A Grammar of Ayeri

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Documenting a Fictional Language

by Carsten Becker

Benung. The Ayeri Language Resource

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Set in Junicode and Fira Sans with XeTeX.

Ayeri is a fictional language spoken by fictional people in a fictional setting, and as such is not related to any naturally existing languages. It is thus not to be confused with *Azeri*, a Turkic language spoken in Azerbaijan and its surrounding countries. Ayeri's vocabulary is entirely *a priori*, this means, no real-world languages have been used specifically as sources of vocabulary. Ayeri is also not derived from any specific real-world language family by means of sound changes. Due to the language's sound and spelling aesthetic being inspired by Austronesian languages, however, occasional overlaps with words existing in those languages may happen, but only accidentally so.

https://benung.nfshost.com
https://github.com/carbeck/ayerigrammar/
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Abbreviations

1	First person
2	Second person
3	Third person
A	Agent
ACC	Accusative
ADJ	Adjunct
AFF	Affirmative
AGR	Agreement
AGTZ	Agentizer
AN	Animate
ANIM	Animacy
AT	Agent topic
CASE	Case
CAUS	Causative
CAUT	Causative topic
COMP	Complement
COMP	Comparative
DAT	Dative
DATT	Dative topic
DEF	Definite
DIM	Diminutive
DYN	Dynamic
F	Feminine
FOC	Focus
FUT	Future
GEN	Genitive
GEND	Gender
GENT	Genitive topic
HAB	Habitative
HORT	Hortative
IMP	Imperative
INAN	Inanimate
INDF	Indefinite
INS	Instrumental
INST	Instrumental topic
INT	Intensifier
IRR	Irrealis
ITER	Iterative
LNK	Linker
LOC	Locative
LOCT	Locative topic
M	Masculine
N	Neuter
NEG	Negative
NFUT	Near future
NMLZ	Nominalizer
NOM	Nominative
NPST	Near past
NUM	Number
OBJ	Object
OBJ_θ	Secondary object
OBL	Oblique
P	Patient
PERS	Person
PL	Plural
PRED	Predicator

PREP Preposition
PROG Progressive
PRS Present
PST Past
PT Patient topic
PTCP Participle
REFL Reflexive
REL Relative
RFUT Remote future
RPST Remote past
SBJ Subject
SG Singular
SPEC Specificity
SUPL Superlative
TOP Topic
XCOMP Open complement

Preface

This is my latest attempt to write a grammar of Ayeri, a fictional language which I have been developing since December 2003. Getting to work on grammar writing again was triggered by a growing dissatisfaction with not having a central place of documentation, when the first thing people look for on my website is often the grammar, incomplete as well as partially inaccurate and outdated as it may be. In addition to that, there was a seminar on fictional languages at the University of Tübingen, Germany, in the summer semester of 2016 (Buch 2016). Ayeri was one of the languages that was chosen for students to explore and evaluate.

The student group who worked on Ayeri came to the conclusion that its documentation is severely lacking in the description of basic elements and assumptions, since whole chapters of the grammar had been missing to date (Boga et al. 2016: 12).[1] This is to say that previous attempts of writing a full-fledged grammar of Ayeri have been incomplete due to loss of enthusiasm and creeping neglect.

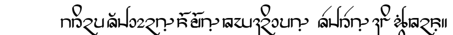
Although the *Ayeri Grammar* has so far been lying dormant for five years, I have written a whole number of blog articles detailing various grammatical issues (Becker 2016a: Blog). These articles have been taken into consideration here. This grammar writing attempt is thus not only a transferral to a different typesetting system, but constitutes an extension to previous formal documentation as well.

I hope that by transferring my previous grammar writing from LibreOffice to LaTeX, combined with using GitHub as a version control system, maintaining and editing will become faster, more transparent, and more elegant, since LaTeX operates on plain text files, and version control helps in keeping track of changes over time.

Carsten Becker
Marburg, July 18, 2016

[1] ཀཱུ་ཏཱ་ནཱས་ཨི་ཀཱན། *Kutānas-ikan* ‘thanks a lot’ to Bella Boga, Madita Breuninger, Thora Daneyko, and Martina Stama-Kirr for their hard work on making sense of my published materials in spite of information being scattered all over the place, as well as their providing me with the presentation concluding their group work.

0 Introduction



Paronaya adanyāng si ming tahanoyyāng, edareng voy kotanas.
'He who cannot write believes it not to be toil.'
— Anonymous

In December 2003, the idea for a new fictional language was born, an idea that turned out to stick with me for over 10 years now.[1] At that time, my seventeen years old self was still fairly new to this whole making-up languages business, read things about linguistics here and there, and was not shy to ask questions about terminology (and, looking at old mails, a little impertinently teenager-like so), for example on *Conlang-L* and the *Zompist Bulletin Board*. One thing seemed to catch my interest especially: syntactic alignments other than the nom/acc of the few languages I was familiar with, that is, German, English, and French. Apparently this curiosity was big enough for me to grow bored with my second fictional language, Daléian (declared 'quite complete' after maybe half a year of work or so), and to start something new from scratch in order to put newly acquired knowledge to test.

I had read about "trigger languages" on *Conlang-L* and wanted to try my hands on making my own. I cannot remember how long it took me to come up with a first draft of an Ayeri grammar, however, I do remember having been told that a good language cannot be made in a summer. Of course, I still did not really know what I was doing then, even though I thought I had understood things and authoritatively declared "this is how it works" in my first grammar draft when things sometimes really do not work that way. But at least an interest had been whetted.

In order to illustrate the various stages from the beginnings to current Ayeri, I went through some old backups contemporary with the very early days. Here is a sentence from the oldest existing document related to it, titled "Draft of & Ideas for my 3rd Conlang"—the file's last-changed date is December 14, 2003, though I remember having started work on Ayeri in early December. I added glossing for

1 Most of the text here is taken from the blog article, "Happy 10th anniversary, Ayeri!" (Becker 2013) with some slight rephrasings and extensions.

convenience and according to what I could reconstruct from the notes. This uses vocabulary and grammatical markers just made up on the spot and for illustrative purposes; little of it actually managed to make it into actual work on Ayeri:

(1)

Ayevhoi	*agiaemaesim*	*coyaielieðamavir*	*vhaieloyaŋaiye.*
Ay-evhoi	agia-ema-esim	coyai-el-i-eðam-avir	vhai-el-o-yaŋa-iye
3SG.AN-SBJ	read-VERB-SBJ.AN	book-NOUN-AN-INDF-P	bed-NOUN-INAN-ON-LOC

'He reads a book on the bed.'

According to the grammar draft of September 5, 2004, this would have already changed to:

(2)

Ang	*layaiyąin*	*mecoyalei*	*ling*	**pinamea.*
Ang	laya-iy-a-in	me-coya-lei	ling	*pinam-ea
A.SBJ	read-3SG.AN$_1$-a$_1$-SBJ	INDF.INAN-book-P.INAN	top.of	bed-LOC

'He reads a book on the bed.'

A word for 'bed'—ᓐᔾᒪ *pinam*—was only (re-)introduced on October 24, 2008, however. In the current state of Ayeri, I would translate the sentence as follows:

(3)

Ang	*layaya*	*koyaley*	*ling*	*pinamya.*
Ang	laya=ya.Ø	koya-ley	ling	pinam-ya
AT	read=3SG.M.TOP	book-P.INAN	top.of	bed-LOC

'He reads a book on a/the bed.'

As you can see, quite a bit of morphology got lost already early on, especially the overt part-of-speech marking (!) and animacy marking on nouns. Also, prepositions were just incorporated into a noun complex as suffixes apparently. Gender was originally only divided into animate and inanimate, but I changed that at some point because only being really familiar with European languages, it felt awkward to me not to be able to explicitly distinguish 'he', 'she', and 'it'.

A feature that also got lost is the assignment of thematic vowels in personal pronouns to third-person referents: originally, every third-person referent newly introduced into discourse would be assigned one of /a e i o u/ to disambiguate, and there was even a morpheme to mark that the speaker wanted to dissolve the association. Constituent order was theoretically variable at first, but I preferred SVO/AVP due to familiarity with that. Later on, however, I settled on VSO/VAP. Also, I had no idea about what was called "trigger morphology" on *Conlang-L* for the longest time—essentially, this referred to the Austronesian, or Philippine, aligment. I am not claiming that I know all about it now, just that due to reading up on the topic, I have a slightly more informed understanding now. Orthography

changed as well over the years, so ⟨c⟩ in the early examples encodes the /k/ sound, not /tʃ/ as it does today; diphthongs were spelled as ⟨Vi⟩ instead of modern ⟨Vy⟩.

What was definitely beneficial for the development of Ayeri was the ever increasing amount of linguistics materials available online and my entering university (to study literature) in 2009, where I learned how to do research and also had a lot of interesting books available at the library.

One of the things people regularly compliment me on is Ayeri's script—note, however, that Tahano Hikamu was not the first one I came up with for Ayeri. Apparently, I had already been fascinated with the look of Javanese/Balinese writing early on;[2] Figure 0.1 shows a draft dated February 9, 2004. However, the letter shapes in this draft looked so confusingly alike that I could never memorize them. About a year later, I came up with the draft in Figure 0.2. What is titled "Another Experimental Script" there is what would later turn into Tahano Hikamu, Ayeri's 'native' script. According to the notes in my fictional language ring binder, the script looked much the same as today about a year from then, but things have only been mostly stable since about 2008.

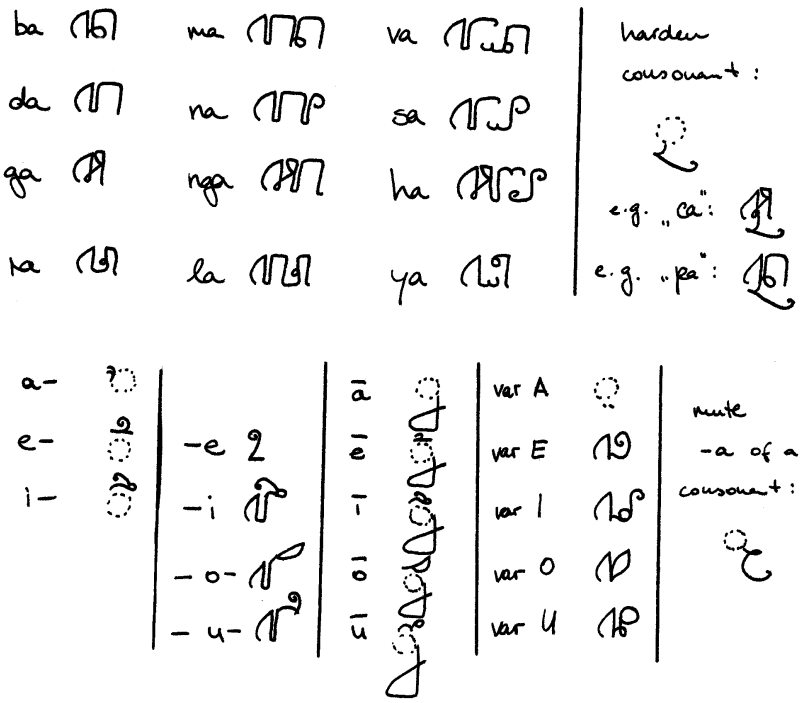
An important date in the history of Ayeri was when I decided to set up an improved website for Ayeri that would include a blog. The idea was that this way, I could more freely write on whatever detail I currently interested me in Ayeri, outside of the constraints of the Grammar. Thus, *Benung. The Ayeri Language Resource* launched on March 1, 2011. Being able to write short articles, however, probably also led to neglecting work on the actual formal reference grammar, which had been lying dormant from January 2011 on. This was always on the premise that I would eventually include the information from blog articles in the grammar. However, juggling such a big document had always felt daunting, so I let laziness take the better part of me eventually as enthusiasm gradually subsided.[3] This renewed attempt at documentation has been started with the intention to right those wrongs.

I hope that by now it should be clear which kind of a fictional language Ayeri is: a personal, artistic language—or *artlang* in community parlance. Thus, my goal in creating Ayeri is not to propose yet another international auxiliary language, like Esperanto. It is also not my goal to make it as logical as possible, like Lojban. Neither is it my goal to engineer it towards certain underlying premises, for example, to reach a maximal amount of information density, like Ithkuil, or to get by on as few different words as possible, like Toki Pona. It is also not a 'what-if' language in

[2] Compare, for instance, the charts in Kuipers and McDermott (1996). The Wikipedia articles on either script contain a number of images depicting the scripts in use, both current and historic.

[3] Let me add to my defense, however, that I also worked on my B. A. thesis in 2013 and my M. A. thesis in 2016, which required several months of preparation each and thus left me largely unable to work much on Ayeri.

Figure 0.1: First design for an Ayeri script (February 9, 2004)

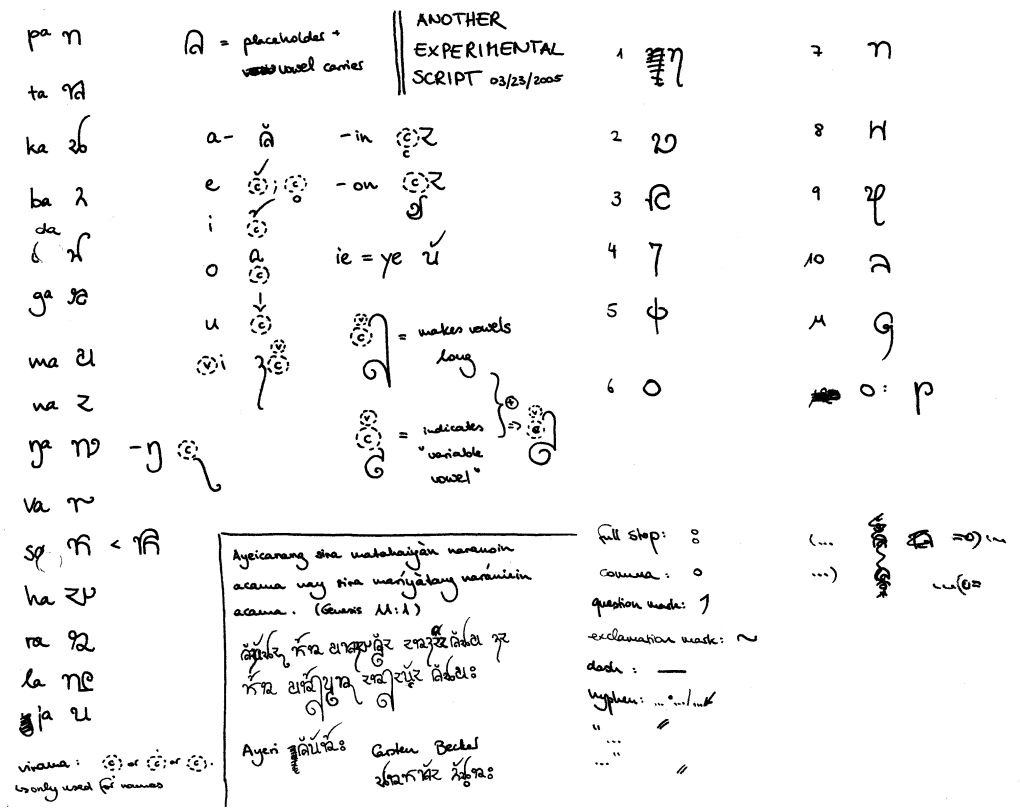


the sense of "What could the modern language of Old Irish speakers transplanted to Australia look like?" or "Latin piped through Athabascan sound changes."

Ayeri is rather an attempt to create an artificial language for personal enjoyment and intellectual stimulation by creating a feedback loop between reading up on linguistics and actively devising rules for a fictional language accordingly, to see how things work within the frame I created, or to try and see whether certain ideas work together at all when combined, and to better understand why they do or do not. Ayeri will only ever be as perfect as miniature models of things can be, since it has not grown organically from millenia of human interaction, and I cannot and will never know about each and every aspect of language myself, in spite of continued curiosity about these matters. Nor will it be possible for me to replicate all the fascinating twists and irregularities that natural languages normally entail. The ultimate goal in my work on Ayeri is, I suppose, to make it emulate natural languages to at least some degree of depth and complexity.

In writing this grammar, I hope that I will find a good balance between applying linguistic theory to already existing materials and ideas, and going forth to create rules for aspects of the language that have so far been neglected, often due to my not being aware of them. In my opinion, the split between being able to apply methods of linguistics to what has grown over the course of more than a decade

Figure 0.2: First draft for Tahano Hikamu (March 23, 2005)



on the one hand, and discovering and developing new aspects of the language on the other is what makes Ayeri an interesting piece of "informed nonsense," as a colleague of mine once put it.

If in the following text my (non-native) English is not always fully idiomatic, you find that I got facts, theories or analyses wrong, or not all aspects of the language or its description are equally thoroughly worked-out—which are all very likely events—I ask you to remember that this work is a one-person effort, so mistakes and errors are unavoidable. You are kindly invited to share any constructive criticism you have with me, however, to correct or improve any issues that might need correction or elaboration.

1 Phonology

This chapter will present charts depicting the phoneme inventory of Ayeri and describe the various commonly encountered allophones of both consonants and vowels. Following this, a detailed statistical analysis of the words found in a number of translated texts from 2008 to 2016 as well as dictionary entries up to July 2016 will produce insights into Ayeri's phonotactics. Some notes on stress patterns and intonation will close the chapter.

1.1 Phoneme inventory

1.1.1 Consonants

At 17 consonants, Ayeri has a "moderately small" inventory, according to Maddieson (2013a). Figure 1.1 shows the full chart of consonant phonemes.

Regarding allophony, /tj kj/ and /dj gj/ are usually realized as [tʃ] and [dʒ], respecitively, except if a homorganic nasal /n/ or /ŋ/ is preceding: for instance, *ankyu* /ˈaŋkju/ 'really' is realized as [ˈaŋkju], not as *[ˈaŋtʃu] or *[ˈantʃu]. It is important to note, however, that besides this synchronic palatalization process leading to [tʃ] and [dʒ] as *allophones*, there is also a diachronic one in parallel here—or the diachronic process is still ongoing. For example, there is no way to predict whether *cuna* 'original, initial', *panca* 'finally, eventually', and *vac-* 'like', or *jaran* 'pilgrimage', *aja-* 'play', and *nuj-* 'pour' have /tj/ or /kj/, /dj/ or /gj/, respectively, unless we consider the clues given by the conservative native spellings of the respective words.[1] We can rather assume two sound changes, (1) tj, kj → tʃ, and (2) dj, gj → dʒ, leading to the *phonemes* /tʃ/ and /dʒ/ in the present-day language.

1 Actual scribes would typically err in cases where the merger is complete, so this strategy would, in fact, be of limited use in the real world.

Figure 1.1: Consonant inventory (divergent orthography in pointed brackets)

	Bilabial		**Labiodental**		**Alveolar**		**Palatal**		**Velar**		**Glottal**	
Plosive	p	b			t	d			k	g		
Affricate					tʃ ⟨c⟩	dʒ ⟨j⟩						
Nasal		m				n				ŋ ⟨ng⟩		
Fricative			v		s						h	
Tap/Flap						r						
Approximant						l	j ⟨y⟩					

The plural marker ◌ᱤᱸ *-ye* is commonly contracted to [dʒ] when a case suffix beginning with a vowel follows:[2]

(1) a. ᱚᱱᱭᱟᱱᱭᱮᱝ *nyānyeang* → *nyānjang* ['njaːndʒaŋ] 'persons' (person-PL-A);
b. ᱱᱮᱛᱩᱭᱮᱟᱥ *netuyeas* → *netujas* [ne'tudʒas] 'brothers' (brother-PL-P).

The plural marker may also contract before the locative marker ◌ᱟ *-ya* and the dative marker ◌ᱭᱟᱢ *-yam*, basically for dissimilation:[3]

(2) a. ᱱᱤᱣᱟᱭᱮᱭᱟ *nivayeya* → *nivajya* [ni'vadʒja] 'at the eyes' (eye-PL-LOC);
b. ᱢᱟᱣᱤᱭᱮᱭᱟᱢ *mavíyeyam* → *mavíjyam* [ma'vidʒjam] 'to the sheep' (sheep-PL-DAT).

Dissimilation of the sequence ◌ᱭᱟ *-yaya* is attested in my translation of Kafka's short story "Eine kaiserliche Botschaft," where the relative pronoun ᱥᱤᱭᱟ *siyaya* appears transcribed as *sijya*:

> As far as morphophonology is concerned, the relative pronoun complex *sijya* 'in/at/on which.LOC' is interesting in so far as it is a contraction of **siyaya* 'REL-LOC-LOC' that I introduced here [...] Since this feature does not occur in previous texts, let's assume it's an acceptable variant. (Becker 2012: 12)

The contraction happens "only if both parts are grammatical suffixes" (12), however, so the environments this contraction may appear in are effectively limited to relative pronouns combining locative and locative, or locative and dative marking.

The word ᱱᱟᱡᱟᱭ *lajāy* 'student' is special in that it is the only word with ᱡ [dʒa] so far. Presumably it is derived from the verb ᱱᱟᱭᱟ *laya-* 'read' with the agentive suffix ◌ᱢᱟ *-maya*, except the shortening of the suffix—with or without compensatory lengthening of the final vowel of the modified word stem—was applied irregularly, possibly via *ᱱᱟᱡᱭᱟ **layāya*. The regular form ᱱᱟᱭᱟᱢᱟ *layamaya* means 'reader'.

Lastly, /h/ may assimilate to its phonemic environment and is realized as [ç] before front vowels, and as [x] before back vowels in this case:

(3) a. ᱛᱟᱦᱤ ***tahi*** ['taçi] 'favorable';
b. ᱵᱟᱦᱳ ***baho*** ['baxo] 'loud'.

While vowels become long when two identical vowels come into succession, consonants do not geminate but are treated like a single consonant:

[2] The customary romanization uses ⟨c⟩ and ⟨j⟩ for allophonic cases of [tʃ] and [dʒ] as well.

[3] ◌ᱮᱭ *-ea* also occurs as an allomorph, so that ◌ᱤᱸ *-ye* + ◌ᱮᱭ *-ea* → ◌ᱤᱭᱟ *-yēa*.

Figure 1.2: Vowel inventory (divergent orthography in pointed brackets)

	Front	Center	Back
High	i, iː ⟨ī⟩		u, uː ⟨ū⟩
Mid	e, eː ⟨ē⟩	(ə ⟨ə, e⟩)	o, oː ⟨ō⟩
Low		a, aː ⟨ā⟩	

(4) a. *tavvāng* [taˈvaːŋ] 'you get' (get=2SG.A),
b. *disyyang* [diˈsjaŋ] 'I fasten' (fasten=1SG.A).

With diphthongs, the sequence /Vɪ.j/ is treated as though it were /Vj.j/, so the double /j/ simplifies to just a single /j/; however, the vowel remains lax in spite of being phonetically in an open position now:

(5) *tipuyya* [tiˈpʊ.ja] 'on the grass' (grass-LOC).

1.1.2 Vowels

Ayeri's vowel system distinguishes five qualities, as shown in Figure 1.2; Maddieson (2013c) classifies this as "average." Length, however, is also a factor, and there are five diphthongs as well, as we will see below. At 17 : 5, the consonant–vowel ratio is 4.25, which Maddieson (2013b) again classifies as "average," although Ayeri finds itself at the upper end of the tier.

The lax vowels [ɪ ɛ ɔ ʊ] occur as allophones of their tense counterparts /i e o u/ in closed syllables, for example:

(6) a. ***ming*** [mɪŋ] 'can, be able',
b. ***enya*** [ˈɛn.ja] 'everyone',
c. ***agon*** [ˈa.gɔn] 'outer, foreign', and
d. ***pakur*** [ˈpa.kʊr] 'ill, sick'.

/ə/ occurs marginally in the tense prefixes *kə-* 'NPST', *mə-* 'PST', *və-* 'RPST', as well as in the prefix *mə-* 'some, whichever'. Otherwise, [ə] acts as as an allophone of /e/ in final unstressed position, for instance, in the word ***mine*** [ˈminə] 'affair, matter, issue'.

Ayeri also possesses a number of diphthongs, these are: /aɪ eɪ ɔɪ ʊɪ aʊ/, spelled ⟨ay⟩, ⟨ey⟩, ⟨oy⟩, ⟨uy⟩, and ⟨au⟩. Furthermore, there are long equivalents of the short vowels: /iː eː aː oː uː/; in romanization, long vowels are marked with a macron ⟨¯⟩ over the letter. Long vowels are lexicalized in a few words, for example:

(7) a. *nīsa* ‘wanted’, *pasīsa* ‘interesting’;
b. *arēn* ‘anyway, however’, *lēra* ‘whore’;
c. *lā* ‘tongue’, *yāng* ‘he’ (he.A);
d. *nōn* ‘will, intention’; and
e. *babūan* ‘barbarian’.[4]

Otherwise, long vowels result from two same vowels next to each other, for instance:

(8) *aja-* ‘play’ + *-an* ‘NMLZ’ → *ajān* ‘game, play’.

Morphophonologically, long vowels also occur in double-marked relative pronouns where the agreement marker for the relative clause’s head has been omitted, for instance, *sinā* ‘of which, about which’, as in the following example:

(9)

Le	*turayāng*	*taman*	*sinā*	*ang*	*ningay*	*tamala*	*vās.*
Le	tura-yāng	[taman-Ø]$_1$	si-Ø$_1$-na	ang	ning=ay.Ø	tamala	vās
PT.INAN	send=3SG.M.A	letter-TOP	REL-PT.INAN-GEN	AT	tell=1SG.TOP	yesterday	2SG.P

‘The letter which I told you about yesterday, he sent it.’

This is to disambiguate it from the plain genitive-marked relative pronoun *sina* ‘which.GEN’:[5]

(10)

tamanreng	*ledanena*	*nā*	*sina*	*koronvāng*
taman-reng	[ledan-ena	nā]$_1$	si-na$_1$	koron=vāng
letter-A.INAN	friend-GEN	1SG.GEN	REL-GEN	know=2SG.A

‘the letter of my friend which you know’

As pointed out in (7c), the word *lā* ‘tongue’ ends in a long vowel, so the question is what happens when a case suffix beginning with a vowel is appended. To avoid a hiat, a glide /j/ may be inserted, so both of the following renditions are possible:

[4] I have gone years without dictionary entries for /uː/, but it has always seemed slightly odd to me to lack a vowel in that position when all other vowels can be long. Therefore, *babūan* ‘barbarian’ and its adjective *babū* ‘barbarian (adj.)’ were coined as *prankaye*—things ‘that you put in specifically to make things fit’, another new coining this decision resulted in. Note, however, that it should have always been possible to form words like *kūbo* ‘as though bitter’, from *ubo* ‘bitter’ + *ku-* ‘like, as though’.

[5] A variant which combines the allomorphs of the relativizer and the genitive case marker in the opposite way also exists: *s-* + *-ena* → *sena*.

(11) a. *Aku* *lāas!*
Aka-u lā-as
swallow-IMP tongue-P

'Shut up!'

b. *Aku lāyas!*

(idem)

With diphthongs—as described above—/ɪ/ coalesces with a following /j/ to /j/, but the initial vowel will not become tense, thus:

(12) *tipuyya* [tiˈpʊ.ja] 'on the grass' (grass-LOC).

Moreover, /u/ is commonly realized as [w] when followed by a vowel, for example in *huākaya* [ˈwaːkaja] 'frog' or *rua-* [rwa] 'have to, must'. [w] may also be an allophone of /uj/, as in *adauyi* [aˈdawi] 'then', *edauyi* [eˈdawi] 'now', or *nekuyi* [ˈnekwi] 'eyebrows'. The negative suffix *-oy* is also commonly contracted to [w] before a diphthong:

(13) *ming**o**yay* → *ming**u**ay* [mɪŋˈwaɪ] 'I cannot' (can-NEG=1SG.TOP).

1.2 Phonotactics

For the purpose of this statistical analysis, most of the available translations into Ayeri from late 2008 to July 2016 have been used as a text corpus;[6] example sentences from various blog articles have also been added, as well as dictionary entries for all nouns, adjectives, adverbs, pronouns, adpositions, conjunctions, and numerals if they were not prefixes or suffixes.[7] Borrowings have been deleted if they could not reasonably be words in Ayeri. Altogether, the corpus comprises 5,500 words, which

[6] These texts are: A Medieval Neighborhood Dispute (2015), A Message from the Emperor (2012), Article 1 of the Universal Declaration of Human Rights (2011), The Beginning of Tolstoy's *Anna Karenina* (2014), Conlang Christmas Card Exchange 2008/09 (2009), Conlang Holiday Card Exchange 2010/11 (2011), Conlang Relay 15 (2008), Conlang Relay 17 (2010), Conlang Relay 18 (2011), The First Two Chapters from Saint-Exupéry's *Le Petit Prince* (2013), The Four Candles (2010), Honey Everlasting (2014), LCC4 Relay (2011), The Lord's Prayer (2015), The North Wind and the Sun (2016), The Origin of the Wind (2009), Ozymandias (2011), Please Call Stella … (2008), Psalm 23 (2013), The Scientific Method (2014), The Sheep and the Horses (2012), Sugar Fairies (2011), The Upside-Down Ice Skater (2009). The texts can be accessed from Becker (2016a: Examples).

[7] This section updates and extends a previous analysis of the phonological makeup of dictionary entries (Becker 2010). The previous study had its focus on gathering frequency statistics for word generation, however, we want to know about words generally here.

Table 1.1: Frequency of words with different numbers of syllables (n = 5500)

Segment	Count	Percentage
2 syllables	2277	41.40%
3 syllables	1393	25.33%
1 syllable	1201	21.84%
4 syllables	547	9.95%
5 syllables	74	1.35%
6 syllables	8	0.15%

is a very small figure for such a study, but there are only so many texts available unfortunately. Words may occur more than once.

Among the dictionary entries, verbs have notably been ignored, since verb stems alone do not constitute independent words—they are always inflected in some way, so that they may end in consonants or consonant clusters that independent words cannot end in. This also has repercussions on syllabification and stress, which depend on the inflection of the verb stem:

Figure 1.3: Syllabification of inflected verbs

Suffix	*ca-* 'love'	*gum-* 'work'	*babr-* 'mumble'
-ay (1SG)	cə́y	gu.máy	ba.bráy
-va (2SG)	cá.va	gúm.va	ba.brá.va
-yam (PTCP)	cá.yam	gúm.yam	bá.bryam

For the purpose of gathering statistics on phonemes, the words from translated texts were converted to IPA first. Fortunately, this is rather easy as Ayeri's romanization is very straightforward. Syllable breaks have also been inserted semi-automatically.

1.2.1 Number of syllables per word

First, let us see how many syllables words commonly have (see Table 1.1). The higher the syllable count, the more likely it is for them to be compounds or inflected words.

Two-syllable words make up the bulk of the sample, which is not surprising since 1,072 entries (55.43%) in the dictionary subsample are disyllabic: most of Ayeri's roots are disyllabic. Unsurprisingly, most monosyllabic words are function words like the ones cited below. In the following, I will quote a few examples for each number of syllables per word:

(14) a. ᜀᜅ᜔ *ang* (AT),
ᜈᜌ᜔ *nay* 'and',
ᜇᜓ *rua* 'must';

b. ᜇᜆᜒ *datau* 'normal',
ᜐᜈᜌ᜔ *nasay* 'near to';

c. ᜀᜊᜈ᜔ᜌᜅ᜔ *avanyāng* 'he sinks' (sink=3SG.M.A),
ᜆᜓᜊᜎᜒ *tovaley* 'a cloak' (cloak-P.INAN);

d. ᜒᜉᜒᜊᜈ᜔ᜏᜒᜎᜓ *binyanveno* (corner.beautiful, a place name),
ᜋᜒᜆᜈᜒᜈ᜔ *mitanena* 'of the palace' (palace-GEN);

e. ᜑᜎᜓᜌᜋᜈᜐ *haruyamanas* 'a beating' (beat-PTCP-NMLZ-P),
ᜐᜓᜅ᜔ᜃᜓᜇᜒᜑᜐ *sungkorankihas* 'geography' (science.map);

f. ᜃᜌ᜔ᜆᜓᜋᜌᜋᜈᜒᜈ᜔ *kaytomayanena* 'of righteousness' (righteous-NMLZ-GEN),
ᜈᜒᜐᜒᜋᜌᜋᜌᜅ᜔ᜑᜓᜌᜒ *nasimayajang-hen* 'all followers' (follow-AGTZ-PL-A=all).

Table 1.2 shows the frequencies of syllable types by position in a word. It is important to note here that phonemes which consist of more than one segment—affricates, diphthongs, and long vowels—have been counted as only one of C (consonant) or V (vowel), respectively. The following subsections will elaborate on which sounds the Cs and Vs correspond to. Moreover, it is important to note that medial syllables have not been further distinguished by position in the word for the sake of this analysis, so anything between the second and the fifth medial syllable is treated the same. It would furthermore be possible to calculate the frequencies of one syllable type following the other, however, no such calculations have been carried out here.

In all positions, CV is the most common syllable type, followed by CVC. With a very big margin, V is the next most common syllable type, which is also most common in initial syllables and least common in monosyllabic words. The cases with only a few attestations are the following:

(15) a. Initial CVCC:
ᜎᜒᜅ᜔ᜆᜅ᜔ *linktang* /liŋk.ˈtaŋ/ 'they try' (try=3PL.M.A),[8]
ᜐᜒᜎ᜔ᜅᜈᜌ᜔ᜅ᜔ *silvnang* /silv.ˈnaŋ/ 'we see' (see=IPL.A);

b. Final CCCV:
ᜋᜒᜄᜒᜇᜓ *migryo* /ˈmi.grjo/ 'flourishes' (flourish-3SG.N),
ᜐᜓᜊᜒᜇᜓ *subryo* /ˈsu.brjo/ 'ceases' (cease-3SG.N);

c. Single V:
ᜁᜌᜀ᜔ *ay* /aɪ/ 'I' (ISG.TOP).

The medial and final VC cases may seem like an oddity, but they are mostly due

[8] The verb stem is found in the dictionary as ᜎᜒᜅᜃ᜵ *linka-*, with a final *-a*, and thus is possibly an entry changed at a later point, or the example from the text (Sugar Fairies) chosen here contains an error.

Table 1.2: Frequency of syllable types per word (n = 5500)

Type	Initial		Medial		Final		Single		Total	
CV	2896	67.36%	1974	72.02%	2109	49.06%	578	48.13%	7557	60.26%
CCV	55	1.28%	24	0.88%	46	1.07%	32	2.66%	157	1.25%
CCCV		—		—	2	0.05%		—	2	0.02%
CVC	761	17.70%	610	22.25%	1902	44.24%	298	24.81%	3571	28.48%
CCVC	29	0.67%	10	0.36%	85	1.98%	9	0.75%	133	1.06%
CVCC	2	0.05%		—		—		—	2	0.02%
V	488	11.35%	95	3.47%	67	1.56%	2	0.17%	652	5.20%
VC	68	1.58%	28	1.02%	88	2.05%	282	23.48%	466	3.72%
Total	4299	100.00%	2741	100.00%	4299	100.00%	1201	100.00%	12540	100.00%

to the previous syllable ending in /ŋ/, with that syllable also containing a lax vowel, which means that this syllable must be closed. An alternative explanation would be to assume that /ŋ/ is ambisyllabic, or actually /n.g ~ ŋ.g/, but realized as [ŋ]. The high number of single-syllable VC is due to ᾰ̓ᾐ̓ *ang* 'AT', which alone appears 255 times in the sample (4.63% of all words, 21.23% of monosyllabic words, 90.43% of monosyllabic VC words).

1.2.2 Phonemic makeup of initial syllables

The statistics in the following sections have been gathered from the IPA conversions of translated texts and dictionary entries mentioned above. The transcribed words have been split into syllables and then the collected contents of each position group were written into separate plain text files, one each for:

- all initial syllables of polysyllabic words,
- all medial syllables of polysyllabic words,
- all final syllables of polysyllabic words, and
- all monosyllabic words.

Monosyllabic words are both initial and final syllables at the same time; they have been counted separately for the purpose of this analysis. Onsets, nuclei and codas have been matched by regular expressions; the command line tools `grep`, `sort`, and `uniq` were used to aggregate all occurring variants for each syllable segment as well as their absolute frequencies:[9]

(16)
```
C = (?:tʃ|dʒ|[ptkbdgmnŋvshrljw])
V = (?:[ae]:?ɪ|aʊ|[ieaou]:?|[ɪɛɔʊə])
```

As we have seen above (Table 1.2), CCV syllables only make up 1.28% of initial syllables, insofar it is no surprise that consonant clusters all appear at the bottom of Table 1.3. There also seem to be combination patterns in that initial clusters exist for all plosives plus /r/, and almost all bilabials plus /j/, with the exception of /bj/, however, /nj/ is added to the group instead. Combinations with /w/ only occur for /b/, /r/, and /s/, which do not share an obvious connection. Syllables without a consonant filling the onset position are marked with 'Ø'; these numbers correspond to the VC and VCC rows in Table 1.2.

Perhaps most striking about the nuclei of initial syllables presented in Table 1.4 is that plain vowels occur most frequently. As mentioned above, lax vowels are counted here as allophones of tense ones as their distribution is complementary and

[9] However, `sort` was unable to handle all IPA characters, so `sed 'y/ɛɪɔʊə:ʃʒŋ/EIOU@:SZN/'` had to be used to compensate by transcribing everything into X-SAMPA.

Table 1.3: Frequency of onsets in initial syllables (n = 4299)

Phoneme	Frequency	Percentage
Ø	556	12.93%
s	488	11.35%
t	432	10.05%
m	418	9.72%
k	380	8.84%
n	375	8.72%
p	334	7.77%
b	231	5.37%
d	172	4.00%
v	164	3.81%
l	159	3.70%
r	134	3.12%
j	126	2.93%
g	111	2.58%
h	99	2.30%
tʃ	30	0.70%
pr	27	0.63%
nj	27	0.63%
kr	8	0.19%
br	8	0.19%
tr	6	0.14%
dʒ	4	0.09%
gr	3	0.07%
w	2	0.05%
sw	1	0.02%
rw	1	0.02%
pj	1	0.02%
mj	1	0.02%
bw	1	0.02%

Table 1.4: Frequency of nuclei in initial syllables (n = 4299)

Phoneme		Frequency	Percentage
a		1847	42.96%
i		1011	23.52%
	i	*802*	*18.66%*
	ɪ	*209*	*4.86%*
e		705	16.40%
	e	*523*	*12.17%*
	ɛ	*164*	*3.81%*
	ə	*18*	*0.42%*
u		260	6.05%
	u	*228*	*5.30%*
	ʊ	*32*	*0.74%*
o		227	5.28%
	o	*188*	*4.37%*
	ɔ	*39*	*0.91%*
aː		109	2.54%
aɪ		88	2.05%
eɪ		40	0.93%
eː		4	0.09%
ɔɪ		3	0.07%
ʊɪ		1	0.02%
oː		1	0.02%
iː		1	0.02%
eːɪ		1	0.02%
aʊ		1	0.02%

Table 1.5: Frequency of codas in initial syllables (n = 4299)

Phoneme	Frequency	Percentage
Ø	3441	80.04%
n	298	6.93%
ŋ	243	5.65%
r	129	3.00%
l	88	2.05%
m	74	1.72%
s	20	0.47%
t	2	0.05%
h	2	0.05%
tʃ	1	0.02%
ŋk	1	0.02%
lv	1	0.02%
k	1	0.02%

are listed here for the sake of completeness. This is the reason why the plain vowels are presented as grouped with their allophones in this table as well as in subsequent ones. Long vowels and diphthongs find themselves below the 5% threshold, and the words with single occurrences are:

(17) a. རྒྱལ་བཟན *kuysān* 'comparison',
b. ཨོད་ *nōn* 'will, intention',
c. ཉིན *nīsa* 'wanted',[10]
d. རྒྱབ་ཡ *sēyraya* 'will overcome' (FUT-overcome-3SG.M),
e. སྐབཟ *sautan* 'cork'.

As the diphthong [e:ɪ] only occurs due to allophony, it should not be counted as a phoneme for the purposes of this analysis. On the other hand, the same could be said for a lot of cases of [a:] included here—this caveat applies to all nouns derived from verbs ending in *-a* with the very common nominalizing suffix ཨན་ *-an*, as exemplified in (8) above. Similarly, the 18 instances of /ə/ reported here are mostly from tense prefixes also mentioned above, for instance, ཨཁོགཀྲ *məkoronay* 'I knew' (PST-know=ISG.TOP).

Initial-syllable codas (Table 1.5) are far less diverse than consonant onsets: there are only 10 attested segments in comparison to 28 for onsets (not counting empty

[10] ཉིན *nīsa* and ཨོད་ *nōn* are both related to ནོ *no-* 'want, plan'.

codas of C(C)V syllables, which constitute the majority by a large margin), and the only two cluster attested are /ŋk/ in the word ཀིན་ཁང་ *linktang* 'they try' (try=3PL.M.A), and /lv/ in the word སིལ་ཝང་ *silvnang* 'I see' (see=1PL.A). There only being two incidences of a CC cluster is very probably an effect of the small sample size. Furthermore, the only unvoiced single coda consonants attested are /s/, /h/, /t/, /tʃ/ and /k/, the latter two only once, /h/ twice:

(18) a. མེཧྭཱང་ *mehvāng* 'you are supposed to' (be.supposed.to=2SG.A),[11]
རོཧ་ཐང་ *rohtang* 'they bite' (bite=3SG.M.A);

b. མུཏྭ་ *mutva* 'you rub' (rub=2SG.TOP),
པཊླང་ *patlay* 'cousin';

c. སིཀ་སིཀ་ *sik-sik* 'tits';

d. བཙྭཱང་ *vacvāng* 'you like' (like=2SG.A).

1.2.3 Phonemic makeup of medial syllables

The onsets of medial syllables (Table 1.6) show properties very similar to those of initial syllables. The order of most common consonants may different here—for example, the most common onset is /r/, not Ø or /s/—, but there are no restrictions on consonants to appear in this position, with the exception of /ŋ/ for reasons stated above (see section 1.2.1). Regarding initial clusters, there are further attestations for plosive plus /r/ (except for /kr/). As for clusters with /j/, the only one with a bilabial is /bj/, but the set is extended to /sj/ and /kj/. For clusters with /w/, only /sw/ and /kw/ occur here, while attestations for /bw/ and /rw/ as in initial-syllable onsets are lacking. This does not mean that those combinations are not principally possible in this position, however.

As with onset consonants, vowel nuclei of medial syllables (Table 1.7) do not show significant differences compared to those of initial syllables either. /a/ is more common here, and /o/ and /u/ switch places. Instead of /eːɪ/, there is an attestation of /uː/ (see footnote 4), for which there is more reason to be counted as a phoneme than for /eːɪ/. The sequences /iː/ and /ʊɪ/ also only occur once and twice, respectively, namely in the following words:

(19) a. པཱ་སཱ *pasīsa* 'interesting';

b. པུ་ལུ་ལེ་ *puluyley* 'a mirror' (mirror-P.INAN),
ཏི་པུ་ཡ་ *tipuyya* 'on the grass' (grass-LOC).

[11] The dictionary entry for the verb is མྱ་ *mya-*, so this may be an instance of my changing a word in the dictionary with the old one staying in the text (The Four Candles).

Table 1.6: Frequency of onsets in medial syllables (n = 2741)

Phoneme	Frequency	Percentage
Ø	123	4.49%
r	343	12.51%
n	260	9.49%
j	233	8.50%
t	222	8.10%
d	213	7.77%
k	189	6.90%
s	170	6.20%
m	169	6.17%
l	149	5.44%
v	148	5.40%
h	147	5.36%
p	119	4.34%
g	92	3.36%
b	89	3.25%
tʃ	20	0.73%
dʒ	15	0.55%
tr	11	0.40%
dr	8	0.29%
pr	7	0.26%
w	6	0.22%
sj	2	0.07%
br	2	0.07%
sw	1	0.04%
kw	1	0.04%
kj	1	0.04%
bj	1	0.04%

Table 1.7: Frequency of nuclei in medial syllables (n = 2741)

Phoneme		Frequency	Percentage
a		1480	53.99%
i		480	17.51%
	i	*387*	*14.12%*
	ɪ	*93*	*3.39%*
e		254	9.26%
	e	*206*	*7.52%*
	ɛ	*48*	*1.75%*
o		194	7.08%
	o	*119*	*4.34%*
	ɔ	*75*	*2.74%*
u		120	4.38%
	u	*101*	*3.68%*
	ʊ	*19*	*0.69%*
aː		110	4.01%
aɪ		51	1.86%
ɔɪ		33	1.20%
eɪ		5	0.18%
eː		5	0.18%
aʊ		5	0.18%
ʊɪ		2	0.07%
uː		1	0.04%
iː		1	0.04%

The word in (19a), ꦥꦱꦶꦱ *pasīsa* ‘interesting’, is rather transparently constitutes a causative derivation of the verb ꦥꦱꦾ꦳ *pasy-* ‘wonder, be curious, be interested’, essentially meaning ‘making one wonder/curious’—the causative suffix ꦲꦱ -*isa* can as well be used to derive adjectives with a causative or resultative meaning. Nonetheless it should count as a lexeme in its own right, since it possesses idiomatic meaning.

With medial-syllable codas (Table 1.8) again, sonorants and /s/ make up the largest number of consonants in this position; /t/ and /g/ only occur once each in

(20) a. ꦥꦔꦶꦠ꧀ꦭꦤ꧀ *pangitlan* ‘money change’,[12] and

b. ꦠꦼꦭꦸꦒ꧀ꦠꦺꦴꦁ *telugtong* ‘they survive’ (survive=3PL.N).

Table 1.8: Frequency of codas in medial syllables (n = 2741)

Phoneme	Frequency	Percentage
Ø	2093	76.36%
n	313	11.42%
ŋ	193	7.04%
r	48	1.75%
m	39	1.42%
s	32	1.17%
l	21	0.77%
t	1	0.04%
g	1	0.04%

As documented in Table 1.2 above, Ayeri very strongly favors CV syllables in medial positions, hence the high count of zero segments here.

1.2.4 Phonemic makeup of final syllables

The onsets of final syllables of polysyllabic words (Table 1.9) show the greatest amount of variety, which is due to Ayeri mostly using suffixes for grammatical purposes. Hence it is no surprise that combinations with /j/ and, indeed, /j/ itself as an onset, are especially common, since /j/ is also what a number of very common suffixes start with, for example the plural marker ᠄᠆ *-ye*, the locative marker ᠄ᠠ *-ya*, the dative and participle marker ᠄ᠠᠮ *-yam*, as well as third-person animate pronoun agreement suffixes, and the various first-person and third-person animate pronominal clitics. Figure 1.3 above shows exemplarily how verbs resyllabify when suffixes are attached. Even though single-segment onsets are strongly preferred, Cr, Cw, and especially C(C)j seem to be generally permissible.[13]

[12] The word for 'money' is ᠬᠠᠩᠭᠢᠰ *pangis*, so (20a) is probably a compound, albeit not a fully transparent one. The word for 'change' is ᠲᠢᠯᠠ *tila-*, and there seems to be a nominalizing ᠄ᠠᠨ *-an*. Ayeri allows noun–verb compounds to have a nominalized verb in the second position in spite of it being the head—noun–noun compounds mostly come in head-initial order. Possibly, what happened at the morpheme borders is that ᠲᠢᠯᠠᠭᠠᠨ *tilān* underwent metathesis to *ᠲᠢᠯᠠᠨᠠᠭ **itlān* to match the rhyme of ᠬᠠᠩᠭᠢᠰ *pangis*. *ᠬᠠᠩᠭᠢᠰᠢᠲᠯᠠᠭᠠᠨ **pangisitlān* then underwent irregular haplology (and shortening of the nominalizing suffix) to ᠬᠠᠩᠭᠢᠲᠯᠠᠨ *pangitlan*.

[13] The sequence /sj/ poses difficulty here as there are examples for /Vs.jV/ as well as for /V.sjV/, and I cannot tell for sure if there is a strict rule in operation. It seems that /V.sjV/ is more likely to occur when the second syllable is stressed, whereas /Vs.jV/ is more likely to occur when the first syllable is stressed. Ayeri's own Tahano Hikamu orthography would not show the difference either, since /sja/ is spelled ᠱ either way, and there is no heeding morpheme breaks

Table 1.9: Frequency of onsets in final syllables (n = 4299)

Phoneme	Frequency	Percentage
Ø	155	3.61%
j	1101	25.61%
n	528	12.28%
r	398	9.26%
t	268	6.23%
s	244	5.68%
l	238	5.54%
k	199	4.63%
d	184	4.28%
m	154	3.58%
v	144	3.35%
h	128	2.98%
p	115	2.68%
g	103	2.40%
dʒ	73	1.70%
b	73	1.70%
tʃ	52	1.21%
vj	26	0.60%
pj	22	0.51%
dʒj	17	0.40%
tr	10	0.23%
w	9	0.21%

Phoneme	Frequency	Percentage
pr	7	0.16%
kj	6	0.14%
hj	5	0.12%
bj	5	0.12%
tw	4	0.09%
sw	4	0.09%
sj	4	0.09%
kw	3	0.07%
kr	3	0.07%
br	3	0.07%
vr	2	0.05%
rw	2	0.05%
nw	2	0.05%
tʃj	1	0.02%
rj	1	0.02%
nj	1	0.02%
mw	1	0.02%
grj	1	0.02%
dv	1	0.02%
dr	1	0.02%
brj	1	0.02%

Nuclei of final syllables (Table 1.10) do not bear striking differences to nuclei in other positions. /aː/ comes out second here due to the common nominalizer ཨན་ *-an*, which lengthens the vowel of verb stems ending in /a/, as demonstrated in (8). /aɪ/ is also fairly common here as it is the topic-marked first-person pronoun/pronominal clitic; for the same reason, /aːɪ/ occurs a number of times—the vowel-lengthening rule applies here as well, so its status as a phoneme is marginal. All instances of /eː/ in the sample are from the word ཨ་རེན་ *arēn* 'anyway, however'; all evidence for /iː/ is from སིར་ *sirī* 'due to which' (see section 1.1.2). The only evidence for /uː/ in the sample is from བཱུ་ *babū* 'barbarian (adj.)'.

The list of coda consonants in final syllables (Table 1.11) is very slightly more restrictive than even that of coda consonants in medial syllables (see Table 1.8), since

in placing the diacritic. /CsjV/ will be /C.sjV/ in any case, since Ayeri avoids final consonant clusters if possible, see Table 1.2.

Table 1.10: Frequency of nuclei in final syllables (n = 4299)

Phoneme		Frequency	Percentage
a		2408	56.01%
aː		316	7.35%
o		411	9.56%
	o	*298*	*6.93%*
	ɔ	*113*	*2.63%*
i		289	6.42%
	ɪ	*147*	*3.42%*
	i	*142*	*3.30%*
aɪ		254	5.91%
u		207	4.82%
	u	*155*	*3.61%*
	ʊ	*52*	*1.21%*
e		209	4.85%
	ɛ	*127*	*2.95%*
	ə	*81*	*1.88%*
	e	*1*	*0.02%*
eɪ		103	2.40%
ɔɪ		42	0.98%
aːɪ		23	0.54%
ʊɪ		14	0.33%
aʊ		14	0.33%
eː		5	0.12%
iː		3	0.07%
uː		1	0.02%

Table 1.11: Frequency of codas in final syllables (n = 4299)

Phoneme	Frequency	Percentage
Ø	2224	51.73%
n	899	20.91%
ŋ	651	15.14%
s	244	5.68%
m	225	5.23%
l	34	0.79%
r	21	0.49%
k	1	0.02%

the only non-sonorant attested is /k/, which only occurs in 𐑕𐑦𐑒-𐑕𐑦𐑒 *sik-sik* 'tits' again, which—besides being a vulgar term, thus maybe slightly more dispositioned to allow for deviating phonotactics—looks quite like onomatopoeia, possibly for the sound of sucking.[14]

1.2.5 Phonemic makeup of single syllables

Onsets of single syllables (Table 1.12) appear to be the least varied category. Still, none of the basic set of consonant morphemes (see Figure 1.1) is missing—the frequency order is just completely different from the other onsets surveyed, not merely a mixture of initial and final syllables. Consonant clusters with /j/, /w/ and /r/ exist here as well. Combinations with /j/ are only present for /m/ and /n/, while /r/ again combines with plosives; /w/ combines with /n/ and /r/ at least, which we have already seen in final-syllable onsets (see Table 1.9). Whereas /mj/ has only occurred once in initial-syllable onsets so far (see Table 1.3), it occurs a few more times here, all in the word 𐑥𐑾 *mya* 'be supposed to', which is very commonly used as an unconjugatable modal particle.

A consonant onset that can only be found in monosyllables is /ŋ/,[15] in 𐑯𐑜𐑨𐑕 *-ngas* 'almost', a quantifier suffix that has managed to sneak in due to being marked as an adverb in the dictionary, since it can modify a verb:

[14] Kroonen (2013: 489–490) identifies PGmc **sūgan-, *sūkan-* 'to suck' as an iterative of PGmc **sukkōn-, *sugōn-* 'to suck' and reconstructs PIE **souḱ-neh₂-*. However, he does not say anything about the Germanic word being onomatopoetic in origin.

[15] At least according to the analysis chosen here, see section 1.2.1 for an explanation.

Table 1.12: Frequency of onsets in single syllables (n = 1201)

Phoneme	Frequency	Percentage
Ø	284	23.65%
n	231	19.23%
s	147	12.24%
j	144	11.99%
k	51	4.25%
v	48	4.00%
m	46	3.83%
l	44	3.66%
t	41	3.41%
d	33	2.75%
r	26	2.16%
h	23	1.92%
mj	16	1.33%
p	13	1.08%
tʃ	9	0.75%
g	9	0.75%
nj	8	0.67%
rw	7	0.58%
b	7	0.58%
pr	5	0.42%
dʒ	3	0.25%
tr	2	0.17%
nw	1	0.08%
ŋ	1	0.08%
kr	1	0.08%
br	1	0.08%

(21) *Apayeng-ngas.*
Apa=yeng=ngas
laugh=3SG.F.A=almost

'She almost laughed.'

Here, *-ngas* modifies the verb complex like any other adverb:

(22)

Apayeng	*baho.*
Apa=yeng	baho
laugh=3SG.F.A	loudly

'She laughs loudly.'

However, whereas *baho* 'loud' is treated as a separate unit in terms of intonation, *-ngas* is unstressed and binds to what it follows:

(23) a. *Apayeng-ngas.* [ˌapaˈjɛŋas];
b. *Apayeng baho.* [ˌapaˈjɛŋ ˈbaxo].

As with onset consonants of monosyllabic words, nuclei of this syllable type are the least diverse group again (Table 1.13). One segment that is notably absent is /aʊ/, and the marginally phonemic /eː/ is not present either. By having /a/, /aɪ/, /aː/ at the top, monosyllabic words behave similar to final syllables of polysyllabic words (see Table 1.10), however, the order of the most common vowels bears more similarities to that of initial and medial syllables (see Tables 1.4 and 1.7). The very uncommon /oː/ features twice in this group, namely in two instances of the word *nōn* 'will, intention'.[16]

Like the other syllable segments of monosyllabic words, coda consonants (Table 1.14) as well show the lowest degree of variety among all the coda consonants of the various syllable classes discussed so far. The order is basically the same as that of final-syllable codas (see Table 1.11), though /ŋ/ supersedes /n/ and there is some attestation of final /h/. As noted above, the prevalence of /ŋ/ is due to the agent-topic marker *ang* (see section 1.2.1). /h/ only occurs in the interjections *ah!* and *āh!*, so its status as an actual phoneme in this position is marginal at best.

1.2.6 Cross-syllable consonant clusters

Since a table detailing every combination with its absolute and relative frequency would be too large here, Table 1.15 gives the attested combinations ordered by brack-

[16] Ayeri used to have *-on* as a nominalizer beside *-an*, however, it was not very productive and has long fallen out of use. *nōn* is thus, in fact, originally a nominalization of *no-* 'want, plan'.

Table 1.13: Frequency of nuclei in single syllables (n = 1201)

Phoneme		Frequency	Percentage
a		568	47.29%
aɪ		171	14.24%
aː		140	11.66%
i		113	9.41%
	i	*65*	*5.41%*
	ɪ	*48*	*4.00%*
e		104	8.66%
	ɛ	*65*	*5.41%*
	e	*34*	*2.83%*
	ə	*5*	*0.42%*
o		45	3.75%
	ɔ	*30*	*2.50%*
	o	*15*	*1.25%*
u		20	1.67%
aːɪ		14	1.17%
ɔɪ		10	0.83%
iː		6	0.50%
eɪ		5	0.42%
ʊɪ		3	0.25%
oː		2	0.17%

Table 1.14: Frequency of codas in single syllables (n = 1201)

Phoneme	Frequency	Percentage
Ø	612	50.96%
ŋ	377	31.39%
n	105	8.74%
s	58	4.83%
m	36	3.00%
l	6	0.50%
h	4	0.33%
r	3	0.25%

Table 1.15: Frequency of cross-syllable consonant clusters (n = 1270)

Interval [%]	Consonant cluster
0.00 … 0.09	g.t, h.t, h.v, k.s, l.n, lv.n, m.bj, m.d, m.dʒ, m.l, m.n, m.pr, m.r, n.dv, n.g, n.h, n.w, ŋ.dʒj, ŋ.kw, ŋ.m, ŋ.n, ŋ.rj, ŋ.t, ŋk.t, r.b, r.dʒ, r.g, r.l, r.m, r.sj, r.tʃ, r.v, s.dʒ, s.h, s.l, s.n, s.p, s.v, t.v, tʃ.v (0.08%).
0.10 … 0.24	l.bj, m.br, m.t, n.s, ŋ.b, ŋ.h, ŋ.p, ŋ.w, r.dʒj, r.pj, s.dʒj, s.m, t.l (0.16%); l.dʒ, l.p, m.k, n.sj, ŋ.dʒ, ŋ.g, ŋ.s, r.pr (0.24%).
0.25 … 0.49	m.v, r.s, s.r (0.31%); n.r, s.t (0.39%); m.pj, n.dʒj, r.d (0.47%).
0.50 … 0.74	ŋ.kj, ŋ.v, r.k, r.n (0.55%); l.b, l.t, ŋ.r (0.71%).
0.75 … 1.00	r.p, r.t (0.87%); l.vj (0.94%).
1.0 … 2.4	m.j (1.18%); ŋ.l (1.34%); n.tʃ (1.50%); n.dʒ (2.13%); n.v (2.28%); l.j (2.36%).
2.5 … 4.9	m.p (2.52%); s.j (2.60%); n.l (2.91%); l.v (3.15%); m.b (3.23%); ŋ.k (3.78%).
5 … 9	n.t (5.28%); n.d (6.85%); ŋ.j (7.32%); r.j (8.98%).
10+	n.j (25.35%).

ets. As can be expected, bilabials cluster mostly with bilabials (83/112 purely bilabial CC combinations = 74.11%), alveolars with alveolars (317/948 = 33.44%), and velars with velars (59/207 = 28.51%). However, at least for alveolars and velars, the score is even higher with /j/: 52.64% and 44.93%, respectively. /j/ is also the most common second consonant overall, at 47.8% of all consonant clusters; /n.j/ is the most common cluster at a total of 25.35%. Alveolars provide the highest variety of both first and second consonants, with 6 different phonemes making up 74.65% of C_1, and 8 different phonemes making up 28.74% of C_2.

Labiodentals and glottals occur least frequently, on the other hand: There is only one cluster with /v/ as a first consonant, namely, /lv.n/ (0.08%). For /h/, there are two, which are /h.v/ and /h.t/ (0.16%). Altogether, however, there are 97 combinations in /v/ (7.64%)—most commonly /l.v/ (3.15%) and /n.v/ (2.28%)—while there are only 4 in /h/ (0.31%): /n.h/, /s.h/, and twice /ŋ.h/.

At 924 first consonants (72.76%), the nasals /m/, /n/, and /ŋ/ make up the largest group going by manner of articulation, followed by the tap /r/, which appears 175 times (13.78%) as the first consonant. For second consonants, approximants constitute the largest group at 669 combinations (52.68%), followed by 387 pairs with plosives second (30.47%).

Figure 1.4: Declension paradigm for Ayeri 𑧞𑧑 *niva* 'eye'

	Singular		Plural	
TOP	*ní.va*	'the eye'	*ni.vá.ye*	'the eyes'
A	*ni.vắng*	'eye'	*ni.va.jáng*	'eyes'
P	*ni.vắs*	'eye'	*ni.vá.jas*	'eyes'
DAT	*ni.vá.yam*[19]	'to the eye'	*ni.vá.jyam*	'to the eyes'
GEN	*ni.vá.na*	'of the eye'	*ni.va.yé.na*	'of the eyes'
LOC	*ni.vá.ya*	'at the eye'	*ni.vá.jya*	'at the eyes'
CAUS	*ni.va.í.sa*	'due to the eye'	*ni.va.jí.sa*	'due to the eyes'
INS	*ni.vá.ri*	'with the eye'	*ni.va.yé.ri*	'with the eyes'

1.3 Notes on prosody

1.3.1 Stress

Ayeri uses dynamic accent, that is, stress is based on differences in the loudness of syllables, among others.[17] Which syllable is stressed depends on a mixture of which position in a word a syllable occupies and the phonemic shape of it. In fact, English, which also has phonemic stress in pairs such as *record* /ˈrɛkərd/ (noun) and /riˈkɔrd/ (verb) that Ayeri lacks, does a similar thing (examples adapted from Halle 1998: 552):

(24) *admire* /ædˈmaɪər/ — *admirable* /ˈædmərəbl/ [English]
carnivore /ˈkarnɪvɔr/ — *carnivorous* /karˈnɪvərəs/
ignore /ɪgˈnɔr/ — *ignorant* /ˈɪgnərənt/

Stress does not stay at fixed intervals in these words and they even change their sound structure a little, but there are a number of variables which can nonetheless be formally described and applied here (564–565).[18] To demonstrate how word stress moves around in Ayeri, the complete declension paradigm for 𑧞𑧑 *niva* 'eye' is presented in Figure 1.4.

17 For a discussion of terms, see Kager (2007), for instance.

18 Halle (1998) takes a generativist approach rather than a more modern Optimality-Theory based one like Kager (2007) does, who only deals with fixed-stress systems in this introductory article, though Halle's article is still informative. Simplifying a lot, English essentially tries to construct trochaic feet from the right edge of the word. If the last syllable's vowel is not light, it is skipped and stress moves to the antepenultimate syllable; this process is recursive for words with multiple feet, although some suffixes introduce irregularities in rule application.

19 Final-syllable stress is possible as well, also in the plural.

It may appear that in the table above, stress is always on the penultimate syllable, which is indeed the case for most forms quoted there, but compare the superficially unmarked form 𑖦𑖰 *niva*, which is disyllabic with stress on the first (= penultimate) syllable, to the agent and patient singular forms, 𑖦𑖰𑖪𑖾 *nivāng* and 𑖦𑖰𑖩 *nivās*, respectively. These are also disyllabic, however, they are stressed on the second (= ultimate) syllable. Similarly, compare the agent and patient plural forms to each other: the agent plural form 𑖦𑖰𑖫𑖾 *nivajang* is trisyllabic and has its main stress on the third (= ultimate) syllable, while the equally trisyllabic patient plural form 𑖦𑖰𑖫𑖩 *nivajas* is stressed on the second (= penultimate) syllable again.

It should have become clear that even though the basic form 𑖦𑖰 *niva* has first-syllable stress, *ni* will not necessarily carry stress across the whole paradigm.It should also have become clear that the basic algorithm to determine stressed syllables in Ayeri has something to do with counting syllables from the right edge of a word, although some complications need to be factored in. The following sections will try to describe these formally.

Analysis of stress patterns in disyllabic words

The basic foot in Ayeri is a trochee, and for the most part it does not matter whether the syllable is open or closed, or whether there are complex onsets or codas, or no onsets or codas at all:[20]

(25) a. ˊ× ×
ha - *ri* ‘pithy, striking’

b. ˊ× ×
sa - *yan* ‘hole, cave’
sem - *ba* ‘comb’

c. ˊ× ×
bri - *ha* ‘grace’
ba - *brya* ‘(he) mumbles’
a - *gu* ‘chicken’

It can be deduced from words with more than two syllables that stress assignment is trochaic. Stress assignment furthermore runs from right to left, so that in a word with more than two syllables, the last two syllables form a full foot:

[20] In the following, a syllable will be marked by ⟨×⟩ and receives an acute accent ⟨ˊ⟩ when carrying primary stress, a grave accent ⟨ˋ⟩ when carrying secondary stress, and no accent when unstressed. Feet are marked by horizontal lines ⟨|⟩; the end of a word is marked by two horizontal lines ⟨||⟩.

(26) a. × | ×́ ×
ba - *ha* - *lan* 'target, goal'
jar - *ma* - *ya* 'pilgrim'

b. ×̀ × | ×́ ×
ho - *ra* - *ma* - *ya* 'sinner'
ya - *ma* - *na* - *ti* 'causer'

In the case of (26b), the stressed syllables of the first foot bear secondary stress while those of the second foot bear primary stress. Complications, then, come in the form of syllables ending in /ŋ/, containing a long vowel, or containing a diphthong, or a combination of those features. Ayeri does not have syllables that contain a diphthong and also end in /ŋ/, though, since consonant codas after a diphthong are largely avoided.[21] Since the presence or the absence of a certain element that is suspected to have an effect on stress assignment is a yes–no decision, we can make a matrix of binary features:

Figure 1.5: Types of heavy syllables

	[+ DIPH, − ŋ]	[− DIPH, + ŋ]	[− DIPH, − ŋ]
[+ LONG]	++	++	++
[− LONG]	+	+	−

The feature matrix above (Figure 1.5) shows the various kinds of syllable types that we will now see have a manipulative effect on trochaic stress assignment. These syllable types can be considered 'heavy' in that they attract stress and thus modify the regular assignment of stress to every other syllable from the right edge of a word. For the time being, we will only test their effects on disyllabic words as the most common type. As will be shown in the following example, heavy syllables in ultimate positions attract stress while quasi-regular results are produced when they are in penultimate position and the ultimate syllable is not heavy:

(27) a. × ×́
ma - *tay* 'summer, wet season'
pa - *dang* 'mind; heart, mood'
ka - *nāy* 'I marry' (marry=1SG.TOP)
bras - *yāng* 'he bathes' (bathe=3SG.M.A)
na - *rān* 'word; speech'

b. ×́ ×
kār - *yo* 'strong'
key - *nam* 'humans, people'
kan - *ka* 'mind; heart, mood'

[21] It might thus be possible to alternatively analyze diphthongs in /ɪ/ as /Vj/ sequences, essentially.

Unfortunately, there are no disyllabic examples for the feature sets [+ LONG, − DIPH, + ŋ] and [+ LONG, + DIPH, − ŋ] in the first syllable (syllables of the type /C(C(j))Vːŋ/ or /C(C(j))Vɪŋ/). If there were, they would group with (27b).

So far, we have only looked at heavy syllables combined with regular/light ones. In the following case, however, another property of heavy syllables will become apparent: long syllables outweigh those containing a diphthong or ending in /ŋ/. They are essentially superheavy, which is why some of the fields in Figure 1.5 are marked with two plus signs. The following examples show what happens when heavy syllables are combined with other heavy syllables. Let us start by examining the various combinations possible between [− LONG, + DIPH, − ŋ] and the elements from the [+ LONG] row (28a), and the possible combinations between [− LONG, − DIPH, + ŋ] and the [+ LONG] row (28b).

(28) a. × ×́
bay - *hāy* 'I govern' (govern=1SG.TOP)
say - *lyāng* 'he sails' (sail=3SG.M.A)
kay - *vān* 'container'

b. × ×́
kong - *āyn* 'we enter' (enter=1PL.TOP)
keng - *vāng* 'you notice' (notice=2SG.A)
lang - *-vā* 'in the most tiresome way' (tiresome=SUPL)

We can see here that these words have primary stress invariably on the last/long syllable in spite of a heavy syllable preceding in the examples in (28b). The question then is, however, what happens if we invert this order. This is more problematic than it sounds, however, as initial [+ LONG, + DIPH, − ŋ] and [+ LONG, − DIPH, + ŋ], as well as final [− LONG, + DIPH, + ŋ] do not occur, insofar there will only be one possible combination here—the reverse pattern of *lang-vā* 'in the most tiresome way' from (28b) above, also compare with (27):

(29) ×́ ×
cā - *nang* 'love' (love-A)

There is only one one pattern possible here, which is very little to make a point, however, other words following this syllable pattern, like *nāreng* 'rather', for example, behave in the same way. A long syllable has precedence over other kinds of heavy syllables, so *-nang* does not take away stress from *cā-* as one might expect from the examples in (27a). Another question is what happens if we pit elements from the [± LONG] rows against another feature combination of the same row. As above, we will start with the [− LONG] row:

(30) a. × ˊ×
bay - tang 'blood'

b. × ˊ×
pang - lay 'goddess'

In the case of examples for [+ LONG] pattern combinations, we need to keep in mind again that initial [+ LONG, + DIPH, − ŋ] and [+ LONG, − DIPH, + ŋ] are not attested, so again, there will only be one possible combination of two syllables with a long vowel:

(31) ˋ× ˊ×
mā - sāy 'I traveled' (PST-travel=ISG.TOP)

Combining two long syllables with each other will result in both being stressed, which is otherwise avoided in Ayeri, as we will see later. Moreover, the following patterns emerge if we combine each pattern with itself; the combinatorical restrictions mentioned above apply again, of course:

(32) a. × ˊ×
kay - vay 'without'
dang - reng 'bell' (bell-A.INAN)

b. ˋ× ˊ×
bā - mā 'parents, mom-and-dad'

As demonstrated in (28), the last heavy syllable will receive primary stress, except if two long syllables collide, in which case the first long syllable will receive secondary stress.

To summarize the above findings:

1. Ayeri assigns trochaic stress from the right edge of a word. A foot thus consists of two syllables, of which the first is stressed.
2. Syllables ending in /ŋ/ or ones containing a diphthong are considered heavy. They attract stress and take it away from a preceding stressed syllable if the following syllable is not stressed already.
3. Syllables containing a long vowel are considered superheavy and override both light and heavy syllables in attracting stress, since long vowels cannot be unstressed.
4. Primary stress is assigned to the last stressable syllable, or otherwise the last heavy syllable. In the rare case of two long/superheavy syllables after another, the first syllable receives secondary stress and reduces in duration.

Figure 1.6: Stress patterns for [+ HEAVY, – LONG] in trisyllabic words

–H –H +H	*prantanley*	× | × ×́	'question' (question-P.INAN)
–H +H –H	*sarayya*	× | ×́ ×	'(he) bows' (bow-3SG.M)
+H –H –H	*taykondam*	× | ×́ ×	'break (n.)'
–H +H +H	*ralanghay*	× | × ×́	'thumbnail'
+H –H +H	*kaybunay*	×̀ | × ×́	'by the way'
+H +H –H	*maykongas*	× | ×́ ×	'harbor' (harbor-P)
+H +H +H	*panglay-kay*	×̀ | × ×́	'a few goddesses' (goddess=few)

5. Secondary stress is assigned to syllables that are eligible for word stress but which are not in the final foot.

Analysis of stress patterns in trisyllabic words

So far, we have only considered all the possible combinations of two heavy and light syllables. Doing the same for all combinations of three and more syllables would be possible, though the list of examples were to become even longer. Since the feature pair [± DIPH, ± ŋ] behaves the same way throughout and both features are in complementary distribution, we need not test iterations of them separately, but can subsume them under the label [± HEAVY]. The parameters that need testing, then, are [± HEAVY] in combination with [± LONG]. There are 4 possible outcomes for these two features, which in the case of three syllables leads us to $(2 \times 2)^3 = 64$ theoretically possible combinations. For this reason, I want to point out just a few cases, since the general rules sketched out above still apply.

First, let us look at [+ HEAVY, – LONG] combined with [– HEAVY, – LONG] in all positions (Figure 1.6). Finding words that fit the respective permutations is not too much of a problem, especially in cases where there is only one heavy syllable.

It becomes clear from Figure 1.6 that the rules stated at the end of the previous section (p. 35) also hold in the case of trisyllabic words whose syllables alternate short syllables based on the [± HEAVY] feature: *prantanley*, *ralanghay*, *kaybunay*, and *panglay-kay* receive final-syllable stress since this is their last heavy syllable. The first syllables of *taykondam* and *maykongas*, on the other hand, lose the secondary stress they would normally be assigned as two stressed syllables after another are normally avoided; the requirement of long syllables to not be unstressed does not come into effect here. *taykondam* is also an example for the rule that even if a syllable is not heavy, the last syllable that can be assigned stress will receive primary stress.

Carrying out the same analysis as above and moving the feature [+ LONG] through

Figure 1.7: Stress patterns for [± HEAVY, + LONG] in trisyllabic words

−L −L +L	*peraysān*	× | × ˝ ˝	‘paste’
−L +L −L	*raypānya*	× | ˝ × ×	‘at the stop’ (stop-LOC)
+L −L −L	*nōneri*	˵ × | ˊ × ×	‘deliberate, intentional’
−L +L +L	*mə-cān-cān*	× | ˵ ˝ ˝	‘whatever fling’ (whatever=fling)
+L −L +L	*sānisān*	˵ × | × ˝ ˝	‘copula; clutch (n.)’
+L +L −L	*lērāyon*	˵ × | ˝ × ×	‘manwhore’
+L +L +L	—	—	—

the various positions, we receive the results depicted in Figure 1.7.[22] Since long syllables override stress of both light and heavy syllables as pointed out above (p. 35), the example words in this chart contain both of these syllable types. It was not too hard finding examples for all the slots in this case either, except that words with two long syllables in succession are rather rare. Still, only the case of three long syllables must remain unattested.[23]

Again, we can see that long syllables attract stress, in that the final syllables of ཀཱཡཱསཱན *peraysān* and སཱནིསཱན *sānisān* are stressed even though the penultimate syllable is heavy on the virtue of containing a diphthong. As it is in an unstressed position and there is no requirement for the syllable to be stressed, the first syllable of རཱཔཱཉྱ *raypānya* loses stress adjacent to the stressed long penultimate syllable. ནོཎེརི *nōneri* and ལཱཡོཎ *lērāyon* display a secondary-stressed and a primary-stressed syllable next to each other, in the first case due to the rule that long syllables must not be unstressed and ཨེརི *-eri* forming a valid disyllabic foot that receives regular trochaic stress, and in the second case due to two long syllables next to each other, of which the first—again—must not be unstressed. ཨཱཅཱན་ཅཱན *mə-cān-cān* is interesting insofar as the long-syllable stress rules operate on the second foot regularly, while the marker ཨཱ *mə-* ‘whatever’ is by default unstressed, so even if it is added to stressed monosyllabic words like ཧིན *hin* ‘box’, the foot of ཨཱཧིན *mə-hin* ‘which box so ever’ would appear iambic, even though the syllable ཧིན *hin* itself is not heavy.

A further exception is formed by monosyllabic quantifying clitics like ཧེན *-hen* ‘all, every’ or ངས *-ngas* ‘almost’. These are unstressed also when following an un-

[22] For more precision, modifications will be made to the symbols given in footnote 20: let a double acute ⟨˝⟩ denote superheavy syllables with primary stress, and a double grave ⟨˵⟩ denote superheavy syllables with secondary stress.

[23] It would be possible to construct a word with three long syllables if the habitative suffix ཨས *-asa* did not delete the vowel at the end of the verb stem if there is one. མཱསཱཡ *māsāy* ‘I traveled’ (PST-travel=ISG.TOP) would then become **མཱསཱསཱཡ* **māsāsāy* ‘I used to travel’ (PST-travel-HAB=ISG.TOP) instead of the actual form མཱསཱསཱཡ *māsasāy*; the verb stem is ཨས *asa-* ‘travel’.

stressed syllable of their host if they contain a short vowel.

Stress in compounds

Ayeri has a number of lexicalized compound nouns that are treated as one word morphologically (33a). This is in contrast to compounds that are not as established terms, or formed ad hoc (33b):

(33) a. *Ang bengay **kardangirayya** ya Litareng.*
Ang beng=ay.Ø kardang.iray-ya ya Litareng
AT attend=1SG.TOP school.high-LOC LOC= Litareng
'I attend university in Litareng.'

b. *Ang pasyye Pila **sungkoranyam** **kihas**.*
Ang pasy-ye Ø Pila sungkoran-yam kihas
AT be.intersted.in-3SG.F TOP Pila science-DAT map
'Pila is interested in geography.'

For purposes of surveying stress patterns, we will only deal with the kind in (33a), though it may be noted that when not being overtly inflected, the second kind of compound will be treated as a word as well: ᠬᠦᠰᠦᠩᠬᠣᠷᠠᠨᠬᠢᠪᠠᠰ *sungkorankihas* 'geography'. Another kind of indivisible compound as in (33a) is one formed from reduplication, for instance, ᠬᠤᠰᠠᠩ᠎ᠬᠤᠰᠠᠩ *kusang-kusang* 'model', from ᠬᠤᠰᠠᠩ *kusang* 'double'. Figure 1.8 gives several examples along with their stress patterns. As a reference for the various rules in operation, consider the list above (p. 35).

The first word, ᠠᠪᠠᠨ᠎ᠠᠪᠠᠨ *apan-apan*, is not very noteworthy but I included it nonetheless as a reference for regular stress assignment to light syllables. The word decomposes into two feet, each of them has trochaic stress, which does not change when reduplicated. Per rule, the first syllable of the word receives secondary stress while the penultimate syllable bears primary stress. ᠬᠤᠰᠠᠩ᠎ᠬᠤᠰᠠᠩ *kusang-kusang* is following the normal rules as well in that a heavy syllable takes stress from a light one. This does not change in reduplication.

ᠳᠧᠫᠠᠩᠴᠠᠲᠢ *depangcāti* is noteworthy since it follows the same stress pattern as ᠠᠪᠠᠨ᠎ᠠᠪᠠᠨ *apan-apan* in spite of consisting of one foot with a heavy second syllable (ᠳᠧᠫᠠᠩ *depang*) and another with a superheavy first syllable (ᠴᠠᠲᠢ *cāti*). To avoid a clash, stress is not shifted to the heavy syllable in ᠳᠧᠫᠠᠩ *depang*, since it is not strictly necessary for it to be stressed:

(34) (**dépang* → *depáng*) + *cáti* → { **depàng* + *cáti* ; *dèpang* + *cáti* }

In the case of ᠮᠠᠯᠢᠩᠬᠠᠷᠣᠨ *malingkaron* again the rule operates that prohibits two stressed non-long syllables after another. Thus, even if the first component ᠮᠠᠯᠠ

Figure 1.8: Examples of stress patterns in compounds

Word	Pattern	Translation	Constituents					
			Word	Pattern	Translation	Word	Pattern	Translation
apan-apan	ˋ × | ˊ ×	‘extensive’	*apan*	ˊ ×	‘wide’	*apan*	ˊ ×	‘wide’
depangcāti	ˋ × | ˝ ×	‘cuckold’	*depang*	× ˊ	‘fool’	*cāti*	˝ ×	‘lover’
kusang-kusang	× ˋ | × ˊ	‘model’	*kusang*	× ˊ	‘double’	*kusang*	× ˊ	‘double’
latunkema	ˋ × | ˊ ×	‘tiger’	*latun*	ˊ ×	‘lion’	*kema*	ˊ ×	‘stripe’
malingkaron	ˋ × | ˊ ×	‘coast, seashore’	*maling*	× ˊ	‘shore’	*karon*	ˊ ×	‘water’
māvaganeng	˝ × | × ˊ	‘mother’s siblings’	*māva*	ˊ ×	‘mother’	*ganengan*	× | ˊ ×	‘siblings’
pikunanding	ˋ × | × ˊ	‘mustache’	*piku*	ˊ ×	‘beard’	*nanding*	× ˊ	‘lip’
sapayyila	ˋ × | ˊ ×	‘limbs’	*sapay*	× ˊ	‘hand’	*yila*	ˊ ×	‘foot’

maling contains a heavy syllable, stress will not move there. In *latunkema*, the syllable /tʊn/ is assimilated to [tʊŋ] before the /k/ onset of the next syllable. For one, however, this does not make it heavy, and second, even if it did, stress would stay on the first syllable of the word for the same reason as in *malingkaron*. The same rule of stress hiatus avoidance operates in *sapayyila*.

Besides the shortening of the second component of the compound, *māva-ganeng* retains the stress pattern of its constituents. Since /maː/ is not in a final foot, it receives secondary stress. Moreover, *māvaganeng* and *pikunanding* both show that it is acceptable for two light syllables to follow each other.

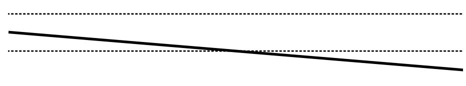
1.3.2 Intonation

Peterson (2015: 66) writes that if "you're creating a language on your own and you're the only speaker, intonation is usually not high on the list of features to focus on, but intonational flavoring is well worth it (read: crucial) when it comes to making an authentic language." Indeed, this has so far been a rather neglected topic in my work on Ayeri. Even though I made a handful of recordings in the past, I have never considered intonation much. Yet, of course, the spoken words in those recordings do not sound like robot speech either, so there must be intonational patterns that I have been subconsciously applying.[24]

Since intonation contours are notoriously difficult to display in print, I will give very approximate graphs of pitch in the respective examples for each surveyed pattern. Certainly there will be other patterns as well which would require more detailed gradations, but for the time being, I will only try to briefly describe those that are most prominent.

Declarative statements

Declarative statements have a gradually falling pitch contour based around an average pitch height, not deviating considerably on both ends:

(35) 

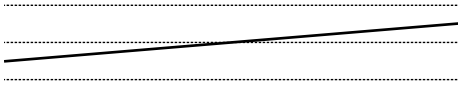
Ang	*gihayo*		*Pintemis*	*minganeri-hen*	*yona.*
Ang	giha-yo	Ø	Pintemis	mingan-eri=hen	yona
AT	blow-3SG.N	TOP	North Wind	ability-INS=all	3SG.N.GEN.

'The North Wind blew with all of his might.'

[24] Whenever this happens, the fallback is likely to be a mixture of German and English, since those are the languages I am most familiar with.

Yes–no questions

Since Ayeri does not use a particle or word order to mark closed questions as such, intonation is used to mark the difference from a declarative statement. To achieve a strong contrast, questions exhibit gradually rising intonation:

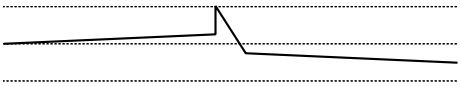
(36) 

Ang	*gihayo*		*Pintemis*	*minganeri-hen*	*yona?*
Ang	giha-yo	Ø	Pintemis	mingan-eri=hen	yona
AT	blow-3SG.N	TOP	North Wind	ability-INS=all	3SG.N.GEN.

'Did the North Wind blow with all of his might?'

'Wh-' questions

Unlike English, Ayeri marks open questions with an in-situ question word. Open questions are thus marked by the question word causing a sharp rise and fall in the overall contour of the question. The first half of the clause has the rising contour of a question, the second half has gradually falling pitch.

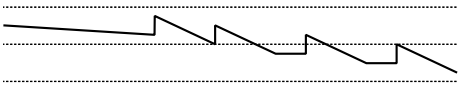
(37) 

Ang	*engyo*	*mico*	*sinya*	*luga*	*toya*	*sam?*
Ang	eng-yo	mico	sinya-Ø	luga	toya	sam
AT	be.more-3SG.N	strong	who-TOP	among	3PL.N.LOC	two

'Who was the stronger of the two?'

Lists

List statements have the general gradual downward slope of declarative statements, but the individual items can nonetheless be marked by a pitch rise on the primary accent of each item.

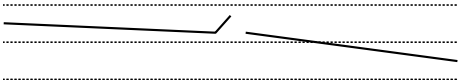
(38) 

Le	*vacyeng*	*seygo,*	*disu,*	*betay*	*nay*	*vasra.*
Le	vac=yeng	seygo-Ø,	disu-Ø,	betay-Ø	nay	vasra-Ø
PT.INAN	like=3SG.F.A	apple-TOP,	banana-Ø,	berry-Ø	and	nut-Ø

'She likes apples, bananas, berries and nuts.'

Complement and relative clauses

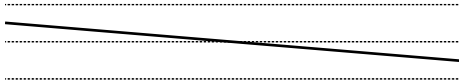
Complement clauses are characterized by the short spike at the end of the preceding main clause followed by a short break which together signal the beginning of a new syntactic unit within the context of the current sentence, which is broadly similar to list statements. Otherwise, statements with complement clauses as well bear the overall downward-sloping contour of declarative statements if included in such.

(39) 

Ang	*manga*	*rantong,*	*engyo*	*mico*	*sinyāng.*
Ang	manga	ran=tong,	eng-yo	mico	sinya-ang
AT	PROG	argue=3PL.N.A,	be.more-3SG.N	strong	who-A

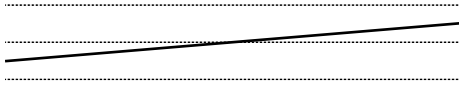
'They were arguing who is stronger.'

Relative clauses, on the other hand, do not receive special prosodic marking, but are treated the same as other basic sentence types. They display a continuous downward slope if part of a declarative statement, or a continuous upward slope if part of a question:

(40) a. 

Lugaya	*asāyāng*	*si*	*sitang-naykonyāng*	*kong*	*tovaya.*
Luga-ya	asāya-ang	si	sitang=naykon=yāng	kong	tova-ya
pass-3SG.M	traveler-A	REL	self=wrap=3SG.M.A	inside	cloak-LOC

'A traveler passed who had wrapped himself into a cloak.'

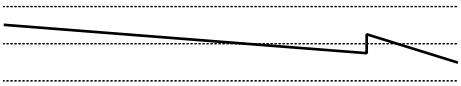
b. 

Adareng	*asāyās*	*si*	*le*	*ninyāng*	*tova?*
Ada-reng	asāya-as	si	le	nin=yāng	tova-Ø
that-A.INAN	traveler-P	REL	PT.INAN	wear=3SG.M.A	coat-TOP

'Is that the traveler who wore the coat?'

Contrast

Ayeri uses a kind of topic system for highlighting constituents in a clause by morphosyntactic means, but this is still different from emphasis on semantic grounds, for example when the speaker wants to highlight a semantic difference in the same syntactic position, as in the following example, which presents a possible answer to the question posed in (40b):

(41) 

Adareng	*asāyās*	*si*	*le*	*nin-yāng*	kegan.
Ada-reng	asāya-as	si	le	nin=yāng	kegan-Ø
that-A.INAN	traveler-P	REL	PT.INAN	wear=3SG.M.A	hat-TOP

'It is the traveler who wore the *hat*.'

We can see here a spike towards the end of the utterance where the word ᮊᮌᮔᮂ *kegan* 'hat' is placed. This word receives extra stress for contrast with ᮒᮝᮉ *tova* 'coat', which is what the other person had asked about.

2 Writing system

In the previous chapter, example words were given in Ayeri's script, *Tahano Hikamu*, wherever possible. Thus, it seems advisable to include a description of Ayeri's native writing system here as well. Literally, *Tahano Hikamu* means 'Round Script' (script round), which is an old formation based on the word *tahan-* 'write' that stuck. The current word for 'script' is *tahanan* 'writing'. Tahano Hikamu was originally named thus because of an earlier draft for a script that never made it very far beyond the drawing board and which was a lot more angular and boxy, see Figure 2.1—Tahano Hikamu was a lot more bubbly in comparison, especially early on (Figure 0.2).[1]

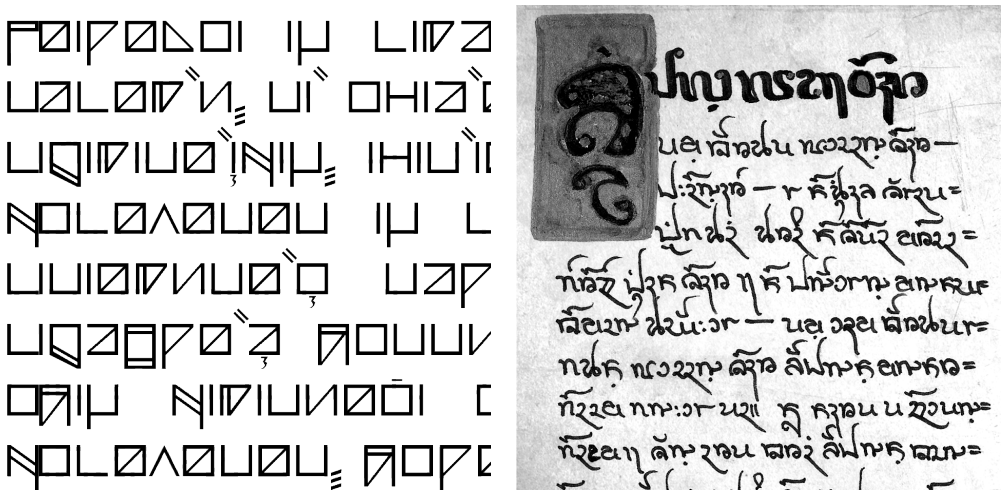
As we have seen in the previous chapter, Ayeri's prosody strongly emphasizes the syllable as a unit. Thus, it is not a surprise that Ayeri's native script, Tahano Hikamu, is an alphasyllabary similar to the Brāhmī alphabets of India and Southeast Asia (Salomon 1996; Court 1996). Scripts like these are

> based on the unit of the graphic "syllalbe" […], which by definition always ends with a vowel (type V, CV, CCV, etc.). Syllables consisting of a vowel only (usually at the beginning of a word or sentence) are written with the *full* or *initial vowel signs* […]. But when, as is much more frequently the case, the syllable consists of a consonant followed by a vowel, the vowel is indicated by a diacritic sign attached to the basic sign for the consonant […]. (Salomon 1996: 376)

For Tahano Hikamu the definition that a syllable consisting only of a vowel is written with an initial vowel sign is only true under certain circumstances, as we will see below. Moreover, Brāhmī scripts are often characterized by conjuncts of clustered consonants which may become quite large and sometimes behave in an idiosyncratic way. Consonant conjuncts like Devanāgarī त्व ⟨tva⟩ from त ⟨ta⟩ + व ⟨va⟩ or idiosyncratic conjuncts like क्ष ⟨kṣa⟩ for क ⟨ka⟩ + ष ⟨ṣa⟩ are not known in Tahano Hikamu, however. Tahano Hikamu also does not know subscript notation for consonant clusters and special diacritics marking coda consonants like in Javanese (Kuipers and McDermott 1996: 478–479). This does not mean, however,

[1] Unfortunately, there is no documentation of the Box script surviving that I know of.

Figure 2.1: Box script and Hikamu



(a) Old and aborted draft: Box script

(b) Ayeri's native script: Tahano Hikamu

that final consonants are simply omitted in writing, since closed syllalbes are reasonably common enough in Ayeri to warrant indicating them. Thus, there is "a special mark to eliminate the vowel of the previous syllable, thereby leaving a consonant in a syllable-final position." (Kuipers and McDermott 1996: 476) That is, a diacritic exists which marks the absence of an inherent vowel, rendering the syllable consonant-only.

Another difference from Brāhmī-family scripts is that vowel length and diphthongs in [ɪ] are indicated by dedicated diacritics, so the long vowels are not doubled versions of their short counterparts. Like in Kharoṣṭhī—another historically important ancient script of India—initial vowels are not represented by unique graphemes but they are all written like post-consonantal vowel diacritics (Salomon 1996: 377), though in Tahano Hikamu with a charcter without an inherent sound value. For this reason, the character is indicated in the table below as ◌ /Ø/; its native name is *ranyan* 'nothing'.[2] Similar to a number of Brāhmī scripts, Tahano Hikamu puts diacritics not only below or above consonant bases, but also before them. This, however, is not limited to vowel graphemes as in Devanāgarī ि ⟨i⟩ or Javanese ꦺ ⟨e, é/è⟩ (Kuipers and McDermott 1996: 478).[3]

[2] I will give the native names of graphemes here, but will refer to them by their English names for clarity in the running text.

[3] Kuipers and McDermott (1996) do not say, but it seems that both might be related, since they are both functionally the only prepended vowel diacritics and both represent a high front sound; this is just a guess, however.

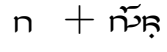
Figure 2.2: The consonant graphemes

/pa/	/ta/	/ka/	/ba/	/da/	/ga/
					
/ma/	/na/	/ŋa/	/va/	/sa/	/ha/
					
/ra/	/la/	/ja/	/Ø/		
					

2.1 Consonants

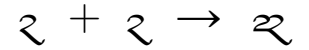
Tahano Hikamu is mainly based on consonant bases that are modified by diacritics. Since the vowel /a/ is so highly frequent in Ayeri, it is also the vowel that is *inherent* to every consonant grapheme if not further modified by vowel diacritics. Consonant letters are simply referred to as *pa, ta, ka,* … Figure 1.1 displays all the main consonants. The customary collation is—similar to the IPA table—roughly grouping the letters according to their sound value by anteriority (front → back) and sonority (low → high). The script is monocameral, that is, there is no distinction between capital letters and minuscule letters as in the Latin, Greek, Cyrillic, Georgian, and Armenian alphabet. It is also written in lines from left to right.

 , which in Ayeri has no sound value but is used as a base for initial vowels, may also serve as the character for /ʔa/. What is, moreover, interesting about  ⟨nga⟩ is that even though before, /ŋ/ was treated strictly as a coda consonant in the previous chapter, it is in fact treated as an onset consonant in writing if a vowel is following:

(1) 
/pa/ /ŋis/

 *pangis* /paŋ.is/ ‘money’

Tahano Hikamu knows a few ligatures. First of all, when two  ⟨na⟩ are in succession within a word, they will form a ligature  ⟨nana⟩:

(2) 
/na/ /na/ /nana/

This is distinct from conjuncts like in Devanāgarī et al., though, since the unmodified sound value will still be /nana/, not */nna/, so the inherent vowel of each 

Figure 2.3: Additional consonant graphemes

/fa/	/wa/	/tsa/	/za/	/ʃa/	/ʒa/
/ça/	**/ksa/**	**/kwa/**	**/xa/**	**/ɣa/**	

Figure 2.4: Primary vowel graphemes

	/i/	/e/	/a/	/o/	/u/	/ə/	/au/
Diaritics							
Independent							

⟨na⟩ is not deleted, and each ⟨na⟩ retains the ability to be modified by diacritics. Tahano Hikamu also has a few ligatures of the kind you would find in Brāhmī scripts, however:

(3) a. ⟨kwa⟩ ← ⟨ka⟩ + ⟨va⟩,
b. ⟨tsa⟩ ← ⟨ta⟩ + ⟨sa⟩, and
c. ⟨ksa⟩ ← ⟨ka⟩ + ⟨sa⟩.

These conjunct letters are, however, not normally employed by Ayeri. Figure 2.3 shows all additional consonants, added to write other languages. Individual languages may adapt the sound values slightly to fit their own purposes.

2.2 Vowels

As mentioned above, vowels are written as diacritics that are added to consonants. In principle, every consonant has two slots for vowels, a primary one atop it, and a secondary one below it. Vowels added to consonants in the primary slot delete their inherent /a/:

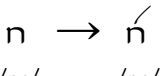
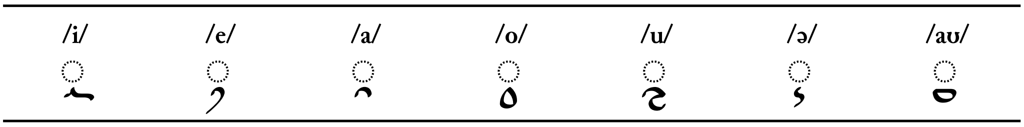
(4) 
/pa/ /pe/

Figure 2.4 gives the primary vowel signs. Of the vowel signs given there, only ⟨ə⟩ is not used in Ayeri. ⟨au⟩ is the only diphthong for which a dedicated

Figure 2.5: Secondary vowel graphemes



grapheme exists, even though its occurrence is rather limited. The independent vowel graphemes are used at the beginning of words or inside words when there is no other way to spell the vowel, which is occasionally the case for secondary vowels. Secondary vowels are vowels that are not parts of diphthongs (even though another language might use them to spell diphthongs that are not covered by default), but follow the vowel of a syllable directly. They are attached underneath a consonant base, for example:

(5) 
/ja/ /je/ /jea/

In fact, the principle that every consonant base with its diacritics represents one syllable is slightly violated here, which is also the reason why secondary vowels very occasionally need to be spelled as independent vowels, for example when the secondary vowel is long, as in the word *ruān* 'duty':

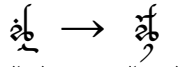
(6) 
/ru/ /rwaː/ /ruːa/

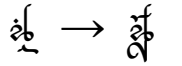
Example (6) uses a diacritic, to indicate length. If is put directly under *ru* (the diacritic moves down where it is not in the way), the syllable will incorrectly spell /ruːa/ instead of the intended /ruaː/. This is because diacritics modify consonants and primary vowels, but there is no way to modify a secondary vowel directly. Figure 2.5 gives a list of secondary vowels corresponding to that of primary vowels above. The vowels as well are just referred to by their sound value; 'primary' and 'secondary', 'superscript' and 'subscript' or 'upper' and 'lower' may be chosen to disambiguate their positions; the native names may use *iray* 'high' and *eyra* 'low' to disambiguate, so *e iray* denotes the superscript ⟨e⟩ diacritic while *e eyra* denotes its subscript counterpart.

As a further exception, those consonant bases with an ascender (⟨ka⟩, ⟨da⟩, /ça/) move the primary vowel to the secondary slot below the consonant by default while indicating the vacancy of the primary slot at the top with a dot. This is done to avoid crossing the ascender of the consonant with a vowel diacritic:

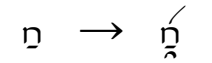
(7) 
/ka/ /ka.i/ /ki/

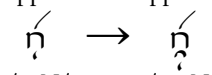
If the primary vowel slot were not silenced by the ◌̣ diacritic, it could reasonably be assumed that the consonant is not losing its inherent /a/ and the vowel below the consonant indicates a secondary vowel, spelling /CaV/. If, however, a secondary vowel is *actually* added, primary and secondary vowels will be assigned the regular primary and secondary slots, respectively, again (8a). This condition also holds true for subscript diacritics (8b).

(8) a. 
/ki/ /ki.e/

b. 
/ki/ /ki:/

The order of secondary vowels and subscript diacritics is iconic insofar as it follows the order of sounds in the syllable. Thus, secondary vowels appear below the consonant-doubling diacritic, ◌̤, while they appear above the syllable-final homorganic nasal diacritic, ◌̇:

(9) a. 
/ppa/ → /ppea/

b. 
/peN/ → /peaN/

2.3 Diacritics

We have already encountered a few diacritics, though Tahano Hikamu comes with a lot more, some of which undergo non-trivial positioning and repositioning rules. As vowels are primarily expressed as superscripts, diacritics are primarily realized as subscripts, so in the following I will first describe subscript diacritics; then prepended diacritics, which Ayeri also has a number of, both as graphemes in their own right and as allographs of other subscript diacritics; and then, lastly, superscript diacritics.

2.3.1 Subscript diacritics

Table 2.6 shows the bottom-attaching diacritics. The 'large diacritics' cause the secondary slot of consonants to move down below the diacritic. 'Small diacritics'

Figure 2.6: Bottom-attaching diacritics

	Native name	Function	Example
	Large diacritics		
	tupasati 'long-maker'	Lengthens the primary vowel of the syllable	*pa* → *pā*
	ya eyra 'low ya'	⟨ya⟩ following another consonant, also across syllables. Marks palatalization of ⟨ta⟩, ⟨da⟩, ⟨ka⟩, ⟨ga⟩ and ⟨ya⟩ in Ayeri.	*ara* → *arya*; *ta* → *ca*
	ringaya 'raiser'	Palatalizes a consonant (not used in Ayeri)	*ta* → /tʲa/, /tʃa/
	ulangaya 'breather'	Aspiration or frication of a consonant (not used in Ayeri)	*ta* → /tʰa/, /θa/
	raypāya eyra 'low stopper'	Glottal stop coda or glottalization of a consonant (consonant letters with ascenders; not used in Ayeri)	*ka* → /kaʔ/; *da* → /dʼa/
	Small diacritics		
	gondaya 'extinguisher'	Deletes the inherent /a/ of a consonant, e.g. in consonant clusters or closed syllables	*para* → *pra*, *par*
	vināti 'nasalizer'	Indicates a homorganic nasal or nasalizes the vowel, depending on the language	*pada* → *panda* /panda/ or /pāda/
	kusangisāti 'duplicator'	Indicates a geminated or otherwise double consonant	*pala* → *palla*

can attach in this place as well as secondary vowels, as does the homorganic nasal diacritic in this diacritic-fraught example:

(10) 

/ˈtʃaːn/ + /puˈlʊɪ/ → /ˌtʃaːmpuˈlʊɪ/

cāmpuluy 'heterosexual'

It also needs to be noted that diacritics like are applied progressively to words as a whole, not stopping at morpheme and syllable boundaries, so even though *toryeng* 'she sleeps' may be composed of *tor-* 'sleep' + *-yeng* (=3SG.F.A) and syllabifies as /tor.ˈjeŋ/, the spelling is not * as one might expect, but .

Even though the primary position for small diacritics is underneath consonants, the diacritic deleting the inherent vowel, , very commonly also appears after a consonant letter at the end of words:

(11) 

Ya	*nimreng*	*pangan*	*narānyena.*
Ya	nim-reng	pangan-Ø	narān-ye-na
LOCT	appear=3SG.INAN.A	end-TOP	word-PL-GEN

'It appears at the end of words.'

This strategy is advantageous in that Tahano Hikamu leaves very little space between individual words: With the dot after the consonant, word boundaries are more visible.

2.3.2 Prepended diacritics

Example (10) leads us directly to the next class of diacritics—ones that are prepended to the consonant letter, either because they are simply placed there or because of allography. Let us first list those diacritics that appear in front of consonants obligatorily (Figure 2.7).

As Figure 2.7 shows, the only obligatorily prepended diacritic that Ayeri uses is the one that marks diphthongs, . It needs to be noted here that changes into ⟨ya⟩ proper when a vowel follows, but stays when a ⟨ya⟩ follows:

(12) a. *haday* 'hero' → (*) *hadayang* 'the hero' (hero-A);
b. *tipuy* 'grass' → (*) *tipuyya* 'in the grass' (grass-LOC).

4 In a Tahano Hikamu orthography I devised for English once, was used for /ɚ/, as in the NURSE vowel in American English: *nurse*.

Figure 2.7: Obligatorily prepended diacritics

	Native name	Function	Example
◌	*lentankusang* 'double-sound'	Marks a diphthong with /ɪ/	*pe* → *pey*
◌	*tilamaya* 'changer'	Marks raised vowels (i.e. umlaut; not used in Ayeri)	*po* → /pø/
◌	*hiyamaya* 'roller'	Marks retroflex consonants (not used in Ayeri)[4]	*ta* → /ʈa/

Figure 2.8: Allographically prepended diacritics

	Native name	Function	Example
◌	*tupasati marin* 'anterior long-maker'	Lengthens the primary vowel of the syllable	*sya* → *syā*, *na* → *nā*
◌	*ya marin* 'anterior ya'	⟨ya⟩ following another consonant, also across syllables.	*na* → *nya*
	ringaya marin 'anterior raiser'	Also used as an allograph for the palatalization proper diacritic.	/sʰa/ → /sʰʲ/
◌	*ulangaya marin* 'anterior breather'	(Pre-)Aspiration or frication of a consonant (not used in Ayeri)	*nga* → /ŋʰa/; *ta* → /ʰta/

Besides ◌𑄴, there are also a number of diacritics that are also obligatorily prepended to consonants, but do so as context-sensitive allographs (Figure 2.8). The selection of the variant diacritics is not random or up to the aesthetic eye of the writer (even though the device itself is certainly a matter of aesthetics), but it is governed by rules. The prepended forms listed in Figure 2.8 are thus triggered

1. when there is no stem or bowl for the regular subscript diacritic to attach to, which is the case for 𑄇 ⟨na⟩, 𑄉 ⟨nga⟩, 𑄍 ⟨va⟩, and 𑄏 ⟨wa⟩:

(13) a. 𑄇 → 𑄃𑄇 /na/ /na:/

b. 𑄉 → 𑄃𑄉 /ŋa/ /ŋa:/

c. 𑄍 → 𑄃𑄍 /va/ /va:/

d. 𑄏 → 𑄃𑄏 /wa/ /wa:/

2. when a large subscript diacritic would be added after another large subscript diacritic—this position can only be occupied once, so further large subscripts are prepended:

(14) 𑄆 → (+𑄳) 𑄆𑄳 → (+𑄵) 2𑄆𑄳 → (+𑄴) 2𑄆𑄳𑄴 → (+𑄧) 𑄃2𑄆𑄳𑄴

/ta/ /tʰa/ /tʰja/ /tʰji/ /tʰji:/

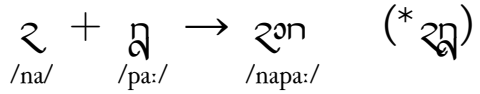
The order of diacritics follows the logic of the respective language's phoneme inventory, so if there are, for example, retroflex consonants and both dental and retroflex consonants can be aspirated, retroflexion would be marked first, then aspiration. If there is a palatalization contrast on top of this, the diacritic would be added after aspiration.

When adding large diacritics to stemless consonants, they are prepended from the beginning, as we saw in (13), and just like in (14), this principle continues:

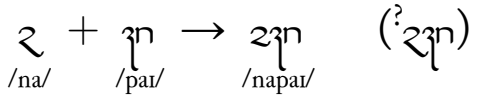
(15) 𑄇 → (+𑄵) 2𑄇 → (+𑄧) 𑄃2𑄇 → (+◌𑄴) 𑄃𑄴2𑄇

/na/ /nja/ /nja:/ /ɲja:ɪ/

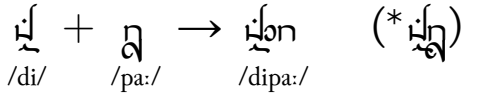
3. with consonants directly following 𑄇 ⟨na⟩, to avoid a clash with its swash:

(16) 
/na/ /paː/ /napaː/ (*ꤢꤧ)

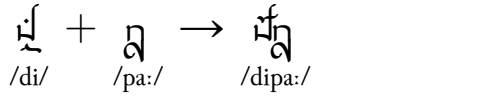
An exception to this exception occurs, however, when the consonant is not directly following. In this case, no reordering happens, only ꤢ ⟨na⟩ *may* reduce its swash in size to accommodate the following prepended diacritic:[5]

(17) 
/na/ /paɪ/ /napaɪ/ (ʔꤢꤨ)

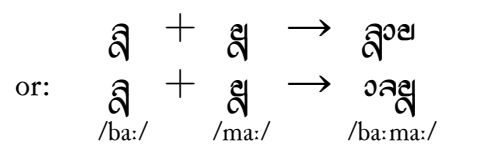
4. in other cases where a clash of subscript diacritics needs to be avoided:

(18) 
/di/ /paː/ /dipaː/ (*ꤓ꤭ꤧ)

Alternatively, the following solution is permissible:

(19) 
/di/ /paː/ /dipaː/

When two long syllables follow each other, as in *bāmā* 'mom-and-dad', one of the length diacritics should definitely be pulled to the front:

(20) 
/baː/ /maː/ /baːmaː/ (ʔꤡ꤫)

[5] The font I am using here is designed so that the reduced combination looks nicer, but if unreduced, ꤢ ⟨na⟩'s swash is not so long as to cross the descender of ꤨ either in this particular case.

Figure 2.9: Superscript diacritics

	Native name	Function	Example
	gondaya ling ‘upper extinguisher’	Deletes inherent /a/ of consonant, e.g. in consonant clusters or closed syllables	*vara* → *vra*
	vināti ling ‘upper nasalizer’	Indicates a homorganic nasal or nasalizes the vowel, depending on language/context	*naka* → *nanka* /naŋka/ or /nāka/
	kusangisāti ling ‘upper duplicator’	Indicates a geminated or otherwise double consonant	*pana* → *panna*
	raypāya ‘stopper’	Glottal stop coda or glottalization of a consonant (not used in Ayeri)	*ta* → /taʔ/; *sa* → /s’a/

2.3.3 Superscript diacritics

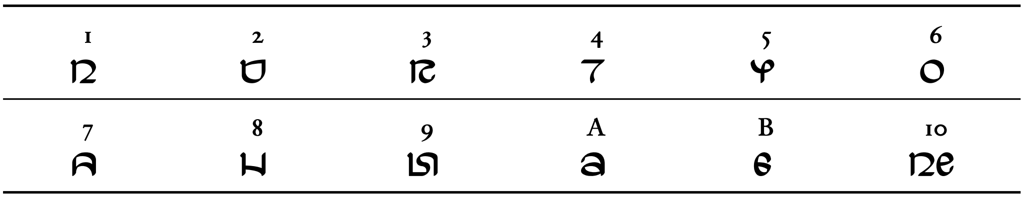
Ayeri’s standard position for diacritics is below consonants, but sometimes it is nicer to put them on top, especially for the letter ⟨na⟩ due to its swash, as well as for ⟨va⟩ since the space below its flag is empty otherwise, thus not providing much of a visual connection. The only diacritic that is normally attaching to the top of consonants is that for the glottal stop—we have already encountered its subscript allograph earlier. Since Ayeri’s phoneme inventory does not possess a phonemic glottal stop or glottalization, this diacritic is not used in Ayeri. The list of superscript diacritics is given in Figure 2.9.

At times, it may be necessary to attach both a superscript diacritic and a vowel sign above a consonant. In this case, the consonant-modifying diacritic is placed first and the vowel diacritic on top of it—this is exactly equivalent to the rule exemplified for subscript diacritics in (9).

(21) a. →
/vva/ → /vve/

b. →
/vva/ → /vvaN/

Figure 2.10: The numerals



2.4 Numerals

Ayeri uses a duodecimal number system, that is, a system based on the powers of of 12, which is a typological rarity.[6] There is a digit for zero, so the system is positional, like the Hindu–Arabic digits used by the Latin alphabet. The numerals for the numbers from 1 to 12 are shown in Figure 2.10.

2.5 Punctuation and abbreviations

Tahano Hikamu's system of manipulating the sound of syllables is very sophisticated, so it comes as no surprise that it is also host of a large number of punctuation marks. Figure 2.11 lists the ones commonly encountered, Figure 2.12 the ones not so commonly encountered.

⟨.⟩ does not look very much like a dot or a point, but it is derived from a sign that looks like two circles stacked on top of each other, similar to ⟨-⟩ (see Figure 0.2). There is no mark for a comma as such, so ⟨-⟩ or ⟨–⟩ cannot be used in this way. Instead of a comma, a wide word space is used to separate syntactic units. A long dash ⟨—⟩ is also sometimes found at the end of paragraphs or texts to mark their end. The strong exclamation mark may appear in its exclamatory function at the end of a line, but does not necessarily indicate strong emphatic force in this case, but just an emphatic statement.

Regarding the less common marks, some of these seem like all to bland copies of modern punctuation, especially the brackets and the decimal point. Still, however, they may serve their purpose sometimes, and the brackets maybe come with the redeeming notion that they push off the text around the inclusion rather than encapsulating the inclusion within it, so the visual effect is slightly different. The name brackets are interesting and maybe useful insofar as many names in Ayeri are derived from common words, for example, *Ajān*, a male name, is literally 'play, game', relating to a playful character; *Migoray*, a female name, literally means 'flower'. The name brackets, then, make it unmistakeably clear that a proper

[6] And one possibly overrepresented by fictional languages due to its rarity in natural languages.

Figure 2.11: Common punctuation marks

	Native name	Function	Example
	dan 'dot'	Full stop	*Sarayāng.* 'He left.'
:	*dan-dan* 'little dot'	A separator for small things, like clitics and abbreviations; divides the constituents of reduplication	*ada-nanga* 'this house'; *5:pd* '5 hrs'; *dan-dan* 'dot-dot, little dot'
—	*puntān* 'dash'	General sign for a longer pause, equivalent to a dash, colon, semicolon, brackets	*Yan – saru!* 'Yan – go!'
	damprantan 'question point'	Marks questions	*Manisu?* 'Hello?'
	dambahān 'shouting point'	Marks exclamations; strong exclamations may be marked by the variant.	*Manisu!* 'Hello!'; *Yi!* 'Urgh!'

Figure 2.12: Less common punctuation marks

	Native name	Function	Example
	danarān 'speaking point'	Quotation marks	*Narayāng "Manisu!"* 'He says, "Hello!"'
	dankayvo 'beside-point'	Bracketing of text	*bahis (larau)* 'a (nice) day'
	dangaran 'name-point'	Explicitly marks a name as such. For the closing name parenthesis, can be found as well.	*Ajān Savati*; *Pila Lay Maran*
	dansinday 'number-point'	Marks (duo)decimal fractions	17.45B82 '19.37482'
	adrumaya 'breaker'	Marks line breaks within a phrase	

noun is intended rather than a common noun. The line-breaker ᛬ serves the purpose of marking the continuation of a clause at the end of a line either generally or where there would be ambiguity with a comma, which, as described above, is a large blank that would otherwise be invisible at the end of a line.

Two very common abbreviations are symbolic in nature, like the ampersand ⟨&⟩ in the Latin alphabet, and incidentally, they correspond to it in that the very common small word ᚾᚨᚣ *nay* 'and' may be abbreviated as ᛗ. Based on this, its reduplicated form ᚾᚨᚣᚾᚨᚣ *naynay* 'furthermore, also' may be abbreviated as ᛘ.

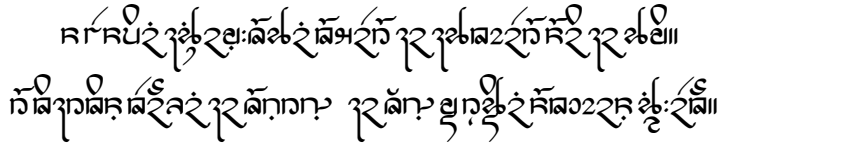
2.6 Styles

Over the course of the years since Tahano Hikamu's inception, I have liked to experiment with different styles of writing, that is, I tried applying a number of different writing styles to the script to change its look and feel while still staying true to the overall character shapes and the system behind the script. The example text I will be using to illustrate the different styles in the following is an Ayeri translation of the first article of the United Nations *Universal declaration of human rights* (Becker 2011):

> *Sa vesayon keynam-ikan tiganeri nay kaytanyeri sino nay kamo.*
> *Ri toraytos tenuban nay iprang, nay ang mya rankyon sitanyās ku-netu.*
> [All human beings are born free and equal in dignity and rights.
> They are endowed with reason and conscience and should act towards each other in a spirit of brotherhood.] (United Nations 1948: Article 1)

The examples above are all using a style I call 'book' style since it comes close to printed letters, or also what might be conceivable as being written with quills or nibs on parchment or paper—of course, pen and paper is also what I used to make up the letters in the first place, without second thought about the limitations of the supposed original writing utensils. The 'book' style letters are what I consider the canonical form. Figure 2.13 shows the above article in this letter style.

Figure 2.13: Tahano Hikamu, 'book style'

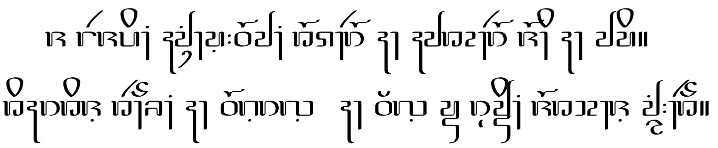


As described above, I have long found the look of the Javanese script[7] rather interesting and thus I tried applying the general aesthetics of what I had seen of

[7] For examples, see Everson (2008), or *Wikipedia*.

it to Tahano Hikamu at some point. As mentioned above as well, there are no subscript letters and in Ayeri, and the number of large swirling diacritics is also rather low, so there is still definitely a difference in appearance. The 'angular' style is also the one that is comparable in function to our bold face or italic style letters, since it is used in captions or to highlight special text within running text. This letter style (*hinya* 'angular') is displayed in Figure 2.14.

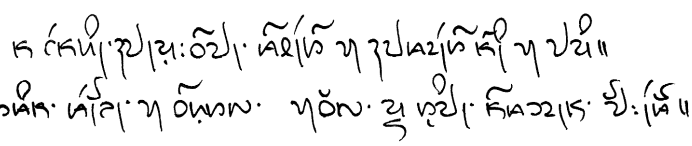
Figure 2.14: Tahano Hikamu, 'angular style'



The greatest difference to the 'book' style is that many of the main strokes double to become a thick and a parallel thin line and the shape of ⟨na⟩ changes to have its swirl straightened into a simple descending line. The vowel carrier changes to a flattened *O*-like circle, and the bottom curl in ⟨ta⟩ changes to a wedge. While the right side of the ⟨sa⟩ character in the 'book style' consists of two strokes—a flag and a downwards bow, both independently attached to the main stem—they connect here to form an *R*-like shape.

Neatly reproducing the shapes of either the 'book' style or the 'angular' style by hand goes rather slowly, so I was wondering what daily handwriting could look like. Of course, this presupposes pen and paper again; Salomon (1996: 377) mentions that inscriptions of Brāhmī and related scripts have been found on copper plates and plates made of other metals, besides stone. Metal plates can be inscribed with metal styluses and should allow similar shapes as modern pens. Wax tablets—a staple in European literacy until the use of paper became widespread—should as well allow for relative freedom of stroke direction. Figure 2.15 shows what Tahano Hikamu might look like quickly jotted down by hand.

Figure 2.15: Tahano Hikamu, 'hand style'

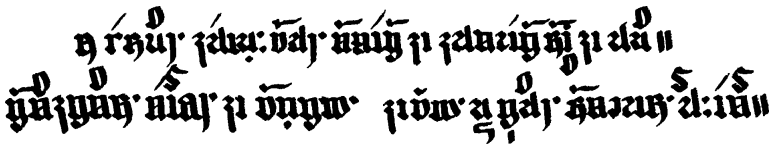


Many letter shapes become simplified, specifically ⟨ba⟩, ⟨ga⟩, ⟨ka⟩, ⟨na⟩, ⟨nga⟩, the vowel carrier , and the vowel ⟨i⟩. Not shown here is the the vowel length diacritic, , which is simplified to a reverse *C* shape. The abbreviation *nay* 'and' is used throughout, though in a shape that is more similar to its 'angular' form . ⟨na⟩ is also taken from the 'angular' style , which opens the possibility that

this is actually the basic shape rather than the 'book' style's ᦈ, or both are different developments from a shared ancestor.

Most recently, I also wondered what Tahano Hikamu might look like if it were adapted to European blackletter style with its characteristic broken arches. This, of course, constitutes a sharp contrast to Ayeri's usual look and feel, which made the experiment all the more interesting, though decidedly non-'canonic'. Figure 2.16 shows what our example passage might have looked like at a time when Gothic book hands flourished.

Figure 2.16: Tahano Hikamu, 'blackletter style'



The letter shapes from the 'book' style stay largely intact here, though all curves are broken up into at least two strokes, and strokes from the bottom left to the top right, which would push a quill in a way that causes ink to splatter, are avoided completely. The characters that differ most are ᦌ ⟨ga⟩, ᦙ ⟨ra⟩, ᦟ ⟨nga⟩, and the vowel carrier ᦀ. ᦈ ⟨na⟩ again appears in the 'angular' shape, though without its descender word-internally and in the abbreviation ᦊ *nay*. ᦁ ⟨ta⟩ comes with a horizontal stroke instead of a curl at the bottom; ᦎ ⟨sa⟩ gains a descender, as does ᦙ ⟨ra⟩. Not shown here either are changes to the 'large' diacritics.

3 Morphological typology

The first chapter dealt with the smallest constituent parts of words—speech sounds, which ones there are, and how they assemble into valid words. Consequently, the following two chapters will be about the next step up from this: morphemes, the atoms of meaning. First we will have a more general look at which kinds of morphemes there are, and then look at them more closely by part of speech: what is their distribution, and how are morphemes put together to form inflected words? This chapter on morphological typology will first deal with general questions about Ayeri's degree of synthesis, and then will try to answer questions about the kinds of functions the various morpheme classes carry out in the language.

3.1 Typology

For the largest part, Ayeri is an *agglutinative* language. Comrie (1989) says of agglutinating languages that in these, typically,

> a word may consist of more than one morpheme, but the boundaries between morphemes in the word are always clear-cut; moreover, a given morpheme has at least a reasonably invariant shape, so that the identification of morphemes in terms of their phonetic shape is also straightforward. [...] As is suggested by the term agglutinating (cf. Latin *gluten* 'glue'), it is as if the various affixes were just glued on one after the other (or one before the other, with prefixes). (43–44)

In Ayeri, root morphemes are modified by affixes for the purposes of inflection and derivation, and these affixes, in the form of suffixes more specifically, can be stacked, especially on verbs. Indeed, they vary little, so that they are always easily recognizable. Suffixation in Ayeri is especially prominent on verbs:

(1)	*Le*	*kondasayāng*	*hemaye*	*pruyya*	*nay*	*napayya*	*kayvay.*
	Le	kond-asa=yāng	hema-ye-Ø	pruy-ya	nay	napay-ya	kayvay
	PT.INAN	eat-HAB=3SG.M.A	egg-PL-TOP	salt-LOC	and	pepper-LOC	without

'He always eats his eggs without salt and pepper.'

The verb root *kond-* 'eat' is inflected here for a habitual action with the suffix *-asa*, and also carries a person-inflection clitic, *-yāng*, marking a third person singular masculine agent. With the notable exception of pronouns and related person-inflection clitics, affixes tend to encode a single grammatical function. Verbs are not the only part of speech that can inflect; nouns and the relativizing conjunction can as well:

(2) a.

Ang	*mətahanay*	*tamanyeley*	*yeyam.*
Ang	mə-tahan=ay.Ø	taman-ye-ley	yeyam.
AT	PST-write=1SG.TOP	letter-PL-P.INAN	3SG.F.DAT

'I wrote letters to her.'

b.

Le	*turayāng*	*taman*	*sinā*	*ang*	*ningay*	*tamala*	*vās.*
Le	tura=yāng	taman-Ø	si-Ø-na	ang	ning=ay.Ø	tamala	vās
PT.INAN	send=3SG.M.A	letter-TOP	REL-PT.INAN-GEN	AT	tell=1SG.TOP	yesterday	2SG.P

'The letter which I told you about yesterday, he sent it.'

The principle of not conflating several grammatical functions into a single suffix can be observed in (2a) regarding the word *tamanyeley* 'letters', in which the plural marker *-ye* is distinct from the inanimate-patient case marker *-ley* (the latter, however, conflates animacy and case). Strictly speaking, the pronoun *yeyam* 'to her' is also composed, namely of the third person feminine base form *ye* and the dative case marker *yam*. Example (2b) is one we have already encountered before (p. 11). Here, the relative pronoun, *sinā* 'of/about which' is inflected for genitive case, and stress on the usually unstressed last syllable suprasegmentally marks that this form is contracted from *sileyena* (*si-ley-ena*, REL-P.INAN-GEN).

So far, we have concentrated on suffixes, but there are a number of prefixes as well; (2a) exhibits the past prefix *mə-* (which is actually redundant in this case). There are also demonstrative prefixes on nouns, however. In the following example, the prefix *eda-* 'this-' joins the noun *peham* 'carpet' to indicate a specific carpet.

(3)

Le	*no*	*intoyyang*	*eda-peham.*
Le	no	int-oy=yang	eda=peham-Ø
PT.INAN	want	buy-NEG=1SG.A	this=carpet-TOP

'I do not want to buy this carpet.'

Besides prefixes and suffixes, Ayeri also possesses at least one grammatical morpheme of the kind Zwicky (1977) calls a 'bound word'. Bound words are cases where morphemes which are

> always bound and always unaccented show considerable syntactic freedom, in the sense that they can be associated with words of a variety of morphosyntactic categories. Frequently, such a *bound word* is semantically associated with an entire

> consituent while being phonologically attached to one word of this constituent, and ordinarily the bound word is located at the very margins of the word, standing outside even inflectional affixes. (6)

This is the case with the marker 𑄃𑄨𑄢𑄧 *manga*, which is treated as an independent word, but can modify verbs and prepositions—heads of verb phrases (VPs) and prepositional phrases (PPs), respectively—is unstressed and appears at the margin of its modification target:

(4) a.

Ang	*manga*	*yavaya*	*ayon*	*bariley.*
Ang	manga	yava-ya	ayon-Ø	bari-ley
AT	PROG	roast-3SG.M	man-TOP	meat-P.INAN

'The man is roasting meat.'

b.

Ya	*mətapyyāng*	*maritay*	*misley*	*manga*	*luga*	*bari.*
Ya	mə-tapy=yāng	maritay	mis-ley	manga	luga	bari-Ø
LOCT	PST-put=3SG.M.A	before	spit-P.INAN	DYN	between	meat-TOP

'The meat, he had put a spit through it before.'

In (4a), 𑄃𑄨𑄢𑄧 *manga* modifies the verb 𑄬𑄨𑄢𑄧 *yava-* 'roast' and indicates that this is a temporarily ongoing action, like the English progressive, except not as strongly grammaticalized.[1] In (4b), 𑄃𑄨𑄢𑄧 *manga* modifies the preposition, on the other hand, to indicate that it is dynamic: 𑄟𑄮𑄢𑄧 *luga* by itself means 'among, between', while its dynamic form 𑄃𑄨𑄢𑄧𑄟𑄮𑄢𑄧 *manga luga* means 'through; during, for'.

As we have seen in the examples above, person suffixes on verbs are single morphemes that encode more than one property, for example 𑄍𑄨𑄢𑄧 *-yeng* encodes the person features third person, feminine, singular, and agent. Personal pronouns, of which the person clitics on verbs are an instance, are the main case of fusion among agglutination in Ayeri, although some of the forms, like 𑄍𑄨𑄢𑄩 *yeyam* 'to her' above, can be decomposed into root and suffix without problem.[2]

Perpendicular to the axis isolation–agglutination runs the axis analytic–synthetic. On the latter axis, Ayeri scores mostly as *synthetic*, since it prefers compactness over spreading a construction over several words, though it does not incorporate object noun phrases (NPs) and it is not possible to form 'sentence-words'

[1] I suppose, a better parallel is the so-called *rheinische Verlaufsform* 'Ripuarian progressive' (*sein* 'be' + *am/beim* 'at the' + infinitive) in German, a construction common in the colloquial language which parallels the English progressive construction and is not yet fully grammaticalized (Eisenberg et al. 2016: 435). Speakers will thus accept both *Er lernt gerade*, literally 'He studies right now', and *Er ist am Lernen* 'He is studying'.

[2] Originally, Ayeri's personal pronouns were indeed agglutinative as well, so 𑄍𑄢𑄧 *yeng* 'she' used to be 𑄀𑄨𑄍𑄢𑄧 *iyeang* (*iy-e-ang*, 3SG-F-A). This also gives an explanation to Boga et al. (2016)'s observation that Ayeri's plural pronouns are formed "[v]ielleicht sogar zu regelmäßig" ([15]; 'possibly in an even too regular way').

either, so it is not going so far as to be polysynthetic (Comrie 1989: 45–46). It is nonetheless theoretically possible, due to suffixation being a prominent pattern, to form foot-long words like

(5) *da-mətahasongoyyang-ikan*
da=mə-taha-asa-ong-oy=yang=ikan
such=PST-have-HAB-IRR-NEG=ISG.A=much

'I would not much used to have had such'

Cases of analytic morphology are compound prepositions as we have seen with ᜋᜈᜒᜄᜓ *manga luga* 'through' in (4b), but verbs as well show analytic structures not only with the progressive marker, but also with modals:

(6) *Ming saboyyang dabas.*
Ming saha-oy=yang dabas
can come-NEG=ISG.A today

'I can't come today.'

Most of the information the VP contains in this example is marked on the content verb, ᜐᜑᜊ᜔ *saha-* 'come', except for ability, which is expressed by the particle ᜋᜒᜎᜈ᜔ *ming* 'can'. ᜋᜒᜎᜈ᜔ *ming* is an uninflected form of the verb expressing ability and may be counted as an auxiliary verb in that the full semantic content of the VP is spread out over two verb forms, one major, one minor—this probably should not be understood as a serial verb construction, however (Aikhenvald 2006).[3] Consider also the following example in which ᜋᜒᜎᜈ᜔ *ming* is inflected like a regular verb:

(7) *Da-mingya ang Diyan.*
Da=ming-ya ang Diyan.
so=can-3SG.M A Diyan

'Diyan can (do it).'

3.2 Morphological processes

3.2.1 Prefixation

Prefixes in Ayeri apply mainly to verbs, but nouns, pronouns, adjectives and conjunctions as well can appear with them, some of which may be clitics; reasons for their being clitics will be given at the appropriate cases in the sections on the various

[3] ᜋᜈᜓ *manga* has, in fact, a verbal counterpart ᜋᜈᜓ᜔ *manga-* 'move; remove' as well, which presumably served as the origin of both the progressive and the dynamic marker.

parts of speech. With verbs, prefixes that are most certainly 'true' prefixes—that is, morphemes that have been semantically bleached by grammaticalization to the point where they only express grammatical functions (Lehmann 2015: 157ff.) and which subcategorize words rather than phrases (Klavans 1985: 117)—are the tense prefixes marking both three degrees of past and future tense, for example:

(8) *Ang səsarāyn ya Makapetang.*
Ang sə-sara=ayn.Ø ya Makapetang
AT FUT-go=IPL.TOP LOC Makapetang

'We will go to Makapetang.'

Here, the prefix ᜐᜒ *sə-* marks future tense on the verb, ᜐᜇ *sara-* 'go'. The other tense prefixes are ᜃᜒ *kə-* (NPST), ᜋᜒ *mə-* (PST), ᜓ *və-* (RPST), and ᜉ *pa-* (NFUT) and ᜈᜒ *ni-* (RFUT). Besides this set of prefixes, there are also a number of proclitics that can appear with verbs, though not exclusively. These are the anaphora ᜇ *da-* 'thus, so, such' and the reflexive marker ᜐᜒᜆᜅ᜔ *sitang-* 'self':

(9) *Da-mingya ang Diyan.*
Da=ming-ya ang Diyan.
so=can-3SG.M A Diyan

'Diyan can (do it).'

(10) *Sitang-kecāng.*
Sitang=ket=yāng
REFL=wash=3SG.M.A

'He washes *himself*.'

ᜐᜒᜆᜅ᜔ *sitang-* can also be used as a preverb in situations where the agent is also the instrument, so both of the following two sentences are equivalent in meaning:

(11) a. *Sa apicāng nanga ikan sitang-yari.*
Sa apit=yāng nanga ikan sitang=yari
PT clean=3SG.A house complete REFL=3SG.M.INS

'He cleaned the whole house by himself.'

b. *Sa sitang-apicāng nanga ikan.*
Sa sitang=apit=yāng nanga ikan
PT REFL=clean=3SG.A house complete

(idem)

Example (11a) shows the more common application of ᜐᜒᜆᜅ᜔ *sitang-*, that is, as a reflexive modifier of pronouns. The prefix ᜇ *da-* can as well be used with noun phrases and is part of the demonstrative set of prefixes, ᜇ *da-* 'such', ᜎᜇ *eda-* 'this', and ᜀᜇ *ada-* 'that':

(12) *eda-ganang*
eda=gan-ang
this=child-A

'this child'

The demonstrative prefixes are also used to form the demonstrative pronouns ᜁᜇᜈ᜔ᜌ *edanya* 'this one', ᜀᜇᜈ᜔ᜌ *adanya* 'that one' and ᜇᜈ᜔ᜌ *danya* 'such one'. A special case in this regard is the postposition ᜇ᜔ᜌᜒᜀ *da-nārya* 'in spite of, despite' where ᜇ᜔ *da-* combines with the conjunction ᜈᜌᜒᜀ *nārya* 'but, although, except'. Originally, ᜇᜒᜃᜉᜐ *dikapisa* 'respective' is derived from ᜇ᜔ *da-* + ᜁᜃᜉᜐ *ikapisa* 'bound, dependent', which is an example of a combination with an adjective. There is also a fixed adverbial expression using one of these prefixes, ᜁᜇᜒᜆᜌᜓᜇᜌ᜵ *eda-tadayyam* 'for the time being, for now' (this=time-DAT).

Last but not least, the prefix ᜃᜓᜒ *ku-* 'like, as though' can be used with both adjectives and nouns (or, more precisely, phrases containing nominals):

(13) a. *ku-koyaya*
ku=koya-ya
like=book-LOC

'like in a book'

b. *ku-prasi*
ku=prasi
like=sour

'as though (it were) sour'

An example of a set-phrase adverbial consisting of ᜃᜓᜒ *ku-* and a verb is ᜃᜓᜒᜌᜈᜐ *ku-nasya* 'as follows', ᜌᜈᜐ᜔ *nasy-* meaning 'follow'. What is curious here is that this fossilized form is lacking person marking and is just extended with an epenthetic *-a* since *-sy* is not a permissible coda. The expected form would be *ᜃᜓᜒᜌᜈᜌᜂᜎᜒᜄ᜵ **ku-nasyareng* (like=follow=3SG.INAN.A).

Following Klavans (1985), who suggests that clitics best be defined as "affixation at the phrasal level" (117), a very common kind of prefix to the verb *phrase* are the topic markers. They are counted as parts of the VP but do not interact with it regarding stress assignment (they are always unstressed) while always being in an initial position, preceding any other preverbal elements:

(14) a. *Ang tahanya tamanley.*
Ang tahan-ya taman-ley
AT write-3SG.M letter-P.INAN

'He writes a letter.'

b. *Ang mətahanya tamanley.* 'He wrote a letter.'

c. *Ang manga mətahanya tamanley.* 'He was writing a letter.'

d. *Ang manga no mətahanya tamanley.* 'He was wanting to write a letter.'

3.2.2 Suffixation

As a largely agglutinative language, most grammatical marking in Ayeri is done by means of suffixes. These occur mainly with nouns and verbs, however, quantifiers take the shape of suffixes as well. Quantifiers, then, may modify content words almost regardless of their part of speech—noun, verb, adjective or adverb. The most pervasive examples of suffixation are certainly those of case marking on nouns and of person marking on verbs, for example:

(15)

Sa	*pəharuyang*	*va*	*manga*	*miday*	*tangya*	*vana*	*suyareri,*	*vimyon!*
Sa	pə-haru=yang	va.Ø	manga	miday	tang-ya	vana	suyar-eri,	vimyon
PT	NFUT-beat=1SG.A	2SG.TOP	DYN	around	ears-LOC	2SG.GEN	ladle-INS,	monkey!

'I'll beat you around your ears with a ladle, you monkey!'

This example shows marking of *tang* 'ears' with the locative case suffix *-ya* and the marking of *suyar* 'ladle' with the instrumental case suffix *-eri*; the previous examples already provide instances of the exceedingly common markers for agent and patient case, *-ang* and *-as*, respectively. Besides case, nouns can also be marked for plural with the suffix *-ye*, and verb roots may be extended by the mood and aspect markers *-ong* (IRR), *-asa* (HAB) and *-oy* (NEG), the last of which is the most frequently occurring one. The mood suffixes can also be stacked, leading to the long word in (5) above. Person marking on verbs is realized as agreement suffixes or of clitic personal pronouns depending on whether an agent NP proper is present or not for the verb to agree with. In (15), a cliticized agent pronoun *-yāng* 'he' (3SG.M.A) appears.

As mentioned above, quantifiers appear as enclitics on almost any type of content word, like on the adverb *para* 'fast' in the following example:

(16)

Tigalyeng	*para-ma.*
Tigal=yeng	para=ma
swim=3SG.F.A	fast=enough

'She swims fast enough.'

3.2.3 Reduplication

There are two patterns of reduplication for verbs, one with complete reduplication of the imperative form to create a hortative statement (17a), and one with partial

reduplication as a way to express that an action takes place again, that is, partial reduplication expresses a iterative, as it were (17b). The imperative iterative, then, has a hortative function as well (17c):

(17) a. *naru-naru*
naru∼nara-u
HORT∼speak-IMP

'let us speak'

b. *na-narayeng*
na∼nara=yeng
ITER∼speak=3SG.F.A

'she speaks again'

c. *na-naru*
na∼nara-u
ITER∼speak-IMP

'let us speak again'

With nouns, full reduplication is used to create a diminutive form (18a), though some reduplications are also lexicalized and may use roots from other parts of speech as well to form nouns, for instance, the words in (18b–d). There are also a number of adjectives for which there exists a lexical reduplication with an intensifying meaning; (19) lists a few examples. This, however, is not a productive derivation strategy.

(18) a. ᨿᨶᩮ *veney* 'dog' → ᨿᨶᩮ᩠ᨿᨶᩮ *veney-veney* 'little dog, doggie'
b. ᨷᩢ *gan* 'child' → ᨷᩢ᩠ᨷᩢ *gan-gan* 'grandchild'
c. ᨠᩩᨱᨦ *kusang* 'double (adj.)' → ᨠᩩᨱᨦ᩠ᨠᩩᨱᨦ *kusang-kusang* 'model'
d. ᨿᩅ᩵ *build* " → ᨿᩅ᩠᩵ᨿᩅ *veha-veha* 'tinkering'

(19) a. ᨷᨷᩢ *apan* 'wide' → ᨷᨷᩢ᩠ᨷᨷᩢ *apan-apan* 'extensive'
b. ᨠᩮᨻᩤ *kebay* 'alone' → ᨠᩮᨻᩤ᩠ᨠᩮᨻᩤ *kebay-kebay* 'all alone'
c. ᨸᩤᩈᩮ *pisu* 'tired' → ᨸᩤᩈᩮ᩠ᨸᩤᩈᩮ *pisu-pisu* 'exhausting'

3.2.4 Suprasegmental modification

As written above (section 1.1.2), case agreement on a complex-marked relative pronoun can drop out under certain circumstances and is replaced by compensatory stress on the secondary case marker, which lengthens the syllable's nucleus vowel:

(20) … *tamanley* *sinā* *(*sina)* *ang* *ningay* *tamala* *vās*
… [taman-ley]$_1$ si-Ø$_1$-na (*si-na$_1$) ang ning=ay.Ø tamala vās
… letter-P.INAN REL-PT.INAN-GEN (*REL-GEN) AT tell=1SG.TOP yesterday 2SG.P

'… the letter which (*whose) I told you about yesterday'

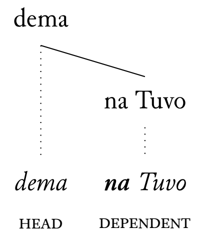
This can be reinterpreted so that vowel length/stress itself is what signifies the agreement of the relativizer with the preceding NP. Which grammatical role the relativizer's head instantiates as an agreement controller is essentially underspecified, hence I will gloss it as -AGR in the following example instead of as full -P.INAN:

(21) /ˌsi.leɪ.ˈena/ → /si.ˈna(ː)/
/si-leɪ-ena/ → /si-ˈ-na(ː)/
REL-P.INAN-GEN REL-AGR-GEN

Since *na* as a light syllable cannot be stressed in word-final position under normal circumstances, it has to lengthen to *nā*.

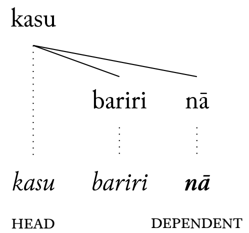
3.3 Marking strategies

With regards to the dichotomy head–dependent marking, Ayeri is rather thoroughly dependent marking, albeit with the exception of agreement morphology on the verb. Dependent marking is exhibited, for instance, in the expression of possessive relationships, where the dependent is marked for genitive case:

(22) a.


dema ***na*** *Tuvo*
dema **na** Tuvo
aunt **GEN** Tuvo

'Tuvo's aunt'

b.


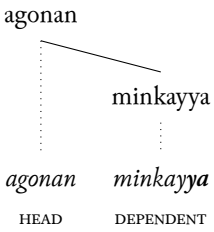
kasu *bariri* ***nā***
kasu bari-ri **nā**
basket meat-INS 1SG.**GEN**

'my basket of meat'

In (22a), *Tuvo* is grammatically in possession of her *dema* 'aunt'; the possessee forms the head of the phrase while it is modified by the possessor, which receives the marking. In (22b), *kasu* 'basket' forms the head and thus also the possessee while *nā* 'my' serves as the dependent possessor; the genitive case is, then again, marked on the dependent. A further example of dependent marking is the locative case, which is marked on the prepositional object while the preposition itself, as the head of the PP, does not receive marking:

(23) *agonan* *minkay**ya***
agonan minkay-**ya**
outside village-**LOC**

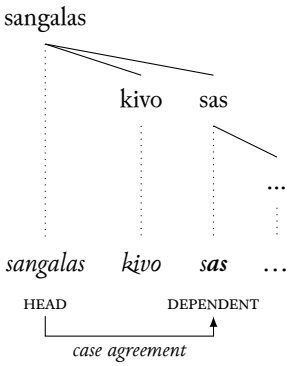
'outside of the village'



The relativizer, likewise, may agree in case with the NP in the matrix clause to which it links the relative clause. This typically happens mainly in formal language and—in terms of linear succession of words at the surface level of the clause—if the relativizer cannot be immediately adjacent to the NP which the relative clause modifies, for example, when an adjective or a possessive pronoun is following the noun:

(24) *sangalas* *kivo* ***sas*** …
sangal-as kivo s-**as** ...
room-P small REL-**P** ...

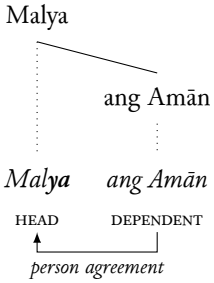
'the small room which ...'



The only instance of head-marking there is in Ayeri is person-marking on the verb, which manifests when the NP following the verb (agent or patient) is not pronominal and thus there is no pronoun to cliticize to the verb stem, but the verb still receives a suffix that indicates a relation with, usually, the agent NP:

(25) *Mal**ya*** *ang* *Amān.*
Mal-**ya** ang Amān
sing-**3SG.M** A Amān

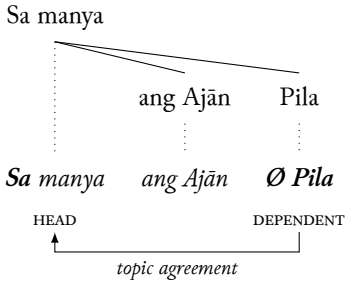
'Amān sings.'



Sentences containing more than one NP also have topic marking on the verb, so that the verb agrees with one of the NPs in topicality. This may be the NP it has person agreement with or any other NP. The topicalized NP as a dependent of the

verb is, in turn, zero-marked, so that the marking relationship for topics is bilateral and thus mixed:

(26) ***Sa*** *manya* *ang Ajān* ***Pila.***
Sa man-ya ang Amān **Ø** **Pila**
PT greet-3SG.M A Ajān **TOP** **Pila**
'Pila, Ajān greets her.'



In this example, the verb exhibits canonic agreement with the agent, ᜀᜅ᜵ᜇᜒᜈ᜔ *Ajān*, in person, gender, and number. It is additionally marked for a patient topic, ᜉᜒᜎ *Pila*, and thus serves as an agreement target for two different controller NPs. The agreement relation is of a different kind for each of the two NPs, however.

4 Grammatical categories

While the previous chapter was about general mechanisms of marking in Ayeri, this chapter will dive into the various parts of speech in order to define their morphology with a closer look. I will begin with nouns as the main carriers of meaning, then deal with other parts of speech that regularly feature in or in combination with the noun phrase—pronouns, adjectives, and adpositions. Following this, there will be a discussion of verbs and adverbs before moving on to numerals and conjunctions.

4.1 Nouns

Nouns in Ayeri have *gender* and *number* as their inherent grammatical properties. Besides common nouns, there are, of course, also proper nouns (that is, names) and nominalizations. Nouns, as the heads of NPs, are also assigned *case* by the verb, which is a third grammatical property they display. For an illustration of the declension paradigms, compare Figures 4.1–4.4.

4.1.1 Gender

Grammatical gender in Ayeri consists of two tiers which are subdivided into four classes based on a mixture of semantic and ontological properties, see Figure 4.5. The animate gender refers, broadly speaking, to entities that are considered alive or are closely associated with living things, such as events, concepts, or activities executed or connected to them. The 'masculine' and 'feminine' subcategories are applied to humans, animals whose sex is known (for example on behalf of breeding them or keeping them as pets), and gods—basically anything that shows sexual dimorphism or is assumed to be an exponent of it as well as nouns referring to such entities in a functional way, for instance, ཨཝ་ *badan* 'father' and ཨཱ་ *māva* 'mother'. The remainder falls into the 'neuter' category—plants, for instance, body parts, or

Figure 4.1: Declension paradigm for *badan* 'father' (animate; consonantal root)

	Singular		Plural	
TOP	*badan*	'the father'	*badanye*	'the fathers'
A	*badanang*	'father'	*badanjang*	'fathers'
P	*badanas*	'father' (obj.)	*badanjas*	'fathers' (obj.)
DAT	*badanyam*	'to the father'	*badanjyam*	'to the fathers'
GEN	*badanena*	'of the father'	*badanyena*	'of the fathers'
LOC	*badanya*	'at the father'	*badanjya*	'at the fathers'
CAUS	*badanisa*	'due to the father'	*badanjisa*	'due to the fathers'
INS	*badaneri*	'with the father'	*badanyeri*	'with the fathers'

Figure 4.2: Declension paradigm for *māva* 'mother' (animate; vocalic root)

	Singular		Plural	
TOP	*māva*	'the mother'	*māvaye*	'the mothers'
A	*māvāng*	'mother'	*māvajang*	'mothers'
P	*māvās*	'mother' (obj.)	*māvajas*	'mothers' (obj.)
DAT	*māvayam*	'to the mother'	*māvajyam*	'to the mothers'
GEN	*māvana*	'of the mother'	*māvayena*	'of the mothers'
LOC	*māvaya*	'at the mother'	*māvajya*	'at the mothers'
CAUS	*māvaisa*	'due to the mother'	*māvajisa*	'due to the mothers'
INS	*māvari*	'with the mother'	*māvayeri*	'with the mothers'

animals whose sex is unknown. The 'inanimate' category typically contains materials and things, such as tools. Furthermore, animals and plants change their category to inanimate as well if they serve as food. There are exceptions to either group, where elements appear in them for no obviously discernable reason. In order to illustrate, here are a few examples for each category:

(1) a. Animate masculine:
badan 'father', *netu* 'brother', *aguyan* 'rooster', *Ajān*, *Latun*;

b. Animate feminine:
māva 'mother', *kina* 'sister', *aguvay* 'hen', *Maha*, *Trānay*;

c. Animate neuter:
adang 'palm tree', *bino* 'color', *ikam* 'deer', *kadān* 'harvest', *cān* 'love', *nanga* 'house', *tampu* 'luck', *yila* 'foot';

d. Inanimate:

Figure 4.3: Declension paradigm for *ḳirin* 'street' (inanimate; consonantal root)

	Singular		Plural	
TOP	*ḳirin*	'the street'	*ḳirinye*	'the streets'
A	*ḳirinreng*	'street'	*ḳirinyereng*	'streets'
P	*ḳirinley*	'street' (obj.)	*ḳirinyeley*	'streets' (obj.)
DAT	*ḳirinyam*	'to the street'	*ḳirinjyam*	'to the streets'
GEN	*ḳirinena*	'of the street'	*ḳirinyena*	'of the streets'
LOC	*ḳirinya*	'at the street'	*ḳirinjya*	'at the streets'
CAUS	*ḳirinisa*	'due to the street'	*ḳirinjisa*	'due to the streets'
INS	*ḳirineri*	'with the street'	*ḳirinyeri*	'with the streets'

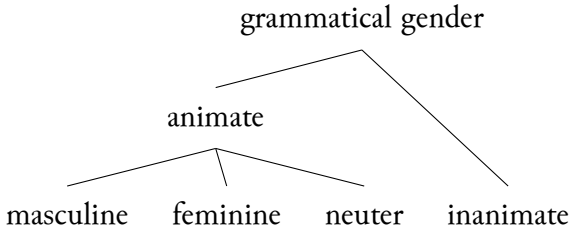
Figure 4.4: Declension paradigm for *pera* 'measure' (inanimate; vocalic root)

	Singular		Plural	
TOP	*pera*	'the measure'	*peraye*	'the measures'
A	*perareng*	'measure'	*perayereng*	'measures'
P	*peraley*	'measure' (obj.)	*perayeley*	'measures' (obj.)
DAT	*perayam*	'to the measure'	*perajyam*	'to the measures'
GEN	*perana*	'of the measure'	*perayena*	'of the measures'
LOC	*peraya*	'at the measure'	*perajya*	'at the measures'
CAUS	*peraisa*	'due to the measure'	*perajisa*	'due to the measures'
INS	*perari*	'with the measure'	*perayeri*	'with the measures'

ahal 'sand', *hema* 'egg', *kahan* 'spear', *melung* 'yogurt', *nusān* 'damage', *payutān* 'mathematics'.

There are also a number of doublets like French *le livre* 'the book' and *la livre* 'the pound', for instance, *banan* (an.) 'kindness, charity' or *bino* (an.) 'color' on the one hand, and *banan* (inan.) 'quality' or *bino* (inan.) 'paint' on the other. Gender is reified by case marking as well as verb agreement; it is not possible to read the gender of a noun from its phonological makeup. The following example illustrates differences in case marking and agreement (inherent information on grammatical features underneath the NPs):

Figure 4.5: Grammatical genders in Ayeri



(2) a.

Ang	*konja*	*badan*	*hemaley.*
Ang	kond-ya	badan-Ø	hema-ley
		[3SG.M.AN]	[3SG.INAN]
AT.AN	eat-3SG.M.AN	father-TOP	egg-P.INAN

'Father eats an egg.'

b.

Sa	*tombara*	*kahanreng*	*burang.*
Sa	tomb-ara	kahan-reng	burang-Ø
		[3SG.INAN]	[3SG.N.AN]
PT.AN	kill-3SG.INAN	spear-A.INAN	animal-TOP

'The animal, the spear kills it.'

In example (2a), the noun in the agent NP, ᓃᐦᔨ *badan* 'father', bears the features [+ ANIMATE, + MASCULINE], which triggers the animate agent topic agreement marker ᓐᓄᓗ *ang* on the verb, since the agent NP is also topicalized. The verb also agrees in person and number with the agent NP by way of the person marker ᐧᐃ *-ya* for third person singular masculine. The object of the sentence, ᕆᐃᓇ *hema* 'egg', on the other hand bears the feature [– ANIMATE], so it receives the inanimate patient case marker ᐧᓀᒡ *-ley* rather than its animate counterpart ᐧᐊᓐ *-as*.

In (2b), on the other hand, we see an inanimate agent, ᓴᐦᐊᔨ *kahan* 'spear', so the verb receives the marker ᐧᐊᓂ *-ara* for third person singular inanimate rather than its animate neuter counterpart ᐧᐁ *-yo*. The (non-topicalized) NP's case marking shows that the agent of the clause is inanimate: ᓴᐦᐊᔨ *kahan* carries the marker ᐧᓀᓄᓗ *-reng*, which marks it as an inanimate agent. The object of the sentence, ᐒᓀᓄᓗ *burang* 'animal', is also the topic, hence topic agreement on the verb uses the marker ᓂ *sa* according to the NP being animate, rather than its inanimate counterpart ᒡ *le*.

4.1.2 Number

Ayeri only distinguishes singular and plural in nouns, which receive plural marking; verbs, then, agree with agent NPs in number in the canonical case. Ordinarily, nouns in Ayeri are countable, however, there is also a group of uncountable nouns

as well as a (small) group of nouns which are always plural. As above, I will list a few words from each group for illustration:

(3) a. Countable nouns:

ajam 'toy' — *ajamye* 'toys',
devo 'head' — *devoye* 'heads',
inun 'fish' — *inunye* 'fish' (pl.),
netu 'brother' — *netuye* 'brothers';

b. Uncountable nouns:
ahal 'sand', *bakay* 'stuff', *gahān* 'hope', *mingan* 'ability';

c. Plurale tantum nouns:
burang 'lifestock, cattle',[1] *ganengan* 'siblings', *keynam* 'people', *tang* 'ears'.

Most concrete things that exist as discrete entities are countable, also, for instance, animals and lifestock—fish, deer, sheep etc. are thus countable, unlike in English; pants, pliers, scissors, glasses, etc. are by default singular as well. Uncountable, on the other hand, are materials in general or abstract concepts. There are also a number of nouns which are plural by default, most notably entities which often occur in groups, but there is as well the odd word for which there seems to be no reason to be included in this group, for instance, *bino* 'paint', and *gimbay* 'sorrows'. A few body parts are also plurale tantum nouns, especially those which occur in pairs (*niva* 'eye' is a notable exception).

As demonstrated in (3a), the noun plural marker is *-ye*, which in native orthography also occurs in the variant or . As described above (section 1.1.1, p. 7), the plural marker may also be reduced to [dʒ] ⟨-j⟩ before case suffixes that begin with /j/ or with a vowel other than /e/, like *-ang* (A) or *-yam* (DAT):

(4) a. *diranang* (uncle-A) + *-ye* (PL)
→ *diranjang* (uncle-PL-A),

b. *diranena* (uncle-GEN) + *-ye* (PL)
→ *diranyena* (uncle-PL-GEN),

c. *diranyam* (uncle-DAT) + *-ye* (PL)
→ *diranjyam* (uncle-PL-DAT).

For pluralia tantum, to express a singular entity, it is always possible to use a genitive phrase like — … *-ena men* 'one of …' (…-GEN one), for instance:

1 Specifically in this meaning; *burang* can also simply mean 'animal', in which case there is a plural form *burangye* 'animals'.

(5) a.

Nupayon	*tangang*	*nā.*
Nupa-yon	tang-ang	nā
hurt-3PL.N	ears-A	1SG.GEN

‘My ears hurt.’

b.

Na	*nupareng*	*tang*	*nā*	*men.*
Na	nupa=reng	tang-Ø	nā	men
GENT	hurt=3SG.INAN.A	ears-TOP	1SG.GEN	one

‘Of my ears, it hurts one.’

Number in nouns can also be manipulated by quantifiers which attach to declined nouns as suffixes. In this case, when plurality is indicated by the quantifier, the noun is not additionally marked for number; the verb, however, keeps agreeing in number:

(6) a.

Ajayon	*ganjang*	*kivo.*
Aja-yon	gan-ye-ang	kivo
play-3SG.N	child-PL-A	small

‘The small children are playing.’

b.

Ajayon	*ganang-ikan*	*kivo.*
Aja-yon	gan-ang=ikan	kivo.
play-3SG.N	child-A=many	small

‘Many small children are playing.’

Likewise, when nouns are modified by numerals, plurality is not normally marked again on the noun. In example (7a), we see a plural noun, *nanga* ‘house’, and in (7b) the same phrase is repeated again with plurality implied by the use of a numeral, *sam* ‘two’; the plural noun itself appears unmarked in its singular form in this case.

(7) a.

Ang	*no*	*vehya*	*sitang-yām*	*nangajas*	*veno*	*nay*	*hiro.*
Ang	no	veh=ya.Ø	sitang=yām	nanga-ye-as	veno	nay	hiro
AT	want	build-3SG.M.TOP	self=3SG.M.DAT	house-PL-P	pretty	and	new

‘He wants to build himself pretty new houses.’

b.

Ang	*no*	*vehya*	*sitang-yām*	*nangās*	*sam*	*veno*	*nay*	*hiro.*
Ang	no	veh=ya.Ø	sitang=yām	nanga-as	sam	veno	nay	hiro
AT	want	build-3SG.M.TOP	self=3SG.M.DAT	house-P	two	pretty	and	new

‘He wants to build himself two pretty new houses.’

An exception to this is the use of words for the numeral powers, like *lan* ‘dozen’, *menang* ‘gross’, *samang* ‘myriad’, etc. in an unspecified way like ‘dozens of people’. In this case, to convey that the numeral is not to be understood

as a precise value, the modified noun will appear in the plural—even if it is a plurale tantum like ᜃᜒᜈᜋ᜔ *keynam* 'people':

(8) *Bengyon* *keynamjang* *menang.*
Beng-yon keynam-ye-ang menang
attend-3SG.N people-PL-A gross

'Hundreds of people attended.'

As we have seen in various examples above, proper nouns in Ayeri do not receive inflection for case by suffixes as common nouns do, and for the purpose of number they are treated as uncountable in Ayeri—they resist inflection by suffixation, marking their special status.[2] However, they can still be modified by quantifiers and quantifying suffixes; verb agreement as well can be used to indicate plurality:

(9) a. *Sahayan* *cabo* *ekeng* *ang* *Yan.*
Saha-yan cabo ekeng ang Yan
come-3PL.M late too A Yan

'The Yans are coming too late.'

b. *Ang* *apatang* *sa* *Yan-ikan.*
Ang apa=teng sa Yan=ikan
AT laugh=3PL.F.A P Yan=all

'They laughed at (all) the Yans.'

4.1.3 Case

As demonstrated in the declension tables at the beginning of this section (Figures 4.1–4.4), Ayeri's NPs are marked for case, which is governed by the verb. Since Ayeri uses a split alignment system with some additional complications, it is not very straightforward, in my opinion, to use the classical labels of nominative (S/A) and accusative (O), or of absolutive (S/P) and ergative (O) for the first two core roles. Hence, I will be using the terms 'agent' and 'patient', which I hope brings about some more clarity, especially when discussing the mentioned complications later on.

Agent

What I call 'agent' here is, to quote Fillmore (2003 [1968]), "the case of the typically animate perceived instigator of the action identified by the verb" (46). Fillmore

[2] Many common names in Ayeri are derived from regular words in the language, so the language needs to have a way to distinguish between regular use and use as a name. For instance, the name ᜌᜒᜈ᜔ *Yan* also means 'boy, son' as a common noun.

himself qualifies this definition, however, in that the "escape qualification 'typically' expresses my awareness that contexts which I will say require agents are sometimes occupied by 'inanimate' nouns like robot or 'human institution' nouns like nation" (Fillmore 2003 [1968]: 46, footnote 31). Payne (1997) summarizes on prototypical agents with regards to their topicality that a "less technical way of expressing this fact is to say that people identify with and like to talk about things that act, move, control events, and have power" (151).

Agents in Ayeri frequently embody the properties quoted by both Fillmore and Payne in this regard, including Fillmore's caveat. However, importantly, 'agent' in Ayeri is a macrorole that may be applied to, for instance, instruments, experiencers, and less typical actors as well, specifically, in absence of more prototypical candidates for agenthood in a sentence. It thus comes very close to a nominative, except that it does not need to be locus of the sentence's topic—although agents very typically are topics, as Payne (1997: 151) goes on to note.[3] Thus, the first NP after the verb in all of the following examples is treated as an agent; the agent is marked by the suffix -ang for animate referents and the suffix -reng for inanimate referents; names and verbal topic agreement are marked by *ang* and *eng*, respectively:

(10) a. ***Ang*** *tinkaya* ***Yan*** *kunangley.*
Ang tinka-ya Ø Yan kunang-ley
AT open-3SG.M TOP Yan door-P.INAN

'Yan opens the door.'

b. *Le tinkaya* ***ayonang*** *kunang.*
Le tinka-ya ayon-ang kunang-Ø
PT open-3SG.M man-A door-TOP

'The door is opened by a/the man',
or: 'The door, a/the man opens it.'

c. ***Eng*** *tinkāra* ***tinkay*** *kunangley.*
Eng tinka-ara tinkay-Ø kunang-ley
AT.INAN open-3SG.INAN key-TOP door-P.INAN

'The key opens the door.'

d. *Tinkāra* ***kunangreng.***
Tinka-ara kunang-reng
open-3SG.INAN door-A.INAN

'The door opens.'

[3] This is the main reason I spoke of 'complications' above: Ayeri's notion of 'subject' is somewhat problematic due to topicalization, which is why I try to avoid complicating terminology by using 'nominative' for agent topics and 'ergative' for agent non-topics, and 'accusative' for patient non-topics and 'absolutive' for patient topics, respectively.

e.

Sā	*tinkaya*	***ang***	***Yan***	*kunangley*	*yan.*
Sā	tinka-ya	ang	Yan	kunang-ley	yan.Ø
CAUT	open-3SG.M	A	Yan	door-P.INAN	3SG.M.TOP

'They make Yan open a/the door',
or: 'Because of them, Yan opens the door.'

In predicative constructions, the constituent which a quality is assigned to or about which a judgement is made is also assigned the agent case:

(11) a.

Tado	***tinkayreng.***
Tado	tinkay-reng
old	key-A.INAN

'The key is old.'

b.

Ang	***Yan***	*nimpayās*	*ban.*
Ang	Yan	nimpaya-as	ban
A	Yan	runner-P	good

'Yan is a good runner.'

With regards to constituents' roles in ditransitive verb frames, donors are represented by agents in Ayeri as well, since they are the origin of whatever is conceptually passed on to the recipient party:

(12)

Le	*ilya*	***ang***	***Yan***	*tinkay*	*yam*	*Cānlay.*
Le	il-ya	ang	Yan	tinkay-Ø	yam	Cānlay
PT	give-3SG.M	A	Yan	key-TOP	DAT	Cānlay

'The key, Yan gives it to Cānlay.'

Patient

Patients are less of a definitional problem than agents, since in transitive sentences, they are very typically undergoers, that is, the constituent that is acted on, affected, or produced by the action expressed by the verb. The patient case is thus the one assigned by default to direct objects—but also to predicative nominals. In ditransitive sentences, the theme is represented by the patient. Animate patients are marked by *-as*, inanimate ones by *-ley*; for names and verbal topic agreement, the markers are *sa* and *le*, respectively:

(13) a.

Ang	*silvye*		*Briha*	***sa***	***Taryan.***
Ang	silv-ye	Ø	Briha	sa	Taryan
AT	see-3SG.F	TOP	Briha	P	Taryan

'Briha sees Taryan.'

b. ***Sa*** *manye* *ang* *Briha* ***Taryan.***
Sa man-ye ang Briha Ø Taryan
PT greet-3SG.F A Briha TOP Taryan

'Taryan is greeted by Briha',
or: 'Taryan, Briha greets him.'

(14) a. *Ang* *rimaye* *Briha* ***kunangley.***
Ang rima-ye Ø Briha kunang-ley
AT close-3SG.F TOP Briha door-P.INAN

'Briha closes a/the door.'

b. ***Le*** *rimaye* *ang* *Briha* ***kunang.***
Le rima-ye ang Briha kunang-Ø
PT.INAN close-3SG.F A Briha door-TOP

'The door is closed by Briha',
or: 'The door, Briha closes it.'

(15) *Ang* *ilya* *Taryan* ***koyaley*** *yam* *Kandan.*
Ang il-ya Ø Taryan koya-ley yam Kandan
AT give-3SG.M TOP Taryan book-P.INAN DAT Kandan

'Taryan gives Kandan a book.'

As the translations of the examples above show, topicalizing the patient can be used to create an effect similar to English's passive voice, except that the patient will not become marked by the agent case for logical reasons—this is a notable difference from the nominative. Even if the agent NP is omitted, the patient NP will not be changed to the agent case, since that would reverse the direction of action:

(16) *Manya* *sa* *Taryan.* ≠ *Manya* *ang* *Taryan.*
Man-ya sa Taryan Man-ya ang Taryan
greet-3SG.M P Taryan greet-3SG.M A Taryan

'Taryan is greeted.' ≠ 'Taryan greets.'

This example shows that the case of the NP will not change, however, the verb will: it now agrees with the next argument in line, the patient NP. It will not do so, however, if the order of arguments is just scrambled, as exemplified by (17). This is to say that the verb does not simply agree with whichever NP follows it, even if it can be assumed that verb agreement in Ayeri developed along similar lines in-world, which will become especially apparent in the discussion of pronouns.[4]

[4] Mismatches in agreement in connection to scrambling such as exemplified by (17b) are to be expected, however, since the brain can only handle so much information between the controller and the target of an agreement relationship. Corbett (2006), notes that with regards

(17) a. *Sa manye Ø Taryan ang Briha.*
Sa man-ye Ø Taryan ang Briha
PT greet-3SG.F TOP Taryan A Briha
person agreement
'Taryan is greeted by Briha',
or: 'Taryan, Briha greets him.'

b. **Sa manya Ø Taryan ang Briha.*
Sa man-ya Ø Taryan ang Briha
PT greet-3SG.M TOP Taryan A Briha
**person agreement*

Besides being the default case for direct objects, the patient case is also assigned to predicative nominals, by analogy with transitive sentences and in spite of the likening nature of the construction:

(18) *Ang Yan **nimpayās** ban.*
Ang Yan nimpaya-as ban
A Yan runner-P good
'Yan is a good runner.'

Dative

The most typical use of the dative is for the recipient NP in a ditransitive clause; as such, it may be a recipient proper or the entity to whose benefit the action is carried out. A number of transitive verbs also use the dative for their object, for example, when it is the target of address. The dative can furthermore be used to mark movement toward a place. The case suffix for datives is ːᵾ -yam for both animate and inanimate entities. Names and verbal topic agreement are marked equally by ᵾ *yam*. Verbs do not exhibit person agreement with dative NPs, since experiencers are treated as agents.

(19) a. *Ang ilya Taryan koyaley **ayonyam.***
Ang il-ya Ø Taryan koya-ley ayon-yam
AT give-3SG.M TOP Taryan book-P.INAN man-DAT
'Taryan gives a book to the man.'

to agreement in NP conjuncts, "distant agreement is rare, and that agreement with the nearest noun phrase or agreement with all (resolution) is much more common" (62). If there were an extensive corpus of texts written by Ayeri speakers, it might be interesting to gather statistics on the number of words between target and controller in relation to the prevalence of agreement mismatches.

b.

Ang	*ilya*		*Taryan*	*koyaley*	***yam***	***Kandan.***
Ang	il-ya	Ø	Taryan	koya-ley	yam	Kandan
AT	give-3SG.M	TOP	Taryan	book-P.INAN	DAT	Kandan

'Taryan gives Kandan a book.'

c.

Yam	*ilya*	*ang*	*Taryan*	*koyaley*	***ayon.***
Yam	il-ya	ang	Taryan	koya-ley	ayon-Ø
DATT	give-3SG.M	A	Taryan	book-P.INAN	man-TOP

'The man is given a book by Taryan',
or: 'The man, Taryan gives him a book.'

The three examples in (19) show the regular use of the dative as the case the recipient of the theme appears in. What distinguishes Ayeri from a pure split-S language is that all constituents can serve as topics, not just agents and patients with regards to their function as syntactic subjects. Thus, it is also possible for dative NPs to appear as topics—person agreement is unaffected by this, though. The following example shows the addressee of a speech act in the dative case; the message is treated as the theme which is passed on:

(20)

Ang	*ningye*	*māva*	*ninganas*	***ganyam***	*yena.*
Ang	ning-ye	māva-Ø	ningan-as	gan-yam	yena
AT	tell-3SG.F	mother-TOP	story-P	child-DAT	3SG.F.GEN

'The mother tells her child a story.'

As mentioned above, the dative can also take on an allative meaning insofar as it marks the target of a motion, as displayed in (21a). As an extention of this means, the adpositional object may as well appear in the dative, since Ayeri cannot distinguish, for instance, 'up' from 'to the top of' with just the preposition, in this case *ling* 'on top of'. With the adpositional object in the locative case (see below), the phrase in (21b) would imply that the man were literally going to the top of the temple, that is, possibly ending up on its roof.

(21) a.

Ang	*nimpye*	*lay*	***māvayam***	*yena.*
Ang	nimp-ye	lay-Ø	māva-yam	yena
AT	run-3SG.F	girl-TOP	mother-DAT	3SG.F.GEN

'The girl runs to her mother.'

b.

Ang	*saraya*	*ayon*	*manga*	*ling*	***natrangyam.***
Ang	sara-ya	ayon-Ø	manga	ling	natrang-yam
AT	go-3SG.M	man-TOP	DYN	top	temple-DAT

'The man goes up to the temple.'

Genitive

The genitive is used to mark possessors; attributive genitives follow the possessee. It can also be used for ablative meanings, that is, to mark the place from which a motion originates, in analogy to the dative's allative use. The genitive is marked on common nouns with the suffix ᱱᱟ *-na*. If a noun stem ends in a consonant, the marker becomes ᱮᱱᱟ *-ena*, compare Figures 4.1–4.4 above. Names and verbal topic agreement are marked by ᱱᱟ *na*. There is no animacy distinction in the genitive case.

(22) a. *Pakur ledanang* ***netuna*** *nā.*
Pakur ledan-ang netu-na nā
sick friend-A brother-GEN 1SG.GEN

'My brother's friend is sick.'

b. *Kopo dilengyereng* ***ajānena.***
Kopo dileng-ye-reng ajān-ena
difficult rule-PL-A.INAN game-GEN

'The rules of the game are difficult.'

c. *Ang nakasyo tamo ibangya* ***na*** ***Niyas.***
Ang nakas-yo tamo-Ø ibang-ya na Niyas
AT grow-3SG.N wheat-TOP field-LOC GEN Niyas

'There is wheat growing on Niyas's field.'

d. ***Na*** *nakasyo tamoang ibangya* ***Niyas.***
Na nakas-yo tamo-ang ibang-ya Ø Niyas
GENT grow-3SG.N wheat-A field-LOC TOP Niyas

'Regarding Niyas, there is wheat growing on his field.'

Futhermore, Ayeri does not make a distinction between alienable and inalienable possession, so that typically inalienable things such as body parts, relatives and family members, or personal items and tools are all treated as described above. Consider the following example for illustration:

(23) *Ang puntaye māva* ***nā*** *mitrangas* ***yena*** *sembari* ***yena.***
Ang punta-ye māva-Ø nā mitrang-as yena semba-ri yena
AT brush-3SG.F mother-TOP 1SG.GEN hair-P 3SG.F.GEN comb-INS 3SG.F.GEN

'My mother is brushing her hair with her comb.'

The above examples show the regular use of the genitive as a marker of possession. The following examples, on the other hand, show the genitive in its ablative function, first without qualification by a preposition, then with the preposition ᱚᱨᱟᱱ *avan* 'at the bottom of', which together with the genitive assumes the meaning 'down from':

(24) a. *Ang sahaya Vetayan* ***rimanena.***
Ang saha-ya Ø Vetayan riman-ena
AT come-3SG.M TOP Vetayan city-GEN

'Vetayan comes from the city.'

b. *Sahu manga avan* ***mehirena,*** *Niva!*
Saha-u manga avan mehir-ena, Niva
come-IMP DYN at.bottom tree-GEN, Niva

'Come down from the tree, Niva!'

Locative

The locative marks basic locations, often the default that is associated with a verb. It is also the case in which adpositional objects normally appear, besides the special cases using the dative and the genitive mentioned above. Common nouns are marked by ꣝ *-ya*;[5] names and verbal topic agreement use the marker ꣟ *ya*. There is no difference made between animate and inanimate referents in the locative.

(25) a. *Ang nedraya paray* ***hinya.***
Ang nedra-ya paray-Ø hin-ya
AT sit-3SG.M cat-TOP box-LOC

'The cat sits in the box.'

b. *Ang naraya Ajān* ***ya*** ***Kaman.***
Ang nara-ya Ø Ajān ya Kaman
AT speak-3SG.M TOP Ajān LOC Kaman

'Ajān speaks to Kaman.'

c. ***Ya*** *mica ang Kaman* ***Visamhinang.***
Ya mit-ya ang Kaman Ø Visamhinang
LOCT live-3SG.M A Kaman TOP Visamhinang

'Kaman lives in Visamhinang',
or: 'Visamhinang is where Kaman lives.'

The example sentences in (25) show locative NPs that are not further specified by adpositions so that the correct interpretation may be dependent on context and the experience of the addressee. Example (25a) is an instance of this circumstance, insofar as experience tells that cats like to sit inside boxes, so further specifying the position with the preposition ꣘꣝ *kong* 'inside' would be emphasizing that the cat is not sitting just anywhere, but really *inside* the box as opposed to on top of it, for instance. The following example has the cat sitting on top of the box:

[5] Older texts still exhibit an allomorph ꣞ *-ea*, used especially in combination with the plural suffix ꣛, giving ꣞꣛ *-yēa*. The modern language uses ꣝꣟ *-jya*.

(26) *Ang nedraya paray ling hinya.*
Ang nedra-ya paray-Ø ling hin-ya
AT sit-3SG.M cat-TOP on.top box-LOC

'The cat sits on the box.'

Ayeri also has a number of postpositions, which do not change marking on the adpositional object, however:

(27) *Ang mican edaya **tenyanya** tan pesan.*
Ang mit-yan edaya tenyan-ya tan pesan
AT live-3PL.M here death-LOC 3PL.M.GEN until

'They lived here until their death.'

Causative

The causative marks the cause or causer of an action, the instigator or the reason on behalf of which an agent is acting. It is thus similar to the agent case, though it does not replace it in Ayeri; verbs do not exhibit person agreement with causers even though their action logically supersedes or precedes that of the agent in the embedded event. Dixon (2000) writes that a "causer refers to someone or something (which can be an event or state) that initiates or controls the activity. This is the defining property of the syntactic–semantic function A (transitive subject)" (30). According to Comrie (1989: 176), the causee—the agent of the event controlled by the causer—normally takes the highest place in the hierarchy of syntactic constituents that is not already filled, in this case, by the causer. This observation, however, is complicated by Ayeri's more or less semantics-based case marking as well as topicalization. In the following, I will give examples of nominal marking for cause as before; a discussion of the morphosyntax of Ayeri's morphological causative constructions will be deferred to the section on valency-increasing operations.

Causers or causes are marked by ːꞵꞩ *-isa* for common nouns; names and verbal topic agreement use the marker ꞩ *sā*. As stated above, verbs do not agree with causers even though they have agent-like semantics. There is no animacy distinction in the marking of causers.

(28) a. *Ang rua sarāyn **seyaranisa.***
Ang rua sara=ayn.Ø seyaran-isa
AT must leave=IPL.TOP rain-CAUS

'We had to leave due to the rain.'

b. *Ang yomāy edaya **sā** **Apican.***
Ang yoma=ay.Ø edaya sā Apican
AT be=1SG.TOP here CAUS Apican

'I am here because of Apican.'

c. ***Sā*** *nimpvāng* *hakasley* ***yan.***
Sā nimp=vāng hakas-ley yan.Ø
CAUT run=2SG.A mile-P.INAN 3PL.M.TOP

'You run a mile because of them',
or: 'Due to them, you run a mile',
or: 'They make you run a mile.'

Regarding the typological oddities mentioned above, example (28c) shows what happens in Ayeri with regards to the marking of causers. Essentially, the causer topic was grammaticalized to express a causation relationship.

Instrumental

The instrumental marks the means by which an action is carried out by an agent. This can be a tool as well as an animate being by whose help the action is brought about. The instrumental thus, in effect, marks secondary agents; verbs, however, never show person agreement with instrumental NPs. Common nouns are marked by ːr̃ *-ri* when ending in a vowel and with ːeṛ̃ *-eri* when ending in a consonant; names and verbal topic agreement are marked by r̃ *ri*. With nouns ending in *-e*, as well as the plural marker ːy *-ye*, there is variation regarding whether ːr̃ *-ri* or ːeṛ̃ *-eri* is used, so that in the case of the plural marker both ːyr̃ *-yeri* and ːȳr̃ *-yēri* occur. In passive-like constructions, it is not grammatical to reintroduce the agent as an instrumental; the agent simply remains in the clause in this case, though as a non-topic constituent.

(29) a. *Ang* *visye* *Pila* *seygoley* ***tihangeri*** *yena.*
Ang vis-ye Ø Pila seygo-ley tihang-eri yena.
AT cut-3SG.F TOP Pila apple-P.INAN knife-INS 3SG.F.GEN

'Pila cuts an apple with her knife.'

b. *Ang* *lihoyya-ma* *badan* ***nihanyeri*** ***(nihanyēri).***
Ang liha-oy-ya=ma badan-Ø nihan-ye-ri (nihan-ye-eri)
AT earn-NEG-3SG.M=enough father-TOP nihan-PL-INS (nihan-PL-INS)

'Father did not earn enough with his fruits.'

c. *Ang* *lingya* *Mindan* *mehiras* ***ri*** ***Kadijān.***
Ang ling-ya Ø Mindan mehir-as ri Kadijān.
AT climb.up-3SG.M TOP Mindan tree-P INS Kadijān

'Mindan climbs a tree with Kadijān's help.'

d. ***Ri*** *tavya* *gino* *ang* *Kan* ***nimpur.***
Ri tav-ya gino ang Kan nimpur-Ø
INST become-3SG.M drunk A Kan wine-TOP

'Kan becomes drunk on the wine',
or: 'The wine, Kan becomes drunk on it.'

The instrumental may also be used for comitative meanings where the instrumental NP describes an attribute of its antecedent, for example:

(30) *Ang pegayo sinya kasuley **bariri** nā?*
Ang pega-yo sinya-Ø kasu-ley bari-ri nā
AT steal-3SG.N who-TOP basket-P.INAN meat-INS ISG.GEN

'Who stole my basket of meat?'

In this case, ꤁ꤢꤟ *bari* is marked as an instrumental since it is an attribute of sorts to ꤈ꤢꤴ *kasu*: the instrumental NP describes what its antecedent contains or entails more specifically: it is a basket *with* meat in it. Note, however, that this comitative use of the instrumental is different from mere accompaniment. Thus, it is not possible to say

(31) **Ang sahaya Ajān **ri** **Pila.***
Ang saha-ya Ø Ajān ri Pila
AT come-3SG.M TOP Ajān INS Pila

to express 'Ajān comes (together) with Pila'. The sentence in (31) would instead imply that Pila helps Ajān to come, for example, because he has a sprained ankle and thus needs support to go places. To express accompaniment, instead, the preposition ꤑꤢꤶꤥ *kayvo* 'with, along, beside' has to be used; the prepositional object appears in the locative case:

(32) *Ang sahaya Ajān **kayvo** **ya** **Pila.***
Ang saha-ya Ø Ajān kayvo ya Pila
AT come-3SG.M TOP Ajān with LOC Pila

'Ajān comes (together) with Pila.'

Theoretically, it should be possible as well to use the instrumental together with prepositions for some kind of prolative meaning. The adposition would indicate the place *by way of* a motion is happening:

(33) *Ang pukay manga luga **lahaneri.***
Ang puk=ay.Ø manga luga lahan-eri
AT jump=ISG.TOP DYN top fence-INS

'I jump over the fence.'

This use of the instrumental is unattested in previous translations into Ayeri, however, but could be considered a stylistic alternative—in the case of the example above, to a construction with the word for 'over', ꤑꤡꤢꤟꤤ *eyrarya*:

(34)

Ang	*pukay*	*manga*	*eyrarya*	*lahanya.*
Ang	puk=ay.Ø	manga	eyrarya	lahan-ya
AT	jump=1SG.TOP	DYN	over	fence-LOC

'I jump over the fence.'

A more literal translation of *manga luga lahaneri* is 'by way of the top of the fence', though without the verbosity of the English translation, as both ways to express the circumstance are about equally long in Ayeri.

Case-unmarked nouns

Case endings are applied to nouns in Ayeri only if the word is actually in a syntactic context where case can be applied. Thus, the unmarked form is the citation form, not the one declined for agent. This is the case when addressing people—one might speak of an unmarked vocative:

(35) a.

Raypu,	***petāya!***
Raypa-u,	petāya
stop-IMP,	idiot

'Stop it, you idiot!'

b.

Sahu	*edaya,*	***Diras!***
Saha-u	edaya,	Diras
come-IMP	here,	Diras

'Come here, Diras!'

Imperative forms have underlying second-person agents, so both the 'idiot' in (35a) and Diras in (35b) would be the implied agents of their sentences, yet neither the noun nor the name are marked by the agent markers *-ang* and *ang*, respectively. Another case where nouns are not necessarily marked for case is attested in translations for the prefix *ku-* 'like, as though' when the phrase acts as an adverb or an object complement:

(36) a.

…	*nay*	*ang*	*mya*	*rankyon*	*sitanyās*	***ku-netu.***
…	nay	ang	mya	rank=yon.Ø	sitanya-as	ku=netu
…	and	AT	be.supposed.to	treat=3PL.N.TOP	each.other-P	like=brother

'… and they shall treat each other like brothers.'[6] (Becker 2011)

b.

…	*ang*	*nunaya*	***ku-vipin***	…
…	ang	nuna=ya.Ø	ku=vipin	…
…	AT	fly=3SG.M.TOP	like=bird	…

'… he (would) fly like a bird …' (Becker 2012: 14)

Strikingly, in example (36a), *netu* 'brother' in *ku-netu* 'like brothers' is not even inflected for plural; its placement after the object is likely an effect of translation: adverbs have a strong tendency to appear right after the verb, and a position immediately to the right of the verb is attested for adjectival object predicatives as well. In (36b), on the other hand, *ku-vipin* 'like a bird' is feasibly interpretable as an adverb, since it follows the verb and acts as a modifier to it, not as a complement.

Nouns may also be unmarked if they act as modifiers in a compound and the head is marked for the NP's case and number, for instance:

(37)	*ralanyeri*	*mapang*
	ralan-ye-ri	mapang
	nail-PL-INS	finger

'with the fingernails'

And lastly and probably most importantly, nouns appear superficially unmarked if topicalized, since the topic marker is -*Ø*:

(38)	*Saru-nama,*	*ang*	*nupoyya*	***veney***	*aruno*	*vās.*
	Sar-u=nama,	ang	nupa-oy-ya	veney-Ø	aruno	vās
	go-IMP=just,	AT	hurt-NEG-3SG.M	dog-TOP	brown	2SG.P

'Just go, the brown dog won't hurt you.'

4.1.4 Prefixes on nouns

All of the nominal morphology we have so far dealt with in this section was suffixing. As mentioned in the previous section already (p. 67), however, there are also a number of prefixes that can be applied to nouns. I have just given two examples of the prefix *ku-* 'like, as though' above, but *ku-* applies not only to nouns themselves. In fact, it rather attaches to whole NPs, which makes it a clitic according to Klavans (1985: 117), and a special clitic in Zwicky's terminology, since no corresponding full form exists in its place, comparable to the English possessive clitic *'s*, for instance (Zwicky 1977: 3, 13; 1985: 295; Zwicky and Pullum 1983: 510). To cite from the Ayeri translation of Kafka's short story "Eine kaiserliche Botschaft" again:

6 The original English text this was translated from has "and should act towards one another in a spirit of brotherhood" (United Nations 1948: Article 1).

(39) … *saylingyāng* *kovaro* *naynay,* *ku-ranyāng* *palung.*
... sayling=yāng kovaro naynay, ku=ranya-ang palung
... progress=3SG.M.A easy also, like=nobody-A else

'... he also got on easily, like nobody else.' (Becker 2012: 12)

In this example, we can see ᜃᜓ᜔ *ku-* attaching to a properly inflected NP adjunct. The NP is case-marked for agent since it can be understood to refer to the verb ᜐᜌᜒᜎᜒᜅ᜔ *sayling-* 'progress' in the main clause, insofar ᜇᜈ᜔ᜌᜏᜅ᜔ ᜈᜒᜈ᜔ᜌᜏᜅ᜔ *ranyāng palung* 'nobody else' can replace ᜌᜏᜅ᜔ *-yāng* 'he' in the main clause.

Besides ᜃᜓ᜔ *ku-*, there are also the demonstrative prefixes ᜇ᜔ *da-* 'such', ᜁᜇ᜔ *eda-* 'this', and ᜀᜇ᜔ *ada-* 'that', which have already been mentioned in the previous section as well. The demonstrative prefixes undergo coalescence with nouns beginning with *a-*, that is, they form phonological words with their hosts for all means and purposes. The demonstrative prefixes are special clitics as well, since no contemporary free form exists.

(40) a. *da-nanga* *kāryo*
da=nanga kāryo
such=house big

'such a big house'

b. *edāyon* *nake*
eda=ayon nake
this=man tall

'this tall man'

c. *ada-envan* *alingo*
ada=envan alingo
that=woman clever

'that clever woman'

Moreover, there is a prefix ᜋᜓ *mə-* in complementary distribution with the demonstrative prefixes, which adds a meaning along the lines of 'just any', 'whatsoever', 'some' to the noun. Note that this prefix is distinct from the morpheme indicating an inspecific quantity, ᜁᜀᜒᜎ᜔ *-aril* 'some'.

(41) a. *Ang* *lampyo* *mə-veney* *kayvo* *kirinya.*
Ang lamp-yo mə=veney-Ø kayvo kirin-ya
AT walk-3SG.N some=dog-TOP along street-LOC

'Some dog is walking along the street.'

b. *Ang* *noyan* *mēntānley* *pegamayayam.*
Ang no=yan mə=entān-ley pegamaya-yam
AT want=3SG.M.TOP some=punishment-P.INAN thief-DAT

'They demanded some kind of punishment for the thief.'

Table 4.1: Compounds in the Ayeri dictionary (Becker 2016a) and their classification (n = 130)

Type	Harmonic		Disharmonic		Total	
Endocentric (N + N)	67	51.54%	2	1.54%	69	53.08%
Endocentric (N + Adj)	18	13.85%	4	3.08%	22	16.92%
Synthetic (V + N)	16	12.31%	4	3.08%	20	15.38%
Coordinative (N + N)	9	6.92%		—	9	6.92%
Exocentric (N + N)	1	0.77%	3	2.31%	4	3.08%
Unclear	6	4.62%		—	6	4.62%
Total	117	90.00%	13	10.00%	130	100%

4.1.5 Compounding

With regards to the classification of compounds, Bauer (2001) gives some helpful typological guidelines. Besides the compound types recognized by Sanskrit grammarians—endocentric (*tatpuruṣa*), coordinative (*dvandva*), adjectival-endocentric (*karmadhāraya*), and exocentric (*bahuvrīhi*)—he also adds synthetic compounds, which Sanskrit did not have (697). Overall, he finds that determinative, or endocentric, compounds are the most common ones in the languages of the world (697), especially if the head refers to a location or source of sorts (702).

Gaeta (2008), then, adds to Bauer's research, based on a larger sample of grammars surveyed, that compounds for the largest part correlate with the constituent order of the language, both regarding the order of verb and object and that of noun and genitive (129–133). Mismatches in headedness occur, but appear to constitute the minority of cases and may often be explained through historical changes in syntax; he discerns for one that "morphology is not autonomous from syntax" (135), and that secondly, "[s]yntax seems to be the motor of change, which may be then reflected in compounds" (135), and that thirdly, lexical conservativism causes atavisms to linger on, reflecting the syntax of earlier stages of the language (138–139).

For the purpose of gaining at least a little insight into which types of compounds Ayeri allows—besides endocentric compounds—I conducted a small (non-exhaustive) survey based on 130 compounds from the Ayeri dictionary (Becker 2016a: Dictionary); Table 4.1 shows the various compound classes and the number of words for each. 'Harmonic' and 'disharmonic', respectively, refer to the order of elements; the order is 'harmonic' if it is following the normal constituent order of the language and 'disharmonic' if it is at odds with it (Gaeta 2008).

Unsurprisingly, the largest number of compound nouns in the sample were endocentric compounds of the regular kind, which means that, just like genitive attributes follow nouns, noun compounds are headed left. Especially compounds

with adjectives are interesting insofar as this is also the normal order for free adjectives, so to illustrate, some tests will be necessary to show that these adjectives form a unit with the head noun and are unable to undergo comparison, for instance. Synthetic compounds exist in Ayeri and produce nouns. These are compounds in which "the modifying element in the compound is (usually) interpreted as an argument of the verb from which the head is derived" (Bauer 2001: 701). There are also a number of coordinative compounds; this group, however, is lexicalized and not productive. Exocentric compounds constitute the minority of the sample. In the following I will give examples for each type.

It needs to be noted that unlike Germanic languages, Ayeri does not allow compounds of arbitrary length to be strung together, like in the following ridiculous but no less real example from (former) German legislation (see, for instance, Süddeutsche Zeitung 2013):

(42) *Rindfleischetikettierungsüberwachungsaufgabenübertragungsgesetz* [German]
Rind-fleisch-etikettierung-s-überwachung-s-aufgabe-n-übertragung-s-gesetz
cow-meat-labeling-LNK-surveillance-LNK-duty-LNK-delegation-LNK-law

'Law on the delegation of duties in the surveillance of beef labeling'

In stark contrast, Ayeri allows only two elements in compounds. Furthermore, this section on compounds is located within the section on nouns because Ayeri almost only possesses compounds involving nouns, and the majority of these also results in a noun.

Endocentric compounds

To start with the largest group, endocentric/*tatpuruṣa* compounds, the bulk of these compounds combines two nouns, one of which is the head which is modified by a dependent noun. As Ayeri exhibits a rather strict head-first word order, it comes as no surprise, according to Gaeta (2008), that most of these compounds follow this order strictly: the second noun modifies the first, which is opposite of how English, for instance, typically operates:

(43) a. *betaynimpur* 'grape' ← *betay* 'berry' + *nimpur* 'wine'
b. *karirayan* 'vertigo' ← *kar* 'fear' + *irayan* 'height'[7]
c. *pikunanding* 'mustache' ← *piku* 'beard' + *nanding* 'lips'
d. *tapayperin* 'sunblind' ← *tapay* 'screen' + *perin* 'sun'

The example words in (43) show that the relationships between the modifier and the head are various: a grape is a berry *used* to make wine from (compare

[7] *irayan*, however, is a transparent nominalization of *iray* 'high'.

Bauer 2001: 702); vertigo is the fear *of* height; a mustache is a beard *located* over the lips (702); and a sunblind is a screen *against* the sun. Bauer (2001) mentions that "there may be special morphophonemic processes which apply between the elements of compounds", such as "phonological merger[s] between the elements of the compound" (695). This also occasionally happens in Ayeri, as the next few example words show:

(44) a. *avararan* 'wetland'
← *avan* 'ground' + *raro* 'wet' + *-an* (NMLZ)

b. *mehimitrang* 'fiber tree'
← *mehir* 'tree' + *mitrang* 'hair, fiber'

c. *ningampinam* 'bedtime story'
← *ningan* 'story' + *pinam* 'bed'

d. *padilamican* 'gravitational force'
← *padilan* 'attraction' + *mican* 'force, power'

There is a modicum of alteration happening in all of the heads of the example words in (44), mostly nasals assimilating to the stop or nasal which the modifier begins with (/n/ + /p/ → /mp/, /n/ + /m/ → /m/), though *avararan* and *mehimitrang* even delete whole coda segments. Bauer (2001: 703) notes that very commonly, genitive and plural markers may form linking elements, though he also gives examples of languages which allow other case markers on the modifying element in languages with head-right order; individual languages may allow even more case inflection. However, this appears not to happen in Ayeri. The only element that comes up time and again in between the two halves of compounds is the nominalizer *-an*, which signifies that the head is being formed by a nominalized root, such as in *padilamican*, where *padilan* 'attraction' is a nominalization of *padil-* 'attract', or in *ningampinam*, where *ningan* 'story' is derived from the verb *ning-* 'tell'. However, since Ayeri is head-first and possessive phrases are dependent marking, genitive or other case marking would be expected on the second element, not the first. Case marking on a compound, however, does not inflect just the modifier, but the whole NP:

(45)

Ang	*ningya*	*sipikanena*	*koyabahisena.*
Ang	ning-ya	sipik-an-ena	koyabahis-ena
AT	talk-3SG.M.TOP	keep-NMLZ-GEN	book.day-GEN

'He talks about keeping a journal.'

koyabahisena in this example is not to be interpreted as 'book of day(s)' but as 'of a day-book'. Inflection between the parts of a compound can happen nonetheless, though. In compounds which are formed ad hoc or which are otherwise transparent in their composition ('loose' compounds), inflection often is de-

ferred to the noun head noun instead of the edge of the compound as a whole; the modifier is treated as an adjunct in this case, and stays uninflected:

(46)

Sa	*trayeng*	*tipin*	*ralanyeri*	*mapang*	*yena.*
Sa	tra=yeng	tipin-Ø	ralan-ye-ri	mapang	yena
PT	scratch=3SG.F.A	itch-TOP	nail-PL-INS	finger	3SG.F.GEN

'The itch, she scratches it with her fingernails.'

Besides noun modifiers, there are also compounds where the modifier is an adjective. In classical Sanskrit terminology, this type is called *karmadhāraya* (Bauer 2001: 698–699).[8] Examples in Ayeri include:

(47)
a. 𑁆𑁆 *kardangiray* 'university' ← 𑁆𑁆 *kardang* 'school' + 𑁆 *iray* 'high'
b. 𑁆𑁆 *marashari* 'witticism' ← 𑁆 *maras* 'phrase' + 𑁆 *hari* 'pithy'
c. 𑁆𑁆 *silvanikan* 'overview' ← 𑁆𑁆 *silvan* 'view' + 𑁆 *ikan* 'whole'
d. 𑁆𑁆 *vipimakārya* 'crow' ← 𑁆𑁆 *vipin* 'bird' + 𑁆 *makārya* 'black'

In all of these cases, the adjective forms a unified lexeme with the head noun, hence it is not comparable, for example:

(48) a.

**kardangiray-eng*	*kardangiray-vā*
kardang-iray=eng	kardang-iray=vā
school-high=COMP	school-high=SUPL
'*higher-school'	'*highest-school'

b.

**marashari-eng*	**marashari-vā*
maras-hari=eng	maras-hari=vā
phrase-pithy=COMP	phrase-pithy=SUPL
'*pithier-phrase'	'*pithiest-phrase'

In fact, it is possible to form 𑁆𑁆 *kardangiray vā* and 𑁆𑁆 *marasari vā*, but they mean 'most universities' and 'most witticisms', respectively; 𑁆 *-eng* 'rather' as a quantifier does not combine with nouns. Since the meaning composed from noun–adjective compounds is often idiomatic, they also cannot be divided as shown above in (46), since a 𑁆𑁆 *kardangiray* 'university' is not a 𑁆𑁆 *kardang* 'school' which is 𑁆 *iray* 'high' in the literal sense, but a school of the highest tier. 𑁆𑁆 *kardangena iray* (school-GEN high), then, can only be interpreted in the literal sense, 'of the high school', but not as 'of the university', which thus can only be 𑁆𑁆 *kardangirayena*.

[8] Bauer also mentions that appositional compounds like *maid-servant*, *woman doctor* and *fighter-bomber* are counted in this category (Bauer 2001: 699). Ayeri, however, does not possess such formations in particular.

In the sample, there were also a few compounds I categorized as noun–noun combinations, which look as though they violate head-first order. All of these involve *sitang* 'self' as a modifier:

(49) a. *sitanglentan* 'vowel'
← *sitang* 'self' + *lentan* 'sound'

b. *sitangparonān* 'self-confidence'
← *sitang* 'self' + *paronān* 'faith'

c. *sitangtenyan* 'suicide'
← *sitang* 'self' + *tenyan* 'death'

sitang does not exist as a noun by itself in Ayeri, the word for 'self' is its nominalization *sitangan*. Nonetheless, it looks like it could have plausibly been a noun once. However, this noun may have been grammaticalized into a reflexive morpheme of a more general kind, which in turn birthed the form *sitangan* as a renovation.[9] The reflexive *sitang* is used—as we have seen in the previous chapter—as a prefix, so there are two ways to intepret these formations: first, *sitang* may be the reflexive prefix here and thus the compound follows the normal syntactic order; or second, the order of elements is reversed and thus may reflect an earlier stage of Ayeri where *sitang* was still a noun and modifiers could still appear in front of their heads, at least optionally so (Gaeta 2008: 133–137).

There are a number of genuinely reversed endocentric compounds as well, however, in which the modifier comes first and the head last. Since there are only a few of these, I will give all of them in the following example:

(50) a. *baripata* 'ground meat'
← *bari* 'meat' + *pata* 'mash'

b. *kayvolentan* 'consonant'
← *kayvo* 'with' + *lentan* 'sound'

c. *māvaganeng* 'mother's siblings'
← *māva* 'mother' + *ganeng* 'siblings'

[9] A little bit of language history would certainly simplify things here and lend them credence. Let us simply assume that *sitang* used to be a noun meaning something like 'self' at a previous stage of Ayeri and was repurposed as a reflexive prefix. Lehmann (2015) quotes a few examples of what he calls 'autophoric' nouns that came to be used as reflexive pronouns in their respective language: "Typical examples are Sanskrit *tan* 'body, person' and *ātmán* 'breath, soul', Buginese *elena* 'body', Okinawan *dūna* 'body', !Xu *l'esi* 'body', Basque *burua* 'head', Abkhaz *a-xə̀* 'the head'. In their respective languages, all these nouns are translation equivalents of English *self*" (45–46). Thus, it would not be out of line at all to assume such a grammaticalization path for Ayeri as well.

d. *matinanding* 'labia'
← *matikan* 'hot' + *nanding* 'lips'

e. *muyavirang* 'brass'
← *muya* 'false' + *avirang* 'gold'

f. *tonisaytang* 'self-assured'
← *tonisa* 'assured' + ? *sitangan* 'self'

Given the discussion of *sitang* above, one word among the examples above that is not too clear is *tonisaytang*, which appears to contain a deviant form of either *sitang* or *sitangan*, which is preceded by the adjective *tonisa* 'assured, ascertained'.

All of the previously mentioned compounds involving nominal elements formed nouns, though, there are also a few denominal compounds in the sample. This process is not productive, however, and interestingly, only noun–adjective combinations appear in this group:

(51) a. *mirampaluy* 'otherwise'
← *miran* 'way' + ? *palung* 'different'

b. *padabanya* 'insane'
← *padang* 'mind' + *banaya* 'sick'

c. *tenkarisa-* 'be frightened to death'
← *ten* 'life' + *karisa* 'frightened'

mirampaluy is an adverb, the modifier probably a mangling of *palung*; *padabanya* is an adjective meaning 'insane' rather than the expected 'insanity' (instead: *padabanyān*); and *tenkarisa-* acts as a verb, possibly from conversion or reinterpretation, since the suffix *-isa* also forms morphological causatives of a number of verbs. Besides these irregularities, there is also at least one noun compound which uses a postposition as an adjectival modifier:

(52) *silvankayvay* 'blindness' ← *silvan* 'sight' + *kayvay* 'without'

This compound must be derived from the phrase *silvanya kayvay* 'without sight' (see-NMLZ-LOC without), though here as well, the word roots are simply juxtaposed, as noted above is the common way to form compounds in Ayeri.

Synthetic compounds

According to Bauer (2001), (semi-)synthetic compounds, or verbal(-nexus) compounds, are compounds that have "been variously defined as being based on word-groups or syntactic constructions (Botha 1984: 2), or as compounds whose head elements are derived from verbs (Lieber 1994: 3607)" (Bauer 2001: 701). Examples of this type in English would include *truck-driver*, *peace-keeping*, and *home-made*. He

mentions also that synthetic compounds have been mainly discussed with regards to Germanic languages, but that according to Lieber (1994: 3608), the phenomenon is much more widespread. Ayeri possesses compounds like this as well, and the regular case again follows the constituent order, here that of verbs and nouns: Ayeri is a VO language, and thus the verb as the head of the compound is usually found on the left side with its nominal modifier following it (Gaeta 2008: 129–133):

(53) a. *anlāgonan* 'pronunciation'
← *anl-* 'bring' + *agonan* 'outside'

b. *napakaron* 'acid'
← *nap-* 'burn' + *karon* 'water'

c. *napaperin* 'sunburn'
← *nap-* 'burn' + *perin* 'sun'

d. *telbasasān* 'waysign'
← *telba-* 'show' + *sasān* 'way'

The relations between the verb and the noun are various again, that is, the nominal modifier is not simply the direct object of the verb: to pronounce something means to bring it *to* the outside; a sunburn is a burn *caused by* the sun; and a waysign shows the way (*sasān* is the object here). Even though *karon* may serve as an agent (or a causer) of the burning effect of acid (similarly for *napaperin* 'sunburn'), the verb-first order is justified here as well, since verbs always go first in Ayeri sentences, and any other NPs, whether actor or undergoer, are following.

Just as with endocentric compounds, there are a number of seeming exceptions to the verb-first order of synthetic compounds as well. These are just as far and few between, however, and whether they should all be counted as noun–verb combinations is also questionable as they appear to all be formed with nominalized verbs. The verbal element may thus be only indirectly verbal for the purposes of compounding. If interpreted as noun–noun combinations, the nominal first element would reasonably form the head again for some of the below example words.

(54) a. *mariptuntayam* 'spread'
← *marin* 'surface' + *punta-* 'stroke' + *-yam* (DAT)

b. *sasanlekān* 'labyrinth'
← *sasān* 'way' + *leka-* 'guess' + *-an* (NMLZ)

c. *selangnunān* 'plane'
← *selang* 'machine' + *nuna-* 'fly' + *-an* (NMLZ)

d. *sinturān* 'radio'
← *sinto* 'wave' + *tura-* 'send' + *-an* (NMLZ)

mariptuntayam is special in that it contains the dative suffix *-yam* which is lexicalized as part of the word: something made or intended for spread-

ing on a surface. A few more such verbal derivations can be found, though not compounds, among others:

(55) a. *grenyam* 'extremity' ← *gren-* 'reach out'
b. *lugayam* 'password' ← *luga-* 'go through'
c. *sahayam* 'future' ← *saha-* 'come'

There is also *maripunta-* 'spread over' as the verb corresonding to *mariputayam*, though its meaning is less specific. Here as well, however, the verbal part is last instead of first. For the other example words (54b–d), an interpretation of the second part as a deverbal noun is possible: a labyrinth as a way or path which requires guessing, a plane a machine for flight, and radio as a sending of waves. In the latter case, *sinturān*, however, the head is still on the wrong side even if one interprets all of the above examples as noun–noun compounds with a deverbal element.

Coordinative compounds

Coordinative compounds are a very small group among the sample drawn from the dictionary, and not a very productive one. Bauer (2001) defines this class as having "two or more words in a coordinate relationship, such that the entity denoted is the totality of the entities denoted by each of the elements" (699). He cautions that they are very easy to confuse with appositional (also *karmadhāraya*) compounds in that both types of compound allow inserting an *and* between both elements. The following nominal coordinative compounds are included in the dictionary sample:

(56) a. *bāmā* 'mom-and-dad'
← *bā(bā)* 'dad' + *mā(mā)* 'mom'
b. *pruynapay* 'seasoning'
← *pruy* 'salt' + *napay* 'pepper'
c. *sapayyila* 'hands-and-feet'
← *sapay* 'hand' + *yila* 'foot'
d. *simileno* 'horizon'
← *simil* 'country' + *leno* 'sky'
e. *sitemrugon* 'thunderstorm'
← *sitem* 'lightning' + *rugon* 'thunder'
f. *vekamdekey* 'dishes'
← *vekam* 'plate' + *dekey* 'fork'

None of the two elements recognizably forms the head in these examples, but both elements are typical exponents of the thing the compound signifies. Bauer (2001: 699) mentions that coordinative adjective compounds are rare, or at least

rarely documented in the grammars he surveyed. In the sample I took, only the following compound is included, which forms a noun from the combination of two adjectives, insofar it is relevant to this section even though the component parts are not nouns:

(57) *makagisu* 'twilight' ← *maka* 'light' + *gisu* 'dark'

The sample also includes the following two words, however, which are neither made up from nouns, nor do they form a noun in combination. Instead, they are technically verbs combining to form directional adverbs and have been exceptionally included here for completeness:

(58) a. *mangasaha* 'towards' ← *manga-* 'move' + *saha-* 'come'
b. *mangasara* 'away' ← *manga-* 'move' + *sara-* 'go'

Exocentric compounds

In exocentric compounds, the modifier is not a hyponym of its head (700), which means that the modifier is not describing a property that more closely determines its head. So while a *dog kennel* is a type of kennel made for dogs, the head of an *egghead* is neither for eggs, nor containing eggs, nor made of eggs; instead, it refers to an egg-shaped skull metaphorically. And while a *bluecollar* may wear a blue shirt professionally, the referent it signifies is not a type of collar, but the relationship is metonymical in that the blue collar is part of the guise of the signified entity as a whole. The sample from the Ayeri dictionary contains a few compounds of this kind as well, though again, it is not a very productive group:

(59) a. *avanyonang* 'artery'
← *avan* 'bottom, down' + *yonang* 'stream'
b. *baytandevo* 'headache'
← *baytang* 'blood' + *devo* 'head'
c. *linyonang* 'vein'
← *ling* 'top, up' + *yonang* 'steam'
d. *sindaynanga* 'address'
← *sinday* 'number' + *nanga* 'house'

What is striking here is that only one out of for examples shows the expected head-left order: *sindaynanga*. The other three examples all have the head head component on the right side, preceded by a modifier. However, what all of these have in common, is that they are only metaphorically or metonymically describing the thing they signify: veins and arteries are not literally streams going

up or down (they are a kind of stream flowing in different directions, however, so these are probably on the borderline between exocentric and endocentric); a headache is related to the head, but has not directly to do with being made of or containing blood (the rationale behind this being a superstition that you have too much blood in your head, which is said to cause the pain); and a house number may be part of an address, but is in a *pars pro toto* relationship to it.

A few mysterious cases

The following words from my sample were either undeterminable as to their composition due to parts of the word not being clear regarding one of their constituent parts, either because I tweaked the constituent so much as to not be readily recognizable anymore, or because I forgot to make an entry in the dictionary, or even deleted or changed that. The words in question are the following:

(60)
a. *batangiman* 'mosquito' ← *baytang* 'blood' + ?
b. *kirinalang* 'avenue' ← *kirin* 'street' + ?
c. *ningambakar* 'telltale' ← *ningan* 'story' + ?
d. *ragayesuy* 'grid' ← *ragan* 'line' + ?
e. *teraymino* 'melancholic' ← ? + *mino* 'happy'
f. *vetaysano* 'fare' ← ? + *sasān* (earlier *sasano*) 'way'

For all of the components represented by a question mark, there is no corresponding dictionary entry. At least in *baytangiman*, the * **iman* part looks as though it could be a noun due to the *-an* nominalizer suffix. * **teray* in *teraymino* might also be an adjective supposed to mean 'sad' (which would make it an adjectival coordinative compound), although the dictionary entry for that is *giday*. Even though parts of all these words are unclear, they all seem to follow the correct syntactic order, judging by those parts that are identifiable. And even in the case of *vetaysano*, which is missing the first part, it can be reasonably assumed that the identifiable part, * **sano*, is the modifier, and * *vetay* may have once been intended to mean 'money' or 'fee' or something along these lines.

With the exception of *ningambakar*, all of the mystery words were entered into the dictionary in 2006. Digging through old archives and translations, I could determine at least that * **bakar* was once intended to mean 'lie', and * **teray* was indeed meant to mean 'sad'.

4.1.6 Reduplication

Wiltshire and Marantz (2000) write that it has been suggested that reduplication serves an iconic function, "with the repetition of phonological material indicating

a repetition or intensity in the semantics" (561), so with regards to nouns it mainly serves to indicate plurality of various kinds. However, they find that in fact, reduplication serves all kinds of functions, also ones without iconic meanings, and mention Agta, an Austronesian language of the Philippines, which uses reduplication to form diminutives (Healey 1960: 6–9). As we have seen in section 3.2.3 above, so does Ayeri, and it is justified in doing so since there is real-world evidence for this use of reduplication. Examples for diminutive reduplication in Ayeri include:

(61) a. *limu* 'shirt' → *limu-limu* 'little shirt'
b. *nanga* 'house' → *nanga-nanga* 'little house'
c. *sapay* 'hand' → *sapay-sapay* 'little hand'
d. *veney* 'dog' → *veney-veney* 'little dog'

Diminutive reduplication involves full stem reduplication in Ayeri. Besides the productive use of reduplication for diminutive marking, there are a number of diminutive formations which have been lexicalized, such as in the following examples:

(62) a. *agu* 'chicken' → *agu-agu* 'chick'
b. *gan* 'child' → *gan-gan* 'grandchild'
c. *pasing* 'tube' → *pasing-pasing* 'straw'
d. *poyu* 'cheek; bacon' → *poyu-poyu* 'butt'

There are also at least two documented cases where the reduplicated root is not a noun, but the reduplication results in a noun:

(63) a. *kusang* 'double (adj.)' → *kusang-kusang* 'model'
b. *veh-* 'build' → *veha-veha* 'tinkering'

Reduplicated nouns behave like regular nouns with regards to inflection, that is, they receive prefixes and suffixes just like the simplexes from which they are derived:

(64)

Puco	*mino*	***veney-veneyang.***
Puk-yo	mino	veney~veney-ang
jump-3SG.N	happily	DIM~dog-A

'The little dog is jumping happily.'

In this example, the reduplicated noun *veney-veney* is marked as an agent in that the agent suffix *-ang* is appended to the noun as a unit *after* reduplicating the noun stem. In other words, the following formation in which the root is reduplicated along with its declension suffix is ungrammatical for the purpose of forming a diminutive:

(65) **veneyang-veneyang*

Likewise, the reduplicated form is not treated in the way an endocentric compound would be, so case and plural marking cannot be appended to the first element:

(66) **veneyang veney*

While ordinary nouns undergo full reduplication to form a diminutive, in compounds, only the head is reduplicated, unless the compound is strongly lexicalized or has an idiomatic meaning going beyond that of its components. The following example shows the simple case of a transparent endocentric compound:

(67)

Ya	*yomayo*	*mehir-mehirang*	*seygo*	*veno*	*kay*	*pang*	*nanga*	*nana.*
Ya	yoma-yo	mehir∼mehir-ang	seygo	veno	kay	pang	nanga-Ø	nana
LOCT	be-3SG.N	DIM∼tree-A	apple	pretty	three	back	house-TOP	1PL.GEN

'There are three pretty little apple trees behind our house.'

In this example, being endearing or otherwise small is treated as a property of the head, *mehir* 'tree', not of the whole compound *mehirseygo* 'apple tree', or the dependent, *seygo* 'apple'—after all, an apple tree which is small is rather a small tree with apples on it than a tree with small apples. The avoidance of the fully reduplicated form *mehirseygo-mehirseygo* is probably related to the notion of economy of expression.

4.1.7 Nominalization

Some accidental ways of deriving nouns have been mentioned above, for instance, some reduplicated non-nominal roots like *kusang* 'double' or *veha-* 'build' may form nouns. However, Ayeri also has some dedicated morphology to derive nouns from other parts of speech. The most common and highly productive way to derive a noun, is the suffix *-an*. The examples in (68) illustrate some derivations from verbs, and (69) shows derivations from adjectives to nouns. As *kuhan* 'oar' shows, the nominalization may have an idiomatic meaning.

(68)
a. *balang-* 'search (v.)' → *balangan* 'search (n.)'
b. *kuh-* 'row' → *kuhan* 'oar'
c. *rig-* 'draw' → *rigan* 'drawing'
d. *veh-* 'build' → *vehan* 'building'

(69) a. *apitu* 'pure' → *apituan* 'purity'
b. *gira* 'urgent' → *girān* 'hurry'
c. *pakis* 'serious' → *pakisan* 'seriousness'
d. *vapa* 'skillful' → *vapan* 'skill'

Occasionally, it may even happen that a noun is derived from a noun with a related but sometimes more basic meaning using the nominalizer *-an*. This process, however, is not productive, so compared to deverbalization and deadjectivization, examples of this derivation strategy are few.

(70) a. *ajam* 'toy' → *ajaman* 'game'
b. *kelang* 'chain' → *kelangan* 'connection'
c. *nanga* 'house' → *nangān* 'household'
d. *ten* 'life' → *tenan* 'soul'

There are also some apparent nominalizations in *-am* and *-ang*, although these are irregular and non-productive:

(71) a. *aja-* 'play' → *ajam* 'toy'
b. *gin-* 'drink' → *ginam* 'glass'
c. *mik-* 'poison (v.)' → *mikam* 'poison (n.), venom'
d. *nuna-* 'fly' → *nunam* 'feather'

(72) a. *bayha-* 'rule' → *bayhang* 'government'
b. *hapa* 'remaining' → *hapang* 'remainder'
c. *kada-* 'collect' → *kadang* 'committee; alliance'
d. *mima* 'possible' → *mimang* 'access'

Agentive nouns can be formed from regular nouns with the suffix *-maya*, compare the examples in (73). An epenthetic /a/ may be introduced to break up consonant clusters that would otherwise be either difficult to pronounce or violating phonotactics. When the stem of the word the agentive suffix is attached to ends in a consonant or /Ca/, it is also often found fused with the root, sometimes with the first /a/ of *-Caya* lengthened, see (74). Specifically feminine agentive nouns can be derived with the related suffix *-vaya*; two examples are given in (75).

(73) a. *anl-* 'bring' → *anlamaya* 'waiter'
b. *hora* 'sin' → *horamaya* 'sinner'
c. *nasy-* 'follow' → *nasyamaya* 'follower'
d. *teba-* 'bake' → *tebamaya* 'baker'

(74) a. 𐬀𐬎𐬀𐬐 *asa-* 'travel' → 𐬀𐬎𐬀𐬌𐬀 *asāya* 'traveler'
b. 𐬀𐬊𐬌𐬎𐬐 *ibut-* 'trade' → 𐬀𐬊𐬌𐬎𐬀 *ibutaya* 'trader, merchant'
c. 𐬦𐬀𐬙𐬐 *lant-* 'lead' → 𐬦𐬀𐬙𐬀 *lantaya* 'leader; driver'
d. 𐬙𐬀𐬦𐬐 *tang-* 'listen' → 𐬙𐬀𐬦𐬀 *tangaya* 'listener'

(75) a. 𐬌𐬌 *gan* 'child' → 𐬌𐬌𐬯𐬀 *ganvaya* 'governess'
b. 𐬦𐬀𐬌𐬌 *lanya* 'king' → 𐬦𐬀𐬌𐬯𐬀 *lanvaya* 'queen'

Besides these, there is also a derivative suffix for makers of things, 𐬀𐬀𐬎 *-ati* (contracting to /atʃ/ *-ac* before a vowel), though this is not too productive, and sometimes irregular, as 𐬯𐬍𐬦𐬙𐬀𐬎 *sirtangati* 'youth' shows:

(76) a. 𐬍𐬀𐬊𐬌 *gindi* 'poem' → 𐬍𐬀𐬊𐬌𐬎 *gindati* 'poet'
b. 𐬯𐬍𐬦𐬙𐬐 *sirtang* 'young' → 𐬯𐬍𐬦𐬙𐬀𐬎 *sirtangati* 'youth'
c. 𐬙𐬁𐬌𐬌 *tahan-* 'write' → 𐬙𐬁𐬌𐬌𐬎 *tahanati* 'scribe'
d. 𐬯𐬁𐬱𐬀𐬨 *vehim* 'piece of clothing' → 𐬯𐬁𐬱𐬀𐬨𐬎 *vehimati* 'tailor'

A few instances also exist where a tool of sorts is derived with a suffix 𐬀𐬀𐬎𐬌 *-(e)ryan*, which is related to the instrumental suffix 𐬀𐬀𐬍 *-eri* in combination with the nominalizer 𐬀𐬀𐬌 *-an*:

(77) a. 𐬏𐬀𐬍 *gur-* 'turn' → 𐬏𐬀𐬍𐬌 *guryan* 'coil, cylinder'
b. 𐬨𐬀𐬯 *mis-* 'behave' → 𐬨𐬀𐬯𐬌 *miseryan* 'method, strategy'
c. 𐬊𐬀𐬐 *nap-* 'burn' → 𐬊𐬁𐬐𐬌 *naperyan* 'tinder'
d. 𐬐𐬀 *pra-* 'glitter, gleam' → 𐬐𐬁𐬀𐬌 *praryan* 'spark'

While 𐬀𐬀𐬌 *-an* derives nouns from verbs to produce nouns that act as such in every way, it may sometimes be preferable to refer to the action as such by a noun, compare in English:

(78) a. Manhattan is famous for its tall **buildings**.
b. **Building** a house is an expensive endeavor.

In (78a), *building* is simply a noun derived from the verb *build*. It acts as a noun in every way, for example, it can serve as a subject and object, it can be pluralized, it can take determiners, and can be modified by adjectives. The form of *building* in (78b), however, is a gerund, and as such underlies the restriction that it cannot be pluralized (Payne 1997: 35). As we have seen at the beginning of this section on nominalization, Ayeri can derive 𐬯𐬁𐬙𐬌 *vehan* 'building, construction' from the verb 𐬯𐬁𐬙𐬐 *veh-* 'build', which acts like every other common noun, much like in the English example in (78a):

(79) a.

Lesāra	*sirimang*	***vehānreng***	***tado.***
Lesa-ara	sirimang	vehān-reng	tado
collapse-3SG.INAN	about.to	building-A.INAN	old

'The old building is about to collapse.'

b.

Le	*vacyang*	***eda-vehān.***
Le	vac=yang	eda=vehān-Ø
PT.INAN	like=1SG.A	this=building-TOP

'This building, I like it.'

c.

Ang	*latayo*	*bayhang*	***vehānyeley***	***yona.***
Ang	lata-yo	bayhang-Ø	vehān-ye-ley	yona
AT	sell-3SG.N	government-TOP	building-PL-P.INAN	3SG.N.GEN

'The government is selling its buildings.'

d.

Le	*ming*	*kuysāran*	***vehān-kay***	*dirasyam*	*ran.*
Le	ming	kuysa-aran	vehān-Ø=kay	diras-yam	ran
PT.INAN	can	compare-3PL.INAN	building-TOP=few	splendor-DAT	3SG.INAN.GEN

'Few buildings can compare to its splendor.'

The above examples condense several properties into one for illustration. Thus, (79a) shows that *vehān* can serve as basically a subject of a clause, and that it can as well be modified by an adjective—the choice of adjectives is not subject to any distributional restrictions other than those imposed by the semantic frame of HOUSE. In the next example, (79b), *vehān* serves as the object of the clause and is being determined by the demonstrative prefix *eda-* 'this'. The third example, (79c), shows *vehān* both pluralized and modified by a possessive pronoun, *yona* 'of it'. And finally, in (79d) we see *vehān* quantified by the suffix *-kay* 'few'.

Similar to the English example in (78b), Ayeri can also derive nouns from the participle of a verb describing the action as such—a gerund. For an example, I will again draw on the Ayeri translation of Kafka's short story "Eine kaiserliche Botschaft" (Becker 2012: 2, 14):

(80)

…	*nay*	*ang*	*pətangongva*	*ankyu*	***haruyamanas***	*nanang*	*megayena*
…	nay	ang	pə-tang-ong=va.Ø	ankyu	haru-yam-an-as	nanang	mega-ye-na
…	and	AT	NFUT-hear-IRR=2SG.TOP	truly	beat-PTCP-NMLZ-P	great	fist-PL-GEN

yana	*kunangya*	*vana.*
yana	kunang-ya	vana
3SG.M.GEN	door-LOC	2SG.GEN

'… and you would indeed hear his magnifcent beating at your door very soon.'

The annotations to this translation contain a comment on the grammatical rules which operate in this passage, more specifically also on the gerund derivation *haruyaman* 'beating':

> Furthermore, I wrote *haruyaman* 'beating' instead of *haruan* 'beat(ing)' because I wanted to emphasize the process of beating as an incomplete action. This is possible here because the word is not topicalized and neither is it marked as a dative, which would also require *haruyamanyam* 'beat-PTCP-NMLZ-DAT' to become *haruanyam* 'beat-NMLZ-DAT' (the participle marker *-yam* is derived from the dative case ending *-yam*). (Becker 2012: 14–15)

We can read from this description that the participle marker in Ayeri has possibly been grammaticalized from the dative case marker, or that it is at least synchronically homonymous. In order for case marking to operate, this formation has to be nominalized, which is done the usual way by appending *-an*, thus yielding the suffix cluster *-yaman* for the derivation of verbs as gerunds. If the gerund is marked for dative case, the suffix cluster * **-yamanyam* basically undergoes haplology to a simple nominalized form with the suffix cluster *-anyam*:

(81)	*haru-*		*haruyam*		*haruyaman*		**haruyamanyam*		*haruanyam*
	haru-	→	haru-yam	→	haru-yam-an	→	haru-yam-an-yam	→	haru-an-yam
	beat		beat-PTCP		beat-PTCP-NMLZ		beat-PTCP-NMLZ-DAT		beat-NMLZ-DAT

The comment on the translation also makes a little note on the gerund being possible because the word is not topicalized. This is based on an old rule that gerunds cannot be topicalized unless nominalized first, however, usage has since changed so that earlier, *haruyam* would have constituted the gerund form, while even by the time of translating the short story, it had changed to *haruyaman*. Thus, it is no surprise to see the following example, from the partial translation of Saint-Exupéry's story "Le petit prince" (Becker 2015 [2013]: 3, 13):

(82)	*Sa*	*koronyang*	***palungyaman***	*na*	*Baysānterpeng*	*nay*	*na*	*Bayokivo*
	Sa	koron=yang	palung-yam-an-Ø	na	Baysānterpeng	nay	na	Bayokivo
	PT	knew=1SG.A	distinguish-PTCP-NMLZ-TOP	GEN	Realm.Middle	and	GEN	Spring.Little

menaneri	*nivānyena.*
menan-eri	nivān-ye-na
first-INS	glimpse-PL-GEN

'I knew how to distinguish between China and Arizona at first sight.'

A more literal translation of this sentence would be 'The distinguishing of China and Arizona, I knew it at first sight', so the whole passage *palungyaman … na Bayokivo* forms the topic of the sentence here, headed by the gerund *palungyaman* 'distinguishing'. According to the old rule obliquely quoted in the comment to the passage in (80), this should not be possible. As said before, though, usage has changed.

A rule we can gather from the above example from Saint-Exupéry is that gerunds are treated as animate nouns. Since they are impersonal, they trigger neuter agreement on verbs. They can also be the objects of sentences. The passage in (80) furthermore illustrates that gerunds can be modified by The following example shows a gerund used as an agent—basically a subject—as well (Becker 2014):

(83) ***Dilayamanang*** *kalamena bahalanas ayonena …*
Dila-yam-an-ang kalam-ena bahalan-as ayon-ena ...
find.out-PTCP-NMLZ-A truth-GEN goal-P man-GEN ...

'(If) finding out the truth is the goal of the man ...'

What all the passages on gerunds quoted before show is that gerunds in Ayeri do not behave like transitive verbs as in English. Thus, what would be the object of the former verb appears in the genitive case in Ayeri. As in English, however, gerunds in Ayeri cannot be pluralized:

(84) **Noyo* ***vehayamanjang*** *nangayena.*
Noyo veha-yam-an-ye-ang nanga-ye-na
expensive build-PTCP-NMLZ-PL-A house-PL-GEN

'*The buildings of houses are expensive.'

It is possible, however, to quantify gerunds insofar as the quantifier does not imply countable quantities of the action. Moreover, it is possible for gerunds to be modified by possessors. The following to sentences exemplify this use:

(85) *Ang lugayan* ***delacamanas-ikan*** *kayanya pang.*
Ang luga=yan.Ø delak-yam-an-as=ikan kayan-ya pang
AT go.through=3PL.M.TOP suffer-PTCP-NMLZ-P=much war-LOC after

'They went through a lot of suffering after the war.'

(86) *Krico* ***malyyamanang*** *muya* ***tan.***
Krit-yo maly-yam-an-ang muya tan
annoy-3SG.N sing-PTCP-NMLZ-A wrong 3PL.M.GEN

'Their off singing is annoying.'

4.2 Pronouns

Ayeri possesses different kinds of pronouns in the sense that there is a closed class of words which contains anaphora of various types—personal pronouns, demonstrative pronouns, interrogative pronouns, relative pronouns, as well as reflexive and reciprocal expressions. Each class of pronouns will be discussed in the following.

Figure 4.6: Personal pronouns

Person	TOP	A	P	DAT	GEN	LOC	CAUS	INS
1SG	ay	yang	yas	yām	nā	yā	sā	rī
2SG	va	vāng	vās	vayam	vana	vaya	vasa	vari
3SG.M	ya	yāng	yās	yayam	yana	yāy	yasa	yari
3SG.F	ye	yeng	yes	yeyam	yena	yea	yesa	yeri
3SG.N	yo	yong	yos	yoyam	yona	yoa	yosa	yori
3SG.INAN	ra	reng	rey	rayam	ran	raya	rasa	rari
1PL	ayn	nang	nas	nyam	nana	nyā	nisa	ni
2PL	va	vāng	vās	vayam	vana	vaya	vasa	vari
3PL.M	yan	tang	tas	cam	tan	ca	tis	ti
3PL.F	yen	teng	tes	teyam	ten	teya	tēs	teri
3PL.N	yon	tong	tos	toyam	ton	toya	tōs	tori
3PL.INAN	ran	teng	tey	racam	ten	raca	ratas	ray

4.2.1 Personal pronouns

As Figure 4.6 shows, Ayeri possesses quite a large number of personal pronouns with little syncretism between the different paradigm slots overall (the second person is a notable exception); there are also no gaps in the paradigm. Ayeri's personal pronouns reflect the grammatical features also found in nouns, that is, number, gender, and case, and person is added to that. The individual forms range from completely fused to fully transparent even within the same case paradigm, for instance, *yām* '(to/for) me' (1SG.DAT) on the one hand, and *yayam* '(to/for) him' (transparently 3SG.M-DAT) on the other. Originally, all pronouns have been regular formations based on the respective unmarked pronominal element listed in the TOP column of Figure 4.6 declined by adding a case suffix (see section 4.1.3). Use has caused many of these formations to contract and erode as grammaticalization progressed:

(87) a. *ayang* → *yāng*
ay-ang yāng
1SG-A 1SG.A

b. *iyatena* → *tan*
iy-a-t-ena tan
3SG-M-PL-GEN 3SG.M.GEN[11]

The plural series used to be derived by adding 𑍞 *-n* or, in the third person, 𑍢 *-t-* to the pronoun stem, which can still be easily observed in the unmarked pronouns as well as in the alternation between 𑍬 *y-* and 𑍢 *t-* in the third person pronouns. The same goes for the gender-marking thematic vowel in the animate third person pronouns, which has been retained as a distinctive feature even in the non-core pronouns despite sometimes heavy modifications. A further interesting property of Ayeri is that synchronically, singular and plural are distinguished, except for the second person, where the forms are the same, basically like in English. Lehmann (2015) explains, however, that this is not an unusual route for languages to take:

> New pronouns, especially for the second person singular, are often obtained by shifting pronouns around in the paradigm, especially by substituting marked forms for unmarked ones. This explains, for instance, the use of [...] English *you* for the second person singular (42)

The second person singular subject pronoun of English used to be *thou*, cognate to German *du*, which can still be found in Shakespeare, for instance. Something along the lines of English *you* as a second person plural pronoun replacing second person singular *thou* by way of a deferential singular use of a plural pronoun (OED 2016: you, pron., adj., and n.) may have happened in Ayeri as well.

The personal pronouns are used in just the same way as their full-NP counterparts would be, also in the non-core cases:

(88) a.

Sa	*harya*	*ang*	*Paradan*	*tandās*	*kaleri.*
Sa	har-ya	ang	Paradan	tanda-as	kal-eri
AT	beat-3SG.M	A	Paradan	fly-P	rag-INS

'Paradan beats the fly with a rag.'

b.

Sa	*haryāng*	*tandās*	*kaleri.*
Sa	har=yāng	tanda-as	kal-eri
AT	beat=3SG.M.A	fly-P	rag-INS

'He beats the fly with a rag.'

c.

Sa	*harya*	*ang*	*Paradan*	*yos*	*kaleri.*
Sa	har-ya	ang	Paradan	yos	kal-eri
AT	beat-3SG.M	A	Paradan	3SG.N.P	rag-INS

'Paradan beats it with a rag.'

d.

Sa	*harya*	*ang*	*Paradan*	*tandās*	*rari.*
Sa	har-ya	ang	Paradan	tanda-as	rari
AT	beat-3SG.M	A	Paradan	fly-P	3SG.INAN.INS

'Paradan beats the fly with it.'

[11] Strictly speaking, this could as well be glossed as *t<a>n* (3SG.GEN<M>). I chose to gloss the pronoun in the above way, however, in order to not overly complicate things.

In the above set of examples, (88a) shows a sentence with full NPs, with the agent, ᜀᜅ᜔ ᜈᜀᜇᜒᜇᜈ᜔ *ang Paradan* replaced by the third person singular masculine agent pronoun ᜌᜎᜅ᜔ *yāng* in (88b); in (88c) the patient, ᜆᜈ᜔ᜇᜐ᜔ *tandās*, is replaced with the third person singular neuter patient pronoun ᜌᜓᜐ᜔ *yos*; in (88d), lastly, the instrument, ᜃᜎᜒᜂ *kaleri* is replaced with the third person singular inanimate instrumental pronoun ᜈᜂ *rari*. Furthermore, complex NPs are in complementary distribution, that is, an NP which contains an adjective is wholly replaced by an NP containing a personal pronoun:

(89) a. *Ang ninye vehimley veno.*
Ang nin=ye.Ø vehim-ley veno
A wear=3SG.F.TOP dress-P.INAN beautiful

'She wears a beautiful dress.'

b. **Ang ninye adaley veno.*
Ang nin=ye.Ø ada-ley veno
A wear=3SG.F.TOP that-P.INAN beautiful

'*She wears a beautiful it.'

c. *Ang ninye adaley.*
Ang nin=ye.Ø ada-ley
A wear=3SG.F.TOP that-P.INAN

'She wears it.'

Comparing the example sentences in (88) with the TOP column in Figure 4.6 an important property of personal pronouns becomes apparent. That is, the 'unmarked' (or rather, zero-marked) pronoun forms are also the ones showing as verb agreement. An important difference in this respect, however, is that the third person singular inanimate verb agreement marker is not ᜈ *-ra*, but ᜀᜇᜈ *-ara*. The following two examples illustrate the parallel more clearly—observe the person marking on the verb in (90) and the corresponding object pronouns in (91):

(90) a. *Sa manya ang Ajān Pila.*
Sa man-ya ang Ajān Ø Pila
PT greet-3SG.M A Ajān TOP Pila

'Pila, Ajān greets her.'

b. *Sa manye ang Pila Ajān.*
Sa man-ye ang Pila Ø Ajān
PT greet-3SG.F A Pila TOP Ajān

'Ajān, she greets him.'

(91) a.

Sa	*manye*	*ang*	*Pila*	***ya.***
Sa	man-ye	ang	Pila	ya.Ø
PT	greet-3SG.F	A	Pila	3SG.M.TOP

'Pila greets him.'

b.

Sa	*manya*	*ang*	*Ajān*	***ye.***
Sa	man-ya	ang	Ajān	ye.Ø
PT	greet-3SG.M	A	Ajān	3SG.F.TOP

'Ajān greets her.'

Another important property of both pronouns and verbs is that agent pronouns (and patient pronouns under certain circumstances) replace person agreement by cliticizing to the verb stem. As person agreement morphology is a domain of verbs, it will be dealt with in more detail in the chapter on verbs proper. The following example illustrates the mainly relevant process, however:

(92) a.

Sa	*man**ya***	***ang***	***Ajān***		*Pila.*
Sa	man-ya	ang	Ajān	Ø	Pila
PT	greet-3SG.M	A	Ajān	TOP	Pila

'Pila, Ajān greets her.'

b.

Sa	*man**yāng***		*Pila.*
Sa	man=yāng	Ø	Pila
PT	greet=3SG.M.A	TOP	Pila

'Pila, he greets her.'

Possessive pronouns are special compared to regular personal pronouns in that they can act as both personal pronouns proper and possessive adjectives, depending on context. The main case for the pronouns listed above in the genitive column of Figure 4.6 is that of possessive adjectives, which means that unlike personal pronouns, they are not necessarily in complementary distribution with nominal NPs, compare (89). Instead, they may be used as modifiers like, or alongside, adjectives, as (93) shows.

(93)

nangaya	*ledo*	*nā*
nanga-ya	ledo	nā
house-LOC	blue	1SG.GEN

'in my blue house'

Yet, however, possessives do not fully share the properties of adjectives, namely, they cannot be compared (* **nā-eng* '*myer', * **nā-vā* '*myest'). Fronting them in actual pronominal fashion is possible, for instance, in predicative statements like the one in (94a). Alternatively, a phrasal construction with *vilyang-* 'belong' as indicated in (94b) may be used.

Figure 4.7: Demonstrative pronouns

Case	Proximal	Distal	Indefinite
TOP	edanya	adanya	danya
A	edanyāng	adanyāng	*danyāng*
A.INAN	edareng, *edanyareng*	adareng, adanyareng	*danyareng*
P	edanyās	adanyās	danyās
P.INAN	edaley	*adaley*	danyaley
DAT	*edayam*	adayam	*danyayam*
GEN	edanyana	adanyana	danyana
LOC	*edanyaya*	adanyaya	*danyaya*
CAUS	*edanyasa*	*adanyasa*	*danyasa*
INS	*edanyari*	*adanyari*	*danyari*

(94) a. *Nā* *ada-nangāng.*
Nā ada=nanga-ang
ISG.GEN that=house-A

'That house is mine.'

b. *Ang* *vilyangyo* *ada-nanga* *yas.*
Ang vilyang-yo ada=nanga-Ø yas
AT belong-3SG.N that=house-TOP ISG.P

'That house belongs to me.'

4.2.2 Demonstrative pronouns

Demonstrative pronouns in Ayeri are formed with the demonstrative prefixes: 𑁍𑁤𑁲 *eda-* 'this' (proximal), 𑁃𑁤𑁲 *ada-* 'that' (distal), and 𑁤𑁲 *da-* 'such' (indefinite). These are combined with a morpheme 𑁯𑁱 *nya*, which is related to the word for 'person', 𑁯𑁯𑁱𑁦 *nyān*. Figure 4.7 gives the declined forms for all of them. Those forms attested in the corpus gathered from dictionary entries and example texts also used for the syllable structure analyses in section 1.2 appear in upright type, those that should be grammatical as well otherwise are given in italic type. The corpus is very small, but the prevalence of some forms is possibly reflecting varying degrees of grammaticalization at least to some extent. Table 4.2 gives the token frequencies of the various attested forms.

Of all the cases, the agent demonstratives have the highest token frequency at a combined 52.53%, especially the distal pronouns are very frequent in the sample.

Table 4.2: Token frequencies of attested demonstrative pronouns

Pronoun	Gloss	Absolute	Relative
edanya	this.TOP	1	1.69 %
adanya	that.TOP	9	15.25 %
danya	such.TOP	1	1.69 %
edanyāng	this.A	4	6.78 %
adanyāng	that.A	8	13.56 %
edareng	this.A.INAN	3	5.08 %
adareng	that.A.INAN	15	25.42 %
adanyareng	that.A.INAN	1	1.69 %
edanyās	this.P	1	1.69 %
adanyās	that.P	2	3.39 %
danyās	such.P	2	3.39 %
edaley	this.P.INAN	2	3.39 %
danyaley	such.P.INAN	2	3.39 %
adayam	that.DAT	3	5.08 %
edanyana	this.GEN	1	1.69 %
adanyana	that.GEN	2	3.39 %
danyana	such.GEN	1	1.69 %
adanyaya	that.LOC	1	1.69 %
Total		59	100 %

Moreover, the distal inanimate agent demonstative occurs twice as often as its animate counterpart, the shortened form *adareng* 'that (one)' being far more current than the full form *adanyareng*. Interestingly, the shortened form *edareng* 'this one' is also the only one attested for the inanimate proximate agent; similarly, the only dative demonstrative attested once is shortened as well: *adayam* '(to/for) that'. For non-core cases, only 'long' demonstratives are attested, albeit sparingly so.

Regarding the variation between 'long' and 'short' forms, it is not surprising that those demonstratives with a high frequency of use are eroded in some way: it seems that Ayeri prefers them to stay trisyllabic, which is achieved by dropping the *nya* part.[12] A further reason for dropping the *nya* part especially in the inanimate demonstratives may be that it is perceived as a marker of animacy—it

12 According to the so-called Zipf's law, word length and token frequency correlate in that the most frequently used words in a language also tend to be the shortest (Zipf 1935: 25–27).

has been noted above already that it is related to the word ᜈᜒᜀᜈ᜔ *nyān* 'person'. Both factors, high frequency and semantic mismatch, may thus promote contraction.

Still, the question for the reason for the high frequency especially of ᜀᜇᜂᜌᜒᜎ᜔ *adareng* remains open. It may be explained by looking at a few typical examples of this word in context, however.

(95) a. *Nay ang nelyo-ikan sungkorankihas, adareng tono.*
Nay ang nel-yo=ikan sungkorankihas, ada-reng tono
and AT help-3SG.N=much geography, that-A.INAN certain

'And geography, that's for sure, helped me a lot.' (Becker 2015 [2013]: 13)

b. *Adareng merambay-ikan, le sundalvāng sasān vana …*
Ada-reng merambay=ikan, le sundal=vāng sasān-Ø vana …
that-A.INAN useful=very, PT.INAN lose=2SG.A way-TOP 2SG.GEN …

'It's very useful if you get lost […]' (14)

c. *Adareng danyaley segasena boa tinka.*
Ada-reng danya-ley segas-ena boa tinka
that-A.INAN such-P.INAN snake-GEN boa closed

'The one of the closed boa snake.'[13] (22)

In all of the example sentences in (95), ᜀᜇᜂᜌᜒᜎ᜔ *adareng* 'that (one)' serves as a dummy pronoun together with a predicative adjective or NP, which is the main reason why it occurs so frequently. This is to say, Ayeri prefers the demonstrative pronoun ᜀᜇᜂᜌᜒᜎ᜔ *adareng* as the dummy agent in predicative contexts over the personal pronoun ᜂᜎ᜔ *reng* 'it'. Otherwise, however, demonstrative pronouns work regularly as deictic anaphora: 'this', 'that', and 'such (a)', except that as nominal elements they are declined for case—but not for number or animacy, which is a notable difference between demonstrative pronouns and personal pronouns:

(96) a. *Ang vehya Ø Ajān nangās.*
Ang veh-ya Ø Ajān nanga-as
AT build-3SG.M TOP Ajān house-P

'Ajān builds a house.'

b. *Nangās? Sa vehyāng may danya.*
Nanga-as? Sa veh=yāng may danya-Ø
house-P? PT build=3SG.M.A AFF such-TOP

'A house? He builds one indeed.'

[13] More literal translations of this sentence are 'That is the one of the closed boa snake' or 'That is one of a closed boa snake'.

(97) a. *Sā* *hasuyeng* *eda-migorayye.*
Sā hasu=yeng eda=migoray-ye-Ø
CAUT sneeze=3SG.F.A this=flower-PL-TOP

'These flowers make her sneeze.'

b. *Ang* *tipinyon* *nivaye* *yena* *adanyari* *naynay.*
Ang tipin-yon niva-ye-Ø yena adanya-ri naynay
AT itch-3PL.N eye-PL-TOP 3SG.F.GEN that-CAUS as.well

'Her eyes are itching due to that/them/those [the flowers] as well.'

As mentioned in the previous chapter (p. 67), the prefix 𑖛𑖳 *da-* 'such, so' can combine with a range of syntactic phrase types, but most notably NPs, to serve as an indefinite demonstrative:

(98) *Adareng* *da-dipakanas.*
Adareng da=dipakan-as
that-A.INAN such=pity-P

'That is such a pity.'

𑖛𑖳 *da-* can be used to express English 'one' in the sense of a deictic anaphora as well. Thus, to express 'the X one', if X is an adjective, it is strictly speaking necessary to use the full demonstrative pronoun, 𑖛𑖲𑖵 *danya*, since adjectives do not decline, and Ayeri largely avoids undeclined NPs:[14]

(99) a. *Silvyo* *danyāng* *kivo* *ku-mino-ing.*
Silv-yo danya-ang kivo ku=mino=ing
look-3SG.N such-A little like=happy=so

'The little one looks so happy.'

b. *Sa* *noyang* *danya* *tuvo.*
Sa no=yang danya-Ø tuvo
PT want=1SG.A such-TOP red

'I want the red one.'

Nonetheless, in cases like (99b) where the demonstrative is topicalized, the prefixed form may be used, which is possible since 𑖛𑖳 *da-* is a clitic that binds to NPs, rather than nouns. As we have seen before, NPs do not exhibit overt case marking if topicalized, so whether 𑖛𑖳 *da-* leans on a superficially unmarked noun or an adjective, which is always unmarked for case, does not matter, since both are NPs. The sentence presented in (99b) is thus rather formal; less formally, the following is acceptable as well:

[14] See section 4.1.3 above for examples of situations where nouns regularly do not exhibit case marking.

Figure 4.8: Interrogative pronouns

Pronoun	Literal meaning	Idiomatic meaning
ᨘᨿᨶ *sinya*	which one (ᨕᨿᨶ *nyān* 'person')	'who', 'what', 'which'
ᨘᨀᨶ *sikan*	how much (ᨀᨶ *ikan* 'much')	'how much', 'how many'
ᨘᨿᨿ *sikay*	with what (ᨿᨿᨾ *kayvo* 'with')	'how' (tool, circumstance)
ᨘᨋᨶ *simin*	which way (ᨋᨶ *miran* 'way')	'how' (way, procedure)
ᨘᨆᨿᨚ *sitaday*	which time (ᨆᨿᨚ *taday* 'time')	'when'
ᨘᨕᨶ *siyan*	which place (ᨕᨾ *yano* 'place')	'where'

(100) *Sa noyang da-tuvo.*
Sa no=yang da=tuvo.Ø
PT want=ISG.A such=red.TOP

'I want the red one.'

4.2.3 Interrogative pronouns

The intererrogative pronouns are all formed with ᨘ *si*, combined with a lexical element or a case marker; ᨘ *si* is also related to the relativizer ᨘ *si*. The interrogative pronouns are listed in Figure 4.8.

A property which all interrogative pronouns share is that they are placed *in situ*. That is, they appear in the same position as the phrase they stand in for, so there will not be movement of the question word to the front as in English. Additionally, impersonal interrogative pronouns cannot be topicalized since they also do not inflect for case, which preempts the difference between zero-marked topicalized and overtly case-marked untopicalized forms.

(101) a. *Sa petigavāng inun sikan?*
Sa petiga=vāng inun-Ø sikan
PT catch=2SG.A fish-TOP how.much

'How much fish did you catch?'

b. *Sa-sahavāng sitaday?*
Sa∼saha=vāng sitaday
ITER∼come=2SG.A when

'When will you return?'

In the table on interrogative pronouns above, ᨘᨿᨶ *sinya* 'who, what, which' is seperated from the other pronouns because it behaves differently. Namely, it can be declined for all cases according to the syntactic or semantic role of the NP it

Figure 4.9: Declension paradigm for 𑤬𑤲𑤴 *sinya* 'who, what'

Case	Pronoun	Translation
TOP	𑤬𑤲𑤴 *sinya*	'who', 'what'
A	𑤬𑤲𑤴𑥁 *sinyāng*	'who', 'what'
A.INAN	𑤬𑤲𑤴𑥂 *sinyareng*	'who', 'what'
P	𑤬𑤲𑤴𑥃 *sinyās*	'whom', 'what'
P.INAN	𑤬𑤲𑤴𑥄 *sinyaley*	'whom', 'what'
DAT	𑤬𑤲𑤴𑥅 *sinyayam*	'for/to whom', 'for/to what'
GEN	𑤬𑤲𑤴 *sinyana*	'whose', 'from whom', 'from what'
LOC	𑤬𑤲𑤴 *sinyaya*	'in/at/on whom', 'in/at/on what'
CAUS	𑤬𑤲𑤴 *sinyisa*	'due to/because of whom', 'due to/because of what'
INS	𑤬𑤲𑤴 *sinyari*	'by whose help', 'with what'

replaces, and it can and will often be topicalized: what you query about will likely constitute the topic of the sentence and the answer.

(102) a. *Ang yomayo sinya adaya?*[16]
Ang yoma-yo sinya-Ø adaya
AT exist-3SG.N who-TOP there

'Who is there?'

b. *Sa narayeng sinya?*
Sa nara=yeng sinya-Ø
PT say=3SG.F.A what-TOP

'What did she say?'

Ayeri does not strictly distinguish animate and inanimate entities in its interrogative pronouns, so there is no distinction between 'who' and 'what'. 𑤬𑤲𑤴 *sinya* and/or the verb will simply inflect according to context and to the speaker's expectations or knowledge (compare Figure 4.9). Thus, there is also no dedicated question word for 'why', since in Ayeri one can simply ask 'due to what/whom' by inflecting 𑤬𑤲𑤴 *sinya*:

(103) a. *Le kayāng adanya sinyayam?*
Le ka=yāng adanya-Ø sinya-yam
PT.INAN throw.away=3SG.M.A that-TOP what-DAT

'Why (= what for) did he throw that away?'

[16] This may be shortened to just 𑤬𑤲𑤴𑥁𑤀𑤴𑤳𑤱 *sinyāng adaya?* 'who (is) there?' (who-A there).

b.

Ang	*prantoyva*	*sinyaisa?*
Ang	prant-oy=va.Ø	sinya-isa
AT	ask-NEG=2SG.TOP	what-CAUS

'Why (= because of what) did you not ask?'

While there is no dedicated 'why', Ayeri distinguishes between two kinds of 'how': *simin* asks about the way by which—or the circumstances under which—an action is carried out, whereas *sikay* asks for the means or tools used to carry out an action:

(104) a.

Le	*tiyavāng*	*vadisān*	*simin?*
Le	tiya=vāng	vadisān-Ø	simin
PT.INAN	make=2SG.A	bread-TOP	how

'How do you make bread?'

b.

Le	*peralvāng*	*sagan*	*sikay?*
Le	peral=vāng	sagan-Ø	sikay
PT.INAN	grind=2SG.A	flour-TOP	how

'How do you grind flour?'

The correct answer to the question in (104a) needs to treat the process of making bread, since *simin* asks about the way; a correct answer to the question in (104b), on the other hand, will likely mention grinding utensils, like a mill or a pestle. Even though Ayeri possesses an instrumental case which can be used in a comitative way, note the conflation of that and the preposition of accompaniment, *kayvo*, in this case (see section 4.1.3).

Comparing Tables 4.8 and 4.9, it may strike the reader's eye that there are two possbilities to express 'where'—lexical *siyan* and synthetic *sinyaya*. It is important to note, however, that these are not strictly interchangeable, even though some variation is to be expected. While *siyan* refers to *places* in general, the *sinya* series refers to *entities* both animate and inanimate more specifically:

(105) a.

Saravāng	*siyan?*	—	*Ya*	*Sikatay.*
Sara=vāng	siyan	—	Ya	Sikatay
go=2SG.A	where	—	LOC	Sikatay

' "Where are you going?"—"To Sikatay." '

b.

Ya	*divvāng*	*sinya?*	—	*Ya*	*Haki.*
Ya	div=vāng	sinya-Ø	—	Ya	Haki
LOCT	stay=2SG.A	who-TOP	—	LOC	Haki

' "Where are you staying?"—"At Haki's" '

4.2.4 Indefinite pronouns

Haspelmath (1997: 56) notes how descriptions of languages often do not document indefinite pronouns—whether they simply do not exist in this language or whether they escaped the author's attention remains unknown in these cases. It may thus be duly noted here that Ayeri does indeed possess indefinite pronouns.[17] In order to classify languages, Haspelmath generalizes the map displayed in Figure 4.10 based on a sample of 100 languages from all continents, although he notes that this sample has a European bias due to the availability of data (2). Languages typically form continguous areas on the map, even though they may carve it up quite differently, and with overlaps between the different semantic groupings 1–9.

An interesting question that Haspelmath poses towards the end of his book is whether there are any correlations between word order typology and the preference for generic nouns ('person', 'thing', 'place', 'time', 'manner') or, for instance, interrogative-based systems (239–241). While from Haspelmath's concluding statistics it looks as though there is a slight preference of languages with which Ayeri shares basic typological traits—such as verb-initial, verb–object, and noun–genitive word order, also having prepositions—for basing indefinite pronouns on generic nouns, Haspelmath concedes that these seeming correlations are skewed by areal effects, "because indefinite pronouns have a strongly areal distribution" (241).[18] He still presumes, however, that word-order typology may have an effect on the formation of indefinites insofar as it correlates with grammaticalization more generally (239).

Haspelmath mentions generic nouns, and these can be combined with the quantifying expressions 'every', 'any', 'some', and 'none' into an array like the one presented in Figure 4.11. Ayeri does not distinguish 'every' from 'any' as English does; there is also no distinction in polarity (affirmative versus negative) the way English has it:

(106) a. *I don't know something about this.

b. I don't know anything about this.

17 As it is a fictional language, the value of this assertion to linguistic typology remains doubtful, however.

18 The map in *WALS,* Haspelmath (2013), suggests areal clusters at least for generic-noun based systems in Africa and Southeast Asia. *WALS* classifies 194 out of 326 languages (60%) as possessing interrogative-based indefinite pronouns to date, with evidence for this type quoted for all continents except Africa. The next smaller group, generic-noun based, falls behind at 85 data points (26%). The curious lack of evidence for the interrogative type in Africa despite its being the most frequent one in the set on all other continents may be due to the unavailability of data. Crossreferencing the *WALS* data for constituent-order with the map on indefinite-pronoun systems did not yield a result which obviously suggested a correlation.

Figure 4.10: The implicational map for indefinite pronoun functions (Haspelmath 1997: 4)

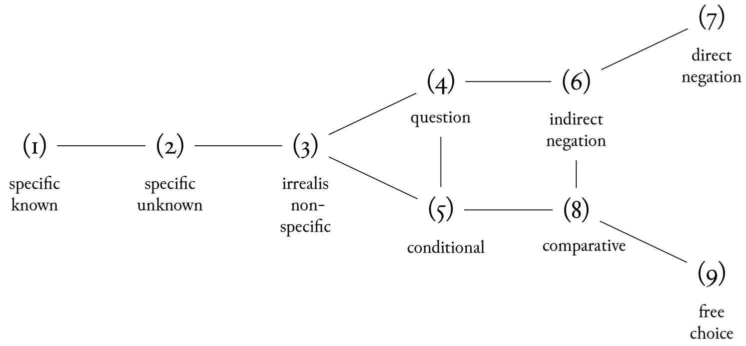


Figure 4.11: Indefinite pronouns

	every	**some**	**none**
PERSON	enya	arilinya	ranya
THING	enya	arilinya, arilya	ranya
PLACE	yanen	yāril	yanoy
TIME	tadayen	tajaril; metay	tadoy; jānyam
MANNER	arēn	miranaril	aremoy
REASON	—	yāril	—

Likewise, Ayeri does not distinguish between animate and inanimate indefinite referents—the same pronouns are used for either, although the shortening of *arilinya*, *arilya*, can only be used for inanimates, similar to the distinction in the demonstrative pronouns between *adanyāng* 'that one' (that.one-A) and *adareng* 'that one' (that.one-A.INAN; see section 4.2.2). Two further features stand out, however.

Firstly, most of the pronouns in the chart have a lexical part—Ayeri's indefinite pronouns are based on generic nouns. Thus, the pronouns referring to people and things all have the *-nya* element in common, which we also find in the interrogative and demonstrative pronouns, and which also appears in the word *nyān* 'person'. In the same way, the pronouns related to the notion of place have a *ya-* or *yan-* part, which we also find in *yano* 'place'.[19] In a regular continuation of this pattern, the indefinite pronouns of time all have an element related to *taday* 'time' in common, which is obscured somewhat by palatalization in

19 *yano* itself is an old nominalization and very likely related as a morpheme to the locative suffix *-ya*.

tajaril. The exception to this series, then, is *jānyam*, which is the multiplicative numeral formed from *ja* 'zero', thus means 'zero times' or 'not once' rather than 'never', although it can also be used emphatically for the latter. The series of manner pronouns is an absolute exception in that it must be a residue from an older layer of grammaticalization since *are-* is not a recognizable morpheme in the modern language.[20] *miranaril* is a regular formation of *miran* 'way, manner' combined with the quantifier (!) for indefinite amounts, *-aril* 'some'.

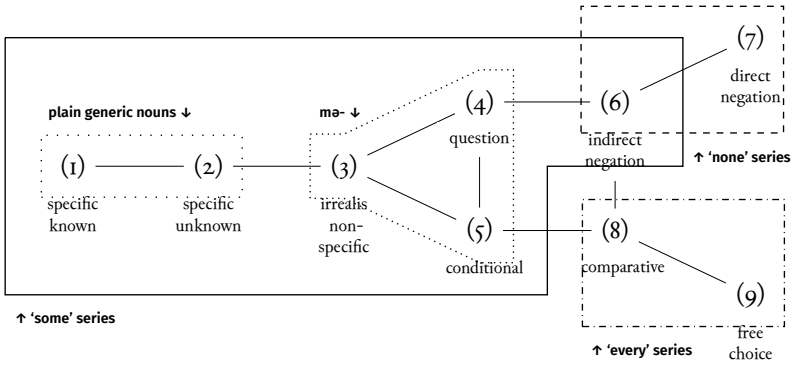
This observation leads to the second regular feature, that is, affixes as modifiers to generic nouns. The 'every' series regularly features the morpheme *en*, either prefixed or suffixed, which is related to the quantifier *-hen* 'every, all, each' and can presumably be found even on *arēn* in spite of its obscure lexical base. In the same manner, the series related to inspecific generic-noun referents is marked by the affix *aril* which, as we have just seen above, is otherwise used to refer to inspecific quantities, for instance, *vadisān-aril* 'some bread' (bread=some). In the case of *miranaril*, the suffix seems somewhat of an odd choice, since manner is not a quantifiable variable in the same way people, things, locations or moments are. Possibly, it is chosen rather in analogy with the other pronouns in this series than on semantic grounds. In any event, *metay* has the semantically more 'proper' *me-* prefix, relating it to absolute inspecificity.[21] This alternation is employed to distinguish between the meaning of 'sometime', that is, occurring once an unspecified point in time, and *tajaril* 'sometimes', which refers to repeated occurrence at inspecific times. The alternation between *miranaril* and regularly derived *mə-miran* can be leveraged to express a specificity difference as well. While the former suggests that an action is carried out or an event is happening by means of a specific, though unknown procedure, the latter suggests just any possible procedure. Lastly, the negative series is reguarly marked by the negative suffix *-oy*, which also occurs with adjectives and verbs (see sections 4.3.2 and 4.5.4). An outlier in this series is the person/thing-related indefinite pronoun, *ranya*. The etymologic connections of the *ra* part are not presently known, perhaps the postposition *ran* 'against' is related.

The chart in Figure 4.11 only tells half the truth by not giving any information on use contexts for the individual forms, so how do they fit in with the chart from Haspelmath (1997) quoted at the beginning of this section? Regarding the functions of indefinite pronouns annotated to the numbers on the map, he gives the following examples, which, however, mostly only give one example for either the 'person' or 'thing' category at a time. It is up to the reader to generalize from

20 I probably made this up as I was going, many years ago, and without considering systematic implications, as I was unaware of them at the time.

21 Compare German *irgendjemand* and French *n'importe qui* 'no matter who'.

Figure 4.12: Map of indefinite pronoun functions in Ayeri



this (Haspelmath 1997: 2–3):[22]

(107)

1. specific, known to the speaker:
   Somebody called while you were away: guess who!
2. specific, unknown to the speaker:
   I heard something, but I couldn't tell what kind of sound it was.
3. non-specific, irrealis:
   Please try somewhere else.
4. polar question:
   Did anybody tell you anything about it?
5. conditional protasis:
   If you see anything, tell me immediately.
6. indirect negation:
   I don't think that anybody knows the answer.
7. direct negation:
   Nobody knows the answer.
8. standard of comparison:
   In Freiburg the weather is nicer than anywhere in Germany.
9. free choice:
   Anybody can solve this simple problem.

As we have seen in Figure 4.11 above, Ayeri does not make a difference between 'every' and 'any', which is why the 'some' series can be applied to all of (1)–(5); it can also be used for indirect negation (6). The pronouns from the 'none' column, then, are used to express direct negation (7). Since double negation—that is, agreement

[22] These appear here reordered according to numerical order. The book lists them according to their logical order as tracing the map, the enumeration somewhat confusingly tied in with the running enumeration of examples.

in negation between verbs and indefinite pronouns for purposes of emphasis rather than double negation in the strictly logical sense—is possible, the 'none' series may also be employed for indirect negation (6). Moreover, Ayeri uses the 'every' series for both standard of comparison (8) and free choice (9). Besides this, absolute-indefinite 𑖩𑖽 *me-* can be used for (3)–(6) in combination with a (generic) noun to attach to. It needs to be noted that only the indefinite pronouns with person or thing reference (those including 𑖭𑖲 *nya*) decline; they can also be topicalized. The other indefinites, relating to place, time and manner, are indeclinable and also cannot be topics for this reason. For the 'specific' categories (1) and (2) it is furthermore possible to use the plain generic nouns, 𑖭𑖭𑖰𑖲 *nyān* 'person', 𑖪𑖭𑖲 *linya* 'thing', 𑖨𑖯𑖲 *yano* 'place', 𑖝𑖫𑖯 *taday* 'time', 𑖩𑖪𑖰𑖲 *miran* 'way', however. Figure 4.12 shows the groupings for Ayeri; (108) gives examples of all types.

(108) 1. specific, known to the speaker:

a. *Ang sahaya **arilinya,** leku, sinyāng adaley!*
Ang saha-ya arilinya-Ø lek-u sinya-ang ada-ley
AT come-3SG.M someone-TOP, guess-IMP who-A that-P.INAN

'Someone came, guess who it is!'

b. *Le ilta ningyang **linya** vayam.*
Le ilta ning=yang linya-Ø vayam
PT.INAN need tell=1SG.A thing-TOP 2SG.DAT

'I need to tell you something.'

2. specific, unknown to the speaker:

a. *Ang pegaya **arilinya** pangisley nā.*
Ang pega-ya arilinya-Ø pangis-ley nā
AT steal-3SG.M someone-TOP money-P.INAN 1SG.GEN

'Someone stole my money.'

b. *Ang saratang **yanoya** agon.*
Ang sara=tang yano-ya agon
AT go=3PL.M.A place-LOC foreign

'They are going somewhere foreign.'

3. non-specific, irrealis:

a. *Pinyan, prantu **yāril** palung.*
Pinyan prant-u yāril palung
Please ask-IMP somewhere different

'Please ask somewhere else.'

b. *Le* *ilta* *miranang* *adanya* ***mə-miraneri*** *palung.*
Le ilta mira=nang adanya-Ø mə=miran-eri palung
PT.INAN need do=ISG.A that.one-TOP some=way-INS different

'We need to do that in some other way.'

4. polar question:

a. *Ang* *koronva* ***arilinyaley*** *edanyana?*
Ang koron=va.Ø arilinya-ley edanya-na
AT know=2SG.TOP something-P.INAN this.one-GEN

'Do you know anything about this?'

b. *Yomaya* ***mə-nyānang*** *si* *ang* *vaca* *mirongya* *edanyaley?*
Yoma-ya mə=nyān-ang si ang vaca mira-ong=ya.Ø edanya-ley
exist-3SG.M some=person-A REL AT like do-IRR=3SG.M.TOP this-P.INAN

'Is there *anyone* who would like to do this?'

5. conditional protasis:

a. *Ang* *ming* *pengalayn* *sitanyās* ***yāril,*** *adareng* *pray-ven.*
Ang ming pengal=ayn.Ø sitanya-as yāril ada-reng pray=ven
AT can meet-IPL.TOP each.other-P somewhere that-A.INAN great=pretty

'If we can meet somewhere that would be pretty great.'

b. *Sa* *na-naravāng* ***mə-lentan,*** *ang* *haray* *vās!*
Sa na∼nara=vāng mə=lentan-Ø ang har=ay.Ø vās
PT ITER∼say=2SG.A some=sound-TOP AT punch-ISG.TOP 2SG.P

'You make any more sound, I'm gonna punch you!'

6. indirect negation:

a. *Paronoyyang,* *ang* *no* *tahaya* ***arilinya*** *adaley.*
Paron-oy=yang ang no taha-ya arilinya-Ø ada-ley
believe-NEG=ISG.A AT want have-3SG.M anyone-TOP that-P.INAN

'I don't think anyone wants to have that.'

b. *Paronoyyang,* *le* *ming* *sungvāng* *adanya* ***yanoy.***
Paron-oy=yang le ming sung=vāng adanya-Ø yanoy
believe-NEG=ISG.A PT.INAN can find=2SG.A that.one=TOP nowhere

'I don't think you can find that *anywhere*.'

7. direct negation:

a. *Ang* *koronya* ***ranya*** *guratanley.*
Ang koron-ya ranya-Ø guratan-ley
AT know-3SG.M nobody-TOP answer-P.INAN

'Nobody knows the answer.'

b. *Le* *ming* *sungvāng* *adanya* ***yanoy.***
Le ming sung=vāng adanya-Ø yanoy
PT.INAN can find=2SG.A that.one=TOP nowhere

'You can't find that anywhere.'

8. standard of comparison:

a. *Sa* *engyeng* *larau* ***enya*** *palung.*
Sa eng=yeng larau enya-Ø palung
PT be.more=3SG.F.A nice anyone different

'She is nicer than anyone else.'

b. *Ang* *engyo* *ban* *eda-riman* ***yanen*** *palung.*
Ang eng-yo ban eda=riman-Ø yanen palung
AT be.more-3SG.N good this=city-TOP anywhere different

'This city is better than anywhere else.'

9. free choice:

a. *Ang* *ming* *guraca* ***enya*** *eda-prantanley.*
Ang ming gurat-ya enya-Ø eda=prantan-ley
AT can answer-3SG.M anyone-TOP this=question-P.INAN

'Anyone can answer this question.'

b. *Epayeng* ***tadayen*** *si* *sa* *pinyaya* *ye* *ang* *Tapan.*
Epa=yeng tadayen si sa pinya-ya ye ang Tapan
refuse=3SG.F.A everytime REL PT ask-3SG.M 3SG.F.TOP A Tapan

'She refused everytime Tapan asked her.'

4.2.5 Relative pronouns

As has been described before, Ayeri connects relative clauses to main clauses with the relativizer 𑁍 *si*. This relativizer can be declined for case in accordance to the relative clause's head in the matrix clause. The respective forms can be gathered from Figure 4.13 (column 'Pronoun').

(109) a. *Eryyo* *tarela* *natrangās* *si* *tado.*
Ery-yo tarela natranga-as si tado
use-3SG.N still temple-P REL old

'The temple, which is old, is still being used.'

b. *Edanyāng* *ayonas* *sirtang* *sas* *ang* *sihabaya* *mondoas* *nana.*
Edanya-ang ayon-as sirtang si-as ang sihaba=ya mondo-as nana
this-A man-P young REL-P ang tend=3SG.M.TOP garden-P IPL.GEN

'This is the young man who tends our garden.'

Figure 4.13: Relative pronouns

Case	Pronoun	Pronoun with secondary inflection				
		DAT	GEN	LOC	CAUS	INS
Ø	si	siyām	sinā	siyā	sisā	sirī
A	sang	sangyam	sangena	sangya	sangisa	sangeri
A.INAN	sireng	sirengyam	sirengena	sirengya	sirengisa	sirengeri
P	sas	sasyam	sasena	sasya	sasisa	saseri
P.INAN	siley	sileyyam	sileyena	sileyya	sileyisa	sileyeri
DAT	siyam	siyamyam	siyamena	siyamya	siyamisa	siyameri
GEN	sina/sena	sinayam	sinana	sinaya	sinaisa	sinari
LOC	siya	siyayam	siyana	siyaya	siyaisa	siyari
CAUS	sisa	sisayam	sisana	sisaya	sisaisa	sisari
INS	seri	seriyam	serina	seriya	serīsa	seriri

As explained in section 3.3, if the relativizer is immediately following its lexical head, only the base form *si* is used, which is illustrated in (109a). Here, the head of the relative clause is *natrangās* 'the temple', which is immediately followed by the relative clause. If word material is intervening, however, which is the case in (109b), the relative pronoun may be inflected to agree in case with its antecedent in more formal language for referential clarity: *sas* agrees in case with *ayonas* two words over to the left. Relative pronouns do not agree in number with their heads, though, and in gender only insofar as it is relevant to nominal case inflection, that is, agents and patients are distinguished for animacy.

A special property of the relative pronoun is that it can be declined for its role in the relative clause as well to express more complex relationships between the main clause and the relative clause. The respective forms can be found in the columns titled 'Pronoun with secondary inflection' in Figure 4.13. The token frequency of the actually occurring complex relative pronouns in the very small corpus gathered from example texts and dictionary entries (see section 1.2) is given in Table 4.3.

Compared to the unmarked relativizer *si*, which occurs 50 times in the sample (all relative pronouns from Figure 4.13 occur 80 times in total), the complex relative pronouns have a very low frequency. This is not surprising, since 'for whom', 'by which', etc. are quite specialized expressions. It also seems that those forms unmarked for their antecedent are preferred, since those are the only ones attested—the sample is really much too small to make actually meaningful judgements here, however. Examples of complex relative pronouns are:

Table 4.3: Token frequencies of attested complex relative pronouns

Pronoun	Gloss	Absolute
siyā	REL.Ø.LOC	7
sirī	REL.Ø.INS	3
sinā	REL.Ø.GEN	1
siyām	REL.Ø.DAT	1
Total		12

(110) a. *Le vacyang koya yana sileyya ang layāy adanyana.*
Le vac=yang koya-Ø yana si-ley-ya ang laya=ay.Ø adanya-na
PT.INAN like=ISG.A book-TOP 3SG.M.GEN REL-P.INAN-LOC A read=ISG.TOP that-GEN

'I like his book in which I read about it.'

b. *Ya saratang yano siyām sarasatang.*
Ya sara=tang yano-Ø si-Ø-yām sara-asa=tang
LOCT GO=3PL.M.A place-TOP REL-LOC-DAT GO-HAB=3PL.M.A

'They went to the place to which they always went.'

It needs to be pointed out that a complex relative pronoun cannot form the topic of the relative clause even though it is marked for case according to the relative clause's syntactic domain. Furthermore, the relative pronoun cannot receive inflection for an agent or a patient of the embedded clause. The following examples illustrate these points:

(111) **Mica edaya sobayāng si (ʾsī) na ihayang koyaley.*
Mit-ya edaya sobaya-ang si-Ø-Ø na iha=yang koya-ley
live-3SG.M here teacher-A REL-A-TOP GENT borrow=ISG.A book-P.INAN

'Here lives the teacher from whom I borrowed a book.'

(112) **Mica edaya sobayāng sāng le sobya payutān yām.*
Mit-ya edaya sobaya-ang si-Ø-ang le sob-ya payutān-Ø yām
live-3SG.M here teacher-A REL-A-A PT.INAN teach-3SG.M math-TOP ISG.DAT

'Here lives the teacher who taught me math.'

(113) **Mica edaya sobayāng sās ya kradasayang kardang.*
Mit-ya edaya sobaya-ang si-Ø-as ya krad-asa=yang kardang-Ø
live-3SG.M here teacher-A REL-A-P LOCT hate-HAB=ISG.A school-TOP

'Here lives the teacher whom I used to hate in school.'

Example (111) displays a sentence in which the relative pronoun relative clause: *na* as a genitive topic is supposed to refer to ungrammatically forms the controller of

topic agreement on the verb in the _sobayāng_ in the matrix clause by way of the relativizer _si_ which would then necessarily carry a zero-morpheme topic marker. There is no resumptive pronoun in the relative clause, so the relative pronoun itself forms the anaphora in the relative clause referring to the relativized argument of the matrix clause. This is not possible.

In example (112), the relative pronoun *_sāng_ carries no overt case agreement as it directly follows its antecedent (*_sangang_ otherwise) but the long vowel shows that it is declined as the agent of the relative clause; the verb agrees using _-ya_ accordingly. There is no resumptive agent pronoun, so the relative pronoun would stand in for the agent NP that would be necessary if the relative clause were an independent sentence. The use of the relative pronoun as an agent-NP replacement in this sentence is equally ungrammatical, though, and so is the agreement between verb and declined relative pronoun.

Similarly, in (113), the relative pronoun carries case marking for the patient of the relative clause, since the agent of the matrix clause serves as the patient NP of the embedded clause. This is not grammatical either.

Altogether, it seems that in Ayeri, core arguments of intransitive and transitive clauses—agents and patients—cannot precede the embedded verb of a relative clause; the verb firmly forms the head of the embedded clause in this regard. The relative pronoun also cannot receive secondary marking for agents and patients and stand in directly as the agent and patient NP of the relative clause, respectively. It is interesting in this regard that Ayeri _does_ allow this for recipients, however, maybe since by their nature as goals they carry something of a locative connotation (compare (110b)) and are thus less tightly integrated with verbs, occupying a middle ground between core arguments and adverbials like the locative proper.[23]

4.2.6 Reflexives and reciprocals

As mentioned previously, Ayeri forms its reflexives with the prefix _sitang-_ in combination with a personal pronoun, compare (114). If the agent of the action is the same as the reflexive patient—that is, the agent acts on itself—the reflexive prefix can also migrate onto the verb instead, which is demonstrated in (115).

[23] This would be interesting to explore in terms of grammaticalization, as it is very possible that this behavior reflects a stage of the language before _-yam_ had been grammaticalized as the dative marker. In this respect, it would as well be necessary to explore whether the similarity between the dative marker _-yam_ and the locative marker _-ya_ is indeed etymological or merely incidental.

(114) *Ang silvye sitang=yes puluyya.*
Ang silv=ye.Ø sitang=yes puluy-ya
AT see=3SG.F.TOP self=3SG.F.P mirror-LOC

'She sees herself in the mirror.'

(115) *Ang sitang-silvye puluyya.*
Ang sitang=silv=ye.Ø puluy-ya
AT self=see=3SG.F.TOP mirror-LOC

'She sees herself in the mirror.'

Doing the same with a non-patient pronoun does not work, however, so the sentence in (115) with the reflexive *sitang* marked on the verb is not equivalent to the following one, in which *sitang-* appears together with a personal pronoun in the locative case, even though here as well, the agent and the locative pronoun refer to the same entity:

(116) *Ang silvye sitang-yea puluyya.*
Ang silv=ye.Ø sitang=yea puluy-ya
AT look=3SG.F.TOP self=3SG.F.LOC mirror-LOC

'She looks at herself in the mirror.'

It may be noted furthermore that the genitive/possessive pronoun series conveys the meaning of 'one's own', which is completely regular in meaning ('of X-self'), however:

(117) *Le no eryongyang pakay sitang-nā.*
Le no ery-ong=yang pakay-Ø sitang=nā
PT.INAN want use-IRR=1SG.A umbrella-TOP self=1SG.GEN

'I'd like to use my own umbrella.'

Besides reflexive pronouns, Ayeri also has a reciprocal pronoun, *sitanya* 'each other'. This pronoun acts the same as other pronouns and can be inflected according to its function in the clause:

(118) a. *Ang narayan Ajān nay Pila sitanyaya.*
Ang nara-yan Ø Ajān nay Pila sitanya-ya
AT talk-3PL.M TOP Ajān and Pila each.other-LOC

'Ajān and Pila talk to each other.'

b. *Sa ming tangtang sitanya.*
Sa ming tang=tang sitanya-Ø
PT can hear=3PL.M.A each.other-TOP

'They can hear each other.'

4.3 Adjectives

Adjectives are one of the parts of speech in Ayeri which do not inflect for any of the grammatical properties of their heads, that is, there is no agreement relation between adjectives and nominal heads. They do inflect for comparison under certain circumstances, however, and can also take various affixes that modify the meaning of the adjective stem.

4.3.1 Comparison

In cases where a comparee is left unexpressed or the patient forms the standard of comparison, Ayeri uses clitic suffixes on adjectives. The suffixes involved are *-eng* (COMP) and *-vā* (SUPL):

(119) a.

Yeng	*ganyena*	*men*	*si*	*alingo-eng.*
Yeng	gan-ye-na	men	si	alingo=eng
3SG.F.A	child-PL-GEN	one	REL	clever=COMP

‘She is one of the more clever children.’

b.

Ang	*tavya*		*Diyan*	*tingracas*	*ban-eng*	*na*	*Maha.*
Ang	tav-ya	Ø	Diyan	tingrati-as	ban=eng	na	Maha
AT	become-3SG.M	TOP	Diyan	musician-P	good=COMP	GEN	Maha

‘Diyan became a better musician than Maha.’

c.

Garatang,	*yāng*	*pokamayās*	*para-vā.*
Gara=tang,	yāng	pokamaya-as	para=vā
name=3PL.M.A,	3SG.M.A	shooter-P	fast=SUPL

‘They named him the fastest shooter.’

In (119a) the comparee is missing, while in (119b), the quality under comparison, *tingracas ban-eng* ‘a better musician’, is a patient NP; the standard, *Maha*, is expressed by an adverbial genitive NP. The example in (119c) similarly expresses an absolute without giving a group of entities to draw from. In all these cases, it is, however, also possible to use a more complex analytic construction using verbs which will be covered at a later point.

4.3.2 Negation

Adjectives in Ayeri can be negated in two ways: categorially with *-arya*, and pragmatically with *-oy*. These correspond to English *un-*, and *in-, il-, ir-* etc. for categorial negation, and to *not* for pragmatic negation. *-oy* absorbs the vowel of the root it is attached to if said root ends in a vowel.

(120) *Telbaya* *miseryanang* *ku-ardārya.*
Telba-ya miseryan-ang ku=arda-arya
show-3SG.M method-A like=suitable-NEG

'The method proved unsuitable.'

(121) *Pakoy* *eda-yanoreng.*
Paka-oy eda=yano-reng
safe-NEG this=place-A.INAN

'This place is not safe.'

Example (120) displays an adjective which carries the categorial negation marker ꠁꠛꠣ *-arya*; the adjective in (121) carries the simple, pragmatic negation marker ꠁꠘꠉ *-oy*. Which one to use is up to the speaker, since both negate the described property. The categorial marker puts an emphasis more on expressing a general opposite, while the pragmatic marker simply negates, so that it is not necessarily implied that the negative state persists. The place that is ꠇꠘꠉ *pakoy* 'not safe' now is not necessarily ꠇꠘꠛꠣ *pakārya* 'unsafe' in general, but simply not safe in the context of the here and now of the utterance.

Besides *ad hoc* derivation of categorial negatives with ꠁꠛꠣ *-arya*, there are also a few lexicalized instances. These have an idiomatic meaning and the negator or the word itself may be irregularly reduced. Examples are, among others:

(122) a. ꠛꠢ *ban* 'good' → ꠛꠢꠎ *banaya* 'ill, sick'
b. ꠑꠣꠇꠉ *kovaro* 'easy' → ꠑꠣꠇꠛꠣ *kovarya* 'awkward'
c. ꠎꠇꠢꠞꠣ *sirimang* 'straight' → ꠎꠇꠢꠞꠎ *sirimaya* 'passive'

4.3.3 Adjectivization

Adjectives in Ayeri are very commonly zero derivations, that is, there is rather free conversion between nouns and adjectives,[24] for instance:

(123) a. ꠀꠚꠇ *Ayeri* 'Ayeri' ~ ꠀꠚꠇ *Ayeri* 'Ayeri'
b. ꠄꠣꠍ *disa* 'soap, lye' ~ ꠄꠣꠍ *disa* 'soapy, alkaline'
c. ꠊꠉ *gino* 'drink' ~ ꠊꠉ *gino* 'drunk'
d. ꠇꠞꠚꠎ *pahamay* 'danger' ~ ꠇꠞꠚꠎ *pahamay* 'dangerous'
e. ꠎꠇꠀ *sempay* 'peace' ~ ꠎꠇꠀ *sempay* 'peaceful'

[24] Adjectives and split-off modifiers in noun–noun compounds are thus similar at least superficially.

Adjectives can also be derived from verbs with the causative suffix ᜐᜎᜈ᜔ *-isa*, which often corresponds to adjectives derived from the past participle form—the meaning is often, but not necessarily, relating to an achieved state. The suffix may change the last vowel to ᜎᜓ *u* or drop it; a specific pattern to these changes is not recognizable. The derivations may be idiomatic occasionally, as some derivations in the example below show.

(124) a. ᜃᜒᜎᜅ᜔ᜐ᜵ *kelang-* 'connect' → ᜃᜒᜎᜅᜒᜐᜓ *kelangisu* 'connected, related'
b. ᜉᜎᜓᜅ᜔ᜐ᜵ *palung-* 'distinguish' → ᜉᜎᜓᜅ᜔ᜐᜒᜈ᜔ *palungisa* 'various'
c. ᜐᜓᜎᜋᜒᜇ᜵ *sundala-* 'lose' → ᜐᜓᜎᜋᜒᜎᜒᜐᜓ *sundalisu* 'lost'
d. ᜆᜊᜈ᜔᜵ *taban-* 'write' → ᜆᜊᜈᜒᜐ᜔ *tabanis* 'literary'
e. ᜊᜒᜐ᜵ *vesa-* 'give birth' → ᜊᜒᜐᜒᜈ᜔ *vesisa* 'native'

There are also at least two words where an ᜐᜎᜈ᜔ *-isa* adjective is derived not from a verb, but a word of a different part of speech—in this case, a noun, and another adjective:

(125) a. ᜀᜉᜒᜈ᜔ *apin* 'luck' → ᜀᜉᜒᜈᜒᜐ᜔ *apinisa* 'lucky'
b. ᜁᜎᜌᜓ *iray* 'high' → ᜁᜎᜌᜒᜐᜓ *irayisu* 'exalting'

4.3.4 Other affixes

As with nouns, other affixes which can be attached to adjectives as clitic hosts, are the prefix ᜃᜓ᜵ *ku-*, expressing semblance, as well as quantifying and grading suffixes, of which the suffixes used to express comparative and superlative are, essentially, a grammaticalized variety, since ᜎᜅ᜔᜵ *-eng* can also be used like 'rather'.

(126) *Paray-parayang* *ku-pikisu*
Paray∼paray-ang ku=pikisu
DIM∼cat-A like=scared
'The kitten is like scared.'

(127) *Eda-prikanreng* *napay-eng*
Eda=prikan-reng napay=eng
this=soup-A.INAN spicy=rather
'This soup is rather spicy.'

Figure 4.14: Prepositions (simple)

Preposition		**Etymology (or related to)**
agonan	outside	*agonan* ‘outside’
avan	bottom, ground	*avan* ‘ground, bottom; soil’
eyran	under, below	*eyran* ‘sole’
eyrarya	over	*eyran* ‘sole’ + *-arya* (NEG)
kayvo	with, beside[26]	*kayv-* ‘accompany’
kong	inside, within	*kong* ‘inside’
ling	on	*ling* ‘top’
luga	among, between	*luga-* ‘pass, penetrate’
mangasaha	towards, in + *time*	*manga saha-* ‘coming’
mangasara	away	*manga sara-* ‘going’
marin	front, on (walls etc.)	*marin* ‘face, surface’
miday	around	*miday-* ‘surround’
nasay	near, close	*nasay* ‘proximity’
nuveng	left	*nuho* ‘liver’
pang	behind, ago	*pang* ‘back’
patameng	right	*patam* ‘heart’

4.4 Adpositions

Adpositions are another part of speech in Ayeri whose stem itself does not inflect. Ayeri’s most basic adpositions are derived from relational nouns, which is likely the reason why Ayeri mostly employs prepositions, with postpositions and ambipositions being less important placement patterns (Hagège 2010: 110–111; Lehmann 2015: 81 ff.). Adpositions in their most basic use trigger locative marking on the governed NP, the prepositional object; for allative and ablative meanings, the prepositional object may also appear in the dative and the genitive case, respectively, as described in section 4.1.3.[25] The cognitive metaphor ‘time equals space’ with the future conceptualized as lying ahead and the past behind also holds in Ayeri, so that some of the words describing locations also double to describe temporal relations.

4.4.1 Prepositions

Figure 4.14 gives all the words in Ayeri which may be used as prepositions. As mentioned above, most of these are derived transparently from nouns, so they have

25 Even a prolative use together with the instrumental is thinkable.

26 There is also a preposition *dayrin* ‘side’ listed in the dictionary, however, this has never seen much use. Instead, *kayvo* has come to cover ‘beside, to the side of’ as well.

probably been grammaticalized relatively recently—their non-preposition meaning is still transparent, they are still phonologically rather complex, and some of them are even polysyllabic in spite of not being composed and covering rather basic meanings.[27] Since these nouns have ceased to function as common nouns, however, it is not possible to inflect them in the way described in section 4.1. Thus, for example, while it is possible to say (128a), it is not really possible to say (128b):

(128) a.

Le	*yomareng*	*kanka*	*lingya*	*rivanena.*
Le	yoma=reng	kanka-Ø	ling-ya	rivan-ena
PT.INAN	exist=3SG.INAN.A	snow-TOP	top-LOC	mountain-GEN

'There is snow on the top of the mountain.'[28]

b.

**Ang*	*nedraye*	*lingya*	*nedrānena.*
Ang	nedra=ye.Ø	ling-ya	nedrān-na
AT	sit=3SG.F.TOP	top-LOC	chair-GEN

'?She sits on the top of a chair.'

Instead, the grammatical way to express (128b) is the following, using 𐑤𐑦𐑙 *ling* as a preposition with the object in the locative case:

(129)

Ang	*nedraye*	*ling*	*nedrānya.*
Ang	nedra=ye.Ø	ling	nedrān-ya
AT	sit=3SG.F.TOP	top	chair-LOC

'She sits on a chair.'

In this case, since *on* is the expected position of sitting with regards to chairs, the preposition can even be dropped:

[27] Unsurprisingly, Hagège (2010: 129) references Zipf regarding speech economy and token frequency. According to Lehmann (2015: 134–141), the phonological integrity of morphemic units reduces as grammaticalization is progressing (with token frequency increasing due to increasing obligatoriness). Bybee and Hopper (2001) see the reason for phonological reduction of highly frequent phonological material "in the automatization of neuro-motor sequences [...]. Such reductions are systematic across speakers; that is, they do not respresent 'sloppy' or 'lazy' speech" (11). Hence, for example, English's most basic prepositions are extremely short and simple words, for instance, *of, at, in*, which derive from the slightly more complex PIE forms **h₂ep-ó, *h₂ed, *h₁en(-i)*, respectively (Kroonen 2013: 1, 39, 269). Since adpositions frequently grammaticalize into case markers, it may be assumed that the phonologically much more simple case affixes of Ayeri constitute an older layer of basic adpositions. Their non-suffixed forms may be remnants of this use.

[28] The corresponding sentence with a preposition is 𐑤𐑰 𐑘𐑝𐑮𐑧𐑙 𐑒𐑙𐑒 𐑤𐑦𐑙 𐑮𐑦𐑝𐑨𐑙𐑿 *Le yomareng kanka ling rivanya* 'There is snow on top of the mountain' (PT.INAN exist=3SG.INAN.A snow-TOP top mountain-LOC).

(130) *Ang nedraye nedrānya.*
Ang nedra=ye.Ø nedrān-ya
AT sit=3SG.F.TOP chair-LOC

'She sits on a chair.'

With regards to (128a) it is also necessary to mention what Hagège calls the 'Proof by Anachrony Principle' (Hagège 2010: 158–159). According to this principle, when an adposition is very grammaticalized, speakers can use both the adposition and its etymological ancestor side by side without taking offense in the double occurrence. This is notably not the case in Ayeri, where it is not possible to say things like (131a), where 𐤐𐤍𐤂 *pang* is used in both its meanings so that the preposition 𐤐𐤍𐤂 *pang* 'behind' governs the original noun 𐤐𐤍𐤂 *pang* 'back'.

(131) a. **Le ranice ang Maha adanya pang pangya yena.*
Le ranit-ye ang Maha adanya-Ø pang pang-ya yena
PT.INAN hide-3SG.F A Maha that-TOP back back-LOC 3SG.F.GEN

'*Maha hides it at the back of her back.'

b. *Le ranice ang Maha adanya pangya yena.*
Le ranit-ye ang Maha adanya-Ø pang-ya yena
PT.INAN hide-3SG.F A Maha that-TOP back-LOC 3SG.F.GEN

'Maha hides it at her back,'
or: 'Maha hides it behind herself.'

Examples like (128b), on the other hand, show that there is nonetheless a tendency towards grammaticalization of originally relational nouns in Ayeri. Grammaticalization is visible in that formerly relational nouns have become restricted in the way they can be used syntactically (Lehmann 2015: 174). This specialization is also apparent in morphology from the fact that prepositions in Ayeri, in spite of their nominal origin, cannot be modified by adjectives and relative clauses like regular nouns. Thus, for instance, while 𑖀𑖭𑖍 *avan* as a noun can mean 'soil' or 'ground' and can be modified by semantically coherent adjectives like 𑖆𑖪𑖕 *kabu* 'fertile', the preposition 𑖀𑖭𑖍 *avan* cannot. Again, a grammatical way to express (132b) would have to use 𑖀𑖭𑖍 *avan* as a relational noun, that is, 𑖀𑖭𑖍𑖆𑖪𑖕𑖃𑖭𑖍 *avanya kabu similena* 'at the fertile bottom of the country' (bottom-LOC fertile country-GEN).

(132) a. *Sa yomareng avan kabu ibangya yana.*
Sa yoma=reng avan-Ø kabu ibang-ya yana
PT exist=3SG.INAN.A.INAN ground-TOP fertile field-LOC 3SG.M.GEN

'Fertile ground is on his field.'

Figure 4.15: Prepositions (dynamic)

Preposition	***manga* + PREP**
agonan 'outside'	out
avan 'at bottom'	to the bottom; *with* DAT/GEN*:* down to/from
eyran 'under'	under
eyrarya 'over'	across, over
kayvo 'with, beside'	along
kong 'inside'	into
ling 'on top'	onto, while; *with* DAT/GEN*:* up to/from
luga 'between'	through, during, for + *time*
marin 'in front'	to the front
miday 'around'	circling around
nasay 'near'	into the near
nuveng 'left'	to the left
pang 'behind'	behind, to the back
patameng 'right'	to the right

b.

**Ang*	*mican*	*avan*	*kabu*	*similya*
Ang	mit=yan.Ø	avan	kabu	simil-ya
AT	live=3PL.M.TOP	bottom	fertile	country-LOC

'*They live at the fertile bottom of the country.'

At the beginning of this section it was shown that prepositions in Ayeri cannot receive number and case marking, which are otherwise typical features of nouns. What is possible with regards to affixes, however, is adding degree suffixes to prepositions, since these suffixes are clitics, selecting phrasal heads as their hosts, rather than inflections:

(133)

Ang	*mitasaye*	*pang-ikan*	*mandayya*	*tado.*
Ang	mit-asa=ye.Ø	pang=ikan	manday-ya	tado
AT	live-HAB=3SG.F.TOP	back=much	forum-LOC	old

'She used to live way behind the old forum.'

As demonstrated before, another quasi-inflection adpositions in Ayeri can carry is the dynamic marker *manga* (see section 3.1). While most of the prepositions in Figure 4.14 have a static meaning, *manga* indicates a motion in the direction of the respective location, thus *kong* 'inside' becomes *manga kong* 'into', for instance. Figure 4.15 repeats the table of prepositions above for the most part and gives the respective dynamic meanings. The prepositions *mangasaha* and *mangasara* are missing from this list and appear in the previous table instead,

even though they express motion rather than position, because they are only used in this base form and cannot be prefixed by *manga*, which they already contain. Note, however, that *mangasaha* and *mangasara* are not synonymous to an adjunct in the dative and the genitive case, respectively. Rather, the prepositions add a more deliberate or literal meaning:

(134) a.

Ang	*nimpay*	*kardangyam.*
Ang	nimp=ay.Ø	kardang-yam
AT	run=1SG.TOP	school-DAT

'I'm running to (a/the) school.'
(e.g. for class, or just up to the building)

b.

Ang	*nimpay*	*mangasaha*	*kardangya.*
Ang	nimp=ay.Ø	mangasaha	kardang-ya
AT	run=1SG.TOP	towards	school-LOC

'I'm running towards (a/the) school.'
(up to the building)

(135) a.

Ang	*lampay*	*kardangena.*
Ang	walk=ay.Ø	kardang-ena
AT	walk=1SG.TOP	school-GEN

'I'm walking from (a/the) school.'
(e.g. home, or somewhere else from there)

b.

Ang	*lampay*	*mangasara*	*kardangya.*
Ang	lamp=ay.Ø	mangasara	kardang-ya
AT	walk=1SG.TOP	away	school-LOC

'I'm walking away from (a/the) school.'
(away from the building)

Also note that while Germanic languages like English make frequent use of set expressions which combine a verb with a preposition, such as *run away, go by, raise up, track down*, sometimes with rather idiomatic meanings, this pattern does not occur as frequently in Ayeri. Some exceptions are:

(136) a. *il- mangasara* 'surrender' (give away),
b. *lant- mangasara* 'distract' (lead away),
c. *nimp- mangasara* 'escape' (run away),
d. *tapy- dayrin* 'save (valuable assets)' (put aside),
e. *tapy- miday* 'put on' (put around),
f. *tura- mangasaha* 'forward' (send towards).

These verbs do not govern a prepositional object in the locative case in their idiomatic meaning, as displayed by the next example, in which *batangiman*

and *sa Ajān* do neither serve as arguments of *lanco* or *mangasara*, but of the phrasal verb *lant- mangasara*:[29]

(137)

Ang	*lanco*	*mangasara*	*batangiman*	*sa*	*Ajān.*
Ang	lant-yo	mangasara	batangiman-Ø	sa	Ajān
AT	lead-3SG.N	away	mosquito-TOP	P	Ajān

'The mosquito distracted Ajān.'

Very often, where the verb expression in English contains a preposition, there is a separate verb in Ayeri, or the same verb is used in Ayeri for both the plain English verb and the one extended by a preposition:

(138)
a. *apand-* 'descend, climb down',
b. *dila* 'figure out, find out',
c. *ling-* 'ascend, mount, climb up',
d. *naga-* 'watch after',
e. *pah-* 'remove, take away',
f. *subr-* 'cease, give up'.

(139)
a. *ka-* 'throw (away)',
b. *mat-* 'warm (up)',
c. *sikl-* 'rip (up)'.

In cases where the preposition does not have a prepositional object otherwise, its double nature as a noun comes to the fore in that the preposition word will be treated like a noun if it is denominal and carries the appropriate case marker itself:

(140) a.

Ang	*sahayan*	*manga*	*pang*	*nangaya.*
Ang	saha=yan.Ø	manga	pang	nanga-ya
AT	go=3PL.TOP	DYN	back	house-LOC

'They go behind the house.'

b.

Ang	*sahayan*	*pangyam.*
Ang	saha=yan.Ø	pangyam
AT	go=3PL.TOP	back-DAT

'They go behind (it),'
or: 'They go to the back.'

Figure 4.16: Postpositions

Postposition		Etymology (or related to)
𑄇𑄳𑄎𑄢𑄚 *da-nārya*	despite, in spite of	𑄇𑄳 *da-* 'such' + 𑄎𑄢𑄚 *nārya* 'but'
𑄎𑄬𑄎𑄢 *kayvay*	without	𑄎𑄬𑄩 *kayvo* 'with' + 𑄃𑄎 *-oy* (NEG)
𑄥𑄦𑄇𑄎𑄟 *masahatay*	since	𑄥𑄳 *mə-* (PST) + 𑄦𑄇𑄳 *saha-* 'come' + 𑄟𑄎𑄬 *taday* 'time'
𑄎𑄦𑄦𑄭 *nasyam*	according to	𑄎𑄦𑄦𑄮𑄭 *nasyyam* 'following'
𑄓𑄓 *pang*	beyond, after, past	𑄓𑄓 *pang* 'back'
𑄓𑄦𑄞 *pesan*	until	—
𑄟𑄞 *ran*	against	*possibly* 𑄟𑄞 *ran* 'from it'
𑄟𑄩 *rayu*	diagonally across	𑄟𑄩 *rayu* 'slanted, oblique, skewed'
𑄪𑄭𑄢 *yamva*	instead of	—

4.4.2 Postpositions

While Ayeri mainly uses prepositions—which is by far the most common order for VO languages (Dryer 2013)—it also uses a number of postpositions, which are given in Figure 4.16. As can be read from the figure, postpositions do not usually have a nominal origin but are derived either from other prepositions, from adverbial phrases, or even from an adjective in the case of 𑄟𑄩 *rayu*. The etymologies of 𑄓𑄦𑄞 *pesan* and 𑄪𑄭𑄢 *yamva* are unclear to date.

The postposition 𑄓𑄓 *pang* is special in that it also exist as a preposition meaning 'behind, in the back of', though as a postposition it acquires the related but slightly different meaning 'beyond, after, past'. It might thus be better treated as a homonym to the preposition rather than as an ambiposition (Hagège 2010: 115). Example (141a) illustrates a use of 𑄓𑄓 *pang* as a preposition, (141b) one of 𑄓𑄓 *pang* as a postposition. This is in contrast to typical ambipositions like German *wegen* 'because of, due to' in (142), which has the same meaning in either position and the position variant is just a matter of style.

(141) a.

Sa	*lancāng*	*pel*	*manga*	*pang*	*penungya.*
Sa	lant=yāng	pel-Ø	manga	pang	penung-ya
PT	lead=3SG.M.A	horse-TOP	DYN	back	barn-LOC

'The horse, he leads it behind the stable.'

[29] Colloquially, 𑄥𑄓𑄟𑄦𑄇 *mangasaha* and 𑄥𑄓𑄟𑄦𑄟 *mangasara* may be shortened to just 𑄟𑄦𑄇 *saha* and 𑄟𑄦 *sara*, respectively.

Figure 4.17: Adpositions with temporal meaning

Adposition	**Spatial meaning**	**Temporal meaning**
	Prepositions	
kong	inside	within
ling	on top of	while
marin	in front of	before
manga luga	through	during
mangasaha	towards	in + *time*
pang	behind	ago
	Postpositions	
masahatay	—	since
pesan	—	until
pang	beyond, after	after, past

b.

Lesyo	*pelang*	*si*	*sā*	*nimpyong*	*penungya*	*pang*	*yan.*
Les-yo	pel-ang	si	sā	nimp=yong	penung-ya	pang	yan.Ø
fall-3SG.N	horse-A	REL	CAUT	run=3SG.N.A	stable-LOC	back	3PL.TOP

'The horse they raced past the barn fell.'

(142) a. [German]

wegen	*des*	*schlechten*	*Wetters*
wegen	des	schlecht-en	Wetter-s
because.of	DEF.GEN.N.SG	bad-GEN.N.SG	weather-GEN

'because of the bad weather'

b.

des	*schlechten*	*Wetters*	*wegen*
des	schlecht-en	Wetter-s	wegen
DEF.GEN.N.SG	bad-GEN.N.SG	weather-GEN	because.of

(idem)

Besides the difference in placement, the morphological properties of postpositions are the same as those of prepositions. That is, where postpositions are derived from nouns at all, they do not receive case and number marking and cannot themselves be modified by adjectives or relative clauses. Generally, it is possible for them to be hosts of quantifier clitics where semantics permit it.

4.4.3 Adpositions and time

It has been mentioned above that location also serves as the conceptual metaphor for expressing temporal relationships. Notably the prepositions *kong* 'inside',

ling 'on', ᜎᜒᜈ᜔ *marin* 'in front of', ᜋᜅᜓᜌᜄ᜔ *manga luga* 'through', ᜋᜅᜐᜑ *mangasaha* 'towards', and ᜉᜅ᜔ *pang* 'behind' come to mind as doubling for 'within', 'while', 'before', 'during', 'in + *time*', and 'ago', respectively (also see Figure 4.17). Since postpositions are not primarily derived from nouns, there are dedicated forms for expressing temporal relationships, namely, ᜋᜑᜐᜑᜆᜌ᜔ *masahatay* 'since', ᜉᜑᜈ᜔ *pesan* 'until', and as the only form with a double function, ᜉᜅ᜔ *pang* 'after, past'.

(143) a. *Miranang kong bihanya sam.*
Mira=nang kong bihan-ya sam
do=IPL.A inside week-LOC two

'We will do it within two weeks.'

b. *Girenjang mangasaha pidimya-kay.*
Girend=yang mangasaha pidim-ya=kay
arrive=3SG.M.A towards hour-LOC=few

'He will arrive in a few hours.'

c. *Layaye-ikan ang Pila ling yeng pakur.*
Laya-ye=ikan ang Pila ling yeng pakur
read-3SG.F=much A Pila on 3SG.F.A sick

'Pila read a lot while she was sick.'

Of the examples above, the use of ᜃᜓᜅ᜔ *kong* in (143a) is probably still closest to a local preposition in that the time span is conceptualized as a container, or the distance between two points. The use of ᜋᜅᜐᜑ *mangasaha* in (143b), on the other hand, is more idiomatic. While the prepositions in these two examples each govern an NP, example (143c) shows that it is also possible for prepositions expressing a temporal relationship to govern a subclause. This ability is even more prominent with temporal postpositions in that all of the words listed above can govern either an NP or a clause, for instance, ᜋᜑᜐᜑᜆᜌ᜔ *masahatay*:

(144) a. *Ang manga hangya lakayperinya masahatay.*
Ang manga hang=ya.Ø lakayperin-ya masahatay
AT PROG stay=3SG.M.TOP solstice-LOC since

He has been staying since the solstice.

b. *Yeng giday sarayāng masahatay.*
Yeng giday sara=yāng masahatay
3SG.F.A sad leave=3SG.M.A since

'She has been sad since he left.'

Figure 4.18: Conjugation paradigm for ಕ್ಸಬ್- *sob-* 'learn, teach' (monoconsonantal root)

Person		**Singular**		**Plural**
1SG	*sobay*	'I learn'	*sobayn*	'we learn'
2SG	*sobva*	'you learn'	*sobva*	'you learn'
3SG.M	*sobya*	'he learns'	*sobyan*	'they learn'
3SG.F	*sobye*	'she learns'	*sobyen*	'they learn'
3SG.N	*sobyo*	'it learns'	*sobyon*	'they learn'
3SG.INAN	*sobara*	'it learns'	*sobaran*	'they learn'
IMP	*sobu!*	'learn!'		
HORT	*sobu-sobu!*	'let's learn!'		
ITER	*so-sob-*	'learn again, relearn'		
PTCP	*sobyam*	'learning'		

4.5 Verbs

Besides nouns, verbs constitute the other main part of speech in Ayeri which carries inflections. Verbs show person and number agreement, but may also inflect for tense, aspect, mood, and modality as grammatical categories of the verb itself. Personal pronouns may furthermore cliticize to the verb stem, and the verb phrase is also often marked with a clitic indicating the topic of the sentence and the topic NP's role in Ayeri's case system, which can be interpreted as a second agreement relation. Further clitics may indicate reflexive actions, likeness, logical connection, as well as degree and measure. Verbs are thus probably the most versatile part of speech on the one hand, but also the one with the heaviest workload on the other. The following sections will dissect the morphology of verbs category by category. Since cliticization is a phrase-level process (Klavans 1985), it will only be touched on briefly here. Because verbs inhabit a central position in syntax and exhibit agreement morphology, it will be necessary in this section to merge syntax and morphology on occasion in order to describe morphosyntactic effects.

4.5.1 Person–number marking

As described in section 3.3, Ayeri conjugates its main verbs, canonically in agreement with the agent NP, and verb conjugation as such is extremely pervasive. The basic conjugation paradigms are given in Figures 4.18–4.20.[30] Agreement causes verbs

[30] Due to the agglutinating structure of Ayeri it makes little sense to list the whole paradigm of verb inflection for all possible affix combinations here, as the table would become unreasonably large. Instead, the various sections below will contain examples of use for all affixes.

Figure 4.19: Conjugation paradigm for *anl-* ‘bring’ (biconsonantal root)

Person	Singular		Plural	
1SG	*anlay*	‘I bring’	*anlayn*	‘we bring’
2SG	*anlava*	‘you bring’	*anlava*	‘you bring’
3SG.M	*anlya*	‘he brings’	*anlyan*	‘they bring’
3SG.F	*anlye*	‘she brings’	*anlyen*	‘they bring’
3SG.N	*anlyo*	‘it brings’	*anlyon*	‘they bring’
3SG.INAN	*anlara*	‘it brings’	*anlaran*	‘they bring’
IMP	*anlu!*	‘bring!’		
HORT	*anlu-anlu!*	‘let’s bring!’		
ITER	*an-anl-*	‘bring again, bring back’		
PTCP	*anlyam*	‘bringing’		

Figure 4.20: Conjugation paradigm for *no-* ‘want’ (vocalic root)

Person	Singular		Plural	
1SG	*noay*	‘I want’	*noayn*	‘we want’
2SG	*nova*	‘you want’	*nova*	‘you want’
3SG.M	*noya*	‘he wants’	*noyan*	‘they want’
3SG.F	*noye*	‘she wants’	*noyen*	‘they want’
3SG.N	*noyo*	‘it wants’	*noyon*	‘they want’
3SG.INAN	*noara*	‘it wants’	*noaran*	‘they want’
IMP	*nu!*	‘want!’		
HORT	*nu-nu!*	‘let’s want!’		
ITER	*no-no-*	‘want again’		
PTCP	*noyam*	‘wanting’		

to reflect grammatical categories of nominal entities, thus, verbs show agreement in person (1, 2, 3) and number (SG, PL); third persons are again differentiated by gender (M, F, N, INAN; compare section 4.1.1). The conjugation suffixes are basically the same as the topic-marked (thus superficially unmarked) personal pronouns (see section 4.2.1).

Regarding person–number inflection, verbs may be divided into three classes: monoconsonantal, biconsonantal, and vocalic stems. As discussed in section 1.2, Ayeri restricts the number of successive non-glide consonants to two, which has repercussions in the second person, since the conjugation suffix there is *-va*. Monoconsonantal roots are unaffected by this restriction, however, hence the con-

jugation suffixes can simply be appended as they are; this is illustrated with the verb ཇོན་ *sob-* 'teach, learn' in Figure 4.18. Verb stems ending in dental and velar plosives will naturally undergo palatalization in the third person animate, so for instance, the third person singular masculine of the verb ཇུར་ *gurat-* 'answer' is ཇུར་ཚ་ *guraca* '(he) answers', and the third person feminine plural of ཨབག་ *abag-* 'roam, wander' is ཨབཇེ་ *abajen* '(they) roam, (they) wander'. Verbs whose stem ends in an affricate are treated as monoconsonantal roots as well, since the affricate occupies one consonant phoneme segment. Thus, the second person of ཨིཙ་ *ic-* 'glide, slide' is not *ཨིཙྭ་ **icava*, but ཨིཙྭ་ *icva* 'you glide, you slide'.

Since /v/ is neither a vowel nor a glide, as present in the non–second person suffixes, an epenthetic *-a-* is inserted between the stem and the second-person suffix for verbs whose stem ends in -CC.[31] This is illustrated in Figure 4.19 for the verb ཨན་ལ་ *anl-* 'bring'. The second person conjugation of this verb is not *ཨན་ལ་ **anlva*, since the cluster *-nlv-* is illegal, but ཨན་ལ་ *anlava*. Since Ayeri treats two successive instances of the same consonant as a single segment—there is no gemination—verbs like སིལ་ *silv-* 'see' conjugate like monoconsonantal roots with regards to consonant clusters. That is, the second person of སིལ་ *silv-* is not *སིལ་ཝ་ **silvava*, as one might expect, but སིལ་ཝ་ *silvva*. A further exception to this are verbs ending in -Cs, since -Cs-C- is commonly resyllabified as -C-sC- (see chapter 1, footnote 13). Thus, the second-person form of ཀཱརྶ་ *kars-* 'freeze' is not *ཀཱརྶཝ་ **karsava* as expected, but ཀཱརྶྭ་ *karsva* 'you freeze'.

Lastly, verb stems may end in a vowel, most commonly *-a*. In these cases as well, the conjugation suffixes may simply be appended to the stem. The conjugation of this class is illustrated in Figure 4.20 with the verb ནོ་ *no* 'want'. Verb stems ending in *-a* undergo the regular vowel lengthening process for the first person suffixes, hence, the first person singular conjugation of ཨཔ་ *apa-* 'laugh' is ཨཔཱཡ་ *apāy* 'I laugh'. Verb stems ending in a diphthong in /ɪ/ are essentially treated as a hybrid of monoconsonantal and vocalic stems, since the diphthong's final /ɪ/ is treated as /j/ before a vowel: པལཡཔ *palayay* 'I rejoice', པལཡཝ་ *palayva* 'you rejoice'.

As mentioned above, the person marking on verbs is essentially the same as the topic-marked personal pronouns. This has further ramifications for person-marking on verbs, however, insofar as—again, canonically—even fully case-marked agent pronouns may act as person marking by means of cliticization. Thus, any person-marking on verbs except third-person agreement is, in fact, a topicalized pronoun clitic not only by diachronic origin. Unlike English, Ayeri does not use agent pronouns in addition to person agreement on verbs. Consider these two example sentences in English:

[31] A *root* is understood here as the uninflected verb morpheme, for instance, ཨན་ལ་ *anl-*, ཨིཙ་ *ic-*, ནོ་ *no-*, or ཇོན་ *sob-*. A *stem* may contain inflections and further inflectional affixes attach to it.

(145) a. *John greets Mary.* [English]
John greet-s Mary
John greet-3SG.PRS Mary

b. *He greets Mary.*
He greet-s Mary
3SG.M greet-3SG.PRS Mary

In these examples, the verb has an agreement suffix *-s* which indicates third person singular, present tense, whether the subject of the sentence is a noun (*John*) or a pronoun (*he*), which acts as a free morpheme in English. Now consider the Ayeri equivalents of these two examples, on the other hand:[32]

(146) a. *Ang manya Ajān sa Pila.*
Ang man-ya Ø Ajān sa Pila
AT greet-3SG.M TOP Ajān[3SG.M] P Pila[3SG.F]

'Ajān greets Pila.'

b. *Ang manya sa Pila.*
Ang man=ya.Ø sa Pila
AT greet=3SG.M.TOP P Pila[3SG.F]

'He greets Pila.'

It is probably uncontroversial to analyze ᠶᠠ *-ya* in (146a) as person agreement: ᠠᠵᠠᠨ *Ajān* is a male name in Ayeri while ᠫᠢᠯᠠ *Pila* is a feminine one; the verb inflects for a masculine third person, which tells us that it agrees with the one doing the greeting, Ajān. Ajān is also who this is about, which is shown on the verb by marking for an agent topic. In the second case, there is only anaphoric reference to Ajān, so you might say that the agent NP is left out. Very broadly thus, the verb marking here seems to be like in Spanish, where you can drop the subject pronoun:

(147) a. *Juan saluda a María.* [Spanish]
Juan salud-a a María
John greet-3SG ACC Mary

'John greets Mary.'

b. *Saluda a María.*
Salud-a a María
greet-3SG ACC Mary

'He greets Mary.'

32 Most of the following account is taken nearly verbatim from a previously published blog article, Becker (2016b). Some of the Ayeri examples used in the following come from a list of samples I provided for a bachelor's thesis at the University of Kent in March 2016, in private conversation, on request.

Example (146b) probably does not seem conspicious either, except that there is also topic marking for an agent there, the controller of which I have so far assumed to be the person inflection on the verb, in analogy with examples like the following:

(148) *Lampyāng.*
Lamp=yāng
walk=3SG.M.A

'He walks.'

This raises the question whether in Ayeri, there is dropping of an agent pronoun involved at all, which is why the person suffix in (146b) was glossed as *=ya.Ø* (=3SG.M.TOP) rather than just as *-ya* (-3SG.M). In turn, this question leads us to consider another characteristic of Ayeri, namely that the topic morpheme on noun phrases is zero. That is, the absence of overt case marking on a nominal element indicates that it is a topic; the verb in turn marks the case of the topicalized NP with a (case) particle preceding it. Pronouns as well show up in their unmarked form when topicalized, which is why I am hesitant to analyze the pronoun in (149b) as a clitic on the VP rather than an independent morpheme:[33]

(149) a. *Sa manya ang Ajān Pila.*
Sa man-ya ang Ajān Ø Pila
PT greet-3SG.M A Ajān TOP Pila

'It's Pila that Ajān greets.'

b. *Sa manyāng ye.*
Sa man=yāng ye.Ø
PT greet=3SG.M.A 3SG.F.TOP

'It's her that he greets.'

What is remarkable, then, is that 𑍂 *ye* (3SG.F.TOP) is the very same form that appears as an agreement morpheme on the verb, just like 𑍃 *-ya* (3SG.M) in various examples above (also compare the examples in section 4.2.1):

(150) *Ang purivaye yāy.*
Ang puriva=ye.Ø yāy
AT smile=3SG.F.TOP 3SG.M.LOC

'She smiles at him.'

[33] Also, perhaps a little untypically, topic NPs in Ayeri are not usually pulled to the front of the phrase (at least not in the written language; see Lehmann 2015: 120–122), so topic-marked pronouns stay in-situ. Which NP constitutes the topic of the phrase is marked on the verb right at the head of the clause. How and whether this can be justified in terms of grammatical weight (see, for instance, Wasow 1997: 95–98) remains to be seen.

This also holds for all other personal pronouns. Moreover, *-yāng* as seen in examples (148) and (149b) may also be used as a free pronoun in equative statements with predicate nominals, as well as other such case-marked personal forms:

(151) a. *Yeng mino.*
Yeng mino
3SG.F.A happy

'She is happy.'

b. *Yāng naynay.*
Yāng naynay.
3SG.M.A too

'He is, too.'

As for case-marked person suffixes on verbs, the assumption so far has been that they are essentially clitics, especially since the following marking strategy is the grammatical one in absence of an agent NP:

(152) a. *Manye sa Pila.*
Man-ye sa Pila
greet-3SG.F P Pila

'Pila is being greeted.'

b. *Manyes.*
Man=yes.
greet=3SG.F.P

'She is being greeted.'

The verb here agrees with the patient—or is it that person agreement suffixes on verbs are generally clitics in Ayeri, even where they do not involve case marking? There seems to be a gradient here between what looks like regular verb agreement with the agent on the one hand, and agent or patient pronouns just stacked onto the verb stem on the other hand. For an overview, compare Figure 4.21. In this figure, especially the middle, transitional category is interesting in that what looks like verb agreement superficially can still govern topicalization marking, which is indicated in column II by an index '1'. Note that this behavior only occurs in transitive contexts; there is no topic marking on the verb if the verb only has a single NP dependent. Also consider that for example (b) in the type III transitive cell the question is, whether this should not better be analyzed as AT …-3SG.M.TOP …-TOP …-P, with co-indexing of the topic on the person inflection of the verb, making it structurally closer to type II.

As for personal pronouns fused with the verb stem like in the first column, Corbett points out that

Figure 4.21: Verb inflection types in Ayeri

	Type I: Clitic pronouns	**Type II: Transitional**	**Type III: Verb agreement**
Inflectional categories	Person Number Case	Person Number Case/Topic	Person Number
Examples (intransitive)	…=yāng …=3SG.M.A	—	…-ya$_1$ …-ang$_1$ …-3SG.M …-A
Examples (transitive)	sa$_1$ …=yāng …-Ø$_1$ PT …=3SG.M.A …-TOP	ang$_1$ …=ya.Ø$_1$ …-as AT …=3SG.M.TOP …-P	a. ang$_1$ …-ya$_1$ …-Ø$_1$ …-as AT …-3SG.M …-TOP …-P b. a$_1$ …-ya$_2$ …-ang$_2$ …-Ø$_1$ PT …-3SG.M …-A …-TOP

> In terms of syntax, pronominal affixes are arguments of the verb; a verb with its pronominal affixes constitutes a full sentence, and additional noun phrases are optional. If pronominal affixes are the primary arguments, then they agree in the way that anaphoric pronouns agree [...] In terms of morphology, pronominal affixes are bound to the verb; typically they are obligatory [...]. (Corbett 2006: 99–100)

This seems to be exactly what is going on for instance in (148) and (152b), where the verb forms a complete sentence. It needs to be pointed out that Corbett includes an example from Tuscarora, a native American polysynthetic language, in relation to the above quotation. Ayeri should not be considered polysynthetic, however, since its verbs generally do not exhibit relations with multiple NPs, at least as far as person and number agreement is involved (Comrie 1989: 45–46).[34]

Taking everything written above so far into account, it looks much as though Ayeri is in the process of grammaticalizing personal pronouns into person agreement (Lehmann 2015: 42–45; Gelderen 2011: 493–497). Corbett (2006: 76–77) illustrates an early stage of such a process:

(153) a. *Ke* *móe* *ke=fue.* (**Ke móe fue.*) [Skou]
3SG.M fish 3SG.M=see.3SG.M
'He saw a fish.'

b. *Pe* *móe* *pe=fu.* (**Pe móe fu.*)
3SG.F fish 3SG.F=see.3SG.F
'She saw a fish.'

What Gelderen calls the *subject cycle*, the "oft-noted cline expressing that pronouns can be reanalyzed as clitics and agreement markers" (Gelderen 2011: 493) applies here, and as well in Ayeri. However, while she continues to say that in "many languages, the agreement affix resembles the emphatic pronoun and derives from it" (494), Ayeri does at least in part the opposite and uses the case-unmarked, unstressed form of personal pronouns for what resembles verb agreement most closely. This, however, should not be too controversial either, considering that, for instance, semantic bleaching and phonetic erosion go hand in hand with grammaticalization (Lehmann 2015: 136–137; Gelderen 2011: 497).

As pointed out above in (152), Ayeri usually exhibits verbs as agreeing with agents and occasionally patients, not topics as such. This may be a little counterintuitive since the relation between topics and subjects is close, but is possibly due to the fact

[34] The topic NP marked on the verb may be a different from the one with which the verb agrees in person and number, so technically, Ayeri verbs *may* agree with more than one NP in a very limited way (compare section 3.3). Still, I would not analyze this as polypersonal agreement, since there is only canonical verb agreement with one constituent, that is, the agent NP. Topic marking should, in my opinion, be viewed as a separate agreement relation, as pointed out in the quoted section above.

Figure 4.22: The syntax and morphology of pronominal affixes (Corbett 2006: 101)

SYNTAX:	non-argument	argument	
LINGUISTIC ELEMENT:	'pure' agreement marker	pronominal affix	free pronoun
MORPHOLOGY:	inflectional form		free form

that the unmarked word order is VAP. This means that agent NPs usually follow the verb, and it strikes me as not too unnatural to have an agreement relation between the verb and the closest NP also when non-conjoined NPs are involved (Corbett 2006: 180). This conveniently explains why verbs can agree with patients as well if the agent NP is absent. Taking into account that the grammaticalization process is still ongoing so that there is still some relative freedom in how morphemes may be used if a paradigm has not yet fully settled (Lehmann 2015: 148–150) also makes this seem less strange. Verbs simply become agreement targets of the closest semantically plausible nominal constituent. Ayeri seems to be shifting from topics to subjects, and as a consequence the bond between agents and verbs is strengthened due to their usual adjacency; developing verb agreement with agents may be seen as symptomatic of this change.[35]

Signs so far point towards Ayeri's person agreement in fact being more likely enclitic pronominal affixes, even what I had been thinking of as person agreement before (that is, suffixes on the verb that only encode person and number, but not case). The question is, then, how this might be corrobated. Corbett offers a typology here, see Figure 4.22. According to this typology, a pronominal affix is syntactically an argument of the verb but has the morphology of an inflectional form. If we compare this to the gradient given in table 1 above, it becomes evident that type I definitely fulfills these criteria, and type II does so as well, in fact, in that there is no agent NP that could serve as a controller if the verb inflection in type II were 'merely' a agreement target. The inflection in type III, on the other hand, appears to have all hallmarks of agreement in that there is a controller NP that triggers it, with the verb serving as an agreement target. Moreover, the person marking on the verb is not a syntactic argument of the verb. As example (152a)

[35] When translating things in Ayeri, I find myself very often using agent topics, which may be because I am used to subjects proper. Supposing that this is also what Ayeri prefers in-universe, it would make sense to assume the usual grammaticalization path by which topics become subjects, thereby also leading to subject-verb agreement by means of resumptive pronouns referring back to left-dislocated topics (Lehmann 2015: 121–122; Gelderen 2011: 499–500). Lehmann (2015: 120) gives colloquial French *Jean, je l'ai vu hier* 'John, I saw him yesterday' as an example here: the object clitic *l'* (← *le* 'him') may well develop into an agreement affix (also see Gelderen (2011: 498) on a dialect of Spanish in which, she argues, this has happened).

shows, however, marking of type III permits the verb to mark more than one case role, which makes it slightly atypical, although verbs can only carry a single instance of person marking (Corbett 2006: 103). Regarding referentiality, the person suffixes on the verb in table 1, columns I and II are independent means of referring to discourse participants mentioned earlier, whereas the person suffix in III needs support from an NP in the same clause as a source of morphological features to share:

(154) a. *Ajān … Ang manya sa Pila.*
Ajān ... Ang man=ya.Ø sa Pila
Ajān ... AT greet=3SG.M.TOP P Pila

'Ajān ... He greets Pila.'

b. *Ajān … Sa manyāng Pila.*
Ajān ... Sa man=yāng Ø Pila
Ajān ... PT greet=3SG.M.A TOP Pila

'Ajān ... It's Pila that he greets.'

c. **Ajān … Manya sa Pila.*
Ajān ... Man-ya sa Pila
Ajān ... greet-3SG.M P Pila

Since person marking of the type I and II is *referential*, as shown in example (154a) and (154b), it can be counted as a cliticized pronoun (103). Pronouns in Ayeri can also refer to non-people—there are both a 'neuter' gender for non-people considered living (or being closely associated with living things), and an 'inanimate' gender for the whole rest of things (compare section 4.1.1). Since mere agreement as in type III needs support from an NP within the verb's scope, though, it does not have *descriptive/lexical content* of its own. That is, it *only* serves a grammatical function (104), not strictly as an anaphora. As for Corbett's *balance of information* criterion, Figure 4.21 also highlights differences in what information is provided by the person marking. Nouns in Ayeri inherently bear information on person, number, and gender, and all three types of person inflection on verbs share these features. However, there are no extra grammatical features indicated by the first two inflection types that are not expressed by noun phrases, although under a very close understanding of Corbett, the following example (155) may still qualify as person-marking on the verb realizing a grammatical feature shared with an NP that is not openly expressed by the NP. He writes that in the world's languages, this frequently is number (105). This, however, does not apply to Ayeri because the only time verbs display number not expressed overtly by inflection on a noun is in agreement like in type III (a):[36]

[36] From a Lexical-Functional Grammar point of view, the number feature of 𐑒𐑱 *kay* in (155)

(155) *Ang sahayan ayon kay kong nangginoya.*
Ang saha-yan ayon-Ø kay kong nanggino-ya
AT come-3PL.M man-TOP three into tavern-LOC

'Three men come into a pub.'

As shown above, verb marking of the types I and II is independent as a reference, so there is *unirepresentation* of the marked NP. In contrast, verb marking of type III requires a controlling NP in the same clause to share grammatical features with, so that there is *multirepresentation* typical of canonical agreement (Corbett 2006: 106). Note that unirepresentation as outlined here is probably different from pro-drop, as in this case I would expect sentences like (154c) to be grammatical (107). A further property that hinges on types I and II being independent pronouns glued to verbs as clitics is that they are not coreferential with another NP of the same grammatical relation, but are in complementary distribution, as commonly assumed with pronominals (108). Hence, either of these two examples is ungrammatical:

(156) a. **Lampyāng ang Ajān.*
Lamp=yāng ang Ajān
walk=3SG.M.A A Ajān

b. **Ang lampyāng Ajān.*
Ang lamp=yāng Ø Ajān
AT walk=3SG.M.A TOP Ajān

However, verb agreement with a free pronoun is also not possible even though it might be expected according to (109)—also compare example (145b) above. Instead, the agent pronoun replaces any possible person agreement on the verb:

(157) a. *Lampyāng.*
Lamp-yāng
walk=3SG.M

'He walks.'

b. **Lampya yāng.*
Lamp-ya yāng
walk-3SG.M 3SG.M.A

In conclusion, we may assert that Ayeri appears to be in the process of grammaticalizing pronouns as verb infletions, however, how far this grammaticalization process has progressed is dependent on syntactic context. Ayeri displays a full gamut from personal pronouns (usually agents) glued to verbs as clitics to agreement with

coalesces with the semantic features provided by *ayon* in the maximal projection; agreement is thus with the whole agent NP rather than just with *ayon* as the NP's categorial head.

coreferential NPs that is transparently derived from these personal pronouns. With the latter, the complication arises that coreferential pronoun NPs are not allowed as agreement controllers as one might expect, but only properly nominal NPs. Slight oddities with regards to Austronesian alignment—Ayeri's actors bear more similarities to subjects than expected, but still without fully conflating the two notions—can possibly be explained by a strengthening of the verb-agent relationship pointed out as a grammaticalization process in this article as well. Information on agreement with committee nouns and coordinated NPs with incongruent agreement features can be found in the section on VPs.

4.5.2 Tense

Tense in Ayeri is often not explicitly marked, but has to be inferred from context. However, where marked, Ayeri distinguishes past and future as referring to past and future events, respectively. Both past and future tenses come with three degrees each: near, recent/impending, and remote. Ayeri's distinguishing three degrees of both past and future time is a little unusual with regards to typology according to the survey conducted by Dahl (1985: 127). The decision for which subtier of the past and the future to use is up to pragmatics, that is, there are no definitive and clear-cut lines. The near-time markers are most commonly used for immediate scope, that is, things which have just happened or will happen in a moment. The recent/impending-time markers may then be used for anything else which does not qualify as remote, that is, a long time into the past or the future from the point of view of the speaker.

Dahl (1985: 117) further notes that among the languages in the surveyed sample, past tenses are mostly marked by suffixes, the marking of this category being extremely common in addition. Ayeri may thus be a little unusual crosslinguistically again by exclusively using prefixes for tense marking. This makes sense, however, if we assume that historically, the tense prefixes once were auxiliary verbs. Ayeri applies head-first word order to subordinating verbs, as we will see further below, so these prefixes may just have begun to *pro*cliticize instead of slipping into a position behind their head (that is, Wackernagel's position).

Of the triad tense–aspect–mood this section will only cover basic uses of the marked tense categories, followed by a discussion of complex tense combinations such as past-in-future. The subsequent section 4.5.3 will provide more insight into the morphological marking of aspectual categories; section 4.5.4 deals with the morphology of mood marking in Ayeri.

Present tense

Verbs in Ayeri are unmarked for present tense, as it is the normal mode of speaking. Besides being used to comment or report on current events, the present tense is also used to make statements of general truth:

(158)

Sa	*arapyo*	*tahanyamanang*	*koyana*	*nogalam-ikan.*
Sa	arap-yo	tahanyaman-ang	koya-na	nogalam-Ø=ikan
PT	require-3SG.N	writing-A	book-GEN	patience-TOP=much

'Writing a book requires much patience.'

Moreover, Ayeri does not strictly mark its verbs for past tense in narrative discourses—verbs may thus appear as though with a present-time reference in spite of recounting past events, whether historical or fictional. See the next subsection on the past tense.

Past tense

The past tense indicates actions in the past if not further modified. The three degrees of past tense are marked with 𑖎𑖵 *kə-* (near/immediate), 𑖍𑖵 *mə-* (recent), and 𑖪𑖵 *və-* (remote), which attach right in front of a verb root. In spite of the customary spelling of the past tense prefixes with ⟨ə⟩, which reflects pronunciation, they have an underlying /a/ vowel in this place. This means that the vowel of the tense prefixes coalesces with a following /a/ to form a long vowel (see section 1.1.2), which is demonstrated in example (159b) below:

(159) a.

Ang	*kəsilvay*	*yes*	*motonya.*
Ang	kə-silv=ay.Ø	yes	moton-ya
AT	NPST-see=1SG.TOP	3SG.F.P	store-LOC

'I've just seen her at the store.'

b.

Le	*mādruyāng*	*ikan*	*biratay.*
Le	mə-adru=yāng	ikan	biratay-Ø
PT.INAN	PST-break=3SG.M.A	wholly	pot-TOP

'The pot, he completely broke it.'

c.

Vəmittang	*edaya.*
Və-mit=tang	edaya
RPST-live=3PL.M.A	here

'They lived here (a long time ago)'

Note that the recent and the remote past tense are not generally marked if the past context is clear, for instance, when a past context has already been established in discourse. This may also happen explicitly by using a time adverbial such as 𑖍𑖩𑖽

tamala 'yesterday' or *pericanya menang pang* 'a hundred years ago'. In the presence of an explicit time adverbial, redundant tense marking is also dropped subsequently:

(160)

Ang	*kondayn*	*kadanya*	*terpasānley*	*bihanya*	*sarisa.*
Ang	kond=ayn.Ø	kadanya	terpasān-ley	bihan-ya	sarisa
AT	eat=1PL.TOP	together	lunch-P.INAN	week-LOC	previous

'We had lunch together last week.'

The reference to a past time frame is explicitly given in this example by the adverbial phrase *bihanya sarisa* 'last week', hence the verb appears here simply as *kondayn*, rather than with redundant past-tense marking as *məkondayn*. Since past tense is often underspecified in Ayeri, the language also does not employ epic past forms in narrative contexts like English, among others, commonly does:

(161) The sky above the port was the color of television, tuned to a dead channel.
(Gibson 1995 [1984]: 9)

This quote is, of course, the first sentence of Gibson's novel *Neuromancer,* which never mentions any definite dates, but is clearly set in a future world, maybe somewhere around the middle of the twenty-first century. Yet, however, Gibson recounts events which are logically happening in an imagined future as having already happened in the past: he uses the past tense as a convention of storytelling. What Ayeri, then, does in contrast to English is to basically treat stories as though happening in the present; adverbials referring to past time may, again, set up the correct time frame if required. Ayeri is in good company here, since according to Dahl "[m]ore common than marking narrative contexts [...] is not marking them—quite a considerable number of languages use unmarked verb forms in narrative contexts" (Dahl 1985: 113). This, however, is yet different from a narrative present, that is, the use of present tense within a past context, which languages like English may use in narrative contexts to increase the feeling of immediacy and thus raise suspense. The following example from an Ayeri translation of the well-known Aesopian fable, 'The North Wind and the Sun' (compare Aesop 2007), illustrates Ayeri's non-marking of tense on verbs in narrative contexts:

(162)

Ang	*manga*	*ranyon*	*adauyi*		*Pintemis*	*nay*		*Perin,*	*engyo*
Ang	manga	ran-yon	adauyi	Ø	Pintemis	nay	Ø	Perin,	eng-yo
AT	PROG	argue-3PL.N	then	TOP	North Wind	and	TOP	Sun,	be.more-3SG.N

mico	*sinyāng*	*luga*	*toya,*	*lingya*	*si*	*lugaya*	*asāyāng*	*si*
mico	sinya-ang	luga	toya,	ling-ya	si	luga-ya	asāya-ang	si
strong	who-A	among	3PL.N.LOC,	while-LOC	REL	pass-3SG.M	traveler-A	REL

sitang-naykonyāng	*kong*	*tovaya*	*mato.*
sitang=naykon=yāng	kong	tova-ya	mato.
self=wrap=3SG.M.A	inside	cloak-LOC	warm.

'The North Wind and the Sun were then arguing which among them is stronger, all the while a traveler passed by who had wrapped himself in a warm cloak.'

Future tense

Future tense marks explicit references to future time in Ayeri, that is, "someone's plans, intentions or obligations" (Dahl 1985: 103), as well as predictions. The future prefixes behave analogously to the ones indicating past tense: *pə-* indicates immediate/near future (NFUT), *sə-* indicates impending future (FUT), and *ni-* indicates remote future (RFUT). Underlying the reduced vowels in *pə-* and *sə-* are /a/ and /e/, respectively, so that these prefixes cause adjacent vowels of the same type to lengthen as usual; the same, of course, applies to *ni-* regarding /i/. The following examples show the future tense markers in context:

(163) a. *Pəsahayang!*
Pə-saha=yang
NFUT-come=1SG.A

'I'm coming (in a moment)!'

b.

Ang	*səkarsayn*	*kankaya.*
Ang	sə-kars=ayn.Ø	kanka-ya
AT	FUT-freeze=1SG.TOP	snow-LOC

'We will freeze in the snow.'

c.

Paronatang,	*nisa-sahaya*	*dihakayāng.*
Parona=tang	ni-sa∼saha-ya	dihakaya-ang
believe=3PL.M.A	RFUT-ITER∼come-3SG.M	prophet-A

'They believe that the prophet will return (one day).'

Like the past tense, the future is often not explicitly marked if the time frame is clear from context or has been clarified with such adverbials as *tasela* 'tomorrow', *mangasaha pericanya* 'in a year', or *metay* 'sometime':

(164) *Ang raypāy vaya bihanya mararya.*
Ang raypa=ay.Ø vaya bihan-ya mararya
AT stop=ISG.TOP 2SG.LOC week-LOC next

'I'm stopping by you next week.'

It is possible here to explicitly mark the verb for future tense as well, for example, to make a promise, or to otherwise emphasize that the future condition will come to pass:

(165) *Səsidejang tasela, diran.*
Sə-sideg=yang tasela diran
FUT-repair=ISG.A tomorrow uncle

'I *will* repair it tomorrow, uncle.'

Past in past

So far, we have only dealt with tense marking from the point of view of the present. However, it is also possible to refer to an event which precedes another event in the past. Ayeri makes little use of auxiliary verbs, and thus the regular morphological and pragmatic means of tense marking have to cover this relation as well. In order to indicate pre-past events, it is customary to explicitly mark the verb for past time in Ayeri, in difference to the common lack of morphological marking for plain past tense. However, as it is possible for the ᵊ *mə-* prefix to be used to refer to 'regular' past events from a present point of view as well, context again has to provide the information that the frame of reference is past in this case, rather than the speaker's present.

(166) CONTEXT: Ajān's past travels

Ya məsaraya iri maritay ang Ajān Ø Tasankan
Ya ma-sara-ya iri maritay ang Ajān Ø Tasankan
LOCT PST-go-3SG.M already before A Ajān TOP Tasankan

'Tasankan, Ajān had already gone there before.'

The above example is essentially ambiguous as to the reference point. The explicit tense marking draws attention to the fact that the event definitely lies in the past and the adverbs underline this fact. Instead of reading the sentence as referring to a pre-past event, it is equally possible to read it from a present-time point of view as 'Ajān has already gone to Tasankan before', although under these circumstances, it would be more common to leave the ᵊ *mə-* out, as described in section 4.5.2:

(167) CONTEXT: Ajān's current traveling plans

Ya	*saraya*	*iri*	*maritay*	*ang*	*Ajān*		*Tasankan*
Ya	sara-ya	iri	maritay	ang	Ajān	Ø	Tasankan
LOCT	go-3SG.M	already	before	A	Ajān	TOP	Tasankan

'Tasankan, Ajān already went there before.'

Likewise, it is possible to make plans in the past with the intention of them coming to frutition only later, possibly at a point before the current time or even further in the future. The English idiom to express this time relation is 'was going to'; in Ayeri, the relation cannot be expressed by morphological means, but only by lexical ones. Thus, *no-* 'want; plan to' must be used, together with explicit past marking. Since *no-* is a modal particle (see section 4.5.5), inflection is placed on the content verb.

(168) CONTEXT: Ajān's having gone to Tasankan

Ang	*no*	*məinca*	*tosantangyeley*	*hiro*	*yam*	*Pila.*
Ang	no	ma-int=ya	tosantang-ye-ley	hiro	yam	Pila
AT	want	PST-buy=3SG.M.TOP	earring-PL-P.INAN	new	DAT	Pila

'He had planned to buy new earrings for Pila.'

The time relation expressed here is, thus, essentially that of a pre-past event again, since the planning of the action of buying took place before the time of going to Tasankan.

Past in future

Of course, it is also possible to refer to future actions or events which will already have happened before a point further in the future. From the point of view of the later event, the closer event will thus already lie in the past, forming its prerequisite. As with future-in-past, there is no way in Ayeri to mark this relation morphologically, but lexical means have to be used, that is, first and foremost the adverb *iri* 'already', which indicates that an action has been completed in the past. As with other future actions, the time frame must be inferred from context if it is not indicated explicitly by temporal adverbs or future-tense marking (compare section 4.5.2).

(169) CONTEXT: Ajān's traveling to Tasankan

Ang	*girenja*	*iri*	*nilay*	*sirutayya*	*tamala*	*pesan.*
Ang	girend=ya.Ø	iri	nilay	sirutay-ya	tamala	pesan
AT	arrive=3SG.M.TOP	already	probably	evening-LOC	tomorrow	before

'He will probably already (have) arrive(d) before tomorrow evening.'

Strictly speaking, the above example does not make it explicit whether Ajān *will arrive* before evening or *will have arrived*. In order to indicate that the action is all but complete, the cessative adverb *mayisa* 'be done; ready' may be added:

(170)

Girenjāng	***mayisa***	*iri.*
Girend=yāng	mayisa	iri
arrive=3SG.M.A	be.done	already

'He already has arrived', or: 'He will already have arrived.'

4.5.3 Aspect

Aspectually unmarked verb forms indicate general statements, which may be completed or ongoing, depending on the meaning of the verb itself. Ayeri seems not to make strict formal distinctions with regards to either, perfectivity or lexical aspect. It needs to be noted, however, that at least to date, it is not entirely clear how Ayeri fares with regards to conceptualizing perfectivity, which Dahl (1985: 76) in reference to Comrie (1976: 16) characterizes as being based on the conceptualization of actions or events as bounded or otherwise limited wholes, versus a lack of closure. Dahl also notes that "it seems rather to be a typical situation that even in individual languages, we cannot choose one member of the opposition [perfective–imperfective] as being clearly unmarked" (Dahl 1985: 69). He further argues that

> The difficulty of deciding which member of the opposition is marked and which is unmarked is connected with the tendency for PFV:IPFV to be realized not by affixation or by periphrastic constructions but rather by less straightforward morphological processes. (73)

In other words: it *is* a difficult category to assess, in spite of being "often taken to be 'the' category of aspect" (69), mostly since languages often do not reify it by straightforward means. In Ayeri, the most tangible way of expressing completeness of an action is to use adverbs like *mayisa* 'ready, done', *iri* 'already', *ikan* 'completely, wholly' (also as an adjective); a quantifier like *-hen* 'all'; verbs like *samir-* 'finish', *panga-* 'end', and *raypa-* 'stop'; or an indefinite pronoun like *enya* 'everything, everybody':

(171)

Le	*kondjeng*	*enya.*
Le	kond=yeng	enya-Ø
PT.INAN	eat=3SG.F.A	everything

'She ate everything.' or: 'She ate it all up.'

Apart from the more general dilemma of determining how perfectivity is expressed in detail, Ayeri marks verbs openly by morphological means to indicate

progressive, habitual, and iterative actions—by their nature all conceptualizing actions as being composed of a series of two or more related actions of the same kind, though not necessarily implying a strong semantic connection to the past. The following sections will discuss each of these categories.

Progressive

In order to indicate an ongoing action explicitly, Ayeri employs the marker ꤢꤶꤔ *manga*, which we have already seen with dynamic prepositions above (section 4.4.1). This marker is a bound morpheme within the verb phrase and precedes the verb word:

(172)

Ang	*manga*	*ilye*	*karonas*	*nakajyam.*
Ang	manga	il=ye.Ø	karon-as	naka-ye-yam
AT	PROG	give=3SG.F.TOP	water-P	plant-PL-DAT

'She is giving water to the plants.'

Going by the data presented by Dahl (1985: 91), Ayeri is typologically unremarkable in marking progressive aspect with a periphrastic construction, although it is remarkable in possessing morphological progressive marking at all—it only occurs in 27% of the languages in Dahl's sample. Typical of progressives, this form of the verb is not limited to present contexts in Ayeri as exemplified in (172) above. Instead, it is possible to also use the progressive in past (173a) and future (173b) contexts, the latter being probably less typical, though:

(173) a.

Ang	*manga*	*gumya*		*Ajān*	*tadayya*	*si*	*ya*	*kongaye*	*ang*	*Pila*
Ang	manga	gum-ya		Ajān	taday-ya	si	ya	konga-ye	ang	Pila
AT	PROG	work-3SG	TOP	Ajān	time-LOC	REL	LOCT	enter-3SG.F	A	Pila

gumanga	*tamala.*
gumanga-Ø	tamala
workshop-TOP	yesterday

'Ajān was working when Pila entered the workshop yesterday.'

b.

Ang	*manga*	*nimpay*	*rangya*	*nā*	*tadayya*	*si*	*cunyo*
Ang	manga	nimp=ay.Ø	rang-ya	nā	taday-ya	si	cun-yo
AT	PROG	run=ISG.TOP	home-LOC	ISG.GEN	time-LOC	REL	begin-3SG.N

bekalang	*tasela.*
bekal-ang	tasela
festival-A	tomorrow

'I will be running home when when the festival starts tomorrow.'

Ignoring the constructedness of the above examples, the time adverb is located in the relative clause in both sentences in this case. For illustrative purposes, let

us assume that a narrative context with the respective time frames has already been established in (173). As noted above, Ayeri prefers to not mark every verb for tense explicitly when the context is clear already, insofar the argument that progressive aspect works independent of *tense* needs corrobation; the question being whether constructions like *manga mə-…* (PROG PST-…) are possible. Strictly speaking, there is nothing to prevent this construction, however, we have to wonder if it is actually *natural* to phrase things this way. What can be said at least is that progressive marking is possible within a context referring to past or future actions and events irrespective of their explicit marking on the verb. Furthermore, the examples in (173) illustrate a very typical use of the progressive as a structuring means, that is, an ongoing background action may be expressed using a progressive form, while an interrupting action receives no special marking (compare the past progressive in English).

Habitual

Unlike the few instances of habitual marking in Dahl's survey (96), Ayeri possesses a suffix for marking habitual actions on the verb: *-asa*, where the first *-a* replaces the terminal vowel of a verb stem if present, compare example (174b) below. The habitual aspect in Ayeri stresses that an action is carried out as a habit, that is, not just a few times, but with regular frequency. Essentially, verbs marked with the habitual in Ayeri can be translated by adding the adverb *usually* in English (97). The habitual aspect is not restricted to present actions or absolute statements like the one in (174a), but can also be used in past contexts to express that something *used to* be done in the past as, again, in (174b). While the contexts are probably very few, there are no restrictions about using the habitual also in contexts relating to future actions which are predicted to be carried out habitually. The following sentences illustrate typical contexts in which the habitual may be used:

(174) a.

Le	*kondasayāng*	*hemaye*	*pruyya*	*nay*	*napayya*	*kayvay.*
Le	kond-asa=yāng	hema-ye-Ø	pruy-ya	nay	napay-ya	kayvay
PT.INAN	eat-HAB=3SG.M.A	egg-PL-TOP	salt-LOC	and	pepper-LOC	without

'He always eats his eggs without salt and pepper.'

b.

Ang	*ajasāyn*	*ranisungas*	*tadayya*	*si*	*yāng*	*ganas.*
Ang	aja-asa=ayn.Ø	ranisung-as	taday-ya	si	yāng	gan-as
AT	play-HAB=1PL.TOP	hide.and.seek-P	time-LOC	REL	1SG.A	child-P

'We used to play hide-and-seek when I was a child.'

Importantly, the verb root with habitual marking forms a new verb stem to which affixes may be attached. This is relevant to mood suffixes, which follow aspectual marking.

Iterative

The iterative aspect marks actions that are repeated at least once by reduplication. The equivalent in English is to use the adverb *again* or the prefix *re-*. Iterative reduplication in Ayeri is only partial, in that only the initial CV- or VC- of a verb root is repeated—there are no verb roots which consist of only a single consonant or vowel. Complications begin, however, if the verb root starts with a consonant cluster (not unusual), or a diphtong (rare). In the case of an intial consonant cluster, the cluster is simplified to only include the first consonant; for initial diphthongs, there is no necessity to include the first available consonant, since the secondary vowel of a diphthong can by itself act as a semivowel to make up for the vowel hiatus.

(175)
a. *kuta-* 'thank' → *ku-kuta-* 'thank again'
b. *amang-* 'happen' → *am-amang-* 'happen again'
c. *prant-* 'ask' → *pa-prant-* 'ask again'
d. *ayrin-* 'set' → *ay-ayrin-* 'set again'

The reduplicated stem works as a new stem for other prefixes, that is, no morphological material can go between the reduplicated part and the lexical stem proper; the following example also shows that there is, again, no restriction on the iterative aspect with regards to tense:

(176) *Məku-kutayāng.* (**Ku-məkutayāng*)
Mə-ku~kuta=yāng
PST-ITER~thank=3SG.M.A

'He thanked again.'

Iterative reduplication is lexicalized at least in one verb, *sa-saha-* 'return'. Besides the meaning of 'again', iterative reduplication may also indicate the meaning 'back', for instance in the following example:

(177) *Ta-tapyu adaley!*
Ta~tapy-u ada-ley
ITER~put-IMP that-P.INAN

'Put that back!'

In addition to a simple iterative meaning, a frequentative meaning like 'walk around', 'cry all the time', or 'keep asking' can be achieved by combining the iterative and progressive aspects, that is, the verb is both modified by *manga* for progressive aspect and partial initial reduplication for iterative aspect:

(178) a.

Ang	*manga*	*la-lampay*	*saha-sara*	*manga*	*luga*	*bahisya-hen.*
Ang	manga	la~lamp-ay.Ø	saha-sara	manga	luga	bahis-ya=hen
AT	PROG	ITER~walk=1SG.TOP	back.and.forth	DYN	while	day-LOC=all

‘I was walking around back and forth all day long.’

b.

Ang	*manga*	*si-sipye*	*kimay*	*sirutayya.*
Ang	manga	si~sip-ye	kimay.Ø	sirutay-ya
AT	PROG	ITER~cry-3SG.F	baby.TOP	night-LOC

‘The baby, she is crying all the time at night.’

c.

Manga	*pa-prantu!*
Manga	pa~prant-u
PROG	ITER~ask-IMP

‘Keep asking!’

Lexically marked aspectual categories

Besides using morphological means, Ayeri expresses some aspectual categories by way of lexical items, that is, verbs and adverbs. The relevant words in this respect are the adverbs *sirimang* ‘about to’ (prospective) and *mayisa* ‘ready; be done’ (cessative), as well as the verb *cun-* ‘begin, start’ (inchoative):

(179)

Saratang	*sirimang.*
Sara=tang	sirimang
leave=3PL.M.A	about.to

‘They are about to leave.’

(180)

Konjang	*mayisa.*
Kond=yang	mayisa
eat=1SG.A	be.done

‘I am done eating.’

(181)

Pəcunreng	*seyaryam.*
Pə-cun=reng	seyar-yam
NFUT-begin=3SG.INAN.A	rain-PTCP

‘It is going to start raining any moment.’

Prospective *sirimang* (179) and cessative *mayisa* (180) are expressed by adverbs which are regularly following verbs as their heads. They precede other adverbs due to a higher amount of semantic bondedness, by tendency, than other descriptive adverbs. For this reason, as well as for expressing grammatical function rather than lexical meaning with the original meaning still transparent, they appear

to be on the verge of grammaticalization. In contrast, inchoative ཅུན་ *cun-* (181) is expressed by a periphrastic verb construction, that is, ཅུན་ *cun-* requires a content-verb VP as a complement rather than an NP. The content/main verb appears in a non-finite form marked by ཡམ་ *-yam*, which will be described below.

4.5.4 Mood

Besides various aspects, Ayeri also marks mood other than realis: irrealis, imperative, hortative, and negative. These are also expressed by suffixes on the verb and typically follow aspectual marking where it is expressed by a sufffix, that is, the habitative suffix ཨས་ *-asa*. The following subsections will discuss each of the modal categories expressed by suffixes; modal verbs proper will be discussed in section 4.5.5.

Irrealis

Irrealis marking in Ayeri is indicated by the suffix ངོན་ *-ong* and marks that an action is thought of as hypothetical by the speaker, whether he or she expects it to be fulfilled or not:

(182) *Sahongvāng* *edaya,* *ming* *silvongvāng* *sitang-vāri.*
Saha-ong=vāng edaya, ming silv-ong=vāng sitang=vāri
come-IRR=2SG.A here, can see-IRR=2SG.A REFL=2SG.INS

'If you came/had come here, you could see/have seen it yourself.'

As (182) shows, irrealis marking is especially prominent in conditional clauses which express a hypothetical cause and effect. Both condition/protasis and consequence/apodosis are marked with the irrealis suffix in this case. The example sentence also shows that, again, the initial vowel of the suffix replaces the last vowel of the verb stem, if there is one, so that རཧ་ *saha-* becomes རཧོན་ *sahong-*, to which further mood suffixes may be added, and finally, person marking.

The same suffix, ངོན་ *-ong*, is also used in other contexts expressing inactual events, for instance, in reported speech, or complement clauses expressing a wish about the actualization of a hypothetical event:

(183) *Narayeng,* *ang* *menongye* *demās* *yena.*
Nara=yeng ang menu-ong=ye.Ø dema-as yena
say=3SG.F.A AT visit-IRR=3SG.F.TOP aunt-P 3SG.F.GEN

'She said she were visiting her aunt.'

(184) *Hanuyang,* *koronongyang* *maritay.*
Hanu=yang koron-ong=yang maritay
wish=1SG.A know-IRR=1SG.A before

'I wish I had known this before.'

Irrealis marking does not, however, appear in contexts that express requirements on or wishes about a third person's actions, that is, typical subjuctive contexts; the verb in the complement clause rather appears in the indicative in these contexts. To add a sense of expectation of compliance about the action, the modal ᜐᜌ *mya* 'be supposed to' may be added, see section 4.5.5.

(185) a. **Arapnang, sa garongyāng hatay.*
Arap=nang sa gara-ong=yāng hatay-Ø
require=IPL.A PT call-IRR=3SG.M.A police-TOP

b. *Arapnang, sa (mya) garayāng hatay.*
Arap=nang sa (mya) gara=yāng hatay-Ø
require=IPL.A PT (be.supposed.to) call=3SG.M.A police-TOP

'We require that he call the police.'

Negative

The negative mood is used to negate verbs, which is separate from irrealis marking: negation of verbs is marked by the suffix ᜂᜓᜌ᜔ *-oy*, which has an allomorph *-u* before diphthongs in romanization and also in pronunciation. The Tahano Hikamu spelling is more conservative here and keeps the spelling ᜂᜓᜌᜓᜉ ⟨-oyay⟩ for /-uay/ (-NEG=ISG.TOP). Like the irrealis suffix, the negative suffix deletes the last vowel of the verb stem if present, which is exemplified in (186b) besides this example showing the *-u* allomorph. Moreover, example (186c) shows that negative marking usually follows irrealis marking when suffixes are stacked: ᜂᜎᜒ᜵ *-ong* + ᜂᜓᜌ᜔ *-oy* ⟶ ᜂᜎᜓᜌᜒ᜵ *-ongoy*.

(186) a. *Ang silvoyyan nasiyamanas tan.*
Ang silv-oy=yan.Ø nasi-yam-an-as tan
AT see-NEG=3PL.M.TOP approach-PTCP-NMLZ-P 3PL.M.GEN

'They did not see them approaching.'

b. *Ang peguay kalam adaley!*
Ang pega-oy=ay.Ø kalam ada-ley
AT steal-NEG=ISG.TOP honestly that-P.INAN

'I didn't steal it, honestly!'

c. *Ang tendongoyva sarayam adaya.*
Ang tend-ong-oy=va.Ø sara-yam adaya
AT dare-IRR-NEG=2SG.TOP go-PTCP there

'You would not dare to go there.'

If negated verbs appear together with negative indefinite pronouns (compare section 4.2.4), multiple negatives do not cancel each other out, but amplify the

negation instead. This is to say that Ayeri allows for multiple negation as a means to emphasize the impossibility of something.

(187)

Le	*gamaroyya*	*tadoy*	*ranyāng*	*adanya.*
Le	gamar-oy-ya	tadoy	ranyāng	adanya-Ø
PT.INAN	manage-NEG-3SG.M	never	nobody-A	that-TOP

'Nobody ever managed that',
literally: 'Nobody never didn't manage that.'

Imperative

The imperative mood is used to mark orders to an unspecified second person, that is, imperative verbs do not require an overt second person agent; if an addressee is included, it is oblique and unmarked for case, see section 4.1.3. Moreover, no distinction is made between singular and plural second-person addressees, so that the marker is ◌ִ *-u* in either case. Like the other mood suffixes, the vowel of the imperative suffix replaces the vowel of the verb stem if there is one.

(188) a.

Giru	*māy!*
gira-u	māy
hurry-IMP	INT

'Hurry up!'

b.

Tangu	*yām,*	*Yan!*
Tang-u	yām	Yan
listen-IMP	ISG.DAT	Yan

'Listen to me, Yan!'

c.

Tangu	*yām,*	*ledanye*	*nā!*
Tang-u	yām	ledan-ye	nā
listen-IMP	ISG.DAT	friend	ISG.GEN

'Listen to me, my friends!'

It is important to note that the imperative paradigm is defective; imperative verbs behave essentially as infinite forms in that they do not exhibit any agreement in person, number, gender, and topic, and also cannot act as hosts for clitic personal pronouns. Imperative verbs may be marked for negative and hortative, however. Hence, for instance, (189) is grammatical, while the examples in (190) are not.

(189)

Saroyu	*yas!*
Sara-oy-u	yas!
leave-NEG-IMP	ISG.P

'Don't leave me!'

(190) a. * *Ya* *sa-sahu* *nanga!*
Ya sa∼saha-u nanga-Ø
LOCT ITER∼go-IMP house-TOP

'Go back to the house!'

b. * *Sa* *sutamuya* *kohanya* *tasela!*
Sa sutam-u=ya.Ø kohan-ya tasela
PT hang-IMP=3SG.M.TOP sunrise-LOC tomorrow

'May he be hanged tomorrow at sunrise!'

Example (189) simply expresses a negative command, which is unproblematic in terms of logic, since commands may be issued to act in a certain way, or to forgo this action. Example (190a) shows the imperative verb as preceded by a locative topic marker, which is not logically impossible, but unacceptable by convention. Example (190b) takes this one step further in displaying a cliticized object pronoun in the fashion of morphological passives (compare section 4.5.1, page 151).

Hortative

The hortative is a special kind of imperative which addresses a group including the speaker. Its implied referent is thus first-person plural. Again, it is not necessary to mark the verb for the addressee here. As the hortative is related in meaning to the imperative, the verb also uses the imperative inflection with ◌ु *-u*, but it is fully reduplicated in addition to mark the difference. As regards agreement morphology, the same restrictions as those of imperatives apply.

(191) a. *Sahu!*
Saha-u
go-IMP

'Go!'

b. *Sahu-sahu* *umangya!*
Sahu∼saha-u umang-ya
HORT∼go-IMP beach-LOC

'Let's go to the beach!'

4.5.5 Modal verbs

Modal verbs in Ayeri express the notions of ability, desire, permission, requirement, obligation, and also of continuation, as indicated by Figure 4.23. They can generally act as both fully inflectable intransitive verbs, as well as invariable bound morphemes which occur in combination with fully inflected content verbs:

Figure 4.23: Modal verbs and particles

Category	Verb	Particle	Translation
ABILITY	*ming-*	*ming*	'be able to, can'
DESIRE, INTENTION	*vac-* *no-*	*vaca* *no*	'like to' 'want to'
PERMISSION	*kila-*	*kila*	'be allowed to, may'
REQUIREMENT	*ilta-*	*ilta*	'need to'
OBLIGATION	*mya-* *rua-*	*mya* *rua*	'be supposed to, shall' 'have to, must'
CONTINUATION	*div-*	*diva*	'stay, remain'

(192) a.

Rua	*bahavāng*	*baho,*	*ang*	*bihanoyya*	*mirampaluy*	*nas.*
Rua	baha=vāng	baho,	ang	bihan-oy=ya.Ø	mirampaluy	nas
must	shout=2SG.A	loudly,	AT	understand-NEG=3SG.M.TOP	otherwise	IPL.P

'You have to shout loudly, otherwise he does not understand us.'

b. *Ruasanang.*
Rua-asa=nang
must-HAB=IPL.A

'We usually have to.'

As (192a) shows, the modal does not inflect in combination with another verb; it rather acts similarly to a prefix, like the progressive marker *manga*, which is also presumably deverbal (compare section 3.1, footnote 3). In difference to *manga*, which as a preverbal element only serves a grammatical function, the semantic component of the modals is still prevalent, as is shown by (192b), where *rua-* appears in its function as an intransitive verb with the same meaning of strong obligation as in (192a), though it carries regular person and aspect inflection here. Inflecting the modal in the context of cooccurrence with a content verb is, however, considered unacceptable:

(193) **Ruavāng* *bahayam* *baho.*
Rua=vāng baha-yam baho
must=2SG.AT shout-PTCP loudly

'You have to shout loudly.'

Regarding example (192b) and its ability to inflect, Ayeri also has a verb that generally means 'do', namely, *mira-*. However, it is not common to use this as

a dummy verb to carry the inflection instead of the modal verb either. While such a construction is not ungrammatical *per se*, it is simply not the preferred way to express intransitive modal verbs:

(194) ?*Rua mirasanang.*
Rua mira-asa=nang
must do-HAB=IPL.A

'We usually have to.'

While most of the verbs listed in Figure 4.23 should look reasonable to English speakers, Ayeri uses two verbs for modal particles which may seem odd: ᨁᨚᨕ᩵ *vaca* 'like to', to express taking pleasure in doing something, and ᨕᨛᨁ᩵ *diva* 'stay, remain', to express that the action is being prolonged.[37] The latter verb thus also has an aspectual component to its meaning.

(195) a. *Ang vacay betayley.*
Ang vac=ay.Ø betay-ley
AT like=ISG.TOP berry-P.INAN

'I like berries.'

b. *Ang vaca konday betayley.*
Ang vaca kond=ay.Ø betay-ley
AT like eat=ISG.TOP berry-P.INAN

'I like to eat berries.'

(196) a. *Ang divay rangya nā tasela.*
Ang div=ay.Ø rang-ya nā tasela
AT stay=ISG.TOP home-LOC ISG.GEN

'I will stay home tomorrow.'

b. *Ang diva bengya ku-danyās kebay.*
Ang diva beng=ya.Ø ku=danya-as kebay
AT stay stand=3SG.M.TOP like=one-P alone

'He remained standing as the only one.'

The fact that modal particles in Ayeri retain their verbal semantics in spite of shedding verb morphology is probably even more obvious from the above examples (195) and (196), which show the alternation between full-verb use (a) and modal use (b) for both ᨁᨚᨕ᩵ *vac-* and ᨕᨛᨁ᩵ *div-*. In comparison to the other modal verbs in Figure 4.23, these two verbs in particular also stand out by virtue of their roots

[37] The verb stems indeed end in a consonant while the modal particles need an epenthetic *-a* to form permissible words.

ending in a consonant instead of a vowel like in the other cases. This suggests that they may have been grammaticalized as modal verbs only relatively recently, and there appears to be variation at least for *vac-*, for instance:

(197) … *yam vacongyang ilisayam eda-koyās gan* …
… yam vac-ong-yang ilisa-yam eda=koya-as gan-Ø …
DATT like-IRR-1SG.A dedicate-PTCP this=book-P child-TOP

'… I would like to dedicate this book to the child …' (Becker 2015 [2013]: 1, 8)

Moreover, as illustrated previously in (185b), *mya* 'be supposed to, shall' can be used to express indirect commands where English may use the subjunctive mood; essentially the function of this modal particle is that of the jussive mood. For convenience, the above example will be repeated here:

(198) *Arapnang, sa (mya) garayāng hatay.*
Arap=nang sa (mya) gara=yāng hatay-Ø
require=1PL.A PT (be.supposed.to) call=3SG.M.A police-TOP

'We require that he call the police.'

In addition to this use, *mya* is also used in commands to third persons, whether direct or indirect. English may use *shall* here as an equivalent.

(199) a. *Ningu cam, mya saratang.*
Ning-u cam, mya sara=tang
tell-IMP 3PL.M.DAT shall leave=3PL.M.A

'Tell them to leave.'

b. *Mya vehara nekanley.*
Mya veh-ara nekan-ley
shall build-3SG.INAN bridge-P.INAN

'A bridge shall be built.'

c. *Mya yomāra makangreng.*
Mya yoma-ara makang-reng
shall exist-3SG.INAN light-A.INAN

'Let there be light.'

4.5.6 Participle

Besides the imperative—and, by extension, the hortative—Ayeri also possesses another infinite form called the participle. This form is marked by appending *-yam* to the verb root. The participle is generally the form of verbal complements of intransitive subordinating verbs other than modal verbs (compare section 4.5.5).

For instance, ᩈᩩᩴ᩠ *cun-* 'begin' or ᨾᨶᩢᩣᩴ *manang-* 'avoid' both allow complementation with another verb:

(200) a. *Cunyo* *makayam* *perinang.*
Cun-yo maka-yam perin-ang
begin-3SG.N shine-PTCP sun-A

'The sun began to shine.'

b. *Manangyeng* *pengalyam* *badanas* *saha* *yena.*
Manang=yeng pengal-yam badan-as saha yena
avoid=3SG.F.A meet-PTCP father-P in.law 3SG.F.GEN

'She avoids to meet her father-in-law.'

Since subordinated verbs may be transitive like in (200b), the problem of center-embedding arises when the agent NP of the subordinating verb is not simply a cliticized pronoun (see section 4.5.1), since arguments of the subordinating verb follow the embedded clause as in (200a):

(201) a. ?*Ang* *pinyaya* [konjam *inunas*] *Yan* *sa* *Pila.*
Ang pinya-ya kond-yam inun-as Ø Yan sa Pila
AT ask-3SG.M eat-PTCP fish-P TOP Yan P Pila

'Yan asks Pila to eat the fish.'

b. ??*Ang* *pinyaya* [ilyam *koyaley* *ledanyam* *yana*] *Yan* *sa* *Pila.*
Ang pinya-ya il-yam koya-ley ledan-yam yana Ø Yan sa Pila
AT ask-3SG.M give-PTCP book-P.INAN friend-DAT 3SG.M.GEN TOP Yan P Pila

'Yan asks Pila to give the book to his friend.'

In order to avoid too much complexity at the expense of ease of composition on the speaker's side, and intelligibility on the listener's, it is much preferable to express the embedded clause as a complement clause instead.[38] The particle ᨯᩣ *da-* may be

[38] The German linguist Otto Behaghel (1854–1936) coined a number of laws—albeit with German in focus—three of which are relevant to information flow: "Das oberste Gesetz ist dieses, daß das geistig eng Zusammengehörige auch eng zusammengestellt wird." (Behaghel 1932: 4) ['The supreme law is such that the mentally closely related is also arranged in close proximity.']—"Ein zweites machtvolles Gesetz verlangt, daß das Wichtigere später steht als das Unwichtige, dasjenige, was zuletzt noch im Ohr klingen soll." (4) ['A second powerful law demands that more important information appear at a later point than what is less important: the which is supposed lastly to resonate in the listener's ear.']—"Gesetz der wachsenden Glieder [...]; es besagt, daß von zwei Gliedern, soweit möglich, das kürzere vorausgeht, das längere nachsteht." (6) ['Law of the growing constituents [...]; it signifies that of two constituents, if possible, the shorter one precedes, the longer one follows.'] Also compare Wasow (1997) on the cooperation between speaker and listener in the face of syntactically complex, 'heavy' constituents.

added to the formerly subordinating verb in order to signal that a complement clause is following.

(202) a.

Ang	*da-pinyaya*		*Yan*	*sa*	*Pila,*	[le	*konjeng*	*inun*].
Ang	da=pinya-ya	Ø	Yan	sa	Pila	le	kond=yeng	inun-Ø
AT	such=ask-3SG.M	TOP	Yan	P	Pila	PT.INAN	eat=3SG.F.A	fish-TOP

'Yan asks Pila to eat the fish.'

b.

Ang	*da-pinyaya*		*Yan*	*sa*	*Pila,*	[le	*ilyeng*	*koya*	*ledanyam*
Ang	da=pinya-ya	Ø	Yan	sa	Pila,	le	il=yeng	koya-Ø	ledan-yam
AT	such=ask-3SG.M	TOP	Yan	P	Pila,	PT.INAN	give-3SG.F	book-TOP	friend-DAT

yana].
yana
3SG.M.GEN

'Yan asks Pila to give the book to his friend.'

4.5.7 Other affixes

In the section on noun morphology we have already encountered a number of clitic prefixes that may attach to noun heads (see section 4.1.4), and some of these can also attach to verbs. Furthermore, verbs may also be modified by certain adverbial quantifier clitics. The latter are dealt with in more detail in the section on adverbs; only a few relevant examples will be given here.

Prefixes

We have already encountered the prefix ᜇ᜔ *da-* 'so, such' in the previous section, as well as in the section on noun prefixes (see sections 4.1.4 and 4.5.6). With nouns, ᜇ᜔ *da-* 'such' patterns as a demonstrative with the deictic prefixes ᜂᜇ᜔ *eda-* 'this' and ᜀᜇ᜔ *ada-* 'that'. Distinguishing between near and far is not possible with verbs,[39] but pointing out that something is happening 'in this way', 'so' is still possible, hence ᜇ᜔ *da-* is also applicable to verbs. ᜇ᜔ *da-* can thus act essentially as a pro-verb. As a clitic, it leans on the verb, preceding all other inflectional prefixes, that is, any tense prefixes that may possibly precede the verb root.

(203) a.

Da-mingya	*ang*	*Diyan.*
Da=ming-ya	ang	Diyan.
so=can-3SG.M	A	Diyan

'Diyan can (do it).'

[39] Unless you distinguish between actions performed in the speaker's proximity versus ones that are performed at a distance. Ayeri, however, does not make such a distinction.

b. *Ang da-məpinyaya Yan sa Pila.*
Ang da=mə-pinya-ya Ø Yan sa Pila
AT such=PST-ask-3SG.M TOP Yan P Pila

'Yan asked Pila to (do so).'

Another possible use of the prefix 𑄣𑄧 *da-* with verbs is related to the colloquial abbreviation of 𑄣𑄪𑄟 *danya* 'such one' as described in section 4.2.2, where the demonstrative part, 𑄣𑄧 *da-* may be split off the pronoun and attached in front of the adjective directly to express 'the ADJ one'. This practice has possibly been extended to verbs in analogy to the use just illustrated in (203). Example (100) from the mentioned section is repeated here for the reader's convenience:

(204) *Sa noyang da-tuvo.*
Sa no=yang da=tuvo.Ø
PT want=1SG.A such=red.TOP

'I want the red one.'

When 𑄣𑄧 *da-* is used as an abbreviation for 𑄣𑄪𑄢𑄮 *danyās* (such.one-P) or 𑄣𑄪𑄢𑄴𑄝 *danyaley* (such.one-P.INAN), as in the following example, it may also appear prefixed to the verb:

(205) *Mya da-vehoyyāng.*
Mya da=veh-oy=yāng
supposed.to one=build-NEG=3SG.M

'He is not supposed to build one.'

As mentioned above, 𑄣𑄧 *da-* can also be used in an expletive way, to express 'in this way' or 'like that'. It does not encode an anaphoric relation in this case, but merely serves as a discourse particle to highlight the action.

(206) a. *Da-sahāra seyaraneng.*
Da=saha-ara seyaran-eng
thus=come-3SG.INAN rain-A.INAN

'Here comes the rain.'

b. *Le no da-subroyya ang Hasanjan tiga kaytan yana.*
Le no da=subr-oy-ya ang Hasanjan tiga kaytan-Ø yana
PT want there=give.up-NEG-3SG.M A Hasanjan honorable right-TOP 3SG.M.GEN

'Mr. Hasanjan did not want to cease his right just there.'

Besides 𑄣𑄧 *da-*, verbs may also take the 𑄦𑄧 *ku-* 'like' prefix, which we have already seen with both nouns and adjectives (compare sections 4.1.4 and 4.3.4). The English translation in context may rather be 'as though' than 'like' here, but the function is the same: expressing alikeness and resemblance.

(207)

Misyeng,	*ang*	*ku-tangoyye*	*yās.*
Mis=yeng,	ang	ku=tang-oy=ye.Ø	yās
act=3SG.F.A	AT	like=hear-NEG=3SG.F.TOP	3SG.M.P

'She acts as though she does not hear him.'

As previously described (compare section 4.2.6), ᮞᮤᮒᮀ᮪ *sitang* 'self', the reflexive prefix, can appear as a prefix on verbs as well. This may be the case when the patient/undergoer of a transitive sentence signifies the same entity as the actor. Example (115) is repeated here for convenience:

(208)

Ang	*sitang-silvye*	*puluyya.*
Ang	sitang=silv=ye.Ø	puluy-ya
AT	self=see=3SG.F.TOP	mirror-LOC

'She sees herself in the mirror.'

The image of the agent in the mirror is that of the agent herself, so she is seeing her own reflection. Both agent and patient thus reference the same person, which means that instead of using the reflexive object pronoun ᮞᮤᮒᮀ᮪ᮌᮦᮔ᮪ *sitang-yes* 'herself' (self=3SG.F.P), it is possible to drop the pronoun and to place the reflexive prefix on the verb instead.

Suffixes

Besides taking clitic prefixes, verbs may also take clitic suffixes, namely, adverbial suffixes denoting degree, such as ᮃᮓᮤ᮪ *-ani* 'not at all', ᮃᮀᮉᮀ᮪ *-eng* 'rather', ᮃᮓᮦᮉᮤ᮪ *-ikan* 'much', ᮃᮓᮤᮊᮧᮌ᮪ *-ikoy* 'not much', ᮃᮊᮦ *-kay* 'a little', ᮃᮇᮗ *-nama* 'just, only, merely', ᮃᮔᮂᮒ᮪ *-ngas* 'almost', and ᮃᮔᮌᮗ *-nyama* 'even'. Some of these overlap with quantifiers applicable to nouns, and all of them are also applicable to adjectives. As enclitics, these suffixes lean on the inflected verb:

(209) a.

Ang	*rua*	*apaya-kay*		*Latun*	*adanyaya.*	
Ang	rua	apa-ya=kay	Ø	Latun	adanya-ya	
AT	must	laugh=3SG.M=a.little	TOP	Latun	that.one-LOC	

'Latun had to laugh a little at that.'

b.

Ya	*no*	*narayang-nama*	*va.*
Ya	no	nara=yang=nama	va.Ø
LOCT	want	speak=1SG.A=just	2SG.TOP

'It is you I just want to talk to.'

4.6 Adverbs

Adverbs in Ayeri are the counterparts of adjectives with regards to modification of verbs and phrases. Like adjectives, they do not display agreement, though attributive adverbs may take suffixes for comparison ('run *faster*', 'climb *better*'). Adverbs may equally be modified by the usual degree suffixes. Generally, there is no rigid distinction between adverbs and adjectives, so the latter may easily be used as the former. The following subsections will discuss the different kinds of adverbs and their possible uses as modifiers.

4.6.1 Attributive adverbs

Attributive adverbs are words expressing the manner in which an action is carried out, or the circumstances of an event. Like adjectives, adverbs follow their heads, that is, verbs. If near-grammaticalized adverbs are involved, namely, adverbs whose function predominates over their semantic content, attributive adverbs follow these. This case is illustrated in (210a), where the attributive adjective ꤁ꤢꤲ *ban* 'good' follows the more functional adverb ꤀ꤡꤵ *iri* 'already'. In (210b), on the other hand, the descriptive adjective ꤆ꤢꤱ *cabo* 'late' can directly follow the verb. Further adverbs may follow in decreasing order of semantic relation to their head. With regards to grammaticalization, Lehmann (2015: 157 ff.) speaks of *bondedness* or *Fügungsenge* ('closeness of construction'): the closer the bond between two juxtaposed terms is, the higher is its degree of grammaticalization. This explains why ꤀ꤡꤵ *iri* must follow the verb in (210a) while descriptive adverbs less central to the verb's meaning typically follow with increasing optionality.

(210) a.

Ri	*rija*	*iri*	***ban***	*ang*	*Tapan*	*palān*	*yena.*
Ri	rig-ya	iri	ban	ang	Tapan	palān-Ø	yena
INST	draw-3SG.M	already	well	A	Tapan	age-TOP	3SG.F.GEN

'For her age, Tapan already draws well.'

b.

Sahasaya	***cabo***	*ang*	*Niyas.*
Saha-asa-ya	cabo	ang	Niyas
come-HAB-3SG.M	late	A	Niyas

'Niyas is usually late.'

Comparison of adverbs

Since actions are usually gradable in the way they are carried out, it is possible to compare adverbs in the same way as adjectives. Here, however, only the particle-based strategy described in section 4.3.1 can be used.

(211) a.

Ang	*rije*	*ban-eng*	*Sipra*	*na*	*Tapan.*
Ang	rig-ye	ban=eng	Sipra	na	Tapan
AT	draw-3SG.F	good=COMP	Sipra	GEN	Tapan

'Sipra draws better than Tapan.'

b.

Rije	*ban-vā*	*ang*	*Nava.*
Rig-ye	ban=vā	ang	Nava
draw-3SG.F	good=SUPL	A	Nava

'Nava draws best.'

In order to form the comparative (211a), the suffix ꤁ꤢꤡ *-eng* is appended to the adverb; the superlative (211b) carries the suffix ꤁ꤢ *-vā* as a marker.

Māy and voy

The discourse particles ꤛꤢꤡ *māy* 'yes' and ꤟꤡ *voy* 'no' can also appear as adverbs, though since they act mainly as functional morphemes here, it is not possible for them to undergo comparison in spite of their attributive use. While ꤛꤢꤡ *māy* 'yes' and ꤟꤡ *voy* 'no' normally express affirmative and negative responses as answers to closed questions, ꤛꤢꤡ *māy*, for one, can be used adverbially as an intensifier (212). In a similar way, ꤟꤡ *voy* can be used for negative intensification (213). The negative intensifier replaces negation on the verb in this case, though the verb may still be negated as well for very forceful negation.

(212) a.

Nay	*le*	*konja*	*māy*	*epang*	*ang*	*Kaji*	*nernan*	*barina*	*sebu!*
Nay	le	kond-ya	māy	epang	ang	Kaji	nernan-Ø	bari-na	sebu
And	PT.INAN	eat-3SG.M	INT	then	A	Kaji	piece-TOP	meat-GEN	rotten

'And then Kaji totally ate the piece of rotten meat!'

b.

Yāng	*māy*	*karomayās*	*nārya.*
Yāng	māy	karomaya-as	nārya
3SG.M.A	INT	doctor-P	though

'He *is* a doctor, though.'

(213) a.

Le	*vacyo*	*voy*	*veneyang*	*kondan.*
Le	vac-yo	voy	veney-ang	kondan-Ø
PT.INAN	like-3SG.N	INT.NEG	dog-A	food-TOP

'The food, the dog did not like it at all.'

b.

Adareng	*voy*	*bahisley*	*niru.*
Ada-reng	voy	bahis-ley	niru
that-A.INAN	INT.NEG	day-P.INAN	bad

'That is no a bad day at all.'

Besides this use, both ᜋᜌᜒ *māy* and ᜎᜓᜌ᜔ *voy* can also be used in tag questions, to reflect the expectation of a person asking with regards to the answer:

(214) a. *Sa konjon māy patasjang keynam?*
Sa kond-yon māy patas-ye-ang keynam-Ø
PT eat-3PL.N AFF bear-PL-A people-TOP

'People, bears eat them, don't they?'

b. *Sa ginyon voy patasjang nimpur?*
Sa gin-yon voy patas-ye-ang nimpur-Ø
PT drink-3PL.N NEG bear-PL-A wine-TOP

'Wine, bears don't drink it, do they?'

Example (214a) poses the question with the expectation of an affirmative answer. This is indicated by using the affirmative particle ᜋᜌᜒ *māy* after the verb. Example (214a), on the other hand, indicates that the asker has doubts about the issue in question and expects his or her opposite to decline. The negative particle ᜎᜓᜌ᜔ *voy* is placed in adverb position after the verb accordingly.

4.6.2 Degree and quantity

While attributive adverbs follow their heads as independent words, the most common adverbs expressing degree and quantity (quantifiers) do not only follow verbs, nouns, adpositions, adjectives, or other adverbs, but they cliticize on them, that is, they are dependent morphemes. The word stem—a lexical head which is usually inflected except in the case of adjectives—serves as the host for the clitic in all these cases. Examples of degree and quantifier suffixes and how they interact with different parts of speech were already given in all the relevant sections; an example from each section is repeated here for convenience. As we will see below, there are common grading and quantifying adverbs which behave like regular adverbs as well. It is possible to combine both the suffixed and the free kinds with other adverbs as long as those adverbs permit modification with regards to degree and/or quantity. Purely functional adverbs like ᜁᜏᜓᜌ᜔ *iroy* 'not yet' or ᜐᜒᜇᜒᜋᜅ᜔ *sirimang* 'about to' may allow degree adverbs to modify them at least.

(215) a. With a noun (6b):

Ajayon ganang-ikan kivo.
Aja-yon gan-ang=ikan kivo.
play-3SG.N child-A=many small

'Many small children are playing.'

b. With an adjective (127):

Eda-prikanreng *napay-eng*
Eda=prikan-reng napay=eng
this=soup-A.INAN spicy=rather

'This soup is rather spicy.'

c. With an adposition (133):

Ang *mitasaye* *pang-ikan* *mandayya* *tado.*
Ang mit-asa=ye.Ø pang=ikan manday-ya tado
AT live-HAB=3SG.F.TOP back=much forum-LOC old

'She used to live way behind the old forum.'

d. With a verb (209a):

Ang *rua* *apaya-kay* *Latun* *adanyaya.*
Ang rua apa-ya=kay Ø Latun adanya-ya
AT must laugh=3SG.M=a.little TOP Latun that.one-LOC

'Latun had to laugh a little at that.'

A number of quantifier adverbs can be used to express both quantity and degree, espeically prominent in this regard is ᜁᜅᜒᜃᜈ᜔ *-ikan*, which comprises all of 'many', 'much' and 'very', as displayed in examples (215a) and (215c), where in the former case it appears as a quantifier of a countable entity (ᜎᜓᜈᜅ᜔ᜁᜅᜒᜃᜈ᜔ *ganang-ikan* 'many children') and in the latter case as a degree adverb (ᜉᜅ᜔ᜁᜅᜒᜃᜈ᜔ *pang-ikan* 'way behind'). The complete set of degree and quantifier suffixes is listed in Figure 4.24. Note that not all suffixes have both a grading and a quantifying meaning.

Grading and quantifying expressions which deviate form the pattern of cliticization and instead are used as independent words are, most notably: ᜇᜒᜇᜒᜈ᜔ *diring* 'several', ᜁᜂᜃᜒᜅ᜔ *ekeng* 'over-, overly, too', ᜑᜒᜅᜒᜅᜐ *hengas* 'almost all', ᜁᜅᜒᜃᜈ᜔ᜁᜅᜒᜃᜈ᜔ *ikan-ikan* 'altogether, totally', ᜁᜅᜒᜃᜈ᜔ᜏᜈ᜔ᜈᜌ *ikanvānya* 'at most, by and large', ᜃᜎᜒᜈ᜔ *kagan* 'excessively, far too', ᜋᜒᜈᜒᜃᜈᜒᜅ᜔ *menikaneng* 'another (one more)', ᜋᜒᜇᜌ᜔ *miday* 'approximately', ᜉᜎᜓᜅ᜔ *palung* 'another (a different kind)', ᜂᜎᜒᜈ᜔ᜇᜌ᜔ *regandey* 'bit by bit, gradually', ᜏᜎᜌᜈ᜔ᜈᜌ *varyānya* 'at least'. Besides, adjectives denoting a degree, like ᜁᜉᜈ᜔ *ipan* 'drastic, extreme, radical' can of course also be used as adverbial modifiers. Since adverbs do not inflect, the conversion happens without the need to explicitly mark it. ᜁᜉᜈ᜔ *ipan* can thus also be used to mean 'extremely':

(216) *Yang* *valuy* *ipan,* *sa* *silvyang* *va.*
Yang valuy ipan, sa silv=yang va.Ø
ISG.A glad extremely PT see=ISG.A 2SG.TOP

'I'm extremely glad to see you.'

Figure 4.24: Adverbial degree and quantifier suffixes

Suffix	Degree	Quantity
-ani	not at all	none at all
-aril		some
-eng	rather, more	more
-hen	completely	all, every, each
-ikan	much, very	many, much
-ikoy	not very, less	not many, not much
-ing	so	
-kay	a bit, little	few
-ma	enough	enough
-mas	some kind of	
-nama	just, merely	just, only
-ngas	almost	
-nyama	even	
-vā	most	most
-ven	pretty, quite	

4.6.3 Sentence adverbs

Ayeri allows adverbs to modify sentences, for instance, to express the stance of the speaker, to concede an argument, or simply to structure an argumentative chain.

Stance adverbs

Adverbs indicating the stance of the speaker towards an assertion or a statement are, for instance: *ankyu* 'really', *cuyam* 'actually, indeed, in fact', *kalam* 'honestly', *kuban* 'fortunately', *kuniru* 'unfortunately', *nilay* 'probably', *yoming* 'maybe, perhaps'. These adverbs are usually placed after the verb like any other attributive adverb, even though their scope is over the whole clause. It is also possible to place them towards the end of the clause they are used in, however. Example (217) gives an example of either position.

(217) a.

Ang	*ming*	*bengya*	*kuban*		*Tipal*	*vahamya*	*bavesangena*	*nā.*
Ang	ming	beng-ya	kuban	Ø	Tipal	vaham-ya	bavesang-ena	nā
AT	can	attend-3SG.M	fortunately	TOP	Tipal	party-LOC	birthday-GEN	1SG.GEN

'Fortunately, Tipal can attend my birthday party.'

b.

Sahayāng	*cabo-kay*	*nilay*	*nārya.*
Saha=yāng	cabo=kay	nilay	nārya
come=3SG.M	late=a.little	probably	though

'He will probably come a little late, though.

Discourse-structuring adverbs

Ayeri does not have a great number of concessive adverbs, that is, *arēn* 'however, anyway' and *nārya* 'although, though; nevertheless' do most, if not all the work. Like adverbs expressing stance, they may follow the verb or be placed at the end of the clause. Example (217b) above already shows an example of *nārya* being used as a sentence adverb. With regards to this word, it is important to note that *nārya* may also be used as a general contrastive conjunction which can mostly be translated as 'but'. In this sense, its placement in a clause creates a slight difference in grammar, though not a great one in meaning, as illustrated by example (218) below.[40]

(218) a.

Garayang,	*nārya*	*guraca*	*ranyāng.*
Gara=yang,	nārya	gurat-ya	ranya-ang
call=1SG.A,	but	answer-3SG.M	nobody-A

'I called, but nobody answered.'

b.

Garayang,	*guraca*	*nārya*	*ranyāng.*
Gara=yang	gurat-ya	nārya	ranya-ang
call=1SG.A,	answer-3SG.M	although	nobody-A

'I called, although nobody answered.'

Besides the two adverbs mentioned above, there is also *da-nārya* 'even though, in spite of, despite' as a postposition with a contrastive meaning (see section 4.4.2). As an adposition it accepts either a noun phrase or a complement phrase (CP) as a complement. In the latter case, which is shown in (219b), there is no locative case agreement of the whole CP with the postposition, since there is no fitting agreement target to attach it to.

(219) a.

Ya	*precang*	*nanga*	*yena*	[^{PP} [^{NP}*sarānya*	*yena*	]	*da-nārya*].
Ya	pret=yang	nanga-Ø	yena	sarān-ya	yena		da-nārya
LOCT	knock=1SG.A	house-TOP	3SG.F.GEN	absence-LOC	3SG.F.GEN		in.spite

'I knocked at her house in spite of her absence.'

40 Possibly it is easier not to distinguish between conjunction and adverb at all in this case and instead to treat *nārya* as an adverb with a general constrastive meaning which can exceptionally be found at the beginning of a clause as well.

b.	*Precang*	[PP [CP *ang*	*yomoyye*	*rangya*	*yena*	] *da-nārya*	].
	Pret=yang	ang	yoma-oy=ye.Ø	rang-ya	yena	da-nārya	
	knock=1SG.A	AT	exist-NEG=3SG.F.TOP	home-LOC	3SG.F.GEN	even.though	

'I knocked, even though she wasn't at home.'

Further adverbs which are commonly used as adverbial expressions and which may appear in the presentation of arguments include: *deramyam* 'after all', *kaybunay* 'by the way', *ku-nasya* 'as follows', *menanya* 'on the one hand', *mirampaluy* 'otherwise', *nāreng* 'rather', *naynay* '(and) also, moreover, furthermore', *palunganya* 'on the other hand', *panca* 'finally, eventually, in the end', *pinyan* 'please', *suhing* 'naturally, of course'. It should be apparent by the complexity and relative length of some of these words that they are fossilized expressions, for instance, *deramyam* 'after all' transparently derives from *deram* 'matter of fact' declined for dative case (*yam*, see section 4.1.3); *ku-nasya* is derived from a phrase literally meaning 'as (it) follows'; and *palunganya* 'on the other hand' literally means 'in difference', from *palungan* 'difference, distinction'. Of the list given above, it may be noted that *pinyan* 'please' (from *pinya-* 'ask') is often found at the beginning of polite requests:

(220)	*Pinyan,*	*sahu*	*kongya!*
	Pinyan	saha-u	kong-ya
	please	come-IMP	inside-LOC

'Please come inside!'

Conjunctive adverbs

The term 'conjunctive adverb' here refers to sentence adverbs which have the distribution of a conjunction. Whereas sentence adverbs are normally placed either after the verb or at the end of a clause, these words are usually found as introducing clauses as they connect two otherwise independent statements to show their relation to each other. Their meaning extends that of the 'pure', logical conjunctions *nay* 'and' and *soyang* 'or', however.[41] Part of this small class of words are the expressions *bata* 'if, whether',[42] *kada* 'then, thus', *kada-kada* 'so that … again', *kadāre* 'so that', *naynay* 'moreover, furthermore', *nāreng* '(but)

41 Logical 'not' is usually expressed by a negative suffix on the adjective or the verb, compare sections 4.3.2 and 4.5.4, respectively. For conjunctions proper, see section 4.8.

42 Conditional protasis and apodosis are usually unmarked in Ayeri, however, it may still be desirable occasionally to use a particle to indicate them explicitly.

rather', ᨕᨘᨚᨗ *nāroy* 'but not', ᨕᨘᨚᨛ *nārya* 'but, except that, though, yet', ᨿᨗᨶᨗᨦ *sining* 'that is', and ᨿᨗᨶᨚᨿᨗᨾ *yanoyam* 'because, for, since'.

(221) a.

Le	*rimasayang*	*kunang*	*sirutayya,*	*kadāre*	*ming*	*toryang*
Le	rima-asa=yang	kunang-Ø	sirutay-ya	kadāre	ming	tor=yang
PT.INAN	shut-HAB=ISG.A	door-TOP	night-LOC	so.that	can	sleep=ISG.A

ban-eng.
ban=eng
good=COMP

'I usually close the door at night so that I can sleep better.'

b.

Ilta	*toryeng,*	*nārya*	*da-kilisoyyon*	*nilanjang*	*yena.*
Ilta	tor=yeng	nārya	da=kilis-oy-yon	nilan-ye-ang	yena
need	sleep=3SG.F.A	but	so=allow-NEG-3PL.N	thought-PL-A	3SG.F.GEN

'She needed to sleep, but her thoughts did not allow her to.'

c.

Ang	*ming*	*hangoyya*		*Yan*	*padangas,*	*yanoyam*	*yāng*	*pisu.*
Ang	ming	hang-oy-ya	Ø	Yan	padang-as	yanoyam	yāng	pisu
AT	can	keep-NEG-3SG.M	TOP	Yan	mind-P	because	3SG.M.A	tired

'Yan cannot concentrate because he is tired.'

Regarding (221b), it needs to be pointed out that ᨕᨘᨚᨛ *nārya* can also be used as a regular adverb. In those cases it is considered to have less contrastive force, however: postposed ᨕᨘᨚᨛ *nārya* is best translated as 'though, although' (compare section 4.6.3).

Since verbs can be negated and reduplicated for grammatical purposes, the adverbs ᨀᨆ᩠ᨀᨆ *kada-kada* 'so that ... again' and ᨕᨘᨚᨗ *nāroy* 'but not' are mostly used with predicative adjectives, since predicative statements lack a verb to apply verb morphology to. These two conjunctive adverbs thus can convey the most important distinctions otherwise expressed by the verb as a substitute. This ability, however, is not a productive grammatical process, but specific to ᨀᨆ᩠ᨀᨆ *kada-kada* and ᨕᨘᨚᨗ *nāroy*, respectively.

(222) a.

Rua	*nibaya*	*ang*	*Pulan,*	*kada-kada*	*yāng*	*sapin*	*tadayya*	*kivo.*
Rua	niba-ya	ang	Pulan	kada∼kada	yāng	sapin	taday-ya	kivo
Must	rest-3SG.M	A	Pulan	ITER∼so.that	3SG.M.A	healthy	time-LOC	little

'Pulan must rest so that he will be healthy again very soon.'

b.

Yang	*temisena*	*cuyam,*	*nāroy*	*yang*	*petau.*
Yang	temis-ena	cuyam	nāroy	yang	petau
ISG.A	north-GEN	indeed	but.not	ISG.A	stupid

'I may be from the north, but I am not stupid.'

Figure 4.25: Demonstratives relating to adverbial categories

Category	Proximal		Distal	
PLACE	*edaya*	'here'	*adaya*	'there'
TIME	*edauyi*	'now'	*adauyi*	'then'
MANNER	*edāre*	'hereby'	*adāre*	'thereby'
REASON	*edayam*	'herefore'	*adayam*	'therefore'

As described above (compare section 4.5.3), partial reduplication of the verb expresses iterative aspect, which in Ayeri is used to mean 'X again' and 'X back', depending on context. The reduplicated form 𑖀𑖍𑖀𑖍 *kada-kada* as displayed in (222a) is irregular in its formation if we assume that it is formed from 𑖀𑖍𑖪𑖨 *kadāre* 'so that'; the regular outcome with iterative reduplication applied would be *𑖀𑖍𑖪𑖨 **ka-kadāre*. As a conjunction, however, it is relatively frequent, so it does not seem odd that it has assumed a phonologically more simple, yet distinct form (compare, for instance, Bybee and Hopper 2001: 11–12). The conjunctive adverb in (222b) exhibits likewise a slightly irregular formation if we consider that it is essentially the negated form of 𑖁𑖍𑖩 *nārya* 'but'; the regular outcome would have been *𑖁𑖍𑖩𑖯 **nāryoy*, which underwent simplification to 𑖁𑖍𑖯 *nāroy*, presumably as well due to its relatively high token frequency.

4.6.4 Demonstrative adverbs

Besides demonstrative pronouns like 𑖀𑖎𑖍 *adanya* 'that (one)' (see section 4.2.2), and indefinite pronouns like 𑖪𑖨𑖫 *yāril* 'for some reason; somewhere' (see section 4.2.4), Ayeri also possesses demonstrative pronouns for the adverbial categories place, time, manner, and reason. The full paradigm is given in Figure 4.25. Compared to the paradigm for demonstrative pronouns relating to persons or things, the paradigm of adverbial demonstratives is incomplete in that forms with 𑖎 *da-* 'such' are unattested. Thus, instead of the hypothetical form with 𑖎 *da-*, a full-NP adverbial with a generic noun has to be used: *𑖎𑖌 **daya* → 𑖎𑖌𑖪𑖌 *da-yanoya* 'in such a place' (such=place-LOC). Adverbial demonstratives are, like pronouns, in complementary distribution with full NPs, since they are pro-forms. Thus, using them as modifiers to NPs as in (223a) is not possible, while using simple demonstrative 𑖆𑖎 *eda-* 'this' together with a noun as in (223b) or using 𑖆𑖌 *edaya* 'here' as a pro-form fully replacing the NP 𑖆𑖎𑖫𑖌 *eda-nangaya* 'in this house' as in (223c) is generally unproblematic.

(223) a. **Ang mice Pada nangaya edaya.*
Ang mit-ye Ø Pada nanga-ya edaya
AT live-3SG.F TOP Pada house-LOC here

b. *Ang mice Pada eda-nangaya.*
Ang mit-ye Ø Pada eda=nanga-ya
AT live-3SG.F TOP Pada this=house-LOC

'Pada lives in this house.'

c. *Mice ang Pada edaya.*
Mit-ye ang Pada edaya
live-3SG.F A Pada here

'Pada lives here.'

4.7 Numerals

The vast majority of the 196 sampled languages in Comrie (2013) either counts in tens or employs a mixed vigesimal-decimal system, while only five languages in the sample use a different base than 10. Ayeri uses a duodecimal system and is thus very untypical compared to real-world languages in using a number base other than 10—none of the languages in Comrie (2013)'s sample are listed as duodecimal.[43] Ayeri's number words are mostly semantic primes, that is, their meanings cannot be readily recognized as derived from body parts (Dixon 2012: 74) or from internal arithmetic like 9 as 'ten lacking one', for instance. The numerals 𐑒𐑱 *kay* 'three', 𐑲𐑮𐑲 *iri* 'five', and 𐑣𐑧𐑯 *hen* 'eight' may be an exception: as a quantifying adverb, 𐑒𐑱 *kay* means 'a little, few'; 𐑲𐑮𐑲 *iri* means 'already', which might refer to the fact that a full hand has been counted off; and 𐑣𐑧𐑯 *hen* also means 'all'. Ayeri moreover appears extremely sophisticated as far as the upper limit of counting systems is concerned in possessing a way of forming large numerals by a theoretically open-ended, recursive process.

[43] I chose to use 12 as a numerical base because I simply wanted to toy with it. Also, I originally conceived of Ayeri speakers as humanoid but not necessarily human, which meant that they would not need to have evolved to have five fingers on each hand—for an earlier fictional language of mine, Daléian, I used an octal system reasoning that speakers would only have four digits. In any case, a duodecimal system could work reasonably well with human hands if you counted not only the fingers, but also the hands themselves. Finger-counting in Ayeri's duodecimal system would probably be similar to counting in the senary system of Nen described in Evans (2009) (as quoted in Dixon 2012): "In counting, Nen speakers 'first count off the five fingers with a finger of their other hand, and then on the sixth they place their counting finger on the inside of the wrist'" (73–74). Even though duodecimal numeral systems only occur rarely in in natural languages, they are not entirely unheard of. Thus, for instance, Cain and Gair (2000) report that in Maldivian, the "decade plus numeral system is currently in fashion, but with some remnants of an older system as well. The numeral *fas doḷas* '60' (lit., 'five twelves') comes from a duodecimal system that has all but disappeared in the Maldives. This number system was used for special purposes such as counting coconuts." (21).

Figure 4.26: Basic cardinal numerals

Numeral	Word	Numeral	Word
0	*ja*	6	*miye*
1	*men*	7	*ito*
2	*sam*	8	*hen*
3	*kay*	9	*veya*
4	*yo*	A	*mal*
5	*iri*	B	*tam*

4.7.1 Cardinal numerals

Since people and concrete things are usually present in a countable manner, I want to comment on how countable entities are handled with regards to numerals. After this, a discussion of how to express fractional amounts will follow.

Integers

Cardinal numerals work much like adjectives in that they modify nouns. As modifiers, they are placed after nouns. The full table of cardinal numerals from 0×12^{0} (0) to 11×12^{0} (B) is given in Figure 4.26.[44] An example of simple modification by a numeral is given in (224):

(224)
Ang	*tenyaya*	*pang*	*bihanya*	*yo*	*soyang*	*miye.*
Ang	tenya=ya	pang	bihan-ya	yo	soyang	miye
AT	die=3SG.M.TOP	ago	week-LOC	four	or	six

'He died four or six weeks ago.'

In this example, the numeral *yo* 'four' modifies the noun *bihan* 'week'. Notably, however, plural marking is missing on the noun, since the notion of plurality is provided by the numeral itself; the numeral is thus normally sufficient to mark the whole NP as plural.

Multiples of 12^{1} between 10 and B0 are formed by appending the suffix *-lan* to the numbers from 0 to B, which are given in Figure 4.27. These numerals themselves act as heads for forming compounds with lower numerals to fill in the 12^{0} numerals 11, 12, 13, ..., 21, 22, 23, etc. Thus, one counts on from *menlan* 'dozen' in the following way:

[44] For the sake of typographic simplicity, A and B will henceforth be used to mean 10×12^{0} and 11×12^{0}, respectively. An index '10' after a figure indicates base 10, while an index '12' indicates base 12.

Figure 4.27: Numerals for factors of 12

Numeral	Word	Numeral	Word
		60	*miyelan*
10	*menlan*	70	*itolan*
20	*samlan*	80	*henlan*
30	*kaylan*	90	*veyalan*
40	*yolan*	A0	*mallan*
50	*irilan*	B0	*tamlan*

(225) a. *menlan-men* (11),
menlan-sam (12),
menlan-kay (13),
etc.

b. *samlan-men* (21),
samlan-sam (22),
samlan-kay (23),
etc.

c. *tamlan-men* (B1),
tamlan-sam (B2),
tamlan-kay (B3),
etc.

In order to form yet higher numbers, the suffix *-nang* is appended to numerals: *menang* (← *men* '1' + *-nang*), *samang* '2' (← *sam* + *-nang*), *kaynang* (← *kay* '3' + *-nang*), etc. While *menang* is used for 100, higher forms in the *nang* series each multiply the numeral from which they are derived by the factor of a duodecimal myriad (= $20\,736_{10}$). Thus, we get the following series:

(226)

samang	$12^{(2-1)\times 4} = 12^4$	myriad
kaynang	$12^{(3-1)\times 4} = 12^8$	myriad myriads
yonang	$12^{(4-1)\times 4} = 12^{12}$	myriad myriad myriads
irinang	$12^{(5-1)\times 4} = 12^{16}$	myriad myriad myriad myriads

etc.

The numeral which the *nang* series word is based on essentially indicates the number of myriad groups, thus, 1-*nang* maximally contains BBBB; 2-*nang* maximally contains BBBB BBBB; 3-*nang* maximally contains BBBB BBBB BBBB, etc. Furthermore, the *nang* series words serve as unit words, and thus can be modified by numerals again, for instance:

(227) a. *menang sam veyalan-kay*
100 2 90 3

$293_{12} = 399_{10}$

b. *samang henlan-miye menang sam veyalan-kay*
1 0000 80 6 100 2 90 3

$86\ 0293_{12} = 2\ 115\ 471_{10}$

In (227a), ꦯꦩ *sam* modifies ꦩꦼꦤꦁ *menang* to indicate that there are two sets of 100_{12}. Likewise, in (227b), ꦯꦩꦁ *samang* is modified by ꦲꦼꦤ꧀ꦭꦤ꧀ꦩꦶꦪꦺ *henlan-miye* to mean 86_{12} times $10\ 000_{12}$. Unit words like ꦩꦼꦤꦁ *menang*, ꦯꦩꦁ *samang*, etc. may also be used as (inanimate) nouns, so it is possible to speak of ꦩꦼꦤꦁꦒꦾ *menangye* 'hundreds'. To express 'hundreds of people', however, the head of the genitive NP is pluralized exceptionally, even if it is a plurale tantum:

(228) a. *Ang bengyon keynam menang kanānya desay iray.*
Ang beng-yon keynam-Ø menang kanān-ya desay iray
AT attend-3PL.N people-TOP hundred wedding-LOC royal

'A hundred people attended the royal wedding.'

b. *Ang bengyon keynamye menang kanānya desay iray.*
Ang beng-yon keynam-ye-Ø menang kanān-ya desay iray
AT attend-3PL.N people-PL-TOP hundred wedding-LOC royal

'Hundreds of people attended the royal wedding.'

In (228), ꦏꦼꦪ꧀ꦤꦩ *keynam* is morphologically a singular form referring semantically to a multitude. It is usually treated as a plurale tantum in that it triggers plural agreement in spite of being morphologically singular, which is illustrated in (228a). In (228b), the word still receives otherwise redundant plural marking to express the difference in meaning from (228a).

In order to indicate that myriad groups have been skipped, the conjunction ꦤꦪ *nay* 'and' is used to avoid confusion, as shown in (229), or simply to avoid having two single-digit numerals following each other, as illustrated by (230).

(229) a. *samang menang men henlan-miye*
1 0000 100 1 80 6

$186\ 0000_{12} = 5\ 101\ 056_{10}$

b. *samang menang men nay henlan-miye*
1 0000 100 1 and 80 6

$100\ 0086_{12} = 2\ 986\ 086_{10}$

Figure 4.28: Simple fractions from ½ to ⅛

Numeral	Word	Numeral	Word
½	*mesam*	⅐	*menito*
⅓	*menkay*	⅛	*menyen*
¼	*menyo*	⅑	*menveya*
⅕	*meniri*	⅒	*memal*
⅙	*memiye*	⅛	*mentam*

(230) a. ʔ*menang mal ito*
100 A 7

b. *menang mal nay ito*
100 A and 7

$A07_{12} = 1447_{10}$

Fractions

So far, we have explored only integers, that is, whole numbers. Since things can often be divided up into smaller sections as well, this section is going to deal with how to express fractional amounts. The main way to express common fractions like ½, ⅓, ¼, etc. is to prepend *men* 'one' to the denominator; the full paradigm for ½ to ⅛ is given in Figure 4.28. Note that a number of these fractions have slightly irregular forms due to assimilation in consonant clusters. In order to introduce a numerator, the fraction numeral is used as a unit word which is modified by a regular cardinal numeral, as (231) shows.

(231) a. *Ang ilca Yan vadisānley mesam.*
Ang ilt-ya Ø Yan vadisān-ley mesam
AT buy-3SG.M TOP Yan bread-P.INAN half

'Yan bought half a loaf of bread.'

b. *Ang ilce Mali sikanley menyo kay kipunena.*
Ang ilt-ye Ø Mali sikan-ley menyo kay kipunena
AT buy-3SG.M TOP Mali pound-P.INAN fourth three cheese-GEN

'Mali bought a three-quarter pound of cheese.'

In order to express compound numerals, *men-* may still be added to the denominator head word, for instance

Figure 4.29: Basic ordinal numerals

Numeral	Word	Numeral	Word
0th	*jān*	6th	*miyan*
1st	*menan*	7th	*itan*
2nd	*saman*	8th	*henan*
3rd	*kayan*	9th	*veyān*
4th	*yan*	Ath	*malan*
5th	*iran*	Bth	*taman*

(232) *memallan-hen*
men-mallan-hen
1/ 10 × 12^1 + 8

$\frac{1}{A8_{12}} = \frac{1}{128_{10}}$

However, this may become confusing if numerators are used, so

(233) ? *memenang* *ito* *menlan-yo* *kay*
men-menang ito menlan-yo kay
1/ 12^2 7 1 × 12^1 + 4 3

$\frac{3}{714_{12}} = \frac{3}{1024_{10}}$

would be expressed less ambiguously as

(234) *menangan* *ito* *menlan-yo* *nernanyena* *kay*
menang-an ito menlan-yo nernan-ye-na kay
12^2-NMLZ 7 1 × 12^1 +4 part-PL-GEN 3

'three of the 1024th part'

using the ordinal form of the denominator.

4.7.2 Ordinal numerals

Ordinal numerals are formed by nominalization from cardinal numerals. This may be another slightly odd strategy, however, it is in fact attested in Classical Tibetan, according to Chung, Hill, and Sung (2014), in reference to Beyer (1992):

> The suffix *-pa* forms a noun from another noun, meaning 'associated with N' (e.g. *rta* 'horse,' *rta-pa* 'horseman,' *yi-ge* 'letter,' *yi-ge-pa* 'one who holds a letter of office,' cf. Beyer 1992: 117). When suffixed to ordinal numbers this suffix forms ordinals (e.g. *gsum* 'three,' *gsum-pa* 'third'; *bcu* 'ten,' *bcu-pa* 'tenth'). (Chung, Hill, and Sung 2014: 626)

Unfortunately, neither Chung, Hill, and Sung (2014) nor Beyer (1992) say whether Classical Tibetan treats these derived forms as nouns or as numerals, or whether it makes that distinction at all. In Ayeri, ordinals are firmly treated as noun-like nominal elements due to the derivational suffix ཨན་ *-an* (compare section 4.1.7). Since nominals are the heads of NPs, this also means that the ordinal numeral forms the head of the NP it occurs in, instead of modifying the entity being counted like an ordinal numeral does. This is illustrated in (235) below. The paradigm for the ordinal numerals from 0 to B can be found in Figure 4.29.

(235) a. *Ang Mahān menanas.*
Ang Mahān menan-as
A Mahān first-P

'Mahan is the first.'

b. *Ang Mahān menanas si girenjāng.*
Ang Mahān menan-as si girend=yāng
A Mahān first-P REL arrive=3SG.M.A

'Mahān is the first to arrive.'

c. *Ang girenja Mahān bahalanya ku-menan diyan*
Ang girend-ya Ø Mahān bahalan-ya ku=menan diyan
A arrive-3SG.M TOP Mahān finish-LOC like=first worthy

'Mahān arrives at the finish as a worthy first.'

d. *Ang tavya Mahān menanas ganyena yana.*
Ang tav-ya Ø Mahān menan-as gan-ye-na yana
AT get-3SG.M TOP Mahān first-P child-PL-GEN 3SG.M.GEN

'Mahān gets his first child',
literally: 'Mahān gets the first of his children.'

As (235a) shows, the ordinal may serve as an anaphora meaning 'the *n*th (one)'. In these cases, animacy is determined by the word the ordinal references, as far as case marking and person agreement are concerned. Since ordinals are treated as nominals, they can also be modified by both a relative clause, as (235b) shows, and an adjective, as shown in (235c). In order to include an entity whose rank in a series is given, the counted entity appears as a genitive attribute, which is illustrated by (235d).

So far, only single-digit ordinals have been described. In order to form higher ordinals, the head unit word receives the nominalizer with the rest of the term trailing as a modifier, otherwise the number word as such is nominalized. Essentially, an ordinal in the 'teens'[45] behaves like a 'tight' noun compound, while ordinals

[45] More specifically, $a \times 12^1 + b$ with $\{a, b \in \mathbf{Z} \mid 0 < a, b < 12^1\}$.

involving unit words for powers of 12 higher than 1 behave as 'loose' compounds (compare section 4.1.5, p. 97).

(236) a.

Adareng	*kaylan-miyanley*	*bahisyena*	*pericanena.*
Ada-reng	kaylan-miye-an-ley	bahis-ye-na	perican-ena
that-A.INAN	$3 \times 12^1 + 6$-NMLZ-P.INAN	day-PL-GEN	year-GEN

'It is the 36th (= 42nd) day of the year.'

b.

Adareng	*menanganley*	*kaylan-miye*	*bahisyena*	*pericanena.*
Ada-reng	menang-an-ley	kaylan-miye	bahis-ye-na	perican-ena
that-A.INAN	12^2-NMLZ-P.INAN	$3 \times 12^1 + 6$	day-PL-GEN	year-GEN

'It is the 136th (= 186th) day of the year.'

In (236a), the whole numeral *kaylan-miye* is nominalized and inflected for case, yielding *kaylan-miyanley*. This is analogous to such nouns as *betaynimpur* 'grape' (literally 'wine-berry'), which inflects as a single unit—a 'tight' compound. In (236b), on the other hand, only the first unit word, *menang* is nominalized and inflected, yielding *menanganley* with *kaylan-miye* following it uninflected. This is analgous to *ralamapang* 'fingernail' which is transparently made up of *ralan* 'nail' and *mapang* 'finger' and for which only the first constituent inflects, for instance, *ralanyena mapang* 'of the fingernails' (nail-PL-GEN finger)—a 'loose' compound.

4.7.3 Multiplicative numerals

Whereas ordinals are derived from cardinal numerals by nominalization, multiplicative numerals are derived from ordinals (compare Figure 4.29) in turn by putting them in the dative case: the suffix *yam* is added to the ordinal form of the numeral. The resulting multiplicative numeral can thus be used as an adverbial meaning 'for the *n*th time', or as an adverb meaning '*n* times'. Context helps to disambiguate between the two, as well as temporal adverbs like *iri* 'already'.

(237) a.

Linkaya	*iri*	*ang*	*Anang*	*kayanyam.*
Linka-ya	iri	ang	Anang	kayanyam
try-3SG.M	already	A	Anang	third-DAT

'Anang already tries it for the third time.'

b.

Linkaya	*iri*	*kayanyam*	*ang*	*Anang.*
Linka-ya	iri	kayanyam	ang	Anang
try-3SG.M	already	third.time	A	Anang

'Anang already tried it three times.'

Compound multiplicative numerals are treated analogously to ordinals, that is, for composite numerals smaller than 12^2, the derivational marking is placed at the

end of the composite numeral. Conversely, for composite numerals of orders of magnitude above 12^1, the head of the phrase receives all the marking that makes it a multiplicative numeral while the rest trails uninflected as a modifier:

(238) a. *kaylan-tamanyam*
kay-lan-tam-an-yam
3 × 12^1 + II-NMLZ-DAT

'3B (= 47_{10}) times'

b. *menanganyam* *men* *samlan-kay*
menang-an-yam men sam-lan-kay
12^2-NMLZ-DAT 1 2 × 12^1 + 3

'123 (= 171_{10}) times'

4.7.4 Distributive numerals

Distributive numerals are formed in the same way as multiplicative numerals, that is, as a derivation of the respective ordinal numeral, which itself has the form of a nominalized cardinal numeral (compare Figure 4.29). The derivative affix in this case is the instrumental marker, ᜁᜒᜎ᜔ *-eri* (compare section 4.1.3). Distributive numerals refer to groups of *n*, as example (239) shows.

(239) *Ang* *sarayon* *burangjang* *kong* *besonya* *samaneri.*
Ang sara-yon burang-ye-yang kong beson-ya sam-an-eri
AT go-3PL.N animal-PL-A inside ship-LOC two-NMLZ-INS

'The animals went inside the ship two by two.'

The formation of composite numerals mirrors that of multiplicative numerals, in that composite numerals below 12^1 are treated as single units whereas composite numerals of orders of magnitude larger than 12^1 mark only the head word while the remainder of the phrase follows as an uninflected modifier.

(240) a. *henlan-yaneri*
hen-lan-yo-an-eri
8 × 12^1 + 4-NMLZ-INS

'84 by 84 (= 100_{10})'

b. *menanganeri* *miye* *tamlan-yo*
menang-an-eri miye tam-lan-yo
12^2-NMLZ-INS 6 II × 12^1 + 4

'6B4 by 6B4 (= $1\,000_{10}$)'

4.7.5 Number ranges

Ranges of cardinal numbers may be viewed as conceptually similar to stretches of way, hence they are predestined to be expressed by prepositional phrases, or in Ayeri, by any of the cases which can be used for locative purposes (dative, genitive, locative). However, Ayeri treats cardinal numerals more like adjectives than nouns, so using means of case marking is not possible. On the other hand, it should not be a problem, though, to use adpositions since these take both NPs and CPs as complements. Thus, an adjective should not be problematic as a complement either, since it is embedded in an NP. As an adjective, however, the numeral in the PP is not marked for locative case, since adjectives do not inflect for nominal categories (compare section 4.3). Ranges of cardinal numbers may hence be expressed using the postposition ᚑᚱᛇ *pesan* '(up) until'. When counting starts at ᛫ᛇᛇ *men* 'one', this numeral may be dropped, like in English 'count to ten' instead of 'count from one to ten'.

(241) *Kurye* *ang* *Pila* (*men*) *tam* *pesan.*
Kur-ye ang Pila (men) tam pesan
count-3SG.F A Pila (I) B until

'Pila counts from I to B (= I ... II_{10}).'

Since ordinal numerals are treated as nouns, they may receive case marking. This means that, in contrast to cardinal numerals, it is possible to express a range using a combination of the genitive and the dative case, or again ᚑᚱᛇ *pesan* with its prepositional object in the locative case. Examples for this are given in (242).

(242) a. *Ang* *gumasaya* *samanena* *pidimyena* *da-malanyam.*
Ang gum-asa=ya saman-ena bahis-ye-na da=malan-yam
AT work-HAB=3SG.M.TOP second-GEN hour-PL-GEN such=tenth-DAT

'He usually works from the second hour to the tenth.'

b. *Ang* *yomaya* *Magay* *diyan* *edaya* *henanena* *bahisyena*
Ang yoma-ya Ø Magay diyan edaya henan-ena bahis-ye-na
AT exist-3SG.M TOP Magay worthy here eighth-GEN day-PL-GEN

da-menlananya *pesan.*
da=menlanan-ya pesan
such=dozenth-LOC until

'Mr. Magay is here from the eighth to the dozenth day.'

ᚸᛇᛇᚱ *samanena* 'from the first' in (242a) and ᛋᚢᛇᛇᚱ *henanena* 'from the eighth' in (242b) use the genitive case marker ᛫ᛇᚱ *-ena* (compare section 4.1.3) to indicate the starting point. ᛞ᛫ᛗᚨᛚᚨᚾᛃᚨᛗ *da-malanyam* 'to the tenth one' and ᛞ᛫ᛗᛇᚾᛚᚨᚾᛃᚨᚱᛇᚱ *da-menlanya pesan* 'up until the dozenth one' indicate the end points. Since ᛗᛇᚾᛚᚨᚾ *menlan* in

(242b) is embedded in a PP headed by the postposition *pesan*, it appears in the locative case instead of the dative case like *malan* in (242a).

4.8 Conjunctions

It was already described how conjunctive adverbs work as conjunction-like sentence adverbs in section 4.6.3. This section is about the 'purely logical' conjunctions *nay* 'and' and *soyang* 'or', as well as their combination with *kamo* 'equal(ly)' to form correlative conjunctions.

4.8.1 Simple conjunction and disjunction

Coordination is commonly achieved by the conjunction *nay* 'and'. It is placed in between the conjuncts, and works on all syntactic levels. Namely, it may coordinate lexical heads, as well as phrases, and whole clauses.

(243) a. [AP [A *Taran*] *nay* [A *saco*]] *nangāng*.

Taran	nay	saco	nanga-ang
quiet	and	cool	house-A

'The house is quiet and cool.'

b. *Ajayan* [NP *yanang*] *nay* [NP *layang*].

Aja-yan	yan-ang	nay	lay-ang
play-3PL.M	boy-A	and	girl-A

'The boy and the girl are playing.'

c. [S *Nāng* *pisu*] *nay* [S *tapannang*].

Nāng	pisu	nay	tapan-nang
1PL.A	tired	and	be.thirsty-1PL.A

'We are tired and are thirsty.'

The example sentences in (243) are ordered by increasing level of coordination: (243a) combines two adjective-phrase (AP) heads, *taran* 'quiet' and *saco* 'cool', which together make up the predicative AP that is equated to *nangāng* 'a/the house'. In (243b), then, two agent NPs, *yanang* 'a/the boy' and *layang* 'a/the girl', together form the subject of the verb *ajayan* 'play'. Lastly, (243c) shows two main clauses coordinated, that is, *nāng pisu* 'we are tired' on the one hand, and *tapannang* 'we are thirsty' on the other.

Just as *nay* expresses *con*junction, *soyang* 'or' expresses *dis*junction. It is equally placed between two disjuncts and equally works at all levels—lexical heads, phrases, and clauses. Inclusive and exclusive 'or' are not formally distinguished in Ayeri by the disjunction *soyang* alone, so context is necessary to contrast

between them. Alternatively, a construction akin to English ‘either … or’ may be used to make the distinction explicit (see section 4.8.2).

(244) a. *Pasyyang, yāng* [^{AP}[^{A}*mino*] *soyang* [^{A}*giday*]].
Pasy=yang yāng mino soyang giday
wonder=1SG.A 3SG.M.A happy or sad

‘I wonder whether he is happy or sad.’

b. *Le no ginvāng* [^{NP}*karon*] *soyang* [^{NP}*gali*]?
Le no gin=vāng karon-Ø soyang gali-Ø
PT.INAN want drink=2SG.A water-TOP or juice-TOP

‘Do you want to drink water or juice?’

c. [^{S}*Beratu edauyi*] *soyang* [^{S}*sa-sahu rangya*]!
berata-u edauyi soyang sa∼saha-u rang-ya
decide-IMP now or return-IMP home-LOC

‘Decide now or go home!’

As above, (244) shows different syntactic contexts for *soyang*. In (244a), it puts two adjectives, *mino* ‘happy’ and *giday* ‘sad’ into opposition as phrasal heads making up a predicative AP. Then, in (244b), the choice is between two NPs, *le … karon* ‘water’ and *le … gali* ‘juice’, which jointly form the object of *ginvāng* ‘you drink’. Lastly, in (244c), two main clauses are in opposition—either disjunct forms a complete sentence on its own.

4.8.2 Complex conjunction and disjunction

English has a number of correlative conjunctions, that is, conjunctions made up of multiple parts which work together as one expression. Among these are, notably, *as … as*, *both … and*, *either … or*, *neither … nor*, *rather … than*, and *the … the*. Ayeri uses the adverb *kamo* ‘equally, same’ together with a conjunction for many of these.

kamo … nay ‘equally … and’ is equivalent to ‘both … and’: the correlative construction emphasizes that two options are equal to each other. Syntactically, resulting sentences are equal to those presented in (243). *sano* ‘both’ may be used as a synonym to *kamo* as well here.

(245) *Ang vacay kamo piyuley nay obanley.*
Ang vac=ay.Ø kamo piyu-ley nay oban-ley
AT like=1SG.TOP equally grain-P.INAN and bean-P.INAN

‘I like both grains and beans.’

Alternatively, it is possible to use a construction with *naynay* ‘(and) also’:

(246)	*Ang*	*vacay*	*piyuley,*	*obanley*	*naynay.*
	Ang	vac=ay.Ø	piyu-ley	oban-ley	naynay
	AT	like=1SG.TOP	grain-P.INAN	bean-P.INAN	also

'I like grains and also beans.'

The example in (245) may be translated more literally as 'I like grains and beans equally', with two NPs in alternation, both being objects of a transitive verb, *vac-* 'like'. With predicative adjectives, the verb *kama-* '(be) equal' may be used:

(247)	*Ang*	*kamayan*	*mabo*	*nay*	*giday.*
	Ang	kama=yan.Ø	mabo	nay	giday
	AT	be.equal=3PL.M.TOP	hungry	and	thirsty

'They are both hungry and thirsty.'

kama- is one of Ayeri's copular verbs used to express equality between two properties of its subject. The literal meaning of (247) is thus, roughly, 'They are as hungry as they are thirsty'. The construction slightly differs from that used to do comparison of NPs, however, in that the conjunction *nay* is placed between both predicative terms here. In order to express literal 'be ... as ... as', thus, the conjunction is dropped:

(248)	*Kamareng*	*matikan*	*helanas*	*agonanya.*
	kama=reng	matikan	helan-as	agonan-ya
	be.equal=3SG.INAN.A	hot	oven-P	outside-LOC

'It's as hot as an oven outside.'

kamo ... nay is used to express 'the ... the', that is, a proportional or antiproportional relationship between two amounts, sizes, or properties; using *sano* 'both' here is judged less fitting. In order to express a relationship of equal increase/decrease in this way, conjuncts are additionally marked with the comparative suffix *-eng* 'more, rather' or its opposite, *-ikoy* 'less':

(249)	*Ang*	*tavyan*	*kamo*	*nakēng*	*nay*	*konjāng-eng.*
	Ang	tav=yan.Ø	equal	nake=eng	nay	kond=yāng=eng
	AT	become=3SG.M.TOP	equally	tall=COMP	and	eat=3SG.M.A=more

'The taller they get, the more they eat.'

The type of correlative conjunction which selects one of two alternatives but not both—that is, exclusive 'or' (XOR)—is expressed by the construction

kamo … soyang 'equally … or', as illustrated by (250).[46] For its negative opposite, 'neither … nor', negation must be used, which is displayed in (251).

(250) a.

Ang	*miraya*	*kamo*	*Ajān*	*adaley*	*eda-konkyanya*	*soyang*	*da-mararya.*
Ang	mira-ya	kamo	Ajān	adaley	eda=konkyan-ya	soynag	da=mararya
AT	do-3SG.M	equally	Ajān	that-P.INAN	this=month-LOC	or	such=next

'Ajān does it either this month or next.'

b.

Kamayong	*mabo*	*soyang*	*krito*	*mirampaluy.*
Kama=yong	mabo	soyang	krito	mirampaluy
be.equal=3SG.N.A	hungry	or	angry	otherwise

'They are either hungry or otherwise angry.'

(251) a.

Ang	*taboyye*	*kamo*		*Sipra*	*netuas*	*soyang*	*kinās.*
Ang	taha-oy-ye	kamo	Ø	Sipra	netu-as	soyang	kinās
AT	have-NEG-3SG.F	equally	TOP	Sipra	brother-P	or	sister-P

'Sipra has neither a brother nor a sister.'

b.

Ang	*kamuay*	*layas*	*soyang*	*veno.*
Ang	kama-oy=ay.Ø	lay-as	soyang	veno
AT	be.equal-NEG=1SG.A	girl-P	or	beautiful

'I am neither a girl nor beautiful.'

[46] Interestingly, it looks as though I slightly plagiarized English here in idea, albeit unwittingly: the etymology of *either* is given as being from Old English *ǽghwæðer, ǽgðer*, from Germanic **aiwon* 'always' + **gihwaþaro-z* 'each of two', cf. OED (2016: either, adj. (and pron.) and adv. (and conj.)). On the other hand, the collective wisdom of the internet's fictional-language community holds that one cannot truly innovate grammatical structures; there will always be a natural language which evolved a given construction before, and possibly with more complications involved. This situation is referred to as 'ANADEW', an acronym for 'a nat[ural]lang[uage] already does even worse'.

5 Phrase structures

While the previous chapter dealt largely with the various parts of speech and their various distributive and inflectional properties, the present chapter will elaborate on how these words combine into syntactic phrases. Since Ayeri is a verb-initial language, it is probably most comfortably analyzed in terms of Lexical-Functional Grammar (Bresnan et al. 2016), since LFG does not require complicated derivations behind the surface structure of sentences.[1] It will be assumed here that, even though Ayeri is basically VSO with predicate and predication not adjacent to each other, it is configurational in that there is a VP which c-commands a number of other constituents as complements in transitive sentences.

In principle, LFG assumes that grammar operates on different structural levels: mainly, these are a(rgument) structure, c(onstituent) structure, and f(unctional) structure; other layers have been proposed by different researchers for different purposes (Butt and King 2015: 862–865). Bresnan et al. (2016) define three core design principles for LFG:

Variability: "The principle of variability states that *external structures vary across languages*. The formal model of external structure in LFG is the *c-structure*, which stands for 'constituent structure' or 'categorial structure'" (41). C-structures are commonly represented by context-free phrase-structure rules; constituency trees are based on an extended version of X-bar theory (42).[2]

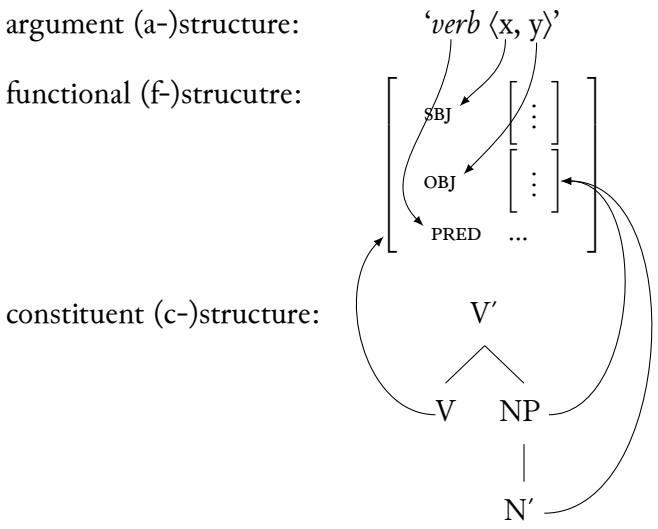
[1] Passivization, for instance, is assumed to be a lexically motivated alternation in predicate structure (SBJ is blocked, so the nominative is assigned to OBJ, and the original SBJ is expressed by an ADJ), rather than an internal derivational process (Bresnan et al. 2016: 23 ff.).

[2] The basic recursive rules of X-bar theory are observed:

1. a) $X' \rightarrow X^0$, YP
   b) $X' \rightarrow X'$, YP
2. $XP \rightarrow YP, X'$

The principle of economy of expression furthermore dictates that trees be pruned of empty

Figure 5.1: Correspondences between different structural layers



Universality: "The principle of universality states that *internal structures are largely invariant across languages*. The formal model of internal structure in LFG is the *f-structure*, which stands for 'functional structure'" (Bresnan et al. 2016: 42). The f-structure is depicted as an argument-value matrix (AVM) which maps the relations between 'subject' (SBJ), 'object' (OBJ), 'predicator' (PRED), etc. as functional abstractions of NP, VP, V, etc. (42). Verbs are also presented with their *a-structure* spelled out. That is, which arguments a verb has relations to is formally stated (15). The f-structure collates semantic features associated with heads of grammatical functions (GFs), such as case (CASE), person (PERS), number (NUM), which are abstract features and as such need not have morphological realization (43).

Monotonicity: "Constituent structure form is simply not the same in all languages [...] In LFG the correspondence mapping between internal and external structures does not preserve sameness of form. Instead, *it is designed to preserve inclusion relations between the information expressed by the external structure and the content of the internal structure*" (43). Due to the principle of monorepresentation, information distributed over different morphemes which logically belongs to a single grammatical function is presented in the f-structure as unified.

To illustrate the different parallel structures in operation, Bresnan et al. (2016: 15) give the schema in Figure 5.1 to demonstrate which part of the a- and c-structure

nodes, and projection levels be omitted if they are not branching (Bresnan et al. 2016: 119–128).

respectively corresponds ('links', 'maps') to which part of the f-structure:[3] Regarding the different functions distinguished, LFG assumes the following hierarchies (97, 100):

(1) a. Grammatical functions (GFs):

$$\overbrace{\text{SBJ} > \text{OBJ} > \text{OBJ}_\theta}^{\text{core}} > \overbrace{\text{OBL}_\theta > \text{XCOMP, COMP} > \text{ADJ}}^{\text{noncore}}$$

b. (Non)argument functions (AFs/$\overline{\text{AFs}}$):

$$\underbrace{\text{TOP FOC}}_{\text{non-a-fns}}\ \overbrace{\text{SBJ OBJ OBJ}_\theta\ \text{OBL}_\theta\ \text{XCOMP COMP}}^{\text{a-fns}}\ \underbrace{\text{ADJ}}_{\text{non-a-fns}}$$

c. Discourse functions (DFs):

$$\overbrace{\text{TOP FOC SBJ}}^{\text{d-fns}}\ \underbrace{\text{OBJ OBJ}_\theta\ \text{OBL}_\theta\ \text{XCOMP COMP ADJ}}_{\text{non-d-fns}}$$

The elements listed in (1) will also appear in phrase-structure rules and c-structure trees together with arrows. These arrows symbolize inheritance of feature information from the current level (↓) of the tree to the next (↑), so for instance, '(↑ SBJ) = ↓' means that the information subsumed by the current node ('down') is passed on as the subject function of the next higher node ('up') in the tree. Concise information on notational formalisms of LFG can be found, for instance, in Butt and King (2015).

5.1 Determiner- and noun phrases

Noun phrases (NPs), and determiner phrases (DPs) as their functional counterpart, fulfill the functions of subject (SBJ), object (OBJ), secondary object (OBJ_θ), as well as oblique location (OBL_{loc}), and various adjuncts (ADJ). DPs and NPs can also constitute topics (TOP). Which DP or NP receives which function is selected by the a-structure of the verb—this also has repercussions on case- and topic marking.

Generally, DPs and NPs can be described with the phrase-structure formulas given in (2), which list the various parts that can occur in them; parentheses indicate the optionality of a term, that is, the respective element may occur but is not constitutive; an asterisk stands for 'zero or more' occurrences of the respective element.

(2) a. $\text{DP} \rightarrow \underset{\uparrow = \downarrow}{\text{D}^0}\ (\underset{\uparrow = \downarrow}{\text{NP}})$

b. $\text{NP} \rightarrow \underset{\uparrow = \downarrow}{\text{N}^0}\ (\underset{(\uparrow \text{ADJ}) = \downarrow}{\text{XP}})\ (\underset{(\uparrow \text{ADJ}) = \downarrow}{\text{NP}})$

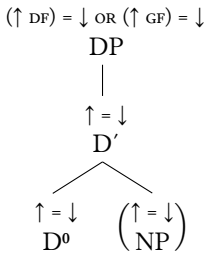
c. $\text{N}^0 \rightarrow \underset{\uparrow = \downarrow}{\text{N}_{\text{stem}}}\ \underset{\uparrow = \downarrow}{\text{-N}_{\text{infl}}}\ \text{OR}\ (\underset{\uparrow = \downarrow}{\hat{\text{P}}})\ \underset{\uparrow = \downarrow}{\text{N}^0}$

[3] Bresnan et al. (2016) use 'SUBJ' for 'subject'; for consistency with the above I will use 'SBJ' in the following.

5.1.1 Determiner phrases

The functional heads of DPs are formed by determiners. The c-structure of a DP corresponding to the linear description in (2a) is depicted in (3); annotations about feature inheritance for c-to-f-structure conversion have been added.

(3)



Ayeri does not possess articles as such, though it does have a variety of morphemes which occur as clitic prefixes on nouns which can be analyzed to fulfill this function. These clitics are the demonstrative prefixes 𞤺𞤤𞤭 *eda-* 'this', 𞤀𞤤𞤭 *ada-* 'that', and 𞤤𞤭 *da-* 'such (a)', as well as the inspecificity prefix 𞤺𞤭 *mə-* 'some' (compare section 4.1.4). These prefixes can only be used with nouns, but not with personal pronouns (compare section 4.2.1), since personal pronouns as well have the status of determiners. Pronouns, as pro-forms, are in complementary distribution with NPs containing a noun. In order to capture the fact that an NP is facultative with the demonstrative and inspecificity prefixes while it must not occur with pronouns, 'NP' appears in parentheses since it is not always present. We can define the following lexicosemantic rules for determiners (D⁰):

(4) a. Demonstrative prefixes:

𞤺𞤤𞤭 *eda-*	P	(↑ PRED)	=	'this'
		(↑ PERS)	$=_c$	3
		(↑ SPEC)	=	+
𞤀𞤤𞤭 *ada-*	P	(↑ PRED)	=	'that'
		(↑ PERS)	$=_c$	3
		(↑ SPEC)	=	+
𞤤𞤭 *da-*	P	(↑ PRED)	=	'such'
		(↑ PERS)	$=_c$	3
		(↑ SPEC)	=	+

b. Inspecificity prefix:

𞤺𞤭 *mə-*	P	(↑ SPEC)	=	−
		(↑ PERS)	$=_c$	3

c. Personal pronouns:

(various)	N	(↑ PRED)	=	'pro'
		(↑ PERS)	=	{1, 2, 3}
		(↑ REFL)	=	±
		(↑ NUM)	=	{SG, PL}
		(↑ GEND)	=	{M, F, N}
		(↑ ANIM)	=	±
		(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
		(↑ SPEC)	=	+

d. Demonstrative pronouns:

(various)	N	(↑ PRED)	=	'this/that/such'
		(↑ PERS)	=	3
		(↑ ANIM)	=	±
		(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
		(↑ SPEC)	=	+

Demonstrative prefixes as well as the inspecificity prefix ꞑə- *mə-* cannot be without an NP complement, which is what '$=_c$' is supposed to express in the feature specification: the demonstrative prefixes require that an element exist which encodes a third-person referent to bind to; nouns are assumed to encode third person by default.[4] On the other hand, personal and demonstrative pronouns inherently define information on person (PERS). Since there is a great number of both personal and demonstrative pronouns, only the various values they can assume are indicated, without ensuring that the combinations are actually possible (compare section 4.2.1). Personal pronouns, for instance, only distinguish INAN as set against {M, F, N}, which are subgroups of AN. Gender is also not distinguished in all persons, but only in the third.

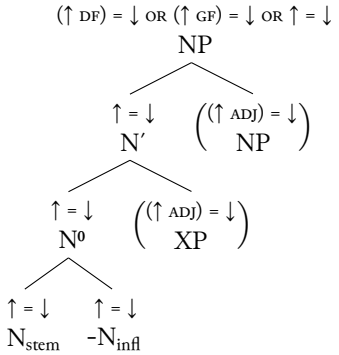
5.1.2 Noun phrases

Regarding NPs proper, it is necessary to distinguish morphologically between those containing common nouns and those containing proper nouns (that is, names), as we have seen in the previous chapter (compare section 4.1): common nouns indicate case by a suffix, while proper nouns receive case marking by a particle preceding the noun. For this reason, the phrase-structure formula in (2c), defining nominal heads (N^0), has two halves connected by OR. In the second half, the case particle before names is indicated by '$\hat{P}$' ('P-roof'), a non-projecting particle (Bresnan et al. 2016: 116–117). Nouns can also be modified by adjectives, adjunct nouns, or relative clauses, which are typically following the noun. The c-structure of NPs can be assumed to

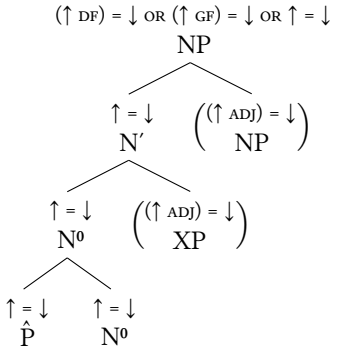
[4] A simple '=' *defines* a value; a subscript 'c' indicates that the morpheme *requires* that this value be present. Thus '$=_c$' expresses a *constraining* equation (Bresnan et al. 2016: 59–61).

look like given in (5). Since modifiers of N⁰ (N⁰'s sister node) can consist of different phrase types (AP, NP, CP), they are indicated generalized as 'XP' in the diagrams. The NP sister node of N′ is reserved for genitive-NP attributes to N⁰.

(5) a. Common nouns:



b. Proper nouns:



For nouns, the following general lexicosemantic properties can be assumed:

(6) a. Common nouns:

...	N	(↑ PRED)	=	'...'
		(↑ PERS)	=	3
		(↑ NUM)	=	{SG, PL}
		(↑ GEND)	=	{M, F, N}
		(↑ ANIM)	=	±
		(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}

b. Proper nouns:

(various)	P	(↑ ANIM)	=	±
		(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
...	N	(↑ PRED)	=	'...'
		(↑ PERS)	=	3
		(↑ NUM)	=	{SG, PL}
		(↑ GEND)	=	{M, F, N}
		(↑ ANIM)	=	±

...

A Names

A.1 Given names

A.1.1 Masculine names

Ajan
Ajān
Akan
Amān
Apan
Apican
Banan
Bayhan
Baykan
Bihān
Canya
Denan
Diyan
Gahān
Hanuan
Hanvan
Hinvo
Hiro
Ijān
Ikan
Kadijan
Kagan
Kaman
Kan
Kolun
Kruy
Kruyan
Lantān
Lanyan
Latun
Ledo
Linko
Lita
Mahān
Makang
Mangan
Mangān
Mangyan
Maran
Mican
Mico
Nahang
Nibān
Niyas
Pangal
Peran
Pinyān
Pralan
Prano
Pulan
Saylan
Sān
Sedan
Sirtang
Sopan
Suhing
Taboy
Tang
Tapan
Taryan
Telbān
Tenan
Tendan
Tenyam
Tikim
Tipal
Togas
Toryan
Tukong
Ulang
Ven
Vey
Veykan
Vipin
Virang
Yan
Yonang

A.1.2 Feminine names

Agivay
Anang
Apitu
Apituay
Apitvay
Avan
Bahay
Bamis
Biling
Binis
Briha
Caysu
Dembay
Diras
Dita
Diya
Gada
Gindi
Gumkay
Kadisu
Karon
Kemis
Kumang
Linglay
Lito
Magaya
Maha
Mali
Malivay
Mangavay
Migray
Misan
Nilan
Ninlay
Niva
Pada
Pakay
Palay
Panglay
Paso
Pila
Pin
Pituay
Sempay
Sikavay
Silva
Silvan
Sinlay
Sinvay
Sipra
Tamay
Taniva
Tavisay
Teping
Trānay
Tunan
Tuvo
Vala
Vapa
Vomay

A.1.3 Gender-neutral names

Anang
Banvā
Cān
Cisu
Dikun
Leno
Maka
Manting
Ming
Natran
Nava
Nilyam
Pangra
Para
Parān
Perin
Piha
Pralan
Pray
Sutay
Tahi
Taran
Toran
Tupoy
Veno
Veta

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