

# Sentani

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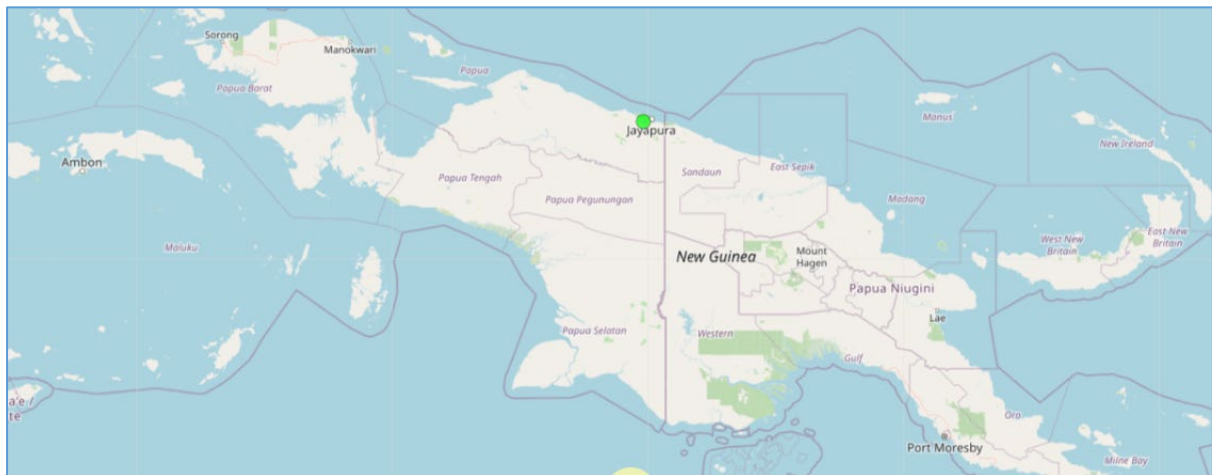
To appear in *The Oxford Guide to the Papuan languages*, edited by Nicholas Evans and Sebastian Fedden.

## 1. Introduction

### 1.1. The language scene

Sentani (ISO 639-3: *set*) is a member of the small Sentani(c) language family, comprising Sentani, Tabla, Nafri, and Demta (Cowan 1965; Gregerson & Hartzler 1987; Hammarström & Forkel & Haspelmath 2021). It is currently spoken by 30,000 people in the Sentani Lake district in north-eastern West Papua (Eberhard & Simons & Fennig 2020), see Fig. 1.

Figure 1. The location of Sentani close to Jayapura in northern New Guinea



Sentani has three mutually intelligible dialects: the Central dialect (D. Hartzler 1976; M. Hartzler 1976; 1976; 1983; 1986; Onde et al. 1979; Mehuwe & Hartzler & Hartzler 1993), the Eastern dialect (Cowan 1952a; 1952b; 1965; Elenbaas 1999), and the Western dialect (on which there are no publications). The present sketch is about the Eastern dialect. In Indonesia today, there are virtually no speakers of the Eastern dialect left (Mayer 2021: 8), and Mayer's (2021) sketch is on the language of a 'rememberer' who emigrated to the Netherlands as an adult in 1962. This sketch is based on written sources rather than my own fieldwork: I have made grateful use of the data and analyses presented in Cowan (1965) and Mayer (2021); a few illustrations in section 2 and 7 are from Elenbaas (1999). However, the analysis

presented here differs in some crucial respects from these earlier sources, and I have applied my own glossing conventions to the examples.<sup>1</sup>

## 1.2. Typological profile and overview of the chapter

In this subsection a summary of the typological profile of Sentani and an overview of the chapter is presented. Sentani phonology is discussed in section 2. With eleven consonants and seven vowels Sentani has a relatively simple segment inventory. Syllable structures are also simple, and the majority of monomorphemic forms have only one or two syllables. The domain of stress assignment is the prosodic word. A prosodic word can contain up to eight syllables. Stress is from right to left, weight sensitive and penultimate.

Section 3 presents the free and bound pronouns in Sentani; and section 4 deals with nominals and Noun Phrases. There are three paradigms of free pronouns: a short pronoun, a long pronoun, and a possessive pronoun. The language has no case marking for subject (A/S) or object (P) on free pronouns or NPs. Sentani nouns are morphologically simple: except for a possessive prefix, they do not show any derivational or inflectional morphology. NPs are head-initial, with adjectival and other modifiers following the head; compound nouns are head-final.

The Sentani numeral system (section 5) combines quinary and vigesimal bases, and employs morphemes for the body parts ‘hand’, ‘footsole’, ‘palm of hand’ and ‘body’. Sentani has postpositions (section 6) that have the shape CV, where the initial consonants /r/ and /n/ distinguish locational from directional forms, while the vowels express additional semantic distinctions.

The structure of the Sentani clause is discussed in section 7. The core of the clause is the verbal complex, which is preceded by subject and object NPs, in that order. The verbal complex comprises pronominal, negative, aspectual, tense and mood morphemes. Verbal complexes contain one or more verb roots, and may contain one or more pronominal suffixes indexing the person and number of subject and object. Different suffixing patterns are used in the non-future and the future tense. Pronominal indexing is not grammatically obligatory, except in imperatives. The verbal complex also contains morphemes with a wide range of grammatical functions – they are analysed as grammaticalized lexical items, mostly verbs.

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<sup>1</sup> Neither Cowan (1965) nor Elenbaas (1999) provide glosses with their examples.

The verbal complex may optionally be followed by an emphatic particle. Temporal and locative adjuncts appear in clause initial position.

Sentani non-verbal predication (section 8) is expressed as the juxtaposition of subject and predicate; no copular verb or predicative inflection is used. Nominal predicates are negated with the negator *pam* ‘not, nothing’. Imperative and interrogative clauses are the topic of section 9. In imperatives, the agent addressee is obligatorily expressed with a pronominal index on the verb. In interrogatives, polar questions are marked by intonation, and content questions contain question words that remain in situ.

## 2. Phonology

This section presents an overview of the Sentani consonant and vowel inventory (section 2.1-2.2), followed by a description of syllable structure, how syllables combine into roots (section 2.3) and how stress is assigned (section 2.4).

### 2.1. Consonants

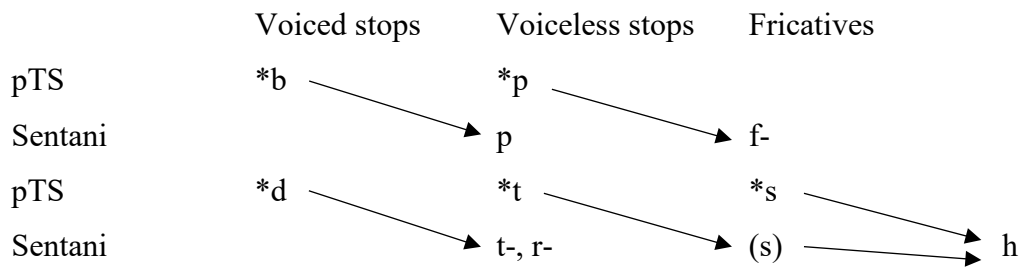
Sentani has eleven consonants, if we include the marginal fricative /s/, which only occurs following a (homorganic) nasal (e.g. *minsa* ‘branch’) (Gregerson & Hartzler 1987: 12), see Table 1.

Table 1: Sentani consonants

	BILABIAL	ALVEOLAR	PALATAL	VELAR	GLOTTAL
STOP	p	t		k	
FRICATIVE	f	(s)			h
NASAL		m		n	
LIQUID				l	
GLIDE		w		j	

The absence of voiced stops, and the marginality of /s/ in present-day Sentani is a result of a systematic historical sound change affecting the voiced stops and fricatives of the ancestor of Sentani and Tabla (referred to as proto-Tabla-Sentani (pTS) in Gregerson & Hartzler 1987: 4). The sound change is represented in (1). While the sound change \*s > h is complete, the change t > s > h is not: /s/ is still attested following a homorganic nasal. (Note that pTS and present-day Sentani lack a voiced velar stop /g/).

(1) Sound changes in proto-Tabla-Sentani affecting Sentani stops and fricatives<sup>2</sup>



The three voiceless stops /p, t, k/ have voiced and/or lenited allophones in intervocalic position: [p~b~β], [t~d~r], [k~k̄ x~x~ɣ]. This allophonic variation affects word-initial and word-medial stops; an example is the variable pronunciation of word-initial /tejæ/ ‘I’ as [ˈte.jæ]~[ˈde.jæ]~[ˈre.jæ]. Following a nasal, the voiceless stops become voiced; no other allophones are possible in this context, examples are given in (2). The allophone of /k/ is [g] rather than a fricative in these contexts, see (2c) (Mayer 2021: 15-16).

- (2)
- |    |            |               |            |
|----|------------|---------------|------------|
| a. | /kampu/    | [ˈkam.bu]     | ‘root’     |
| b. | /nəkəntəj/ | [nə.xən.ˈdəj] | ‘mosquito’ |
| c. | /mænkə/    | [ˈmæŋ.gə]     | ‘girl’     |

Fricative /f/ is an independent phoneme which occurs word-initially and word-medially. Specifically, it is not an allophone of /p/, as evidenced by words such as [foj] ‘banana’ and [əm.ˈfæw] ‘banana leaf’, which cannot be pronounced as \*[poj, boj, βoj] or \*[əm.ˈbæw, əm.ˈβæw] respectively (Mayer 2021: 16). While the consonant /l/ is rare in lexical words and only occurs word-medially, it is frequently attested as the mood suffix *-le* ‘IND’ attaching to verbal complexes. In this position, /l/ has the allophones [t] following a /j/, (3), [w] following a /w/, (4) and [d] following a nasal, (5):

- (3) /ələ-aw-aj-le/ [ə.lə.ˈwaj.te]  
 speak-2SG.OBJ-3PL.SBJ-IND  
 ‘They have spoken to you’ (Mayer 2021:18)

<sup>2</sup> Segments followed by a dash (f-, t-, r-) indicate (word-) initial position (Gregerson & Hartzler 1987: 4).

- (4) /mə-kə-aw-le/ [mə.'xaw.we]  
 come-PST-2PL.SBJ-IND  
 ‘You all came here’ (Mayer 2021:18)
- (5) /ələ-ko-kə-an-le/ [ə.lə.ko.'xan.de]  
 speak-PLU-PST-1PL.SBJ-IND  
 ‘We spoke’ (Mayer 2021:18; the translation there is ‘We said something’)

In word-final position, /m/ and /n/ nasals may be neutralized for place, and become [ŋ] under certain conditions (cf. Mayer 2021: 17). The distribution of consonants in Sentani words is summarized in Table 2.

Table 2: Sentani consonant positions in (simple and derived) words

Position	p	t	k	f	s	l	h	m	n	ɺ	w	j
word-initial	√	√	√	√	(√)	-	√	√	√	-	√	√
word-medial	√	√	√	√	-	√	√	√	√	√	√	√
word-final	-	-	-	-	-	-	-	√	√	-	√	√

## 2.2. Vowels

Sentani has 7 vowels, see Table 3. The vowel /u/ is the least frequent. In contrast to the consonants, the vowels are relatively stable and do not show significant allophony.

Table 3: Sentani vowels

	FRONT	CENTRAL	BACK
HIGH	i		u
MID	e	ə	o
LOW	æ	a	

When two open adjacent syllables with phonetically identical vowels appear in a word, and one of those vowels is preceded by a nasal, this latter vowel will be deleted (cf. Elenbaas 1999: 49), for example /janako/ > [jaŋko] ‘bush man’ (M. Hartzler 1976: 72).

### 2.3. Structure of syllables and roots

The syllabic structures of Sentani are V, CV, and CVC. Codas are restricted to nasals and glides, see (6) (Mayer 2021: 21, 16). Sentani lacks both complex onsets and complex codas.

#### (6) Sentani syllable structure

V	/a/	‘word, voice’
CV	/pu/	‘water’
CVC <sub>glide</sub>	/taj/	‘1SG.POSS.EMP’
CVC <sub>nasal</sub>	/pam/	‘not, nothing’
	/kam.pu/ [kam.bu]	‘root’

The phonological word in Sentani consists of a single syllable (including one that contains a single vowel), or any combination of the syllables just mentioned. The majority of monomorphemic forms are mono- or disyllabic; examples include (C)V *i* ‘fire’, *fi* ‘sago’; (C)V.CV *aje* ‘bird’, *kadu* ‘cheek’; (C)V.CVC *ahaw* ‘far’, *faləm* ‘head’; (C)VC.CVC *əŋgaj* ‘ear’, *kəndin* ‘small’. Underived words have maximally three syllables, e.g. *hokolo* ‘young’, *nəkəndəj* ‘mosquito’. Due to the preference of the CV syllable, consonant sequences do not occur very frequently, and if they do, they are often the result of interconsonantal vowel deletion, (7a-b). As a result of morpheme concatenation, phonetic geminates appear, (7c-d) (examples from Elenbaas 1999: 51).

(7) a.	/janako/	[jaŋgo]	‘bush man’
b.	/finiki/	[fiŋgi]	‘thick’
c.	/wə-ən-nə-le/	[wənnələ]	
	say.to-3SG.SBJ-3SG.OBJ-IND		
	‘He will tell him’		
d.	/moko-ən-mi-le/	[moxommile]	
	make/do-3SG.SBJ-3PL.OBJ-IND		
	‘He will work for them’		

### 2.4. Stress

The domain of stress assignment is the prosodic word, consisting of a lexical root plus all the affixes and/or clitics. A prosodic word can contain up to eight syllables, (8).

- (8) /molo<sup>3</sup>-ko-kə-aw-a-le=ne/ [mo.loko.xawa.læne]  
 edit.surface-make/do-PST-2SG.OBJ-1SG.SBJ-IND=LOC1  
 ‘...for I wrote to you’ (Elenbaas 1999: 58)

(C)V syllables consist of one mora and are light, CVC syllables ending in a glide or nasal (cf. (6)) have two morae and are heavy. The generalisation of stress assignment could also be formulated as: Stress the ultimate heavy syllable, otherwise the penultimate syllable. So if both ultimate and penultimate are light, main stress is on the penultimate syllable (9a-b); if the ultimate syllable is light and the penultimate is heavy, stress is on the penultimate (9c-d), and an ultimate heavy syllable is stressed (9e-f) (examples from Mayer 2021).

- (9) a. ['bu.lu] /pulu/ ‘hole’  
 b. [o.'no.mi] /onomi/ ‘life, health’  
 c. [nu.'xoj.bo] /nu-ko-j-bo/ ‘Sit down!’  
 rest-make/do-2SG.SBJ-AFF  
 d. [a.no.ko.'xan.de] /anə-ko-kə-an-le/ ‘We have eaten it’  
 eat-make/do-PST-1PL.SBJ-IND  
 e. [kən.'diŋ] /kən.'din/ ‘small’  
 f. [ka.'bam] /kabam/ ‘big’

Cowan (1965: 10) mentions some exceptions to the regular stress pattern; examples are given in (10). In the minimal pair in (10a), stress is contrastive, and the final stress in [ka'la] does not follow the stress rule. The words in (10b) also have final stress; for these no minimally contrasting forms are given.

- (10) a. ['kala] ‘shellfish’  
 [ka'la] ‘shout, yell’  
 b. [i'fa] ‘small (men’s) canoe’  
 [u'ma] ‘hair (of the head)’  
 [fə'la] ‘bow and arrow’  
 c. [a'par] ‘small (men’s) canoe’ (Demta language)

<sup>3</sup> *Molo* occurs with various meanings in the sources, including ‘work on, prepare, fix something, plant, inter, bury, write’ (Cowan 1965: 85). The shared semantics seems something like ‘edit a surface’.

[i'pa]	'small (men's) canoe' (Sentani western dialect)
[i'fa]	'small (men's) canoe' (Sentani eastern dialect)

Cowan (1965:10) suggests that the stress pattern of at least some of these irregular forms may be related to the historical loss of final consonants; compare the cognate set in (10c). The Demta word *apar* has regular stress because it has a final heavy syllable, while its cognates in the Sentani western and eastern dialects *ipa* and *ifa* have stress on the final light syllable. The idea is that the final syllable originally contained a final consonant, as is still the case in Demta; and that the stress remained on the final syllable after the consonant was lost.

### 3. Free and bound pronouns

Sentani pronouns are presented in Table 4. The short pronouns express subjects (A, S) and objects (P), as well as complements of postpositions, and possessors. Short pronouns are unstressed and are frequently used in running texts. The long pronouns are composed of short pronouns plus the emphatic particle *jae* 'EMP'. Long pronouns can also express A, S, P and possessors. (There is no data on whether they can be complements of postpositions.) Long pronouns are stressed (Cowan 1965: 16), have a contrastive function, and are (therefore) less frequent in running texts than short pronouns. Long pronouns often occur in sentences that are uttered in isolation (Mayer 2021: 38).

Table 4. Sentani pronouns and possessive prefixes (Mayer 2021: 38).

	Short pronoun	Long pronoun	Possessive emphatic pronoun	Possessive prefix
1SG	<i>ta</i>	<i>tejae</i>	<i>taj</i>	<i>t-</i>
2SG	<i>wa</i>	<i>wejae</i>	<i>waj</i>	<i>w-</i>
3SG	<i>na</i>	<i>nejae</i>	<i>naj</i>	<i>n-</i>
1PL.INCL	<i>me</i>	<i>mejae</i>	<i>mej</i>	<i>m-</i>
1PL.EXCL	<i>e</i>	<i>ejae</i>	<i>aj</i>	
2PL	<i>ma</i>	<i>maja</i>	<i>maj</i>	
3PL	<i>na</i>	<i>nejae</i>	<i>naj</i>	<i>n-</i>



Note that the third person forms in the shaded cells do not distinguish singular and plural, and the possessive prefixes, unlike the pronouns, do not mark clusivity.<sup>4</sup> Possessor person and number may be expressed by the short pronoun or the possessive pronoun, or indexed on the noun with a possessor prefix. The paradigm of possessive pronouns functions to emphasize the possessor, in contrast to possessors expressed by a short pronoun or indexed by a prefix. According to Cowan (1965: 16), the possessive prefixes are reduced forms of the emphatic possessive pronouns. In turn, the possessive pronouns may be historically reduced forms of the long pronouns. However, their synchronic distribution appears to be different: possessive pronouns express possessors and can replace possessed NP (in constructions such as *This shirt is mine*), but long pronouns cannot replace possessed NPs.<sup>5</sup>

#### 4. Nominals and noun phrases

Sentani nouns are neither marked for gender nor for number, and besides a possessive prefix, they do not show any other derivational or inflectional morphology. Illustrations of non-possessive NPs are given in (11)-(16). NPs are head-initial, with adjectival modifiers following the head. Degree adverbs and quantifiers (numeral and non-numeral) follow the adjective, (15). Non-numeral quantifiers can co-occur, (16).

(11) *u foj*  
 body good  
 ‘good (i.e. healthy) body’ (Cowan 1965: 12)

(12) *fa hokolo, fa bəna*  
 child young child old  
 ‘young(er) child, old(er) child’ (Cowan 1965: 58)

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<sup>4</sup> Here I follow Mayer 2021. From the discussion in Cowan (1965) it appears that the clusivity distinction in Sentani may be a dialectal variety that developed under Austronesian influence; ‘[F]or in the closely related Tanah Merah language the unique form for the 1st p. du., pl., both inclusive and exclusive, is *e’e*, while it is *mi, me* in Nafri. Also in the inflected forms of the verb there is not a single trace of separate inclusive and exclusive 1 p. du., pl. forms. The [plural] pronoun *e* [...] I have never met [...] in actual usage, while my informants were divided in their opinions on the point.’ (Cowan 1965:16, footnote 7).

<sup>5</sup> This account of the pronouns is brief and preliminary. To analyse the distribution and functions of the pronouns in more detail, more work is needed with native speaker consultants, and a larger corpus.

- (13) *joku kabam*  
 dog big  
 ‘big dog’ (Mayer 2021: 17)
- (14) *imə kabam sela*  
 house big very  
 ‘very big house’ (Cowan 1965: 53)
- (15) *kəlu fa pe*  
 son young two  
 ‘two young sons’ (Mayer 2021: 45)
- (16) *talo hələm nəmə*  
 year much all  
 ‘many years’ (Mayer 2021: 36)

Nominals are conjoined by a conjunction *æ/ə*, as in (17) and (44) below.

- (17) *wejæ æ tejæ*  
 2SG and 1SG  
 ‘you and I’ (Mayer 2021: 39)

Multiple adjectival modifiers are separated by *jæle* ‘with’,<sup>6</sup> as in (18):

- (18) *obo pum jæle jahi jæle jæ*  
 pig fat with round with EMPH  
 ‘a fat, round pig’ (Mayer 2021: 97, cf. Cowan 1965: 68)

Compound nouns combine two juxtaposed nominal lexemes. In contrast with NPs, which are head initial, compounds are head final; compare (19)-(20) with (11)-(12) above.

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<sup>6</sup> On the basis of the limited data available, I cannot decide whether *jæle* is a (comitative) postposition or a conjunction, or functions as both. In Cowan (1965: 53-54) and Mayer (2021) it is referred to as a postposition.

(19) *u makaj*  
body manner  
'character' (Cowan 1965: 84)

(20) *hokolo fa, bəna fa*  
young child old child  
'youngest child (of a family), oldest child (of a family)' (Cowan 1965: 12)

Coordinative compounds, illustrated in (21a-e), employ the same structure as the endocentric compounds above.

(21) a. *moni maj*  
hunger disaster  
'famine' (Mayer 2021: 42)

b. *a few*  
voice tongue  
'language' (Cowan 1965: 12)

c. *to mijæ*  
man woman  
'people' (Mayer 2021: 40)

d. *obo joku*  
pig dog  
'animal' (Cowan 1965: 12)

e. *kaji ifa*  
big.(women's).canoe small.(men's).canoe  
'canoe (general)' (Cowan 1965: 81)

Such noun-noun combinations are also used to express part-whole and kinship relations, as in (22a-c).

- (22) a. *joku faləm*  
 dog head  
 ‘dog’s head’ (Cowan 1965: 60)
- b. *əm fæ*  
 banana leaf  
 ‘banana leaf’ (Cowan 1965: 60)
- c. *ondofolo fa*  
 chief child  
 ‘chief’s child’ (Cowan 1965: 57)

Pronominal possession is expressed with a possessor and free pronoun preceding the nominal head, as illustrated in (23) (although some kinship nouns take an obligatory possessive prefix, see (26)). In these possessive NPs, the possessor is not emphasized. The possessive NPs in (23) are minimally contrastive with the nominal compounds in (22).

- (23) a. *joku na faləm*  
 dog 3.POSS head  
 ‘head of (the/a) dog’ (Cowan 1965: 60)
- b. *əm oloku na fæ*  
 banana oloku 3.POSS leaf  
 ‘leaf of an oloku-banana’ (Cowan 1965: 60)
- c. *ondofolo na fala*  
 chief 3.POSS bow.and.arrow  
 ‘bow-and-arrow of the chief’ (Cowan 1965: 60)

A possessed NP may also consist of just a possessive pronoun and a noun, as in the nominal clause in (24), where the subject is *na to* ‘his name’, and the nominal predicate is *Ebalə Jakali*.

- (24) *Na to Ebalə Jakali*  
 3.POSS name E. J.  
 ‘His name [was] Ebalə Jakali.’ (Mayer 2021: 45)

For contrastiveness or disambiguation, a possessive pronoun is used, see (25) and (64) below.

- (25) *maj hamam*  
 2PL.POSS.EMPH food  
 ‘YOUR food’ (as opposed to my food) (Mayer 2021: 38)

Unlike many other Papuan languages that make a formal distinction between alienable and inalienable possession<sup>7</sup> (where inalienable nouns often include kinship terms and body part nouns), Sentani does not generally mark this distinction. The only exceptions appear to be a few prefixed kinship terms, e.g. ‘father’ and ‘mother’, as well as the noun *ataj* ‘knowledge’, which taken an obligatory possessive prefix, (26)-(27). Note that in (26c-d) the free pronoun is singular while the possessive prefix is plural. The plural prefix may be a form of honorific semantic agreement, primarily being used for respected persons the speaker has an in group relationship with (Corbett 2023: 23).

- (26) a. *m-æko*  
 1/2PL.POSS -father  
 ‘my/our father’ (Mayer 2021: 33)
- b. *n-æko*  
 3.POSS-father  
 ‘his/her/their father’ (Mayer 2021: 33)
- c. *taj m-æko*  
 1SG.POSS.EMPH 1/2PL.POSS-father  
 ‘my father’ (Mayer 2021: 39)

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<sup>7</sup> For example, the alienability distinction is generally marked in Trans New Guinea languages (Fedden 2020), in Timor-Alor-Pantar languages (Klamer 2017; 2023) and in the Papuan language families in the Bird’s Head of Papua (Holton & Klamer 2018)

- d. *taj*                      *m-nakə*  
 1SG.POSS.EMP    1/2PL.POSS.mother  
 ‘my mother’ (Mayer 2021: 46)

- (27)      *Wejæ*              *w-ataj*                      *rusise*      *afæw?*  
 2SG              2SG.POSS-knowledge    Russian    language  
 ‘Do you know Russian?’ (Mayer 2021: 47)

Sentani NPs also contain demonstratives. Table 5 lists the general demonstrative *pele*, and three demonstratives distinguishing proximate, medial and distal distance to the speaker or deictic centre.<sup>8</sup>

Table 5. Sentani demonstratives

<i>pele</i>	DEM
<i>pækə</i>	DEM.PROX
<i>takə</i>	DEM.MED
<i>tikə</i>	DEM.DIST

In the examples presented by Cowan (1965: 58), demonstratives precede the noun (e.g. *bele do* /*pele to*/ ‘that man’, while in examples (28)-(30) from Mayer (2021) demonstratives either follow or precede the noun.

- (28)      *jaka*              *pele*  
 relatives      DEM  
 ‘the relatives’ (Mayer 2021: 81)

- (29)      *to*              *pele*    *mijæ*      *pele*  
 man              DEM    woman    DEM  
 ‘the man and the woman’ (Mayer 2021: 39, translation adapted)<sup>9</sup>

<sup>8</sup> This set of four is the one presented in Mayer (2021: 35). Cowan (1965: 58) mentions only three (*dakə* /*takə*/ translated as ‘this’, *bele* /*pele*/ translated as ‘that’, and *dikə* /*tikə*/, also translated as ‘that’).

<sup>9</sup> Mayer (2021: 39) translates this as two indefinites ‘a man and a woman’, likely due to the presentative function this phrase has in the beginning of a text (‘One day, a man and a woman came by canoe from Sere...’).

- (30)        *pele*        *jo*  
               DEM        village  
               ‘that village’ (Mayer 2021: 73)

Demonstratives mark definite NPs; in contrast, the numeral *mbaj* ‘one’ marks indefinite NPs, see (88).

## 5. The numeral system

This section is based on data in Cowan (1965: 13, 62, 87) and Mayer (2021: 44). The Sentani numeral system combines quinary and vigesimal bases, see Table 6. The numerals ‘one’ to ‘four’ are simplex forms, while ‘five’ to ‘ten’ are complex forms containing the morpheme *mə* ‘hand’. Numerals ‘fifteen’ and ‘twenty’ involve the lexemes *mə* ‘hand’ and *odo fə* ‘footsole’. ‘Twenty’ contains the form *u* ‘body’, a vigesimal base that is also used in ‘fourty’, which literally translates as ‘two bodies’.

Table 6. Sentani numerals

Numeral	Underlying form	Translation
<i>mbaj</i>		‘one’
<i>pe</i>		‘two’
<i>nami</i>		‘three’
<i>kəli</i>		‘four’
<i>mə hæ mbaj</i> hand leaf one	/mə fæ <sup>10</sup> mbaj/	‘five’, lit. ‘one handpalm’
<i>mə hi=nə mbaj</i> hand other=LOC1 one	/mə əhi nə mbaj/	‘six’, lit. ‘at the other hand one’
<i>mə hi=nə pe</i> hand other=LOC1 two	/mə əhi nə pe/	‘seven’, lit. ‘at the other hand two’
<i>mə hi=nə nami</i>	/mə əhi nə nami/	‘eight’, lit. ‘at the other hand three’

<sup>10</sup> The morpheme *hæ* in the numeral is suggested to be derived from *fæ* ‘leaf’ (Cowan 1965: 13), *mə fæ* ‘handpalm’ (Cowan 1965: 79) (lit. ‘hand leaf’). Compare *fæ* ‘leaf’ in *odo fæ* ‘footsole’ (lit. ‘foot leaf’) in numeral ‘fifteen’.

hand other=LOC1 three		
<i>mə hi=nə kəli</i> hand other=LOC1 five	/mə əhi nə kəli/	‘nine’, lit. ‘at the other hand five’
<i>mə pə</i> hand two		‘ten’, lit. ‘two hands’
<i>mə pə mbaj</i> hand two one		‘eleven’, lit. ‘two hands one’
<i>mə pe odo fə əmbaj</i> hand two foot leaf one		‘fifteen’, lit. ‘two hands one footsole’
<i>u mbaj</i> body one		‘twenty’
<i>odo pe mə be</i> foot two hand two		‘twenty’
<i>u pe</i> body two		‘fourty’

Nowadays, Indonesian forms are generally used in everyday language, especially for the higher numbers.

## 6. Postpositional phrases

Five frequently used Sentani postpositions are given in Table 7. Postpositions with an initial [n] indicate locations, those with an initial [r] indicate directions.

Table 7. Frequently used Sentani postpositions

Form	Translation	Gloss
= <i>nə</i>	‘at, in’	LOC1
= <i>na</i>	‘at, in, close to, in the vicinity of’	LOC2
= <i>rə</i>	‘moving to’	DIR1
= <i>re</i>	‘towards, to’	DIR2
= <i>ra</i>	‘from’	SOURCE



The postpositions =*nə* ‘LOC1’ =*na* ‘LOC2’ differ in that the location indicated by =*nə* is more affected, closer, and less generic than the location indicated by =*na*. The contrast is illustrated in (31a-b) and (32a-b).

- (31) a. *imæ=nə*  
house=LOC1  
‘inside/attached to the house’ (Mayer 2021: 40)
- b. *imæ=na*  
house=LOC2  
‘in/on/at/near/in the vicinity of the house’ (Mayer 2021: 40)

- (32) a. *Joku taj=nə mə-kə-le*  
dog 1SG.POSS.EMP=LOC1 come-PST-IND  
‘A dog came to me [at my feet]’ (Mayer 2021: 41)
- b. *Joku taj=na mə-kə-le*  
dog 1SG.POSS.EMP=LOC2 come-PST-IND  
‘A dog came to me [in my general vicinity]’ (Mayer 2021: 41)

The adposition =*rə* ‘DIR1’ expresses a movement in the direction of a location, as in (33). In contrast, =*re* ‘DIR2’ encodes more grammaticalized direction, typically flagging the addressee or recipient argument of a (semantically) bivalent verb, as in (34)-(35).

- (33) *Jo ahaw=rə ə-wo-le*  
village far=DIR1 go-IPFV-IND  
‘He went to a far away village’ (Mayer 2021: 73)
- (34) *Tejæ wa=re akokoj a ukə-aw-a-le*  
1SG 2SG=DIR2 trad.singing word tell-2SG.OBJ-1SG.SBJ-IND  
‘I tell you a traditional story’ (Mayer 2021: 59)
- (35) *Pele jæ wejæ ta=re obo kəlu kəndin fəm*

DEM EMPH 2SG 1SG=DIR2 pig son small even  
 ‘Yet to me you haven’t even

*a-je-j* *mo*  
 NEG-give-NEG still  
 given a small piglet yet’ (Mayer 201: 54; translation adapted)

In addition, a verb can occur with or without a postpositional phrase with *=re* ‘DIR2’. For example, in (36) the verb *arəj* ‘see’ takes a bare object, while in (37), the object of *arəj* ‘see’ is flagged with *=re* ‘DIR2’, and the verb is translated as ‘look at’. The distinction seems to relate to the volitional involvement of the experiencer subject.

(36) *Tejæ ninæ Onsá arəj-w-bo-kə-a-le*  
 1SG already Onsá see-3SG.SBJ<sup>11</sup>-AFF-PST-1SG.SBJ-IND  
 ‘I have already seen Onsá’ (Mayer 2021: 66)

(37) *Tejæ imæ kabam=re arə-le*  
 1SG house big=DIR2 see-IND  
 ‘I look at the big house’ (Mayer 2021: 40)

The postpositions *=re* ‘DIR2’ and *=ra* ‘SOURCE’ express opposite directions, as illustrated in (38)-(39).

(38) *Wa mbə=re?*  
 2SG where=DIR2  
 ‘Where are you going?’ (Mayer 2021: 40)

(39) ‘*Wa mbə=ra?*’ *‘Tikə=ra’*  
 2SG where=SOURCE yonder=SOURCE

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<sup>11</sup> The suffix *-w-* ‘3SG’ (see Table 8, section 7.1) appears to have no referential function in this example, as there is no 3SG subject involved in the event. A similar observation can be made for *-w-* in example (52) below. Note that in both cases, the following suffix is *-bo* ‘AFF’ (Table 12, section 7.3), and that this affix is typically preceded by *-w-*, see (40), (69)-(71). It might be that this has led to the situation where *-w-* has become a fixed combination with *-bo* [*wbo*] in the (‘rememberer’) speaker consulted by Mayer (2021).



In intransitive clauses, the subject NP precedes the verbal complex, see (42). In transitive clauses, the subject is followed by the object and verbal complex (showing APV order), see (43). An example with a full NP in A function is (44).

(42) *Tejæ nəkə-a-le*  
 1SG sit-1SG.SBJ-IND  
 ‘I sit’ (Mayer 2021: 48)

(43) *Tejæ əmfæw ano-ko-kə-a-le*  
 1SG banana eat-PLU-PST-1SG.SBJ-IND  
 ‘I have eaten bananas’ (Mayer 2021: 57)

(44) *Onsá ə Awansi a ələ-wo-aj-le*  
 Onsá CONJ Awansi word speak-IPFV-3PL.SBJ-IND  
 ‘Onsá and Awansi are speaking words’ (Mayer 2021: 51; translation adapted)

Note that in these examples, the verb also has a subject suffix. In fact, Sentani arguments are frequently expressed by verbal suffixes alone (see section 7.1, Tables 8-11).

In case of ditransitive predicates, for example involving verbs of transfer like ‘give X to Y’ and ‘tell X to Y’, the patient/theme X is expressed as a bare NP, and the recipient Y is typically expressed as a pronoun<sup>13</sup> governed by a postposition. Both PP and NP precede the verb, in that order, as illustrated in (45). From the limited data available, it is unclear if recipients must always be oblique (headed by an adposition), or whether they can also be expressed as bare NPs.

(45) *Tejæ wa=re akójkoj a ukə-aw-a-le*  
 1SG 2SG=DIR2 trad.singing word tell-2SG.OBJ-1SG.SBJ-IND  
 ‘I tell you a traditional story’ (Mayer 2021: 59)

Note that in (45), the agent and the recipient are also indexed on the verb; the patient is not. In the (few) examples of three-place predicates that I have, the benefactive / malefactive /

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<sup>13</sup> I have no examples with ditransitive verbs where the recipient is a lexical NP (as in *I gave money to the teacher*).

recipient but not the patient is indexed on the verb, see (34).<sup>14</sup> The recipient may also be expressed as a PP only, see (35).

Arguments expressed by free pronouns do not show case distinctions for S, A, and P, see Table 4 above. Temporal and locational adjuncts are clause initial: (46) illustrates a locative adjunct, (61) and (75) illustrate temporal adjuncts.<sup>15</sup>

- (46) *Pele jo əj=nə moni maj kabam nəkə-le*  
 DEM village inside=LOC1 hunger disaster big sit-IND  
 ‘In that village there was a great famine’ (Mayer 2021: 42)

Clauses optionally end with an emphatic particle. Verbal clauses are negated with a negative circumfix or a negative verb (see section 7.2). Non-verbal clauses are negated with *pam* in post-predicate position (section 8).

### 7.1. Pronominal indexing on the verb

In Sentani, the verb is the morphologically most complex word class. A verbal complex can consist of one or more verb roots; compare the single verb root *nəkə* ‘sit’ in (47) with the double verb root *ha-po* ‘take.along-strike’ in (48). Sentani thus has combinations of verb roots as verbal compounds in the core of its verbal complex.

- (47) *Tejæ nəkə-a-le*  
 1SG sit-1SG.SBJ-IND  
 ‘I sit’ (Mayer 2021: 48)

- (48) *Tejæ obo ha-po-ko-kə-a-le*  
 1SG pig take.along-strike-PLU-PST-1SG.SBJ-IND  
 ‘I have hit/beaten up the pig’ (Mayer 2021: 41, 70)

<sup>14</sup> Many other Papuan languages with a ditransitive verb like ‘give’ and pronominal indexing, index the recipient/beneficiary rather than the patient/theme on the verb (cf. Reesink 2013).

<sup>15</sup> The position of adverbs (e.g., *ninæ* ‘already’) needs more study: in the data available, adverbs occur in various positions: clause-initial or clause-final, between subject and object (as in (36) above), or between the object and the verbal complex.

Verbal complexes often contain one or more pronominal suffixes that index the person and number of arguments; in (49) both the subject and the object are indexed on the verb.

- (49) *Jakali Sere=ne wabə-w-mi-hi-kə-le*  
 Jakali Sere=DIR2 trick-3SG.SBJ-3DL.OBJ-CONN-PST-IND  
 ‘Jakali played tricks on these two from Sere’ (Mayer 2021: 58; translation adapted)

However, pronominal indexing is not syntactically obligatory: the sources used for this sketch contain many examples of transitive clauses with no arguments indexed on the verb, as in (50)-(51), (95); with only the subject indexed, and not the object, as in (44), (61), (63); or with only the object indexed and not the subject, (76). Indexing is not obligatory for animate referents, (50). However, the pronominal suffixes attested in the sources generally tend to have animate referents, though there are also examples where a pronominal suffix has an inanimate referent, (79). Inanimates may also be left unindexed, (63).

- (50) *Tejæ Onsá arəj*  
 1SG Onsá see  
 ‘I see Onsá’ (Mayer 2021: 48)

- (51) *Tejæ wa=re a ələ-ko-kə-le*  
 1SG 2SG=DIR2 word speak-PLU-PST-IND  
 ‘I have spoken words to you’ (Mayer 2021: 49; translation adapted)

Only in imperatives do verbs have obligatory indexing of subjects (see section 9). Whether or not a participant is indexed seems to depend on non-syntactic factors such as information structure and discourse context coupled with animacy of the referent. This can only be studied with a larger corpus than is currently available, and remains a topic for further research.

There are two paradigms of subject suffixes, and two for object suffixes. The subject paradigms are different in non-future (Table 8) and future (Table 9). Objects in non-future (Table 10) and future (Table 11) also have different shapes, but in addition, the form of non-future objects depends on the number of the subject they may combine with: non-future

objects combining with a third person subject affix take the same shape as future objects (Table 11).

For both subject and object affixes, non-future forms are used in present and past tense, in imperfective aspect, and in imperatives. Non-future forms may thus be considered the more ‘neutral’ forms of the two.

When both subject and object are indexed, the suffixes in the non-future appear in the order “object-subject”. But when, in the non-future, a third person subject is indexed together with an object, the suffix order becomes “subject-object”, and the non-future object suffix takes the shape of a future object suffix (Table 11). (With first or second person subjects, the suffix order remains “object-subject”, and the object suffix retains its non-future shape (Table 10)). Illustrations are given below.

Table 8. Non-future subject suffix

	Singular	Dual	Plural
1	<i>-a</i>	<i>-ən</i>	<i>-an</i>
2	<i>-j</i>	<i>-ew</i>	<i>-aw</i>
3	<i>-∅</i> or <i>-w</i> <sup>16</sup>	<i>-ej</i>	<i>-aj</i>

Table 9. Future subject suffix (Mayer 2021: 60, adapted from Elenbaas 1999: 54)

	Singular	Dual	Plural
1	<i>-te</i>	<i>-a</i>	<i>-ma</i>
2	<i>-ew</i>	<i>-∅</i>	<i>-əm</i>
3	<i>-ən</i>	<i>-nej</i>	<i>-naj</i>

Table 10. Suffix for non-future object, combining with 1<sup>st</sup> or 2<sup>nd</sup> person subject suffix (obj-sbj suffix order)

	Singular	Dual	Plural
1	<i>-ar</i>	<i>-am</i>	<i>-am</i>

<sup>16</sup> The third person non-future subject suffix is realised as a zero morpheme, or as *-w*; compare *əɾə-a-le* ‘see-1SG.SBJ-IND’ ‘I see’ with *əɾə-∅-le* ‘see-3SG.SBJ-IND’ ‘He sees’. Examples where it is realised as *-w* include (40) and (49).

2	<i>-aw</i>	<i>-p</i>	<i>-am</i>
3	<i>-an</i>	<i>-ame</i>	<i>-ame</i>

Table 11. Suffix for future object, or non-future object combining with 3<sup>rd</sup> person subject (sbj-obj suffix order)

	Singular	Dual	Plural
1	<i>-lə</i>	<i>-mə</i>	<i>-mə</i>
2	<i>-ej</i>	<i>-ə</i>	<i>-əm</i>
3	<i>-nə/-no</i>	<i>-mi</i>	<i>-mi</i>

Example (52) contains two clauses. The first is in the present (non-future), the second in the future, triggering different shapes for the subject and object affixes. In both cases, the subject is not a third person, and thus follows the object.

- (52) *Wa=re moko-w-bo-kə-aw-a-le*  
 2SG=DIR2 make/do-3SG.SBJ<sup>17</sup>-AFF-2SG.OBJ-1SG.SBJ-IND  
 ‘I tell (lit. do) you,

*wa kəlu jæ ta=rə ə-wə-j-lə-əm jæ*  
 2SG son EMPH 1SG=DIR2 NEG-say.to-NEG-1SG.OBJ-2PL.SBJ EMPH  
 do not call me your son.’ (Lit. ‘...your son, to me you don’t say [that]’) (Mayer 2021: 93)

Examples (53)-(55) are all in present tense, i.e., take non-future suffix forms. In (53)-(54), the object suffix combines with a first person subject suffix, which it precedes. In (55), however, the object suffix combines with a third person subject suffix, and now the object suffix follows the subject suffix. Note that semantically, the object that is indexed on the verb can be a benefactive/malefactive/recipient, (52)-(53), or a patient, (54)-(55).

- (53) *Moko-an-a-le*  
 make/do-3SG.OBJ-1SG.SBJ-IND  
 ‘I make [it] for him’ (Elenbaas 1999: 54)

<sup>17</sup> See footnote 11.



(54) *əṛə-ame-a-le*  
 see-3DU.OBJ-1SG.SBJ-IND  
 ‘I see these two’ (D. Hartzler 1976: 28; cited in Elenbaas 1999: 55; translation adapted)

(55) *əṛə-aj-mi*  
 see-3PL.SBJ-3PL.OBJ  
 ‘They see them’ (D. Hartzler 1976: 29; cited in Elenbaas 1999: 55)

Combinations of subject and object affixes are relatively rare in the data. Many examples have only one argument indexed, or none at all. As already mentioned, pronominal indexing is not syntactically obligatory.

## 7.2. Inflections for negation, tense, aspect, and mood

Besides being indexed for subject and object, Sentani verbs also take affixes for negation, tense, aspect, and mood. The rough order in which these affixes appear in the verbal complex is presented in the template (56) (following Elenbaas 1999: 52). They will be discussed here in this order. Note that (56) contains a slot named ‘X’. The morphemes in this slot have a wide range of different grammatical functions and originate from bleached lexical items. They are discussed in section 7.3.

(56)	NEG	<b>Verb root(s)</b>	NEG	ASP	SBJ (3)	OBJ	<b>X</b>	TENSE	MOOD
					OBJ	SBJ (1, 2)			

The negative circumfix *ə-j* attaches to the verb, (57). The suffixing part of it precedes any pronominals, (58).<sup>18</sup>

(57) *Ə-wabə-j kəlu pe nəkə-a-le*  
 NEG-trick-NEG son face sit-1SG.SBJ-IND  
 ‘One cannot trick the son that sits before you!’ (Mayer 2021: 90)

<sup>18</sup> Reesink (2002) considers negations in postpredicate position as typical for Papuan languages in general, but it remains to be investigated to what extent this is indeed the case: in Sentani, negation is expressed by a verbal circumfix, and in TNG languages negation is often done by means of a verbal prefix or proclitic (Fedden 2020).

- (58) ...*wa*    *kəlu*    *jæ*    *ə-wə-j-lə-əm*  
 2SG    son    EMPH    NEG-say.to-NEG-1SG.OBJ-2PL.SBJ  
 ‘...do not call me your son’ (Mayer 2021: 60)

Negations can also be expressed with a negative verb, e.g., *ahi* ‘not want’ in (59). (Non-verbal predicates are negated with the nominal *pam*, see section 9.)

- (59) *Ebalə*   *Jakali*   *ahi*    *jæ*  
 Ebalə   Jakali   not.want    EMPH  
 ‘(But) Ebalə Jakali did not want [it]’ (Mayer 2021: 66)

The aspectual slot contains a suffix *-wo* ‘IPFV’ in (60). In (61), the tense slot contains the suffix *-kə* ‘PST’. This is the only tense suffix attested in the verbal complex; present tense is unmarked, and future tense is expressed in the choice of affixes for subject and object (see section 7.1, Table 8-11). In other words, while many Papuan languages have elaborate tense systems, Sentani only distinguishes future and non-future.

- (60) *Məhi=nə*    *hako-wo-a-le*  
 sadness=LOC1    sorrow-IPFV-1SG.SBJ-IND  
 ‘I am feeling sad’ (Mayer 2021: 59)

- (61) *Jahimo*   *toboni*    *pele*   *tow-ej-mə-kə-le*  
 next.day   bride.price   DEM   take-3DL.SBJ-paddle-PST-IND  
 ‘The next day, they brought (lit. took and paddled) the bride price...’ (Mayer 2021: 66)

The verbal complex ends with a slot for affixes marking mood, the most frequent one being *-le* ‘IND’. This suffix occurs in the imperfective (60), and in present, past and future tense, (62)-(64).

- (62) *Tejæ*   *wa=re*    *a*    *ukə-aw-a-le*  
 1SG    2SG=DIR2   word    tell-2SG.OBJ-1SG.SBJ-IND  
 ‘I tell you something’ (Mayer 2021: 62)

- (63) *Tikə=nə            na    kətənələ    ə-w-sajə-w-bo-kə-le*  
 DEM.DIST=LOC1 3    things            go-3SG.SBJ-squander-3SG.SBJ-AFF-PST-IND  
 ‘There, he went and squandered his things’ (Mayer 2021: 62)
- (64) *Tejæ    waj            imæ=nə            mə-te-le*  
 1SG    2.POSS.EMP    house=LOC1    come-1SG.SBJ-IND  
 ‘I will come to YOUR house’ (Mayer 2021: 62)

### 7.3. Suffixes between the pronominal and tense-aspect slots

The position called ‘X’ in (56) above is located between the pronominal and the tense-aspect suffixes. It contains affixes with a wide range of grammatical functions which are historically derived from semantically bleached lexical items, mostly verbs (Cowan 1965: 24–25), as shown in Table 12. The first suffix *-nu* ‘3POSS body/self’ is of nominal origin, the next three suffixes derive from transitive verbs, and the final two derive from intransitive deictic verbs.

Table 12. Morphemes between the pronominal and tense-aspect slots

Suffix	Function	Gloss	Related lexeme(s)	Gloss
<i>-nu</i>	reflexive	REFL	<i>na u</i>	‘3.POSS body/self’
<i>-bo</i>	affected	AFF	<i>po</i>	‘strike, beat, aim at’
<i>-ko</i>	pluractional	PLU	<i>(mo-)ko</i>	‘make, do’
<i>-hi</i>	connective	CONN	<i>i, je</i>	‘give’
<i>-ho</i>	direction from	THITHER	<i>ho</i>	‘go (across, away)’
<i>-mə</i>	direction towards	HITHER	<i>mə</i>	‘come’

In what follows I describe how the suffixes in Table 12 combine with verb roots, based on information gleaned from Cowan (1965).

Examples (65)-(67) contain *-nu* ‘REFL’, which is historically related to the possessed noun phrase *na u* ‘3.POSS body’. In (65), combining *hike* ‘attach’ with *nu* derives the reflexive construction ‘attach himself’. In (66)-(67), combining *a* ‘take’ with *nu* literally means ‘take one’s body’, i.e., ‘raise oneself, rise, get up, stand up’. Not all verbal complexes

containing *-nu* translate as reflexives. In some cases, the reflexive meaning may be more metaphorical, as in (67).

- (65) *Hikε-w-nu-ke*  
 attach-3SG.SBJ-REFL-PST  
 ‘He attached himself’ (Cowan 1965: 27)
- (66) *A-j-nu*  
 take-2SG.SBJ-REFL  
 ‘You raise yourself; you rise, you stand up’ (Cowan 1965: 27)
- (67) *He-w-nu-ke*  
 hang-3SG.SBJ-REFL-PST  
 ‘He halted, he stopped’ (lit. ‘He hung himself’) (Cowan 1965: 27)

The suffix *-bo* ‘AFF’ is likely historically related to the verb *po* ‘to strike X, beat X, aim at X’. (Recall that *b~p* are allophones in intervocalic position, section 2.1). *-Bo* derives complex verbs with an affected undergoer/patient argument, (68). The complex verbs derived with *-bo* in (68a) have one argument, while their base verb has two, so derivation with *-bo* results in a reduced valency. However, deriving verbs with *-bo* does not regularly involve such reduction: in many examples in Cowan (1965), the base and the derived form have the same valency, examples are given in (68b).

- |      |    |               |                                  |                  |                                       |                                   |
|------|----|---------------|----------------------------------|------------------|---------------------------------------|-----------------------------------|
| (68) | a. | <i>dawə</i>   | ‘to open, to<br>loosen (trans.)’ | <i>dawə-bo</i>   | ‘to open, to<br>loosen<br>(intrans.)’ | (Cowan 1965:<br>27) <sup>19</sup> |
|      |    | <i>hon(ə)</i> | ‘to burn, to roast<br>(trans.)’  | <i>hon(ə)-bo</i> | ‘to burn, to roast<br>(intrans.)’     | (Cowan 1965: 80)                  |
|      |    | <i>he</i>     | ‘to hang’                        | <i>he-bo</i>     | ‘hang (intrans.)’                     | (Cowan 1965: 80)                  |

<sup>19</sup> The first three derivations show a ‘labile alternation’, which is ‘a polyvalency alternation in which one alternant is transitive (with A and P) and the other alternant only includes an S which corresponds to the transitive P’ (Haspelmath 2021: 39). This is ‘patient-preserving lability’ in the terminology of Dixon 1994). Cowan (1965: 27) calls this a ‘medial’ alternation.

b.	<i>fako</i>	‘to float’	<i>fako-bo</i>	‘to float’	(Cowan 1965: 79)
	<i>haka</i>	‘to run (away)’	<i>haka-bo</i>	‘to run (away)’	(Cowan 1965: 80)
	<i>nunde</i>	‘to be lost, to disappear’	<i>nunde-bo</i>	‘to be lost, to disappear’	(Cowan 1965: 86)

The argument of verbs derived with *-bo* may be the single argument of an intransitive construction, as in the examples in (69)-(71), or it may be the affected patient of a transitive construction, as illustrated in (72).

(69) *Ja he-w-bo-ke*  
 day hang-3SBJ-AFF-PST  
 ‘It became day, it became light’ (Lit. ‘the day hung’) (Cowan 1965: 27)

(70) *O-w-bo-ke*  
 descend-3SG.SBJ-AFF-PST  
 ‘It dropped down (by itself)’ (Cowan 1965: 27)

(71) *Wale-w-bo-ke*  
 live-3SG.SBJ-AFF-PST  
 ‘He came back to life’ (Cowan 1965: 27)

(72) *bodo* ‘hear, listen’ *bodo-bo* ‘listen to, understand’ (Cowan 1965: 76)  
*huwə* ‘tell, notice’ *huwə-bo* ‘notice, feel’ (Cowan 1965: 81)

In some derivations it is hard to see any semantic relation between the base verb and its derivation with *-bo*, (73) is an example.

(73) *ha* ‘take along’ *ha-bo* ‘beat up’ (Cowan 1965: 79)<sup>20</sup>

<sup>20</sup> In Cowan (1965), *ha-bo* is often written as *ha-po*.

The pluractional suffix *-ko* ‘PLU’ is likely related to the handling verb (*mo-*)*ko* ‘make, do’, and it derives complex verbs that express a plurality of events. The events may involve several objects, (74)-(75), or may affect the same object repeatedly, (76).

(74) *Na kəʔanalə wahe-w-mi-ko-kə-le*  
 3SG things divide-3SG.SBJ-3DL.OBJ-PLU-PST-IND  
 ‘He divided his goods between these two (each individually).’ (Mayer 2021: 58)

(75) *Wena məhæ-məhæ obo hə-po-w-ko-kə-le*  
 yesterday how.much pig hit-AFF-W-PLU-PST-IND  
 ‘How many pigs were slaughtered yesterday?’ (Mayer 2021: 59)

(76) *Nejæ ta=re ha-po-lə-ko-kə-le*  
 3SG 1SG=DIR2 take.along-AFF-1SG.OBJ-PLU-PST-IND  
 ‘He has beaten me up.’ (Mayer 2021: 58)

The suffix *-hi* ‘CONN’ (and its allophonic alternants *~si*, *~fi*) may be historically related to the transfer verb *i/je* ‘to give’. It “indicates a bringing together, uniting, collecting, connecting or fastening of the object or objects, but sometimes also a disuniting, disconnecting of what belongs together, while often the original meaning is not clear any more [sic!].” (Cowan 1965: 26). Illustrations of its function collecting, connecting and uniting the object are (77)-(80).

(77) *Adilə-w-fi-ke*  
 gather-3SG.SBJ-CONN-PST  
 ‘He collected’ (Cowan 1965: 26)

(78) *Molo-w-fi-ke*  
 edit.surface-3SG.SBJ-CONN-PST  
 ‘He fastened [something]’ (Cowan 1965: 26)

(79) *Hono-j-na-hi*  
 lie.down-2SG.SBJ-3SG.OBJ-CONN

‘Lie [down] on it!’ (Cowan 1965: 26)

- (80) *Jakali Sere=re wabə-w-mi-hi-kə-le*  
Jakali Sere=DIR2 cheat-3SG.SBJ-3DL.OBJ-CONN-PST-IND  
‘Jakali cheated these two [from] Sere.’ (Mayer 2021: 58; translation adapted)

The suffix *-ho* ‘THITHER’ related to the verb *ho* ‘go’, and expresses movement from the deictic centre:

- (81) *dilo* ‘dive’ *dilo-ho* ‘dive over’ (Cowan 1965: 77)  
*jane* ‘hide’ *jane-ho* ‘hide away’ (Cowan 1965: 82)

The morpheme *-mə* ‘HITHER’ is a grammaticalization of the verb *-mə* ‘come’. It expresses movement towards the deictic centre, and can be metaphorically extended to refer to a movement in time, so that it expresses “[...] an action, lasting in its effect up to the present time” (Cowan 1965: 25).

- (82) *Wə-aj-nə na=nə*  
say.to-3PL.SBJ-3SG.OBJ 3=LOC2  
‘They said to him:

“*Mænggə pe pə-j-mə-j-ən=na*”?  
girl before return-HAB-COME-HAB-3SG.SBJ=LOC2<sup>21</sup>  
“Did the girl come back here?” (Mayer 2021: 87; translation adapted)

In sum, the suffixes occurring in the slot between the pronominals and the tense-aspect morpheme are not of a single functional category. Their derivational and/or inflectional functions vary widely. The diversity exhibited by the morphemes in this slot is likely due to the fact that they are grammaticalized from quite different lexical items: a noun, two action verbs, a transfer verb and two deictic verbs. As grammaticalized lexical items (mostly ex-verbs), they occur outside of the pronominal suffixes attached to the verbal root;

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<sup>21</sup> Mayer (2021) recognizes a habitual circumfix, but the sources contain so few examples of it that I have not been able to analyse it for the present sketch.

‘capturing’ the pronominal affixes inside the derived verb form.<sup>22</sup> They show a second layer of verb serialization in the verbal complex, besides the verbal compounds that occur in the core of the verbal complex (see section 7.1).

## 8. Non-verbal clauses

Sentani non-verbal predication is expressed as the juxtaposition of subject and predicate; no copular verb or predicative inflection is used. Nominal predicates express proper inclusion (83), and identity, (84)-(85).

(83) *Awansi mænggə fa*  
 Awansi girl young  
 ‘Awansi is a young girl’ (Mayer 2021: 63)

(84) *Mænggə fa naj to Awansi*  
 girl young 3.POSS.EMP name Awansi  
 ‘The girl’s name is Awansi’ (Mayer 2021: 63)

(85) *Kələw Nikíban Ohəj jakoba ondofolo*  
 Kələw Nikíban Asei island chief  
 ‘Kələw Nikíban is the chief of Asei island’ (Mayer 2021: 64)

Nominal predicates are negated with the negator *pam* ‘not, nothing’, (86)-(87):

(86) *Tejæ t-ataj pam*  
 1SG 1SG.POSS-knowledge NEG  
 ‘I don’t know (it)’ (lit. ‘My knowledge (is) not’) (Mayer 2021: 35)

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<sup>22</sup> A similar case where a deverbal affix captures a pronominal affix occurs Makalero, a Papuan language of the Timor Alor Pantar family (Klamer 2018: 251–252). In Makalero it creates a full paradigm of unverbated ‘give’ with an entrapped recipient object prefix.



- (87) *Tejæ to pam*  
 1SG man NEG  
 ‘I’m not a man...’ (Mayer 2021: 85)

Non-verbal clauses may have numerals, (88), or postpositional phrases, (89)-(90), as their predicates. Such predicates are also negated with *pam*, (91).<sup>23</sup>

- (88) *To mbaj na kəlu fa pe*  
 man one 3 son young two  
 ‘A man had two sons.’ (lit. ‘A man his sons [are] two’ (Mayer 2021: 45))

- (89) *Aje imæ puma=nə*  
 bird house top=LOC1  
 ‘A bird is on top of a house’ (Mayer 2021: 35)

- (90) *Nejæ imæ=na*  
 3 house=LOC2  
 ‘He is in the house’ (Mayer 2021: 64)

- (91) *Wa kəlu takə=nə pam*  
 2SG son DEM.MED=LOC1 NEG  
 ‘Your son is not here’ (Mayer 2021: 98)

## 9. Imperative and interrogative clauses

In imperatives, the agent addressee must be expressed with a pronominal index on the verb, as illustrated in (92)-(94).

- (92) *Hono-j*  
 lie.down-2SG.SBJ  
 ‘Lie down!’ (Mayer 2021: 56)

<sup>23</sup> Gerstner-Link (2023: 282-283) argues that the Sentani negator *pam* [bam] has been borrowed into languages of the Border family: Kilmeri and Pagi adopted it as an (additional) emphatic verbal negation and Imonda as a negation of verbless clauses.

(93) *Əlǝ-j-ko*  
 speak-2SG.SBJ-PLU  
 ‘Speak!’ (Mayer 2021: 52; translation adapted)

(94) *O folo-j-bo*  
 tree cut-2SG.SBJ-AFF  
 ‘Cut the wood in half!’ (Mayer 2021: 56)

Polar questions are marked by intonation. The (verbal and nominal) interrogative clauses in (95)-(97) are only distinguishable from declaratives by the rising intonation at the end of the sentence.

(95) *Wa hamam anǝ-ko-kǝ jǝ?*  
 2SG food eat-PLU-PST EMPH  
 ‘Have you eaten?’ (Mayer 2021: 68)

(96) *Wejǝ w-ataj akokjoj Diǝrman?*  
 2SG 2SG.POSS-knowledge traditional.singing German  
 ‘Do you know traditional German stories?’ (Lit. ‘Your knowledge is...’ (Mayer 2021: 34)

(97) *Wa foj?*  
 2SG good  
 ‘How are you? (Lit. ‘Are you good?’) (Mayer 2021: 68)

Question words remain in situ. Question words with nominal referents are *hinǝ* ‘who’, (98)-(99), *maka/mǝka* ‘what’ (100), and *mbǝ* ‘where’ (101)-(102). Other question words are *mǝhǝ* ‘how’ (103), *maka=nǝ/mǝka=nǝ* ‘why’ (104)-(105), and *mǝhǝ-mǝhǝ* ‘how much/many’, see (75) above.

(98) *Nejǝ hinǝ?*  
 3 who  
 ‘Who is he?’ (Mayer 2021: 67)

- (99) *Waj to hinə?*  
 2SG.POSS.EMP name who  
 ‘What is your name?’ (Mayer 2021: 64)
- (100) *Takə maka?*  
 DEM.MED what  
 ‘This (is) what?’ (Cowan 1965: 53)
- (101) *Wa mbə=re?*  
 2SG where=DIR2  
 ‘Where are you going?’ (Mayer 2021: 40)
- (102) *Mbə=na botol jə?*  
 where=LOC2 bottle EMPH  
 ‘Where is the bottle?’ (Mayer 2021: 65)
- (103) *Wa məhæ?*  
 2SG how  
 ‘How are you?’ (Mayer 2021: 65)
- (104) *Məka=nə ta=re wejə hinə jə?*  
 what=LOC1 1SG=DIR2 2SG ask EMPH  
 ‘Why are you asking me?’ (Mayer 2021: 63)
- (105) *Məka=nə obo kəndin?*  
 why=LOC1 pig small  
 ‘Why is the pig small?’ (Mayer 2021: 67)

The sources contain few examples of interrogative sentences, and example (104) is the only interrogative sentence with a verbal predicate that I could find.

## References

- Bergsland, K. & Vogt, H. 1962. On the validity of glottochronology. *Current Anthropology* 3:115–153. *Current Anthropology* 3. 115–153.
- Cowan, H.K.J. 1952a. De Austronesisch-Papoea'se taalgrens in de Onderafdeling Hollandia (Nieuw Guinea). *Tijdschrift Nieuw-Guinea* 13((1-6)). 133–43, 160–77, 201–6.
- Cowan, H.K.J. 1952b. Drie verhalen in Sentani-taal. *Bijdragen Tot de Taal - Land- En Volkenkunde* 108(4). 347–64.
- Cowan, H.K.J. 1965. Grammar of the Sentani language with specimen texts and vocabulary. *Verhandelingen van Het Koninklijk Instituut Voor Taal- Land- En Volkenkunde* 47.  
DOI: <https://doi.org/10.2307/412395>
- Eberhard, David M. & Simons, Gary F. & Fennig, Charles D. (eds.). 2020. *Ethnologue: Languages of the World*. 23rd ed. Dallas, Texas: SIL International. Retrieved from <http://www.ethnologue.com>
- Elenbaas, Nine. 1999. *A unified account of binary and ternary stress: Considerations from Sentani and Finnish*. Utrecht: LOT Publications.
- Fedden, Sebastian. 2020. The Morphology of Trans New Guinea languages. In *Oxford Research Encyclopedia of Linguistics*,. Oxford: Oxford University Press. Retrieved from <https://doi.org/10.1093/acrefore/9780199384655.013.633>
- Gerstner-Link, Claudia. 2023. Multilateral Lexical Transfer among Four Papuan Language Families: Border, Nimboran, Sentani and Sko. In Marian Klamer & Francesca R. Moro (eds.), *Traces of Contact in the Lexicon: Austronesian and Papuan Studies*, 263–306. Leiden: Brill.
- Gregerson, Kenneth & Hartzler, Margaret. 1987. Towards a reconstruction of proto-Tabla-Sentani phonology. *Irian: Bulletin of the Irian Jaya Development* 26(1). 1–29.

- Hammarström, Harald & Forkel, Robert & Haspelmath, Martin. 2021. *Glottolog 4.5*.  
Retrieved from <http://glottolog.org/>
- Hartzler, Dwight. 1976. A study of Sentani verb structure. *Irian: Bulletin of the Irian Jaya Development* 5(2). 18–38.
- Hartzler, Margaret. 1976. Central Sentani Phonology. *Irian: Bulletin of the Irian Jaya Development* 5(1). 66–81.
- Hartzler, Margaret. 1983. Mode, aspect and foregrounding in Sentani. *Language and Linguistics in Melanesia* 14. 175–94.
- Hartzler, Margaret. 1986. Theme and focus in Sentani discourse. *Workpapers in Indonesian Languages and Cultures* 3. 17–43.
- Holton, Gary & Klamer, Marian. 2018. The Papuan languages of East Nusantara and the Bird's Head. In Bill Palmer (ed.), *The languages and linguistics of the New Guinea area: a comprehensive guide.*, 569–640. Berlin: Mouton de Gruyter.
- Klamer, Marian. 2017. The Alor-Pantar languages: Linguistic context, history and typology. In Marian Klamer (ed.), *The Alor-Pantar languages: History and typology (2nd ed.)*, 1–48. Berlin: Language Science Press.
- Klamer, Marian. 2018. Typology and grammaticalization in the Papuan languages of Timor, Alor, and Pantar. In Heiko Narrog & Bernd Heine (eds.), *Grammaticalization from a Typological Perspective*, 235–262. Oxford: Oxford University Press.
- Klamer, Marian. 2023. Word classes in Timor-Alor-Pantar and the Papuan region. In Eva van Lier (ed.), *Oxford Handbook of Word Classes.*, Oxford: Oxford University Press.
- Mayer, Clemens J. 2021. A grammar sketch of Sentani. Research MA Thesis, Leiden University. Retrieved from <https://hdl.handle.net/1887/3212906>

Mehuwe, Chris & Hartzler, Dwight & Hartzler, Margaret. 1993. *Kamus Sentani-Indonesia-Inggris*. Jayapura: Summer Institute of Linguistics. Retrieved from

<https://www.sil.org/resources/archives/37492>

Onde, Yotam Yolam & Falo, Usiel & Yoku, Edison & Hartzler, Dwight. 1979. *A Eleilei Buyaka Afeu*. Jayapura: Percetakan Universitas Cenderawasih.

Reesink, Ger. 2013. Expressing the GIVE event in Papuan languages, a preliminary survey.

*Linguistic Typology* 17(2). 217–266.