<td>c.</td>
<td>a + i</td>
<td>/kaid/</td>
<td>’kaid’</td>
<td>kaid</td>
</tr>
<tr>
<td>d.</td>
<td>a + u</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>o + i</td>
<td>/nkoid/</td>
<td>[ŋkau]</td>
<td>ngkoid</td>
</tr>
<tr>
<td>f.</td>
<td>o + u</td>
<td>/ou/</td>
<td>[ɔ]</td>
<td>ou</td>
</tr>
<tr>
<td>g.</td>
<td>u + i</td>
<td>/a.bui/</td>
<td>[a’bui]</td>
<td>abui</td>
</tr>
</tbody>
</table>

---

23 Here, in a disyllabic word, we have evidence of a vocalic sequence. V₁ is then a nucleus of syllable initial, and V₂ is a nucleus of syllable final. The first syllable will always be a light-syllable.
(7.3) \( V_1 V_2 \) construing two nuclei

a. \( i + a \) \(/di.an/\) \([di'an]\) \( dian\) \( 'blood' \) (see [2.7j])
b. \( e + i \) \(/je.i/\) \([je'i]\) \( yei\) \( 'Yei'\)
c. \( a + i \) \(/a.i/\) \([ai]\) \( ai\) \( 'eternal'\)
d. \( a + u \) \(/kau.be/\) \([ka,u'be]\) \( kaube\) \( 'K.O. tree'\)
e. \( o + i \) \(/ko.mpoid/\) \([kɔ'mbɔ'id']\) \( komboid\) \( 'ulcer'\)
f. \( o + u \) \(/mpo.u/\) \([mbo'u]\) \( mbou\) \( 'lizard'\)
g. \( u + i \) \(/du.kui/\) \([du'y'u]\) \( dugui\) \( 'K.O. tree'\)

7.3 Sequences of consonants

Sequences of consonants are outlined in table 7.2.

<table>
<thead>
<tr>
<th>C₁ C₂</th>
<th>/d/</th>
<th>/p/</th>
<th>/t/</th>
<th>/k/</th>
<th>/m/</th>
<th>/n/</th>
<th>/w/</th>
<th>/j/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/d/</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>/p/</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>/t/</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/k/</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/m/</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/n/</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/w/</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/j/</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition, a sequence of three juxtaposed consonants is also found. This is /nkw/ which is discussed in section 7.3.8.

As pointed out in the introduction section (see table 1.3), phonetic realisations such as prenasalised, palatalised, and labialised segments are considered sequences of at least two juxtaposed consonants in a CC-sequence. They are /mp, nt, nk/, /pw, kw/, and /dj, tj/. A CCC-sequence is found, which is /nkw/.

The sequences are not encountered in word-final position. The sequence /pw/ is not possible in word-medial position, and /dj/ is not found in the initial position. Only one example is found for /tj/, that is, codea /tjo.de.a/ \([çɔdɛ'a]\) ‘wallaby’.

The following is the outline of the sequences of consonants which occupy the (C)CC-slots in the (C)V(C) pattern (see CCV [7.1c] and CCVC [7.1g]). The vowels that may
precede (and follow) the sequences will be indicated. I will present only their
distribution in monosyllabic and disyllabic words.

7.3.1 /mp/
Table 7.3 displays the distribution of /mp/ in monosyllabic and disyllabic words.
Their examples are given in (7.4).

<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCV</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>CCVC</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CCV-σ</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>σ-CCV</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>σ-CCVC</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

(7.4) a. /mpe/ [mbe] mbe ‘complain’
b. /mpu/²⁴ [mbu] mbu ‘thorny grass’
c. /mpit/ [mbit’] mbit ‘moon’
d. /mpok/ [mbok’] mbok ‘secret’
e. /mpuk/ [mbuk’] mbuk ‘grass-skirt’
f. /mpan/ [mban] mban ‘only’
g. /mpi.juk/ [mbi’juk’] mbiyuk ‘K.O. bird of paradise’
h. /mpe.te/ [mb’e’ře] mbere ‘two’
i. /mpo.wid/ [mbɔ’wid’] mbowid ‘Mbowid (PN)’
j. /mpu.tu/ [mbu’ru] mburu ‘lake’
k. /a.mpit/ [a’mbit’] ambit ‘sake’
l. /e.mbet/ [e’mbet’] embet ‘sharp’
m. /a.mpan/ [a’mban] amban ‘back’
n. /e.mpok/ [e’mbɔk’] embok ‘strong’
o. /u.mpun/ [u’mbun] umbun ‘shoulder’

Some possible patterns, such as CCVV, CCVVC, CCVV-σ, CCVVC-σ, σ-CCVV, and
σ-CCVVC are not yet considered in this analysis.

²⁴ This form is almost always reduplicated, thus: mbu-mbu. It expresses a numerous amount of the ‘thorn’.
This way of reduplication is a typical Melayu-Papua expression (cf. rumput duri-duri ‘grass thorn-thorn’).
7.3.2 /nt/
The distribution of /nt/ is captured in Table 7.4. The examples are given in (7.5).

Table 7.4: Distribution of nt in monosyllabic and disyllabic words

<table>
<thead>
<tr>
<th>nt</th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCV</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CCVC</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CCV-σ</td>
<td>+</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>σ-CCV</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>+</td>
<td>−</td>
</tr>
<tr>
<td>σ-CCVC</td>
<td>+</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

(7.5) a. /nti/ ["di] ndi ‘this’
b. /nte/ ["de] nde ‘over there’
c. /nta/ ["da] nda ‘here’
d. /nto/ ["do] ndo ‘cave’
e. /ntu/25 ["du] ndu ‘downward’
f. /ntet/ ["det"] ndet ‘in here’
g. /ntat/ ["dat"] ndat ‘equal’ (cf. [7.5q])
h. /ntok/ ["dok"] ndok ‘K.O. reed’ (cf. [7.5r])
i. /ntuk/ ["duk"] nduk ‘thunder’
j. /nti.mit/ ["di’mit"] ndimit ‘necklace bead’
k. /nta.pu/ ["da’pu] ndapu ‘ball’
l. /ntu.mpuk/ ["du’m’buk’] ndumbuk ‘cassowary’
m. /e.nti/ ["e’di] endi ‘leave it (interjection)’
n. /i.niti/ ["i’d’iti"] indit ‘side’
o. /ma.nte/ ["ma’nde] mande ‘how many’
p. /a.nto/ ["a’d’o] ando ‘other’
q. /e.ntat/ ["e’n’dat’] endat ‘equal’ (cf. [7.5g])
r. /a.ntok/ ["a’n’dok’] andok ‘K.O. reed’ (cf. [7.5h])
s. /a.ntuk/ ["a’n’duk’] anduk ‘pain’

7.3.3 /nk/
Table 7.5 shows the distribution of /nk/. The examples are presented in (7.6).

25 An inflection of n-d-u ‘ADV-steep-down’.
Table 7.5: Distribution of \( nk \) in monosyllabic and disyllabic words

<table>
<thead>
<tr>
<th>( nk )</th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCV</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>CCVC</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CCV-( \sigma )</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>( \sigma )-CCV</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>( \sigma )-CCVC</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

(7.6) a. /nka/ \( [\text{ŋ}g\text{a}] \ngga \) ‘where’
b. /nkik/ \( [\text{ŋ}g\text{i}k] \nggik \) ‘Nggik (PN)’
c. /nkok/ \( [\text{ŋ}g\text{o}k] \nggok \) ‘erosion’
d. /nkut/ \( [\text{ŋ}g\text{ut}] \nggut \) ‘K.O. bird’
e. /nki.vot/ \( [\text{ŋ}g\text{i}\text{v}\text{ot}] \nggivot \) ‘K.O. bird’
f. /nk.e.bak/ \( [\text{ŋ}g\text{e}\text{b}\text{ak}] \nggebak \) ‘canoe’
g. /nka.bok/ \( [\text{ŋ}g\text{a}\text{b}\text{ok}] \nggabok \) ‘K.O. pandanus’
h. /nko.te/ \( [\text{ŋ}g\text{o}\text{t}\text{e}] \nggore \) ‘cold’
i. /nku.num/ \( [\text{ŋ}g\text{u}\text{num}] \nggunum \) ‘K.O. bird’
j. /n.e.nka/ \( [\text{ŋ}g\text{a}] \nggga \) ‘leaf’
k. /a.nku/ \( [\text{ŋ}g\text{u}] \anggu \) ‘awesome’
l. /a.nkin/ \( [\text{ŋ}g\text{in}] \anggin \) ‘heaviness’
m. /e.nken/ \( [\text{ŋ}g\text{en}] \enggen \) ‘necklace’
n. /a.nkop/ \( [\text{ŋ}g\text{op}] \anggop \) ‘tip’, ‘nail’
o. /a.nkup/ \( [\text{ŋ}g\text{up}] \anggup \) ‘pulp’

7.3.4 /\( tj \)/
In monosyllabic words, /\( tj \)/ is not attested. Its distribution in disyllabic words is given in table 7.6, and the examples are found in (7.7). For convenience, \( \times \) indicates “not attested at this stage.”

Table 7.6: Distribution of \( tj \) in disyllabic words

<table>
<thead>
<tr>
<th>( tj )</th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCV</td>
<td>( \times )</td>
<td>( \times )</td>
<td>( \times )</td>
<td>( \times )</td>
<td>( \times )</td>
</tr>
<tr>
<td>CCVC</td>
<td>( \times )</td>
<td>( \times )</td>
<td>( \times )</td>
<td>( \times )</td>
<td>( \times )</td>
</tr>
<tr>
<td>CCV-( \sigma )</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>( \sigma )-CCV</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>( \sigma )-CCVC</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
(7.7) a. /tjo.dea/ [çɔ’deə] codea 26 ‘wallaby’
b. /ma.tji/ [ma’çi] maci ‘forget’
c. /i.tja/ [i’ça] ica ‘mother’
d. /i.tjo/ [i’çɔ] ico ‘K.O. tree’
e. /a.tjok/ [a’çɔk’] acok ‘foot/feet’
f. /i.tjuk/ [i’çuk’] icuk ‘glue’ 27

7.3.5 /dj/
Like /tj/, /dj/ is not found in monosyllabic words. Table 7.7 presents its distribution in disyllabic words. Examples follow in (7.8).

| Table 7.7: Distribution of dj in disyllabic words |
|--------|--------|--------|--------|--------|--------|
|  dj  |  i  |  e  |  a  |  o  |  u  |
| CCV  | ×   | ×   | ×   | ×   | ×   |
| CCVC | ×   | ×   | ×   | ×   | ×   |
| CCV-σ | − | − | − | − | − |
| σ-CCV | − | − | + | + | − |
| σ-CCVC | − | − | + | + | − |

(7.8) a. /a.dja/ [a’ja] aja ‘stunning’
b. /ta.djo/ [ta’jɔ] tajo ‘K.O. banana’
c. /a.djak/ [a’jak’] ajak ‘breast’
d. /i.djom/ [i’jɔm] ijom ‘grasshopper’

7.3.6 /pw/
There is only one example found for /pw/ in monosyllabic words as evidenced in table 7.8 and example (7.9). It is not found in disyllabic words.

| Table 7.8: Distribution of pw in monosyllabic words |
|--------|--------|--------|--------|--------|--------|
|  pw  |  i  |  e  |  a  |  o  |  u  |
| CCV  | + | − | − | − | − |
| CCVC | − | − | − | − | − |
| CCV-σ | × | × | × | × | × |
| σ-CCV | × | × | × | × | × |
| σ-CCVC | × | × | × | × | × |

26 Stress and distribution of /tj/ rule out the common Wano phonological rules. Most probably, codea is a loan-word.
27 From the sap of a tree. It may be the tree called ico.
(7.9) /pwi/ [pʷi] pwi ‘louse (head)’

7.3.7 /kw/
The sequence /kw/ is not attested with back vowels, as table 7.9 shows. The examples are presented in (7.10).

Table 7.9: Distribution of kw in monosyllabic and disyllabic words

<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCV</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>CCVC</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>CCV-σ</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>σ-CCV</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>σ-CCVC</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
</tbody>
</table>

(7.10) a. /kwi/ [kʷi] kwi ‘red’
       b. /kwe/ [kʷe] kwe ‘but’
       c. /kwa/ [kʷa] kwa ‘woman’
       d. /kwam/ [kʷam] kwam ‘turtle’
       e. /kwe.mpa/ [kʷe'mba] kwemba ‘grass’
       f. /pi.kwi/ [pi'kwʷi] pikwi ‘K.O. pandanus’
       g. /na.kwan/ [na'kwʷan] nagwan ‘lord’

7.3.8 /nkw/
As shown in table 7.10 and examples in (7.11), the sequence /nkw/ does not take the back vowel /u/ (cf. CCCV [7.1d] and CCCVC [7.1h]).

Table 7.10: Distribution of nkw in monosyllabic and disyllabic words

<table>
<thead>
<tr>
<th></th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCCV</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>CCCVC</td>
<td>−</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>CCCV-σ</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>σ-CCCV</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>σ-CCCVC</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+</td>
<td>−</td>
</tr>
</tbody>
</table>
7.4 Complex sequences

Constructions like /ei/ ‘up’ as discussed in section 7.2 illustrate a complex syllable structure: a diphthong construing a syllable. Such is captured in figure 7.5, which is repeated below with specifics in figure 7.7.

![Diagram of V1V2 as a nucleus construing a diphthong]

When two sequences are adjacent in one syllable, we have evidence of a complex sequence. In this structure, a consonantal sequence and a diphthong are adjoined in occupying the onset and nucleus slots, respectively. Such a phenomenon is very common in Wano phonology. Consider the second syllables of /o.kweid/ ‘heart’ and /i.nkwoid/ ‘K.O. banana’, as illustrated in non-linear structures in figures 7.8 and 7.9. The binary branching of the nucleus indicates that V₁ bears primary stress.

![Diagram of complex sequences of CCVVC](image1)

![Diagram of complex sequences of CCCVVC](image2)
8 WORD STRESS

As has been pointed out in section 7.1, vowels are the only permissible segments used to construe a nucleus and to bear primary stress. The stress is always syllable final, encountered in any polysyllabic word. In terms of morphophonology, stress may occur on the initial syllable (as in bok ‘good’, bok-o ‘good-pausal’) or penultimate syllable (a’nmok ‘come (sg.imperative), a’nmok-o ‘come (sg.imperative)-pausal’. The following examples illustrate the final stress in words of three (in [8.1a]) and four syllables (in [8.1b]). Nominal words which consist of four syllables are not many, but are possible. In verbal inflection, however, a word may have up to five syllables.

(8.1) a. σ.σ.'σ
   V.CV.CVC /i.ne.nek/ [i'ne'nek'] ‘K.O. bird’
   CV.CV.CV /ki.ki.tu/ [ki'y'i'ru] ‘mosquito’
   CV.C.V.CVC /ji.vi.vit/ [ji'bi'bit'] ‘butterfly’

   b. σ.σ.σ.'σ
   CV.CV.CV.CV /na.ka.mp tu./ [na'y'a"bu'ru] ‘pumpkin’
   CVC.CV.CCV.CV /mpu.ti.tja.ja/ ["bu,riç'a'ja] ‘K.O. yam’
   CV.CCV.CV.CCV /ta.mpa.ta.kwi/ [ta,"bara'y"i] ‘cricket’

Stress is non-phonemic, that is, stress-shifting on a word does not change the meaning of the word. Take the word mudi ‘leech’, for example. It is articulated [mu'di]. If the stress is switched to the first syllable, as in ['mu'di], the meaning will remain the same, even though its phonetics no longer represents the nature of Wano stress.

9 MORPHOPHONOLOGY

The phonological changes pertaining to morpheme sequencing are treated hereafter. Section 9.1 deals with juxtaposition of the particle ta ‘specifier’ (‘SPEC’). Section 9.2 presents cliticisation of the enclitic =o. Section 9.3 discusses verbal inflections. Symbols and abbreviations used in this section follow.

{} morphophonological structure
- morpheme boundary
= clitic boundary
# word boundary
// phonological representation
. syllable boundary
[ ] phonetic realisation
→ ‘is spelled’ or ‘becomes’
/ in the environment of
< 'is derived from' or 'is of'
V vowel
C consonant

The conventional graphemes are presented in italic typeface. Examples are given following the layered order of: (i) graphemic realisation, (ii) morphophonological representation, (iii) phonetic representation, (iv) grammatical glossings and functions, and (v) free translation.

9.1 The particle *ta* ‘SPEC’

The particle *ta* functions as the specifier marker (SPEC). The following allomorphs of *ta* ‘SPEC’ are attested.

(9.1) a. *pa*  c. *ka*  e. *da*
b. *ta*  d. *ba*  f. *ra*

9.1.1 The allomorphs *pa*, *ta*, and *ka*

The allomorphs *pa*, *ta*, and *ka* ([9.1a], [9.1b] and [9.1c]) are so realised in the following construction, as given in figure 9.1 where C₂ is the /t/ of *ta* and C₁ is a voiceless stop (that is, /p, t, or k/).

\[
\begin{array}{c}
\text{C₂ → C₁} / C₁# C₂ \\
\text{Figure 9.1: Realisation of ta as pa, ta, or ka}
\end{array}
\]

The phonetic realisation of the preceding consonants (that is, C₁) is somehow produced with a complete closure held a bit longer than normal, then suddenly released, resulting in a slight lengthening of sound. The following consonant (that is, C₂, which is /t/ of *ta*) then takes the phonetic forms of C₁ (that is, either [p, t, or k] of /p, t, or k/). This is to say that the initial consonant of *ta* ‘SPEC’ assimilates to the preceding one.

For instance, *op* ‘finished’ is pronounced [ɔp̩]. In order to emphasise that ‘(it) is finished’, *ta* ‘SPEC’ is attached to *op* ‘finished’. We then have {op ta} which is realised [ˈɔpːaː], giving us a possible phonological structure /op.ta/ ~ /op.pa/ or morphophonological structure {op#ta}. It is apparent that, in one or the other case, the two /p/s in /pp/ are a result of morpheme sequencing, {op ta}, and therefore are different in their syllabic status. The preceding *p* is the coda element of the VC syllable type (that is, *op*). The following *p* is the onset element of the CV pattern (that is, *pa*, which is the allomorph of *ta*).
Concerning spelling conventions, this leaves us with at least two possible spellings: (i) the surface form *op pa* or (ii) the underlying form *op ta* as outlined in (9.2a) and (9.2b), respectively, both which roughly mean ‘it is finished’.

(9.2)  

<table>
<thead>
<tr>
<th></th>
<th>Morphophonological form</th>
<th>Phonetic realisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td><em>op pa</em></td>
<td><em>ap pa</em></td>
</tr>
<tr>
<td>b.</td>
<td><em>op ta</em></td>
<td><em>ap ta</em></td>
</tr>
</tbody>
</table>

In this study, both conventions (9.2a) and (9.2b) will be used when presenting data interlinearly. For the orthography, the surface form is proposed. With this in mind, examples for the structures in figure 9.1 follow.

(9.3) a. *{ap#ta}*       | *ap pa*       | *ap ta*       |
      |               | man SPEC      |
      |               | ‘it is a man’ |

b. *{kat#ta}*       | *kat ta*       |
      |               | you(sg) SPEC  |
      |               | ‘it is you(sg)’ |

c. *{yok#ta}*       | *jok ta*       |
      |               | now SPEC      |
      |               | ‘it is now’   |

9.1.2 The allomorphs *ba* and *da*

The allomorphs *ba* and *da* (in [9.1d] and [e]) are so found in the following construction, as outlined in figure 9.2.

\[
C_2 \rightarrow C_1 / C_1# + C_2
\]

\[
| [\text{+voiced}] | [\text{nasal}] |
\]

Figure 9.2: Realisation of *ta* as *ba* or *da*

Again, *C_2* is /t/ of *{ta}*, while *C_1* is a nasal (that is /m, n/). When a word with a nasal final is juxtaposed to the particle *ta* ‘SPEC’ (that is, *C_1# + C_2*), a progressive assimilation takes place resulting in *C_2* being realised as *C_3*. Thus, due to its preceding nasal consonants (that is, /m, n/), /t/ of *ta* is affected in terms of voicing and place of articulation. The voiceless stop becomes voiced (as in [9.4a] and [b]), and alveolar becomes bilabial (see [9.4a]). The nasals are, as in the case of /p, t, k/ above, realised with a reasonable phonetic lengthening. Examples follow.
Notice that as it has been defined in section 7, the sequences /nt/ and /mp/ are realised ["d] and ["b] respectively. A quick look may lead us to the conclusion that an overlapping between a purely phonological phenomenon and a morphophonological one has taken place. This is not so. The notion of /n + t/ and /m + p/ is a matter of sequencing of phonemes, that is, /NC/ construing a single phonetic realisation [NC], as in ["di] of /nti/ ‘this’, [a"duk] of /a.ntuk/ ‘pain’ or ["bit] of /mpit/ ‘moon’, and [a"bit] of /a.mpit/ ‘sake’. But in the case of {m, n + t}, as illustrated in (9.4), we have evidence of morpheme sequencing with two phonetic properties, that is [C:C]. This is found across morpheme or word boundary, as in {...C-C...} or in {...C#C...}. Despite the phonological and morphological differences, both will be orthographically presented adapting the pattern in (9.2), thus yielding ndi ‘this’, anduk ‘pain’, mbit ‘moon’, and ambit ‘sake’, as well as wom ta ‘it is a pig!’ and an ta ‘it is me’.

9.1.3 The allomorph ra

The allomorph ra, given in (9.1f), is so found in the following construction, as given in figure 9.3, where C1 is still /t/ of {ta}, C2 is its phonetic realisation, and V can be one of the vowels: i, e, a, o, or u.

\[
\begin{align*}
C_1 & \rightarrow \ C_2 / \ V\# + C_1 \\
\end{align*}
\]

\[
\begin{array}{c}
\lf \\
\rf
\end{array}
\]

Figure 9.3: Realisation of ta as ra

The structure in figure 9.3 is straightforward. The allomorph ra, apparently, is a result of /t/ being in the /VtV/ position (cf. section 2.7), which is in this case {...V\# ta}. Recalling spelling conventions suggested in (9.2), the underlying form ndi ta ‘it is this’ is used and not the surface one ndi ra. Notice the combination of the surface form (ndi ‘this’) and the underlying form (ta ‘SPEC’) is apparent. Consider the interlinear representation in (9.5).
Evidence in (9.5) suggests that the spelling of nti ta ‘it is this’ is a more logical form than any other (such as nti ra, nti ra, or nti ta). This also suggests that, in the Wano orthography, (i) any independent (single) lexeme (i.e., phonological word) be written in accordance with its surface form (which is accepted by the native speakers of Wano) and (ii) any lexeme that occurs across a word boundary resulting in the changing of its phonetic shape (i.e., its morphophonological form) be written in accordance with its underlying form.

9.2 The enclitic =o ‘PAUS’

The enclitic =o functions as a pausal marker (PAUS). When the enclitic =o ‘PAUS’ is attached to a word that is a bilabial or an alveolar plosive final, regressive assimilation (RAS) takes place (figure 9.4).

\[
\begin{align*}
\{ \ldots C\# & + V\# \} & \rightarrow \{ C \} \text{RAS} \\
/ \ldots b, p, d, t & =o / & \rightarrow \{ \beta, b, j, t \}
\end{align*}
\]

Figure 9.4: Cliticisation of =o ‘PAUS’ resulting in regressive assimilation

It is asserted in sections 2.1 and 2.2 that /b/ is [b’] and /p/ is [p’] in word-final position. In such a distribution, the contrast between /b/ and /p/, however, is either neutralised to [p’] or hardly noticeable. Only when a vowel, which is mostly the enclitic =o ‘PAUS’, follows is the difference revealed. In this case, lenition takes place in two ways: (i) Affecting manner of articulation, that is, /b/ → [β] as in (9.6a), and (ii) affecting voicing, that is, /p/ → [b] as in (9.6b). Such holds for the phonemes /d/ and /t/. Thus, /d/ is realised as [j] (9.6c) and /t/ is realised as [r] (9.6d).

(9.6) a. \textit{woraneb-o} \\
\textit{wot - -aneb }=o \\
\textit{wor a'nêβ ò} \\
\textit{come- -2p.IMP }=PAUS \\
‘you(pl) come (imperative)’

b. \textit{nanop-o} \\
\textit{n- -anop }=o \\
\textit{n a'nêb ò} \\
\textit{1s- -head }=PAUS \\
‘my head’
c. **deid-o**
   deid  =o
   ‘deid  o’
   banana =PAUS
   ‘banana’

d. **ambit-o**
   o- ambit =o
   a’imbir  o
   3s- sake    =PAUS
   ‘for him/her/it’

To promote a consistent spelling of this form, hyphenation is used, as shown in (9.6). That is, **woraneb** is hyphenated as **woraneb-o** ‘you(pl) come (imperative)-pausal’ (9.6a), and when cliticised, **nanop** is **nanop-o** ‘my head-pausal’ (9.6b), **deid** is **deid-o** ‘banana-pausal’ (9.6c) and **ambit** is **ambit-o** ‘sake-pausal’ (9.6d). Such holds for words ending with /k/. For instance, **amok** is **amok-o** ‘you(sg) come (imperative)-pausal’, **netik** is **netik-o** ‘I am going-pausal’. Only for the enclitic =o ‘paus’, hyphenation applies. The reasons follow.

Apart from marking ‘utterance ending’, the presence and absence of =o in a word does not signify semantic difference of the word. Take the imperative **amok** ‘you(sg) come (imperative)’, for example. It can be expressed with or without =o, with no distinction in meaning.

Second, one can argue that the enclitic =o functions as a discourse marker in expressions like ‘Oh, …’, ‘Well, …’ or ‘I mean, …’. If this is so, then /amok/ ‘you(sg) come’ can be differentiated from /amok + =o/, which is ‘I mean, you come’. However, because =o is overwhelmingly found in daily speech, the distinction is disputable. As a result, that the presence and absence of =o in a word is not semantically significant. In a discourse, it simply functions to end an utterance.

In the interlinear representation, after all, hyphenation is used in the surface form, whilst the sign = is used in the underlying form to distinguish a morpheme break from a cliticisation. Here, the phonetic realisation of the surface form is ignored. It follows that (9.7a–9.7e) are the standard forms as opposed to (9.7a’–9.7e’), respectively.
9.3 Verbal inflections

Assimilation, elision, epenthesis, and vowel harmony are the features found in the verbal morphology.

9.3.1 Assimilation

Reciprocal or coalescent assimilation is attested in a morpheme sequencing in the structure of /n+k/.

\[
\begin{array}{c}
\text{[NASAL } + \text{ C]} \rightarrow [N^C] \\
\text{n} & \text{k} \rightarrow [g]
\end{array}
\]

Figure 9.5: Assimilation of n and k

In the following example, we see that the verb stem for ‘die’ is kan-, an -n verbs type (Burung 1994a). When it occurs in a realis verb form, the reciprocal assimilation unfolds between /n/ and the realis marker (REAL) /k/. Such affects points of articulation and voicing, and results in the phonetic representation as read in figure 9.5: /n/ is [n] and /k/ is [g]; in coalescence they construe [ŋ̊g] (see section 8).
9.3.2 Elision

When two consonants are juxtaposed across a morpheme boundary, syncopal elision (the omission of the preceding segment) is commonly attested. This is structured in figure 9.6.

\[
\begin{align*}
a. \{...C_1 + C_2 ...\} & \rightarrow [...C_1 + C_2...] \\
| & \quad | & \quad | \\
t & \quad k & \quad \rightarrow \text{ELIDED k}
\end{align*}
\]

\[
\begin{align*}
b. \{...N_1 + N_2...\} & \rightarrow [...N_1 + N_2...] \\
| & \quad | & \quad | \\
n & \quad m, n & \quad \text{ELIDED m, n}
\end{align*}
\]

Figure 9.6: Consonantal syncopal elision

For instance, the verb stem for ‘roast’ is tat-, a -t verbs type. When it is expressed in realis mode, the /t/ is elided preceding /k/ ‘REAL’, giving us the phonetic realisation as read in figure 9.6a with the example in (9.7a). Similarly, in figure 9.6b, the preceding /n/ is omitted when followed by a nasal (/m, n/), as illustrated in (9.7b) and (c).

(9.7) a. \textit{takirak}
\begin{align*}
tat-k-it-ak \\
taØ-k-ir-'ak'
\end{align*}
roast-REAL-3s.SUBJ-then
‘he/she/it roasted (and) then’

b. \textit{kambi}
\begin{align*}
kan-mpi \\
kaØ-imbi
\end{align*}
die-curse
‘die due to a curse’

c. \textit{wanuk}
\begin{align*}
wam-nuk \\
wam-nuk
\end{align*}
take-next
‘after taking …’

(9.6) \textit{kanggirak}
\begin{align*}
kan-k-it-ak \\
kaŋ-g-ir-'ak'
\end{align*}
die-REAL-3s.SUBJ-then
‘he/she/it died (and) then’
9.3.3 Epenthesis

A prothetic vowel is often encountered which has its affect on the morphology. Take the sequential suffix -nuk (or ~ -nok) ‘next’ in (9.7c), for instance. Although it is not easily found, its occurrence as an independent element following a noun phrase is possible. In such circumstances, epenthesis occurs. The phrase Tiagai enok ‘after Tiagai, …’ from an oral text gives evidence of epenthesis in the following example.

(9.8)    Tiagai enok,    Kembu omarib     muni    nggig  wu  
         tiakai enok| kempu ø-omarib  muni nkikit   w-u  
PN     next PN     3s-bottom that pull out come-p.A

nouguarik                        ka,…  
| n-ou-ku-at-ik               ta|  

“After Tiagai, they were coming along/from the foot of the Kembu mountain,…”

This phenomenon is, however, stylistic. Evidence suggests that enok ‘next’ in the given phrase in (9.8) is possible without the epenthesis. See the following example of the same text by the same narrator for the noun phrase Acodi nok “after Acodi,…”.

(9.9)     ando ra,     ou Acodi nok mbonggu,     ando ra, we  
         anto ta|     ou atjodi nok mpon-k-u|     anto ta| w-e  
other SPEC down PN     next cut-REAL-p.A other SPEC come-s.A

inqo     o ma Akbiri ndome  ari unggu  
ø-inom o ma akbiti nto-me at-i un-k-u  
3s-with place sacred PN cave-LOC 3s-PL go through-REAL-p.A

unggu                     uku, ……  
un-k-u                     it-k-u | | ……

‘Some went down to Acodi, some came and they went through the sacred Akbiri cave, …’

Likewise, the sequential -ak28 ‘then’ adds an obligatory /j/ when it stands alone in a discourse, yielding yak ‘then’ as shown in (9.10).

28 The variant form of -ak is -iak ‘then’.
Now, this, regarding my birth, that my fathers came out, their staying in caves, I will tell that later.

9.3.4 Allophonic variants of /n/

In section 2.8, it is stated that /n/ is realised as [n] and [ŋ]. The latter occurs when the phoneme is preceded by high vowels (that is, /i, u/). In the morphophonological feature, there is evidence to suggest that the palatal nasal is found in free variation with the velar nasal (that is, [ŋ]) although the velar nasal is mostly found. Such is possible when /k/ intervenes /i/ and /n/. Consider the elevative deictic ei ‘up’ which is, again, found in free fluctuation with eik and ei’. When a deictic word is composed of ei ‘up’ + na ‘as such’ the following variations are possible.

(9.11) a. eî nya
   eî na
   ‘eî na
   up as such
   ‘up that way (manner)’

b. eik nya ~ nga
   eik na
   ‘eik na ~ ŋa
   up as such
   ‘up that way (manner)’

However, when the glottal stop intervenes the realisations of [n, ŋ, and ŋ] are all possible.

(9.12) eî’ na ~ nya ~ nga
   eî’ na
   ‘eî’ na ~ ŋa ~ ŋa
   up as such
   ‘up that way (manner)’
For the spelling convention, the phonetic variants of /n/ are ignored, while the free fluctuation between /k/, '/', and zero is maintained; thus giving us ei na ~ eik na or ei’ na for the adverbial expression ‘up that way’.

9.3.5 Vowel harmony

In verbal inflection, vowel harmony is also attested. In this respect, both progressive and regressive (or anticipatory) assimilation are attested as outlined in figure 9.7.

\[
\begin{align*}
\text{a. } & \{\cdots V_1 \ C \ V_2 \cdots \} \rightarrow [V_1 \ C \ V_1] \text{ Progressive} \\
\text{b. } & \{\cdots V_1 \ C \ V_2 \cdots \} \rightarrow [V_2 \ C \ V_2] \text{ Regressive}
\end{align*}
\]

Figure 9.7: Realisation of vowel harmony

The properties of V₁ in figure 9.7a are /i, o/ and V₂ are /e, o, and u/ pertaining to the compositions given in (9.13) as found in the verb for ‘do’.

\[(9.13) \ \begin{align*}
a. & \ \ /i \ C \ e/ \rightarrow [\varepsilon \ C \ \varepsilon] \\
b. & \ \ /i \ C \ o/ \rightarrow [\varnothing \ C \ \varnothing] \\
c. & \ \ /o \ C \ u/ \rightarrow [u \ C \ u]
\end{align*}\]

The root for the verb ‘do’ is it-\. When inflected, it can be expressed by e-, o-, and u- as shown in (9.14a), (b), and (c), respectively. The ‘singular marker’ is in fact signalled either by -e or -o. When ‘singular’ is marked by /e/, /i/ becomes /e/ (see [9.14a]). When it is indicated by /o/, it becomes /o/ (9.14b). The number for ‘plural’ is marked by /u/. When this occurs, /i/ becomes /u/ (see [9.14c]).

\[(9.14) \ \begin{align*}
a. & \ \text{eke} \\
& \ \text{it-k-e} \\
& \ \varepsilon\varnothing-k-\varepsilon \\
& \ \text{do-REAL-s.A.PROG} \\
& \ \text{‘one is/was doing’ or ‘singular is/was doing’} \\
b. & \ \text{oko} \\
& \ \text{it-k-o} \\
& \ \varnothing\varnothing-k-\varnothing \\
& \ \text{do-REAL-s.A} \\
& \ \text{‘one did’ or ‘singular did’} \\
c. & \ \text{uku} \\
& \ \text{it-k-u} \\
& \ \text{u\varnothing-k-\u} \\
& \ \text{do-REAL-p.A} \\
& \ \text{‘ones did’ or ‘plural did’}
\end{align*}\]
In terms of the progressive harmonic assimilation (figure 9.8), the property of \( V_1 \) is restricted to /u/, and \( V_2 \) is /o/ as shown in to the following construction.

\[
\begin{align*}
/u\ C\ o/ & \rightarrow [u\ C\ u] \\
\text{Figure 9.8: Progressive assimilation in vowel harmony}
\end{align*}
\]

This feature occurs mostly in the verbs ending with a vowel. Consider (9.15) for example. The root for the existential ‘exist’ is \( \text{won-} \). The ‘singular’ is marked by /e/, thus \( \text{won-e} \) ‘one exists’ or ‘singular exists’. When ‘plural’ is given, we have \( \text{wun-u} \) ‘ones exist’ or ‘plural exists’ (9.15).

(9.15) \( \text{wunu} \)
\[
\begin{align*}
\text{won-}\ u \\
\text{wun-}\ 'u \\
\text{exist-p.A} \\
\text{‘ones exist’ or ‘plural exist’}
\end{align*}
\]

Finally, a vowel which is \([-\text{high}]\) becomes \([+\text{high}]\) when preceded by /u/. This is structured in figure 9.9 and illustrated by a derived personal name in (9.16). \( V_x \) marks any vowel.

\[
\begin{align*}
\{\ldots\ V_1\ C\ V_2\ \ldots\} & \rightarrow [V_1\ C\ V_2] \\
\mid & \mid & \mid \\
\ u & \ C & V_x & \ V_2 & \ C & V_2 \\
\mid & \mid & \mid & \mid & \mid
\end{align*}
\]

\[
\begin{align*}
\text{[+high]} & \ [\text{-high}] & \ [\text{+high}] & \ [\text{+high}] \\
\text{Figure 9.9: Vowel harmony with } u
\end{align*}
\]

(9.16) \( \text{tavuni} \)
\[
\begin{align*}
\text{tavu} & \ ne \\
\ text{ta'lu} & \ ni \\
\text{tobacco SPEC.TOP} \\
\text{‘Tavuni (PN)’}
\end{align*}
\]

10 ADAPTATION OF MELAYU-PAPUA

This section discusses phonological adaptation of Melayu-Papua by the Wano phonology. The following conventions follow van Coetsem (1988): \( RL \) for “recipient language” and \( SL \) for “source language”.

Based on van Coetsem’s investigation,
A phonological loan is an imitation, replication or reproduction in the rl of a foreign or sl pronunciation; such an imitation is often only an approximation. A phonological loan as an imitation thus something that the imitating rl speaker does not have in his integrated or native phonology,... (1988:7).

I will discuss some phenomena of the phonological adaptation noticed among the Wano speakers. In so doing, I adapt his purpose of using the term phonological loan, that is, “to indicate any form of loan in the realm of segmental or suprasegmental phonology, regardless of whether it affects the paradigmatic dimension, the syntagmatic dimension or both” (van Coetsem, 1988:7). Such segments and suprasegments refer to loan-phonemes and stress and are the focus of our discussion in this section. The notion of source language (SL) and recipient language (RL) is first discussed.29 In van Coetsem’s term, RL-agentivity takes place if the RL speaker is the agent, using some SL words while speaking his or her own language. This is the case of borrowing. On the other hand, SL-agentivity occurs when the agent is the SL speaker using his or her native articulatory while speaking RL. This is the case of imposition.30 Our discussion here is in terms of RL-agentivity.

Whilst Wano is clearly the RL, the SL is either Papuan vernacular such as Melayu-Papua or Indonesian. The mutual contact between the RL speakers and the SL speakers implies transfer of some phonemes, by means of loan-words, from the SL to the RL. Evidence can be found among the Wano children who have been to Indonesian local primary schools, or among young men who have been to a local literacy or Bible school set up by various Christian missions in a neighbouring language.31 These children would normally be obliged to learn Indonesian, which is taught by teachers with a Melayu-Papua linguistic background. Those who went to a mission school used Melayu-Papua as the lingua franca. The introduction of some Melayu-Papua phonemes to Wano, although still premature, is noticed. They are /b/, /d/, /g/, /h/, /l/, and /s/.

The data supplied for the Melayu-Papua (or Papuan-Malay) words with their segmental and suprasegmental behaviours are merely based on my native intuition of the language. It should be of interest to see an analysis from a non-native Melayu-Papua linguist as well. In my analysis here, I have used the term Melayu-Papua in a broad sense, which refers to any non-standard Indonesian language spoken in Papua

29 Other terms used are donor or model language versus borrowing or replica language.
30 The proposed term for Weinreich’s interference (1953:1) or Lado’s transfer (1957:11), quoted from van Coetsem (1988:2).
31 For example, a Bible school in Mulia which is conducted in the Dani language, and the same in Hitadipa where the language of Moni is used.
(formerly Irian Jaya). Further research may distinguish, as I would suggest, (i) North-coastal Melayu-Papua, which is spoken in the regions from Jayapura to Sorong, (ii) South-coastal Melayu-Papua which is found from the region of Sorong down to Merauke, and (iii) Inland Melayu-Papua, which is used mostly in the region of the interior, stretched out from the Western to the Eastern territory of Papua. The introduction and spread of Melayu-Papua is mostly influenced by various foreign missionaries, at the first contact, using Indonesian as lingua franca. Whilst, where a government post is found, some Indonesian (most often spoken by a native of Melayu-Papua) might play a role in introducing new words as well.

I will discuss each phoneme by first describing its phonetic status in the SL, Melayu-Papua, and then showing its new phonetic status (if any) in the RL, Wano. The characteristics of stress will be presented when needed.

10.1 /b/

The Melayu-Papua /b/ is realised [b], a voiced bilabial plosive, in word-initial and medial positions. It is [p’], a voiceless unreleased bilabial plosive word finally. It is interpreted in Wano as the implosive [b] discussed in section 2.1. For instance, the Melayu-Papua bapa ‘father’ is pronounced with [b] instead of [p] in Wano, while keeping the stress pattern of Melayu-Papua: bapa. The /b/ may also be realised [mb] as often heard in words like begitu ‘thus so’: [mbegitu]. Again, the stress pattern of Melayu-Papua is maintained: mbegitu.

In word-medial position, as evidenced in the Melayu-Papua Habel ‘Abel’, [mb] is not attested. We then have [a be d’] with stress switching. Thus, the Melayu-Papua habel becomes abed in Wano. Since there are no loanwords with /b/ word-finally, the phonetic realisation in Wano is not certain (indicated by ? in figure 10.1). The realisation of Melayu-Papua /b/ in Wano is given in figure 10.1.

<table>
<thead>
<tr>
<th></th>
<th>Melayu-Papua</th>
<th>Wano</th>
</tr>
</thead>
<tbody>
<tr>
<td>#C</td>
<td>[b]</td>
<td>→ [6] ~ [mb]</td>
</tr>
<tr>
<td>VCV</td>
<td>[b]</td>
<td>→ [6]</td>
</tr>
<tr>
<td>C#</td>
<td>[p’]</td>
<td>→ ?</td>
</tr>
</tbody>
</table>

Figure 10.1: Realisation of Melayu-Papua b in Wano

10.2 /d/

The Melayu-Papua /d/ is realised as [d] in word-initial and medial positions, and [t’] in word-final position. It is pronounced in Wano in a similar way as the Wano /d/
discussed in section 2.6. In Wano it is [d] in word-initial and medial positions. In loanwords, /d/ may be realised as ["d] as well. This is probably due to a matter of uncertainty in choice made by the RL speakers when encountering /d/ in a loanword. For words like domba ‘sheep’ (the Indonesian word which is used to introduce the term for ‘sheep’ into Wano), a Wano would say [dɔmba] ~ ["dɔmba]. Stress is shifted. The usual placement of stress on the penultimate in Melayu-Papua has been shifted to the final syllable in Wano. Thus, Melayu-Papua domba is Wano dom ba or ndom ba.

Further, in word-medial position, /d/ is sometimes [r] instead of [d], as in Yahudi ‘Jews’, which is pronounced [jaudî] or [ja'yuri]. Stress is switched from the Melayu-Papua penultimate to the final syllable in Wano. So, Melayu-Papua ya hudi is Wano yau di or yagu ri.

Since loanwords with /d/ in final position are not found, the phonetic prediction is not certain. Figure 10.2 follows.

<table>
<thead>
<tr>
<th>/d/</th>
<th>Melayu-Papua</th>
<th>Wano</th>
</tr>
</thead>
<tbody>
<tr>
<td>#C</td>
<td>[d]</td>
<td>[d] ~ [&quot;d]</td>
</tr>
<tr>
<td>VCV</td>
<td>[d]</td>
<td>[d] ~ [r]</td>
</tr>
<tr>
<td>C#</td>
<td>[r]</td>
<td>?</td>
</tr>
</tbody>
</table>

Figure 10.2: Realisation of Melayu-Papua d in Wano

10.3 /g/

The Melayu-Papua /g/ is realised [g] in word-initial and medial positions. In word-final position, it is not found. It is realised as [k] or ["g] in Wano, as in Melayu-Papua words like guru ‘teacher’, garam ‘salt’, gula ‘sugar’, gembala ‘shepherd’, and garis ‘matches’. Thus, a Wano speaker would say [ku ru] or [ngu ru]. Here, stress is also switched to the final syllable, so that Melayu-Papua guru is Wano ku ru or nggu ru.

It is not certain in word-medial position because loanwords with /g/ in such a position have not yet been found, except proper nouns like Melayu-Papua Magdalena ‘Magdalene’. In the CC-sequence, it is either [k] or elided in Wano. The realisation is either [makɔdaˈðeːna] in the lento pronunciation or [maˈdaːðeːna] when allegro. In this instance, the stress pattern of Melayu-Papua is adapted, so that it is pronounced ˈmeɡeˈdaːðeːna or ˈmaˈdaːðeːna. The realisation of Melayu-Papua /g/ in Wano is shown in figure 10.3.
10.4 /h/

The Melayu-Papua /h/ is realised [h], the glottal fricative, in word-initial, medial and final positions. In Wano, it is elided word initially and finally. For instance, Melayu-Papua Herodes ‘Herod’ is [erɔdɛt’] (cf. Habel in section 10.1), and Allah ‘God’ is [aɗa] or, rarely but possible, [ara] in Wano. In word-medial position, it is realised [y], as evidenced in the word Yahudi ‘Jews’ in section 10.2, or in Melayu-Papua Rahab ‘Rahab’ which is [rɔyab’]. The stress pattern, again, is switched to the final syllable. Thus, Melayu-Papua heˈrodes, ˈallah, and ˈrahab are Wano eroˈdet, aˈda, and raˈgab, respectively.

<table>
<thead>
<tr>
<th>/g/</th>
<th>Melayu-Papua</th>
<th>Wano</th>
</tr>
</thead>
<tbody>
<tr>
<td>#C</td>
<td>[ɡ]</td>
<td>[k] ~ [ɡ]</td>
</tr>
<tr>
<td>VCV</td>
<td>[ɡ]</td>
<td>[k] ~ ELIDED</td>
</tr>
<tr>
<td>C#</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10.3: Realisation of Melayu-Papua g in Wano

10.5 /l/

The Melayu-Papua /l/ is [l], a voiced lateral alveolar, found in all positions. It is realised in Wano as [d] in word-initial position. The [d] fluctuates with [r] in the medial position. It is found in word-final position as [d’]. For example, in the initial position, Melayu-Papua Lukas ‘Luke’ is [dukat’] but *[rukat’] in Wano. In the medial position, Melayu-Papua gula ‘sugar’ is [ŋgura] or [kura] but *[ŋguda] or *[kuda]. Here, stress is uncertain; lukas is either ˈdukat or duˈkat, and ˈgula is either ˈŋgura or ngguˈra.

It is also noticed that [l] of /l/ is more adaptable than the other loan-phonemes, since we may find [ŋgula] or [kula]. This also suggests that /l/ is more likely to be accepted in Wano than the other phonemes. In a case, for instance, where /l/ is followed by /d/, we will find /d/ remains [d], but /l/ changes to either [d], [r], or [l]. Such can be seen in the proper noun Magdalena (see section 10.3); […d…d…], […d…r…], or […d…l…] are possible realisations, and not *[…r…d…] or *[…l…d…]. This is illustrated in figure 10.5.
10.6 /s/

The Melayu-Papua /s/ is realised as [s], a voiceless alveolar fricative, and found in word-initial, medial and final positions. In Wano, it is [ç] or [t] in the initial position, [ç] in the medial position, and [t'] in the final position. For instance, Melayu-Papua surat ‘letter’ is realised as [çurat'] or [turat'], Isak ‘Isaac’ is [içak'], and Markus ‘Mark’ is [marakut'] in Wano. When a syllable consists of /s/ occupying both onset and coda positions, the onset element (C1 = [s]1) fluctuates in Wano, that is, between [ç] or [t]. Thus, the Melayu-Papua Yesus [jesus] ‘Jesus’ is [jeçut'] or [jetut']. Stress does not take the Melayu-Papua pattern, since we have surat, isak, markus, and yesus in Melayu-Papua, but cu'rat ~ tu'rat, i'çak, mara kut, and je'çut/je'tut in Wano.

10.7 The sequence /nt/

It has been noted that /n/ plus /t/ results in ["d] in Wano (section 7.3.2). Such affects the pronunciation of some loanwords, when this combination is found in word-medial position only. The Melayu-Papua unta ‘camel’ and mantri ‘male-nurse’, which are realised [unta] and [manteri] or [mant'ri] in Melayu-Papua, have become [u"da] and [ma"dāri] in Wano, with, again, changes in stress position. It is Melayu-Papua ūnta and ūmanteri or man ūteri but un' da and mande 'ri in Wano.
APPENDIX 1: DICTIONARY

This preliminary dictionary is based mostly on recorded texts, personal notes, and some elicited words. There are approximately one thousand entries. Names of birds are obtained mainly by way of (i) direct contact with the item, (ii) comparing pictures based on the works of Peckover and Filewood (PF 1976), Beehler, Pratt, and Zimmerman (BPZ 1986), and (iii) Briley (JB n.d.).

Loanwords are included. The donor language is abbreviated in small capitals: IND—Indonesian, MP—Melayu-Papua. The abbreviated grammatical categories (see Conventions in introduction) are in italics and placed between brackets immediately following the word-entry.

Some interjectional expressions are also included in this dictionary.

If a form appears to be rare or of certain dialects, this is indicated. No attempt has been made to distinguish dialect differences.

In case of bound morphemes and enclitics markings (that is - and =), they are given in between brackets attached to the grammatical category of the given entry. For example, (-ipn) reads ‘X inalienable possessee with prefix possessor’, and (mrk=) reads ‘X marker, enclitic’.

Stress is only indicated (preceding the stressed syllable) when (i) the nucleus is a diphthong, or (ii) it does not follow the predictable pattern described in section 8. An entry with the indication of stress is given in between slashes after the main entry.

Only the neutral verbs are included. A new term under lexical categories is introduced: ‘experiential-events’.32 Items denoting inalienable possessees are glossed without indicating the possessor (indi ‘name’ for ‘his/her/its name’, ova ‘father’ for ‘his/her father’. Such appears in the lexical entry as follows: eruk (-ipn) ‘hair (of head

32 See Burung (2002, 2003) for the notion of ‘experiential-events’.
or body), feather’—when used as an example in the main body, the full meaning is
given. Only the third person singular form is given for items of inalienable possessive
nouns, beneficiary, comitative, and experiential-events. Synonyms are also indicated.
The alternative names for a proper noun are listed following the given name.

The following abbreviations are used.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
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<tbody>
<tr>
<td>adj</td>
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<tr>
<td>adv</td>
<td>adverb</td>
</tr>
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<td>age</td>
</tr>
<tr>
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<td>agent</td>
</tr>
<tr>
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<td>alienable possessee</td>
</tr>
<tr>
<td>b.pron</td>
<td>bound-pronoun</td>
</tr>
<tr>
<td>ben</td>
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</tr>
<tr>
<td>BPZ</td>
<td>Beehler, Pratt, and Zimmerman 1986</td>
</tr>
<tr>
<td>CF.</td>
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**WANO–ENGLISH**

**A — a**

*a₁* (apn-) his, her, its. CF. *e₂, o₄.*

*a₂* (-mkr) polar question.

*a₃* (-num) singular PURP. CF. *i₃, o₅, u₃.*

*a₄* (interj) ah!

**abua** (-exevo) feeling for, pity, love,  compassion.

**abui** /a bui/ (*n*) possum. IND. *kusu-kusu.*

**aburi** (-ipn) children of male. CF. *acui.*

**abut** (-ipn) child of male. CF. *ayak.*

**ac** (-subj) I, in SEQ prox-past. CF. *er₁.*

**Acodi** (pn) Acodi, Wano village.

**acok** (-ipn) foot, toe.

**acui** (-ipn) children of female. CF. *aburi.*

**Ada** (pn-loan) God. IND *Allah.* CF. *Ara.*

**Adam** (pn-loan) Adam. IND *Adam.*

**ade** (-ipn) old, ancestor.
adede (adj.val) spicy hot.
ademburu (-ipn) tear.
adik (-ipn) treasure, belonging, secret. adi worak. CF. munyuum.
Adi (pn) Adi, Wano river.
adian (-ipn) blood. CF. dian.
Adi (-ipn) self, nothing.
ado (-ipn) forefather. CF. omba, oma.
adom (-ipn) root. - adom mboinggu
Wendnesday.
Adombi see Duvede.
Adi (-ipn) Adi, Wano river.
Adian (-ipn) blood. CF. dian.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
adik worak. CF. munyum.
Adi (-ipn) Adi, Wano river.
adik (-ipn) self, nothing.
adik (-ipn) tear.
adik (-ipn) treasure, belonging, secret.
anggudi (adj.age) new, unripe, lush.
anggun (-exev) weariness, sadness. (adj.hp)
weary, sad.
anggundit (-ipn) pus. CF. nggundit.
anggup (n) pulp, soft mass of wood fibre.
angguret (-ipn) mucus. CF. ngguret.
angguri (n-loan) wine. IND anggur.
anggwon (apn) pig. CF. wom.
anini (-exev) hate. CF. ago, mbe’, nggum.
anop (-ipn) head.
ap (n) man, person, people.
Aperid (n-loan) April. IND April.
apik (-n) all.
apu (-exev) desire to consume, hungry,
thirsty, etc.
ar1 (-subj) they, in REAL past. CF. ir1.
ar2 (-subj) he/she/it/they, in prox-past
sub-t.
Ara (pn-loan) see Ada.
are (n) uncle.
ar1 (n-loan) day. IND hari.
Aricawudigwe (pn) Aricawudigwe, Wano
female name.
aringgu (-ipn) snot. CF. tinggu.
arip (-ipn) lid.
arit (-ipn) leg.
Aroni (pn) Aroni, Wano river.
arot (-ipn) hip.
at1 (pron) he/she/it. CF. it.
at2 (obj-) him/her/it, in REM of ‘see’ for
the third person subject. CF. iCat, kat2.
auk / auk/ (adv, -exev) hurry, rush.
avodo ~ avodok (-ipn) skin.
avodok see avodo.
avok (-exev) desire.
avoke (-ipn) body (physical). CF. eve.
avovan (-ipn) shadow.
avud ~ avudi (-ipn) abdomen, bottom.
avuda ~ avuja (-ipn) pregnancy.
avudi see avud.
avuja see avuda.
avukwa1 (adj, n) feminine.
avukwa2 (adj, n) lesbian, homosexual.
avurap (adj, n) masculine.
Awa (pn-loan) Eve. IND Hawa. CF. Eva.
awang (-ipn) liver. NOTE the meaning is
not certain, CF. enokweid.
awedi (-ipn) kidney.
awengge (-ipn) arm (muscle), obak owok
’spir’.
awi1 (-ipn) origin, seed.
awi2 (apn) house.
awiv (n) kind of tree.
awo (adv) still, not yet.
awot (-ipn) younger sibling of same sex.
awu1 (apn) shell. CF. wu1.
awu2 (apn) money. CF. wu2.
ayak (-ipn) child of female. CF. abut.
aye1 (-ipn) penis.
aye2 (interj) expression of awesomeness.
CF. ajak2.
ayenggodan (-ipn) sperm, semen. CF.
yenggodan.
ayu (n) spirit. CF. ai.

B — b
ba (mkr) specifier. CF. ta.
babo (n) kind of tree.
bado (n) kind of vegetable.
bagai / ba’gai/ (n) spotted cuscus. LAT
spilocuscus maculatus, BPZ.
bagam (n) kind of pandanus.
bagi (n) kind of cuscus.
bago (n) kind of tree.
Baguci (pn) Bagusi, Turu hamlet.
baiak (vb) set.
baid / baid/ (n) cuscus. ENG yellow-footed
rock wallaby. LAT petrogalexanthropus,
BPZ.
bako (n) kind of bird. IND burung raja
udang berparuh kuning – jenis pekakak,
JB.
bane (mrk) instrument.
baniak (vb) put down.
bariak (vb) open.
barip (n) kind of pandanus.
Bat (pn) Bat, Wano name.
bato (n-loan) corn.
batok see bato.
be ~ be’ (adj) small, little, few.
bedamot (n) kind of tree which is considered good for making bows.
bedeniak (vb) clear up.
bekorak (vb) visit.
benabena (n) kind of banana.
Benebet (pn-loan) Barabas. IND Barabas.
beriak (vb) meet, visit.
bid (n) sound/act of sucking (sugar cane).
bingginok (n) musical instrument.
biri1 (adj.val) clean, clear.
biri2 (adj.col) white.
birica (n) kind of pandanus.
Biricare (pn) Biricare.
birop (n) mud.
biru (n) lake. CF. mburu.
bo (n) kind of tree.
bogubuge (n) kind of sweet potato.
obicagwa (n) housemaid.
bok (adj.val) good, right.
bongga ~ bonggo (n) crab.
bonggo (n) see bongga.
boranggen (n) kind of sweet potato.
bu ~ bu’ (inter) unwilling, reluctance.
bugod (n) kind of bird. IND burung kuping kucing hitam/putih, JB.
biucinogot (n) kind of bird. IND burung sikatan kecil, JB.
buk (adv) near. CF. muk2.
bunggu (n) kind of tree.
burome (n) kind of tree. IND burung katik indah, JB.

c — c
cca (-mk) purposive.
Caduki (pn-loan) Saducees. IND Saduki.
Camaria (pn-loan) – Samaria.

codea / co’lea/ (n) wallaby.

D — d
d (mrk-) steep.
da (mrk) specifier. CF. ta.
Dagaid (pn) Dagai, Duvele village.
dagu (n) pandanus.
Damad ~ Ndamad (pn) Damal, a tribe to the southwest.
dambuniak (vb) unite, mix.
dame (n) kind of palm tree. IND damar.
damit (n) horsefly. IND lalat babi.
danggu (n) family of owl. IND elang or burung betet kukuk berdada hitam, JB.
Dani ~ Ndani (pn) Dani, a tribe to the south and south-east.
daniak (vb) chew.
Dauda ~ Ndauda (pn) Dem2, a tribe to the south-west.
davo1 (n) rack, platform. PM para-para.
davo2 (n) pigsty.
de (n) cry.
Decembet (n-loan) December. IND desember.
Dedome ~ Ndedome (pn) Moni, a tribe to the west.
dei / ‘dei/ ~ ‘dei’ ~ deik (deic) up-steep.
deiak (vb) cry.
deid / ‘deid/ (n) banana.
deidnebuk / ‘deidne buk/ (n) regent-whistler. LAT pachycephola griseiceps or rufousnaped whistler or aleadryas rufinucha, BPZ.
dem1 (n) kind of tree. IND kayu susu.
Dem2 ~ Ndem – see Dauda.
dembeniak (vb) peal, skin, break, divide.
demburu (ipni) tear. CF. ademburu.
deniak (vb) stitch.
dian (n) blood. CF. adian.
diagen (n) fish.
diare (n) eel.
dicariak ~ icariak (vb) cook.
\textbf{dik}_{1} (\textit{mrk}) \textit{negator, no, not.}
\textbf{dik}_{2} (\textit{interj}) \textit{look!, I tell you what!}

\textit{Dikmu} (\textit{pn}) Dikmu, Wano name.
\textit{dina} (\textit{num-loan}) five. \textit{IND lima.}
\textit{dimit} \sim ndimit \textit{(n) necklace-bead}. \textit{IND manik-manik}. 

\textit{dingge} (\textit{adv}) \textit{noon, midday.}
\textit{dinimbuk} (\textit{n}) \textit{poisonous snake.}
\textit{dip} (\textit{n}) \textit{kind of pandanus.}
\textit{dirivu} (\textit{n}) \textit{dust}. \textit{CF. wun.}
\textit{divud} (\textit{n}) \textit{kind of tree, which is used for making combs.}
\textit{Dogodem} (\textit{pn}) Dogodem, Turu hamlet.
\textit{doiak} (\textit{vb}) \textit{stay.}
\textit{dombak} (\textit{n}) \textit{finger click.}
\textit{dombawom} \sim ndombawom (\textit{n-loan}) \textit{sheep}. \textit{IND domba.}
\textit{dombok} (\textit{deic}) \textit{above.}
\textit{donggob} (\textit{n}) \textit{wild chicken. PM ayam hutan, maleo.}
\textit{Donggobgwe} (\textit{pn}) Donggobgwe, Wano female name.
\textit{donggoniak} (\textit{vb}) \textit{drown.}
\textit{doniak} (\textit{vb}) \textit{barter, buy, pay.}
\textit{dope} (\textit{n}) \textit{kind of tree.}
\textit{dou} \sim \textit{dou} \sim \textit{dou'} \sim \textit{douk} (\textit{deic}) \textit{down-steep}. \textit{CF. du.}
\textit{du} \sim \textit{dum} \sim \textit{duk} (\textit{deic}) \textit{down-steep}. \textit{CF. dou.}
\textit{duma} (\textit{num-loan}) \textit{two}. \textit{IND dua.}
\textit{dugui} (\textit{n}) \textit{kind of tree.}
\textit{duk} see \textit{du.}

\textit{Dukat} (\textit{pn-loan}) Luke. \textit{IND Lukas.}
\textit{Dukibeci} (\textit{pn}) Dukibeci, Wano river.
\textit{dum} see \textit{du.}
\textit{duniak} (\textit{vb}) \textit{catch.}
\textit{duvr} (\textit{n}) \textit{kind of tree.}
\textit{Duvede} \sim \textit{Nduvede, Adombi} (\textit{pn}) Duvele, a tribe to the northeast.

\textit{E} \sim \textit{e}
\textit{e} \textsubscript{1} (\textit{n}) \textit{tree, wood, forest, jungle.}
\textit{e} \textsubscript{2} (\textit{apn-}) see \textit{a} \textsubscript{1.}

\textit{e} \textsubscript{3} (\textit{-num}) \textit{singular, in PROG non-past sub-t.}
\textit{CF. u} \textsubscript{1.}

\textit{e} \textsubscript{4} (\textit{-mrk}) \textit{remote singular sub-t.}

\textit{e} \textsubscript{5} (\textit{interj}) \textit{stutter (expressing doubting, correction or a short break).}

\textit{eb} (\textit{-subj}) \textit{you plural, in incep non-past. CF. u} \textsubscript{2.}

\textit{ede} \sim \textit{ede'} \sim \textit{pede} (\textit{adj.val}) \textit{bitter, sour.}
\textit{edeme} (\textit{deic}) \textit{in front of.}

\textit{Edicabet} (\textit{pn-loan}) Elizabeth. \textit{IND Elisabet.}
\textit{Egemba} (\textit{pn}) Egemba clan.
\textit{egin} (\textit{apn}) \textit{bow.}

\textit{ei} / \textit{bi} / \sim \textit{ei'} \sim \textit{eik} (\textit{deic}) \textit{up.}
\textit{eikik} (\textit{n}) \textit{kind of tree.}

\textit{Ek} (\textit{pn}) Ek, Wano name.
\textit{ekanok} (\textit{interj}) \textit{never mind, don’t worry.}
\textit{embedak} (\textit{-ipn}) \textit{remember. CF omaci, maci.}
\textit{emberiak} (\textit{vb}) \textit{think, remember, ponder.}
\textit{embet} \textsubscript{1} (\textit{adj}) \textit{sharp, spiky.}
\textit{embet} \textsubscript{2} (\textit{n-loan}) \textit{bucket}. \textit{IND ember.}
\textit{embok} (\textit{adj}) \textit{strong.}
\textit{emboro} (\textit{-ipn}) \textit{knee.}
\textit{emit} (\textit{-exev}) \textit{laziness.}
\textit{en} (\textit{n}) \textit{sugar cane.}
\textit{enak} (\textit{-ipn}) \textit{tooth, teeth. CF. ak} \textsubscript{1.}
\textit{enan} (\textit{-ipn}) \textit{excrement, faeces, intestine.}
\textit{enap} (\textit{-ipn}) \textit{mouth.}
\textit{end} \textsubscript{1} (\textit{-subj}) \textit{you, in PROG non-past sub-t.}
\textit{CF. ep.}

\textit{end} \textsubscript{2} (\textit{-subj}) \textit{you, in REAL past verbs. CF. ep, up.}

\textit{endak} see \textit{ndat.}
\textit{endanggen} (\textit{-ipn}) \textit{thigh.}
\textit{endarak} (\textit{vb}) \textit{occur.}
\textit{endat} see \textit{ndat.}
\textit{endi} (\textit{interj}) \textit{leave it, forget it.}
\textit{ene} (\textit{-ipn}) \textit{belongs, possession.}

\textit{engga} (\textit{-ipn}) \textit{leaf.}
\textit{enggadi} (\textit{-exev}) \textit{shame.}
\textit{enggavid} (\textit{-ipn}) \textit{wing.}
\textit{enggawok} (\textit{-ipn}) \textit{tail.}
\textit{enggebok} (\textit{adj.val}) \textit{delicious.}
enggen (-apn) necklace.
enggit (-ipn) finger, hand.
enik (-ipn) breath.
enok (deic) next. CF. nok.
Enot (pn-loan) Enos.
ep1 (-subj) you plural, in PROG non-past. CF. end, ond.
ep2 (-subj) you plural, in SEQ REAL past. CF. end.
Epo (pn) Epo, Turu Hamlet.
er1 (-subj) I, in REAL past verbs. CF. ac, ic.
er2 (-subj) we, in prox-past sub-t. CF. ir2.
erani (n) slope, of mountain.
eravun ~ aravun (-ipn) menstruation, period. CF. tavun.
Erodet (pn-loan) Herod. IND Herodes.
erok (-adj) slow.
erok2 (adv) slowly.
eruk (-ipn) hair (-of head and body), feather.
et (-subj) I, in PROG non-past sub-t. CF. uer.
Eva – see Awa.
eve1 (-ipn) body. CF. avoke.
eve2 (-conj, adv) also.
Evet (pn) Evet.
eyedoman (-ipn) servant.
eyo (-ipn) appendix.

I — i
i1 (n) water.
i2 (-mrk) plural. CF. wi1.
i3 see a3.
i4 (-mrk) REM singular. CF. ou2.
Iak (-asp) then. CF. ak2.
ic (-subj) I, in PROG prox-past. CF. er1.
icak (adj.age) fresh, raw, lush, virgin.
Icadipa (pn) Hitadipa, Moni village.
icomo (pn-loan) Isaac. IND Isak.
icat (obj-) them, in REM of ‘see’ for the third person subject. CF. kat2, at2.
icawo (-ipn) aunt, sister of one’s mother.
icowo (-ipn) aunt, sister of one’s mother.
tombo (n) kind of tree.
tombo (n) kind of tree.
Icuk (n) kind of tree, of which sap is used as glue.
id (-subj) I, in INCEP non-past. CF. uid.
idanggen (-ipn) buttock.
id1 (-ipn) fear.
id2 (adj) afraid.
ijak (-ipn) breast. CF. ajak.
iom (n) grasshopper.
ik (-asp) progressive.
indi (-ipn) name.
indirok (-ipn) side. IND lambung. CF. pe.
indit2 (-ipn) cheek.
indu (n) fire, flame.
inenek (n) black-faced cuckooshrike. LAT coracina novaehollandiae, cuckooshrike or cocarina, BPZ.
inewek (n) kind of bird. IND burung dara berkerah, JB.
inexe (-ipn) eye.
Inge (-ipn) eye.
inggwebuk ~ inggebok (adj) blind.
inggweol (-ipn) kind of banana.
injak (vb) climb up.
inu (adv or ipn) inside. CF. ombat.
inunu (deic) in the inside. CF. inu.
inu1 (ipn-) their.
inu2 (ben-) for them.
inu3 (obj-) them. CF. k3, ninye.
inu4 (b.pron-) they.
inuye (obj-) them, in REM of ‘see’. CF. inyu.
inu (n) bread-fruit.
inuom (-com) with.
Inyoriakkwe (pn) Inyoriakkwe, Wano female name.
Inyorok (pn) Inyorok, Wano name.
Inyorogwi (pn) Inyorogwi, Wano female name.
ir1 (-subj) he/she/it, in REAL past. CF. ar1.
ir2 (-subj) I, in prox-past sub-t. CF. er2.
irakut (n) waterfall.
Iratoi (pn) Iratoi, Turu village.
ir (-ipn) sibling of different sex.
iriak (vb) do.
iru (n) hole.
iru' ~ iruk (adj,pp) hot.
irudik (n) sorcery, magic power, charm.
it (pron) they. CF. at1. (b.pron-) iny.
iyanggo ~ iyanggok (-ipn) outer ear.
iyanggok see iyanggo.

K — k
k1 (ipn-) your.
k2 (ben-) for you.
k3 (obj-) you.
k4 (b.pron-) you. cf. kat.
k5 (-mood) realis.
ka (=mrk) specifier. CF. ta.
kabi (n) iguana. IND biawak, soa-soa.
kadea (n) rat, mouse.
Kadedo (pn) Kadedo, Wano hamlet.
kadencjak (vb) climb over: yugut kadenjak
‘climb over the mountain’; (vb) break:
e kadenjak ‘break the stick’.
kago (adv) like, about.
kagu (n) kind of dove. IND burung merpati berdada kuning, JB.
kagude (n) kind of bird. IND pitohui kepala hitam, JB.
kaid / kaid/ n sprout.
kainggambuk /ka,ingga mbuk/ (n) crinkle-collared manucode. IND burung sri gunting lencana hitam, JB.
kainjak (vb) collect. see take.
kainyik (adv) part.
kambiak (vb) die because of a sorcery.
kambuniak (vb) tie.

Kamit (n-loan) Thursday. IND Kamis.
Kana (pn) Kana, Wano name.
kane (n) firewood.
kaniak (vb) die.
kanyik (adv) part.
Kareki (pn) Kareki, Wano river.
kat1 (pron) you. CF. kit. (b.pron-) k4.
kat2 (obj-) him/her/it, in REM of ‘see’ for the third person subject. cf. icat, at2.
kaube (n) kind of tree, which is good for making arrows.
kawo (n) kind of bird. IND burung mina emas/kuning, JB.
Kayapat (pn-loan) Kajafas. IND Kayafas.
ke (obj-) you, in REM of ‘see’. cf. kinye, k3.
keat (obj-) you, in REM of ‘see’ for the third person subject. cf. kicat.
kedamben (n) kind of bird. IND burung kepinis berdada putih, JB.
kede (n) rattan, string.
Kedo (pn) Kedo, Wano name.
Kembe (pn) Kembe, Wano river.
Kembemu (pn) Kembemu, Wano hamlet.
Kembu (pn) Kembu, Wano mountain.
kena (num) three.
kendang (n-loan) potato. IND kentang.
kende (n) ginger.
keni ~ keni’ (n) burping.
keniniak (vb) burp.
Keramu (pn) Keramu, Wano hamlet.
Kericut (pn-loan) Christ. IND Kristus.
kevem ~ kuwem (adv) late-afternoon. CF. kevim.
kevevak (n) penis gourd.
kevim (adv) afternoon. CF. kevem.
ki1 (adv) very.
ki2 (adj) true. (Friday) - ki wone woniak.
Kiagai /ki a'gai/ see Tiagai.
kibi ~ kivi (n) kind of tree.
kicat (obj-) you, in REM of ‘see’ for the third person subject. cf. keat.
kiduk (n) smoke.
Kigiru (n) mosquito.  
Kigievu (n) crowned dove. IND burung mambruk.  
Kik1 (adj.val) dirty.  
Kik2 (adj.col) black.  
Kin (adj) visible.  
Kiniak1 (vb) appear, visible.  
Kiniak2 (vb) pick up, take out.  
Kiny1 (ipn-) your plural.  
Kiny2 (ben-) for you plural.  
Kiny3 (obj-) you plural.  
Kiny4 (b.pron-) you plural. CF. kit.  
Kinye (obj-) you, in REM of ‘see’. CF. ke, kiny3.  
Kinyombowigiduk (pn) rainbow.  
Kinunggwa (n) centipede. IND ular cincin.  
Kirugwi (n) kind of bird. IND burung katik berdada putih, JB.  
Kit (pron) you plural. CF. kat. (b.pron-) kiny.  
Kivi – see kibi.  
Kivit (adj) yesterday.  
Kobun (n) kind of pandanus.  
Kodak (n) bedding.  
Kodariak (vb) have.  
Kode (adj.age) old, ripe. CF. tawe2.  
Kodiak (vb) get, find, discover.  
Kom (n) yam.  
Kombi (n) sago.  
Komboid (n) ulcer, wound.  
Konak (n) kind of bird. IND burung gagak berkepala hitam/bersuara merdu, JB.  
Kondumbugwa (n) northern scrub robin. IND burung kukuk semak/ekor kipas (jenis tekukur), JB.  
Koneniaak (vb) listen, hear.  
Koniaak (vb) correct.  
Korak (vb) see him/her/it.  
Korok1(adj) near.  
Korok2 (n) seeking.  
Kourare (pn) Kourare, Wano name.  
Kouwak (adj) short. CF. mot, pou.  
Kovakkwe (pn) Kovakkwe, Wano female name.  
Kovu (adv) tomorrow.  
Koyabi (n) kind of tree.  
Koyon (pn) Koyon, Wano village.  
Kudik (n) kind of sugar cane.  
Kuduk (adj) female animal. CF. weyat.  
Kugup (adj.dim) thick. CF. pode1.  
Kuguru – kuguruo (n) demon, evil spirit, witch.  
Kugw1 (n) witch. IND pesihir. PM suanggi.  
Kugwi2 (pn) Kugwi, Wano name.  
Kugwidom (n) articles of witchcraft, sacred articles. IND benda-benda berhala.  
Kugwigwe (pn) Kugwigwe, Wano female name.  
Kum1 (n) owl.  
Kum2 (interj) scream, shout, a call.  
Kuna (n) peanut, shell. CF. wu.  
Kumbuk (n) kind of tree, which is not good for firewood.  
Kun1 (adv) again. CF. kundigu.  
Kun2 (n) kind of yam.  
Kundigu (adv) again. CF. kun1.  
Kuni ~ kuni’ (n) war.  
Kuniaak (vb) make a fire.  
Kunik (n) bond, relationship. (vb) related, integrated. IND. (n) hubungan, kaitan, (vb) tertancap, terkait, tersambung.  
Kunumgwe (pn) Kunumgwe, Wano female name.  
Kunyawi (n) men’s dorm. CF. kunyawu with locative suffix. Young men live here to be prepared for their future. The motto of the Wano people “in kunyawi there is wone mawi” advises about essential strength and wisdom. Individual right is highly appreciated and protected. In a kunyawi, if someone has put his belonging in a special place nobody can take or
remove it. A parental dorm is a central core to educate its young men for their future. A tiruk ‘central poll of the house’ erected in the middle of wunawi ‘fireplace’ symbolising ninyombo ovok ‘our grandfather’s leg’ (from knee down) or ninyombo acok ‘our grandfather’s foot’ is to be treated with awe and respect. In a kunyawi there must be kani ‘firewood’ all the time to keep indu ‘fire’ alight, the symbol of life. The opposite of kunyawi is kwenyawi ‘women’s dorm’, which has no cultural significance as strong as kunyawi.

kunyedunggwi (n) kind of necklace.
kup (n) dark. CF. kupmu.
kuperak (adv) morning.
kupmu (adv) evening, night.
kurik (n) kind of sugar cane.
kuru (n-loan) see ngguru.
kaa (n) woman.
kwam (n) turtle. CF. pode2.
Kwanggarek (pn) Kwanggarek, Wano female name.
kwe (conj) but.
kweck (n) kind of bird. IND burung pitohui berjambul, JB.
kweidiak (vb) sit down.
kwemba (n) grass.
kwevi (adj, adv) endless.
ki (adj.col) red.

M —m
ma (adj) forbid, sacred. (proh) don’t!
ma’ (n) vomit, vomiting.
maci (n) negligence, forgetfulness.
Madadena ~ madarena (pn-loan)
Magdalene. IND Magdalena.
Madarena see Madadena.
madaria / mada’ria/ (pn-loan) malaria. IND malaria.
made (n) arrow for small games, i.e., birds, chickens, or ground rats. CF. wim.
mado (n) wild pig. CF. nggoca ~ nggoica.
maduk (adj) bad, evil, mistake, wrong.
maminiak (vb) learn, investigate.
mande (q) how many, how much.
manderi (p-loan) male nurse. IND mantri.
mandom (q) when. CF. ndikim.
mangga1 (adj.col) brown.
mangga2 (n) kind of tree, which its fruit is used to colour one’s face for a war or a ceremony. CF. mangga3.
mangga3 red/brown-facial decoration. CF. mangga2.
mangge1 (n) frog.
mangge2 (n) kind of tree, whose leaf is used for making netbag.
manggo (n) biceps band.
manggu (n) first born.
Marakut ~ marekut (pn-loan) Mark. IND Markus.
Maret (n-loan) March. IND Maret.
Mareta (pn-loan) Martha. IND Marta.
Maria (pn-loan) Mary. IND Maria.
mariak (vb) make, build, squeeze, prepare (food).
Matiut (pn-loan) Matthew. IND Matius.
mayuk (n) salt.
Mbadiakwe (pn) Mbadiakwe, Wano female name.
mbaiak (vb) wiggle.
mban (adv) only.
Mbanda (pn) Mbanda clan.
mbareniak (vb) knot.
mbariak (vb) fasten.
mbc (n) fuss, complain, agitate, irritate. CF. ago, anini, nggum.
mbere (num) two. CF. nimbre.
mbiak (vb) curse.
mbicariak (vb) search.
Mbidik (pn) Mbidik, Wano hamlet.
mbininiak (vb) recite, announce, proclaim.
mbinit (n) sand.
mbit (n) moon, month.
mbiyuk (n) kind of bird of paradise, that is the one which has two thin tails.
mboid / 'mboid/ (n) sweet potato: mboi me mboi engga me uku 'Saturday'.
mboinyi / 'mboi hiyi/ (n) kind of pandanus.
mboinyiak / 'mboi yi 'ak/ (vb) slice, write.
mbok (n) secret. CF.
nadi.
Mbomban (pn) Mbomban, Wano village.
mbon (n) kind of tree.
mbona (n) sin.
Mbonawe (pn) Mbonawe, Wano female name.
mboniak (vb) cut, cross.
mboriak (vb) whistle (by putting finger in the mouth).
mbou (n) lizard. IND cecak.
mbou' / 'mbou' / (n) sky, heaven, universe.
Mbou'mu Nagwan (pn) God.
Mbowid (pn) Mbowid, a Wano village.
mbu ~ mbu-mbu (n) thorny grass. PM rumput baduri, rumput duri-duri.
mbud (n) stick.
Mbudo (pn) Mbudo, Wano name.
mbuk1 (n) kind of reed.
mbuk2 (n) grass-skirt.
mbuk3 (adj.pp) dry. CF. min.
Mbunggarigwe (pn) Munggarigwe, Wano female name.
mburica (n) kind of yam.
mburicaya (n) kind of yam.
mburu1 (n) lake. CF. biru, amburu.
me1 (conj) and.
me2 (-mrk) LOCATIVE. CF. me.
Medenggwa (pn) Medenggwa clan.
medeniak (vb) roll a tobacco. CF. pereniak.
mediak (vb) lift up, lean on, erect.
megop (n) kind of tree.
Mei1 (pn) Mei, Wano female name.
Mei2 (n-loan) May. IND Mei.
meinyiak / 'meinyi 'ak/ (vb) pull out. CF. niriak.
meiyo (n) urine. CF. ameiyo.
mek (adj, interj) impossible.
mendarak (vb) wrap, put on. CF. pungguniak.
mende (mrk) source.
meriak (vb) rise, stand up.
merom (n) kind of sweet potato.
midinggiriak (v) to block.
min (adj) wet, cold (substance). CF. mbuk3.
Minggu (n-loan) Sunday. IND Minggu. CF. tamba.
miriak (vb) fell, cut down.
Mirib (pn) Mirib clan.
Mocami (pn) Mocami, Wano hamlet.
moinyiak / 'moinyi 'ak/ (vb) capture.
mono (deic) like that. CF. ndo2.
mot (adj, adv) short. CF. aduk, muk.
mowid (n) python.
mu (-mrk) locative. CF. me2.
Muca (pn-loan) Mozes. IND Musa.
mudi1 (n) leech, of the small type. CF. yanambok.
mudi2 (adj.col) blue.
mudu (interj) gee!, help! (expressing surprise and dislike).
Mui (pn) Mui, Wano river.
muk1 (adj) long. CF. mot.
muk2 (adv tem, dim) far.
muni (deic) that.
muniak (vb) dry.
munyum (n) treasure. CF. adi.
murinid (n) kind of bird. IND burung jalak, JB.

N — n
n1 (ipn-) my.
n2 (ben-) for me.
n3 (obj-) me. Cf. niny3, ne.
n4 (b.pron-) I. Cf. an.
na (deic) as such. Cf. ni.
nabi (n) dream, vision.
naboia (vb) throw away.
naci (n-loan) rice. IND nasi.

Nacid Mbedagwe (pn) Nacid Mbedagwe, Wano female name.
nacimbak (n) kind of yam.
nad (deic) here.
nak (n) secret. Cf. mbok.
nagamburu (n) pumpkin.
nagwan (n) lord, chief.
nak (vb) glue.
nak a (n) porcupine, hedgehog. IND landak.
nano (Q) what.
nariak (vb) close.

Nawid-nawidgwe (pn) Nawid-nawidgwe, Wano female name.
naphu (n) ball.
nadariak (vb) immerse, wash, bathe, shower, swim. PM molo, tobo, tum.
ndak (adj, adv) equal, same.

Ndani (n) thunder.
nduk1 (n) see ndu.
nduk2 (n) see ndu.
ndum (n) cassowary.
ndup (n) kind of tree.

Ndou ~ Duvede, Adombi (pn) Duvele, a tribe to the north.
ne1 (mrk) specific topic. Cf. no.
ne2 (obj-) me, in REM of ‘see’. Cf. ninye, n3.
neat (obj-) me, in REM of ‘see’ for the third person subject. Cf. nicat.

Neirowak (pn) Neirowak, Wano place.
nenggit pemenok apik (num) five.
nenggit pemenok apik ambui (num) six.
nenggit pemenok apik kena (num) eight.
nenggit pemenok apik mbere (num) seven.
nenggit pemenok apik mbere-mbere (num) nine.
nenggit pemenok apik ngganduk (num) ten.
ngga (Q) where.
nnggabok (n) king of pandanus.
nnggabunya (n) kind of tree.
nnggacame (n) kind of pandanus.
nngacamuru (n) large centipede. IND kalajenging besar.

Nggamende (pn) Nggamende, Wano name.
nnganduk (Q) how.
nngarek (adj.val) handsome, pretty.
nggauma (n) kind of tree.
nggayo (Q) why.
nggayonduk (Q) how come, what do you think?.
ngge (Q) which one.
ngge’ (interj) excuse me!
nggebak (n) canoe.
nggembada (n-loan) shepherd. IND gembala.
nggemi (n) folklore, folktale.
nggenek (n) kind of bird. IND burung bayan gunung or kesturi raja, JB.
nggenggema (n) kind of bird. IND burung nuri kecil hijau, JB.
nggereja (adj-loan) church. IND gereja.
nggerengga (adj. col) green.
nggewo (n) dog.
nggidivi (n) lemon.
nggiduk (n) cucumber.
nggiga (adj or n) jealous, or silent anger with vengeful thought. CF. ago, anini, mbe’.
nggum (adj or n) kind of bird. IND burung berparuh katak, JB.
nggiraniak (vb) carry on head. CF. woniak, yeriak.
nggiraniak (adj-loan) church. IND gereja.
nggivit (n) kind of bird.
nggivot (n) kind of bird.
nggoica (n) wild pig. CF. mado.
nggoca ~ nggoica (n) wild pig. CF. mado.
nggoid (n) landslide, erosion.
nggowe (n) sound of pigs.
nggwenkuma (n) peanut.
Nggweri (pn) Nggweri, Wano village.
nggwe (n) sound of pigs.
nggwen (n) earth, soil, ground.
nggwenkuma (n) peanut.
nggweri (pn) Nggweri, Wano village.
ni (deic) as such. CF. na.
nibiniak (vb) pull. CF. niriak.
icat (obj-) us, in REM of ‘see’ for the third person subject. CF. neat.
nimbre (num) two. CF. mbere.
niny1 (ipn-) our, ours.
niny2 (ben-) for us.
niny3 (b-pron-) us. CF. niny3.
niny (obj-) us, in REM of ‘see’. CF. ne, niny3.
nirak (vb) pull out. CF. meiniyak.
nit (pron) we. CF. an. (b-pron-) niny.
no (mrk) generic topic. CF. ne2.
norak1 (vb) go.
norak2 (vb) consume, i.e, eat, drink, smoke.
November (n-loan) November. IND November.
Novet (pn) Novet, Wano name.
nuakwe (n) kind of dove, wallace.
nuk (deic) see nok.
umbodok-umbodok see ombodok.

O — o

o₁ (n) place, region, environment (demarcative).
o₂ (n) village, hamlet.
o₃ (num) singular, in non-past. Cf. ut₁.
o₄ (apn-) see a₁.
o₅ see a₃.
o₆ (=mrk) pausal.
obak (-ipn) branch.
obaruk₁ (-ipn) odour.
obaruk₂ (adj.age) rotten, old, defective.
obat / bat / (n-loan) medicine. IND obat.
od (-mrk) reflexive.
odi (-ipn) testicle.
odia (apn) hut, posthouse, (garden) shelter.
odia (vb) urinate.
odiah (apn) friend. CF. ombane.
odo (deic) centre.
on (adj.pp) deep.
ond (subj) you, in PROG non-past. Cf. ep.
donowok (-ipn) chin.
one (-ipn) voice, sound, speech, language.
onega (n) kind of palm, whose leaf is used for the roof of a house.
op (adv) already, completed, all up. (adj) finished, used up, all gone.
Ombot (pn) the name of a river.
**orinukwa** (*n*) lowlands *peltops*, a kind of bird (found in the lowlands), the name used in/by Joyce Briley.

**oru** (*n*) old Wano, the Dani language.

**ot** (-subj) I, in PROG non-past. CF. *uer*.

**ou** / 'ou' / ~ ouk (*deic*) down.

**ou2** (-mrk) REM plural. CF. *e4*.

**ouk** (*n*) kind of bird. IND *burung cabak celepuk*, JB.

**oum** (*-ipm) stomach.

**ova** (*-ipm) father.

**ovavud** (*-ipm) character. CF. *vavud*.

**owarid** (*-ipn*) saliva. CF. *warid*.

**owe** (*-ipn*) older sibling of different sex.

**owok** (*-ipn*) bone.

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**P**

**pa** (*mrk*) specifier. CF. *ta*.

**Padik-padinggunggwa** see *Padinggunggwa*.

**Padinggunggwa** (*pn*) Padinggunggwa, Wano village.

**pariak** (*vb*) produce.

**Pavid Owokwe** (*pn*) Pavid Owokwe, Wano female name.

**pavuk** (*n*) bush.

**pe** (*deic*) side. CF. *indit*.

**Peambourarogwe** (*pn*) Peambourarogwe, Wano female name.

**Pebruari** (*n-loan*) February. IND *Februari*.

**peki** (*n*) assumption

**pemle** ~ pemle’ (*adj.dim*) thin. CF. *kugup*.

**pemona** (*n*) kind of banana.

**pomone** (*n*) kind of tree.

**poniak** (*vb*) sweep.

**poriak** (*vb*) split.

**pou / pou’/ (*adj.dim*) short.

**pu** (*n*) blowing.

**puduk** (*n*) assemble.

**puk** (*n*) waiting.

**pungguniak** (*vb*) wrap (with leaf). CF. *mendarak*.

**punu** ~ punu-punu (*n*) kind of pigeon.

**pupugi** (*n*) kind of bird. IND *burung gagak kelabu*, JB.

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**Peterut** (*pn-loan*) Peter. IND Petrus.

**pewo** (*n*) kind of bird. IND *burung tepekong kumis*, JB.

**picuwe** (*n*) kind of bird. IND *burung cabe irian*, JB.

**piganiak** (*vb*) keep, hold.

**pigorak** (*vb*) grab, embrace.

**pikwi** (*n*) kind of pandanus.

**pindimbold** (*n*) kind of sweet potato.

**Pinggik Denggakkwe** (*pn*) Denggakkwe, Wano female name.

**piniak1** (*vb*) arrive.

**piniak2** (*vb*) dance.

**piniriak** (*vb*) bind.

**pipiyu** (*n*) kind of pandanus.

**pit** (*n*) kind of tree, which has white bark with the skin as soft as velvet, used for making fences, houses, or combs.

**piyu** (*n*) kind of pandanus.

**poa** (*n*) kind of tree, whose wax is used for making rubber.

**podaniak** (*vb*) bend, curve.

**pode1** ~ pode’ (*adj.dim*) thin. CF. *kugup*.

**pode2** (*n*) turtle. CF. *kwam*.

**podi** ~ podi’ (*n*) deception, cheating.

**podik** (*vb*) lie, deceive, trick.

**poiya** (*n*) sun.

**pomo** (*n*) kind of banana.

**ponggo** (*n*) kind of tree.

**pongurak** (*n*) kind of tree.

**poniak** (*vb*) sweep.

**pociak** (*vb*) split.

**pou / pou’/ (*adj.dim*) short.

**pu** (*n*) blowing.

**puduk** (*n*) assemble.

**puk** (*n*) waiting.

**pungguniak** (*vb*) wrap (with leaf). CF. *mendarak*.

**punu** ~ punu-punu (*n*) kind of pigeon.

**pupugi** (*n*) kind of bird. IND *burung gagak kelabu*, JB.

**pupugo** (*n*) rufous babbler.
puriak (vb) wait.
pwi (n) head louse.

R — r
Ra’ab (pn-loan) Rahab. IND Rahab. CF. Ragab.
radio (n-loan) – radio.
Ragab (pn-loan) see Ra’ab.
roti-kom (n-loan) bread. CF. tuaninyomboid.

T — t
ta (mrk) specifier, who, which. (var) ba, pa,
ta, da, ka, ra.
taburiak (vb) to cover.
tabi (n) kind of vegetable. IND sayur gedi.
tabid (adj) wide.
tabirabi (n) kind of tree.
tabit (n) wind.
tade (n) kind of tree.
tadu (n) kind of yam.
tae ~ tae’ (n) lightning.
tagaid / ta’gaid/ (n) kind of sugar cane.
tage (n) kind of bamboo.
taget (n) spider.
tajo (n) kind of banana.
takwa (n) kind of fish. IND ikan gabus.
tam (n) kind of tree with edible fruits.
tamba (n) chanting: tamba kweiku or puk
wunak uku Sunday.
tambaragwi ~ tombaragwi (n) kind of
cricket, which is blue and looks like a
long beetle.
tanggeno (n) tomba bower bird. LAT
archboldia sanfordi, PF.
tariak (vb) roast on or under the ground.
CF. woodeniak.
tat (n) kind of tree, whose fruit is edible.
tavennga (n) kind of vegetable. MP sayur
genemo.
tavi (n) rain.
tavo (n) tobacco.

tavom (n) honey eater. IND burung pengisap
madu, JB.
tavun (n) menstruation, period. CF.
eravun.
tawe1 ~ tauwe (n) kind of bird. IND burung
nuri cokelat, JB.
tawe2 (adj.age) young.
taye (adj.dim) light.
teben (n) bat.
tebon (n) fly.
Tedaca (n-loan) Tuesday. IND Selasa.
tegen (n) kind of palm, the bark of which
is used to make a bow. MP pinang
hutan.
Tegori (pn) Tegori, Wano name.
tembombaak (n) kind of tree.
teno (n) kind of tree, which is good for
making fences and houses. Its fruit is
edible.
Teptembet (n-loan) September. IND
September.
tevenggiak (vb) to overshadow.
teveniak (vb) cremate.
tevepuven (n) kind of bird. IND burung
da r a p i n u s , J B .
tewu (n) kind of banana.
ti (n) clipper.
Tiagai / tia’gai/ (pn) Tiagai, Wano village.
tid (n) pig’s snout.
Tidje (pn) Satan. IND Setan.
tigi ~ tigi’ ~ tigik (n) kind of tree whose
fruit is edible.
tigik / ti’giak/ (adj) shallow.
tigrigit (n) kind of bird. IND burung
kipas
dada hitam, JB.
tigig (n) kind of tree.
Tinak (pn) Sinak, Moni village.
tinggi (n) kind of tree, which is used for
making arrows.
Tinggi-ringgi (pn) mountain name.
tinggu (n) snot. CF. aringgu.
tinyo (n) scorpion. IND. kalajengking.
tiradi (n) cloud.
tiri (adj.col) yellow.
tiriak (vb) miscarry.
Tivinggi (pn) Tivinggi, Wano village.
tiwica (n) kind of pandanus, yellowish and more delicious.
tiyu (n) kind of bird. IND burung rajawali merah, JB.
to (n) cooking pot, a canoe-like shape, usually used for squeezing pandanus fruit.
toan (n) kind of vegetable.
todik (adj) quick, fast.
tombaragwi ~ tambaragwi (n) kind of cricket, which is blue and looks like a long beatle.
ton (n) kind of pandanus.
toniak (vb) cough.
torak (vb) intend, will, want to.
towaro (n) kind of banana.
towe (n) bird.
toweanan (n) kind of pandanus.
towewom (n) chicken.
tu (n) way, path, door.
tuan (n-loan) Westerner, sir. IND tuan.
tuaninyene (n) pineapple.
tuaninyomboid (n) bread. CF. roti-kom.
Tukmid (pn) Tukmid, mountain name.
tundik (n-loan) injection. IND suntik.
tuniak (vb) walk.
tupermi (n-loan) kind of food. IND supermie.
tupu (n) kind of tree, which is used for making canoes.
Turat (pn) Turat, Wano name.
Turu (pn) Iau, a tribe to the north and northwest.
Turumo (pn) Turumo, Turu village.
tuwi (n) kind of tree, which is used for making arrows.

U — u
u1 (-num) plural, in non-past. CF. e3, o3.
u2 (-subj) you, in INCEP non-past. CF. eb.
u3 see a3.
u4 (n) desire.
u5 (n) hawk. IND elang hutan.
uer (-subj) we, in PROG non-past. CF. et, ot.
ugo (n) kind of bird. IND pitohui cokelat bata, JB.
ugwid (n) kind of bird. IND burung kukuk besar (jenis tekukur), JB.
uiak (vb) sleep.
uid (-subj) we, in INCEP non-past. CF. id.
uija (n) kind of bird. IND burung dara pergam, JB.
uk (-asp) next. CF. nok.
umbun (-ipn) shoulder. IND bahu.
umbun1 (-ipn) top shoulder. IND bahu.
umbun2 (-ipn) top head. PM ubun-ubun.
unanggada (n) kind of bird. IND burung bayan pantai, JB.
undawom (n-loan) camel. IND unta.
unewakwa (n) kind of bird. IND burung rajawali kecil, JB.
uni (n) kind of bird. IND bebek rawa, JB.
uniak (vb) enter.
up (-subj) you plural, in PROG REAL past CF. end.
uru1 (n) spirit (of an ancestor).
uru2 (n) see urukuma.
urukuma (n) aircraft.
ut (n) moss.
utterwe (n) kind of bird. IND burung nuri ekor panjang, JB.
uyak ~ u’yak (n) hornbill. IND burung kumkum.
uyo (adj.col) soft-brown.

V — v
vavud (n) character. CF. ovavud.
Vawi (pn) Fawi, Iau village.
ve (n) lifting up.
**vi (adj)** mute, deaf.

**vingge (n)** kind of tree.

**vinggu (n)** cockroach.

**viyu (n)** fawn-breasted bower bird. LAT *chlamydera cerviniventris*, PF.

**W — w**

**wa (interj)** greetings, expression of gratitude or appreciation.

**wab (adv)** time.

**wadik (n)** deserted garden. CF. *akut*, *yarak*, *yavuk*.

**wado (n)** gecko. IND *toke*.

**wado (n)** gecko. IND *toke*.

**wagen (n)** kind of tree.

**wak (n)** cockroach.

**wanyu (n)** fawn-breasted bower bird. LAT *chlamydera cerviniventris*, PF.

**wa (interj)** pardon me?, what did you say?

**Waimu (pn)** Waimu, Wano village.

**Wandin Awi Mayugwe (pn)** Wandin Awi Mayugwe, Wano female name.

**Wanggiva (pn)** Wanggiva, Wano village.

**waniak (vb)** take, gather, pick up.

**Wano (pn)** Wano, the Wano tribe.

**wariak (vb)** hit him/her/it, abuse, stab, shoot, forge, spit, play, attack, poke, spear.

**warid (n)** saliva.

**wariak (vb)** hit him/her/it, abuse, stab, shoot, forge, spit, play, attack, poke, spear.

**wariak (vb)** hit him/her/it, abuse, stab, shoot, forge, spit, play, attack, poke, spear.

**wariak (vb)** hit him/her/it, abuse, stab, shoot, forge, spit, play, attack, poke, spear.

**wrak (vb)** come.

**worak (vb)** come.

**woraneb (imp) you come (to plural). CF. amok**.

**woroak (~ woria (vb) give.**

**wur (n)** money.

**wu (n)** shell. CF. *kuma*.

**wu (n)** money.

**wu (n)** shell. CF. *kuma*.

**wu (n)** shell. CF. *kuma*.

**wun (n)** ash. CF.

**wun (n)** ash. CF.

**wunom (attr.deic) up high.**

**wunyom (adv.deic) up high.**

**Wundak (n)** battle cry.

**wum (adj, adv)** empty.

**wun (n)** shell. CF. *kuma*.

**wu (n)** shell. CF. *kuma*.

**wu (n)** shell. CF. *kuma*.

**wu (n)** shell. CF. *kuma*.

**wu (n)** shell. CF. *kuma*.
Y — y
yabok (adv) far. CF. mot.
yadid (n) kind of bird. IND burung kipas
berpunggung cokelat merah, JB.
Yaguri see Yaudi.
yak (adv) then, afterward. CF. PM lalu,
terus, baru.
Yakobut (pn-loan) James. IND Yakobus.
yambeniak (vb) count.
yambuci (n) kind of yam.
Yamo (pn) Yamo, Wano river. ENG van
Daalen.
yanambok (n) kind of leech, the bigger
type. CF. mudi.
yanduk (n) bridge.
Yanet (pn-loan) Yanis.
yanggwi (n) cockatoo. IND burung kakatua
putih besar berjambul kuning, JB.
yaniak (vb) scream, yell.
Yao (pn) Yao, Wano village. IND Yawa.
yarif (vb) plant, grow.
Yauri ~ Yaguri (pn-loan) Jew, Jewish. IND
Yahudi.
yaruk (n) harvested garden. CF. yawuk1,
wardak, akut.
yaruk2 (n) work, job.
yawid (n) bird of paradise.
ye (n) axe.
yeciniak (vb) sneeze.
Yecut (pn-loan) Jesus. IND Yesus.
yedok (adj.dim) large, big, huge, many.
Yedome (pn) Wano village, which is the
place where the stone axe is
traditionally made and bartered to the
Dani tribe. The main river running
across the area is called Yei. CF. yei.
yedowi (n) knife.
yeget (n) fence.
Yei / ye i/ (pn) river name, where people
used to make stone axes, ye. The
village of the people there is called
Yedome. CF. yedome.
Yek (pn) Wano village.
yembenak (n) city.
yenggen (n) fissure, gap, rift, slot.
yenggodan (ipn) sperm, semen. CF.
ayenggodan.
yeniak (vb) wander.
Yerei (pn) Yerei, Turu village.
yeriah (vb) carry on shoulder. CF.
ggiraniak, woniak.
yehek (adj.hp) weak.
yi (deic) this.
yiduwu (n) kind of bird. IND burung pipit,
JB.
yigirak (vb) rub both hands against each
other.
yik (adj) dull, blunt. CF. andogon.
Yinggeo (pn) Yinggeo, mountain name.
yiviniak (vb) scratch, scrape, grate, claw,
shave.
yivivit ~ kivivit (n) butterfly.
yo ~ yo’ (vb) pick, steal, rob.
Yoanet (pn-loan) John. IND Yohanes.
yodiak (vb) insert, fill in, put in.
yogu (n) kind of dove. IND burung merpati
ekor panjang, JB.
yoinje (n) torch.
yok (adv) now.
yonggoniak (vb) rest.
yoniak1 (vb) help.
yoniak2 (vb) return, move, shake.
Yoredan (pn-loan) Jordan. IND Yordan.
yoriak (vb) say, tell.
Yucana (pn) Johanna, Wano female name.
Yucup (pn-loan) Joseph. IND Yusuf.
yud (n) tucan. IND burung taun-taun. LAT
aceros plicatus, PF.
Yudi (n-loan) July. IND Juli.
Yudiap (pn-loan) Juliap.
yugum (n) stone, rock gravel.
yugut (n) mountain.
yuk (interj) yes.
yum (n) netbag: yum agede kunggu
Monday.
yumbuk (n) kind of palm tree. PM nibon.
LAT onco sperma filamentosum, PF.
yumbuniak (vb) fold.
Yuni (n-loan) June. IND Juni.
yuniak (vb) move.

ENGLISH–WANO

A — a
abdomen – avud, avudi.
about see like.
above – dombok.
abuse him/her/it – wariai. (see hit, stab, shoot, forge, spit, play, poke, spear, abuse).
Adam – Adam.
afraid – id12.
afternoon – kevim. (late) – kevem ~ ku vem.
again – kun1 ~ kundigu.
agitate – see fuss.
ah! – a4.
aircraft – urukuma ~ uru2.
all – apik.
also – eve2.
amazement – see awesomeness.
ancestor – ade.
and – me1.
Andrew – Andariat.
anger – anini.
animal (female) – kuduk. (male) – weyat.
announce – see recite.
ant – nggevado.
appear – kiniak1.
appendix – eyo.
appreciation, expression of – see greeting.
April – Aperid.
arm band – manggo.
arrive (vb) – piniak1.
arrows (for big game) – wim. (for small game) – made.
as such – ni, na.
ash – wun. CF. dust.
assemble – puduk.
assumption (n) – pede1.
astonished – see stunned.
attack – wariai. see hit, stab, shoot, forge, spit, play, poke, spear, abuse.
August – Agucut ~ Agutut.
aunt (sister of one’s mother) – icawo.
axe – ye.

B — b
back (-ipn) – amban, omb0d1.
backside – anduk1.
bad – maduk.
ball (n) – ndapu.
bamboo – (kind of) - tage.
banana – deid. (kind of - bena-bena, inggwoi d, no’, pomo, tajo, tewu, towar).
Barabas – Benebet.
barking sound (n) – nggok2.
barter – doniak.
bat (n) – teben.
bathe (vb) – see immerse.
battle cry – wuk-duk.
bayan tree – wein.
bearing – kodak.
behind – see backside.
belongings – ene.
bend (vb) – podaniak.
biceps – awengge.
big – see large.
bile – see bladder.
bond – piniriak.
bird – towe. (kinds of - bako, bugod, buicinogot, burome, inevek, kagude, kawo, kedamben, kirugwi, konak, kwe cu k, mbiyuk, murinid, nggenek, nggenggema, nggivit, nnggivot, nggoron, nggunum,
bird of paradise – yawid. (kind of) - mbiyuk.
bitter – ede ~ ede’ ~ pede.
black – kik2.
bladder – adunggwanggen.
blind – inggwebuk ~ inggebok.
blood – adian, dian.
blowing (n) – pu.
blue – mudiz.
blunt – see dull.
body – (abstract) eve1, (concrete) awoke, (integral bond) kunik.
bone – owok.
bottom of body – omarib1.
bow – egin.
branch – obak.
bread – roti-kom, tuaninyomboid.
bread-fruit – inyo.
break – see peel.
brain – ajak ~ ijak.
breath – enik.
bridge – yanduk.
brown – mangga1.
bucket – embet2.
bust – see make.
burp (vb) – keniniak. (n) keni ~ keni’.
bush – puwuk.
butterfly – yivivit ~ kivivit.
butterfly – yivivit ~ kivivit.
buttock – idanggen.
buy – see barter.

C — c
call – see scream.
camel – undawom.
canoe – nggebak.
capture – moinyiak.
carry (by hand) – woniak, (on head) – nggiraniak. (on shoulder) – yeriai.
cassowary – ndumbuk.
catch (vb) – duniak. CF. grab.
cave – ando, ndo1.
central – odo.
chanting (n) – tamba.
character – ovavud, vavud.
charm – see sorcery.
cheating (n) – see deception.
cheek – indit2.
cheek – amewok.
cheek – daniak.
chicken – towewom, (wild) – donggob.
chief – see lord.
child – nonggobe.
(youngest) – amea.
children – nonggodunggwi.
chin – ondowok.
Christ – Kericut.
church – nggereja.
claw (vb) see scratch.
clean – biri1.
clear – see clean.
clear up – bedeniak.
climb over – kadeniak.
climb up – iniak.
clipper – ti.
cloud (n) – tiradi.
cockatoo – yanggwi.
cockroach – vinggu.
cold – nggore, min.
collect (vb) – kainiak. CF. take.
come – worak.
come! – (sg.imp) amok2. (pl.imp) – woraneb.
come out – windiriak. CF. spread out.
come up – winiak. CF. spread out.
compassion – see feeling for.
complain – see fuss.
consume (vb) – norak2.
cook – dicariak ~ icariak.
corn – bato ~ batok.
corner – amunggut.
correct – koniak.
corrupt – see spoil.
cough (vb) – toniak.
count (vb) – yambeniak.
country – see home.
cousin – ambunu.
crab – bongga ~ bonggo.
cremate (vb) – teveniak.
cricket – wem. (kinds of) - tambaragwi ~
tombaragwi.
cross (vb) – noniak. CF. cut. (n)
nonggik-donggik.
crown dove – kigivu.
cry – de, deiak.
cucumber – nggiduk.
curse – see spoil.
curve (vb) – see bend.
cuscus – baid. (kinds of) - bagai, bagi, codea.
cut – mboniak. CF. cross.
cut down – see fell.

die – kaniak. (because of sorcery) –
kambiak. CF. curse.
dig (vb) – ndeniak.
diligence – ambudit.
diligent – see diligence.
dirty – kik1.
discover – see get.
divide – see peel.
do – iriak.
dog – nggewo.
don’t worry – see never mind.
don’t! – see sacred.
door (n) – see path.
dove – (kinds of) - kagu, kigivu, nuakwe, yogu.
down – ou ~ ou’ ~ ouk.
down-steep – du ~ dum ~ duk.
drink – see consume.
drown – donggoniak.
dry – mbuk3.
dry (vb) – muniak.
dull – andogon, yik.
dust – dirivu. CF. ash.

D — d

damage – see spoil.
dance (vb) – piniak2.
dark – kup.
day – ari.
deaf and dumb – see mute.
deceive (vb) – see lie.
December – Decembet.
deception (n) – podi ~ podi’.

decompose – see spoil.
deep (adj.pp) – on.
deface – see spoil.
defective – see rotten.
delicious – enggebok.
demon – kuguru ~ kuguruo.
desire – avok, u4.
destroy – see spoil.
develop – see spread.

d — e

ear (outer) – anggo.
earth (n) – nggwen.
eat – see consume.
eel – diare.
egg – see fruit.
eight – nenggit pemenok apik kena.
Elizabeth – Edicabet.
embrace (vb) – see grab.
empty – wum.
endless – kwevi.
enter (vb) – uniak.
environment – see place.
equal – endat ~ ndat ~ endak.
erosion – see landslide.
eternal – ai.
Eve – Awa.
evening – kupmu.
evil – see bad.
excrement – enan.
excuse me! – ngge’.
exist (vb) – woniak.
eye – ingge.

F — f
facial-paint (red/brown) – mangga3.
faeces (feces) – see excrement.
family (of female) – oinyayak. (of male) – agwebut.
far – yabok (spatial); far away – yabok, muk2 (temporal).
fast – todik. CF. quick.
fasten – mbariak.
fat – amok1.
father – ova.
fawn-breasted bower bird – viyu.
fear – idi1.
feather – see hair.
February – Pebruari.
feeling for – abua.
fell – miriak.
feminine – avukwa1.
fence – yeget.
fertile – amburu.
fetch – widiak.
few – see small.
fiancé – adurik.
fill in (vb) – see insert.
fill up – wiriak.
find – see get.
finished – op.
fire – indu.
firewood – kane. make a fire – kuniak.
first born – manggu.
fish – dianggen. (kinds of - pega, takwa)
fissure – yenggen.
five – nenggit pemenok apik.
flame – see fire.
fly (n) – tebon.
fold (vb) – yumbuniak.
folklore – nggemi.
folktale – see folklore.
foot – see toe.
for (me) – n2. (us) – niny2. (you) – k2. (you plural) – kiny2. (him/her/it) – see sake. (them) – iny2.
forbid – ma.
forefather – ado.
forehead – okewok.
forge – wariak. see hit, shoot, abuse, stab, forge, spit, play, poke, spear.
forget it! – see leave it.
forgetfulness – see negligence.
four – mberember.
fresh – icaidok.
Friday – see ki2.
friend – ombane.
friends – ombawi.
frog – mangge1.
fruit – anggen.
fuss – mbe.

G — g
gall – see bladder.
gap – see fissure.
garden (already harvested) – akut.
(deserted) – wadik. (in use, harvested)
yorak. (prepared, planted) – yawuk.
gather (vb) – see take. (together) – see assemble.
gecko – wado.
gee! – mudu.
get – kodiak.
ghost – anggena.
give – woriak, woiak.
go (vb) – norak1.
God – Mbou’mu Nagwan, Ada, Ara.
good – bok.
grab (vb) – pigorak.
grass – kwemba. (thorn – diruk, thorny – mbu ~ mbu-mbu)
grasshopper – ijom.
grass-skirt – mbuk2.
grate (vb) – see scratch.
gravel (n) – see stone.
green – nggerengga.
greeting – wa.
ground (n) – see earth.
grow (vb) – see plant.
grub (n) – nggon.

H — h
hair – eruk.
hamlet – see place.
hand – see finger.
handsome – nggarek.
happiness – angginuk.
happy – see happiness.
hard – see tough.
have – kodariak.
having intercourse – wuriak.
hawk – u5.
he – at1 (-subj) ar2, ir1, ok.
head – anop. (top of head – umbun2)
hear – see listen.
heart – okweid.
heaven – see sky.
heaviness – anggin.
heavy – see heaviness.
hedgehog – see porcupine.
heel – aduwon.
help (vb) – yoniak1, yeniak. NOTE: For (interjection) see gee!
her – see his. (obj- of ‘see’) – see him.
here – nda.
Herod – Erodet.
high – see long.
him (obj- of ‘see’) at2, kat2.
hip – arot.
his a1. CF. c2, o4.
history – wonedom.

hit him/her/it – wariak. see abuse, stab, shoot, forge, spit, play, poke, spear.
hold (vb) – piganiak.
hole – iru.
home – amu.

homosexual – avukwa2.
honey eater – tavom.
hornbill – uyak.
horsefly – damit.
hot – iru’ ~ iruk.
house – awi2.

household of female – see family of female.
household of male – see family of male.

housemaid – boicagwa.
how – ngganduk.
how come – nggayonduk.
how many – mande.
how much – mande.
huge – see large.
hungry – apu.
hurry – auk.
husband – oin.
hut – odia.

I — i
I – an. (-subj) ac, er1, et, ic, id, ir2, ot. (b.pron-) n4.
I tell you what! – see look!
iguana – kabi.
immerse (vb) – ndariak.
immortal – see eternal.

impossible – mek.
in front of – edeme.
in here – nde.
in the inside – inumu.


infant – see child.

infants – see children.

injection – tundik.
insert – yodiak.
inside – inu. in the inside – inumu.
instrument (mrk) – bane.
intend (vb) – torak.
intestine – see excrement.
investigate – see learn.
irritate – see fuss.
Isaac – Icak.
it – see he, (obj- of ‘see’) see him.
its – see his, (obj- of ‘see’) see him.

J — j
James – Yakobut.
January – Yanuari.
jealousy – nggum.
Jesus – Yecut.
Jew – Yaudi, Yaguri.
Jewish – see Jew.
Jews – Yaudi, Yaguri.
job – see work.
Johanna – Yucana.
John – Yoanet.
Jordan – Yoredan.
Joseph – Yucup.
journal – see history.
juice – see sap.
July – Yudi.
June – Yuni.
jungle – see tree.

K — k
Kayafas – Kayapat.
keep (vb) – see hold.
kidney – awedi.
knife – yedowi.
knot – mbarenia.

L — l
lake – biru, mburu1.
land – see home.
landslide – nggo1d ~ nggok1.
language – one CF. voice.
large – yedok.
laziness – emit.
lazy – see laziness.
leaf – engga. (ichy – wavi)
lean on – see lift up.
learn – maminia.
leave it! – endi.
leech – mudi. (kind of - yanambok)
leg – arit.
lemon – nggidivi.
lesbian – see homosexual.
lice of head – pwi.

M — m
Magdalene – Madadena ~ Madarena.
magic – see sorcery.
magic power – see sorcery.
make – mariak. make a fire – kuniak.
malaria – madaria.
man – ap.
manucode (crinkle-collared) – kainggambuk.
many – see large.
March – Maret.
Mark – Marakut, Marekut.
Martha – Mareta.
Mary – Maria.
male – avurap.
Matthew – Matiut.
May – Mei.
me – n3, ne2, neat.
meal – anggi.
medicine – obat.
meet – beriak. CF. visit.
Mei – Mei1.
menstruation – tavun, eravun ~ aravun.
mentally disabled – anggudi.
midday – see noon.
mind – enokweid CF. liver. NOTE a
derivation of enuk-okweid ‘3s-
knowledge-3s-heart’.
miscarry – tiriak.
mistake – see bad.
mix – see unite.
Monday – see netbag.
money – awu2, wu2.
month – see moon.
moon – mbit.
morning – kuperak.
Moses – Muca.
mosquito – kigiru.
moss – ut.
moth of butterfly – wu’2.
mother – ica.
mountain – yugut.
mouse – see rat.
mouth – enap.
move (vb) – yuniak. CF. return.
mucus – angguret.
mud – birop.
muscle – omaceo.
musical instrument – bingginok.
mute – vi.
my – m1.

N — n
nail – see tip.
name – indi.
ear – buk, korok1.
neck – anggogede.
necklace – enggen. (kind of -
kunyedunggwi, necklace of bead - dimit
~ ndimit)
negator (mrk)- dik1.
negligence – maci.
nephew – amboko.
netbag – yum.
never mind! – ekanok.
new – see fresh.
next – enok, nok, nuk.
niece – see nephew.
night – see evening.
nine – nenggit pemenok apik mbere-mbere.
no – dik CF. negator.
noon – dingge.
nose – akwi.
not – see negator.
not yet – see still.
nothing – adik. CF. self.
November – November.
now – yok.
nurse – manderi.

O — o
occur – endarak.
odour – obaruk1.
old – (person) kode. (thing) – see rotten.
one – ambui, tatu.
only – mban.
open – bariak.
origin – awi1.
originate – wuinje.
other – ando.
our – ninye1.
ours – see our.
outside – ombat. at the outside – ombatme.
owl – kum₁.

P — p
pain – anduk₂.
palm of hand – amo.
palm tree – yumbuk (kinds of - dame, ongga, tegen)
pandanus – dagu (kinds of - bagam, barip, birica, dip, kobun, mboinyi, nggabok, nggacame, pikwi, pipiyu, piyu, tiwica, ton, towenan)
pardon me? – wae.
part – kainyik.
past – see backside.
path (n) – tu.
pay – see barter.
peanut – nggwenkuma.
peel – dembeniak.
penis – aye₁. (penis gourd – kevewok)
people – ap CF. man, person.
person – ap CF. man, people.
Peter – Peterut.
pick – (vb) yo ~ yo’.
pick up (vb) – kiniak₂, see take.
pig – wom – (-ipn) anggwor. (wild – nggoca ~ nggoica, mado (sound of – nggwe)
pigeon – nggane ~ nggwane. (kind of - punu-punu)
pigsty – davo₂.
pineapple – tuaninyene.
place – o.
plant (vb) – yariak.
platform – see rack.
play – wariak. see spit, forge, hit, shoot, abuse, stab, forge, poke, spear.
plural (-mrk) – wi₁, i₂. (-num) – u₁. (REM) – ou₂.
poke – wariak. see play, spit, forge, hit, shoot, abuse, stab, forge, spear.
polar question (-sx) – a₂.
ponder – see think.
porcupine – namok.
possession – see belongings.
possom – abui.
posthouse – see hut.
pot for cooking – to.
potato – kendang.
pregnancy – avuja, avuda.
present (food) – see make.
present (vb) – see exist.
pretty – see handsome.
proclaim – see recite.
produce (vb) – pariak.
progressive (-mrk) – ik.
prostitute – ombavidu.
pull (vb) – nibiniak.
pull out – meiniyak, nggigiriak, niriak.
pulp – anggup.
pumpkin – nagamburu. (kinds of - numbok-umbok, ombok₂)
purposive – (-sx) ca.
pus – anggundit.
put down – baniak.
put in – see insert.
python – mowid.
Q — q
quick – todik.
R — r
rack – davo₁.
radio – radio.
Rahab – Ra’ab, Ragab.
rain (n) – tavi.
rainbow – kinyombowigiduk.
rat – kadea.
rattan – kede.
raw – see fresh.
realis (-mrk) – k₅.
recite – mbininiak.
red – kwi.
reed – andok. (kinds of) - mbuk₁, ndok.
reflexive – (-sx) od.
regent-whistler – deidnebuk.
region – see place. (in a region) – ome.
reluctance – see unwilling.
remember – see think.
rest (vb) – yonggoniak.
return (vb) – yoniak2.
rib – indirowok.
rice – naci.
riat – see fissure.
right – see good.
ripe – see old.
rise – meriak.
roast on stake – wodeniak, on the ground – tariak, under the ground – tariak.
robin northern scrub – kondumbugwa.
rock (n) – see stone.
roll (vb) – pereniak. a tobacco – medeniak.
rotten – see stone.
rough – see tough.
rub hands – yigirak.
rufous babbler – pupugo.
rush – see hurry.

S — s
Saturday – tabtu.
sacred – ma, articles – kugwidom.
sad – see weariness.
sadness – see weariness.
Saducees – Caduki.
sago – kombi.
sake – ambit.
saliva – warid, (-ipn) owarid.
salt – mayuk, tavi.
same – see equal.
sand – mbinit.
sap – amburu1.
Satan – Tidje.
Saturday – see mboi.
say – yoriak.
scapula – omban. CF. shoulder.
scoop – ndoriak.
scare (vb) – yiviniak. CF. scratch.
scratch (vb) – yiviniak. CF. scrape.
scream – yaniak.
screaming – kum2.
screaming out of pain (n) – nggwa.
search – mbicariak.
secret – mbok.
see – korak.
seed – (-IPN) anggen CF. fruit, origin.
seeking – korok2.
self – adik. CF. nothing.
semen – see sperm.
September – Teptembet.
set – baiak.
seven – nenggit pemenok apik mbere.
shake (vb) – see return.
shallow – peko, tigiak.
shame – enggadi.
sharp – embet, embedak.
shave (vb) – yiviniak. CF. scrape, scratch.
she – see he.
shrimp – dombawom ~ ndombawom.
sheesh – see wow!
shell (n) – wu1, awu1.
shelter in garden – odia CF. hut.
shepherd – nggembada.
shivering (vb) – nggoriak.
shoot – wariak. see hit, abuse, stab, forge, spit, play, poke, spear.
short – mot, pou, kouwak.
shoulder top – (-ipn) umbun1. blade – (-ipn) omban. back – (-ipn) omarib2.
shout – see scream.
shower (vb) – see immerse.
sibling of different sex – iri. older of same sex – owe, ewe. younger of same sex – awot.
side – indih. (deic-) side – pe, (deic-) on one side – peme (deic-) on one side next – pemenok.
side-bone – see rib.
Sinak – Tinak.
singular – (-num) a3, e3, i3, o3, o5, u3. (REM) e4, i4.
sir – see Westerner.
sit down! – kweidiak.
six – nenggit pemenok apik ambui.
skin – avodo.
skin (vb) – see peel.
skirt – see grass-skirt.
sky – mbou’.
sleep – uiak.
slice – mboinyiak.
slippery – ambedak.
smacking, eating noisily (vb) – ndap.
small – be ~ be’.
smoke – kiduk.
snake – wavud. poisonous – dinimbuk.
sneeze – yeciniak.
snot (-ipn) – aringgu, tinggu.
snout of pig – tid.
soft (adj) – wo.
soft-brown – uyo.
soil – see earth.
song – ndawi.
sorcery – irudik.
soul – see mind.
sound – see voice.
sour – see bitter.
source (-mrk) – mende.
spear – wariak. see play, spit, forge, hit, shoot, abuse, stab, forge, play, poke, spear.
specifier (mrk) – ta, da, pa, ka, ba, ra.
speech – see voice.
sperm – ayenggodan.
spicy hot – adede.
spider – taget.
spiky – see sharp.
spine – ombodok.
spirit – ayu. (kinds of) - anggena, kugwi, kuguru ~ kuguro, uru1, wanogwak.
spit – wariak. see forge, hit, shoot, abuse, stab, forge, play, poke, spear.
split (vb) – poriak.
spoil – aguiak.
spread – ndoniak.
spread out (vb) – wiganak, windiriak.
sprout – kaid.
squeeze – see make.
stab – wariak. see hit, abuse, shoot, forge, spit, play, poke, spear.
stand up – see rise.
stay – doiak.
steal (vb) see pick.
steep (mrk-) – d.
stick – mbud, mbudo.
still – awo.
stitch – deniak.
stomach – oum.
stone (n) – yugum. (of fruit) – see fruit.
story – wone.
strength – omawi.
string – see rattan.
strong – embok. CF. strength.
stunned – ajak2.
stupid – see bad.
stutter (interj) – e3.
sucking (sound, act of) – bid.
sweet potato – mboid. (kinds of) - bogubuge, boranggen, merom, pindimboid.
swim (vb) – see immerse.
T — t
tail – enggawok.
take (vb) – waniak.
take-out – see pick up, scoop.
tall – see long.
teacher – ngguru, kuru.
tear – ademburu.
teeth – see tooth.
tell – see say.
ten – nenggit pemenok apik nenggit pemenok apik imbirak.
testicle – odi.
thanks – see greeting.
that – muni.
their – iny₁.
them – iny₃, inye, icat. Cf. k₃, ninye.
then (adv) – yak. (-asp) – ak, iak.
there – mona.
they – it (-subj) - ar₁, ar₂, ok. (b.pron-) iny₄.
thick – kugup. (animate) – see fat.
thigh – endanggen.
thin – pode₁ ~ pode’.
think – emberiak.
thirsty – see hungry.
this – ndi, yi. (this is it) – ndet.
three – kena.
thunder – nduk₁.
Thursday – Kamit.
tie – kambuniak.
time – wab.
tip – anggop.
tobacco – tavo.
toddler – see child.
toddlers – see children.
toe – acok. Cf. foot.
tomba bower bird – tanggeno.
tomorrow – kovu.
tongue – amede.
tooth – ak.
top of head – (-ipn) umbun₂.
topic (specific mrk) – ne. (generic mrk) – no.
torch – yoinje.
tough – ambok.
treasure – adi, munyum.
tree – e. (kinds of - agaktebe, ambo,
amumbek, awiv, babo, bago, bedamot, bo,
bunggu, dem₁, divud, dope, dugui, eikik,ico, icombon, icuk, kaube, kibi ~ kivi,
koyabi, kumbuk, mangga, mangge₂,
mbon, megop, ndup, nggabunya,
nggaua, pit, poa, pongo, ponggurak,
tabirabi, tade, tam, tat, tomba,
tembombak, teno, tigi ~ tigi’ ~ tigik, tigit,
tinggi, tupu, tuwi, vingge, wein.)

trick (vb) – see lie.
true – k₁₂.
tucan – yud.
Tuesday – Tedaca.
turtle – kwam. (kind of) - pode.
two – mbere, dua.

U — u
ulcer – komboid.
uncle – are.
unite – dambuniak.
universe – see sky.
unripe – see new.
unwilling – bu ~ bu’.
up – ei ~ ei’~ eik.
up high – wunom, wunyom.
up low – wenom, wenyom.
upset – ago.
up-stEEP – dei.
urINate (vb) – (-ipn) odiak.
urine – ameiyo, meiyo.
us – n₃, niny₃, ninye₃, nicat.

V — v
vagina – (-ipn) angget.
van Daalen river – Jamo, Yamo.
vegetable – mboid-engga. (kind of) - bado,
tabi, tavengga, toan.
vein – ombagit.
very – ki₁.
village – see place.
virgin – see fresh.
visible – kin. (vb) see appear.
visit – bekorak. Cf. meet.
voice – one.
vomit – ma’.
vomiting – see vomit.

W — w
wait (vb) – puriak.
waiting (n) – puk (sg.imp) – puk.
walk (vb) – tuniak.
wallaby – weya. (kind of – codea).
wallace (kind of dove) – nuakwe.
waiter (vb) – yeniak.

weak – anggudi, yewek.
weariness – anggun.
weary – see weariness.
weave – see spread.
Wednesday – see root.
week – yewek.
Western – tuan.
wet – min. CF. mbuk3.
what – nano.
what did you say? – see pardon me?
what do you think – see how come.
when – (Q) mandom, ndikim.
where – ngga.
which one – ngge.
whistle with fingers in mouth – mboriak.
white – biri2.
why – nggayo.

wide – tabid.
wife – agwe.
wiggle – mbaik.
will (vb) – see intend.
wind (n) – tabit.
wine – angguri.
wing – enggavid.
witch – kugwi1. CF. demon.
witchcraft articles of – kugwidom. CF.
sacred articles.
woman – kwa.
women – akomi.
wood – see tree.
work (n) – yavuk2.
wound – see ulcer.
wow! – wi2.
wrap (vb) – pungguniak.
write – see slice.
wrong – see bad.

Y — y
yam – kom. (kinds of) - kun, mburica.
mburicaya, nacimbak, tadu, yambuci.
yell – see scream.
yellow – tiri.
yes – yuk.
you – kat1. (b.pron) k4. (-mood) k5. (obj) – k3, ke, keat. (-subj) – end1, end2, ond, u2. CF.
kit.
you plural – kit. (b.pron-) kiny4. (obj) –
kiny3, kinye, kicat. (-subj) – eb, ep, up. CF.
kat.
young age – tawe2.
your – k1. (px pl – kiny1)
### APPENDIX 2: WORDLIST

The wordlist used is based on the UnCen-SIL 3/85/1 wordlist, with some modifications. The Indonesian words have been added by the author.

**BAHASA**

<table>
<thead>
<tr>
<th>Language</th>
<th>WANO ['wana]</th>
</tr>
</thead>
</table>

**NAMA/ISTILAH LAIN**

| Other Names | Mulia and Pania |

**KABUPATEN**

| Region | 
|--------|----------------|
|       | 

**KECAMATAN**

| District | Dagai, Iratoi, Turumo, Fawi, Biricare, Mbomban, and Yei |

**DESA, KAMPUNG**

<table>
<thead>
<tr>
<th>Town, Village</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**WORDLIST RELIABILITY**

| Good |

**PENUTUR ASLI**

| Name: Various native speakers from the above villages |

**Nama**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
</table>

**Umur**: ranges from 25–45

**Age**

<table>
<thead>
<tr>
<th>Male</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Female</th>
</tr>
</thead>
</table>

**AHLI BAHASA**

| Wiem Burung |

**Linguist**

| 
| 

**TANGGAL**

| Since 1992–1994 |

**Date**

| 
| 

---

1. kepala – head [a'nɔp']
2. rambut – hair [e'rɔk']
3. bulu badan – body hair (see 2)
4. telinga – ear (outer) [a'mɔ]
5. leher – neck [a'gɔ'kɔ]e'de]
6. mulut – mouth [e'nɔp']
7. giga – tooth [ak']
8. lidah – tongue [ame'de]
9. mata – eye [i'gi]
10. hidung – nose [a'kɔ'wi]
11. tangan – hand [e'git']
12. kotor – dirty [kik']
13. tangan kotor – dirty hand [e'git' kik']
14. siku – elbow [ε,'giro'ɲi'gut']
15. jari – finger (see 11)
16. kuku – nail [e'gira'ɲɔp']
17. kuku jari – nail finger (see 16)
18. kulit – skin [aβɔ'dɔ]
19. daging – flesh [ε'yɔ'ɡɔ'm gum]
20. lemak – fat [a'mɔk']
21. tulang – bone [ɔ'wɔk']
22. payudara – breast [a'jak']
23. dada – chest [ame'wɔk']
24. perut – stomach [a'βud']
25. punggung – shoulder [o'bo'dɔk']
26. darah – blood [adi'an]
27. jantung – heart [e'nɔ'k'wεi'd']
28. hati – liver [a'wan]
29. kaki – foot [a'çɔk']
30. bengkak – swell [pe'kɔ]
31. kaki bengkak – swollen foot [a,çɔke'kɔ]
32. luka – wound [kɔ̃bɔ̃d] 68. sempit – narrow (see 64)
33. sakti – hurt [aŋd] 69. jalan sempit – narrow path/way/road [tu'6e?] 70. lebar – wide (see 62)
102. **bintang** – star ["bɔːn,μume\textsuperscript{m}de]
103. **pisang** – banana [de\textsuperscript{d}i]
104. **kebun** – garden [ja\textsuperscript{b}uk]
105. **alang-alang** – grass [pa\textsuperscript{b}uk]
106. **kering** – dry [\textsuperscript{m}buk]
107. **pohon** – tree [e]
108. **kayu** – wood (see 107)
109. **kayu kering** – dry wood [\textsuperscript{m}buk]
110. **babat** – cut [\textsuperscript{m}bani\textsuperscript{a}k]
111. **dengan** (e.g., bela kayu dengan kapak) – with [ba\textsuperscript{ne}(?)]
112. **dengan** (e.g., mereka dengan kami) – with [i\textsuperscript{p}an]
113. **cabang** – branch [\textsuperscript{m}b\textsuperscript{a}k] also biceps
114. **daun** – leaf [\textsuperscript{m}ga]
115. **duri** – thorn [k\textsuperscript{w}\textsuperscript{e}\textsuperscript{m}ba] ko plant
116. **buah** – fruit [\textsuperscript{a}gen]
117. **biji** – stone (fruit) (see 117)
118. **busuk** – rotten [\textsuperscript{b}ar\textsuperscript{u}k]
119. **bau** – aroma (see 118)
120. **berbusuk** – rotten aroma --
121. **hutan** – jungle [e\textsuperscript{de}me]
122. **tali** – string, cord [ke\textsuperscript{de}]
123. **putih** – white [bi\textsuperscript{r}i]
124. **hitam** – black [ki\textsuperscript{ka}]
125. **merah** – red [k\textsuperscript{w}i]
126. **kuning** – yellow [ti\textsuperscript{r}i]
127. **hijau** – green [\textsuperscript{g}re\textsuperscript{e}ga]
128. **burung** – bird [to\textsuperscript{we}]
129. **telur burung** – egg [to\textsuperscript{w},\textsuperscript{e}\textsuperscript{a}\textsuperscript{m}gen]
130. **sayap burung** – wings [ek\textsuperscript{na}\textsuperscript{b}id]
131. **terbang** – fly\textsuperscript{v} --
132. **kasuari** – cassowary [\textsuperscript{m}d\textsuperscript{u}\textsuperscript{m}buk]
133. **lalat** – fly\textsuperscript{n} [te\textsuperscript{f}on]
134. **lalat babi** – horse fly [da\textsuperscript{mit}]
135. **nyamuk** – mosquito [ki\textsuperscript{yi}ru]
136. **anjing** – dog [\textsuperscript{g}e\textsuperscript{w}o]
137. **besar** – big, large [je\textsuperscript{d}o\textsuperscript{k}]
138. **anjing besar** – big dog [\textsuperscript{g}e\textsuperscript{w}o\textsuperscript{j}e\textsuperscript{d}o\textsuperscript{k}]
139. **kekil** – small [\textsuperscript{e}(?)]
140. **ini** – this [\textsuperscript{di}]
141. **itu** – that [mu\textsuperscript{n}i]
142. **sama** – same [\textsuperscript{d}ak(\textsuperscript{d}ak)]
143. **berbeda** – different [\textsuperscript{a}\textsuperscript{d}o]
144. **lintah** – leech [mu\textsuperscript{d}i] \(\sim\) [jana\textsuperscript{m}b\textsuperscript{k}]
145. **gigit** – to bite --
146. **makan** – to eat [no\textsuperscript{r}ak]
147. **ekor** – tail [\textsuperscript{g}a\textsuperscript{w}ak]
148. **ikan** – fish [\textsuperscript{m}a\textsuperscript{g}en]
149. **kutu** – lice (hair) [\textsuperscript{p}i\textsuperscript{i}]
150. **babi** – pig [\textsuperscript{w}om]
151. **panah babi** – shoot the pig [\textsuperscript{w}om\textsuperscript{w}ari\textsuperscript{a}k]
152. **cacing** (tanah) – worm [\textsuperscript{m}b\textsuperscript{a}didi\textsuperscript{c}a]
153. **ular** – snake [wa\textsuperscript{b}ud\textsuperscript{i}]
154. **panjang** – long [\textsuperscript{m}at] CF. 89.
155. **ular panjang** – long snake [wa\textsuperscript{b}ud\textsuperscript{mat}]
156. **pendek** – short [\textsuperscript{p}u\textsuperscript{u}]
157. **tikus** – rat [kade\textsuperscript{a}]
158. **penuh** (e.g., ember) – full (e.g., bucket) --
159. **rumah** – house [a\textsuperscript{wi}]
160. **baru** – new --
161. **rumah baru** – new house --
162. **tua** – old [ko\textsuperscript{de}]
163. **rumah tua/lama** – old house --
164. **atap** – roof [\textsuperscript{g}a]
165. **depan** – in front [\textsuperscript{e}me]
166. **di luar** – outside [\textsuperscript{a}m\textsuperscript{b}at]
167. **di dalam** – inside [inu\textsuperscript{mu}]
168. **di belakang** – at the back [\textsuperscript{a}m\textsuperscript{b}o\textsuperscript{d}id]
169. **kanan** – right [\textsuperscript{m}at\textsuperscript{ka}n\textsuperscript{e}]
170. **kiri** – left [kot\textsuperscript{ka\textsuperscript{ne}}]
171. **dekat** – near [ko\textsuperscript{r}\textsuperscript{ak}]
172. **far** – jauh [\textsuperscript{m}at\textsuperscript{e}]
173. **orang** – person [ap\textsuperscript{t}]
174. baik – good [bâık’]
175. orang baik – good person [apbâık’]
176. jahat – bad/evil [ma’dûk’]
177. laki-laki – man [apma’dûk’]
178. perempuan – woman [kw’a]
179. suami – husband [sî’în]
180. isteri – wife [a’yw’e]
181. bapa – father [s’Îa]
182. ibu – mother [i’ça]
183. anak – child [nâng’ô’bê(e)?]  
184. anak (dari perempuan) – child (of female) [a’jak’]  
185. anak (dari laki-laki) – child (of male) [a’bût’]
186. saya – I [an]
187. kamu – you [ka’t’]
188. kita – we [nit’]
189. kami – we (see 188).
190. dia – he/she/it [at’]
191. mereka – they [it’]
192. siapa – who [ta]
193. apa – what [na’nô]
194. nama – name [i’în’ô]
195. datang – come [wô’rak’]
196. jalan – walk [no’rak’]
197. putar – turn around --
198. tahu (sesuatu) – know (something) [e’nuk’]
199. dengar – hear, listen [kôneni’ak’]
200. lihat – see [kô’rak’]
201. cari – seek, look for [kô’rêk’]
202. bicara – talk, speak [jôri’ak’]
203. benar – true [ki]
204. bicara benar – tell the truth [jôriak:i]
205. minum – drink [no’rak’] CF. 196.
206. isap (e.g., rokok) – smoke
207. makan – eat [no’ak’] CF. 205.
208. ludah – spit [wa’rid’]
209. muntah – vomit [ma’?]
210. pukul – hit [warî’ak’]
211. tikam – stab (see 210)
212. bunuh – kill (see 210)
213. mati – die [kani’ak’]
214. hidup – alive [e’nîk’]
215. garuk – scratch [nêng’ri’ak’] itchy [a’nô’bô]
216. duduk – sit down [kwe’dûne]  
217. berdiri – stand up [metne]
218. tidak – no, not [dîk’]
219. mandi – bathe [î’în’ô’rak’]
220. tidak mandi – one doesn’t bathe [î’î’da’râk’dîk’]
221. jatuh (mis., buah) – fall (e.g., fruit) [dûk’] ~ [”dûk’]
222. berbaring – to lie down [u’jak’]
223. tidur – sleep (see 222).
224. mimpi – dream [a’bî]
225. pegang – hold [piyani’ak’]
226. beri – give [wô’yiri’ak’]
227. tiup – blow [pu] ~ [”û]
228. bernapas – breath [e’nîk’] CF. 214.
229. batuk – cough [tô’gô]
230. hitung – count [ja’mîn’î’ak’]
231. gali – dig [”denî’ak’] must be preceded by a noun, e.g., nggwen ndeniak.
232. takut – afraid [i’dî]
233. malu – shy (see 232) [nëng’a’dî]
234. menangis – cry [deî’ru]
235. menyanyi – sing [”da,wiwari’ak’]
236. main – play [”da,puwari’ak’]
237. dorong – push --
238. tarik – pull [nikorak] robek tear apart [nîhîni’ak’]
239. gosok – rub (hand) [ju’ûni’ak’] kasih hancur grind [jìi’i’ak’]
240. hapus – erase [”dôrî’ak’], [”m’bêni’ak’]
241. cuci (pakaian) – wash (clothes) [fi,ri’i’ak’]
242. jepit – clip [ti]
243. lempar (batu) – throw (stone) [ju'yunwari'ak]
244. enam – six [ne'ŋgit peme'nok a'pik a"m"i]
245. tujuh – seven [ne'ŋgit peme'nok a'pik m"be're]
246. delapan – eight [ne'ŋgit peme'nok a'pik ke'na]
247. sembilan – nine [ne'ŋgit peme'nok a'pik m"be,tre"m"be're]
248. sepuluh - ten [ne'ŋgit peme'nok a'pik ne'ŋgit peme'nok a'pik i"mbi'ra'k]

REFERENCES

A. Corpus Sources Quoted


**B. General Readings**