A Grammar of Ayeri

Carsten Becker

A Grammar of Ayeri

Documenting a Fictional Language

Benung. The Ayeri Language Resource

Marburg · 2018

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Set in Junicode and Fira Sans with XƎTEX.

Ayeri is a fictional language. As such, it is not related to any naturally existing languages, living or dead. 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 Ayeri's sound and spelling aesthetic being inspired by Austronesian languages such as Malay, Indonesian, or Tagalog, however, occasional overlaps with words existing in these languages may happen, but only accidentally so.

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Contents

List of Figures vi

List of Tables vii

List of Abbreviations x

Preface xiii

0 Introduction 1

1 Phonology 7
- 1.1 Phoneme inventory . . . 7
  - 1.1.1 Consonants . . . 7
  - 1.1.2 Vowels . . . 10
- 1.2 Phonotactics . . . 12
  - 1.2.1 Number of syllables per word . . . 13
  - 1.2.2 Phonemic makeup of initial syllables . . . 16
  - 1.2.3 Phonemic makeup of medial syllables . . . 20
  - 1.2.4 Phonemic makeup of final syllables . . . 23
  - 1.2.5 Phonemic makeup of single syllables . . . 25
  - 1.2.6 Cross-syllable consonant clusters . . . 30
- 1.3 Notes on prosody . . . 31
  - 1.3.1 Stress . . . 31
  - 1.3.2 Intonation . . . 41

2 Writing system 45
- 2.1 Consonants . . . 47
- 2.2 Vowels . . . 48

2.3 Diacritics 50
2.3.1 Subscript diacritics 51
2.3.2 Prepended diacritics 51
2.3.3 Superscript diacritics 56
2.4 Numerals 57
2.5 Punctuation and abbreviations 58
2.6 Styles 59

3 Morphological typology 63
3.1 Typology 63
3.2 Morphological processes 67
3.2.1 Prefixation 67
3.2.2 Suffixation 69
3.2.3 Reduplication 70
3.2.4 Suprasegmental modification 71
3.2.5 Clitics 71
3.3 Marking strategies 102

4 Grammatical categories 107
4.1 Nouns 107
4.1.1 Gender 107
4.1.2 Number 111
4.1.3 Case 113
4.1.4 Prefixes on nouns 126
4.1.5 Compounding 127
4.1.6 Reduplication 137
4.1.7 Nominalization 139
4.2 Pronouns 144
4.2.1 Personal pronouns 144
4.2.2 Demonstrative pronouns 149
4.2.3 Interrogative pronouns 153
4.2.4 Indefinite pronouns 157
4.2.5 Relative pronouns 164
4.2.6 Reflexives and reciprocals 167
4.3 Adjectives 170
4.3.1 Comparison 170
4.3.2 Negation 170
4.3.3 Adjectivization 171
4.3.4 Other affixes 172

4.4 Adpositions . . . 172
4.4.1 Prepositions . . . 173
4.4.2 Postpositions . . . 178
4.4.3 Adpositions and time . . . 179
4.5 Verbs . . . 181
4.5.1 Person marking . . . 182
4.5.2 Tense . . . 194
4.5.3 Aspect . . . 200
4.5.4 Mood . . . 205
4.5.5 Modals . . . 209
4.5.6 Participle . . . 212
4.5.7 Other affixes . . . 212
4.6 Adverbs . . . 215
4.6.1 Attributive adverbs . . . 216
4.6.2 Sentence adverbs . . . 218
4.6.3 Demonstrative adverbs . . . 222
4.7 Numerals . . . 223
4.7.1 Cardinal numerals . . . 223
4.7.2 Ordinal numerals . . . 227
4.7.3 Multiplicative numerals . . . 230
4.7.4 Distributive numerals . . . 231
4.7.5 Number ranges . . . 231
4.8 Quantifiers and Intensifiers . . . 232
4.9 Conjunctions . . . 234
4.9.1 Simple conjunction and disjunction . . . 234
4.9.2 Complex conjunction and disjunction . . . 235

5 Syntactic typology 239
5.1 Lexical-functional grammar . . . 239
5.2 Typological considerations . . . 241
5.3 'Trigger languages' . . . 246
5.4 Definition of terms . . . 248
5.4.1 Subject . . . 248
5.4.2 Topic . . . 252
5.4.3 Focus . . . 253
5.5 Tests on subjecthood . . . 253
5.5.1 Verb agreement . . . 255
5.5.2 Syntactic pivot . . . 257
5.5.3 Quantifier float . . . 263

5.5.4 Relativization 266
5.5.5 Control of secondary predicates 267
5.5.6 Raising 270
5.5.7 Control 275
5.5.8 Conclusion 281
5.6 Establishing configurationality 284
5.6.1 V + O as a surface constituent 285
5.6.2 Asymmetric influence on thematic roles 287
5.6.3 Idioms 288
5.6.4 Obligatoriness of subjects 289
5.6.5 Binding 290

6 Phrase structures 295
6.1 Noun and determiner phrases 295
6.1.1 Noun phrases 297
6.1.2 Determiner phrases 304
6.1.3 Nominal clitics 332
6.2 Adjective and adverb phrases 335
6.2.1 Adjective phrases 336
6.2.2 Adverb phrases 341
6.3 Prepositional phrases 344
6.4 Inflectional and verb phrases 356
6.4.1 Equative statements 356
6.4.2 Inflectional phrases 362
6.4.3 Verb phrases 370
6.4.4 Existential statements 382
6.4.5 Semi-copula verbs 386
6.4.6 Secondary Predicates 387
6.4.7 Complex transitive verbs 397
6.4.8 Passivization 406
6.4.9 Causatives 415
6.5 Complementizer phrases 417
6.5.1 Complement clauses 419
6.5.2 Relative clauses 419
6.5.3 Conditional clauses 425

A Names 427
A.1 Masculine names 427
A.2 Feminine names 428

A.3 Gender-neutral names 428

B Example Texts **429**
B.1 The North Wind and the Sun 429
B.2 The Fox and the Rooster 431
B.3 Ozymandias 433

Bibliography **437**

Index **449**

List of Figures

0.1 First design for an Ayeri script 4
0.2 First draft for Tahano Hikamu 5

2.1 Box script (undeciphered) and Tahano Hikamu 46
2.2 Tahano Hikamu, 'book style' 60
2.3 Tahano Hikamu, 'angular style' 60
2.4 Tahano Hikamu, 'hand style' 61
2.5 Tahano Hikamu, 'blackletter style' 62

4.1 The implicational map for indefinite pronoun functions 158
4.2 Map of indefinite pronoun functions in Ayeri 161

5.1 F-structure mappings 241

6.1 Visualization of case alternations of ᨿᨿᩲ *ling* and ᨿᩮᩣᨶ *avan* 351

List of Tables

1.1 Consonant inventory (divergent orthography in brackets) 8
1.2 Vowel inventory 10
1.3 Syllabification of inflected verbs 13
1.4 Frequency of words by number of syllables 13
1.5 Frequency of syllable types per word 15
1.6 Frequency of onset consonants in initial syllables 17
1.7 Frequency of nuclei in initial syllables 18
1.8 Frequency of codas in initial syllables 19
1.9 Frequency of onsets in medial syllables 21
1.10 Frequency of nuclei in medial syllables 22
1.11 Frequency of codas in medial syllables 23
1.12 Frequency of onsets in final syllables 24
1.13 Frequency of nuclei in final syllables 26
1.14 Frequency of codas in final syllables 27
1.15 Frequency of onsets in single syllables 28
1.16 Frequency of nuclei in single syllables 29
1.17 Frequency of codas in single syllables 30
1.18 Frequency of cross-syllable consonant clusters 31
1.19 Declension paradigm for Ayeri ऱ्र *niva* 'eye' 32
1.20 Types of heavy syllables 34
1.21 Stress patterns for [+ HEAVY, − LONG] in trisyllabic words 37
1.22 Stress patterns for [± HEAVY, + LONG] in trisyllabic words 38
1.23 Examples of stress patterns in compounds 40

2.1 The consonant graphemes 47
2.2 Additional consonant graphemes 48
2.3 Primary vowel graphemes 49

2.4 Secondary vowel graphemes 50
2.5 Obligatorily prepended diacritics 52
2.6 Allographically prepended diacritics 52
2.7 Subscript diacritics 53
2.8 Superscript diacritics 57
2.9 The numerals 57
2.10 Common punctuation marks 58
2.11 Less common punctuation marks 59

4.1 Declension paradigm for [illegible] *badan* 'father' 108
4.2 Declension paradigm for [illegible] *māva* 'mother' 108
4.3 Declension paradigm for [illegible] *kirin* 'street' 109
4.4 Declension paradigm for [illegible] *pera* 'measure' 109
4.5 Compounds in the Ayeri dictionary 128
4.6 Personal pronouns 145
4.7 Demonstrative pronouns 149
4.8 Token frequencies of attested demonstrative pronouns 151
4.9 Interrogative pronouns 156
4.10 Declension paradigm for [illegible] *sinya* 'who, what' 156
4.11 Indefinite pronouns 158
4.12 Relative pronouns 165
4.13 Token frequencies of attested complex relative pronouns 166
4.14 Prepositions (simple) 173
4.15 Prepositions (directional) 176
4.16 Postpositions 180
4.17 Adpositions with temporal meaning 180
4.18 Conjugation paradigm for [illegible] *sob-* 'learn, teach' 182
4.19 Conjugation paradigm for [illegible] *anl-* 'bring' 183
4.20 Conjugation paradigm for [illegible] *no-* 'want' 184
4.21 Conjugation paradigm for [illegible] *apa-* 'laugh' 185
4.22 Verb inflection types in Ayeri 189
4.23 The syntax and morphology of pronominal affixes 191
4.24 Modal verbs and particles 209
4.25 Demonstratives relating to adverbial categories 222
4.26 Basic cardinal numerals 224
4.27 Numerals for factors of 12 225
4.28 Simple fractions from $\frac{1}{2}$ to $\frac{1}{8}$ 227
4.29 Basic ordinal numerals 228
4.30 Degree and quantity suffixes 234

5.1 Comparison between Tagalog and Ayeri 283

6.1 Case alternations of [illegible] *ling* and [illegible] *avan* 350
6.2 Collected results of the tests on derived arguments 405

List of Abbreviations

Glossing abbreviations

1	First person
2	Second person
3	Third person
A	Agent
ABS	Absolutive
ACC	Accusative
AFF	Affirmative
AGR	Agreement
AGTZ	Agentizer
AN	Animate
AT	Agent topic
AV	Active voice
CAUS	Causative
CAUT	Causative topic
COMP	Comparative
COND	Conditional
DAT	Dative
DATT	Dative topic
DEF	Definite
DET	Determiner
DIM	Diminutive
DIR	Directional
DIST	Distal
DV	Dative voice
ERG	Ergative
EVID	Evidential
F	Feminine
FOC	Focus
FUT	Future
GEN	Genitive
GENT	Genitive topic
HAB	Habitative
HORT	Hortative
IMP	Imperative
IMPF	Imperfective
INAN	Inanimate
IND	Indicative
INDF	Indefinite
INS	Instrumental
INST	Instrumental topic
INT	Intensifier
IRR	Irrealis
ITER	Iterative
IV	Instrumental voice
LNK	Linker
LOC	Locative
LOCT	Locative topic
M	Masculine

N	Neuter
NEG	Negative
NFUT	Near future
NMLZ	Nominalizer
NOM	Nominative
NPST	Near past
NVOL	Non-volitive
OBL	Oblique
OV	Objective voice
P	Patient
PASS	Passive
PFV	Perfective
PL	Plural
POS	Positive
POSS	Possessive
PREP	Preposition
PRI	Primary
PROG	Progressive
PROX	Proximal
PRS	Present
PRT	Preterite
PST	Past
PT	Patient topic
PTCP	Participle
REFL	Reflexive
REL	Relative
RFUT	Remote future
RPST	Remote past
SG	Singular
ST	Strong
SUPL	Superlative
TOP	Topic
TR	Transitive
WK	Weak

LFG-specific abbreviations

ADJ	Adjunct
AF	Argument function
ANIM	Animacy
ASP	Aspect
CASE	Case
COMP	Complement
CONJ	Conjunction
DEG	Degree
DEG-DIM	Degree polarity
DEIX	Deixis
DF	Discourse function
GEND	Gender
GF	Grammatical function
INDEX	Index
MOD	Modality
MOOD	Mood
NUM	Number
OBJ	Object
OBJ$_\theta$	Secondary object
OBL$_\theta$	Oblique constituent
PCASE	Prepositional case
PERS	Person
POSS	Possessor
PRED	Predicator
PREDLINK	Predicative complement
PRONTYPE	Pronoun type
PSEM	Prepositional semantics
Q	Question particle
QUANT	Quantifier
SIMP	Simple aspect
SPECIF	Specificity
SUBJ	Subject
TEL	Telic
TENSE	Tense
XCOMP	Open complement

Grammaticality judgments

*	ungrammatical or undocumented
?	questionable
!	running counter to expectation
#	marked

Preface

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

The student group who worked on Ayeri came to the conclusion that its documentation was severely lacking in the description of basic facts, seeing as whole chapters of the grammar had been missing at the time (Boga et al. 2016: 12). However, while the formal documentation of Ayeri's grammar was lying dormant between 2011 and 2016, I wrote a number of blog articles detailing various grammatical issues (Becker 2016a: Blog).[1] These articles have finally been taken into consideration here.

This book is not merely a filling-in of blanks in previous documentation, though, but was written from scratch for the most part. This goes especially for the syntax chapter, which finally gave me an opportunity to begin acquainting myself with this field. With this book, you are holding the result of two years of hard work in your hands. I hope you will have as much joy reading it as I had researching it.

Carsten Becker, August 2018

[1] *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

ཀཱུ་ཅ་ནམ་མཁའི་ཀ་ཡོད་ཟེར་ཁ་ལས་ནི་ཅི་ཡང་ཟ་ཁ་ཕ་ཆགས།
Paronaya adanyāng si ming tahanoyyāng, edareng voy kotanas.
'He who cannot write believes it not to be toil.'
— Anonymous[1]

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.[2] 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 the Conlang mailing list and the old Zompist BBoard. One thing seemed to catch my interest especially: syntactic alignments other than the nominative–accusative scheme 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 language invention, 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

1 In the original Latin, *Quia qui nescit scribere putat hoc esse nullum laborem*. Scribe's note in Berlin, State Library, Cod. Lat. fol. 270 (see Bluhme 1858: 589).

2 Most of the text here is taken from the blog article "Happy 10th anniversary, Ayeri!" (Becker 2013) with some slight rephrasings and extensions. When I am calling Ayeri 'fictional' here, I am referring to the fact that Ayeri is the result of creative action and does not lead an existence independent of the confines of my writing about it or composing texts in it, as an author. Like a story, thus, it finds its realization only in the act of telling or writing. Like a story as well, it takes its premises from reality as a basis for imagining what could be. Invented languages are often referred to as 'constructed languages', or 'conlangs' for short, in the hobbyist communities revolving around them.

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 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-SUBJ	read-VERB-SUBJ.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*	*layaiyạin*	*mecoyalei*	*ling*	**pinamea.*
	ang=	laya-iy-a-in	me-coya-lei	ling	*pinam-ea
	A.SUBJ=	read-3SG.AN$_1$-a$_1$-SUBJ	INDF.INAN-book-P.INAN	top.of	bed-LOC
	'He reads a book on the bed.'				

A word for 'bed'—ᠨᠢᠨᠠᠮ *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 familiar with a few European languages, it felt awkward

to me at some point not to be able to explicitly distinguish 'he', 'she', and 'it'. These days, I would find it potentially more interesting if I had not taken this step, but the double split in grammatical gender is codified now.

Another feature that was lost is the assignment of thematic vowels in personal pronouns to third-person referents: originally, every third-person referent newly introduced would be assigned one of /a e i o u/ to disambiguate, and there was even a morpheme to mark the dissolution of this association. Constituent order was theoretically variable at first, but I preferred SVO due to familiarity with that. Later on, however, I settled on VSO. 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, alignment. Orthography changed as well over the years, so ⟨c⟩ in the early examples encodes the /k/ sound, not /ʧ/ as it does today; diphthongs were spelled ⟨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;[3] 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 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 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.

[3] 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.

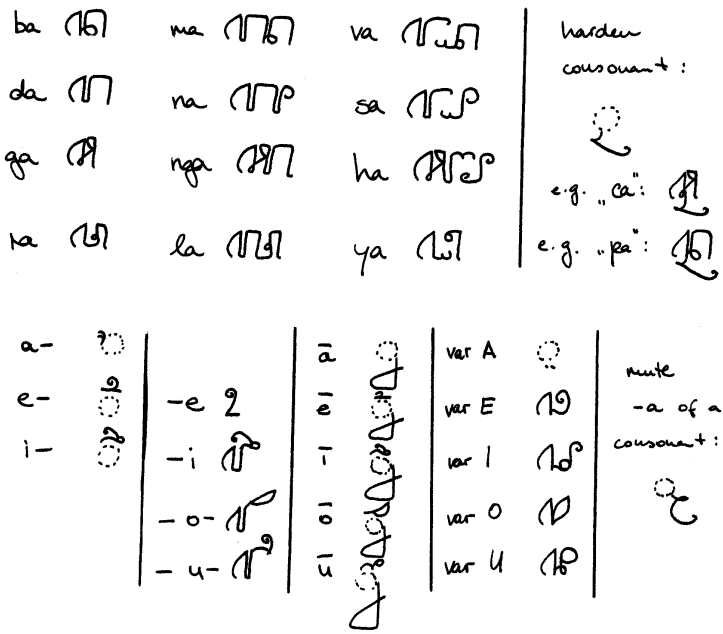


Figure 0.1: First design for an Ayeri script (February 9, 2004)

However, juggling a complex, forty-page document in a word processor had felt too daunting, so I let laziness take the better part of me eventually as enthusiasm gradually subsided. The present, 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 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, maximal information density, like Ithkuil, or to get by with as few different words as possible, like Toki Pona. Ayeri is also not a 'what-if' language in the sense of "What could the modern language of Old Irish speakers transplanted to Australia look like?" or "Latin piped through Algonquian sound changes."

Ayeri is rather an attempt to design an artificial language for personal enjoyment and intellectual stimulation by creating a feedback loop between reading up on linguistics and actively devising rules for an invented 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

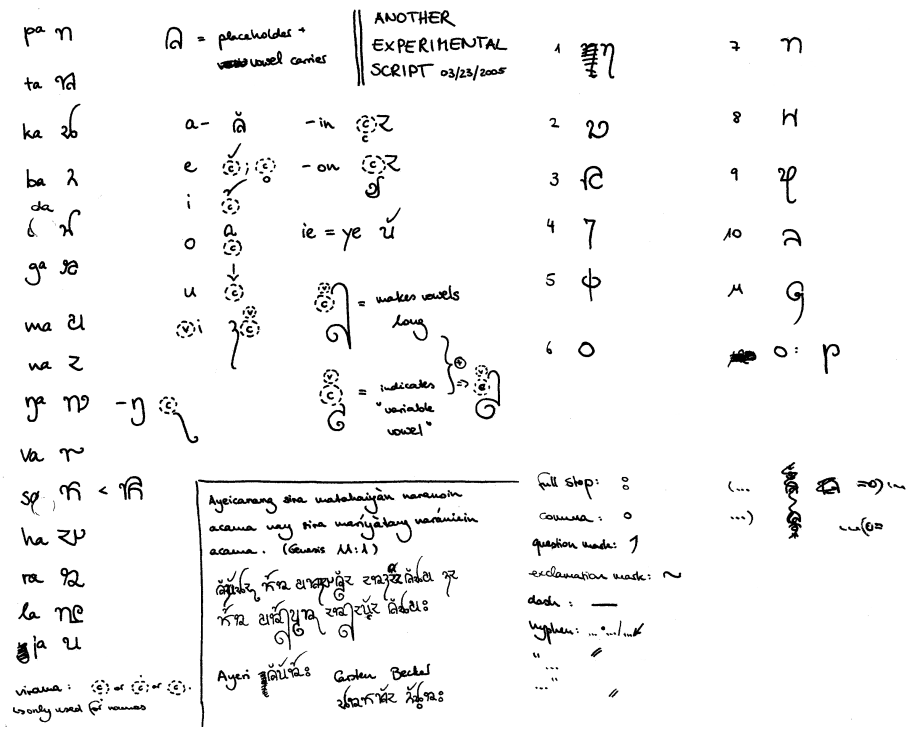


Figure 0.2: First draft for Tahano Hikamu (March 23, 2005)

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 can 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 found 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 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 dear colleague of mine (Servus, Oli!) once put it.

I have tried to document here all things which I have already worked out for Ayeri, and to fill in the most important gaps otherwise. However, there are still some topics which have so far been left out of consideration. Most notably, this is the in-world historical and social context of Ayeri: no real language exists in a cultural vacuum, however, the ideas about Ayeri's cultural embedding are too vague still to be gainfully documented. From this arises a lack of existing work on historical linguistics, areal linguistics (dialects), and sociolinguistics (language contact, stratification). Moreover, since I am more interested in morphosyntax than lexicography, there are no detailed surveys so far on Ayeri's lexicon, for instance, regarding the structuring of its vocabulary, stylistic levels, or onomatopoeia.

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. Big thanks in this regard to Joseph Windsor and Greg Shuflin.

This book is structured in a way to go from the building blocks of the language to increasingly larger structures. Thus, chapter 1 deals with aspects of Ayeri's phonology, and chapter 2 with its alphabet. Chapter 3 contains a discussion of the various morphological means in a general, typological way, while the subsequent chapter 4 discusses the morphology of the individual parts of speech. Before dealing with phrase types and their morphosyntactic makeup, chapter 5 provides a survey into Ayeri's syntactic alignment and tries to answer the question whether Ayeri is a 'configurational' language in spite of VSO word order, and tries to find an answer to the 'trigger-language' issue. Chapter 6 finally discusses how syntactic structures are built up from words, eventually leading to the formation of complete sentences.

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). Table 1.1 shows the full chart of consonant phonemes.

Regarding allophony, /tj kj/ and /dj gj/ are usually realized as [ʧ] and [ʤ], respecitively, except if a homorganic nasal /n/ or /ŋ/ is preceding: for instance, ཨངྱུ *ankyu* /ˈaŋkju/ 'really' is realized as [ˈaŋkju], not as *[ˈaŋʧu] or *[ˈanʧu]. It is important to note, however, that besides this synchronic palatalization process leading to [ʧ] and [ʤ] 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 ཅུ་ *cuna* 'original, initial', ཏཱཀ *panca* 'finally, eventually', and ཝཚ *vac-* 'like', or རྒྱན *jaran* 'pilgrimage', ཨཛ *aja-* 'play', and ནུ་ *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 → ʧ, and (2) dj, gj → ʤ, leading to the *phonemes* /ʧ/ and /ʤ/ 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.

Table 1.1: Consonant inventory (divergent orthography in brackets)

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

The plural marker ꩡ *-ye* is commonly contracted to [ʤ] when a case suffix beginning with a vowel that is not /e/ follows.[2] The same happens before the locative marker ꩡ *-ya* and the dative marker ꩡꩢ *-yam*:

(1) a. ꩡꩡꩡꩡꩡ *netu**ye*** + *-as* → *netu**ja**s* [ne'tuʤas] 'brothers' (brother-PL-P)

b. ꩡꩡꩡꩡ *niva**ye*** + *-ya* → *niva**ja**ya* [ni'vaʤja] 'at the eyes' (eye-PL-LOC)

c. ꩡꩡꩡꩡꩡ *mavi**ye*** + *-eri* → *mavi**ye**ri* [mavi'je:ri] 'with the sheep' (sheep-PL-INS)

Dissimilation of the sequence ꩡꩡ *-yaya* is attested in the translation of Kafka's short story "Eine kaiserliche Botschaft," where the relative pronoun ꩡꩡ *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 of *-yaya* to *-jya* 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 ꩡꩡꩡꩡꩡ *lajāy* 'student' is special in that it is the only word with ꩡꩡ ⟨yya⟩ [ʤa] so far. Presumably it is derived from the verb ꩡꩡꩡ *laya-* 'read' with the agentive suffix ꩡꩡ *-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 *ꩡꩡꩡꩡ **layāya*. The regular form ꩡꩡꩡꩡ *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:

(2) a. ꩡꩡꩡ *tah**i*** ['taçi] 'favorable'

b. ꩡꩡꩡ *bah**o*** ['baxo] 'loud'

While vowels become long when two identical vowels come into succession, consonants do not geminate but are treated like a single consonant, see (3). Furthermore, with diphthongs, the sequence /V1.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; an example of this is given in (4). Here, even though the *-yy-* sequence collapses to /j/, the /u/ of ꩡꩡꩡꩡꩡ *tipuy* remains [ʊ]; the [ɪ∼j] of the diphthong is basically ambisyllabic.

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

(3) a. ꩜ꩁꩁꩀ꩜ *tavvāng* [taˈvaːŋ] ‘you get’ (get=2SG.A)

b. ꩔ꩁꩌꩀ꩜ *disyyang* [diˈsjaŋ] ‘I fasten’ (fasten=1SG.A)

(4) ꩈꩁꩀꩌꩌꩀ *tipuyya* [tiˈpʊ.ja] ‘on the grass’ (grass-LOC)

Table 1.2: Vowel inventory (divergent orthography in brackets)

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

1.1.2 Vowels

Ayeri’s vowel system distinguishes five qualities, as shown in Table 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 to 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:

(5) a. ꩄꩀ꩜ *ming* [mɪŋ] ‘can, be able’

b. ꩆꩁꩂ *enya* [ˈɛn.ja] ‘everyone’

c. ꩈꩄꩂꩂ *agon* [ˈa.gɔn] ‘outer, foreign’

d. ꩀꩈꩂꩀ꩜ *pakur* [ˈpa.kʊr] ‘ill, sick’

[ə] ⟨ə⟩ occurs marginally in the tense prefixes ꩈꩄ: *kə-* ‘NPST’, ꩄ: *mə-* ‘PST’, ꩁ: *və-* ‘RPST’, as well as in the prefix ꩆꩄ: *mə-* ‘some, whichever’. Otherwise, [ə] ⟨e⟩ acts as as an allophone of /e/ in final unstressed position, for instance, in the word ꩄ꩔ꩂ *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 those shown in (6). Otherwise, long vowels result from two same vowels after another, for instance as in (7).

[3] I have gone years without dictionary entries for /uː/, but it has always seemed slightly odd to

(6) a. ཉིས་ *nīsa* 'wanted' གསོན་ *pasīsa* 'interesting'

b. ཨ་རྩེ་ *arēn* 'anyway, however' ཀླ་ *lēra* 'whore'

c. ཁ *lā* 'tongue' ཡང་ *yāng* 'he' (he.A)

d. ཉོན་ *nōn* 'will, intention'

e. བཔཱུ་ *babūan* 'barbarian'[3]

(7) ཨ་ *aja-* 'play' + ཨ་ *-an* 'NMLZ' → ཨ་ཡཱ་ *ajān* 'game, play'.

As far as morphophonology is concerned, long vowels also occur in double-marked relative pronouns where the agreement marker for the relative clause's head has been omitted, for instance, སི་ *sinā* 'of which, about which', as in (8a). This is to disambiguate it from the plain genitive-marked relative pronoun ས *sina* 'which.GEN', as in (8b).[4]

(8) a.

Le	*turayāng*	*taman*	*sinā*	*ang*	*ningay*	*tamala*	*vās.*
le=	tura-yāng	taman$_i$-Ø	si-Ø$_i$-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.'

b.

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

'the letter of my friend which you know'

As shown in (6c), the word ཁ *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 hiatus, a glide /j/ may be inserted, so both of the renditions in (9) are possible.

(9) a.

Aku	*lāas!*
aka-u	lā-as
swallow-IMP	tongue-P

'Shut up!'

b. *Aku lāyas!*
(idem)

me to lack a vowel in that position when all other vowels can be long. Therefore, བཔཱུ *babūan* 'barbarian' and its adjective པཱུ *babū* 'barbarian (adj.)' were coined as ཏཾ་ཁ་ཡེ *prankaye*—things 'that you put in specifically to make things fit', another new coining this decision resulted in.

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

With diphthongs—as described above—/ɪ/ coalesces with a following /j/ to /j/, but the initial vowel will not become tense, thus we receive ဆိုက်ပြ *tip**uyya*** [tiˈpʊja] 'on the grass' from ဆိုက် *tipuy* 'grass' + ပ *-ya* (LOC) instead of *[tiˈpuja]. Moreover, /u/ is commonly realized as [w] when followed by a vowel, for example in ဃောကပြ *huākaya* [ˈwaːkaja] 'frog' or ရှိ *rua-* [rwa] 'have to, must'. [w] may also be an allophone of /uj/, as in အဒေါ်ယိ *adauyi* [aˈdawi] 'then', အခေါ်ယိ *edauyi* [eˈdawi] 'now', or နေကွယ် *nekuyi* [ˈnekwi] 'eyebrows'. The negative suffix ဘူး *-oy* is also commonly contracted to [w] before a diphthong:

(10) မင်္ဂေ*ooyay* → *mingu**a**y* [mɪŋˈgwaɪ] '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;[5] 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.[6] Borrowings have been deleted if they could not reasonably be words in Ayeri. Altogether, the corpus comprises 5 500 words, which is a very small figure for such a survey, but there is only a limited number of 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, compare Table 1.3.

5 These texts are: 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), A Medieval Neighborhood Dispute (2015), A Message from the Emperor (2012), 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).

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

Table 1.3: Syllabification of inflected verbs

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

Table 1.4: Frequency of words by number of syllables (n = 5500)

Segments	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%

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 1.4). 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. Example (11) lists a few examples for each number of syllables per word.

Table 1.5 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

(11) a. ཨང་ *ang* (AT), དེ *nay* 'and', རུ *rua* 'must'

b. པཏཱུ *datau* 'normal', རྣ་ཧཱ *nasay* 'near to'

c. ཨ་ཝ་ཉཱ་ *avanyāng* 'he sinks' (sink=3SG.M.A), ཐོ་ལེ *tovaley* 'a cloak' (cloak-P.INAN)

d. བིཎ་ཝཱ་ཎེ *hinyanveno* (corner.beautiful, a place name),
ཨ་ཙ་ནཱ *mitanena* 'of the palace' (palace-GEN)

e. ཧ་ཡ་ཡ་ཝ *haruyamanas* 'a beating' (beat-PTCP-NMLZ-P),
སྐ་ལ་ཁ་ཝ *sungkorankihas* 'geography' (science.map)

f. ཀ་ཏ་ཡ་ཡ་ནཱ *kaytomayanena* 'of righteousness' (right.do-NMLZ-GEN),
ནི་ཨ་ཡ་ཡ་ཀ་ཚ་ཧེ *nasimayajang-hen* 'all followers' (follow-AGTZ-PL-A=all)

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 listed in (12).

(12) a. Initial CVCC:

ཀ་ལ་ཏ *linktang* /liŋk.ˈtaŋ/ 'they try' (try=3PL.M.A)[7]
ཤ་ལ་ཎ *silvnang* /silv.ˈnaŋ/ 'we see' (see=1PL.A)

b. Final CCCV:

ཨ་ཁ *migryo* /ˈmi.grjo/ 'flourishes' (flourish-3SG.N)
ཤ་ཟ *subryo* /ˈsu.brjo/ 'ceases' (cease-3SG.N)

c. Single V:

ཀཱ *ay* /aɪ/ 'I' (1SG.TOP)

The medial and final VC cases may seem like an oddity, but they are mostly due 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 ཨང་ *ang* 'AT', which alone

7 The verb stem is found in the dictionary as ཀ་ལ་ *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 1.5: 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%

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:[8]

(13)
```
C = (?:tʃ|dʒ|[ptkbdgmnŋvshrljw])
V = (?:[ae]:?ɪ|aʊ|[ieaou]:?|[ɪɛɔʊə])
```

As we have seen above (Table 1.5), 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 1.6. 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 1.5.

Perhaps most striking about the nuclei of initial syllables presented in Table 1.7 is that plain vowels occur most frequently. As mentioned above, lax vowels are counted here as allophones of tense ones since their distribution is complementary. They 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

[8] 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 1.6: Frequency of onset consonants in initial syllables (n = 4299)

Onset	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 1.7: Frequency of nuclei in initial syllables (n = 4299)

Nucleus		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 1.8: Frequency of codas in initial syllables (n = 4299)

Coda	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%
ʧ	1	0.02%
ŋk	1	0.02%
lv	1	0.02%
k	1	0.02%

subsequent ones. Long vowels and diphthongs find themselves below the 5% threshold, and the words with single occurrences are listed in (14).

(14) a. ཁུས་བཟན་ *kuysān* 'comparison'
b. ནོན་ *nōn* 'will, intention'
c. ནཱིས་ *nīsa* 'wanted'[9]
d. ས་ཡ་ཡ་ *sēyraya* 'will overcome' (FUT-overcome-3SG.M)
e. བཞན་ *sautan* 'cork'

Since the diphthong [eːɪ] 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 [aː] 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 (7) above. Similarly, the 18 instances of [ə] reported here are mostly from tense prefixes also mentioned above, for instance, མཁྱོ་ནས་ *məkoronay* 'I knew' (PST-know=1SG.TOP).

Initial-syllable codas (Table 1.8) are far less diverse than consonant onsets: there are only 10 attested segments in comparison to 28 for onsets (not counting

[9] ནཱིས་ *nīsa* and ནོན་ *nōn* are both related to ནོ་ *no-* 'want, plan'.

empty codas of C(C)V syllables, which constitute the majority by a large margin). The only two clusters attested are /ŋk/ in the word གློ་ཁྲལ་ *linktang* 'they try' (try=3PL.M.A), and /lv/ in the word ཟླ་ཝ་ནང་ *silvnang* 'I see' (see=1PL.A). It is probably an effect of the small sample size that there are only two incidences of a CC cluster in the sample set. Morever, the only unvoiced single coda consonants attested are /s/, /h/, /t/, /ʧ/ and /k/, the latter two only once, /h/ twice, see (15).

(15) a. ཕེ་བཅུ་ཝང་ *mebvāng* 'you are supposed to' (be.supposed.to=2SG.A)[10]
ཏོ་བཅུ་ཐང་ *rohtang* 'they bite' (bite=3SG.M.A)

b. ཟླ་ཏ་ *mutva* 'you rub' (rub=2SG.TOP)
ཁ་ཐ་ལ་ *patlay* 'cousin'

c. ཟིག་ཟིག་ *sik-sik* 'tits'

d. ཝ་ཚ་ཝང་ *vacvāng* 'you like' (like=2SG.A)

1.2.3 Phonemic makeup of medial syllables

The onsets of medial syllables (Table 1.9) show properties very similar to those of initial syllables. The order of most common consonants may differ 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 here is /bj/, but, compared to initial syllables, 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 possible in principle in this position, however.

As with onset consonants, vowel nuclei of medial syllables (Table 1.10) 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 /eː1/, there is an attestation of /uː/ (see footnote 3), for which there is more reason to be counted as a phoneme than for /eː1/. The sequences /iː/ and /ʊ1/ also only occur once and twice, respectively, namely in the words in (16).

(16) a. ཁ་ཟ་ *pasīsa* 'interesting';

b. ཏི་ཕུ་ཡ་ *puluyley* 'a mirror' (mirror-P.INAN)
ཏེ་ཕུ་ཡ *tipuyya* 'on the grass' (grass-LOC)

10 The dictionary entry for the verb is ཐ *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 1.9: Frequency of onsets in medial syllables (n = 2741)

Onset	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%
ʧ	20	0.73%
ʤ	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 1.10: Frequency of nuclei in medial syllables (n = 2741)

Nucleus		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%

Table 1.11: Frequency of codas in medial syllables (n = 2741)

Coda	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%

The word in (16a), ꠟ꠰꠵꠶ *pasīsa* 'interesting', rather transparently constitutes a causative derivation of the verb ꠟ꠰꠵꠷ *pasy-* 'wonder, be curious, be interested', essentially meaning 'making one wonder/curious'—the causative suffix ꠶꠶ *-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 an idiomatic meaning.

With medial-syllable codas (Table 1.11) again, sonorants and /s/ make up the largest number of consonants in this position; /t/ and /g/ only occur once each in the words in (17).[11] As documented in Table 1.5 above, Ayeri very strongly favors CV syllables in medial positions, hence the high count of zero segments here.

(17) a. ꠟ꠰꠵꠶꠸꠸꠶꠸꠸꠶ *pangitlan* 'money change'

b. ꠸꠸꠶꠸꠸꠶꠸꠸꠶꠸꠸꠶ *telugtong* 'they survive' (survive=3PL.N)

1.2.4 Phonemic makeup of final syllables

The onsets of final syllables of polysyllabic words (Table 1.12) show the greatest amount of variety, which is due to Ayeri mostly using suffixes for grammatical

11 The word for 'money' is ꠟ꠰꠵꠶ *pangis*. ꠟ꠰꠵꠶꠸꠸꠶꠸꠸꠶ *pangitlan* is probably a compound, albeit not fully transparent. The word for 'change' is ꠸꠸꠶꠸꠸꠶ *tila-*; there is possibly also a nominalizing ꠶꠶ *-an*. Ayeri exceptionally permits nominalized verbs as second members of verb–noun compounds, even though the verb is the head there. What possibly happened at the morpheme boundary is that ꠸꠸꠶꠸꠸꠶ *tilān* underwent metathesis to *꠸꠸꠶꠸꠸꠶ **itlān* to match the rhyme of ꠟ꠰꠵꠶ *pangis*. *ꠟ꠰꠵꠶꠸꠸꠶꠸꠸꠶ **pangisitlān* then irregularly haplologized to ꠟ꠰꠵꠶꠸꠸꠶꠸꠸꠶ *pangitlan*.

Table 1.12: Frequency of onsets in final syllables (n = 4299)

Onset	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%
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%

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* or the third-person animate pronoun agreement suffixes, as well as the various first-person and third-person animate pronominal clitics. Table 1.3 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.[12]

Nuclei of final syllables (Table 1.13) do not bear striking differences to nuclei in other positions. /aː/ comes out second here due to the common nominalizer ꧁ *-an*, which lengthens the vowel of verb stems ending in /a/, as demonstrated in (7). /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 ꧁ *arēn* 'anyway, however'; all evidence for /iː/ is from ꧁ *sirī* 'due to which' (see section 1.1.2). The only evidence for /uː/ in the sample is from ꧁ *babū* 'barbarian (adj.)'.

The list of coda consonants in final syllables (Table 1.14) is slightly more restrictive than even that of coda consonants in medial syllables (see Table 1.11): the only non-sonorant attested is /k/, which only occurs in ꧁ *sik-sik* 'tits' again, which—besides being a vulgar term, thus maybe slightly more dispositioned to deviating phonotactics—looks reasonably like onomatopoeia for the sound of sucking.[13]

1.2.5 Phonemic makeup of single syllables

Onsets of single syllables (Table 1.15) appear to be the least varied category. Still, none of the basic set of consonant morphemes (see Table 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

12 The sequence /sj/ poses difficulty here as there are examples for /Vs.jV/ as well as for /V.sjV/. Whether a strict rule is in operation is unclear. 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 conceals the difference, since /sja/ is spelled ꧁ either way, and morpheme breaks have no impact on the placement the diacritic. /CsjV/ will be /C.sjV/ in any case, since Ayeri avoids final consonant clusters if possible, see Table 1.5.

13 Kroonen (2013) identifies PG **sūgan-, *sūkan-* 'to suck' as derived from the iterative form PG **sukkōn-, *sugōn-* 'to suck', which he gives as originating from PIE **souḱ-neh₂-*. He does not say anything about the word being particularly onomatopoeic, though (489–490).

Table 1.13: Frequency of nuclei in final syllables (n = 4299)

Nucleus		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 1.14: Frequency of codas in final syllables (n = 4299)

Coda	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%

/r/ again combines with plosives; /w/ combines with /n/ and /r/ at least, which we have already seen in final-syllable onsets (see Table 1.12). Whereas /mj/ has only occurred once in initial-syllable onsets so far (see Table 1.6), it occurs a few more times here, all in the word ꩡ *mya* 'be supposed to', which is very commonly used as an unconjugatable modal particle.

A consonant onset which can only be found in monosyllables is /ŋ/,[14] in ꩲꩱꩡ *-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 in (18a). For comparison, (18b) gives an example of regular modification of a verb by an adverb.

(18) a. *Apayeng-ngas.*
apa=yeng=ngas
laugh=3SG.F.A=almost
'She almost laughed.'

b. *Apayeng baho.*
apa=yeng baho
laugh=3SG.F.A loudly
'She laughs loudly.'

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

(19) a. ꩲꩱꩡ꩜ꩲꩱꩡ꩜ꩲꩱꩡ꩜ *Apayeng-ngas.* [ˌapaˈjɛŋas]

b. ꩲꩱꩡ꩜ꩲꩱꩡ꩜ꩲꩱꩡ꩜ *Apayeng baho.* [ˌapaˈjɛŋ ˈbaxo]

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

Table 1.15: Frequency of onsets in single syllables (n = 1201)

Onset	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%
ʧ	9	0.75%
g	9	0.75%
nj	8	0.67%
rw	7	0.58%
b	7	0.58%
pr	5	0.42%
ʤ	3	0.25%
tr	2	0.17%
nw	1	0.08%
ŋ	1	0.08%
kr	1	0.08%
br	1	0.08%

Table 1.16: Frequency of nuclei in single syllables (n = 1201)

Nucleus		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%

As with onset consonants of monosyllabic words, nuclei of this syllable type are the least diverse group again (Table 1.16). One segment which 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 1.13), however, the order of the most common vowels bears more similarities to that of initial and medial syllables (see Tables 1.7 and 1.10). The very uncommon /oː/ features twice in this group, namely in two instances of the word ᨣᩬᩣᩴ *nōn* 'will, intention'.[15]

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

Table 1.17: Frequency of codas in single syllables (n = 1201)

Coda	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%

Like the other syllable segments of monosyllabic words, coda consonants (Table 1.17) as well show the lowest degree of variety among all coda consonants of the various syllable types discussed so far. The order is basically the same as that of final-syllable codas (see Table 1.14), 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 ཨང་ *ang* (see section 1.2.1). /h/ only occurs in the interjections ཨཱ *ah!* and ཨཱ *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 1.18 gives the attested combinations ordered by brackets. 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 ending 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/.

Table 1.18: 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.ʤ, m.l, m.n, m.pr, m.r, n.dv, n.g,[16] n.h, n.w, ŋ.ʤj, ŋ.kw, ŋ.m, ŋ.n, ŋ.rj, ŋ.t, ŋk.t, r.b, r.ʤ, r.g, r.l, r.m, r.sj, r.ʧ, r.v, s.ʤ, s.h, s.l, s.n, s.p, s.v, t.v, ʧ.v (0.08%).
0.10 … 0.24	l.bj, m.br, m.t, n.s, ŋ.b, ŋ.h, ŋ.p, ŋ.w, r.ʤj, r.pj, s.ʤj, s.m, t.l (0.16%); l.ʤ, l.p, m.k, n.sj, ŋ.ʤ, 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.ʤj, 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.ʧ (1.50%); n.ʤ (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%).

At 924 attestations as a first consonant (72.76%), the nasals /m/, /n/, and /ŋ/ make up the largest group 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 secondary plosives (30.47%).

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

[16] This is from ᯘᯖᯘᯖ *gan-gan* 'grandchild' being given as /gan.gan/ in the dictionary, which is the intended pronunciation, however. Assimilation to [ŋ] does not operate in this case.

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

Table 1.19: Declension paradigm for Ayeri ङ्र *niva* 'eye'

	Singular		Plural	
TOP	*ní·va*	'the eye'	*ni·vá·ye*	'the eyes'
A	*ni·vấng*	'eye'	*ni·va·jáng*	'eyes'
P	*ni·vấs*	'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'

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* /ˈɹɛkəɹd/ (noun) and /ɹɪˈkɔɹd/ (verb), does a similar thing, as (20) shows. Ayeri has no such minimal pairs.

(20) English (adapted from Halle 1998: 552):

admire /ædˈmaɪəɹ/ — *admirable* /ˈædməɹəbl/
carnivore /ˈkaɹnɪvɔɹ/ — *carnivorous* /kaɹˈnɪvəɹəs/
ignore /ɪgˈnɔɹ/ — *ignorant* /ˈɪgnəɹənt/

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 (Halle 1998: 564–565).[18] To demonstrate how word stress moves around in Ayeri, the complete declension paradigm for ङ्र *niva* 'eye' is presented in Table 1.19.

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

[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. Halle's article is still informative, though. 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] Irregular final-syllable stress is possible as well here, also in the plural.

superficially unmarked form ཉི་ *niva*, which is disyllabic with stress on the first (= penultimate) syllable, to the agent and patient singular forms, ཉིས་ *nivāng* and ཉིས་ *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 ཉི་ཇང་ *nivajang* is trisyllabic and likewise has its main stress on the third (= ultimate) syllable, while the equally trisyllabic patient plural form ཉི་ཇས་ *nivajas* is stressed on the second (= penultimate) syllable again.

It should have become clear that even though the basic form ཉི་ *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, as (21) shows.[20] From words with more than two syllables we can deduce that stress assignment is trochaic. Stress assignment furthermore moves from right to left, so that in a word with more than two syllables, the last two syllables form a full foot, compare (22).

(21) a. x́ x
ha - *ri* 'pithy, striking'

b. x́ x
sa - *yan* 'hole, cave'
sem - *ba* 'comb'

c. x́ x
bri - *ha* 'grace'
ba - *brya* '(he) mumbles'
a - *gu* 'chicken'

(22) a. x | x́ x
ba - *ha* - *lan* 'target, goal'
jar - *ma* - *ya* 'pilgrim'

b. x̀ x | x́ x
ho - *ra* - *ma* - *ya* 'sinner'
ya - *ma* - *na* - *ti* 'causer'

In the case of (22b), 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 possess syllables

[20] In the following, a syllable will be marked by ⟨x⟩ 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 ⟨|⟩.

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:

Table 1.20: Types of heavy syllables

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

The feature matrix above (Table 1.20) shows the various kinds of syllable types which we will now see have a manipulative effect on trochaic stress assignment. The syllable types marked with a plus sign 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 shown in (23), 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. 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))V:ŋ/ or /C(C(j))Vɪŋ/). If there were, they would group with (23b).

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

b. ẋ x
kār - *yo* 'strong'
key - *nam* 'humans, people'
kan - *ka* 'snow'

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 Table 1.20

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

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, as in (24a), and the possible combinations between [– LONG, – DIPH, + ŋ] and the [+ LONG] row, as in (24b).

(24) a. x ẋ
bay - *bāy* 'I govern' (govern=1SG.TOP)
say - *lyāng* 'he sails' (sail=3SG.M.A)
kay - *vān* 'container'

b. x ẋ
kong - *āyn* 'we enter' (enter=1PL.TOP)
keng - *vāng* 'you notice' (notice=2SG.A)
lin - *kān* 'try, attempt'

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 (24b). The question then is, however, what happens if we invert this order. This is more problematic than it sounds since initial [+ LONG, + DIPH, – ŋ] and [+ LONG, – DIPH, + ŋ], as well as final [– LONG, + DIPH, + ŋ] do not occur. Thus, there will only be one possible combination here—the reverse pattern of གླིང་ཁན *linkān* 'try, attempt' from (24b) above; also compare with (23):

(25) ẋ x
cā - *nang* 'love' (love-A)

There is only one pattern possible here, which is very little to make a point, however, other words following this syllable pattern, like བཉམ་རེང *nāreng* 'rather', for example, behave in the same way. A long syllable has precedence over other kinds of heavy syllables, so ང་ *-nang* does not take away stress from ཅ *cā-* as one might expect from the examples in (23a). 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, see (26).

(26) a. x ẋ
bay - *tang* 'blood'

b. x ẋ
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:

(27) x̀ x́
mā - *sāy* 'I traveled' (PST-travel=1SG.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 combinatorial restrictions mentioned above apply again in (28).

(28) a. x x́
kay - *vay* 'without'
dang - *reng* 'bell' (bell-A.INAN)

b. x̀ x́
bā - *mā* 'parents, mom-and-dad'

As demonstrated in (24), 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 one 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.

As we will see in the in the next section, however, another rule needs to be added to this set:

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

Table 1.21: Stress patterns for [+ HEAVY, – LONG] in trisyllabic words

–H –H +H	*prantanley*	x | x x́	'question' (question-P.INAN)
–H +H –H	*sarayya*	x | x́ x	'(he) bows' (bow-3SG.M)
+H –H –H	*taykondam*	x | x́ x	'break (n.)'
–H +H +H	*ralanghay*	x | x x́	'thumbnail'
+H –H +H	*kaybunay*	x̀ | x x́	'by the way'
+H +H –H	*maykongas*	x | x́ x	'harbor' (harbor-P)
+H +H +H	*saylingyang*	x̀ | x x́	'I progress' (progress=1SG.A)

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 feasible, though the list of examples would 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 (Table 1.21). 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 Table 1.21 that the rules stated at the end of the previous section (p. 36) also hold in the case of trisyllabic words whose syllables alternate short syllables based on the [± HEAVY] feature: ཁཏྲན་ཏན་ལེ *prantanley*, ཁཊཱཡ་ལྦ *ralanghay*, ཀཻལྦུ་ནཱ *kaybunay*, and ས་ལིང་ཡང་ *saylingyang* all receive stress on the final syllable, since this is their last heavy syllable. The first syllables of ཏཱཡ་ཁོ་ན་ཏཾ *taykondam* and ཀཻ་ལྐོ་ང་ཀཱ *maykongas*, on the other hand, lose the secondary stress they would normally be assigned since two stressed syllables after another are normally avoided; the requirement of long syllables to not be unstressed does not come into effect here. ཏཱཡ་ཁོ་ན་ཏཾ *taykondam* is also an example of the rule that even if a syllable is not heavy, the last syllable which can be assigned stress will receive primary stress.

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

Table 1.22: Stress patterns for [± HEAVY, + LONG] in trisyllabic words

−L −L +L	*peraysān*	x | x x̋	'paste'
−L +L −L	*raypānya*	x | x̋ x	'at the stop' (stop-LOC)
+L −L −L	*nōneri*	x̏ | x́ x	'deliberate, intentional'
−L +L +L	—	—	—
+L −L +L	*sānisān*	x̏ | x x̋	'copula; clutch (n.)'
+L +L −L	*lērāyon*	x̏ | x̋ x	'manwhore'
+L +L +L	—	—	—

through the various positions, we receive the results depicted in Table 1.22.[22] Since long syllables override stress assignment to both light and heavy syllables, as pointed out above (p. 36), the example words in this chart contain both of these syllable types. It was not too hard finding examples for all slots in this case either, except that trisyllabic words with two long syllables in succession are rather rare. Thus, the case of a short syllable followed by two long ones, and that of three long syllables in a row remains unattested.[23]

Again, we can see that long syllables attract stress, in that the final syllables of ཀ་ཕྲན་ཤན་ *peraysān* and གླ་རྒྱ་ཅན་ *sānisān* are stressed. For ཀ་ཕྲན་ཤན་ *peraysān*, this is in spite of the penultimate syllable being heavy on the virtue of containing a diphthong. Moreover, the first syllable of ཕྲ་ཤ2ར *raypānya* loses stress adjacent to the stressed long penultimate syllable since it is in an unstressed position and there is no requirement for the syllable to be stressed. ཉོ᳐ནས *nōneri* and ཁ᳐ལ་ཝ᳐ཡ *lērāyon* display a secondary-stressed and a primary-stressed syllable next to each other. In the former case, this is due to the rule that long syllables must not be unstressed, while ས᳐ས *-eri* forms a valid disyllabic foot which receives regular trochaic stress. In the latter case, the stress hiat is due to two long syllables next to each other, of which the first—again—must not be unstressed.

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 habitual suffix ས᳐ *-asa* did not delete the vowel at the end of the verb stem if there is one. ཟླ་ཤ *māsāy* 'I traveled' (PST-travel=ISG.TOP) would then become *ཟླ᳐ཟ᳐ཤ **māsāsāy* 'I used to travel' (PST-travel-HAB=ISG.TOP) instead of the actual form ཟླ᳐ཟ *māsasāy*; the verb stem is ཟ᳐ས *asa-* 'travel'.

Stress in compounds

Ayeri has a number of lexicalized compound nouns which are treated as one word morphologically, for instance as in (29a). This is in contrast to compounds that are not as established, or formed *ad hoc*, as illustrated in (29b).

(29) 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 (29a), though it may be noted that when not being overtly inflected, the second kind of compound will be treated as a word as well: ꠘꠞꠀꠘꠀꠞꠀꠘꠀꠞꠀꠘꠀ

Table 1.23: Examples of stress patterns in compounds

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

maling contains a heavy syllable, stress will not move there. In ཏཱུ་ཏཱ་ཁ་ཡ *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 ཨ་ཡ་ལིང་ཁ་ *malingkaron*. The same rule of stress hiatus avoidance operates in ཨ་ཕ་ཡ་ཡི་ལ *sapayyila*.

Besides the shortening of the second component of the compound, ཨ་ཝ་ག་ཉེ་ *māvaganeng* retains the stress pattern of its constituents. Since /maː/ is not in a final foot, it receives secondary stress. Moreover, ཨ་ཝ་ག་ཉེ་ *māvaganeng* and ཀ་ཕ་ཀུ་ནཱ་ *pikunanding* both show that it is acceptable for two light syllables to follow each other.

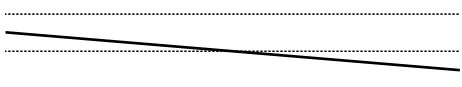
1.3.2 Intonation

Even though a handful of recordings of Ayeri exist, intonation has so far been much of a desiderate.[24] Yet, of course, the spoken words in these recordings do not sound like robot speech either, so there must be intonational patterns. 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:

(31)



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.

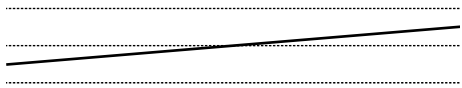
'The North Wind blew with all of his might.'

[24] Peterson (2015) very appropriately notes 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" (66). There must be intonational patterns that I have been subconsciously applying. Very likely, they are influenced by my native language, German.

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:

(32)



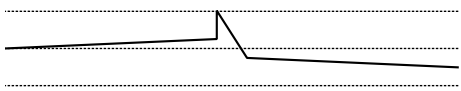
Ang gihayo		*Pintemis*	*minganeri-hen*	*yona?*
ang=giha-yo	Ø=	Pintemis	mingan-eri=hen	yona
AT= blow-3SG.N	TOP=	North Wind	ability-INS=all	3SG.N.GEN.

'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.

(33)



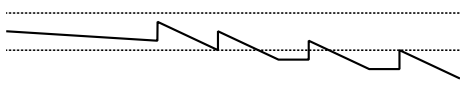
Ang engyo	*mico*	*sinya*	*luga*	*toya*	*sam?*
ang=eng-yo	mico	sinya-Ø	luga	toya	sam
AT= be.more-3SG.N	strong	who-TOP	among	3PL.N.LOC	two

'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.

(34)



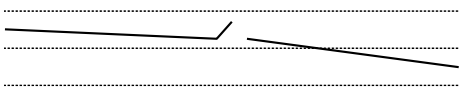
Le	*vacyeng*	*seygo,*	*disu,*	*betay*	*nay*	*vasra.*
le=	vac=yeng	seygo-Ø	disu-Ø	betay-Ø	nay	vasra-Ø
PT.INAN=	like=3SG.F.A	apple-TOP	banana-Ø	berry-Ø	and	nut-Ø

'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. Together, these auditory clues signal the beginning of a new syntactic unit within the context of the current sentence. This 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.

(35)

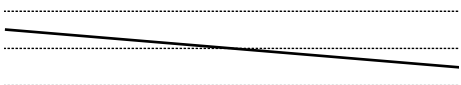


Ang	*manga*	*rantong,*	*engyo*	*mico*	*sinyāng.*
ang=manga=ran=tong			eng-yo	mico	sinya-ang
AT=	PROG=	argue=3PL.N.A	be.more-3SG.N	strong	who-A

'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:

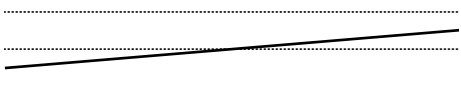
(36) a.



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

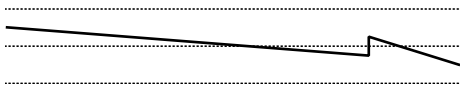
'Is that the traveler who wore the coat?'

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 (compare focus, section 5.4.3), as in the following example, which presents a possible answer to the question posed in (36b):

(37)



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 [illegible] *kegan* 'hat' is placed. This word receives extra stress for contrast with [illegible] *tova* 'coat', which is what the other person had asked about.

2 Writing system

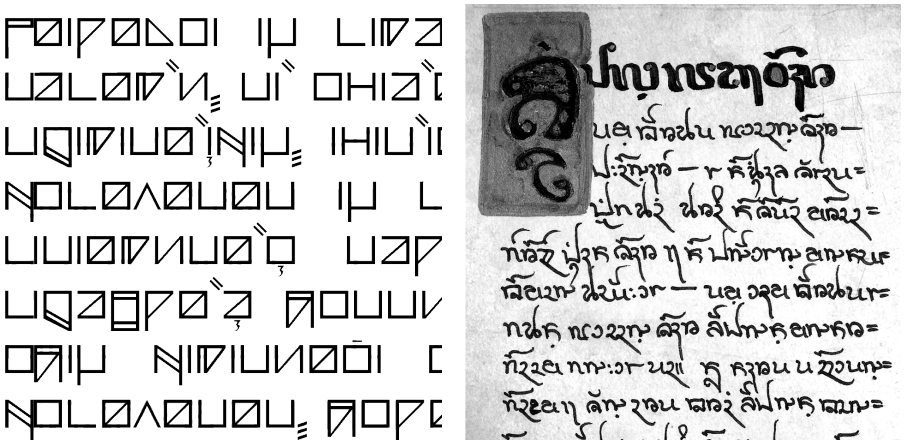
In the previous chapter, example words were given in Ayeri's script, ᏣᏍᏉᏍᏕᏥ *Tahano Hikamu*, wherever possible. Thus, it seems advisable to include a description of Ayeri's native writing system here as well. Literally, ᏣᏍᏉᏍᏕᏥ *Tahano Hikamu* means 'Round Script' (script round), which is an old formation based on the word ᏣᏍᏉ: *tahan-* 'write' that stuck. The current word for 'script' is ᏣᏍᏉᏉ *tahanan* 'writing'.[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, at least as far as Ayeri's spelling is concerned. Subscript notation for consonant clusters and special diacritics marking coda consonants like

[1] 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, see Figure 2.1—Tahano Hikamu was a lot more bubbly in comparison, especially early on (Figure 0.2). Unfortunately, there is no documentation of the Box script surviving that I know of.



(a) Singularly attested: Box script (b) Ayeri's native script: Tahano Hikamu

Figure 2.1: Box script (undeciphered) and Tahano Hikamu

in Javanese (Kuipers and McDermott 1996: 478–479) are likewise unknown to Tahano Hikamu. This does not mean, however, 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" (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). In Tahano Hikamu, a character without an inherent sound value serves as the base. For this reason, the character is indicated in the table below as ๑ /Ø/; its native name is ๑๒๒๒ *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).

[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.

Table 2.1: The consonant graphemes

/pa/	/ta/	/ka/	/ba/	/da/	/ga/
ᨿ	ᨾ	ᨷ	ᨻ	ᨽ	ᨼ
/ma/	**/na/**	**/ŋa/**	**/va/**	**/sa/**	**/ha/**
ᨶ	ᨿ	ᨾ	ᨿ	ᨾ	ᨾ
/ra/	**/la/**	**/ja/**	**/Ø/**		
ᨾ	ᨾ	ᨾ	ᨻ		

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*, etc. Table 2.1 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 alphabets. It is also written in lines from left to right.

ᨻ, 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 ᨾ ⟨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) ᨿ + ᨾᩣᨿᩬ
/pa/ /ŋis/
ᨿᨾᩣᨿᩬ *pangis* /paŋ.is/ 'money'

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

(2) ᨿ + ᨿ → ᨾᨿ
/na/ /na/ /nana/

Table 2.2: Additional consonant graphemes

/fa/	/wa/	/tsa/	/za/	/ʃa/	/ʒa/
ᠮ	ᠨ᠊	ᠬᠴ	ᠨᠵ	ᠪ	ᠨᠪ
/ça/	**/ksa/**	**/kwa/**	**/xa/**	**/ɣa/**	
ᠢᠶ	ᠬᠭᠠ	ᠬᠣᠠ	ᠬᠠ	ᠨᠠ	

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 ᠨ ⟨na⟩ is not deleted, and each ᠨ ⟨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. The difference is that they are not productive, but fossilized.

(3) a. ᠬᠣᠠ ⟨kwa⟩ ← ᠬᠶ ⟨ka⟩ + ᠨ᠊ ⟨va⟩

b. ᠬᠴ ⟨tsa⟩ ← ᠬ ⟨ta⟩ + ᠴ ⟨sa⟩

c. ᠬᠭᠠ ⟨ksa⟩ ← ᠬᠶ ⟨ka⟩ + ᠴ ⟨sa⟩

These conjunct letters are, however, not normally employed by Ayeri. Table 2.2 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) ᠨ → ᠨᠡ

/pa/ /pe/

Table 2.3 gives the primary vowel signs. Of the vowel signs given there, only ᠥ ⟨ə⟩ is not used in Ayeri. ᠦ ⟨au⟩ is the only diphthong for which a dedicated 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

Table 2.3: Primary vowel graphemes

	/i/	/e/	/a/	/o/	/u/	/ə/	/aʊ/
Diaritics	◌ᩲ	◌ᩮ	(◌ᩰ)	◌ᩯ	◌ᩳ	◌ᩬ	◌ᩱ
Independent	ᩲᩣ	ᩮᩣ	ᩰᩣ	ᩯᩣ	ᩳᩣ	ᩬᩣ	ᩱᩣ

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) ᨿ → ᨿᩮ → ᨿᩮᩬ
/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 ᩁᩳᩣᩅᩣᩴ *ruān* 'duty':

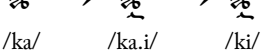
(6) ᩁᩳ → ᩁᩳᩣᩅᩣ (ᩁᩳᩣᩅᩣ)
/ru/ /rwaː/ !/ruːa/

Example (6) uses a diacritic, ◌ᩣ, to indicate length. If ◌ᩣ is put directly under ᩁᩳ *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. Table 2.4 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 ᩋᩤᩁᩰ *iray* 'high' and ᩋᩮᩁᩣ *eyra* 'low' to disambiguate, so ᩋᩮᩋᩤᩁᩰ *e iray* denotes the superscript ⟨e⟩ diacritic while ᩋᩮᩋᩮᩁᩣ *e eyra* denotes its subscript counterpart.

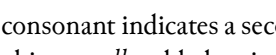
As a further exception, those consonant bases with an ascender (ᨠ ⟨ka⟩, ᨯ ⟨da⟩, ᨧ /ça/) move the primary vowel to the secondary slot below the consonant by default while indicating the vacancy of the primary slot at the top with a dot. This is done to avoid crossing the ascender of the consonant with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

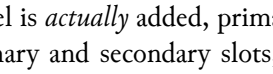
Table 2.4: Secondary vowel graphemes

/i/	/e/	/a/	/o/	/u/	/ə/	/aʊ/
◌	◌	◌	◌	◌	◌	◌

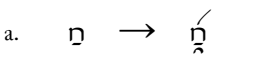
(7) 
/ka/ /ka.i/ /ki/

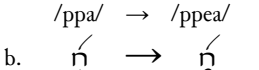
If the primary vowel slot were not silenced by the ◌ diacritic, it could reasonably be assumed that the consonant is not losing its inherent /a/ and the vowel below the consonant indicates a secondary vowel, spelling /CaV/. If, however, a secondary vowel is *actually* added, primary and secondary vowels 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/ /kiː/

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 these diacrtics even undergo non-trivial positioning and repositioning. 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 lastly, superscript diacritics.

2.3.1 Subscript diacritics

Table 2.7 shows the bottom-attaching diacritics. The 'large diacritics' (ཱ through ཷ) cause the secondary slot of consonants to move down below the diacritic. 'Small diacritics' (ཿ through ཾ) can attach in this place as well as secondary vowels, as does the homorganic nasal diacritic ཾ in this diacritic-fraught example:

(10) ཅན་ + ཀུ་ལུ་ → ཅཾ་ཀུ་ལུ་
/ˈʧaːn/ /puˈlʊɪ/ /ˌʧaːmpuˈlʊɪ/
ཅཾ་ཀུ་ལུ་ *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 ཏོ་ *tor-* 'sleep' + ཡེ་ *-yeng* (=3SG.F.A) and syllabifies as /tor.ˈjeŋ/, the spelling is not *ཏོ་ཡེ་ as one might expect, but ཏཾ་ཡ.

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) ཡ ཉིན་རེང་ ཁང་ཀ་ ནཱ་ཉ་ཨ།
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: ཡ ཉིན་རེང་ ཁང་ཀ་ ནཱ་ཉ་ཨ།. With the dot after the final consonant, word boundaries are more visible.

2.3.2 Prepended diacritics

Example (10) leads us directly to the next class of diacritics—those 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 (Table 2.5).

Table 2.5: Obligatorily prepended diacritics

	Native name	Function	Example
꧁◌	꧁꧁꧁꧁꧁꧁꧁꧁ *lentankusang* 'double-sound'	Makes 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)	꧃ *ta* → ꧃ /ʈa/

Table 2.6: 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/ → ꧅ /sʰʲa/
꧆◌	꧆꧆꧆꧆꧆꧆ *ulangaya marin* 'anterior breather'	(Pre-)Aspiration or frication of a consonant (not used in Ayeri)	꧆ *nga* → ꧆ /ŋʰa/; ꧆ *ta* → ꧆ /ʰta/

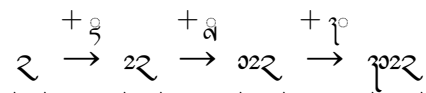
Table 2.7: Subscript diacritics

	Native name	Function	Example
◌ᧁ	ᨿᨾᨠᨿᨶᨿ *tupasati* 'long-maker'	Lengthens the primary vowel of the syllable	ᨠ *pa* → ᨠᧁ *pā*
◌ᧂ	ᨷᨿᨾᨿᨶᨿᨿᨾᨿᨶᨿᨿᨾᨿᨶᨿ

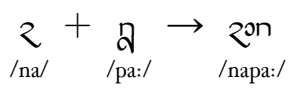
As Table 2.5 shows, the only obligatorily prepended diacritic that Ayeri uses is the one that marks diphthongs, ꤻ. However, ꤻ changes into ꤿ ⟨ya⟩ proper when a vowel follows, but stays ꤻ when a ꤿ ⟨ya⟩ follows:

(12) a. ꤷꤢꤾꤢꤱ *haday* 'hero' → ꤷꤢꤱꤢꤾꤢꤲꤢ (*ꤷꤢꤾꤢꤱꤢꤾꤢꤲꤢ) *hadayang* 'the hero' (hero-A)

b. ꤽꤢꤾꤢꤶꤢꤾꤢꤶꤢꤾꤢꤶ

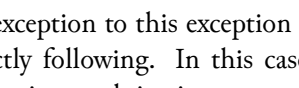
(15) 

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

(16) 

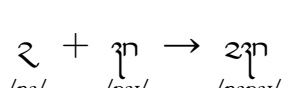
(*ནཔ)

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

(17) 

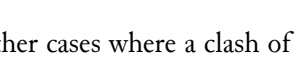
(ʔནཔཱི)

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

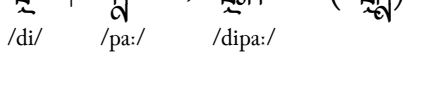
(18) 

(*དཔཱ)

Alternatively, the following solution is permissible:

(19) 

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, as in (20).

(20) 

(ʔབཱམ)

Generally, prepended diacritics apply only to a single consonant grapheme, not a whole consonant cluster as such. Thus, for instance, in words like *pray* 'smooth' ꞇ◌ appears before ꞇ ⟨ra⟩, not before ꞇ ⟨pa⟩, since ꞇ ⟨ra⟩ is the closest consonant before the syllable nucleus which we are modifying by adding the ꞇ◌. Since in the case of *pray* the inherent vowel of ꞇ ⟨pa⟩ is silent, it receives a diacritic ◌ꞇ to mark this fact:

(21) ꞇꞇꞇꞇ (*ꞇꞇꞇꞇ)
/praɪ/

What (21) shows is that essentially, /praɪ/ is split into /p/ + /raɪ/ for purposes of spelling, rather than /pr/ + /aɪ/. If necessary, it is also possible this way to distinguish, for instance, ꞇꞇꞇꞇ /ʈsa/ from ꞇꞇꞇꞇ /tʂa/. It would be up to the respective language's orthography to decide whether either combination spells /ʈʂa/ or whether the ꞇ◌ diacritic is needed on both consonants—that is, ꞇꞇꞇꞇ—to spell the retroflex affricate.

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 ꞇ ⟨na⟩ due to its swash, as well as for ꞇ ⟨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 Table 2.8.

At times, it may be necessary to attach both a superscript diacritic and a vowel sign above a consonant, compare (22). 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).

(22) a. ꞇꞇꞇꞇ ⟶ ꞇꞇꞇꞇ
/vva/ → /vve/

b. ꞇꞇꞇꞇ ⟶ ꞇꞇꞇꞇ
/vva/ → /vvaN/

Table 2.8: Superscript diacritics

	Native name	Function	Example
◌ᐟ	ᐋᐢᐁᐱᐊᐢᐃᐣᐢ *gondaya ling* 'upper extinguisher'	Deletes inherent /a/ of consonant, e.g. in consonant clusters or closed syllables	ᐢᐃ *vara* → ᐢᐢᐃ *vra*
◌ᐠ	ᐢᐅᐣᐁᐃᐢᐃᐣᐢ *vināti ling* 'upper nasalizer'	Indicates a homorganic nasal or nasalizes the vowel, depending on language/context	ᐣᐸ *naka* → ᐣᐣᐸ *nanka* /naŋka/ or /nãka/
◌ᐣ	ᐋᐣᐃᐢᐁᐃᐢᐃᐣᐢ *kusangisāti ling* 'upper duplicator'	Indicates a geminated or otherwise double consonant	ᐃᐣ *pana* → ᐃᐣᐣ *panna*
◌ᐧ	ᐢᐃᐣᐁᐃ *raypāya* 'stopper'	Glottal stop coda or glottalization of a consonant (not used in Ayeri)	ᐁ *ta* → ᐁᐧ /taʔ/; ᐢ *sa* → ᐢᐧ /s'a/

Table 2.9: The numerals

1	2	3	4	5	6
ᐃ	ᐁ	ᐢ	ᐣ	ᐸ	ᐧ
7	8	9	A	B	10
ᐃᐧ	ᐁᐧ	ᐢᐧ	ᐣᐧ	ᐸᐧ	ᐃᐁ

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.[3] 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 Table 2.9.

[3] And one possibly overrepresented by invented languages due to its rarity in natural languages.

Table 2.10: Common punctuation marks

	Native name	Function	Example
꤯	ꤕꤢꤱ *dan* 'dot'	Full stop	ꤞꤢꤱꤗꤢꤲ꤯ *Sarayāng.* 'He left.'
ꤰ	ꤕꤢꤱꤰꤕꤢꤱ *dan-dan* 'little dot'	A separator for small things, like clitics and abbreviations; divides the constituents of reduplication	꤀ꤕꤰꤔꤲ *ada-nanga* 'this house'; ꤷꤰꤕ *5:pd* '5 hrs'; ꤕꤢꤱꤰꤕꤢꤱ *dan-dan* 'dot-dot, little dot'
—	ꤔꤢꤲꤕꤢꤱ *puntān* 'dash'	General sign for a longer pause, equivalent to a dash, colon, semicolon, brackets	ꤚꤢꤱ–ꤞꤢꤲꤗꤢꤲ *Yan—saru!* 'Yan—go!'
ꤻ	ꤕꤢꤲꤗꤢꤲꤞꤢꤱ *damprantan* 'question point'	Marks questions	ꤙꤢꤲꤔꤢꤲꤻ *Manisu?* 'Hello?'
ꤼ	ꤕꤢꤲꤞꤢꤲꤕꤢꤱ *dambahān* 'shouting point'	Marks exclamations; strong exclamations may be marked by the ꤽ variant.	ꤙꤢꤲꤔꤢꤲꤼ *Manisu!* 'Hello!'; ꤚꤢꤽ *Yi!* 'Urgh!'

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. Table 2.10 lists the ones commonly encountered, Table 2.11 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 ꤰ ⟨-⟩ (see Figure 0.2). There is no mark for a comma as such, so ꤰ ⟨-⟩ 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 ꤽ 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 in the Latin alphabet, especially the brackets and the decimal point. Still, they may serve their purpose sometimes, and the brackets ꤵꤶ

Table 2.11: Less common punctuation marks

	Native name	Function	Example
◌	ᎠᏂᏅᏅᏓ *danarān* ‘speaking point’	Quotation marks	ᏂᏅᏩᏂᏍᏗᏍᏓᏥᏍᏗᏥᏍᏗᏥ *Narayāng “Manisu!”* ‘He says, “Hello!”’
◌	ᏗᏂᏩᏂᏥ *dankayvo* ‘beside-point’	Bracketing of text	ᏗᏍᏗᏥᏂᏅᏍᏗᏥ *bahis (larau)* ‘a (nice) day’
◌	ᏗᏂᏍᏅᏓ *dangaran* ‘name-point’	Explicitly marks a name as such. The closing bracket can be found as ᏩᏗ as well.	ᏥᏍᏗᏥᏍᏗᏥᏍᏗ

with it.[4] 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 2011a):

> *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)

Previous examples all used 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 a second thought about the limitations of the supposed original writing utensils. The 'book' style letters are what I consider the canonical form. Figure 2.2 shows the above article in this letter style.

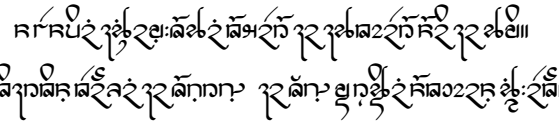


Figure 2.2: Tahano Hikamu, 'book style'

As described above, I have long found the look of the Javanese script[5] rather interesting and thus I tried applying the general aesthetics of what I had seen of it to Tahano Hikamu at some point. As mentioned above as well, there are no subscript letters 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. This letter style (ཟླ22 *hinya* 'angular') is displayed in Figure 2.3.

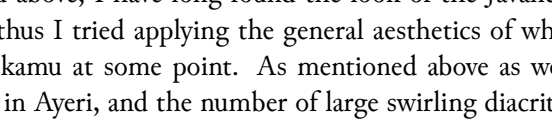


Figure 2.3: Tahano Hikamu, 'angular style'

[4] Over the course of the years since Tahano Hikamu's inception, I have liked to experiment by 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.

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

The greatest difference to the 'book' style is that many of the main strokes double to become a thick and a parallel thin line. The shape of ꡢ ⟨na⟩ also changes into a simple descending line. The vowel carrier ꡁ changes to a flattened *O*-like circle, and the bottom curl in ꡗ ⟨ta⟩ changes to a wedge. While the right side of the ꡘ ⟨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.

Reproducing the shapes of either the 'book' style or the 'angular' style by hand accurately is slow, so I wondered what daily handwriting could look like. 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, however.[6] Metal plates can be inscribed with metal styluses and should allow similar shapes as modern pens. Wax tablets should as well allow for relative freedom of stroke direction, so the character shapes are probably not implausible even without assuming that pen and paper are (widely) available. Figure 2.4 shows what Tahano Hikamu might look like quickly jotted down by hand.

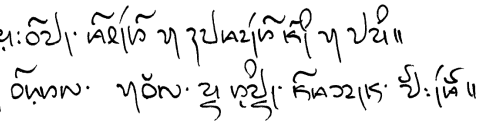


Figure 2.4: Tahano Hikamu, 'hand style'

Many letter shapes become simplified, specifically ꡁ ⟨ba⟩, ꡂ ⟨ga⟩, ꡄ ⟨ka⟩, ꡢ ⟨na⟩, ꡣ ⟨nga⟩, the vowel carrier ꡁ, and the vowel ꡀ ⟨i⟩. Not shown here is the the vowel length diacritic, ꡁ, which is simplified to a reverse *C* shape. The abbreviation ꡤ *nay* 'and' is used throughout, though in a shape that is more similar to its 'angular' form ꡤ. ꡢ ⟨na⟩ is also taken from the 'angular' style ꡢ, which means that it is possibly the acutal basic shape, rather than the 'book' style's ꡢ, 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. 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 2.5 shows what our example passage might have looked like at a time when Gothic book hands flourished.

6 Salomon (1996) also writes that "very few such documents survive in South Asia, though we do have early non-epigraphic specimens on wood, leather, palm leaf, and birch bark from Inner

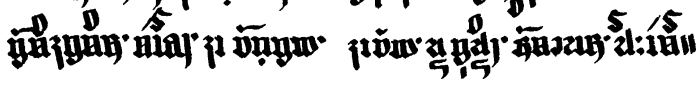


Figure 2.5: Tahano Hikamu, 'blackletter style'

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

Asia" (Salomon 1996: 378).

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 functions various kinds of inflection carry out in the language. In a prelude to both the morphology and syntax chapters, special attention is given to discussing why certain affixes and 'small words' should be treated as clitics.

3.1 Typology

For the largest part, Ayeri is an *agglutinating* 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 with verbs, as (1) shows.

(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 ခွဲမ်း *kond-* 'eat' is inflected here for a habitual action with the suffix ၊အစ *-asa*, and also carries a pronominal clitic, ၊ယျာင် *-yāng*, marking a third person singular masculine agent. With the notable exception of pronouns and related pronominal clitics, affixes tend to encode a single grammatical function. The examples in (2) illustrate that verbs are not the only part of speech which can inflect; nouns, adjectives, and the relativizer can do so 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. *Ang koronya Kaman apyanas palayoy.*
ang=koron-ya Kaman apyan-as palayoy
AT= know-3SG.M Kaman joke-P funny-NEG
'Kaman knows an unfunny joke.'

c. *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 ၊ဆရ၁ဲ့ကင် *tamanyeley* 'letters', in which the plural marker ၊ယ် *-ye* is distinct from the inanimate-patient case marker ၊ကင် *-ley* (the latter, however, conflates animacy and case. Strictly speaking, the pronoun ယ်ပဲ့ *yeyam* 'to her' is also composed, namely of the third-person feminine base form ယ် *ye* and the dative case marker ၊ပဲ့ *yam*. Example (2c) is one we have already encountered before (section 1.1.2, p. 10). Here, the relative pronoun, ဆိုဒ္ *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 ဆိုကင်ယ်ဒ္ *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 ဗ *mə-* (which is actually redundant in this case). There are also demonstrative prefixes on nouns. In the following example, the prefix ဧမ်း *eda-* 'this-' in (3) joins the noun ဂ်ပဲ့ *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=ISG.A this=carpet-TOP
'I do not want to buy this carpet.'

Besides prefixes and suffixes, Ayeri also possesses at least one element both in the verb cluster and cooccurring with adpositions which straddles the border between inflection and function word. This is the clitic marker *manga*, which is treated as an independent word in orthography, but can modify verbs and adpositions—heads of verb phrases (VPs) and adpositional phrases (PPs), respectively. It 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 DIR= between meat-TOP
'The meat, he had put a spit through it before.'

In (4a), *manga* modifies the verb *yava-* 'roast' and indicates that this is a temporarily ongoing action, like the English progressive, except not as strongly grammaticalized.[1] In (4b), *manga* modifies the preposition, to indicate that it is directional: *luga* by itself means 'among, between', while its directional form *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 *-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 *yeyam* 'to her' above, can be decomposed into root and suffix without problem.[2]

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

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' 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 the one in (5).

(5) *da-mətahasongoyyang-ikan*
da=mə-taha-asa-ong-oy=yang=ikan
such=PST-have-HAB-IRR-NEG=1SG.A=much
'I would not much used to have had such'

One case of analytic morphology is compound prepositions like *manga luga* 'through' in (4b), but verbs as well show analytic structures not only with the progressive marker, but also with modals, as (6) shows.

(6) *Ming saboyyang dabas.*
ming=saha-oy=yang dabas
can= come-NEG=1SG.A today
'I can't come today.'

Most of the information the inflectional phrase (IP) contains in this example is marked on the content verb, *saha-* 'come', except for ability, which is expressed by the modal particle *ming* 'can'. *ming* is an uninflected form of the verb expressing ability and we might count it as an auxiliary verb in that the full semantic content of the IP 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] As we will see later (section 3.2.5), though, these modal particles behave more like clitics than function words. Consider, on the other hand, example (7), in which *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] *manga* has, in fact, a verbal counterpart *manga-* 'move; remove' as well, which presumably served as the origin of both the progressive and the directional marker.

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 these are likely clitics; reasons for their being clitics will be discussed below in section 3.2.5. With verbs, prefixes that are most certainly 'true' prefixes—that is, bound morphemes which have been semantically bleached by grammaticalization to the point where they only express grammatical functions (Lehmann 2015: 157 ff.), and which subcategorize for words rather than phrases (Klavans 1985: 117), with a rather high obligation to be marked on every conjunct in coordination (Spencer and Luís 2012: 139)—are the tense prefixes marking both three degrees of past and future tense, for example *sə-* in (8).

(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 *sə-* marks future tense on the verb, *sara-* 'go'. The other tense prefixes are *kə-* (NPST), *mə-* (PST), *və-* (RPST), as well as *pa-* (NFUT) and *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 *da-* 'thus, so, such' and the reflexive marker *sitang-* 'self', compare (9) and (10). Furthermore, (11) shows that *sitang-* can also be used as a preverbal particle in situations where the agent is also the instrument, so both of the sentences in (11) are equivalent in meaning.

(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
self=wash=3SG.M.A
'He washes *himself*.'

Example (11a) shows the more common application of *sitang-*, that is, as a reflexive modifier of pronouns. Moreover, the prefix *da-* can be used with NPs and is part of the demonstrative set of prefixes (which behave, in fact, like proclitics), *da-* 'such', *eda-* 'this', and *ada-* 'that' as shown in (12).

The demonstrative prefixes are also used to form the demonstrative pronouns *edanya* 'this one', *adanya* 'that one' and *danya* '(such) one'. A special case in this regard is the postposition *da-nārya* 'in spite of, despite' where *da-*

(11) a. *Sa apicāng nanga ikan sitang-yari.*
sa= apit=yāng nanga ikan sitang=yari
PT=clean=3SG.A house complete self=3SG.M.INS
'He cleaned the whole house by himself.'

b. *Sa sitang-apicāng nanga ikan.*
sa= sitang=apit=yāng nanga ikan
PT=self-clean=3SG.A house complete
(*idem*)

(12) *eda- / ada- / da-ganang*
eda= / ada= / da=gan-ang
this= / that= / such.a=child-A
'this/that/such a child'

da- combines with the conjunction ᨿᨾᨿᨶ *nārya* 'but, although, except'. Originally, ᨴᨿᨠᨸᨿᨠᨷ *dikapisa* 'respective' is derived from ᨴᨿ *da-* + ᨠᨿᨠᨸᨿᨠᨷ *ikapisa* 'bound, dependent', which is an example of combination with an adjective. There is also a fixed adverbial expression using one of these prefixes, ᨿᨴᨿᨠᨾᨿᨾᨿᨴᨿᨾᨿᨾᨿᨴᨿᨾᨿᨾᨿᨴᨿ

at the phrasal level" (117), a very common kind of prefix to the inflectional *phrase* are the topic markers. They are counted as parts of the IP but they do not interact with it regarding stress assignment: topic particles are always unstressed. Besides this, they are consistently placed in clause-initial position, preceding any other preverbal elements. Earlier examples have already included topic particles, but a dedicated example of their placement is given again here, in (14).

(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.'

The word ꩡꩢꩥꩡꩣꩡꩤ *kudapalung* 'other than that, apart from that' is an interesting case in that it is a fossilized form of multiple proclitics being stacked on an adjective. ꩡꩢꩥꩡꩣꩡꩤ *kudapalung* is transparently made up of the root ꩡꩣꩡꩤ *palung* 'other, different' to which are added ꩥ *da-* 'so, such' and ꩡꩢ *ku-* 'like, as though'.

3.2.2 Suffixation

As a largely agglutinating language, most grammatical marking in Ayeri is done by suffixes. These occur mainly with nouns and verbs, however, some basic quantifiers and intensifiers take the shape of suffixes as well, but behave more like enclitics. Quantifiers and intensifiers may modify content words almost regardless of their part of speech—noun, verb, adjective, adverb, or adposition. The most pervasive examples of suffixation are certainly those of case marking on nouns and of person marking on verbs, as exemplified in (15).

(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 DIR= 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 ꩡꩣꩡꩤ *tang* 'ears' with the locative case suffix ꩡꩥ *-ya* and the marking of ꩥꩢꩥꩡꩤ *suyar* 'ladle' with the instrumental case suffix ꩡꩥꩣꩡꩥ *-eri*; the previous examples already provide instances of the exceedingly common markers for agent and patient case, ꩡꩥꩣꩡꩤ *-ang* and ꩡꩥꩣꩡꩥ *-as*, respectively. Besides case, nouns can be marked for plural with the suffix ꩡꩥꩣꩡꩥ *-ye*, and verb roots may be extended by the mood and aspect markers ꩡꩥꩣꩡꩤ *-ong* (IRR), ꩡꩥꩣꩡꩥ *-asa* (HAB) and ꩡꩥꩣꩡꩥ *-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 an agreement suffix or as a clitic personal pronoun depending on whether an agent NP proper is present or not for the verb to agree with. In (15), a cliticized agent pronoun יָנְגּ *-yang* 'I' (1SG.A) appears.

As mentioned above, both quantifiers and intensifiers may appear as enclitics on almost any type of content word, like מַא *-ma* 'enough' on the adverb פַרַ *para* 'fast' in (16), for instance.

(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, which serves 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 an iterative, compare (17b). The imperative iterative, then, has a hortative function as well in (17c).

(17) a. *naru-naru*
naru∼nara-u
HORT∼speak-IMP
'let's 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's speak again'

With nouns, full reduplication is used to create a diminutive form in (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. ꠰꠰ *veney* 'dog' → ꠰꠰:꠰꠰ *veney-veney* 'little dog, doggie'
b. ꠰꠰ *gan* 'child' → ꠰꠰:꠰꠰ *gan-gan* 'grandchild'
c. ꠰꠰ *kusang* 'double (adj.)' → ꠰꠰:꠰꠰ *kusang-kusang* 'model'
d. ꠰꠰: *veh-* 'build' → ꠰꠰:꠰꠰ *veha-veha* 'tinkering'

(19) a. ꠰꠰ *apan* 'wide' → ꠰꠰:꠰꠰ *apan-apan* 'extensive'
b. ꠰꠰ *kebay* 'alone' → ꠰꠰:꠰꠰ *kebay-kebay* 'all alone'
c. ꠰꠰ *pisu* 'tired' → ꠰꠰:꠰꠰ *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, compare (20).

(20)	*…tamanley*	*sinā*	(**sina*)	*ang ningay*	*tamala*	*vās*
	…taman$_i$-ley	si-Ø$_i$-na	(*si-na$_i$)	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 morphophonemic process can be reinterpreted so that vowel length/stress itself is what signifies the agreement of the relativizer with its antecedent. Which grammatical role the relativizer's antecedent represents is underspecified in this case. Hence, I will gloss it as '-AGR' in the following example instead of as full '-P.INAN'. This is illustrated in (21). Since ꠰꠰ *na*, as a light syllable, cannot be stressed in word-final position under normal circumstances, it has to lengthen to ꠰꠰ *nā*.

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

3.2.5 Clitics

I have been using the term 'clitic' above and claimed that the one or the other morpheme in Ayeri is a clitic. Clitics, however, cannot easily be defined in a formal way, as it appears (Spencer and Luís 2012: 126). Based on Spencer and Luís (2012), with recourse to Zwicky and Pullum (1983), some important, typical characteristics of clitics are:

- Clitics behave in part like function words and in part like affixes, but in any case, they are not free morphemes (Spencer and Luís 2012: 38, 42).
- Clitics tend to be phonologically weak items (39).
- Clitics prominently—and importantly—tend to attach 'promiscuously' to surrounding words. That is, unlike inflection, they are not limited to connect to a certain part of speech or to align with their host in semantics (40, 108–109).
- Clitics tend to be templatic and to cluster, especially if they encode inflection-like information (41, 47–48).
- Clitics have none of the freedom of ordering found in independent words and phrases (43).
- Positions of 'special' clitics tend to not be available to free words (44).
- There are no paradigmatic gaps (108–109).
- There tends to be no morphophonemic alteration like vowel harmony, stress shift or sandhi between a clitic and its host (108–109).
- Similar to affixes, clitics and their host tend to be treated as a syntactic unit, that is, lexical integrity prevents that word material can be put in between a clitic and its host (108, 110).

However, Spencer and Luís (2012) point out many counterexamples to the points on this list in order to highlight that the border between clitics and affixes is often fuzzy. Given this fuzziness, it comes as no surprise that, according to their assessment, there is a lot of miscategorization in individual grammars as a result (107). Another consequence of this lack of a clear delineation between clitics and affixes is that, since not all of the traits described above are always present, making a checklist and summing up the tally is only of limited value. The traits listed above are thus sufficient conditions only, not necessary ones. In the following, I want to elaborate on the classification of various prefixes, suffixes, and particles as clitics.[4]

Preposed particles and prefixes

The preverbal particles should be rather unproblematic with regards to their classification as clitics, that is, the topic marker, one or several modal particles, the

[4] The following discussion incorporates most of the content of a blog article I previously wrote on this topic, Becker (2017), with some additions and corrections. Since clitics sit at the junction of morphology and syntax, it will be necessary at times to deal with topics roughly which will be elaborated on in chapter 6 in more detail.

progressive marker, and also the emphatic affirmative and negative discourse particles. All of these particles essentially have functional rather than lexical content, and are usually unstressed. They come in a cluster with a fixed order, and they appear in a position where no ordinary word material could go, since Ayeri is strictly verb-initial.[5] In conjuncts it is also unnecessary to mark every verb with one or several preverbal particles, as we see in (22).

(22) a. *Ang kece nay dayungisaye māva yanjas yena.*
ang=ket-ye nay dayungisa-ye māva-Ø yan-ye-as yena
AT= wash-3SG.F and dress-3SG.F mother-TOP boy-PL-P 3SG.F.GEN
'The mother washes and dresses her boys.'

b. *Manga sahaya rangya nay nedraya ang Tikim.*
manga=saha-ya rang-ya nay nedra-ya ang=Tikim
PROG= come-3SG.M home-LOC and sit-3SG.M A= Tikim
'Tikim is coming home and sitting down.'

c. *Ang mya ming sidegongya nay la-lataya ajamyeley.*
ang=mya= ming=sideg-ong=ya.Ø nay la∼lata=ya.Ø ajam-ye-ley
AT= shall=can= repair-IRR=3SG.M.TOP and ITER∼sell=3SG.M.TOP toy-PL-P.INAN
'He should be able to repair and resell the toys.'

In (22a), therefore, the agent-topic marker ཨང་ *ang* only occurs before ཁེ་ཙེ *kece* '(she) washes', and the conjoined verb ཡན་ཀྱིས་ཡས་ *dayungisaye* '(she) dresses' is also within its scope. Repeating the marker as well before the latter verb could either be considered ungrammatical because there is only one topic there—བླ་ *māva* 'mother'—or the sentence could be interpreted as having two conjoined clauses with different subjects: '[She washes] and [mother dresses] her boys.' The latter outcome has བླ་ *māva* as the topic only of ཡན་ཀྱིས་ཡས་ *dayungisaye*, while ཁེ་ཙེ *kece*'s topic is the person marking on the verb—a pro-drop subject, essentially.[6]

In (22b), then, the progressive marker ཨང་ *manga* likewise has scope over both verb conjuncts, རྒྱལ *sahaya* '(he) comes' and རྣེ་ཡས *nedraya* '(he) sits' in what is a case of extended/distributed exponence. This is to say that functionally contiguous information can sometimes be split over several words, so that the functional annotation of each verb in (22b) can be represented in the fashion of the (incomplete) f-structure matrix (see Bresnan et al. 2016; Butt and King 2015) shown in (23), which is an attempt to represent the phrase ཨང་ཨང་རྒྱ: *ang manga saha-* 'is coming'

5 The translation of 'Ozymandias' in section B.3 deviates from this rule in རྭ་ཨང་རས་བློ་ཁ་ཏ་ཁ་ཏ་ཕ་ཁ་ཏ་ཁ་ལ *namāng sam kāryo nay taryankay bengyon adāhalya.* 'Two big and torsoless legs stand in that desert' by having the subject NP རྭ་ཨང་རས— *namāng sam* … 'two legs …' precede the verb ཁ་ཏ་ཁ *bengyon* '(they) stand'. This is non-standard syntax in a poetic text.

6 This claim is further investigated below, p. 89 ff.; also compare section 4.5.1.

formally. *manga* is treated there as being part of things the verb inflects for, that is, progressive aspect, in spite of appearing superficially as a function word. The topic marker *ang* does not reflect a morphological property of the verb in the way the progressive marker does, but announces the case and—for agents and patients—the animacy value of the topicalized NP, so the f-structure in (23) lists this information under the TOP function.[7]

(23)
$$\begin{bmatrix} \text{PRED} & \text{`}come\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{ASP} & \text{PROG} \\ \text{TOP} & \begin{bmatrix} \text{CASE} & \text{A} \\ \text{ANIM} & + \\ \ldots & \ldots \end{bmatrix} \\ \ldots & \ldots \end{bmatrix}$$

Modal particles, exemplified in (22c), are probably slightly less typical as clitics since it seems feasible for them to be stressed for contrast. What is not possible, however, is to front either *mya* 'be supposed to' or *ming* 'can', and the verb itself also cannot precede the particles, which is demonstrated in (24). It is also not possible to coordinate any of the elements in the preverbal particle cluster with *nay* 'and', as shown in (25).

(24) a. **mya ang ming sidegongya*
b. **ming ang mya sidegongya*
c. **sidegongya ang mya ming*

(25) a. **ang* ***nay*** *mya ming sidegongya*
b. **ang mya* ***nay*** *ming sidegongya*
c. **ang mya ming* ***nay*** *sidegongya*

Unlike verbs, modal particles in Ayeri resist inflection, so in (22c) the irrealis suffix *-ong* is realized on the verb *sidegongya* '(he) would repair' instead of on one or both of the modal particles as **mingong* and **myong*, respectively. The combination of *mya* 'be supposed to' with an irrealis-marked verb together indicates that the speaker thinks the action denoted by the verb *should* be carried out. The marking on the verb may then be interpreted as being functionally shared by the constituent parts of the whole verb complex. The same goes for negation: only the verb can be negated, but not the modal particle. Possibly, it would be useful in this case to abstract the modal particles as a feature

[7] In the chart, angular brackets group grammatical functions. Since the verb is the head of the clause, the first PRED (predicator) lists the verb with its argument structure (a-structure). In the case of (23), SUBJ and OBL_{loc} indicate that 'come', governs two arguments: a subject and an oblique argument in the form of a location adverbial. These have been omitted for brevity. Also see section 5.1 for brief information on LFG notation conventions.

MODALITY as listed by ParGram (2009–2016: Feature Table) for purposes of functional representation. At least superficially, it looks as though Ayeri acts different from English here in that the content verb is not a complement of the modal element. This assumption is supported by the fact that in Ayeri, the verb inflects, but not the modal particle. Furthermore, modal particles cannot be modified by adverbs in the way regular verbs can, see (26).

(26) a. *Ming tigalye ban nilay ang Diya.*
ming=tigal-ye ban nilay ang=Diya
can= swim-3SG.F good probably A= Diya
'Diya can probably swim well.'

b. **Ming nilay tigalye ban ang Diya.*
ming=nilay tigal-ye ban ang=Diya
can= probably swim-3SG.F well A= Diya

Combinations of topic particle and modal particle, as well as modal particle and verb, likewise cannot be interrupted by parenthetical material like ནཏངས་ *naratang* 'they say', which we can see in the pattern emerging in (27).

(27) a. ***Naratang,*** *ang ming tigalye ban Diya kodanya.*
nara=tang ang ming tigal-ye ban Ø Diya kodan-ya
say=3PL.M.A AT can swim-3SG.F well TOP Diya lake-LOC
'They say Diya can swim well in a lake.'

b. **Ang,* ***naratang,*** *ming tigalye ban Diya kodanya.*

c. **Ang ming,* ***naratang,*** *tigalye ban Diya kodanya.*

d. ?*Ang ming tigalye,* ***naratang,*** *ban Diya kodanya.*

e. *Ang ming tigalye ban,* ***naratang,*** *Diya kodanya.*

f. *Ang ming tigalye ban Diya,* ***naratang,*** *kodanya.*

g. *Ang ming tigalye ban Diya kodanya,* ***naratang.***

Besides verbs, nouns as well have preposed modifiers. This is the case with proper nouns specifically, where the name is preceded by a case particle instead of receiving a case-marking suffix like common nouns do. This case marker is phonologically weak in that its phonological make-up is similar to that of affixes, and unstressed, with the exception of the causative case marker ཟ *sā*, which bears at least secondary stress since it contains a long vowel. We already saw case particles preceding names in (22b) and (26) above: ཨང་ཏིཁིཡ *ang Tikim* and ཨང་ཌི་ཡ *ang Diya*; ཨང་ *ang* marks the proper-noun NPs as agents in both cases. The case marker is missing when the NP is topicalized, as indicated in (27), where the agent NP appears as just ཌི་ཡ *Diya*, not ཨང་ཌི་ཡ *ang Diya*. While case suffixes have narrow scope

as shown in (28a) and thus need to be repeated on every NP in a conjunct, preposed case markers as that in (28c) may be used with wide scope if both conjuncts are proper nouns. Narrow scope with proper nouns may add an individuating connotation, exemplified by (28d).

(28) a. *Toryon veneyang nay badanang.*
tor-yon veney-ang nay badan-ang
sleep-3PL.N dog-A and father-A
'The dog and father are (both) sleeping.'

b. * *Toryon veney nay badanang.*
tor-yon veney_ nay badan-ang
sleep-3PL.N dog_ and father-A

c. *Sa sobisayan ang Niva nay Mico narānye.*
sa= sobisa-yan ang=Niva nay _ Mico narān-ye-Ø
PT=study-3PL.M A Niva and _ Mico language-PL-TOP
'Languages is what Niva and Mico study.'

d. *Sa sobisayan ang Niva nay ang Mico narānye.*
sa= sobisa-yan ang=Niva nay ang=Mico narān-ye-Ø
PT=study-3PL.M A= Niva and A= Mico language-PL-TOP
'Languages is what Niva and Mico (each) study.'

Taking the above characteristics into account—inability to insert word material, special positioning, and wide scope—one may argue that the preposed case markers are clitics. It should be noted furthermore that a single NP cannot be marked for two grammatical functions at the same time, so that case markers cannot be coordinated, as is attempted in (29a) below with *ཁ་ནས་ཟླ་བཱན། **sa nay sā Sopan.*

(29) a. **Ang delacan sa nay sā Sopan.*
ang=delak=yan.Ø sa nay sā Sopan
AT= suffer.from=3PL.M.TOP P and CAUS Sopan
Intended: 'They suffer from and due to Sopan.'

b. *Ang delacan sa Sopan, nay yasa.*
ang=delak=yan.Ø sa=Sopan nay yasa
AT= suffer.from=3PL.M.TOP P= Sopan and 3SG.M.CAUS
'They suffer from Sopan, and due to him.'

The case markers of proper nouns are necessarily proclitics rather than enclitics to preceding word material, since it is possible for them to begin utterances, where it is not possible to lean to the left, but only to the right. This is the case in equative sentences such as the one in (30a). In these cases as well, it is not possible

for parenthetical material to be placed between the case marker and its target of modification, as in (30b); the particle and its head cohere closely and behave essentially like a unit.

(30) a. *Ang Misan lajāyas puti.*
ang=Misan lajāy-as puti
A= Misan student-P zealous
'Misan is a zealous student.'

b. **Ang, paronyang, Misan lajāyas puti.*
ang paron=yang Misan lajāy-as puti
A believe=1SG.A Misan student-P zealous

The fact that case particles attach always to a proper noun very specifically makes them unlike 'typical' clitics, since according to Spencer and Luís (2012), a typical and important feature of clitics is their 'promiscuous' attachment, as described initially. This puts case particles closer to affixes—just like the suffixed case markers. On the other hand, as previously pointed out, clitics do not have to exhibit all traits often associated with them in order to be counted as such. Yet more typical of function words, on the other hand, is the fact that there is no morphophonemic interaction between a case particle and the word it modifies. Thus, for instance, there is no form /saːʤaːn/ resulting from the combination of ས *sa* (P) with ཨཱཛཱན *Ajān*. This overlap in form between affix and function word is typical of clitics, according to the traits excerpted from Spencer and Luís (2012) above.

As discussed previously, ཁྱམ *manga* may not only modify verbs, but also adpositions—which in the case of prepositions are often very transparently derived from nouns. ཁྱམ *manga* in combination with an adposition indicates that there is motion into the specified direction. The directional marker ཁྱམ *manga* is thus a functional morpheme and it always appears before the adposition itself. Adpositions do not otherwise inflect, but ཁྱམ *manga*, due to its functional nature, could reasonably be construed as inflection, in spite of appearing as a function word, just as its (related) verbal counterpart. This double nature makes it a good candidate for a clitic. Applying a shuffling or coordination test here to figure out whether ཁྱམ *manga* is an adjuct is moot, since there is nothing else which can appear in this position—the position ཁྱམ *manga* appears in is thus syntactically privileged; ཁྱམ *manga* can be said to exhibit special syntax, which is further evidence for it being a clitic. With regards to the distinction between special and simple clitics (Zwicky 1977), it ought to be classified as the former: even though it may be derived from the verb ཁྱམ: *manga* 'move', this verb does not constitute the particle's associated full form, compare (31).

(31) a. *Ang saraya Ajān manga kong nangaya.*
ang=sara-ya Ajān manga=kong nanga-ya
AT go-3SG.M Ajān DIR= inside house-LOC
'Ajān goes into the house.'

b. !*Ang saraya mangayam Ajān kong nangaya.*
ang=sara-ya manga-yam Ajān kong nanga-ya
AT= go-3SG.M move-PTCP Ajān inside house-LOC
'Ajān goes to move inside the house.'

Example (31b) assumes that the hypothetical correct place of the verb རྨང: *manga-* 'move' to appear in is as an infinite complement of the main verb in the sentence, རྐ: *sara-* 'go'. While not ungrammatical *per se*, the sentence would imply that ཨ་ཇཱན་ *Ajān* walks away in order to move around in the house, which is not what (31a) posits. There is therefore no direct semantic relationship between what we assumed to be the historical full form and the grammatical marker, that is, the full verb and the directional particle cannot be used interchangeably. When testing with parenthetical word material, it becomes clear that རྨང་རྐྲོན་ *manga kong* 'into' forms a syntactic unit, which is demonstrated in (32). རྨང *manga* is a bound morpheme, and thus not a function word proper.

(32) a. *Ang saraya Ajān,* ***narayāng,*** *manga kong nangaya.*
ang=sara-ya Ajān nara=yāng manga=kong nanga-ya
AT= go-3SG.M Ajān say=3SG.M.A DIR= inside house-LOC
'Ajān goes, he says, into the house.'

b. *Ang saraya Ajān manga, **narayāng**, kong nangaya.

c. Ang saraya Ajān manga kong, **narayāng**, nangaya.

Also, when testing རྨང *manga*'s behavior in terms of distribution over coordinated NPs, we can see in (33b) that there is no problem in condensing the sentence given in (33a) to the extent that རྨང *manga* governs two adpositions in coordination—མཐོ་ *miday* 'around' and རྐྲོན་ *kong* 'inside'—sharing the same adpositional object, རྣང *nanga* 'house'.

For all intents and purposes, thus, རྨང *manga* behaves syntactically like a typical clitic in that it has wide scope over conjuncts, coheres tightly with its target of modification, is located in a syntactically privileged position, and unites properties of both function words and inflection.

From this discussion of prenominal particles (and a pre-adpositional one), let us return to verbs again for a moment. Besides the preverbal particles discussed above, there is also what is spelled as a prefix on the verb which appears to be a

(33) a. *Ang saraya Ajān manga miday nangaya nay manga kong nangaya.*
ang=sara-ya Ø= Ajān manga=miday nanga-ya nay manga=kong nanga-ya
AT= go-3SG.M TOP=Ajān DIR= around house-LOC and DIR= inside house-LOC
'Ajān goes around the house and into the house.'

b. *Ang saraya Ajān manga miday nay kong nangaya.*
ang=sara-ya Ø= Ajān manga=miday nay kong nanga-ya
AT= go-3SG.M TOP=Ajān DIR= around and inside house-LOC
'Ajān goes around and into the house.'

little odd as such in that it can have wide scope over conjoined verbs. This is the prefix ད: *da-* often meaning 'so, thus', displayed in (34).

(34) *Ang da-pinyaya nay hisaya Yan sa Pila.*
ang=da=pinya-ya nay hisa-ya Ø= Yan sa=Pila
AT= so=ask-3SG.M and beg-3SG.M TOP=Yan P= Pila
'Yan asks and begs Pila to (do so).'

ད: *da-*, where it is not used for presentative purposes,[8] is a functional morpheme in that it basically acts as an anaphora for a complementizer phrase (CP) the speaker chooses to drop. Thus, it does not mark any of the intrinsic morphological categories of the verb (tense, aspect, mood, modality, finiteness), just as the topic marker marks for none of the verb's own categories of inflection, but instead refers to a grammatical function the verb subcategorizes for. As an anaphora, ད: *da-* cannot stand alone, though it is possible to use a full demonstrative form ད2ཎ *danya* 'such one' in its place, compare (35).

(35) *Ang pinyaya nay hisaya Yan sa Pila danyaley.*
ang=pinya-ya nay hisa-ya Ø= Yan sa=Pila danya-ley
AT= ask-3SG.M and beg-3SG.M TOP=Yan P= Pila such.one-P.INAN
'Yan asks and begs Pila such.'

Unlike the preverbal particles, ད: *da-* can be associated with a full form, though it still displays special syntax. Unlike English *-n't* or *'ll*, for instance, it does not occur in the same place as the full form. Note also how ད: *da-* is appended to the right of tense prefixes, which *do* express a property of the verb, as shown in (36).

The verb form in (36) becomes ungrammatical with the order of its prefixes reversed, so ཨ:ད2ཎ *məda-pinyaya* is not acceptable. Note, though, that pre- and suffixes proper also have a fixed order in Ayeri, so this alone is probably not enough

8 Although this use is probably related to the anaphoric use.

(36) a. *Ang da-məpinyaya sa Pila.*
ang=da=mə-pinya=ya.Ø sa=Pila
AT= SO=PST=ask=3SG.M.TOP P= Pila
'He asked Pila to.'

b. *Ang da-məpinyaya nay məhisaya Yan sa Pila.*
ang=da=mə-pinya-ya nay mə-hisa-ya Ø= Yan sa=Pila
AT= SO=PST-ask-3SG.M and PST-beg-3SG.M TOP=Yan P= Pila
'Yan asked and begged Pila to.'

evidence to claim that ᨯ᨞ *da-* is not possibly a prefix. Furthermore, while the tense prefixes undergo crasis, this is not the case with ᨯ᨞ *da-*, as (38) shows.

(37) a. *Māmangreng.*
mə-amang=reng
PST-happen=3SG.INAN.A
'It happened.'

b. **Məamangreng.*

(38) a. *Da-amangreng.*
da=amang=reng
thus=happen=3SG.INAN.A
'It happens thus.'

b. **Dāmangreng.*

The ᨯ᨞ *da-* prefix satisfies the criteria of being a phonologically reduced form of an otherwise free functional morpheme, and of occurring in a place where normal syntax would not put the full form. It has wide scope over conjuncts, is attached outside of inflection for proper categories of the verb, and doesn't interact with its host with regards to morphophonemics. In addition to these more typical traits of clitics, there is also no way in (39) to place words between ᨯ᨞ *da-* and the verb stem.

(39) *Da, naratang, amangreng.*
da nara=tang amang=reng
thus say=3PL.M.A happen=3SG.INAN.A

The prefix ᨿᨾᨠ᨞᨞ *sitang-* 'self' behaves in the same way as ᨯ᨞ *da-*, since it also abbreviates a reflexive determiner phrase (DP), for instance, ᨿᨾᨠ᨞᨞ᨚᨿ᨞ *sitang-yes* 'herself' where 'herself', as a patient, is coreferential with the agent of the clause. One might assume that reflexivity is a verbal category of inflection in Ayeri, although, on the other hand, Ayeri also does not have any verbs which appear as grammatically reflexive to indicate unaccusativity like in Romance languages; see (40) and (41) for comparison. The reflexive marking in Ayeri is thus semantically motivated, not functionally.

Ayeri has a tendency to reuse prefixes with different parts of speech, and thus ᨯ᨞ *da-* is also used with nouns, forming part of the series of deictic prefixes, ᨯ᨞ *da-* 'such (a)', ᨿᨯ᨞ *eda-* 'this', ᨾᨯ᨞ *ada-* 'that'. The prefix in all these cases represents a

(40) a. *Adruara* *biratayreng.*
adru-ara biratay-reng
break-3SG.INAN pot-A.INAN
'The pot broke.'

b. **Sitang-adruara* *biratayreng.*
sitang=adru-ara biratay-reng
self=break-3SG.INAN pot-A.INAN
Intended: 'The pot broke.' (an unspecified force broke it)

(41) French:

a. *Le* *pot* *s'est* *cassé.*
le pot se=est cassé
the pot self=be.3SG.PRS broken
'The pot broke.' (an unspecified force broke it)

b. *Le* *pot* *est* *cassé.*
le pot est cassé
the pot be.3SG.PRS broken
'The pot is broken.'

grammatical function, is unstressed, and may have wide scope over conjoined NPs, unless an individuating interpretation is intended, as in (42b). These traits are typical of clitics, as we have seen, though (43) shows that unlike with verbs, the deictic prefixes do undergo crasis, which is a trait more typically associated with affixes.

(42) a. *Sinyāng* *eda-ledanas* *nay* *viretāyās* *tondayena-hen?*
sinya-ang eda=ledan-as nay viretāya-as tonday-ena=hen
who-A this=friend-P and supporter-P art-GEN=all
'Who is this friend and supporter of all arts?'

b. *Sinyāng* *eda-ledanas* *nay* *eda-viretāyās* *tondayena-hen?*
sinya-ang eda=ledan-as nay eda=viretāya-as tonday-ena=hen
sinya-A eda=ledan-P nay eda=viretāya-P tonday-GEN=hen
'Who is/are this friend and this supporter of all arts?'

(43) *Sa ming* *nelnang* *edāyon.*
sa=ming=nel=nang eda=ayon-Ø
P= can= help=1PL.A this=man-TOP
'This man, we can help him.'

The deictic prefixes also cannot be used with all types of NPs, only with those headed by common and proper nouns; the picky nature of the deictic prefixes also

makes them more typical of affixes than of clitics. The preverbal particles, on the other hand, also only occur with verbs, and it was nonetheless argued for them to be classified as clitics above due to the presence of other traits which make the particle under scrutiny clitic-like.

As mentioned initially, Spencer and Luís (2012) give numerous counterexamples to the catalog of traits typically associated with clitics. One of these counterexamples is what they call 'suspended affixation'. This phenomenon occurs in Turkish, for instance, where the plural suffix *-lEr* and subsequent suffixes can be left out in coordination (44a), as well as case markers (44b), and adverbials with case-like functions (44c).

(44) Turkish (Spencer and Luís 2012: 199):

a. *bütün kitap(...) ve defter-ler-imiz*
all book and notebook-PL-1PL.POSS
'all our books and notebooks'

b. *Vapur hem Napoli(...) hem Venedik'-e uğruyormuş*
boat and Naples and Venice-LOC stops.EVID
'Apparently the boat stops at both Naples and Venice'

c. *öğretmen-ler(...) ve öğrenci-ler-le*
teacher-PL and student-PL-WITH
'with (the) students and (the) teachers'

Spencer and Luís (2012) note that in "the nominal domain especially, wide scope inflection is widespread in the languages of Eurasia, becoming more prominent from west to east", and that wide scope affixation "can be found with inflectional and derivational morphology in a number of languages, and it is often a symptom of recent and not quite complete morphologization" (200). They report further that Wälchli (2005) finds that suspended affixation is especially common with 'natural coordination', that is, the combination of items very frequently occurring in pairs like *knife and fork* or *mother and father*, as opposed to cases of occasional coordination (Spencer and Luís 2012: 200). Whether this is also true for Ayeri as of now would require a separate survey.[9] Ayeri is not (intended to be) of Eurasian stock, though since there is evidence of this phenomenon, it should at least be considered.

Given the evidence from Turkish, the categorization of deictic prefixes as *either* affixes *or* clitics is unclear, especially since the diagnostic of scope is devalued by the Turkish examples. On the other hand, suffixes on nouns do not behave this

[9] Or rather, devising supplemental rules.

way in Ayeri, as demonstrated in (45)—they rather behave like typical affixes in that they mandatorily occur on each conjunct. The question is, thus, whether an exception should be made for prefixes on nouns. We may as well assume that they are clitics.

(45) a. *sobayajang nay lajāyjang*
sobaya-ye-ang nay lajāy-ye-ang
teacher-PL-A and student-PL-A
'(the) teachers and (the) students'

b. **sobayaye nay lajāyjang*
sobaya-ye nay lajāy-ye-ang
teacher-PL and student-PL-A

c. **sobaya nay lajāyjang*
sobaya nay lajāy-ye-ang
teacher and student-PL-A

From a functional point of view, the exact nature of the deictic prefixes should not matter either way—ParGram (2009–2016: Feature Table) also cites a DEIXIS feature with PROXIMAL and DISTAL as its values, which fits එඩ *eda-* 'this' and ඇඩ *ada-* 'that' just fine. At present it is unclear, however, how to represent 'such (a)' in this respect, since it is clearly deictic, but neither proximal nor distal. In this case, it should be possible to use (↑ DEIX) = {*this*, *that*, *such*} as well, hence:

(46) a. *edāyon*
eda=ayon
this=man
'this man'

b. $\begin{bmatrix} \text{PRED} & \text{'man'} \\ \text{DEIX} & \textit{this} \end{bmatrix}$

As described above, proper nouns are case-marked by clitic case markers preceding the noun. In fact, these markers must be located somewhere at the left periphery of the NP, so the deictic prefixes stand in between the case marker and the proper noun itself. This is unproblematic for lexical integrity, since the deictic prefixes are not free morphemes. And even if they were part of inflection, the case markers, as clitics, would be on the outside—the order DEICTIC PREFIX–CASE MARKER–NOUN is ungrammatical. An example of this is given in (47).

The question now is, what happens to coordinated proper nouns? Since the suffixed case markers on common nouns have the distributional properties of affixes, they occur on every conjunct. The deictic prefixes, however, only occur on the first, unless an individuating reading is intended, as shown in (41). For

(47) a. *Ang koronay* *sa eda-Kagan.*
ang=koron=ay.Ø sa=eda=Kagan
AT= know=1SG.TOP P= this=Kagan
'I know this Kagan.'

b. **Ang koronay* *eda-Kaganas.*
ang=koron=ay.Ø eda=Kagan-as
AT= know=1SG.TOP this=Kagan-P

c. **Ang koronay* *eda-sa Kagan.*
ang=koron=ay.Ø eda=sa=Kagan
AT= know=1SG.TOP this=P= Kagan

proper nouns it ought to be possible for both a case marker and a deictic prefix to have scope over coordinated proper nouns, as in (48a). Yet, however, this seems slightly odd-sounding, so the strategy in (48b) is preferrable, which avoids the problem altogether by making the names an apposition to the demonstrative *edanya* 'this/these one(s)'.[10] The example in (48c) is unproblematic and here as well indicates that the two persons are referred to individually and not as a group.

(48) a. *Ang koronay* *sa eda-Kagan* *nay* *Ijān.*
ang=koron=ay.Ø sa=eda=Kagan nay Ijān
AT= know=1SG.TOP P= this=Kagan and Ijān
'I know these Kagan and Ijān.'

b. *Ang koronay* *edanyās,* *Kagan* *nay* *Ijān.*
ang=koron=ay.Ø edanya-as Kagan nay Ijān
AT= know=1SG.TOP this.one-P Kagan and Ijān
'I know these, Kagan and Ijān.'

c. *Ang koronay* *sa eda-Kagan* *nay* *eda-Ijān.*
ang=koron=ay.Ø sa=eda=Kagan nay eda=Ijān
AT= know=1SG.TOP P= this=Kagan and this=Ijān
'I know this Kagan and this Ijān.'

Of the deictic prefixes, *da-* is not only available to verbs and nouns, but also to adjectives. Like with verbs, it is short for *danya* '(such) one' in this case, as demonstrated in (49a). The resulting meaning is 'the ADJECTIVE one'; *da-* essentially acts as a nominalizer, at least to the extent that the compound of *da-* and an adjective inherits the distributional properties of *danya* as a demonstrative pronoun. Thus, it can be case- and topic-marked, as shown by (49bc). It can also be modified by another adjective, as in (49c). On the other hand, it cannot be

[10] It is cases like this where you wish it were possible to ask the judgment of a speaker of your conlang instead of relying on your own intuition.

reduplicated for diminution, and also cannot be pluralized. Since adjectives follow their heads, the original order of DEMONSTRATIVE–ADJECTIVE remains intact. 卐 *da-* is thus similar in distribution to English simple clitics such as *'ll*, which occurs in the same place as its full form, the future tense auxiliary *will*.

(49) a. *Le noyang danyaley tuvo.*
le= no=yang danya-Ø tuvo
PT.INAN=want=ISG.A such.one-TOP red
'The red one I want.'

b. *Ang noay da-tuvoley.*
ang=no=ay.Ø da-tuvo-ley
AT= want=ISG.TOP one-red-P.INAN
'I want the red one.'

c. *Le noyang da-tuvo kivo.*
le= no=yang da-tuvo-Ø kivo
PT.INAN=want=ISG.A one=red-TOP small
'The little red one I want.'

The prefix, again, coheres tightly in that no additional material can be inserted. Like with nouns above, inflecting each form in a group of coordinated adjectives results in an individuating reading, as in (50a). It should be possible for the prefix to take wide scope, as in (50b). However, it seems better to me to instead rephrase the coordinated adjective as a relative clause like in (50c), for instance, besides using the full form 卐22 *danya* + adjectives. Since case is obligatorily marked on every conjunct, (50d) is not grammatical.

(50) a. *Ang noay da-tuvoley nay da-lenoley.*
ang=no=ay.Ø da=tuvo-ley nay da=leno-ley
AT= want=ISG.TOP one=red-P.INAN and one=blue-P.INAN
'I want the blue one and the red one.'

b. ?*Ang noay da-tuvoley nay lenoley.*
ang=no=ay.Ø da=tuvo-ley nay leno-ley
AT= want=ISG.TOP one=red-P.INAN and blue-P.INAN
'I want the red and blue one.'

c. *Ang noay adaley si tuvo nay leno.*
ang=no=ay.Ø ada-ley si tuvo nay leno
AT= want=ISG.TOP that-P.INAN REL red and blue
'I want that which is red and blue.'

d. **Ang noay da-tuvo nay lenoley.*
ang=no=ay.Ø da=tuvo nay leno-ley
AT= want=ISG.TOP one=red and blue-P.INAN

Possessive pronouns like ၀ၣ *nā* 'my', ၊ၣ *vana* 'your', etc. behave the same way when derived from their usual role as modifiers to free-standing anaphoras (ꩡ်ၣ *da-nā* 'mine', ꩡ်ၣ *da-vana* 'yours', etc.), except they cannot themselves be modified by adjectives in the way ꩡ်ꩡ *da- tuvo* 'the red one' is in (49c). Taking all of the examples above into account, ꩡ *da-* with adjectives and possessive pronouns seems to be most like a simple clitic according to Zwicky's (1977) definition, compared to the other contexts it can appear in:

> Cases where a free morpheme, when unaccented, may be phonologically subordinated to a neighboring word. Cliticization of this sort is usually associated with stylistic conditions, as in the casual speech cliticization of object pronouns in English; there are both formal *full* pronouns and casual *reduced* pronouns. (5)

Typical of a simple clitic as well, the distribution of ꩡ *da-* is restricted by grammatical context, as pointed out regarding example (48b). Unlike in English, which Zwicky (1977) gives examples of, the condition in Ayeri is likely not merely phonological in this case. However, the nature of the condition is not determined in Spencer and Luís (2012), when they elaborate on Zwicky's (1977) definition that

> we may therefore need to define simple clitics along the lines of Halpern (1998), namely, as clitics that may be positioned in a subset of the positions within which the full forms are found, rather than as clitics that have the same distribution as their full-form counterparts as in Zwicky (1977). Under this broader definition, we capture the fact that simple clitics differ from special clitics in that they can appear in some of the positions that are occupied by their corresponding full forms, while special clitics never can. (Spencer and Luís 2012: 44)

Besides deictic prefixes, nouns may also receive a prefix expressing likeness, ꩡ *ku-*. This prefix is also applicable to adjectives, and is maybe more adverbial in terms of semantics than purely functional morphemes like ꩡ *da-*. In contrast to ꩡ *da-*, ꩡ *ku-* has no full-form equivalent. Some examples of it leaning on nouns are given in (51). Like the deictic prefixes, ꩡ *ku-* appears in a position which is restricted to functional morphemes. Any other modifiers which appear as free words or phrases (adjectives, relative clauses, nominal adjuncts) follow nouns and cannot appear in the position of ꩡ *ku-*. Slightly untypical of a clitic, again, it is not fully 'promiscuous' regarding its phonological host in that it requires a nominal, adjectival or phrasal host.

Generally, ꩡ *ku-* fulfills the function of the preposition *like* in English in (51). However, if it were a preposition in Ayeri, it should trigger the locative on its dependent. In the examples above, however, the NP which ꩡ *ku-* modifies takes the patient case, like predicative NPs are otherwise wont to do. Moreover, while prepositions like ꩡ *kong* 'inside' in (52) are free morphemes in Ayeri, ꩡ *ku-* is bound, which becomes apparent by introducing a parenthetical remark in (53).

(51) a. *Ang misya Amān ku-depangas.*
ang=mis-ya Ø= Amān ku=depang-as
AT= act-3SG.M TOP=Amān like=fool-P
'Amān acts like a fool.'

b. *Ang misya Amān ku-depangas nay karayās.*
ang=mis-ya Ø= Amān ku-depang-as nay karaya-as
AT= act-3SG.M TOP=Amān like=fool-P and coward-P
'Amān acts like a fool and a coward.'

c. *Ang misya Amān ku-depangas nay ku-karayās.*
ang=mis-ya Ø= Amān ku-depang-as nay ku-karaya-as
AT= act-3SG.M TOP=Amān like=fool-P and like=coward-P
'Amān acts like a fool and like a coward.'

d. *Ang misya Amān ku-ada-depangas.*
ang=mis-ya Ø= Amān ku=ada=depang-as
AT= act-3SG.M TOP=Amān like=that=fool-P
'Amān acts like that fool.'

e. *Ang misya Amān ku-ada-depangas nay ada-karayās.*
ang=mis-ya Ø= Amān ku=ada=depang-as nay ada=karayās
AT= act-3SG.M TOP=Amān like=that=fool-P and that=coward-P
'Amān acts like that fool and that coward.'

f. **Ang misya Amān ada=ku=depangas.*
ang=mis-ya Ø= Amān ada=ku=depang-as
AT= act-3SG.M TOP=Amān that=like=fool-P

(52) a. *Ang yomāy,* ***surpareng,*** *kong sayanya.*
ang yoma=ay.Ø surpa=reng kong sayan-ya
AT be=1SG.TOP seem=3SG.INAN.A inside cave-LOC
'I am, it seems, inside a cave.'

b. Ang yomāy kong, **suprareng**, sayanya.

(53) a. *Ang misya Amān,* ***surpareng,*** *ku-depangas.*
ang=mis-ya Ø= Amān surpa=reng ku=depang-as
AT= acts=3SG.M TOP=Amān seem=3SG.INAN.A like=fool-P
'Amān acts, it seems, like a fool.'

b. *Ang misya Amān ku, **surpareng**, depangas.

Examples (51ab) show that similar to the deictic prefixes, ᨠᨿ᨞ *ku-* precedes its target of modification and can have wide scope over coordinated NPs. As (51c) shows, narrow scope is possible as well, and in this case, again, each conjunct is to be interpreted separately instead of ᨠᨿ᨞ *ku-* modifying both conjuncts collectively. As illustrated in (51d), ᨠᨿ᨞ *ku-* even precedes ᨠᨿᨿ᨞ *ada-* as a deictic prefix, for instance, if they appear together. Reversing the order of the prefixes is not possible, as is shown in (51f). As (51e) shows, ᨠᨿ᨞ *ku-* may also have scope over two individuated NP conjuncts. Besides nouns, ᨠᨿ᨞ *ku-* is applicable to pronouns as well, which makes (54) possible, for example.

(54) a. *Ang silvye Pada ku-yes.*
ang=silv-ye Ø= Pada ku=yes
AT= look-3SG.F TOP=Pada like=3SG.F.P
'Pada looks like her.'

b. *Sa silvye ang Pada ku-ye.*
sa= silv-ye ang=Pada ku=ye
PT=look-3SG.F A= Pada like=3SG.F.TOP
'Like *her* Pada looks.'

With proper nouns, the same distributional properties as with common nouns apply, except that ᨠᨿ᨞ *ku-* appears, rather idiosyncratically, as a suffix at the right edge of an NP—or at the right edge of the first NP conjunct—if the NP is preceded by a case marker, as shown in (55). With adjectives, however, there are no idiosyncrasies to this degree. ᨠᨿ᨞ *ku-* appears only as a prefix here, as with common nouns, compare (56).

(55) a. *Ang lentava sa Tagāti diyan-ku.*
ang=lenta=va.Ø sa=Tagāti diyan=ku
AT= sound=2.TOP P= Tagāti worthy=like
'You sound like Mr. Tagāti.'

b. *Ang lentava sa Tagāti diyan-ku nay diranas yana.*
ang=lenta=va.Ø sa=Tagāti diyan=ku nay diran-as yana
AT= sound=2.TOP P= Tagāti worthy=like and uncle-P 3SG.M.GEN
'You sound like Mr. Tagāti and his uncle.'

c. *Sa lentavāng ku-Tagāti diyan.*
sa= lenta=vāng ku=Tagāti diyan
PT=sound=2.A like=Tagāti worthy
'Like Mr. Tagāti you sound.'

As (56b) shows, ᨠᨿ᨞ *ku-* can have wide scope over conjuncts. What further distinguishes ᨠᨿ᨞ *ku-* from a prefix here is that it does not undergo crasis if the

(56) a. *Surpya* *ku-suta* *ang* *Maran.*
surp-ya ku=suta ang=Maran
seem-3SG.M like=busy A= Maran
'Maran seems like he's busy.'

b. *Surpya* *ku-suta* *nay* *baras* *ang* *Maran.*
surp-ya ku=suta nay baras ang=Maran
seem-3SG.M like=busy and gruff A= Maran
'Maran seems like he's busy and gruff.'

adjective begins with an /u/, hence we find ꩜ꩁꩲ *ku-ubo* /kuˈubo/ 'like bitter', not *ꩁꩲ **kūbo* /ˈkuːbo/. Again, the position ꩜ *ku-* appears in is special in that whatever modifies adjectives usually trails after them.

Besides attaching to words, ꩜ *ku-* is furthermore able to subordinate infinite CPs. Since ꩜ *ku-* leans on a whole phrase in (57), which affixes (at least in Ayeri) otherwise cannot do, its status as a clitic should be unmistakable in this context. That is, ꩜ꩁꩲꩁꩲꩁꩲ

(58) Breton (Spencer and Luís 2012: 145; from Borsley et al. 2007):

a. *Bremañ e lennont al levrioù*
now PRT read.PRS.3PL the books
'Now they are reading the books'

b. *Bremañ e lenn ar vugale al levrioù*
now PRT read.PRS.3SG the children the books
'Now the children are reading the books'

c. **Bremañ e lennont ar vugale al levrioù*
now PRT read.PRS.3PL the children the books

(59) Irish (Spencer and Luís 2012: 145; from McCloskey and Hale 1984):

a. *Chuirfinn (*mé) isteach ar an phost sin*
put.COND.1SG (I) in on the job that
'I would apply for that job'

b. *Chuirfeadh sibh isteach ar an phost sin*
put.COND.3SG you in on the job that
'You would apply for that job'

c. *Chuirfeadh Eoghan isteach ar an phost sin*
put.COND.3SG Owen in on the job that
'Owen would apply for that job'

clauses if the subject of the verb is overt as either a full noun or a pronoun: plural marking on the verb and a full subject cannot coincide in this case, which is why (58c) is marked ungrammatical. In (59a) we can see that there is no need for an explicit first-person pronoun, since that function is already expressed by person marking on the verb. Person inflection on the verb seems to be in complementary distribution with full subject pronouns at least for some parts of the paradigm. In (59b) we have an overt second-person subject pronoun, but in this case, the verb does not agree with it and instead defaults to the third-person form, a clear case of which is given in (59c).

While there is no defaulting to a certain person in the presence of an overt subject NP as such in Ayeri, there is still the effect of complementary distribution between a pronominal suffix in the absence of an overt subject NP, and a functionally impoverished as well as phonologically reduced form in its presence, compare examples (60) through (62).

Example (60b) shows the free form of the third singular masculine agent pronoun, ᨿᨗᨦ *yāng* 'he'. This is in complementary distribution with a full NP, which in (60a) is ᨠᨗᨦᨿᨕᨘᨔ *ang Niyas*. In (61a) we can see that the verb agrees with the subject NP in person, gender and number in that it exhibits the suffix ᨿ *-ya*.

(60) a. *Suta ang Niyas.*
suta ang=Niyas
busy A= Niyas
'Niyas is busy.'

b. *Yāng suta.*
yāng suta
3SG.M.A busy
'He is busy.'

(61) a. *Lampya ang Niyas.*
lamp-ya ang=Niyas
walk-3SG.M A= Niyas
'Niyas walks.'

b. *Lampyāng.*
lamp=yāng
walk=3SG.M.A
'He walks.'

(62) a. **Lapyāng ang Niyas.*
lamp=yāng ang=Niyas
walk=3SG.M.A A= Niyas

b. **Lampya yāng.*
lamp-ya yāng
walk-3SG.M 3SG.M.A

If, like in (61b), the overt subject NP is missing, the verb is marked with the same form as the free pronoun, [illegible] *-yāng*, which feeds the verb as a syntactic argument. That is, the person suffix itself realizes the SUBJ function of the verb's argument structure; no other exponent of person features is required, as (62) illustrates. The definitions in (63) list the constituent parts of [illegible] *lampyāng* 'he walks' and their associated grammatical features.[11]

(63)	[illegible] *lamp-* ('walk')	V_{stem}	(↑ PRED)	=	'*walk* ⟨(↑ SUBJ)⟩'
	[illegible] *-yāng* ('he')	Cl	(↑ SUBJ)	=	↓
			(↓ PRED)	=	'*pro*'
			(↓ PERS)	=	3
			(↓ NUM)	=	SG
			(↓ GEND)	=	M
			(↓ ANIM)	=	+
			(↓ CASE)	=	A

Example (64) is an attempt to conceptualize in a formal way that functionally, the inflection takes the role of the subject relation. This also explains why (62a) is ungrammatical: the pronominal suffix [illegible] *-yāng* on the verb is redundant in the presence of a full NP which expresses the same features. In effect, what is attempted in (62), is to fill a grammatical function with essentially the same content in two places, which is redundant. Assuming a '*pro*' value for the PRED feature of [illegible] *-yāng* 'he' is LFG's (Bresnan 1982 onwards; also see section 5.1) way to model the

11 Normally, due to the lexical integrity principle, [illegible] *lampyāng* should be listed as one, but Ayeri's very regular agglutinating nature makes splitting composed words very convenient for illustration as in this case.

(64)
$$\begin{bmatrix} \text{PRED} & \text{`}\textit{walk}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`}\textit{pro}\text{'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{M} \\ \text{ANIM} & + \\ \text{CASE} & \text{A} \end{bmatrix} \end{bmatrix}$$

fact that this pronominal suffix functions as a pro-form available for predication, like a pronoun. Pronouns and full NPs necessarily exclude each other, however.

Example (65) shows, then, the annotations for ׳מַלְפְיָה *lampya* 'walks' as agreeing with an overt NP. Here, the suffix does not have a PRED feature—it is not available for predication, so that a full NP is permissible as a controller of agreement in the clause, with the person suffix as its person-inflection agreement target. The agreement suffix ׳ה *-ya* thus reflects that the subject NP needs to have a certain set of person features. The NP which controls verb agreement (in canonical cases the agent NP) needs to match these features in order to establish an agreement relationship. By constraining ($=_c$) the subject's predicator to not be a pro-form in (65), it should also be possible to rule out cases like in (62), where person agreement is triggered by a pronominal NP. If ׳ה יָנִי *-yāng* were a simple inflectional affix, one of the two examples in (62) should be grammatical.

(65) ׳ה *-ya*$_1$ $\quad$ V_{infl}

(↑ SUBJ)	=	↓
(↓ PRED)	$=_c$	¬'*pro*'
(↓ PERS)	=	3
(↓ NUM)	=	SG
(↓ GEND)	=	M
(↓ ANIM)	=	+

The behavior of pronominal person marking on the verb is rather complex, and decidedly unlike inflection. What looks like an affix on the verb is also an argument of it, like a pronoun, as displayed in (63). Complexity increases further in that such an incorporated pronoun is also eligible for topicalization. As shown above, topic marking on nouns is realized by suppressing the realization of the overt case marker, whether it is a proclitic or a suffix. The topic-marked forms of pronouns are also underspecified for case, and they happen to be the same as those of the person-agreement suffixes, as exemplified by ׳ה *-ya* in (61). Thus, a topic-marked pronominal suffix on the verb looks exactly like ordinary agreement with a full NP, except that there is no full NP to agree with—hence the subscript

numbers in (65) and (66) to distinguish between both kinds of ะ *-ya*.[12]

(66) ะ *-ya₂* Cl

(↑ SUBJ)	=	↓
(↓ PRED)	=	'*pro*'
(↓ PERS)	=	3
(↓ NUM)	=	SG
(↓ GEND)	=	M
(↓ ANIM)	=	+
(↓ CASE)	=	Ø ⟹ (↑ TOP) = ↓

Comparing the feature list in (66) with that in (63) and (65), we see that (66) is basically the same as (63), except that either the CASE feature is absent, or that the suffix is underspecified for case. In absence of an NP to agree with, it follows from this definitional lack that the person marking on the verb itself is to be identified as constituting the topic, and the correspondent of the preverbal topic marker. In the following case, the preverbal topic marker defines that the topic is an animate agent; this information is united with the functional annotations in (66).

(67) ลักษ์ *ang* Cl

(↑ TOP)	=	↓
(↓ CASE)	=	A
(↓ ANIM)	=	+

Instances of other case-unmarked nouns can be ruled out as being also part of the topic relation on the grounds of cohesion and functional uniqueness: if the topic is defined as an agent and it cannot be assumed from context that the case-unmarked noun in question is also part of the agent NP, discard it as a candidate.[13] Besides, every core thematic role (agent, patient, recipient) can only be assigned once, so if the role specified by the topic marker is already assigned, another NP in the same clause cannot also be assigned the same role. This gets more difficult with non-core roles, though it may be assumed that oblique arguments are less likely to be topicalized.

Possibly confusing with regards to the status of the pronominal suffixes as clitics is that "a pronominal affix or incorporated pronominal is effectively a clitic masquerading as an affix" (Spencer and Luís 2012: 144). While the pronominal suffixes in Ayeri behave in a special way regarding syntax, they lack wide scope, which is typical of affixes (apart from the examples from Turkish in (44)). Unlike

12 It is premature to assume that the person suffix on the verb always co-indexes the topic and a distinction between a person-agreement suffix and a homophonous topicalized pronominal suffix is thus unnecessary. While the topic of a clause may consist of any NP in a clause, the verb generally does not agree with non-agent or non-patient NPs.

13 As described in section 6.5.2, there may be multiple topics under very limited circumstances.

Breton in (58) or Irish in (59), Ayeri's pronominal affixes do not default to some form, and verbs cannot be unmarked either, that is, verbs always have to be inflected in some way, mostly for phonotactic reasons. Thus, in coordination, every conjunct has to be inflected for person features, as (68) shows.

(68) a. *Nedrayāng nay layayāng.*
nedra=yāng nay laya-yāng
sit=3SG.M.A and read=3SG.M.A
'He is sits and reads.'

b. **Nedrayāng nay laya.*
nedra=yāng nay laya
sit=3SG.M.A and read

c. **Nedra nay layayāng.*
nedra nay laya=yāng
sit and read=3SG.M.A

In the case of ᦶᦺᦷᦡ᧡ *nedra-* 'sit' and ᦸᦺᦡ᧡ *laya-* 'read' in (68), leaving off the person marking would theoretically generate valid words, since *ᦶᦺᦷᦡ **nedra* and *ᦸᦺᦡ **laya* satisfy phonotactic constraints (see section 1.2). However, Ayeri also has a great number of verb stems which end in a consonant cluster, such as ᦵᦺᦷᦡ᧡ *anl-* 'bring' or ᦷᦡᦷᦡ᧡ *tapy-* 'set', which do not form valid words as bare stems since words cannot end in CC. What would be possible instead is that one conjunct might carry the full pronominal suffix as a 'strong' form and the other one might only partially co-index the required features by using the less specific corresponding agreement marker as a 'weak' form. Differential marking of this kind, though, is simply not established.

After briefly delving into the realm of syntax, let us return to morphology for the second group of suffixes which need clarification. While Ayeri has quantifiers which are independent words, there are also a number of very common 'little' quantifiers and intensifiers which are customarily spelled as suffixes, for instance, ᦡᦵᦡᦷᦡ᧡ *-ikan* 'much, many; very', ᦡᦷᦡᦷᦡ᧡ *kay* 'few; a little', ᦡᦷᦡᦷᦡ᧡ *nama* 'just, only', and ᦡᦷᦡᦷᦡᦷᦡ᧡ *-nyama* 'even'. All of these are determining in meaning and while they are comparatively light in their semantics compared to regular content words, they do not particularly resemble functional morphemes either.

A natural language which also contains suffixed quantifiers is West Greenlandic (Bittner 1995). According to Bittner's (1995) terminology, ᦡᦵᦡᦷᦡ᧡ *-ikan* in Ayeri as modifying a noun would be a D-quantifier, since it forms "a constituent [with] a projection of N" (59). This is in contrast to A-quantifiers, which are defined as forming "a constituent with some projection of V" (59). That is, A-quantifiers are quantifiers like *almost* (ᦡᦸᦷᦡ᧡ *-ngas* in Ayeri), *mostly*, or *never*, which modify

verbs, while D-quantifiers are words like *most*, *some*, or *every*, which modify nouns. Ayeri makes no distinction between A- and D-quantifiers with regards to their being treated as suffixes, however, so that one may find suffixed quantifiers in both groups, sometimes even to the extent that the same quantifier may modify both nouns or verbs. Example (69) gives two instances of suffixed quantifiers from West Greenlandic for comparison with Ayeri in (70).

(69) West Greenlandic (Bittner 1995: 60, 63):

a. *qaatuur-tuaanna-ngajap-p-a-a*
break-always-almost-IND-TR-3SG$_1$.3SG$_2$
'he almost always breaks it'

b. *qaqutigu-rujussuaq*
rarely-very
'very rarely'

(70) a.

Ang adruya	*tadayen-ngas*	*adaley*
ang=adru=ya.Ø	tadayen=ngas	ada-ley
AT= break=3SG.M.TOP	always=almost	that-P.INAN

'he almost always breaks it'

b. *kora-ikan*
kora=ikan
rarely=very
'very rarely'

As we can see in (69a), West Greenlandic incorporates the quantifier suffixes into the verb. Ayeri—not a polysynthetic language—proceeds more freely in (70a), in that ᚠᚨᚦᚨᚤᛖᚾ *tadayen* 'always, every time' is an adverb and as such a free morpheme. Thus, it can be modified by a suffixed quantifier in turn. Since orthography may be treacherous, let us first try to establish whether ᛁᚾᚷᚨᛋ *-ngas* 'almost' and ᛁᚴᚨᚾ *-ikan* 'many, much, very' and their like are free morphemes or not. As discussed initially regarding the preverbal particles, it is possible to reorder free morphemes, while clitics—as bound morphemes—cannot move around. Adverbs and adjectives are, if they optionally add additional information to a lexical head, adjuncts, and according to Carnie (2013) it is possible for adjuncts to switch places within the same syntactic domain. Adjuncts can also be coordinated with other adjuncts in the same syntactic domain. Furthermore, it is possible to replace X′ nodes with pro-forms, like *one* in English.

As (71cd) shows, moving ᛁᚴᚨᚾ *-ikan* 'many, much, very' into different positions results not necessarily in ungrammatical expressions, but in expressions with meanings different from what was intended, since ᛁᚴᚨᚾ *-ikan*'s scope changes from

(71) a. *kipisānye-ikan* *bino* *kāryo*
kipisān-ye=ikan bino kāryo
painting-PL=many colorful big
'many big colorful paintings'

b. *kipisānye-ikan kāryo bino*
'many colorful big paintings'

c. ! *kipisānye bino-ikan kāryo*
'very colorful big paintings'

d. ! *kipisānye bino kāryo-ikan*
'very big colorful paintings'

(72) a. *kipisānye-ikan* *bino* *nay* *kāryo*
kipisān-ye=ikan bino nay kāryo
painting-PL=many colorful and big
'many big and colorful paintings'

b. * *kipisānye-ikan nay bino kāryo*
'many and colorful big paintings'

c. ! *kipisānye bino-ikan nay kāryo*
'big and very colorful paintings'

the noun to the adjective it is appended to. On the other hand, comparing (71a) and (b), it is possible for *kāryo* 'big' and *bino* 'colorful' to switch places with no ill effects. Example (72b) demonstrates that placing a coordinating conjunction between *-ikan* and *bino* does not work. The coordination in (72c), on the other hand, is not a problem—not because it is possible to coordinate *-ikan* and *kāryo*, but because *bino-ikan* 'very colorful' is considered one syntactic unit which is coordinated with *kāryo*. Thus, in (71b), we have actually been trying to coordinate *kipisānye-ikan* 'many paintings' with *bino* 'colorful', which does not work, since it is not possible to coordinate a lexical head with an adjunct supposed to modify it, because they are of different syntactic categories. In this regard it is worth mentioning that Ayeri's quantifier suffixes are rather not complements either, since they are not required to satisfy their head's argument structure.

One might argue that (71) and (72) is like comparing apples to oranges in that *-ikan* 'many, much, very' and *bino* 'colorful' are of different categories, since they do not appear to operate on the same levels. So instead, let us investigate possibilities of word order change and coordination between different quantifiers to ensure keeping the syntactic level constant. With this comes the problem, however, that it seems strange to modify the same lexical head with multiple different quantifiers, so this test does not really seem suitable to produce grammatical re-

sults. Also, with regards to coordination of quantifiers, it is maybe more natural to oppose them with ꩜ꩱꩲ *soyang* 'or' than to coordinate them; the grammatical structure of two categorially identical elements connected by a grammatical conjunction (even if the meaning is disjunctive) remains the same in either case.

(73) a. **keynam-ikan-kay*
keynam=ikan-kay
people=many-few
'few many people'

b. ?*keynam-ikan soyang kay*
keynam=ikan soyang kay
people=many or few
'few or many people'

In example (73a) we see that it is indeed not possible to combine multiple quantifiers to jointly modify a head in the way it is possible for multiple adjectives to modify the same head as in (71a), for instance. The example of quantifier disjunction in (73b) is also odd unless we permit a reading where ꩱꩲꩱꩲ *keynam* 'people' has been suppressed in the second disjunct to avoid repetition, although in the corresponding case of (74b) below, ꩱꩲꩱꩲ *da-kay* 'few ones' would be preferable.

(74) a. ??*keynam*[*-ikan soyang -kay*]
'[few or many] people'

b. ?[*keynam*$_i$*-ikan*] *soyang* [_$_i$*-kay*]
'[few _$_i$] or [many people$_i$]'

Both tests, moving ꩱꩲꩱꩲ *-ikan* 'many, much, very' into other positions and coordination, have failed so far, and we have evidence that ꩱꩲꩱꩲ *-ikan* forms a syntactic unit with its head, which points to it being a bound morpheme similar to an affix. As with free words, it is also possible to replace a quantifier's head with a pro-form, as mentioned above in the comment on (74b), and shown in more detail in (75). With quantifier suffixes there seems to be an overlap between word-like and affix-like properties, which is typical of clitics.

Somewhat untypical of affixes, it seems to be possible to modify suffixed quantifiers with intensifiers like ꩱꩲꩱꩲ *ekeng* 'too' and ꩱꩲꩱꩲ *kagan* 'far too', as (76) shows. This suggests that at least in this context, ꩱꩲꩱꩲ *-ikan* 'many, much, very' may actually be the lexical head of a DP, which creates the need for some additional morpholexic rules in its definition.

Inserting parenthetical word material in between morphemes as a test for coherence may be especially interesting in the face of (76). Here, it is not entirely clear whether ꩱꩲꩱꩲꩱꩲꩱꩲꩱꩲ *keynam-ikan kagan* 'too many people' forms a single

(75) a. *Ang vacyan* *keynam-ikan* *seygoley.*
ang=vac-yan keynam-Ø=ikan seygo-ley.
AT= like-3PL.M people-TOP=many apple-P.INAN
'Many people like apples.'

b. *Ang vacyan* *danya-ikan* *seygoley.*
ang=vac-yan danya-Ø=ikan seygo-ley.
AT= like-3PL.M such.one-TOP=many apple-P.INAN
'Many of them like apples.'

c. *Ang vacyan* *da-ikan* *seygoley.*
ang=vac-yan da=ikan-Ø seygo-ley.
AT= like-3PL.M one=many-TOP apple-P.INAN
'Many (of them) like apples.'

(76) *Ang vacyan* *keynam-ikan* *kagan* *disuley.*
ang=vac-yan keynam-Ø=ikan kagan disu-ley
AT= like-3PL.M people-TOP=many far.too disu-P.INAN
'Far too many people like bananas.'

unit, or whether *kagan* 'far too' is a modifier of *keynam-ikan* 'many people'. Since signs point to the status of suffixed quantifiers as clitics, it is possible that *-ikan kagan* 'far too many' constitutes a clitic cluster similar to the preverbal one. Example (77), therefore, lists examples which try to split up the expression at every relevant point. According to this test, it looks indeed as though *keynam-ikan kagan* forms a syntactic unit, in that *-ikan kagan* cannot be split up internally and also cannot be divided from *-ikan*'s head, *keynam* 'people'. On the other hand, it is also possible to use other adverbs like *patu* 'surprisingly' with quantifiers, as in (78).

(77) a. *Ang vacyan,* ***narayang,*** *keynam-ikan* *kagan* *disuley.*
ang=vac-yan nara=yang keynam-Ø=ikan kagan disu-ley
AT= like-3PL.M say=ISG.A people-TOP=many far.too disu-P.INAN
'Far too many people, I say, like bananas.'

b. *Ang vacyan keynam, **narayang**, ikan kagan disuley.

c. *Ang vacyan keynam-ikan, **narayang**, kagan disuley.

d. Ang vacyan keynam-ikan kagan, **narayang**, disuley.

(78) *keynam-ikan* *patu*
keynam=ikan patu
people=many surprisingly
'surprisingly many people'

The question here as well is whether ཕཏུ *patu* refers to just ཨིཀཱན *-ikan* or to རྐུན་ཨིཀཱན *keynam-ikan*. Replacing རྐུན *keynam* with a pronoun produces a grammatical outcome (79a); doing so with རྐུན་ཨིཀཱན *keynam-ikan*, however, does not (79b). Replacing just ཨིཀཱན *-ikan* at good last produces a very questionable expression as well, however (79c). The syntactic constituency of suffixed quantifiers will be elaborated on in section 6.1.2 (p. 328).

(79) a. *keynam-ikan patu*
keynam=ikan patu
people=many surprisingly
'surprisingly many people'

b. **danyāng patu*
danya-ang patu
such.one-A surprisingly
'surprisingly ones'

c. ?*keynam da-patu*
keynam da=patu
people so=surprisingly
'surprisingly so people'

Another interesting distributional property of suffixed quantifiers in Ayeri is that in spite of their being suffixed (for instance, to verbs), they can form arguments of the verb, similar to pronominal suffixes. Thus, with verbs like ཀྀནྡ *kond-* 'eat', ཨ *-ma* 'enough' appears suffixed to the verb instead of as a predicative DP. Incidentally, the examples in (80) also show that a quantifier attaches after pronominal suffixes, which we have already established as being clitics. An inflectional affix would not normally appear in post-clitic position, which is further evidence to the hypothesis that quantifier suffixes in Ayeri are clitics.

(80) a. *Kondanang=ma.*
kond=nang=ma
eat=IPL.A=enough
'We ate enough.'

b. *Ang tangay-ikan vana.*
ang tang=ay.Ø=ikan vana
AT hear=1SG.TOP=much 2.GEN
'I've heard much about you.'

Since Ayeri possesses a zero copula, equative phrases which treat quantifier suffixes as predicative adverbs pose a difficulty in that quantifier suffixes cannot stand alone like predicatives normally would. Thus, similar to the behavior of ཨ

-ma 'enough' in (80a), the predicative ཨ *-ma* in (81b) cliticizes to the only available word: the subject, ཨ་པར་ *adareng* 'that'.

(81) a. *Adareng* *edaya.*
ada-reng edaya
that-A.INAN here
'It is here.'

b. *Adareng-ma.*
ada-reng=ma
that-A.INAN=enough
'That/It is enough.'

If quantifier suffixes are clitics, they should also have wide scope over conjuncts. Here as well, quantifier suffixes behave like typical clitics in that they can have scope over a conjunct as a whole, although not totally unambiguously so. Thus, in (82a), while རྡོག་ཤས་དང་རི་མཁས་ཀྱི་ཡོད། *koyās nay kihasley-ikan* is translated as 'many books and maps' (nouns do not mark plural if modified by a quantifier which indicates plurality), another possible reading is 'a book and many maps'. Ways to force the latter reading explicitly are, for one, to use རྡོག་ཤ་རྐྱེ *koyās men* 'one/a single book', or alternatively, to reduplicate the coordinator དང *nay* 'and' to དང་ཡང *naynay* 'and also'. Context should be sufficient to indicate the correct reading of (82a) under normal circustances, however. The same applies to (82b), where the non-distributive reading can be made explicit by using དང་ཡང *naynay* instead of simple དང *nay*. In both (82a) and (b), if the first conjunct is modified by an adjective, the distribution of the quantifier over both conjuncts is also blocked. Thus, in (83a), there is 'a big book and many maps', and in (83b) 'the dog' is 'surprisingly clever and pretty quick'.

(82) a. *Ang tahisayan* *koyās* *nay* *kihasley-ikan.*
ang=tahisa=yan.Ø koya-as nay kihas-ley=ikan
AT= own=3PL.M.TOP book-P and map-P.INAN=many
'They own many books and maps.'

b. *Veneyang* *alingo* *nay* *para-ven.*
veney-ang alingo nay para=ven
dog.A clever and quick=pretty
'The dog is pretty clever and quick.'

The interpretations marked as errorneous in (83) can be correctly achieved by ordinarily placing the adjective after the coordinated constituent so that the adjective itself has scope over both conjuncts. This is demonstrated in (84) and

(83) a. *Ang tahisayan koyās kāryo nay kiḫasley-ikan.*
ang=tahisa=yan.Ø koya-as kāryo nay kihas-ley=ikan
AT= own=3PL.M.TOP book-P big and map-P.INAN=many
'They own a big book and many maps.'
Not: 'They own many big books and maps.'

b. *Veneyang alingo patu nay para-ven.*
veney-ang alingo patu nay para=ven
dog-A clever surprisingly and quick=pretty
'The dog is surprisingly clever and pretty quick.'
Not: 'The dog is surprisingly pretty clever and quick.'

(85). Again, an unambiguous and individuating interpretation can be achieved by placing the quantifier suffix on each conjunct.

(84) a. *Ang tahisayan koyajas nay kiḫasyeley kāryo.*
ang=tahisa=yan.Ø koya-ye-as nay kihas-ye-ley kāryo
AT= own=3PL.M.TOP book-PL-P and map-PL-P.INAN big
'They own big books and maps.'

b. *Ang tahisayan koyās nay kiḫasley-ikan kāryo.*
ang=tahisa=yan.Ø koya-as nay kihas-ley=ikan kāryo
AT= own=3PL.M.TOP book-P and map-P.INAN=many big
'They own many big books and maps.'

(85) a. *Veneyang alingo nay para patu.*
veney-ang alingo nay para patu
dog-A clever and quick surprisingly
'The dog is surprisingly clever and quick.'

b. *Veneyang alingo nay para-ven patu.*
veney-ang alingo nay para=ven patu
dog-A clever and quick=pretty surprisingly
'The dog is surprisingly pretty clever and quick.'

The comparative suffixes on adjectives, ᨿᨗᨦ *-eng* (COMP) and ᨿᨘ *-vā* (SUPL) are obviously derived from their quantifier counterparts meaning 'rather' and 'most', which poses a slight problem: it is not entirely clear whether they act as clitics as well, or whether grammaticalization has stripped them of some of the clitic-like properties of quantifier suffixes. Consider, for instance, example (86).

All examples in (86) show that in principle, both interpretations of ᨿᨗᨦ *-eng*, as a quantifier and as a comparative suffix, are legitimate. Thus, distinguish between an inflectional affix and a clitic is difficult. A clear distinction also cannot be made on phonological grounds since even in the reading as a clitic, ᨿᨗᨦ *-eng* (COMP) and

(86) a. *Ang koronya Kaman apyanas palay nay ban-eng.*
ang=koron-ya Ø= Kaman apyan-as palay nay ban-eng
AT= know-3SG.M TOP=Kaman joke-P funny and good-COMP
'Kaman knows a rather funny and good joke.'
or: 'Kaman knows a funnier and better joke.'

b. *Ang koronya Kaman apyanas palay-eng nay ban-eng.*
ang=koron-ya Ø= Kaman apyan-as palay-eng nay ban-eng
AT= know-3SG.M TOP=Kaman joke-P funny-COMP and good-COMP
'Kaman knows a funnier and better joke.'
or: 'Kaman knows a rather funny and rather good joke.'

c. *Ang koronya Kaman apyanas palay-eng nay(nay) da-ban-eng.*
ang=koron-ya Ø= Kaman apyan-as palay-eng nay(nay) da-ban-eng
AT= know-3SG.M TOP=Kaman joke-P funny-COMP and(∼also) one-good-COMP
'Kaman knows a funnier joke and (also a) better one.'
or: 'Kaman knows a rather funny joke and (also a) rather good one.'

ᨕᨚ *-vā* (SUPL) are stressed (compare Spencer and Luís 2012: 90–92). With ᨕᨚᨗᨚ *-eng* we can at least test whether it undergoes crasis if appended to an adjective stem ending in ᨕᨚ *-e*. As we have seen, however, this is not a fully reliable metric either in that deictic prefixes show clitic-like behavior but may still phonologically meld with their host. The only adjective ending in ᨕᨚ *-e* currently listed in the dictionary is ᨔᨚᨗᨚ *nake* 'large, tall'. Example (87) shows what happens when ᨔᨚᨗᨚ *nake* is combined with both kinds of ᨕᨚᨗᨚ *-eng*.

(87) a. *Ang tahayan enonley nake-eng.*
ang=taha=yan.Ø enon-ley nake=eng
A= have=3PL.M.TOP tower-P.INAN tall=rather
'They have a rather tall tower.'

b. *Ang tahayan enonley si nakēng da-nana.*
ang=taha=yan.Ø enon-ley si nake-eng da=nana-na
A= have=3PL.M.TOP tower-P.INAN REL tall-COMP one=IPL.GEN-GEN
'They have a tower taller than ours.'

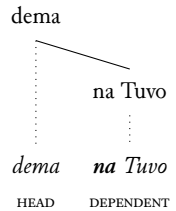
As illustrated by (87b), the purely comparative variant of ᨕᨚᨗᨚ *-eng* should be able to be affected by crasis of two alike vowels. Since adjectives in ᨕᨚ *-e* are exceedingly rare, though, this observation should not matter much in effect.

3.3 Marking strategies

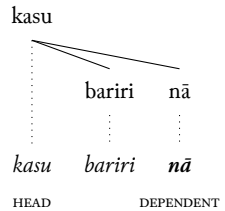
With regards to the dichotomy head–dependent marking, Ayeri is rather thoroughly dependent marking, albeit with the exception of agreement morphology

on the verb. Dependent marking is exhibited, for instance, in the expression of possessive relationships, where the dependent is marked for genitive case:

(88) a. *dema* ***na*** *Tuvo*
dema **na**= Tuvo
aunt **GEN**=Tuvo
'Tuvo's aunt'



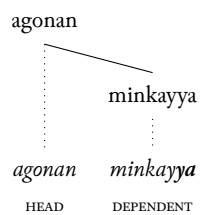
b. *kasu* *bariri* ***nā***
kasu bari-ri **nā**
basket meat-INS 1SG.**GEN**
'my basket of meat'



In (88a),

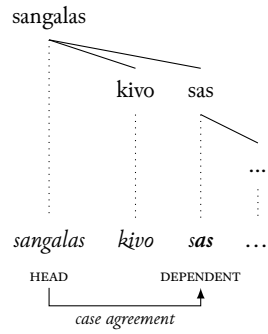
Tuvo is grammatically in possession of her ka *dema* 'aunt'; the possessee forms the head of the phrase while it is modified by the possessor, which receives the marking. In (88b), kasu *kasu* 'basket' forms the head and thus also the possessee, while na *nā* 'my' serves as the dependent possessor; the 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:

(89) *agonan* *minkay**ya***
agonan minkay-**ya**
outside village-**LOC**
'outside of the village'



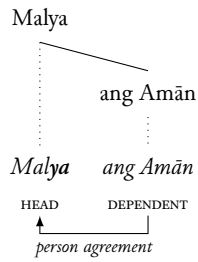
The relativizer, likewise, may agree in case with the NP in the matrix clause to which it links the relative clause. This typically happens mainly in formal language and—in terms of linear succession of words at the surface level of the clause—if the relativizer cannot be immediately adjacent to the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

(90) *sangalas* *kivo* ***sas*** …
sangal-as kivo s-**as** …
room-P small REL-**P** …
'the small room which …'



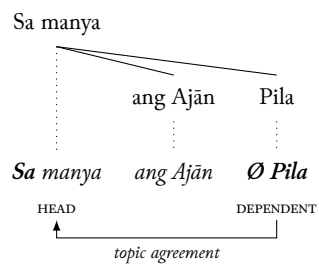
The only instance of head-marking there is in Ayeri is person-marking on the verb, which manifests when the NP following the verb (agent or patient) is not pronominal and thus there is no pronoun to cliticize to the verb stem, but the verb still receives a suffix that indicates a relation with, usually,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

(91) *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, in terms of morphology, the verb may be analyzed as agreeing with one of the NPs in topicality, since topic and case are no categories the verb normally inflects for. In terms of syntax, however, the topicalized NP depends on the verb, so the relationship is mutual, though on different levels—morphology and syntax.

(92) ***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, ཨཇཱན *Ajān*, in person, gender, and number. It is additionally marked for a patient topic, ཕིལ *Pila*, and thus serves as an agreement target for two different controller NPs. As far as morphology is concerned, topic marking on the verb is an instance of head marking.

4 Grammatical categories

While the previous chapter was about general mechanisms of morphological marking in Ayeri, this chapter will dive into the various parts of speech in order to describe 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 the noun phrase (NP) or in combination with it—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 also proper nouns (that is, names) and nominalizations. Nouns, as the heads of NPs, are assigned case by the verb, so case is a third grammatical property nouns display. For an illustration of the declension paradigms, compare Tables 4.1 to 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 (1).

(1)

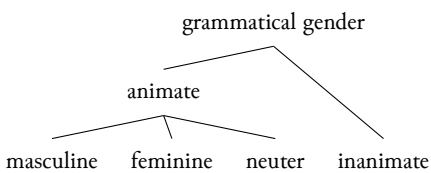


Table 4.1: Declension paradigm for བཨ་རྡན་ *badan* 'father' (animate; consonantal root)

	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/in the father'	*badanjya*	'at/in the fathers'
CAUS	*badanisa*	'due to the father'	*badanjisa*	'due to the fathers'
INS	*badaneri*	'with the father'	*badanyeri*	'with the fathers'

Table 4.2: Declension paradigm for ཨ་ *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/in the mother'	*māvajya*	'at/in the mothers'
CAUS	*māvaisa*	'due to the mother'	*māvajisa*	'due to the mothers'
INS	*māvari*	'with the mother'	*māvayeri*	'with the mothers'

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, བཨ་རྡན་ *badan* 'father' and ཨ་ *māva* 'mother'. The remainder falls into the 'neuter' category—plants, for instance, body parts, or animals whose sex is unknown. The 'inanimate' category typically con-

Table 4.3: Declension paradigm for རྒྱ་རིན་ *kirin* 'street' (inanimate; consonantal root)

	Singular		Plural	
TOP	*kirin*	'the street'	*kirinye*	'the streets'
A	*kirinreng*	'street'	*kirinyereng*	'streets'
P	*kirinley*	'street' (obj.)	*kirinyeley*	'streets' (obj.)
DAT	*kirinyam*	'to the street'	*kirinjyam*	'to the streets'
GEN	*kirinena*	'of the street'	*kirinyena*	'of the streets'
LOC	*kirinya*	'at/in the street'	*kirinjya*	'at/in the streets'
CAUS	*kirinisa*	'due to the street'	*kirinjisa*	'due to the streets'
INS	*kirineri*	'with the street'	*kirinyeri*	'with the streets'

Table 4.4: Declension paradigm for ཕེ་ *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/in the measure'	*perajya*	'at/in the measures'
CAUS	*peraisa*	'due to the measure'	*perajisa*	'due to the measures'
INS	*perari*	'with the measure'	*perayeri*	'with the measures'

tains 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, (2) gives a few examples of each category.

There are also a number of duplicates like French *le livre* 'the book' and *la livre* 'the pound', for instance, ཛན་ *banan* (an.) 'kindness, charity' or ཟོ་ *bino* (an.) 'color' on the one hand, and ཛན་ *banan* (inan.) 'quality' or ཟོ་ *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. (3) illustrates

(2) a. Animate masculine:

ཨཕཱ *badan* 'father', རྣཏུ *netu* 'brother', ཨ་མོ་ཡན *aguyan* 'rooster', ཨ་ཇན *Ajān*, ཡ་ཏུ *Latun*

b. Animate feminine:

ཨ་ཝ *māva* 'mother', ཁྱི་ན *kina* 'sister', ཨ་མོ་ཝ *aguvay* 'hen', ཨ་ཟ *Maha*, ཏྲ་ཎ *Trānay*

c. Animate neuter:

ཨ་ལང *adang* 'palm tree', ཨ་ཕོ *bino* 'color', ཨ་ཁེ *ikam* 'deer', ཁ་ཏན *kadān* 'harvest', ཅན *cān* 'love', ནང *nanga* 'house', ནཱ་ཡ་ཡ *narayaman* 'speaking', ཏཾ་པུ *tampu* 'luck', ཡི་ལ *yila* 'foot'

d. Inanimate:

ཨ་ཧལ *ahal* 'sand', ཧེ་མ *hema* 'egg', ཁ་ཧན *kahan* 'spear', ཨ་ལུང *melung* 'yogurt', ཉུ་ས *nusān* 'damage', པ་ཡུ་ཏཱན *payutān* 'mathematics'

differences in case marking and agreement (inherent information on grammatical features underneath the NPs).

(3) 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 (3a), the noun in the agent NP, ཨ་ཕཱ *badan* 'father', bears the features [GEND M, ANIM +], which triggers the animate agent topic agreement marker ཨ་ལང *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 ཡ *-ya* for third person singular masculine. The object of the sentence, ཧེ་མ *hema* 'egg', on the other hand, bears the feature [GEND INAN, ANIM −], so it receives the inanimate patient case marker ལུ *-ley* rather than its animate counterpart ཨ་ཨཱ *-as*.

In (3b), on the other hand, we see an inanimate agent ཁ་ཧན *kahan* 'spear', so the verb receives the marker ཨ་ཨ *-ara* for third person singular inanimate rather than its animate neuter counterpart ཡོ *-yo*. The (non-topicalized) NP's case marking shows that the agent of the clause is inanimate: ཁ་ཧན *kahan* carries the marker ལུང *-reng*, which marks it as an inanimate agent. The object of the sentence, ཨ་ཡ *burang* 'animal', is also the topic, hence topic agreement on the verb uses the marker ཨ *sa* according to the NP being animate, rather than its inanimate counterpart ལ *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:

(4) a. Countable nouns:

ཨ་རྒྱ་ *ajam* 'toy' — ཨ་རྒྱ་ *ajamye* 'toys',
ཏེ་ *devo* 'head' — ཏེ་ *devoye* 'heads',
ཨི་ཎ *inun* 'fish' — ཨི་ཎ2 *inunye* 'fish' (pl.),
ནེ *netu* 'brother' — ནེ *netuye* 'brothers';

b. Uncountable nouns:

ཨ་ཧལ *ahal* 'sand', ཨ་ཀ *bakay* 'stuff', ཨ་ཧ *gahān* 'hope', ཨ་ཀ *mingan* 'ability';

c. Plurale tantum nouns:

ཨ་ཀ *burang* 'lifestock, cattle',[1] ཨ་ཀ *ganengan* 'siblings', ཀ *keynam* 'people', ཐ *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, also unlike in English. 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, ཨ *bino* 'paint', and ཀ *gimbay* 'sorrows'. A few body parts are also *plurale tantum* nouns, especially those which occur in pairs (ཨ *niva* 'eye' is a notable exception).

As demonstrated in (4a), the noun plural marker is ཡ *-ye*, which in native orthography also occurs in the variant ཨ or 2 due to allography. As described above (section 1.1.1, p. 7), the plural marker may also be reduced to [ʤ] *-j* before case suffixes beginning with /j/ or with a vowel other than /e/, like ཨ *-ang* (A) or ཨ *-yam* (DAT), as demonstrated in (5). For *pluralia tantum*, to express a singular entity, it is always possible to use a genitive phrase like —ཨ *…-ena men* 'one of …' (…-GEN one), like in (6).

[1] Specifically in this meaning; ཨ *burang* can also simply mean 'animal', in which case there is a plural form ཨ2 *burangye* 'animals'.

(5) a. ཡི་ཏཱ་ *diranang* (uncle-A) + ::ཀ -*ye* (PL) → ཡི་ཏཱ2ཀ་ *diranjang* (uncle-PL-A),
b. ཡི་ཏཱ2ཎ *diranena* (uncle-GEN) + ::ཀ -*ye* (PL) → ཡི་ཏཱ2ཎ *diranyena* (uncle-PL-GEN),
c. ཡི་ཏཱ2ཡ་ *diranyam* (uncle-DAT) + ::ཀ -*ye* (PL) → ཡི་ཏཱ2ཡ་པ *diranjyam* (uncle-PL-DAT).

(6) a. *Nupayon tangang nā.*
nupa-yon tang-ang nā
hurt-3PL.N ears-A ISG.GEN
'My ears hurt.'

b. *Na nupareng tang men nā.*
na= nupa=reng tang-Ø men nā
GENT=hurt=3SG.INAN.A ears-TOP one ISG.GEN
'Of my ears, one is hurting.'

Number in nouns can also be manipulated by quantifiers which attach to declined nouns as suffixes—or rather, enclitics. 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. This is illustrated in (7).

(7) a. *Ajayon ganjang kivo.*
aja-yon gan-ye-ang kivo
play-3PL.N child-PL-A small
'The small children are playing.'

b. *Ajayon ganang-ikan kivo.*
aja-yon gan-ang=ikan kivo.
play-3PL.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 (8a), we see a plural noun, ནང་ *nanga* 'house', and in (8b), the same phrase is repeated with plurality implied by the use of a numeral, བཞི *sam* 'two'. The plural noun itself appears unmarked in its singular form in this case. An exception to this is the use of numeral powers, like ཁྲི *lan* 'dozen', ཕྲག་ *menang* 'gross', etc. in an unspecified way, like 'dozens of people'. To convey that the numeral is not to be understood as a precise value, the modified noun appears in the plural—even if it is a *plurale tantum* like རྒྱལ་ཁ *keynam* 'people' in (9).

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

(8) 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.'

(9) *Bengyon keynamjang menang.*
beng-yon keynam-ye-ang menang
attend-3SG.N people-PL-A gross
'Hundreds of people attended.'

suffixation, marking their special status.[2] However, they can still be modified by quantifiers and quantifying clitics; verb agreement as well can be used to indicate plurality, compare (10).

(10) 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 apayen sa Yan-ikan.*
ang=apa=yen.Ø sa=Yan=ikan
AT= laugh=3PL.F.TOP 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 (Tables 4.1–4.4), Ayeri's NPs are marked for case, which is governed by the verb or assigned to adjuncts freely depending on their purpose or meaning. Notably, in Ayeri, case marking is at least partially based on semantics rather than purely on function or structure. This causes a few exceptions, so it is better, in my opinion, not to use the classic labels of nominative (S/A) and accusative (O), or of absolutive (S/P) and ergative (O) for the first two core roles. Instead, I will be using the terms 'agent' and 'patient', which I hope brings about some more clarity, especially when

[2] Many common names in Ayeri are derived from regular words in the language. For instance, the name ᴜᴊ *Yan* also means 'boy, son' as a common noun.

discussing the mentioned exceptions later on. For a discussion of how Ayeri deals with subjecthood, see section 5.5.

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 (2003 [1968]) 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*" (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 (2003 [1968]) and Payne (1997) in this regard, including Fillmore's (2003 [1968]) caveat. However, importantly, 'agent' in Ayeri is a macrorole that may be applied to, for instance, instruments, experiencers, and less typical actors as well, especially, 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.

The agent is marked by the suffix ᎠᏂᏲ *-ang* for animate referents and the suffix ᏂᏗᏲ *-reng* for inanimate referents; names and verbal topic agreement are marked by the clitic case markers ᎠᏂᏲ *ang* and ᏂᏗᏲ *eng*, respectively. See (11) and (12) for examples of each marker.

(11) 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.'

In predicative constructions, the constituent which a quality is assigned to or which a judgment is made about is also assigned the agent case, as (13) shows. With regards to constituents' roles in ditransitive argument frames, donors are

(12) a. ***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.'

b. *Tinkāra* ***kunangreng.***
tinka-ara kunang-reng
open-3SG.INAN door-A.INAN
'The door opens.'

represented by agents in Ayeri as well, since they are the origin of whatever is conceptually passed on to the recipient party, compare (14). Moreover, as (15) shows, the causees are marked as agents, not as a patients, since that would be semantically incongrouous.

(13) 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.'

(14) *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.'

(15) *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.'

Patient

Patients are less of a definitional problem than agents, since in transitive sentences, they are very typically undergoers, that is, the constituent which is acted on, affected, or produced by the action expressed by the verb. The patient case is thus assigned to direct objects—but also to predicative nominals. Animate patients are

marked by ᜐᜳᜋᜱ *-as*, inanimate ones by ᜎᜳᜌ᜵ *-ley*; for names and verbal topic agreement, the markers are ᜐ *sa* and ᜎ᜵ *le*, respectively, compare (16) and (17). In ditransitive sentences like the one in (18), the theme is represented by the patient.

(16) 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.'

(17) 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.'

(18) *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 to form a passive in (19), the patient NP will not be changed to the agent case, since that would reverse the direction of action.

(19) *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.'

Example (19) shows that what changes in passivization is the verb: it now agrees with the next argument in line: the patient NP. Scrambling the order of NPs does not make the verb simply agree with whatever follows it, as illustrated in (20). However, it can nonetheless be assumed that verb agreement in Ayeri historically developed along these lines, which will become especially apparent in the discussion of pronouns.[3]

(20) a. *Sa manye 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 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, compare (21).

(21) *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 (or detriment) the action is carried out. The dative can furthermore be used to mark movement toward a place. The case suffix for datives is ยฺม *-yam* for both animate and inanimate entities. Names and verbal topic agreement are marked equally by ยฺม *yam*. Verbs do not exhibit person agreement with dative NPs, since experiencers are treated as agents.

[3] Mismatches in agreement in connection to scrambling such as exemplified by (20b) are to be expected. Corbett (2006), notes that with regards to agreement in NP conjuncts, "distant agreement is rare, and that agreement with the nearest NP or agreement with all (resolution) is much more common" (62).

(22) 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.'

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 (22) show the regular use of the dative as the case the recipient of the theme appears in. It is also possible for dative NPs to appear as topics—person agreement is unaffected by this, though, since topicalization and subject marking are different processes in Ayeri.

As mentioned above, the dative can also take on an allative meaning insofar as it marks the target of a motion, as displayed in (23a). As an extension 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 יחלנ *ling* 'on top of'. With the adpositional object in the locative case (see below), the phrase in (23b) would imply that the man is literally going to the top of the temple, that is, ending up on its roof.

(23) 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 DIR= top temple-DAT
'The man goes up to the temple.'

Lastly, the dative case is also used to mark resultative NPs, that is, NPs which express the result of an action performed on the semantic patient of a clause. This not only includes syntactic objects, but also patient-subjects of agentless sentences and the subjects of unaccusative verbs (Perlmutter 1978), that is, verbs whose syntactic subject is not performing the action expressed by the verb, but undergoing it. The resultative dative NP is fronted to occur after the verb in contrast to reg-

ular recipients, beneficiaries, or goals. A clause may thus contain two dative NPs. These, however, are still required to be functionally unique. That is, one may not have two recipients or two resultatives in the same clause.

(24) *Ang visya nernanjyam Niyas seygoley ganyam.*
ang=vis-ya nernan-ye-yam Ø= Niyas seygo-ley gan-yam
AT= cut-3SG.M piece-PL-DAT TOP=Niyas apple-P.INAN child-DAT
'Niyas cuts the apple into pieces for the child.'

Hence, the first dative NP in (24), རྣན་རྗེ་རྗེས། *nernanjyam* '(in)to pieces', expresses the result of cutting the object of the clause, གཞི་ལས་ *seygoley* 'apple'. The second dative NP, གཉན། *ganyam* 'for the child', expresses the (optional) beneficiary of the action.

Genitive

The genitive is used to mark possessors; attributive genitive NPs 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 ་ར *-na*. If a noun stem ends in a consonant, the marker becomes ས་ནར *-ena*, compare Tables 4.1–4.4 above. Names and verbal topic agreement are marked by ར *na*. There is no animacy distinction in the genitive case. Examples of the genitive case markers are given in (25).

(25) 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. *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.'

c. ***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 at least in the formal language, so that typically inalienable things—such as body parts, relatives and family members, or personal items, and tools—are all treated as described in (25). Consider (26) for an illustration of

various inalienable things. However, inalienably possessed NPs may still appear without a possessor in less formal language. Besides body parts and family members, this also typically extends to *rang* 'home'.

(26) *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. Apart from possession, the genitive can also be used to mark origin, that is, it has a secondary function as an ablative. This is shown in (27).

(27) *Ang sahaya Vetayan* ***rimanena.***
ang=saha-ya Ø= Vetayan riman-ena
AT= come-3SG.M TOP=Vetayan city-GEN
'Vetayan comes from the city.'

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 as mentioned above. Common nouns are marked by *-ya*;[4] names and verbal topic agreement use the marker *ya*. There is no difference made between animate and inanimate referents in the locative.

The example sentences in (28) 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 (28a) is an instance of this circumstance, in that experience tells that cats like to sit inside boxes, so further specifying the position with the preposition *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 sentence in example (29) has the cat sitting on top of the box.

Ayeri also has a number of postpositions. This does not change the fact that the adpositional object is marked for locative case, as we see in (30), where *tenyan* 'death' is marked for locative case governed by the postposition *pesan* 'until'.

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

(28) 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.'

(29) *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.'

(30) *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 causer NPs, 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, compare section 6.4.9.

Causers or causes are marked by ꩜ *-isa* for common nouns; names and verbal topic agreement use the marker ꩝ *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. Examples of the case marker in its various positions are provided by (31).

(31) 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=2.A mile-P.INAN 3PL.M.TOP
'You run a mile because of them',
or: 'They make you run a mile.'

Regarding the typological oddities mentioned above, example (31c) shows what happens in Ayeri with regards to the marking of causers. Essentially, the causer topic was grammaticalized to express a causative 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, marks secondary agents in effect. Verbs, however, never show person agreement with instrumental NPs. Common nouns are marked by ꩞ *-ri* when ending in a vowel and by ꩞ *-eri* when ending in a consonant; names and verbal topic agreement are marked by ꩞ *ri*. With nouns ending in *-e*, as well as the plural marker ꩞ *-ye*, there is variation regarding whether ꩞ *-ri* or ꩞ *-eri* is used, so that both ꩞ *-yeri* and ꩞ *-yēri* may be found as plural forms. 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. Examples for the case markers are given in (32).

The instrumental may also be used for cases where the instrumental NP acts as a nominal complement describing an attribute of its antecedent head, as in (33).

Here, ꩞ *bari* 'meat' is marked as an instrumental since it serves as an attribute of ꩞ *kasu* 'basket'. The instrumental NP describes what its antecedent contains or

(32) a. *Ang liboyya-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.'

b. *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.'

c. ***Ri*** *tavya* *gino* *ang Kan* ***nimpur.***
ri= tav-ya gino ang=Kan nimpur-Ø
INST=become-3SG.M drunk A= Kan wine-TOP
'The wine, Kan becomes drunk on it.'

(33) *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?'

entails more specifically: it is a basket *with* meat in it. Note, however, that this use of the instrumental is different from expressing accompaniment. Thus, it is not possible to use the sentence in (34) to express 'Ajān comes (together) with Pila'.

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

The sentence in (34) would instead imply that ཀླུ *Pila* helps ཨ་བྱཱ *Ajān* to come, for example, because he has a sprained ankle and thus needs support to get around. To express accompaniment, instead, the preposition རྐྱོ *kayvo* 'with, along, beside' has to be used; the prepositional object appears in the locative case, as usual, then, compare (35).

(35) *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, as in (36).

(36) ?*Ang pukay* *manga luga* ***lahaneri.***
ang=puk=ay.Ø manga=luga lahan-eri
AT= jump=ISG.TOP DIR= 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 the construction with the word for 'over', ꠁꠞꠘꠗꠞ *eyrarya* in (37).

(37) *Ang pukay* *manga eyrarya lahanya.*
ang=puk=ay.Ø manga=eyrarya lahan-ya
AT= jump=ISG.TOP DIR= over fence-LOC
'I jump over the fence.'

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

Case-unmarked nouns

Case morphology is applied to nouns in Ayeri basically whenever NPs serve as complements or as adjuncts, though there are a number of exceptions to this rule, as we will see below. For one, the case-unmarked form is the citation form, not the one declined for agent. As a first exception, the unmarked form can be found when addressing people—one might speak of an unmarked vocative, as illustrated in (38).

(38) 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 (38a) and ꠁꠞꠘꠗꠞ *Diras* in (38b) would be the implied agents of their sentences, yet neither the noun nor the name are marked by the agent markers ꠁꠞꠘꠗꠞ *-ang* and ꠁꠞꠘꠗꠞ *ang*, respectively, since the addressees occur as appositions. Another case where nouns are not marked for case is attested in translations for the prefix ꠁꠞꠘꠗꠞ *ku-* 'like,

as though' when the phrase acts as a depictive secondary predicate, and thus similar to an adverb (compare section 6.4.6, p. 389). This is exemplified by (39).

(39) a. … *nay ang mya rankyon sitanyās* ***ku-netu.***
… nay ang=mya= rank=yon.Ø sitanya-as ku=netu
… and AT= shall=treat=3PL.N.TOP each.other-P like=brother
'… and they shall treat each other like brothers.'[5] (Becker 2011a)

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 (39a),

ึ *netu* 'brother' in ᨀᨓ᩵ᨆᨓ᩵ *ku-netu* 'like brothers' is not even inflected for plural; likewise, ᨀᨓ᩵ᨠᨾᨶ᩵ *ku-vipin* 'like a bird' in (39b) is not inflected for case. The depictive NP in (39a) is also a little unusual in that it does not occur after the verb in the position of an adverb as depictives usually would.

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 as in (40). Here, ᨾᨿᨿᨾᨶᨾᨶᨾᨶ

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), there are also a number of prefixes which can be applied to nouns. I have just given two examples of the prefix ꦑ *ku-* 'like, as though' above, but ꦑ *ku-* applies not only to nouns, but can be combined with other parts of speech as well. As discussed in section 3.2.5 (p. 86 ff.), it behaves in the way of a special clitic in Zwicky's (1977) terminology, since no corresponding full form exists in its place. Example (42) provides illustration.

(42)	… *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 ꦑ *ku-* attaching to a properly inflected NP. The NP ꦫꦤꦾꦁ ꦥꦭꦸꦁ *ranyāng palung* 'nobody else' is case-marked for agent since it can be understood to refer to the verb ꦱꦭꦶꦁ *sayling-* 'progress' in the main clause, so ꦫꦤꦾꦁ ꦥꦭꦸꦁ *ranyāng palung* 'nobody else' can replace ꦪꦁ *-yāng* 'he' in the main clause. While this section deals mainly with prefixes on nouns, it should be mentioned for completeness that ꦑ *ku-* may also appear as a suffix under certain conditions. As discussed in section 3.2.5 (p. 86 ff.), ꦑ *ku-* moves to the end of the NP when a proper noun is marked by a case-marking particle. Example (43) repeats (55) from the previous chapter for convenience.

(43) a.	*Ang*	*lentava*	*sa*	*Tagāti*	*diyan-ku.*		
	ang=	lenta=va.Ø	sa=	Tagāti	diyan=ku		
	AT=	sound=2.TOP	P=	Tagāti	worthy=like		

'You sound like Mr. Tagāti.'

b.	*Ang*	*lentava*	*sa*	*Tagāti*	*diyan-ku*	*nay*	*diranas*	*yana.*
	ang=	lenta=va.Ø	sa=	Tagāti	diyan=ku	nay	diran-as	yana
	AT=	sound=2.TOP	P=	Tagāti	worthy=like	and	uncle-P	3SG.M.GEN

'You sound like Mr. Tagāti and his uncle.'

c.	*Sa*	*lentavāng*	*ku-Tagāti*	*diyan.*
	sa=	lenta=vāng	ku=Tagāti	diyan
	PT=	sound=2.A	like=Tagāti	worthy

'Like Mr. Tagāti you sound.'

Besides ꦑ *ku-*, there are also the demonstrative prefixes ꦢ *da-* 'such', ꦌꦢ *eda-* 'this', and ꦄꦢ *ada-* 'that', which have already been mentioned in the previous section as well (see section 3.2.5, p. 80). The demonstrative prefixes undergo crasis

with nouns beginning with *a-*, that is, they form phonological words with their hosts for all means and purposes. An example of this is given in (44), where ᎿᏂ *eda-* 'this' merges with ᏅᏓᏲ *ayon* 'man' to become ᎿᏅᏓᏲ *edāyon* 'this man'. The demonstrative prefixes are special clitics since no contemporary free form exists.

(44) 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 proclitic Ꭰ *mə-* in complementary distribution with the demonstrative prefixes. This particle adds a meaning along the lines of 'just any', 'whatsoever', 'some' to the noun. Note that this clitic is distinct from the morpheme indicating an inspecific quantity, ᎠᏅᏗᏳᏍ *-aril* 'some'. Uncharacteristically of a clitic, but also like the deictic clitics, Ꭰ *mə-* forms a long vowel if the noun it leans on begins with an /e/. An example of this is given in (45).

(45) 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.'

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,

Table 4.5: 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%

or endocentric, compounds are the most common ones in the languages of the world (Bauer 2001: 697), especially if the head refers to a location or source of sorts (702).

Gaeta (2008), then, adds to Bauer's (2001) 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 (Gaeta 2008: 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). Secondly, "[s]yntax seems to be the motor of change, which may be then reflected in compounds" (135). Thirdly, he finds that 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—a small, non-exhaustive survey was conducted based on 130 compounds from the Ayeri dictionary (Becker 2016a: Dictionary); Table 4.5 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 follows 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 as genitive attributes follow nouns, noun compounds are headed left. Especially compounds with adjectives are interesting in that this is also the normal order for free adjectives. 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 as well that unlike Germanic languages, Ayeri does not allow compounds of arbitrary length to be strung together, like in the ridiculous but no less real example from (former) German legislation in (46).

(46) German (Süddeutsche Zeitung 2013):

Rindfleischetikettierungsüberwachungsaufgabenübertragungsgesetz
rind-fleisch-etikettierung-s-überwachung-s-aufgabe-n-übertragung-s-gesetz
cow-meat-labeling-LNK-supervision-LNK-duty-PL-delegation-LNK-law
'law on the delegation of duties in the supervision 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. Ayeri exhibits rather strict head-initial word order, so it comes as no surprise, following Gaeta (2008), that most of these compounds follow this order as strictly: the second noun modifies the first, which is opposite of how English, for instance, typically operates. Examples from Ayeri are given in (47).

(47) a. ནེ་ལ་ཕ་ཁ་ཅ *betaynimpur* 'grape' ← ནེ་ལ་ཕ *betay* 'berry' + ཁ་ཅ *nimpur* 'wine'
b. ཀ་ལ་ཡ་ཤ *karirayan* 'vertigo' ← ཀ་ར *kar* 'fear' + ཡ་ཤ *irayan* 'height'[6]
c. ཀ་ཕ་ནུ་ཏ *pikunanding* 'mustache' ← ཀ་ཕ *piku* 'beard' + ནུ་ཏ *nanding* 'lips'
d. ཏ་ཕ་ཡ་ཀ *tapayperin* 'sunblind' ← ཏ་ཕ *tapay* 'screen' + ཡ་ཀ *perin* 'sun'

The example words in (47) show that the relationships between modifier and head are various: a grape is a berry *used* to make wine from (compare Bauer 2001:

[6] ཡ་ཤ *irayan*, however, is a transparent nominalization of ཡ་ར *iray* 'high'.

702); vertigo is the fear *of* height; a mustache is a beard *located* over the lips (Bauer 2001: 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 example words in (48) show.

(48) a. ཨ་བཏན་ *avararan* 'wetland'
← ཨ་ *avan* 'ground' + བཏ *raro* 'wet' + ཨན་ *-an* (NMLZ)

b. ཨ་ཁོ་ཁ་ལན་ *mehimitrang* 'fiber tree'
← ཨ་ཁོ་ *mehir* 'tree' + ཁ་ལན་ *mitrang* 'hair, fiber'

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

d. པད་ལམ་ཅན་ *padilamican* 'gravitational force'
← པད་ལན་ *padilan* 'attraction' + ཅན་ *mican* 'force, power'

There is a modicum of alteration happening in all of the heads of the example words in (48), mostly nasals assimilating to the stop or nasal which the modifier begins with (/n/ + /p/ → /mp/, /n/ + /m/ → /m/), though ཨ་བཏན་ *avararan* and ཨ་ཁོ་ཁ་ལན་ *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-final 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 ཨན་ *-an*, which signifies that the head is being formed by a nominalized root, such as in པད་ལམ་ཅན་ *padilamican*, where པད་ལན་ *padilan* 'attraction' is a nominalization of པད་ལ་ *padil-* 'attract', or in ངན་གཏམ་ *ningampinam*, where ངན་ *ningan* 'story' is derived from the verb ངན་ *ning-* 'tell'. However, since Ayeri is head-initial 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, as (49) shows.

(49) *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.'

ཁ་ཡ་ཧ་ཟེ་ན་ *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 deferred to the head noun instead of the edge of the compound as a whole; the modifier is possibly treated as an adjunct in this case, and stays uninflected. An example of this is given in (50).

(50) *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).[7] Examples in Ayeri include those listed in (51). In all of these cases, the adjective forms a unified lexeme with the head noun, hence it is not comparable, as the examples in (52) show.

(51) a. ཁཎ་ལྐོར་ཡུ *kardangiray* 'university' ← ཁཎ་ལྐ *kardang* 'school' + ཤོ་ཡ *iray* 'high'
b. ཨ་ཞ་ཤ་ཧ *marashari* 'witticism' ← ཨ་ཞ *maras* 'phrase' + ཤ *hari* 'pithy'
c. ཤོ་ཎ་ཀ *silvanikan* 'overview' ← ཤ་ཎ *silvan* 'view' + ཤ *ikan* 'whole'
d. ཁ་ཁ *vipimakārya* 'crow' ← ཁ *vipin* 'bird' + ཨ *makārya* 'black'

(52)

	COMPARATIVE	SUPERLATIVE
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 ཁཎ་ལྐོར་ཡ:ཨ *kardangiray-vā* and ཨ་ཞ་ཤ:ཨ *marasari-vā*, but they mean 'most universities' and 'most witticisms', that is, :ཨ *-vā* here does not mark the adjectival part as a superlative form; the suffix modifies the noun–adjective compound as a whole: [*school-high*]=*most*, [*phrase-pithy*]=*most*. :ཁ

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

-eng 'rather' as a quantifier does not combine with nouns, which is why the first examples in (52ab) are both ungrammatical *per se*.

Since the meaning of noun–adjective compounds is often idiomatic, they also cannot be divided as shown above in (50), since a ཁརྡང་རྒྱ *kardangiray* 'university' is not a ཁརྡང་ *kardang* 'school' which is རྒྱ *iray* 'high' in the literal sense, but a school of the highest tier. ཁརྡང་རྒྱ་ཡི *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 ཁརྡང་རྒ་ཡ *kardangirayena*.

In the sample, there were also a few compounds which were categorized as noun–noun combinations and which look as though they violate head-initial order. All of these involve རང་ *sitang* 'self' as a modifier, for instance, as in (53).

(53) a. རང་གླེ་ *sitanglentan* 'vowel' ← རང་ *sitang* 'self' + གླེ *lentan* 'sound'
b. རང་གཝཱ *sitangparonān* 'self-confidence' ← རང་ *sitang* 'self' + གཝཱ *paronān* 'faith'
c. རང་ཏེ *sitangtenyan* 'suicide' ← རང་ *sitang* 'self' + ཏེ *tenyan* 'death'

རང་ *sitang* does not exist as a noun by itself in Ayeri, the word for 'self' is its nominalization, རང་ *sitangan*. Nonetheless, it looks as though it could have plausibly been a noun once. This noun may have been grammaticalized into a reflexive morpheme of a more general kind, which in turn gave rise to the form རང་ *sitangan* as a renovation.[8] The reflexive རང་ *sitang* is used—as we have seen in the previous chapter—as a prefix, so there are two ways to intepret these formations: first, རང་ *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 རང་ *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. There are only a few of these in the sample; (54) lists all of them.

8 A little bit of language history would certainly simplify things here and lend them credence. Let us simply assume that རང་ *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-xə́* '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.

(54) a. བཱ་ཏཱ་པ *baripata* 'ground meat' ← བཱ་ *bari* 'meat' + ཏ་པ *pata* 'mash'
b. རྐྱོ་ལན་ཏན་ *kayvolentan* 'consonant' ← རྐྱོ *kayvo* 'with' + ལན་ཏན *lentan* 'sound'
c. མཱ་ཝ་གཎེ *māvaganeng* 'mother's siblings' ← མཱ *māva* 'mother' + ཝ་ཎེ *ganeng* 'siblings'
d. ཙ་ཏཱ་ནཱ་ཌིང *matinanding* 'labia' ← ཙ་ཏཱ་ཀཱ *matikan* 'hot' + ནཱ་ཌིང *nanding* 'lips'
e. ཨ་ཡ་ཝི་ཏང *muyavirang* 'brass' ← ཨ་ཡ *muya* 'false' + ཨ་ཝི་ཏང *avirang* 'gold'
f. ཏོ་ཟ་རྟ་ཏང *tonisaytang* 'self-assured' ← ཏོ་ཟ *tonisa* 'assured' + ʔ ཀ་ཏང་ *sitangan* 'self'

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. These are listed in (55).

(55) a. ཙ་རཱ་ཏཱ་ལུ *mirampaluy* 'otherwise' ← ཙ་ཏ *miran* 'way' + ʔ ཏ་ལུང *palung* 'different'
b. ཏ་ཕ་ལ་ཉ *padabanya* 'insane' ← ཏ་ཕ *padang* 'mind' + ལ་ཝ *banaya* 'sick'
c. ཏཾ་ཀ་ཡ་ས *tenkarisa-* 'be scared to death' ← ཏཾ *ten* 'life' + ཀ་ཡ *karisa* 'frightened'

As for the examples in (55), ཙ་ཏ་ཏ་ལུ *mirampaluy* is an adverb whose modifier is probably a mangling of ཏ་ལུང *palung*. ཏ་ཕ་ལ་ཉ *padabanya* is an adjective meaning 'insane' rather than the expected 'insanity' (instead: ཏ་ཕ་ལ་ཉཱ *padabanyān*). Lastly, ཏཾ་ཀ་ཡ་ས *tenkarisa-* acts as a verb, possibly from conversion or reinterpretation, since the suffix ཡ་ས *-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, given in (56). This compound must be derived from the phrase ཤ་ཎ་ཡ་ཉ་ཀ་ཝ *silvanya kayvay* 'without sight' (see-NMLZ-LOC without), though here as well, the word roots are simply juxtaposed, as is the common way to form compounds in Ayeri.

(56) ཤ་ཎ་ཀ་ཝ *silvankayvay* 'blindness' ← ཤ་ཎ *silvan* 'sight' + ཀ་ཝ *kayvay* 'without'

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), compare (57).

(57) a. ཨན་ལཱུ་ཅོ་ *anlagonan* 'pronunciation' ← ཨན་ལ: *anl-* 'bring' + ཨ་ལཱུ་ *agonan* 'outside'
b. ནཱ་ཁ་ཀ་ *napakaron* 'acid' ← ནཱ: *nap-* 'burn' + ཁ་ཀ་ *karon* 'water'
c. ནཱ་པ་རི་ *napaperin* 'sunburn' ← ནཱ: *nap-* 'burn' + པ་རི་ *perin* 'sun'
d. ཏེ་ལ་ས་ས་ *telbasasān* 'waysign' ← ཏེ་ལ: *telba-* 'show' + ས་ས་ *sasān* 'way'

Here as well, the relations between verb and noun are various, 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 (ས་ས་ *sasān* is the object here). Even though ཁ་ཀ་ *karon* may serve as an agent (or a causer) of the burning effect of acid (similar for ནཱ་པ་རི་ *napaperin* 'sunburn'), the verb-first order is justified here as well, since verbs always come 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. These are just as far and few between, however, and whether they should all be counted as noun–verb combinations is also questionable, since they all appear to 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 words in (58).

(58) a. མ་རི་པ་ཏ་ཡ་ *maripuntayam* 'spread'
← མ་རི་ *marin* 'surface' + པ་ཏ: *punta-* 'stroke' + ཡ: *-yam* (DAT)
b. ས་ས་ལ་ཀཱ་ *sasanlekān* 'labyrinth'
← ས་ས་ *sasān* 'way' + ལ་ཀ: *leka-* 'guess' + ཨ་ *-an* (NMLZ)
c. ས་ལ་ང་ནུ་ན་ *selangnunān* 'plane'
← ས་ལ་ང: *selang* 'machine' + ནུ: *nuna-* 'fly' + ཨ་ *-an* (NMLZ)
d. སྲིན་ཏུ་ཤ *sinturān* 'radio'
← སྲིན *sinto* 'wave' + ཏཱུ: *tura-* 'send' + ཨ་ *-an* (NMLZ)

maripuntayam is special in that it contains the dative suffix ཡ: *-yam* which is lexicalized as a part of the word: something made or intended for spreading on a surface. A few more such verbal derivations can be found, though not compounds, in those words listed in (59) among others.

(59) a. གྲེན་ཡས།ཡ། *grenyam* 'extremity' ← གྲེན་ས། *gren-* 'reach out'
b. ལུ་ཡ་ཡ། *lugayam* 'password' ← ལུ་ཡ། *luga-* 'go through'
c. ཟ་ཝ་ཡ། *sahayam* 'future' ← ཟ་ཝ། *saha-* 'come'

There is also མ་རི་ཏ་ས། *maripunta-* 'spread over' as the verb corresonding to མ་རི་ཏ་ཡ། *maripuntayam*, though its meaning is less specific. Here as well, however, the verbal part is last instead of first. For the other example words (58b–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 as a machine for flight, and radio as a transmission of waves. In the latter case, ཟིན་ཐུ་ཤ *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 easily confused with appositional (also *karmadhāraya*) compounds in that both types of compound allow inserting an *and* between both elements. The nominal coordinative compounds included in the sample are listed in (60).

(60) a. བ་མ། *bāmā* 'mom-and-dad' ← ཕ་ཕ། *bā(bā)* 'dad' + མ་མ། *mā(mā)* 'mom'
b. ཀ་ཅུ་ཟ་ཉ *pruynapay* 'seasoning' ← ཀ་ཅུ *pruy* 'salt' + ཟ་ཉ *napay* 'pepper'
c. ཟ་ཉ་ཡི་ལ *sapayyila* 'hands-and-feet' ← ཟ་ཉ *sapay* 'hand' + ཡི་ལ *yila* 'foot'
d. སི་མི་ལ་ནོ *simileno* 'horizon' ← སི་མི་ལ *simil* 'country' + ནོ *leno* 'sky'
e. སི་ཏེ་ཁུ་ཅོ་ཤ *sitemrugon* 'thunderstorm' ← སི་ཏེ *sitem* 'lightning' + ཅོ་ཤ *rugon* 'thunder'
f. ཝ་ཁ་ཏ་ལ་ཏེ *vekamdekey* 'dishes' ← ཝ་ཁ་ཏ *vekam* 'plate' + ལ་ཏེ *dekey* 'fork'

Neither of the two elements recognizably forms the head in these examples, but both are typical components of the thing the compound signifies. Bauer (2001) mentions that coordinative adjective compounds are rare, or at least rarely documented in the grammars he surveyed Bauer (2001: 699). In our sample, only the compound in (61) is included. This compound forms a noun from the combination of two adjectives, insofar it is relevant to this section even though the component parts are not nouns.

(61) ཨ་ཁ་ཨི་ཅི *makagisu* 'twilight' ← ཨ་ཁ *maka* 'light' + ཨི་ཅི *gisu* 'dark'

The sample also includes the two words in (62), which are, however, 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.

(62) a. ཨང་ཨཟཧ *mangasaha* 'towards' ← ཨང་: *manga-* 'move' + ཨཟཧ: *saha-* 'come'
b. ཨང་ཨཨ *mangasara* 'away' ← ཨང་: *manga-* 'move' + ཨཨ *sara-* 'go'

Exocentric compounds

In exocentric compounds, the modifier is not a hyponym of its head (Bauer 2001: 700), which means that the modifier is not describing a property that more closely determines its head. So while a *dog house* is a type of house 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, listed in (63). Again, it is not a very productive group.

(63) a. ཨ་22ཡོ་ *avanyonang* 'artery' ← ཨ་ *avan* 'bottom, down' + ཡོ་ *yonang* 'stream'
b. རྟ་ཏཎ་ *baytandevo* 'headache' ← རྟ་ཏ *baytang* 'blood' + ཏཎ *devo* 'head'
c. ཏཿ22ཡ *linyonang* 'vein' ← ཏཿ *ling* 'top, up' + ཡ *yonang* 'steam'
d. རྡ་ཁ་ཎ *sindaynanga* 'address' ← རྡ22ཁ *sinday* 'number' + ཎ *nanga* 'house'

What is striking here is that only one out of four examples shows the expected head-initial order: རྡ་ཁ་ཎ *sindaynanga*. The other three examples all have the 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 is 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 our sample were either undeterminable as to their composition due to parts of the word not being clear regarding one of their constituent parts.[9] The words in question are listed in (64).

(64) a. ཐཔངས་ཏི་ཡཱ *batangiman* 'mosquito' ← ཁ་ཐང་ *baytang* 'blood' + ?
b. རྒྱལ་ཁ་ལམ་ *kirinalang* 'avenue' ← རྒྱལ་ཁ *kirin* 'street' + ?
c. རྔ་བ་ནམ་བཀ *ningambakar* 'telltale' ← རྔ་ཝ *ningan* 'story' + ?
d. ཀཡ་པ་ཡུ་ཅི *ragayesuy* 'grid' ← ཀཡ *ragan* 'line' + ?
e. ཏཱ་ཡ་ཙི་ *teraymino* 'melancholic' ← ? + ཙི *mino* 'happy'
f. ཏ་ཡ་ཙ་ *vetaysano* 'fare' ← ? + བཟན *sasān* (earlier ཙ *sasano*) 'way'

For all of the components represented by a question mark, there is no corresponding dictionary entry. At least in ཁ་ཐང་ཏི་ཡ *baytangiman*, the *ཡ *iman* part looks as though it could be a noun due to the ཡ *-an* nominalizer suffix. *ཏཱ *teray* in ཏཱ་ཡ་ཙི *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 མི་ཡ *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 ཏ་ཡ *vetaysano*, which is missing the first part, it can be reasonably assumed that the identifiable part, *ཟ *sano*, is the modifier, and *ཏ *vetay* may have once been intended to mean 'money' or 'fee' or something along these lines. Digging through old archives and translations, it could be determined at least that ནམ *bakar* once must have meant 'lie', and that ཏཱ *teray* was indeed a word for '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 redupli-

[9] This situation probably arose 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 it.

cation to form diminutives (Healey 1960: 6–9). As we have seen in section 3.2.3 above, so does Ayeri. A few examples of diminutive reduplication are given in (65).

(65) a. ཁྱིམ་ *limu* 'shirt' → ཁྱིམ་ཁྱིམ་ *limu-limu* 'little shirt'
b. རྣང་ *nanga* 'house' → རྣང:རྣང་ *nanga-nanga* 'little house'
c. རྒྱབ *sapay* 'hand' → རྒྱབ:རྒྱབ *sapay-sapay* 'little hand'
d. ཁྱེ་ *veney* 'dog' → ཁྱ:ཁྱ *veney-veney* 'little dog'

Ayeri's diminutive reduplication involves doubling the noun root of a word. Besides the productive use of reduplication for diminutive marking, there are a number of diminutive formations which have been lexicalized, such as in the examples given in (66). There are also at least two documented cases where the reduplicated root is not a noun, but the reduplication results in a noun; compare (67).

(66) a. ཨ་ *agu* 'chicken' → ཨ:ཨ *agu-agu* 'chick'
b. ཨ *gan* 'child' → ཨ:ཨ *gan-gan* 'grandchild'
c. ཁ་ *pasing* 'tube' → ཁ:ཁ *pasing-pasing* 'straw'
d. ཕོ *poyu* 'cheek; bacon' → ཕ:ཕ *poyu-poyu* 'butt'

(67) a. ཁ་ *kusang* 'double (adj.)' → ཁ:ཁ *kusang-kusang* 'model'
b. ཁ *veh-* 'build' → ཁ:ཁ *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. This is illustrated in (68) for ཁ:ཁ *veney-veney* 'little dog', from ཁ *veney* 'dog'.

(68) *Puco* *mino* ***veney-veneyang.***
puk-yo mino veney∼veney-ang
jump-3SG.N happily DIM∼dog-A
'The little dog is jumping happily.'

In (68), the reduplicated noun ཁ:ཁ *veney-veney* is marked as an agent in that the agent suffix ་ལ *-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: *ཁ:ཁ *veneyang-veneyang*. Likewise, the reduplicated form is not treated in the way of an endocentric compound, so case and plural marking cannot be appended to the first element: *ཁ:ཁ *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. Example (69) displays the simple case of a transparent endocentric compound.

(69) *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 IPL.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, ꑦꑟꑣ *mehir* 'tree', not of the whole compound ꑦꑟꑣꑦꑟꑦ *mehirseygo* 'apple tree', or the dependent, ꑦꑟꑦ *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 ꑦꑟꑣꑦꑟꑦ:ꑦꑟꑣꑦꑟꑦ *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 ꑭꑦꑦꑦꑦ *kusang* 'double' or ꑦꑦꑦ *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 ꑦꑦꑦ *-an*. The examples in (70) illustrate some derivations from verbs, and (71) shows derivations from adjectives to nouns. As ꑭꑦꑦꑦ *kuhan* 'oar' shows, the nominalization may have an idiomatic meaning.

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

(71) a. ꑦꑦꑦꑦ *apitu* 'clean' → ꑦꑦꑦꑦꑦ *apituan* 'cleanliness'
b. ꑦꑦꑦ *gira* 'urgent' → ꑦꑦꑦꑦ *girān* 'hurry'
c. ꑦꑦꑦꑦ *pakis* 'serious' → ꑦꑦꑦꑦꑦ *pakisan* 'seriousness'
d. ꑦꑦ *vapa* 'skillful' → ꑦꑦꑦ *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 ꑦꑦꑦ *-an*. This

process, however, is not productive, so compared to deverbalization and deadjectivization, examples of this derivation strategy are few. Example (72) provides instances of such renominalizations.

(72) a. ཨ་རྒྱུ *ajam* 'toy' → ཨ་རྒྱ�eq *ajaman* 'game'
b. སྐྱེད་ལྡན་ *kelang* 'chain' → སྐྱེད་ལྡན་ཞེ *kelangan* 'connection'
c. རྣང་ *nanga* 'house' → རྣང་ཞེ *nangān* 'household'
d. གཏེ *ten* 'life' → གཏན *tenan* 'soul'

There are also some apparent nominalizations in ཨ་ *-am* and ཨ་ *-ang*, though they are irregular and non-productive; compare (73) and (74). The ཨ་ *-am* derivations in (73) seem to have a connotation of being tools used for the action they derive from; the ཨ་ *-ang* derivations listed seem to derive a more abstract related term.

(73) a. ཨ་ཇ *aja-* 'play' → ཨ་རྒྱུ *ajam* 'toy'
b. མཇེ *gin-* 'drink' → མཇུ *ginam* 'glass'
c. ཨ་ཁ *mik-* 'poison (v.)' → ཨ་ཁུ *mikam* 'poison (n.), venom'
d. ཉུ *nuna-* 'fly' → ཉུ *nunam* 'feather'

(74) a. ཁ་ཟུ *bayha-* 'rule' → ཁ་ཟུང་ *bayhang* 'government'
b. ཟུང *hapa* 'remaining' → ཟུང་ *hapang* 'remainder'
c. མཁ *kada-* 'collect' → མཁ་ *kadang* 'committee; alliance'
d. ཨ་ཡ *mima* 'possible' → ཨ་ཡ *mimang* 'access'

Agentive nouns can be formed from regular nouns with the suffix ཡ *-maya*, compare the examples in (75). 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 to which the agentive suffix is attached ends in a consonant or /Ca/, it is also often found fused with the root, sometimes with the first /a/ of *-Caya* lengthened, compare (76). Specifically feminine agentive nouns can be derived with the related suffix ཡ *-vaya*; two examples of this are given in (77).

(75) a. ཨ་ཏ *anl-* 'bring' → ཨ་ཏ *anlamaya* 'waiter'
b. ཧ *hora* 'sin' → ཧ *horamaya* 'sinner'
c. ནཱ *nasy-* 'follow' → ནཱ *nasyamaya* 'follower'
d. ཏ *teba-* 'bake' → ཏ *tebamaya* 'baker'

(76) a. ཨ་ས།: *asa-* 'travel' → ཨ་ས་ཡ།: *asāya* 'traveler'
b. ཨི་བུ།: *ibut-* 'trade' → ཨི་བུ་ཡ།: *ibutaya* 'trader, merchant'
c. ཁྱན་ཏ།: *lant-* 'lead' → ཁྱན་ཏ་ཡ།: *lantaya* 'leader; driver'
d. ཐང་:: *tang-* 'listen' → ཐང་ཝ་ཡ།: *tangaya* 'listener'

(77) a. མཇའ: *gan* 'child' → མཇའ་ཝ་ཡ།: *ganvaya* 'governess'
b. ཁྱ22: *lanya* 'king' → ཁྱ2ཝ་ཡ།: *lanvaya* 'queen'

Besides agentive ::ཡ།: *-maya* and ::ཝ་ཡ།: *-vaya*, there is also a derivational suffix for makers of things, ::ཨ་ཏི: *-ati* (contracting to ::ཨ་ཏ: *-ac-* before a vowel). This suffix is not too productive, and sometimes irregular, as རྩ་ཏ་ཐང་ཏི: *sirtangati* 'youth' in (78) shows. Moreover, there are instances of nominalization where a tool of sorts is derived with a suffix ::ཡ(ཀ)ཡ: *-(e)ryan*, which is related to the instrumental suffix ::ཡ(ཀ): *-eri* in combination with the nominalizer ::ཨ: *-an*; compare (79).

(78) a. གིན་ཏི: *gindi* 'poem' → གིན་ཏི: *gindati* 'poet'
b. རྩ་ཏ་ཐང: *sirtang* 'young' → རྩ་ཏ་ཐང་ཏི: *sirtangati* 'youth'
c. ཐ2ཡ: *tahan-* 'write' → ཐ2ཡ2ཏི: *tahanati* 'scribe'
d. ཝ2ཡ: *vehim* 'piece of clothing' → ཝ2ཡ:ཡ: *vehimati* 'tailor'

(79) a. ཀུ་ཏ: *gur-* 'turn' → ཀ(ཀ)ཡ: *guryan* 'coil, cylinder'
b. ཨ:ཏ: *mis-* 'behave' → ཨ:ཏ(ཀ)ཡ: *miseryan* 'method, strategy'
c. ནཱ: *nap-* 'burn' → ནཱ(ཀ)ཡ: *naperyan* 'tinder'
d. ཏ:ཐ: *pra-* 'glitter, gleam' → ཏ:ཐ(ཀ)ཡ: *praryan* 'spark'

While ::ཨ: *-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 itself by a noun, compare (80) for an example from English. In (80a), *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.

(80) English:

a. *Manhattan is famous for its tall* ***buildings****.*

b. ***Building*** *a house is an expensive endeavor.*

The form of *building* in (80b), 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, Ayeri can derive ཝ2ཡ: *vehan* 'building, construction' from

the verb *veh-* 'build', which acts like every other common noun, much like in the English example in (80a).

(81) 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.'

In order to illustrate properties of derived nouns in Ayeri, the examples in (81) condense several properties into one. For instance, (81a) shows that *vehān* can serve as the 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, (81b), *vehān* serves as the object of the clause and is being determined by the demonstrative prefix *eda-* 'this'. The third example, (81c), shows *vehān* both pluralized and modified by a possessive pronoun, *yona* 'of it'. And finally, in (81d) we see *vehān* quantified by the enclitic *-kay* 'few'.

Similar to the English example in (80b), Ayeri can also derive nouns from the participle of a verb describing the action as such—a gerund. Example (82) again draws on the Ayeri translation of Kafka's short story "Eine kaiserliche Botschaft" (Becker 2012: 2, 14) for an example. 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': I wrote there that *haruyaman* 'beating' was used instead of *haruan* 'beat(ing)' in order to emphasize the process of beating as an incomplete action (14–15).

The participle marker in Ayeri has possibly been grammaticalized from the dative case marker, or it is at least synchronically homonymous. In order for case marking to operate, this formation has to be nominalized, which is done in the

(82) … *nay ang pətangongva* *ankyu* ***haruyamanas*** *nanang* …
… nay ang=pə-tang-ong=va.Ø ankyu haru-yam-an-as nanang …
… and AT= NFUT-hear-IRR=2.TOP truly beat-PTCP-NMLZ-P great …
'… and you would indeed hear the magnificent beating …'

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* undergoes haplology to a simple nominalized form with the suffix cluster ꩜ *-anyam*. See (83) for an example.

(83) *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*. This is encountered in (84), an example from the partial translation of Saint-Exupéry's story "Le petit prince" (Becker 2015 [2013]: 3, 13). 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 (82), this should not be possible. As mentioned before, though, use has changed.

(84) *Sa koronyang* ***palungyaman*** *na Baysānterpeng nay na Bayokivo*
sa= koron=yang palung-yam-an-Ø na= Baysānterpeng nay na= Bayokivo
PT=knew=ISG.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 the difference between China and Arizona at first sight.'

A rule we can gather from (84) 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 (82) furthermore illustrates that gerunds can be modified by adjectives. The example in (85) shows a gerund used as an agent-subject as well (Becker 2014).

(85) ***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 …'

Looking at previous examples of gerunds, we can deduce 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; compare (86). On the other hand, it is possible to quantify gerunds, as well as to modify them by possessors. The two sentences in (87) exemplify these uses.

(86) **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.'

(87) a. *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.'

b. *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. In the following, each class of pronouns will be discussed regarding its morphological properties.

4.2.1 Personal pronouns

As Table 4.6 shows, Ayeri possesses quite a large number of personal pronouns with (maybe unnaturally) little syncretism between the different paradigm slots overall (the second person is a notable exception); there are also no gaps in the paradigm.

Table 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

Ayeri's personal pronouns reflect the grammatical features also found in nouns, that is, number, gender, and case; person is added to this. The individual forms range from completely fused to fully transparent even within the same case paradigm, for instance, ยาม *yām* '(to/for) me' (1SG.DAT) on the one hand, and ยยม *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 Table 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, for instance the first person agent and third person animate masculine plural pronouns; compare (88).

(88) a. *ayang* → *yang*
ay-ang — yang
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 ꦤ꦳ *-n* or, in the third person, ꦠ꦳ *-t-* to the pronoun stem, which can still easily be observed in the unmarked pronouns as well as in the alternation between ꦪ *y-* and ꦠ *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.

(89) a. *Ang harya Paradan tandās kaleri.*
ang=har-ya Ø= Paradan tanda-as kal-eri
AT= beat-3SG.M TOP=Paradan fly-P rag-INS
'Paradan, he beats the fly with a rag.'

b. *Sa haryāng tanda kaleri.*
sa= har=yāng tanda-Ø kal-eri
PT=beat=3SG.M.A fly-TOP rag-INS
'The fly, he beats it with a rag.'

c. *Ang harya Paradan yos kaleri.*
ang=har-ya Ø= Paradan yos kal-eri
AT= beat-3SG.M TOP=Paradan 3SG.N.P rag-INS
'Paradan, he beats it with a rag.'

d. *Ang harya Paradan tandās rari.*
ang=har-ya Ø= Paradan tanda-as rari
AT= beat-3SG.M TOP=Paradan fly-P 3SG.INAN.INS
'Paradan, he beats the fly with it.'

The personal pronouns are used in just the same way as their full-NP counterparts would be, also in the non-core cases. Example (89a) shows a sentence

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.

with full subject and object NPs; example (89b) shows a variation of the sentence with the agent, ᨿᨚᨴᨚᨶ *Paradan*, replaced by the third person singular masculine agent pronoun ᨿᨕᨚᨀ *yāng* 'he'. In (89c), then, the patient, ᨾᨚᨶᨯᨚᨾ *tandās* 'fly', is replaced with the third person singular neuter patient pronoun ᨿᨚᨾ *yos*. In (89d), lastly, the instrument, ᨠᨚᨯᨚᨶᨚᨶ *kaleri* 'with a rag' is replaced with the third person singular inanimate instrumental pronoun ᨿᨚᨶ *rari* 'with it'. Furthermore, complex NPs are in complementary distribution with pronouns, since pronouns are anaphoras for NPs. Thus also, an NP which contains an adjective is wholly replaced by a personal-pronoun determiner phrase (DP), as in (90).

(90) a. *Ang ninye vehimley veno.*
ang=nin=ye.Ø vehim-ley veno
AT= 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
AT= wear=3SG.F.TOP that-P.INAN beautiful
'*She wears a beautiful it.'

c. *Ang ninye adaley.*
ang=nin=ye.Ø ada-ley
AT= wear=3SG.F.TOP that-P.INAN
'She wears it.'

Comparing the example sentences in (89) with the TOP column in Table 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 ᨿᨚ *-ra*, but ᨿᨚᨠᨚ *-ara*. The following two examples illustrate the parallel more clearly—observe the person marking on the verb in (91) and the corresponding object pronouns in (92).

(91) 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.'

(92) a. *Sa manye ang Pila* ***ya.***
sa= man-ye ang=Pila ya.Ø
PT=greet-3SG.F A= Pila 3SG.M.TOP
'Pila, she 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, he greets her.'

Another important property of pronouns is that agent pronouns (and patient pronouns under certain circumstances) replace person agreement by cliticizing to the verb stem. Person agreement morphology is a domain of verbs and will be dealt with in more detail in section 4.5.1. Example (93a) again has full subject and object NPs; the verb displays ཡ -*ya* as the agreement suffix for the masculine agent NP. Example (93b), then, replaces the agent NP with a pronoun. This is not expressed by a free form like *he*, though, but as a pronominal clitic, ཡང་ -*yāng* 'he'.

(93) 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 use the genitive forms in Table 4.6. They are special compared to regular personal pronouns in that, like adjectives, they need ད *da-* as a supporting particle in order to stand alone. The main use for the genitive pronouns as listed in Table 4.6 is to show possession. This means that unlike personal pronouns, they are by themselves not in complementary distribution with nominal NPs, compare (90). Instead, they are used as modifiers, as (94) shows, which makes them superficially similar to adjectives.

(94) *nangaya ledo nā*
nanga-ya ledo nā
house-LOC blue 1SG.GEN
'in my blue house'

However, possessives do not share typical morphological properties of adjectives, namely, they cannot be compared (*ངའི་ཨང་ **nā-eng* '*myer', *ངའི་ཝ་ **nā-vā*

Table 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*

'*myest'). Fronting them in predicative statements like the one in (95) is possible even without the supporting particle, though. Alternatively, a phrasal construction with ཝི་ལྱང་ *vilyang-* 'belong', as indicated in (96), may be used.

(95) a. *Ada-nangāng* *da-nā.*
ada=nanga-ang da-nā
that=house-A one=1SG.GEN
'That house is mine.'

b. *Nā* *ada-nangāng.*
nā ada=nanga-ang
1SG.GEN that=house-A
'Mine is that house.'

(96) *Ang* *vilyangyo* *ada-nanga* *yas.*
ang=vilyang-yo ada=nanga-Ø yas
AT= belong-3SG.N that=house-TOP 1SG.P
'That house belongs to me.'

4.2.2 Demonstrative pronouns

Demonstrative pronouns in Ayeri are formed with the demonstrative prefixes: ཎ་ *eda-* 'this' (proximal), ཨ་ *ada-* 'that' (distal), and ད་ *da-* 'such' (indefinite). These

are combined with a morpheme *nya*, which is related to the word for 'person', *nyān*. Table 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 4.8 gives the token frequencies of the various attested forms.

Of all the cases, the agent demonstratives have the highest token frequency at a combined 52.5%, especially the distal pronouns are very frequent in the sample. 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 has been noted above already that it is related to the word *nyān* 'person'. Both factors, high frequency and semantic mismatch, may thus encourage contraction. Still, the question of high frequency especially of *adareng* remains. It may be explained by looking at a few typical examples of this word in context, however; see (97).

In all of the example sentences in (97), *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 *adareng* as the dummy agent in predicative contexts over the personal pronoun *reng* 'it'. Otherwise, however, demonstrative pronouns work regularly as deictic anaphora: 'this', 'that', and 'such (a)'. As nominal elements they are declined for case—but not for number, which is a notable difference between demonstrative pronouns and personal pronouns. Example (98) illustrates the use of the indefinite demonstrative pronoun, *danya* '(such) one' in reference to the

[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).

Table 4.8: Token frequencies of attested demonstrative pronouns

Pronoun	Gloss	Frequency	
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%

(97) a. *Nay ang nelyo-ikan sungkorankiḫas, 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=2.A way-TOP 2.GEN …
'It's very useful if you get lost […]' (Becker 2015 [2013]: 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] (Becker 2015 [2013]: 22)

singular NP ᨿᨚᨚᨠᨾ *nangās* 'house'; (99) gives an example of a demonstrative pronoun in an oblique case, ᨣᨾᨿᨿᨠᨶ *adanyari* 'due to that', with reference to the plural NP ᨣᨾᨾᨾᨿᨠᨿᨿᨿ

(100) *Adareng* *da-dipakanas.*
adareng da=dipakan-as
that-A.INAN such=pity-P
'That is such a pity.'

ད: *da-* can be used to express English 'one' in the sense of a deictic anaphora as well. Thus, in order to express 'the ADJECTIVE one', it may be necessary to use the full demonstrative pronoun, ཌཎ *danya*, since adjectives themselves do not decline, and Ayeri largely avoids undeclined NPs. An example is given in (101). Also see section 4.1.3 above for examples of situations where nouns regularly do not exhibit case marking. It is also possible, however, to abbreviate ཌཎ *danya* to the prefixed form ད: *da-*, which may be complemented by adjectives and possessive pronouns alike. The adjective or pronoun basically forms a complex anaphora, then, which in most circumstances can be marked for case and topic like any other nominal element, as demonstrated in (102).

(101) a. *Silvyo* *ku-mino-ing* *danyāng* *kivo.*
silv-yo ku=mino=ing danya-ang kivo
look-3SG.N like=happy=so one-A little
'The little one looks so happy.'

b. *Sa noyang* *danya* *tuvo.*
sa= no=yang danya-Ø tuvo
PT=want=1SG.A one-TOP red
'I want the red one.'

(102) *Sa noyang* *da-tuvo.*
sa= no=yang da=tuvo-Ø
PT=want=1SG.A one=red-TOP
'I want the red one.'

If incorporated in this way, the adjective cannot take comparison morphology: a construction like the one in (103a) is not possible since inflections cannot be appended to clitics. Moreover, the meaning of (103b) differs from what was intended, since the ཝ *-vā* clitic is appended not to the adjective, but to the composite nominal as such.

4.2.3 Interrogative pronouns

Interrogative pronouns are all formed with ཟ: *si-*, combined with a lexical element; ཟ: *si-* is also related to the relativizer ཟ *si*. The interrogative pronouns are listed in

(103) a. **da-tuvo-vāley*
da=tuvo=vā-ley
one=red=SUPL-P.INAN
Intended: 'the reddest one'

b. !*da-tuvoley-vā*
da=tuvo-ley=vā
one=red-P.INAN=most/*SUPL
'most red ones'
Intended: 'the reddest one'

Table 4.9. All interrogative pronouns share the property of being placed *in situ*: 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 do not inflect for case, which preempts the difference between zero-marked topicalized and overtly case-marked untopicalized forms. This is illustrated in (104).

(104) a. *Sa petigavāng* *inun* *sikan?*
sa= petiga=vāng inun-Ø sikan
PT=catch=2.A fish-TOP how.much
'How much fish did you catch?'

b. *Sa-sahavāng* *sitaday?*
sa∼saha=vāng sitaday
ITER∼come=2.A when
'When will you return?'

In the table on interrogative pronouns above, ᜐᜒᜨ᜿ *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 replaces, and it can also be topicalized, since the element asked about is likely high in discourse salience; compare (105).

(105) a. *Ang yomayo* *sinya* *adaya?*[15]
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 from inanimate referents in its interrogative pronouns, so there is no distinction between 'who' and 'what'. ཤི2ཎ *sinya* and/or the verb will instead inflect according to context and to the speaker's expectations or knowledge (compare Table 4.10). Thus, there is also no dedicated question word for 'why', since one can simply ask 'due to what/whom' by inflecting ཤི2ཎ *sinya*; ཤི2ཎ་ཟ *sinyisa* is ཤི2ཎ *sinya* marked for causative case by the suffix ཟ *-isa*. Declension of ཤི2ཎ *sinya* for different purposes is shown in (106).

(106) 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?'

b. *Ang prantoyva sinyisa?*
ang=prant-oy=va.Ø sinya-isa
AT= ask-NEG=2.TOP what-CAUS
'Why (= because of what) did you not ask?'

While there is no single, dedicated word for 'why', Ayeri distinguishes between two kinds of 'how': ཤི་ཟ *simin*, on the one hand, asks about the way by which—or the circumstances under which—an action is carried out, see (107a). ཤི་ཁ *sikay*, on the other hand, asks for the means or tools used to carry out an action, see (107b). Thus, the correct answer to the question in (107a) needs to treat the process of making bread, since ཤི་ཟ *simin* asks about the way of doing something; a correct answer to the question in (107b), on the other hand, will likely mention grinding utensils, like a mill or a pestle.

(107) a. *Le tiyavāng vadisān simin?*
le= tiya=vāng vadisān-Ø simin
PT.INAN=make=2.A bread-TOP how
'How do you make bread?'

b. *Le peralvāng sagan sikay?*
le= peral=vāng sagan-Ø sikay
PT.INAN=grind=2.A flour-TOP how
'How do you grind flour?'

Comparing Tables 4.9 and 4.10, strikingly, there are two possbilities to express 'where'—lexical ཤི2ཟ *siyan* and synthetic ཤི2ཎ *sinyaya*. These, however, are not strictly interchangable, even though some variation is to be expected. While

15 This may be shortened to just ཤི2ཎ་ཀ་ཐ *sinyāng adaya?* 'who (is) there?' (who-A there).

Table 4.9: Interrogative pronouns

Pronoun	Literal meaning	Idiomatic meaning
sinya	'which one' (*nyān* 'person')	'who', 'what', 'which'
sikan	'how much' (*ikan* 'much')	'how much', 'how many'
sikay	'with what' (*kayvo* 'with')	'how' (tool, circumstance)
simin	'which way' (*miran* 'way')	'how' (way, procedure)
sitaday	'which time' (*taday* 'time')	'when'
siyan	'which place' (*yano* 'place')	'where'

Table 4.10: Declension paradigm for ꣡ꣁ꣡ꣀ꣡ꣂ *sinya* 'who, what'

Case	Pronoun	Translation
TOP	*sinya*	'who', 'what'
A	*sinyāng*	'who', 'what'
A.INAN	*sinyareng*	'who', 'what'
P	*sinyās*	'whom', 'what'
P.INAN	*sinyaley*	'whom', 'what'
DAT	*sinyayam*	'for/to whom', 'for/to what'
GEN	*sinyana*	'whose', 'from whom', 'from what'
LOC	*sinyaya*	'in/at/on whom', 'in/at/on what'
CAUS	*sinyisa*	'due to/because of whom', 'due to/because of what'
INS	*sinyari*	'by whose help', 'with what'

𑖨𑖬𑖿𑖭 *siyan* refers to *places* in general, the 𑖨𑖬𑖿𑖩 *sinya* series refers to *discourse participants* both animate and inanimate more specifically, as shown in (108).

(108) a. *Saravāng siyan? — Ya Sikatay.*
sara=vāng siyan — ya= Sikatay
go=2.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=2.A who-TOP — LOC=Haki
'"Who are you staying with?"—"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.[16] In order to classify languages, Haspelmath (1997) generalizes the map displayed in Figure 4.1 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 (1997) 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). From Haspelmath's (1997) 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 (1997) concedes that these seeming correlations are skewed by areal effects, "because indefinite pronouns have a strongly areal distribution" (241).[17] He still presumes, however, that word-order typology may have

16 Since it is an invented language, the value of this assertion to linguistic typology remains doubtful, however.

17 The map in *WALS* (Haspelmath 2013) suggests areal clusters at least for generic-noun based systems in Africa and Southeast Asia. *WALS* classifies 60% of the sampled languages as possessing interrogative-based indefinite pronouns, with evidence for this type quoted for all

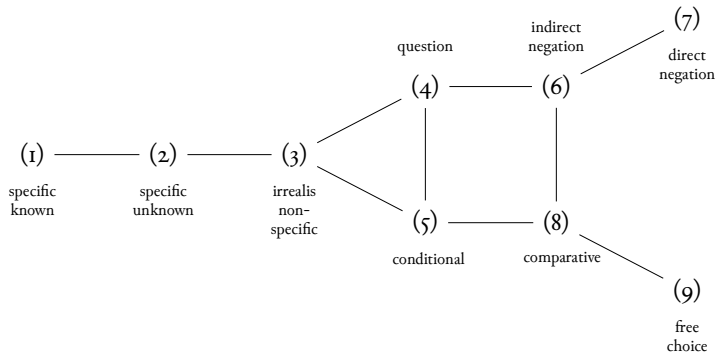


Figure 4.1: The implicational map for indefinite pronoun functions (Haspelmath 1997: 4)

Table 4.11: Indefinite pronouns

Property	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	—

an effect on the formation of indefinites insofar as it correlates with grammaticalization more generally (Haspelmath 1997: 239).

Haspelmath (1997) 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 Table 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. See (109) for an example.

Likewise, Ayeri does not distinguish between animate and inanimate indefinite

continents except Africa. The next smaller group, generic-noun based, falls behind at 26%. The lack of evidence for the interrogative type in Africa despite being the most frequent one in the set may be due to the unavailability of data. Crossreferencing constituent-order and indefinite-pronoun systems did not yield a result which obviously suggested a correlation.

(109) English:

a. **I don't know something about this.*

b. *I don't know anything about this.*

referents. The same pronouns are used for either, although the shortening of ཡ་ལིན་ཉ *arilinya*, ཡ་ལིན་ *arilya*, can only be used for inanimates, similar to the distinction in the demonstrative pronouns between ཨ་ཌཱ་ཉཱ *adanyāng* 'that one' (that.one-A) and ཨ་ཌ་ཉ་ཀ *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 ཉ *-nya* element in common, which we also find in the interrogative and demonstrative pronouns, and which also appears in the word ཉཱ *nyān* 'person'. In the same way, the pronouns related to the notion of place have a ཡ *ya-* or ཡ *yan-* part, which we also find in ཡ *yano* 'place'.[18] In a regular continuation of this pattern, the indefinite pronouns of time all have an element related to ཏ *taday* 'time' in common, which is obscured somewhat by palatalization in ཏ *tajaril*. The exception to this series, then, is ཛ *jānyam*, which is the multiplicative numeral formed from ཛ *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 ཨ *are-* is not a recognizable morpheme in the modern language.[19] ཨ་ཡ *miranaril* is a regular formation of ཨ *miran* 'way, manner' combined with the quantifier (!) for indefinite amounts, ལ *-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 ཨ *en*, either prefixed or suffixed, which is related to the quantifier ཕ *-hen* 'every, all, each' and can presumably be found even on ཨ *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 ལ *aril* which, as we have just seen above, is otherwise used to refer to inspecific quantities, for instance, ཝ་ཌ་ཁ *vadisān-aril* 'some bread' (bread=some). In the case of ཨ *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

[18] ཡ *yano* itself is an old nominalization and very likely related as a morpheme to the locative suffix ཡ *-ya*.

[19] I probably made this up as I was going, many years ago, and without considering systematic implications, since I was unaware of them at the time.

the other pronouns in this series than on semantic grounds. In any event, ཨ་ཏ་ *metay* has the semantically more 'proper' ཨ་ *me-* prefix, relating it to absolute inspecificity.[20] This alternation is employed to distinguish between the meaning of 'sometime', that is, occurring once at an unspecified point in time, and ཏ་ཙ་ལིར་ *tajaril* 'sometimes', which refers to repeated occurrence at inspecific times. The alternation between ཨ་ཡ་ན་ལིར་ *miranaril* and regularly derived ཨ་ཡ་ན་ *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 ཡ་ *-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, ཏ་ཉ་ *ranya*. The etymological connections of the ཏ *ra* part are not presently known, perhaps the postposition ཏ་ *ran* 'against' is related.

The chart in Table 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, Haspelmath (1997) gives the example sentences in (110), 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 this (2–3).[21]

As we have seen in Table 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 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 ཨ་ *me-* can be used for (3) to (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 ཉ *nya*) decline; they can also be topicalized. The other indefinites, relating to place, time and manner, are indeclinable and also cannot

20 Compare German *irgendjemand* and French *n'importe qui* 'no matter who'.

21 The example sentences 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.

(110) 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.

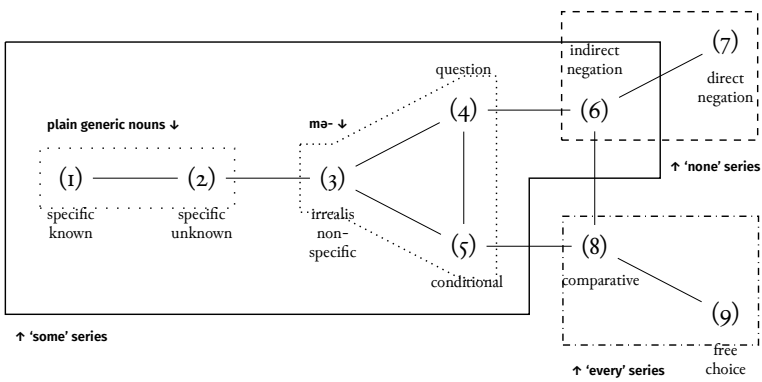


Figure 4.2: Map of indefinite pronoun functions in Ayeri

be topics for this reason. For the 'specific' categories (1) and (2) it is furthermore possible to use the plain generic nouns, ꠀꠞꠀꠞ *nyān* 'person', ꠝꠞꠀꠞ *linya* 'thing', ꠝꠞ *yano* 'place', ꠞꠀꠝꠞ *taday* 'time', ꠝꠞꠀꠞ *miran* 'way', however. Figure 4.2 shows the groupings for Ayeri; (111) gives examples of all types.

(111) 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	2.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	*sarayan*	***yanoya***	*agon.*
ang=sara=yan		yano-ya	agon
AT=	go=3PL.M.TOP	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=1SG.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=2.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=2.A some-sound-TOP AT= punch-1SG.TOP 2.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=1SG.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=1SG.A PT.INAN=can= find=2.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=2.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 described before, Ayeri connects relative clauses to main clauses with the relativizer ᨿᨶ *si*. This relativizer can be declined for case in accordance with the relative clause's head in the matrix clause. The respective forms can be gathered from Table 4.12 (column 'Pronoun').

As explained in section 3.3, if the relativizer is immediately following its lexical head, only the base form ᨿᨶ *si* is used, which is illustrated in (112a). Here, the head of the relative clause is ᨾᨠᨿᨾᨠᨿᨠᨿᨠᨿ

Table 4.12: 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[22]	siya	siyayam	siyana	siyaya	siyaisa	siyari
CAUS	sisa	sisayam	sisana	sisaya	sisaisa	sisari
INS	seri	seriyam	serina	seriya	serīsa	seriri

(112) 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 AT= tend=3SG.M.TOP garden-P IPL.GEN
'This is the young man who tends our garden.'

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 Table 4.12. 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 4.13.

Compared to the unmarked relativizer स *si*, which occurs 50 times in the sample (out of 80), 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 these are the only ones attested. The sample is really much too small to make

Table 4.13: Token frequencies of attested complex relative pronouns

Pronoun	Gloss	Frequency
siyā	REL.Ø.LOC	7
sirī	REL.Ø.INS	3
sinā	REL.Ø.GEN	1
siyām	REL.Ø.DAT	1
Total		12

actually meaningful judgments here, however. Complex relative pronouns are illustrated in (113). Importantly, 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. Compare (114) to (116) for examples.

(113) a. *Le vacyang koya sileyya ang layāy adanyana.*
le= vac=yang koya-Ø si-ley-ya ang=laya=ay.Ø adanya-na
PT.INAN=like=1SG.A book-TOP REL-P.INAN-LOC AT= read=1SG.TOP that-GEN
'I like the 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.'

Example (114) shows a sentence in which the relative pronoun, ungrammatically, forms the controller of topic agreement on the verb in the relative clause: ར *na* as a genitive topic is supposed to refer to སོ་ཟླང་ *sobayāng* 'teacher' in the matrix clause by way of the relativizer ཤ *si*. This relativizer would then necessarily carry a zero-morpheme topic marker. There is no resumptive pronoun in the relative clause, however, so the relativizer itself forms the anaphora in the relative clause referring to the relativized argument in the matrix clause. This is not possible.

(114) **Mica edaya sobayāng si (ʔsī) 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=1SG.A book-P.INAN
'Here lives the teacher from whom I borrowed a book.'

In (115), the relative pronoun *ཟླང་ **sāng* carries no overt case agreement since it

follows its antecedent (*꠱꠰꠸꠰꠸꠰ *sangang* otherwise)—the long vowel identifies it as the agent of the relative clause; the verb agrees accordingly. There is no resumptive agent pronoun here either, so the relative pronoun stands in for the agent NP that would be necessary if the relative clause were an independent sentence. Using a relative pronoun as an agent-NP replacement in this sentence is likewise ungrammatical, though, and so is verb agreement with the declined relative pronoun. Similarly, in (116), 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.

(115) **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 1SG.DAT
'Here lives the teacher who taught me math.'

(116) **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=1SG.A school-TOP
'Here lives the teacher whom I used to hate in school.'

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 or patients, and neither can it stand in directly as the agent or patient NP of the relative clause. It is interesting in this regard that Ayeri *does*, however, allow this for recipients, maybe since by their nature as goals they carry something of a locative connotation (compare (113b)). This would make them 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 ꠱꠰꠸꠰꠸꠰꠸꠰ *sitang-* in combination with a personal pronoun, compare (117). If the agent of the action

[23] It would be interesting to explore this in terms of grammaticalization, since it is possible that this behavior reflects a stage of the language before ꠸꠰꠸꠰ *-yam* had been grammaticalized as the dative marker. In this respect, it would be necessary as well to explore whether the similarity between the dative marker ꠸꠰꠸꠰ *-yam* and the locative marker ꠸꠰ *-ya* is indeed etymological or merely incidental.

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 (118).

(117) *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.'

Doing the same with a non-patient pronoun does not work, however. Thus, the sentence in (118), with the reflexive ཤ་ཐང་: *sitang* marked on the verb, is not equivalent to the one in (119). Here, ཤ་ཐང་: *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. 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'), compare (120).

(118) *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.'

(119) *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.'

(120) *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.'

ཤ་ཐང་ *sitang* is also used to carry quantifiers referring to a pronominal suffix as in (121a). Appending a quantifier directly to the conjugated verb itself can be ambiguous; consider (121b). It appears that ཤ་ཐང་ *sitang* does not act as the controller of the verbal topic marker, however. This is illustrated also by the ability of ཤ་ཐང་ *sitang* and a non-topic agent pronominal suffix to appear side by side, as in (122). For an analysis from the point of view of syntax, refer to section 6.4.3. As described previously, lexical NPs and pronominal suffixes on the verb are mutually exclusive; see section 3.2.5 (p. 89). The correct answer to the question, ཨང་ཁ་ལྷ་ཏཱ།ཤ་ཟ།ཤ་ཟ།ཁྱོ་ཏཱ་ཨ་ཏ།ལ། *Ang koronya sinya guratan?* 'Who knows the answer?', is ཡང་:ཉ།ཨ *Yang-nyama* 'Even

I', with the quantifier clitic leaning on the free pronoun directly, however, since there is no referential ambiguity in this. Introducing an adverb shows that the reflexive–quantifier compound follows the conjugated verb and its adjuncts, as in (123).

(121) a. *Ang koronay sitang-nyama guratanley.*
ang=koron=ay.Ø sitang=nyama guratan-ley
AT= know=1SG.TOP self=even answer-P.INAN
'Even I know the answer.'

b. !*Ang koronay-nyama guratanley.*
ang=koron=ay.Ø=nyama guratan-ley
AT= know=1SG.TOP=even answer-P.INAN
'I even know the answer.'
Intended: 'Even I know the answer.'

(122) *Le koronyang sitang-nyama guratan.*
le= koron=yang sitang=nyama guratan-Ø
PT.INAN=know=1SG.A self=even answer-TOP
'The answer, even I know it.'

(123) *Nimpyāng para-ma sitang-nama.*
nimp=yāng para=ma sitang=nama
run=3SG.M.A quick=enough self=only
'Only he is running quickly enough.'

Besides reflexive pronouns, Ayeri also has a reciprocal pronoun, ศิลฺ *sitanya* 'each other'. This pronoun acts the same as other pronouns and can be inflected according to its function in the clause, as (124) shows.

(124) 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 enclitics on adjectives. The markers involved are །ཨིང་ *-eng* (COMP) and །བ་ *-vā* (SUPL). Adjective comparison is exemplified in (125). In (125a) the comparee is missing, while in (125b), the quality under comparison, ཐོན་ཀཊོ་ནཔ།ཨིང་ *tingracas ban-eng* 'a better musician', is a patient NP; the standard, ཨཚ *Maha*, is expressed by an adverbial genitive NP. The example in (125c) similarly expresses a quality without a group of referents to compare to. In all these cases, it is also possible, however, to use a more complex analytic construction using verbs (compare section 6.4.4).

(125) 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. *Naratang, yāng pokamayās para-vā.*
nara=tang yāng pokamaya-as para-vā
say=3PL.M.A 3SG.M.A shooter-P fast=SUPL
'They said he is the fastest shooter.'

4.3.2 Negation

Adjectives in Ayeri can be negated in two ways: categorially with །ཨ་ *-arya*, and pragmatically with །ཡ *-oy*. These correspond to English *un-*, and *in-*, *il-*, *ir-*, etc. for categorial negation, and to *not* for pragmatic negation. །ཡ *-oy* absorbs the final vowel of the root it is attached to.

Example (126) displays an adjective which carries the categorial negation marker ꠅꠞꠣ *-arya*; the adjective in (127) carries the simple, pragmatic negation marker ꠅꠣ꠸ *-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 ꠏꠣꠘ꠸ *pakoy* 'not safe' now is not necessarily ꠏꠣꠘꠞꠣ *pakārya* 'unsafe' in general, but simply not safe in the context of the here and now of the utterance.

(126) *Telbaya* *miseryanang* *ku-ardārya.*
telba-ya miseryan-ang ku=arda-arya
show-3SG.M method-A like=suitable-NEG
'The method proved unsuitable.'

(127) *Pakoy* *eda-yanoreng.*
paka-oy eda=yano-reng
safe-NEG this=place-A.INAN
'This place is not safe.'

Besides *ad hoc* derivation of categorial negatives with ꠅꠞꠣ *-arya*, there are also a few lexicalized instances. These have an idiomatic meaning and the negator or the word itself may be irregularly reduced. A few examples are listed in (128).

(128) a. ꠀꠣꠘ *ban* 'good' → ꠀꠣꠘ꠰ *banaya* 'ill, sick'
b. ꠘ꠸꠰ꠏ꠸ *kovaro* 'easy' → ꠘ꠸꠰ꠏꠞꠣ *kovarya* 'awkward'
c. ꠎ꠸꠰ꠠ꠰ꠏꠣ *sirimang* 'straight' → ꠎ꠸꠰ꠠ꠰꠰ *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] compare (129).

Adjectives can also be derived from verbs with the causative suffix ꠅꠞꠎ *-isa*, which often correspond to adjectives derived from the past participle form in English—the meaning is often, but not necessarily, relating to an achieved state. The suffix may change the last vowel to ꠣ *u* or drop it; a specific pattern to these changes is not recognizable. The derivations may be idiomatic occasionally, as some derivations in (130) show.

[24] Adjectives and split-off modifiers in noun–noun compounds are thus similar at least superficially (compare section 4.1.5).

(129) a. ཨ་ཡི་རི *Ayeri* 'Ayeri (n.)' ~ ཨ་ཡི་རི *Ayeri* 'Ayeri (adj.)'
b. ཟི་ཧཱ *disa* 'soap, lye' ~ ཟི་ཧཱ *disa* 'soapy, alkaline'
c. མཁྱོ *gino* 'drink' ~ མཁྱོ *gino* 'drunk'
d. བཅས་ཁ *pahamay* 'danger' ~ བཅས་ཁ *pahamay* 'dangerous'
e. གཙུག *sempay* 'peace' ~ གཙུག *sempay* 'peaceful'

(130) a. ཁྱེ་ལང་: *kelang-* 'connect' → ཁྱེ་ལང་པོ་ *kelangisu* 'connected, related'
b. བཀྲོ་བ: *palung-* 'distinguish' → བཀྲོ་བ *palungisa* 'various'
c. རྩོ་ལཱ: *sundala-* 'lose' → རྩོ་ལཱ་ *sundalisu* 'lost'
d. ཐཱན: *tahan-* 'write' → ཐཱ་ཡིག *tahanis* 'literary'
e. ཝེ: *vesa-* 'give birth' → ཝ་ཟ *vesisa* 'native'

There are also at least two words where an ཨིས *-isa* adjective is derived not from a verb, but from a word of a different part of speech—in this case, a noun, and another adjective. These are given in (131).

(131) a. ཨ་པིན *apin* 'luck' → ཨ་པི་ཡ *apinisa* 'lucky'
b. ཨི་ཡ *iray* 'high' → ཨ་ཡ་ཡི *irayisu* 'exalting'

4.3.4 Other affixes

As with nouns, other affixes which can be attached to adjectives as clitic hosts are the prefix ཁུ: *ku-*, expressing semblance as in (132), as well as quantifying and grading suffixes, of which the suffixes used to express comparative and superlative are essentially a grammaticalized variety, since ཨེང *-eng* can also be used like 'rather', as in (133).

(132) *Ku-pikisu paray-parayang.*
ku=pikisu paray~paray-ang
like=scared DIM~cat-A
'The kitten is like scared.'

(133) *Napay-eng eda-prikanreng.*
napay=eng eda=prikan-reng
spicy=rather this=soup-A.INAN
'This soup is rather spicy.'

4.4 Adpositions

Adpositions are one of the few parts of speech whose stem itself does not inflect. Ayeri's most basic adpositions are derived from relational nouns like *top*, *front*, *bottom*. This is also likely the reason why Ayeri mostly employs prepositions, with

Table 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'	*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'

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 adpositional object.[25] The conceptual 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

Table 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] For allative and ablative meanings, an NP may also appear in the dative and the genitive, respectively, though without being governed by an adposition, as described in section 4.1.3. Also compare section 6.3 (p. 349 ff).

probably been grammaticalized relatively recently—their non-preposition meaning is still transparent, they are still rather complex in their phonology, and some of them are even polysyllabic in spite of not being composed and covering rather basic meanings.[26] Since these nouns have ceased to function as common nouns in this context due to grammaticalization, however, it is not possible to inflect them in the way described in section 4.1. Thus, for example, while (134a) is grammatical, (134b) is not. Instead, the grammatical way to express (134b) is given in (135a), using [illegible] *ling* as a preposition with the adpositional object in the locative case. In this case, since *on* is the expected position of sitting with regards to chairs, the preposition can even be dropped, as in (135b).

(134) 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.'[27]

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.'

With regards to (134a), it is worth to mention Hagège's (2010) 'Proof by Anachrony Principle' (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 something like (136a) is not possible. In this

26 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 represent '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.

27 The corresponding sentence with a preposition is [illegible] *Le yomareng kanka ling rivanya* 'There is snow on top of the mountain' (PT.INAN=exist=3SG.INAN.A snow-TOP top mountain-LOC).

(135) a. *Ang nedraye ling nedrānya.*
ang=nedra=ye.Ø ling nedrān-ya
AT= sit=3SG.F.TOP top chair-LOC
'She sits on a chair.'

b. *Ang nedraye nedrānya.*
ang=nedra=ye.Ø nedrān-ya
AT sit=3SG.F.TOP chair-LOC
'She sits on a chair.'

example, ᨿᨿᩁᩮᩅᩣᩁᩣᩅᩣᩁᩣᩅᩣᩁᩣ

(137) 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.'

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.'

(138) *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.'

Table 4.15: Prepositions (directional)

Preposition		*manga* + PREP
agonan	'outside'	'out'
avan	'at bottom'; + DAT: 'down'	'to the bottom'; + DAT: 'down to'
eyran	'under'	'under'
eyrarya	'over'	'across, over'
kayvo	'with, beside'	'along'
kong	'inside'	'into'
ling	'on top'; + DAT: 'up'	'onto, while'; + DAT: 'up to'
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'

As demonstrated before, another quasi-inflection adpositions in Ayeri can host is the directional marker མང་ *manga* (see section 3.1). While most of the prepositions in Table 4.14 have a static meaning, མང་ *manga* indicates a motion in the direction of the respective location, thus ཁྱོང་ *kong* 'inside' becomes མང་ཁྱོང་ *manga kong* 'into', for instance. Table 4.15 repeats the table of prepositions above for the most part and gives the respective directional meanings. The prepositions མང་རཱཧ *mangasaha* and མང་ཀཱ *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 མང་ *manga*, which they already contain. Note, however, that མང་རཱཧ *mangasaha* and མང་ཀཱ *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. This is illustrated by the difference between (139a) and (139b).

(139) a. *Ang nimpay kardangyam.*
ang=nimp=ay.Ø kardang-yam
AT= run=ISG.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=ISG.TOP towards school-LOC
'I'm running towards (a/the) school.'
(up to the building)

Also note that, while Germanic languages like English make frequent use of set expressions which combine a verb with an intransitive 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 listed in (140).

(140) a. ཤོལ་ཀྱང་: མང་ཀཱ *il- mangasara* 'surrender' (give away)
b. ཀླན་ཟ: མང་ཀཱ *lant- mangasara* 'distract' (lead away)
c. ཉིཾ: མང་ཀཱ *nimp- mangasara* 'escape' (run away)
d. ཟཱཔ: གྱཱ་ཏྲེ *tapy- dayrin* 'save (valuable assets)' (put aside)
e. ཟཱཔ: མཱ་ཡཱ *tapy- miday* 'put on' (put around)
f. ཏཱ: མང་རཱཧ *tura- mangasaha* 'forward' (send towards)

The verbs listed in (140) do not govern a prepositional object in the locative case in their idiomatic meaning, as displayed by (141), in which ཐ་ཕ་ཏ་ཡི *batangiman* and ཨ་ཛ་ཨ་ཛ *sa Ajān* do not serve as arguments of ལ་ཁོ *lanco* or མང་ཀཱ *mangasara*, but

as arguments of the phrasal verb ꠞꠇꠣꠀ꠆ꠞꠇꠣꠀꠞꠀꠞꠀ *lant- mangasara*. Colloquially, ꠞꠇꠣꠀꠞꠀꠞꠀ *mangasaha* and ꠞꠇꠣꠀꠞꠀꠞꠀ *mangasara* may also be shortened to just ꠞꠀꠞꠀ *saha* and ꠞꠀꠞꠀ *sara*.

(141) *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 verbal expression in English contains a preposition, there is a separate verb in Ayeri, as in (142), or the same verb is used in Ayeri for both the plain English verb and the one extended by a preposition, as in (143). 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, like ꠞꠀꠞꠀꠞꠀ *pangyam* 'to the back' does in (144b).

(142) a. ꠀꠞꠀꠞꠀ꠆ *apand-* 'descend, climb down'
b. ꠞꠀꠞꠀ꠆ *ling-* 'ascend, mount, climb up'
c. ꠞꠀꠞꠀ꠆ *pah-* 'remove, take away'

(143) a. ꠀꠞꠀ꠆ *ka-* 'throw (away)'
b. ꠞꠀꠞꠀ꠆ *mat-* 'warm (up)'
c. ꠞꠀꠞꠀꠞꠀ꠆ *sikl-* 'rip (up)'

(144) a. *Ang sahayan manga pang nangaya.*
ang=saha=yan.Ø manga=pang nanga-ya
AT= go=3PL.TOP DIR= 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.'

4.4.2 Postpositions

While Ayeri mainly uses prepositions—which is by far the most common order for VO languages (Dryer 2013b)—it also uses a number of postpositions, which are given in Table 4.16. As can be read from the table, 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 ꠞꠀꠞꠀ *rayu*. The etymologies of ꠞꠀꠞꠀꠞꠀ *pesan* and ꠞꠀꠞꠀꠞꠀ *yamva* are unclear to date.

The postposition ꠞꠀꠞꠀ *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 better be treated as a homonym of the preposition rather than as an ambiposition (Hagège 2010: 115). Example (145a) illustrates the use of ꩡꩀ *pang* as a preposition, (145b) the use of ꩡꩀ *pang* as a postposition. This is in contrast to typical ambipositions such as German *wegen* 'because of, due to', which has the same meaning in either position and the position variant is just a matter of style.

(145) a. *Sa lancāng pel manga pang penungya.*
sa= lant=yāng pel-Ø manga=pang penung-ya
PT=lead=3SG.M.A horse-TOP DIR= back barn-LOC
'The horse, he leads it behind the stable.'

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.'

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 ꧁ꩱ *kong* 'inside', ꩡꩲ *ling* 'on', ꩡꩱꩬ *marin* 'in front of', ꩡꩀꩲꩥ *manga luga* 'through', ꩡꩀꩡꩁꩄ *mangasaha* 'towards', and ꩡꩀ *pang* 'behind' come to mind as doubling for 'within', 'while', 'before', 'during', 'in + *time*', and 'ago', respectively (also see Table 4.17). Since postpositions are not primarily derived from nouns, there are dedicated forms for expressing temporal relationships, namely, ꩡꩁꩄꩡꩆꩬ *masahatay* 'since', ꩡꩁꩬ *pesan* 'until', and, as the only form with a double function, ꩡꩀ *pang* 'after, past'.

Of the examples above, the use of ꧁ꩱ *kong* in (146a) 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 ꩡꩀꩡꩁꩄ *mangasaha* in (146b), on the other hand, is more idiomatic. While the prepositions in these two examples each take an NP complement, example (146c) 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 in Table 4.17

Table 4.16: Postpositions

Postposition		Etymology (or related to)
da-nārya	'despite, in spite of'	*da-* 'such' + *nārya* 'but'
kayvay	'without'	*kayvo* 'with' + *-oy* (NEG)
masahatay	'since'	*mə-* (PST) + *saha-* 'come' + *taday* 'time'
nasyam	'according to'	*nasyyam* 'following'
pang	'beyond, after, past'	*pang* 'back'
pesan	'until'	—
ran	'against'	possibly *ran* 'from it'
rayu	'diagonally across'	*rayu* 'slanted, oblique, skewed'
yamva	'instead of'	—

Table 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

(146) a. *Ang mirāyn kong bihanya sam.*
ang=mira=ayn.Ø kong bihan-ya sam
AT= do=1PL.TOP inside week-LOC two
'We will do it within two weeks.'

b. *Ang girenja mangasaha pidimya-kay.*
ang=girend=ya mangasaha pidim-ya=kay
AT= arrive=3SG.M.TOP towards hour-LOC=few
'He will arrive in a few hours.'

c. *Ang layaye-ikan Pila ling yeng pakur.*
ang=laya-ye=ikan Ø= Pila ling yeng pakur
AT= read-3SG.F=much TOP=Pila on 3SG.F.A sick
'Pila read a lot while she was sick.'

can be complemented by either an NP or a clause. This is illustrated for ཨ་རི་ཟ་ཏ་ཡ *masahatay* in (147).

(147) 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.'

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 (VP) is often also 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, progressive aspect, 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.

Table 4.18: Conjugation paradigm for ས*sob-* 'learn, teach' (monoconsonantal root)

Person	Topicalized	Clitic agent	Translation
1SG	*sobay*	*sobyang*	'I learn'
2SG	*sobva*	*sobvāng*	'you learn'
3SG.M	*sobya*	*sobyāng*	'he learns'
3SG.F	*sobye*	*sobyeng*	'she learns'
3SG.N	*sobyo*	*sobyong*	'it learns'
3SG.INAN	*sobara*	*sobreng*	'it learns'
1PL	*sobayn*	*sobnang*	'we learn'
2PL	*sobva*	*sobvāng*	'you learn'
3PL.M	*sobyan*	*sobtang*	'they learn'
3PL.F	*sobyen*	*sobteng*	'they learn'
3PL.N	*sobyon*	*sobtong*	'they learn'
3PL.INAN	*sobaran*	*sobteng*	'they learn'
IMP	*sobu!*	'learn!'	
HORT	*sobu-sobu!*	'let's learn!'	
ITER	*so-sob-*	'learn again, relearn'	
PTCP	*sobyam*	'learning'	

4.5.1 Person marking

As described in section 3.3, Ayeri conjugates its main verbs canonically in agreement with the agent NP. Verb conjugation as such is extremely pervasive, to the point where verb roots cannot appear without inflection. The basic conjugation paradigms are given in Tables 4.18–4.20. 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.

Agreement causes verbs 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). Verbs only have agreement proper with third persons; their form, then, is the same as that of verbs with topicalized pronominal inflection (see section 4.2.1).

Regarding person–number inflection, verbs may be divided into three classes:

Table 4.19: Conjugation paradigm for ཨན་ལྡན་ *anl-* 'bring' (biconsonantal root)

Person	Topicalized	Clitic agent	Translation
1SG	*anlay*	*anlyang*	'I bring'
2SG	*anlava*	*anlavāng*	'you bring'
3SG.M	*anlya*	*anlyāng*	'he brings'
3SG.F	*anlye*	*anlyeng*	'she brings'
3SG.N	*anlyo*	*anlyong*	'it brings'
3SG.INAN	*anlara*	*anlareng*	'it brings'
1PL	*anlayn*	*anlanang*	'we bring'
2PL	*anlava*	*anlavāng*	'you bring'
3PL.M	*anlyan*	*anlatang*	'they bring'
3PL.F	*anlyen*	*anlateng*	'they bring'
3PL.N	*anlyon*	*anlatong*	'they bring'
3PL.INAN	*anlaran*	*anlateng*	'they bring'
IMP	*anlu!*	'bring!'	
HORT	*anlu-anlu!*	'let's bring!'	
ITER	*an-anl-*	'bring again, bring back'	
PTCP	*anlyam*	'bringing'	

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 ཝ *-va*. Monoconsonantal roots are unaffected by this restriction, however, hence the conjugation suffixes can simply be appended as they are; this is illustrated with the verb ཞོབ་ *sob-* 'teach, learn' in Table 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 ཇུ་ཨཏ་ *gurat-* 'answer' is ཇུ་ཨཅ *guraca* '(he) answers', and the third person feminine plural of ཨན་ཨ *abag-* 'roam, wander' is ཨན་ཕ*ཇ *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 ཨ*ཅ *ic-* 'glide, slide' is not *ཨ*ཅ **icava*, but ཨ*ཅ *icva* 'you glide, you slide'.

Since /v/ is neither a vowel nor a glide, an epenthetic *-a-* is inserted between

Table 4.20: Conjugation paradigm for ནོ *no-* 'want' (vocalic root)

Person	Topicalized	Clitic agent	Translation
1SG	*noay*	*noyang*	'I want'
2SG	*nova*	*novāng*	'you want'
3SG.M	*noya*	*noyāng*	'he wants'
3SG.F	*noye*	*noyeng*	'she wants'
3SG.N	*noyo*	*noyong*	'it wants'
3SG.INAN	*noara*	*noreng*	'it wants'
1PL	*noayn*	*nonang*	'we want'
2PL	*nova*	*novāng*	'you want'
3PL.M	*noyan*	*notang*	'they want'
3PL.F	*noyen*	*noteng*	'they want'
3PL.N	*noyon*	*notong*	'they want'
3PL.INAN	*noaran*	*noteng*	'they want'
IMP	*nu!*	'want!'	
HORT	*nu-nu!*	'let's want!'	
ITER	*no-no-*	'want again'	
PTCP	*noyam*	'wanting'	

the stem and the second-person suffix ར *-va* for verbs whose stem ends in -CC.[28] This is illustrated in Table 4.19 for the verb ཨན་ལ *anl-* 'bring'. The second-person conjugation of this verb is not *ཨན་ལ་ **anlva* because the cluster *-nlv-* is illegal, but rather ཨན་ལ་ *anlava*. Since Ayeri treats two successive instances of the same consonant as a single segment—there is no gemination—verbs like རོལ་ *silv-* 'see' conjugate like monoconsonantal roots with regards to consonant clusters. That is, the second person of རོལ་ *silv-* is not *རོལ་ར **silvava*, as one might expect, but རོལ་ *silvva*. A further exception to this are verbs ending in -Cs, since -Cs-C- is commonly resyllabified as -C-sC- (see chapter 1, footnote 12). Thus, the second-person form of ཁར་ *kars-* 'freeze' is not *ཁར་ **karsava* as expected, but ཁར་ *karsva* 'you freeze'.

28 A *root* is understood here as the uninflected verb morpheme, for instance, ཨན་ *anl-*, ཨཀ *ic-*, ནོ *no-*, or ཟོ *sob-*. A *stem* may contain inflections and further inflectional affixes attach to it; it may also host clitics. Roots are thus counted as a subset of stems here.

Table 4.21: Conjugation paradigm for བཟློ *apa-* 'laugh' (vocalic root in -a)

Person	Topicalized	Clitic agent	Translation
1SG	*apāy*	*apayang*	'I laugh'
2SG	*apava*	*apavāng*	'you laugh'
3SG.M	*apaya*	*apayāng*	'he laughs'
3SG.F	*apaye*	*apayeng*	'she laughs'
3SG.N	*apayo*	*apayong*	'it laughs'
3SG.INAN	*apāra*	*apareng*	'it laughs'
1PL	*apāyn*	*apanang*	'we laugh'
2PL	*apava*	*apavāng*	'you laugh'
3PL.M	*apayan*	*apatang*	'they laugh'
3PL.F	*apayen*	*apateng*	'they laugh'
3PL.N	*apayon*	*apatong*	'they laugh'
3PL.INAN	*apāran*	*apateng*	'they laugh'
IMP	*apu!*	'laugh!'	
HORT	*apu-apu!*	'let's laugh!'	
ITER	*ap-apa-*	'laugh again'	
PTCP	*apayam*	'laughing'	

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 Table 4.20 with the verb ཞུ *no* 'want'. Verb stems ending in *-a* undergo crasis regularly for the first person suffixes, hence, the topicalized first-person singular form of བཟློ *apa-* 'laugh' is བཟློ *apāy* 'I laugh' (compare Table 4.21). Verb stems ending in a diphthong in /ɪ/ are treated as a hybrid of monoconsonantal and vocalic stems, since the diphthong's final /ɪ/ is treated as /j/ before a vowel: ཕ�u *palayay* 'I rejoice', ཕyuca *palayva* 'you rejoice'.

As mentioned above, the form of the third-person agreement suffixes on verbs is essentially the same as that of topic-marked third-person pronominal clitics. Any other person-marking on verbs except for third-person agreement is, in fact, a topicalized pronoun clitic, as we will see in the course of the following discussion. Unlike English, Ayeri does not use agent pronouns in addition to person agreement on verbs. Consider the two examples of English in (148).

(148) English:

a. *John greets Mary.*
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 in (149), on the other hand.[29]

(149) a. *Ang manya Ajān sa Pila.*
ang=man-ya Ø= Ajān sa=Pila
AT= greet-3SG.M TOP=Ajān P= Pila
[3SG.M] [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 ᨿ *-ya* in (149a) as person agreement: ᨣᨚᨿᨚ *Ajān* is a male name in Ayeri while ᨠᨠᨿ *Pila* is a female one; the verb inflects for a masculine third person, which tells us that it agrees with the one doing the greeting, ᨣᨚᨿᨚ *Ajān*. ᨣᨚᨿᨚ *Ajān* is also who this is about, which is shown on the verb by marking for an agent topic. In (150b), there is only anaphoric reference to ᨣᨚᨿᨚ *Ajān*; the full agent NP is not realized. Very broadly thus, the verb marking here seems to be like in Spanish, where you can drop the subject pronoun; see (150).

Example (149b) probably does not seem conspicious if we assume that Ayeri is pro-drop, 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 (151).

[29] Most of the following account is taken nearly verbatim from a previously published blog article, Becker (2016d). 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.

(150) Spanish:

a. *Juan saluda a María.*
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.'

(151) *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 (149b) was glossed as *=ya.Ø* (=3SG.M.TOP) rather than just as *-ya* (-3SG.M). In turn, this question leads us to another characteristic of Ayeri we need to consider, namely, that the topic morpheme on NPs 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-indicating) 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 (152b) as a clitic on the verb rather than as an independent morpheme.[30]

(152) 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.'

30 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.

What is remarkable, then, is that ꡁ *ye* (3SG.F.TOP) in (152b) is the very same form that appears as an agreement morpheme on the verb in (153), just like ꡅ *-ya* (3SG.M) in various examples above (also compare the examples in section 4.2.1). This also holds for all other personal pronouns. Moreover, ꡅꡂꡒ *-yāng* as seen in examples (151) and (152b) may also be used as a free pronoun in equative statements with predicative nominals, as well as other such case-marked personal forms, as illustrated in (154). As for case-marked person suffixes on verbs, the assumption so far has been that they are clitics, especially since the marking strategy displayed in (155) is the grammatical one in absence of an agent NP (compare section 3.2.5, p. 89).

(153) *Ang purivaye yāy.*
ang=puriva=ye.Ø yāy
AT= smile=3SG.F.TOP 3SG.M.LOC
'She smiles at him.'

(154) a. *Yeng mino.*
yeng mino
3SG.F.A happy
'She is happy.'

b. *Yāng naynay.*
yāng naynay
3SG.M.A too
'He is, too.'

(155) 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. For an overview, compare Table 4.22. In this table, especially the middle, transitional category is interesting in that what looks like verb agreement superficially can still trigger topicalization marking, which is indicated in column 2 by an index *i*. 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 (b) in the type 3 transitive cell. The question for this example is whether it 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 2.

Table 4.22: Verb inflection types in Ayeri

	Type 1: Clitic pronouns	**Type 2: Transitional**	**Type 3: Verb agreement**
Inflectional categories	person number case	person number case/topic	person number
Examples (intransitive)	…*=yāng* …=3SG.M.A	—	…*-ya*$_i$ …*-ang*$_i$ …-3SG.M …-A
Examples (transitive)	*sa*$_i$ …*=yāng* …*-Ø*$_i$ PT=…=3SG.M.A …-TOP	*ang*$_i$ …*=ya.Ø*$_i$ …*-as* AT=…=3SG.M.TOP …-P	a. *ang*$_i$ …*-ya*$_i$ …*-Ø*$_i$ …*-as* AT=…-3SG.M …-TOP …-P b. *sa*$_i$ …*-ya*$_j$ …*-ang*$_j$ …*-Ø*$_i$ PT=…-3SG.M …-A …-TOP

As for personal pronouns fused with the verb stem like in the first column, Corbett (2006) points out that

> [i]n terms of syntax, pronominal affixes are arguments of the verb; a verb with its pronominal affixes constitutes a full sentence, and additional NPs 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 (99–100)

This seems to be exactly what is going on, for instance, in (151) and (155), 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 concerned (Comrie 1989: 45–46).[31]

Taking everything written above so far into account, it looks as though Ayeri is in the process of grammaticalizing personal pronouns into person agreement (Lehmann 2015: 42–45; van Gelderen 2011: 493–497). Corbett (2006) illustrates an early stage of such a process with the example in (156).

(156) Skou (Corbett 2006: 76–77):

a. *Ke* *móe* *ke=fue.* (**Ke móe fue.*)
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 van Gelderen (2011) calls the *subject cycle*, the "oft-noted cline expressing that pronouns can be reanalyzed as clitics and agreement markers" (493) applies here, and as well in Ayeri. However, while she continues to write that in "many languages, the agreement affix resembles the emphatic pronoun and derives from it" (494), Ayeri does the opposite at least in part and uses the case-unmarked form of personal pronouns for what resembles verb agreement most closely. This, however, should not be too controversial either, considering that, for instance,

31 The topic NP marked on the verb may be 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.

Table 4.23: 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

semantic bleaching and phonetic erosion go hand in hand with grammaticalization (Lehmann 2015: 136–137; van Gelderen 2011: 497).

As pointed out above in (155), Ayeri usually exhibits verbs as agreeing with agents and occasionally patients (but only in absence of agent NPs)—not topics as such. Ayeri, thus, has subject agreement. Agreement with a patient NP may seem a little counterintuitive, but is licensed by Ayeri's semantics-based case marking which marks patient-subjects of passive clauses as such; the agent case is not fully equivalent to a nominative which marks the subject function. Formally, also, agent NPs usually follow the verb, and it does not seem 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 may serve as another explanation for why verbs can agree with patients as well if the agent NP is absent. Taking into account that the grammaticalization process is still ongoing also makes this seem less strange—there is still some relative freedom in how morphemes may be used if a paradigm has not yet fully settled (Lehmann 2015: 148–150). Formally, thus, verbs simply become agreement targets of the closest semantically plausible nominal constituent which can serve as a subject.

From the previous discussion of Ayeri's agreement and pronoun morphology, it may seem as though person agreement consists entirely of enclitic pronominal affixes. The question is, how to determine and describe what actually happens in terms of morphology. Corbett (2006) offers a typology along with test criteria; compare Table 4.23. According to this typology, a pronominal affix is syntactically an argument of the verb, but has the morphology of an inflectional form (compare section 3.2.5, p. 89). If we compare this to the gradient given in Table 4.22 above, it becomes evident that type 1 definitely fulfills these criteria, and type 2 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 2 were 'merely' an agreement target. The inflection in type 3, 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 in this case. As example (155) shows, however, marking of type 3 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 4.22, columns 1 and 2 are independent means of referring to discourse participants mentioned earlier, whereas the person suffix in column 3 needs support from an NP in the same clause as a source of semantic features to share. This becomes apparent when comparing the examples in (157) to each other.

(157) 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 types 1 and 2 is *referential*, as shown in (157ab), it is best counted as consisting of cliticized pronouns (Corbett 2006: 103). Since mere agreement as in type 3 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. This is why (157c) is marked as ungrammatical: the agreement suffix ꞉ᴜ *-ya* itself does not define the semantic features of the clause's subject; it requires a subject NP to exist concurrently.

As for Corbett's (2006) *balance of information* criterion, Table 4.22 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 additional grammatical features indicated by the first two inflection types that are not expressed by NPs. Under a very close understanding of Corbett (2006), though, example (158) 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. Corbett (2006) writes that in the world's languages, this feature 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 3a,

which is exemplified by (158). Here, redundant plural marking on the subject NP is omitted, but plural number still surfaces in the agreement suffix on the verb.[32]

(158) *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 discussed previously, verb marking of the types 1 and 2 is independent as a reference, so there is *unirepresentation* of the marked NP. In contrast, verb marking of type 3 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). A further property that hinges on types 1 and 2 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 the two examples in (159) is ungrammatical.

(159) 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 (Corbett 2006: 109)—also compare example (148b) above. Instead, the suffixed agent pronoun replaces any possible person agreement on the verb in (160).[33]

(160) a. *Lampyāng.*
lamp=yāng
walk=3SG.M
'He walks.'

b. **Lampya yāng.*
lamp-ya yāng
walk-3SG.M 3SG.M.A
Intended: 'He walks.'

In conclusion, we may assert that Ayeri appears to be in the process of grammaticalizing pronouns as verb inflection, however, how far this grammaticalization process has progressed is dependent on syntactic context. Ayeri displays a

32 From an LFG point of view, the number feature of ᯀᯬᯖ *kay* in (158) coalesces with the semantic features provided by ᯅᯬᯖᯒ *ayon* in the maximal projection; agreement is therefore with the whole agent NP rather than just with ᯅᯬᯖᯒ *ayon* as the NP's categorial head.

33 Also see section 3.2.5 (p. 89) for an analysis from a syntactic point of view.

full gamut from personal pronouns (usually agents) glued to verbs as clitics to agreement with coreferential NPs that is transparently derived from these personal pronouns. With the latter, the complication arises that pronouns are not allowed as agreement controllers as one might expect, but only properly nominal NPs. Information on agreement with committee nouns and coordinated NPs with incongruent agreement features can be found in section 6.1.2 (p. 323).

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) 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 (117). 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-initial 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, since 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:

(161) *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 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 which happened in the past if not further modified. The three degrees of past tense are marked with ཀ: *kə-* (near/immediate), ཨ: *mə-* (recent), and ཝ: *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 (162b).

(162) 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 ཏཱ་མ་ལ *tamala* 'yesterday' or ཤ་ཅན་ཆ་ཝ་ཅན་ཡ་ཁང *pericanya menang pang* 'a hundred years ago'. In the presence of an explicit time adverbial, redundant tense marking is also dropped subsequently.

(163) *Ang kondayn kadanya terpasānley bihanya sarisa.*
ang=kond=ayn.Ø kadanya terpasān-ley bihan-ya sarisa
AT= eat=IPL.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 (163) by the adverbial phrase ཟླས་རྒྱས་ *bihanya sarisa* 'last week', hence the verb appears here simply as ཀོ་ཁ་ཎ་ *kondayn*, rather than with redundant past-tense marking as ཨ་ཀོ་ཁ་ཎ་ *məkondayn*. Since past tense is often underspecified in Ayeri, the language also does not employ past forms in narrative contexts like English, among others, commonly does, compare (164).

(164) The sky above the port was the color of television, tuned to a dead channel.
(Gibson 1995: Ch. 1)

The quote in (164) is the famous opening line of Gibson's 1984 novel *Neuromancer,* which never mentions any definite dates, but is clearly set in a future world.[34] 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 (1985) "[m]ore common than marking narrative contexts [...] is not marking them—quite a considerable number of languages use unmarked verb forms in narrative contexts" (113). The example in (165) from an Ayeri translation of the well-known Aesopian fable, 'The North Wind and the Sun' (compare International Phonetic Association 2007: 39, and section B.1), illustrates Ayeri's non-marking of tense on verbs in narrative contexts.

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 analogous to the ones indicating past tense: ཨ *pə-* indicates immediate/near future (NFUT), ཤ *sə-* indicates impending future (FUT), and ནི *ni-*

[34] Christian (2017) reports that Gibson himself pictured his novel as set around 2035, though that he had since realized that this could not be right. One of the characters, the Finn, "makes an offhand reference to the 'Act of '53' as a law [which] deals with the citizenship status of artificial intelligences" (Christian 2017; also compare Gibson 1995: Ch. 5)—this is very unlikely to refer to 1953.

(165) *Ang manga ranyon adauyi Pintemis nay Perin, engyo*
ang=manga=ran-yon adauyi Ø= Pintemis nay Perin eng-yo
AT= PROG= argue-3PL.N then TOP=North Wind and 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.'

indicates remote future (RFUT). Underlying the reduced vowels in ཁ: *pə-* and ཏ: *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 ནི: *ni-* regarding /i/. The examples in (166) show the future tense markers in context.

(166) 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, references to future time are often not explicitly marked if the time frame is clear enough from context or has been clarified with such adverbials as ཐ་ཤས་ *tasela* 'tomorrow', ཕང་རྩ་ཀཱ་ཧ་རྒ་ *mangasaha pericanya* 'in a year', གཏན་ *metay* 'sometime', or པི་བཅུ་རར་ *bihanya mararya* 'next week', as in (167). It is possible as well to explicitly mark the verb for future tense, for example, to make a promise, or to otherwise emphasize that the future condition will come to pass, as illustrated in (168).

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

(167) *Ang raypāy vaya bihanya mararya.*
ang=raypa=ay.Ø vaya bihan-ya mararya
AT= stop=ISG.TOP 2.LOC week-LOC next
'I'm stopping by you next week.'

(168) *Səsidejang tasela, diran.*
sə-sideg=yang tasela diran
FUT-repair=ISG.A tomorrow uncle
'I *will* repair it tomorrow, uncle.'

the past. Ayeri does not use auxiliary verbs, so its morphological and pragmatic means of tense marking have to cover this relation as well. To indicate pre-past events, it is customary to explicitly mark the verb for past time, in difference to the common lack of morphological marking for plain past tense. However, since it is possible for the ꦩ *mə-* prefix to be used to refer to 'regular' past events from a present point of view as well, context again has to provide that the deictic origin is a point in the past rather than the speaker's present.

(169) CONTEXT: Ajān's past travels

Ya məsaraya iri maritay ang Ajān 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 example in (169) 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 ꦩ *mə-* out, as described in section 4.5.2; compare (170).

(170) 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 has already gone 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, ནོ: *no-* 'want; plan to' must be used, together with explicit past marking. Since ནོ *no* is used as a modal particle in this context (see section 4.5.5), inflection is placed on the content verb. The time relation expressed in (171) 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 ཨ་ཏ་ཁ་ཅ *Tasankan*.

(171) 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.'

Past in future

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 ཨི་ཤ *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). Strictly speaking, (172) does not make it explicit whether Ajān *will arrive* before evening or *will have arrived*. In order to indicate that the action is complete, the cessative adverb ཨ་ཡི་ཤ *mayisa* 'be done; ready' may be added, as in (173).

(172) 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.'

(173)

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 treats 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 (1985) 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" (69). He further argues that

> [t]he 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 realize it by straightforward means. In Ayeri, the most tangible way of expressing completeness of an action is to use adverbs like [illegible] *mayisa* 'ready, done', [illegible] *iri* 'already', [illegible] *ikan* 'completely, wholly' (also as an adjective); a quantifier like [illegible] *-hen* 'all'; verbs like [illegible] *samir-* 'finish', [illegible] *panga-* 'end', and [illegible] *raypa-* 'stop'; or an indefinite pronoun expressing entirety, like [illegible] *enya* 'everything, everybody' in (174).

(174) *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 [illegible] *manga*, which we already saw with directional prepositions above (section 4.4.1).

This clitic attaches to the immediate left of the verb, as displayed in (175).

(175) *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—morphological progressive marking only occurs in 27% of the languages in Dahl's (1985) sample. Typical of progressives, this form of the verb is not limited to present contexts, as exemplified in (175) above. Instead, it is possible to also use the progressive in past (176a) and future (176b) contexts, the latter being probably less typical, though.

(176) a. *Ang manga gumya Ajān tadayya si ya kongaye ang Pila*
ang=manga=gum-ya Ø= 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 tadayya si cunyo bekalang*
ang=manga=nimp=ay.Ø rang-ya taday-ya si cun-yo bekal-ang
AT= PROG= run=1SG.TOP home-LOC time-LOC REL begin-3SG.N festival-A
tasela.
tasela
tomorrow
'I will be running home when when the festival starts tomorrow.'

Ignoring the constructedness of the examples in (176), the time adverb is located in the relative clause in both sentences. For illustrative purposes, let us assume that a narrative context with the respective time frames has already been established in (176). As noted above, Ayeri prefers not to 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 ᎠᏁᏗ ᎠᏍ— *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 (176) 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 (1985) survey (96), Ayeri possesses a suffix for marking such actions on the verb: ᨕᨚᨗ *-asa*, where the first *-a* replaces the terminal vowel of a verb stem if present, compare example (177b). The habitual aspect 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 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 (177a), but can also be used in past contexts to express that something *used to* be done in the past, as in (177b). 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. Importantly, the verb root with habitual marking forms a new verb stem to which affixes may be attached. This is relevant for mood suffixes, which follow aspectual marking.

(177) 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.'

Iterative

Iterative aspect marks actions that are repeated at least once by reduplication. Its 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.

(178) a. ခဲ့ကြား *kuta-* 'thank' → ခဲ့ကြားခဲ့ကြား *ku-kuta-* 'thank again'
b. ခံရကၢး *amang-* 'happen' → ခံရးခံရကၢး *am-amang-* 'happen again'
c. ကၢတၢ်ဒုး *prant-* 'ask' → ကးကၢတၢ်ဒုး *pa-prant-* 'ask again'
d. ၃ၣ်ကၣ်ဒဲ *ayrin-* 'set' → ၃ၣ်းၣ်ကၣ်ဒဲ *ay-ayrin-* 'set again'

The words listed in (178) are examples of verbs and their reduplicated form for the purpose of iterative marking. An example for each of the previously mentioned onset types is included: ခဲ့ကြား *kuta-* exemplifies a CV onset, ခံရကၢး *amang-* a VC one; ကၢတၢ်ဒုး *prant-* has a CCV onset which is simplified to CV in the reduplicated form, and ၃ၣ်ကၣ်ဒဲ *ayrin-* begins with a diphthong. The reduplicated stem in each case functions as a new stem for other prefixes, that is, no morphological material can go between the reduplicated part and the lexical stem proper. Besides giving an example of the correct and incorrect order of attachment of the past prefix ဓး *mə-* with a partially reduplicated verb, the example in (179) also shows that there is, again, no restriction on the iterative aspect with regards to tense.

(179) a. *Məku-kutayāng.*
mə-ku∼kuta=yāng
PST-ITER∼thank=3SG.M.A
'He thanked again.'
b. **Ku-məkutayāng.*

Iterative reduplication is lexicalized at least in one verb, ဃးဃသ *sa-saha-* 'return'. Besides the meaning 'again', iterative reduplication may also indicate the meaning 'back', as in (180).

(180) *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 ဓကၢ *manga* for progressive aspect and partial initial reduplication for iterative aspect. Examples of this combination of aspectual marking are given in (181).

(181) 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 DIR= 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 རིས་ཝིཡང་ *sirimang* 'about to' (prospective) and ཙཡ་ *mayisa* 'ready; be done' (cessative), as well as the verb ཚུན་ *cun-* 'begin, start' (inchoative).

(182) a. *Saratang sirimang.*
sara=tang sirimang
leave=3PL.M.A about.to
'They are about to leave.'

b. *Konjang mayisa.*
kond=yang mayisa
eat=1SG.A be.done
'I am done eating.'

c. *Pəcunreng seyaryam.*
pə-cun=reng seyar-yam
NFUT-begin=3SG.INAN.A rain-PTCP
'It is going to start raining any moment.'

Prospective རིས་ཝིཡང་ *sirimang* (182a) and cessative ཙཡ་ *mayisa* (182b) 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 a grammatical function rather than lexical meaning with the original meaning still transparent, they appear to be on the verge of grammaticalization. In contrast, the inchoative verb ཚུན་ *cun-* (182c) is part of a periphrastic verb construction, that is, ཚུན་ *cun-* requires a semantically contentful VP as a complement rather than an NP. The content/main

verb appears in an infinite form marked by ꩜ -*yam*, which will be described from a morphological perspective in section 4.5.6, and in section 6.4.3 from that of syntax.

4.5.4 Mood

Besides various aspects, Ayeri also marks mood other than realis: irrealis, imperative, hortative, and negative. These are expressed by suffixes on the verb and typically follow aspectual marking where it is expressed by a suffix, that is, the habitual suffix ꩡꩬ -*asa*. The following subsections will discuss each of the modal categories expressed by suffixes; modal particles proper will be discussed in section 4.5.5.

Irrealis

Irrealis marking in Ayeri is indicated by the suffix ꩜ -*ong* and marks that an action is thought of as hypothetical by the speaker, whether he or she expects it to be realized or not:

(183) *Sahongvāng edaya, ming silvongvāng sitang-vāri.*
saha-ong=vāng edaya ming=silv-ong=vāng sitang=vāri
come-IRR=2.A here can= see-IRR=2.A REFL=2.INS
'If you came/had come here, you could see/have seen it yourself.'

As (183) 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 ꩡꩬ *saha*- becomes ꩡ꩜ *sahong*-, to which further mood suffixes may be added, and finally, person marking. The same suffix, ꩜ -*ong*, is also used in other contexts expressing inactual events, for instance, in reported speech such as in (184a), or in complement clauses expressing a wish about the actualization of a hypothetical event, as in (184b).

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 ꩢ *mya* 'be supposed to, shall' may be added, see section 4.5.5. Example (185) gives a sentence expressing requirement. As (185a) shows, a rendition with the wished-for

(184) a. *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.'

b. *Hanuyang, koronongyang maritay.*
hanu=yang koron-ong=yang maritay
wish=1SG.A know-IRR=1SG.A before
'I wish I had known this before.'

action in the irrealis mood is ungrammatical, while the rendition with an optional ꩜ *mya* and an otherwise plain verb in (185b) is acceptable.

(185) a. **Arapnang, sa garongyāng hatay.*
arap=nang sa= gara-ong=yāng hatay-Ø
require=1PL.A PT=call-IRR=3SG.M.A police-TOP

b. *Arapnang, sa (mya) garayāng hatay.*
arap=nang sa= (mya=) gara=yāng hatay-Ø
require=1PL.A PT=(shall=)call=3SG.M.A police-TOP
'We require that he call the police.'

Negative

Negative mood is used to negate verbs, which is separate from irrealis marking: negation of verbs is marked by the suffix ꩜ *-oy*, which has an allomorph *-u* before diphthongs in romanization and also in pronunciation. The Tahano Hikamu spelling is more conservative here and keeps ꩜ 〈-oyay〉 for [waɪ] (-NEG=1SG.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: ꩜ *-ong* + ꩜ *-oy* → ꩜ *-ongoy*.

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, as displayed in (187). This is to say that Ayeri allows for multiple negation as a means to emphasize the impossibility of something.

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, as in (188a), it is unmarked for case, see section 4.1.3. Moreover, no

(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=1SG.TOP honestly that-P.INAN
'I didn't steal it, honestly!'

c. *Tendongoyvang* *sarayam* *adaya.*
tend-ong-oy=vang sara-yam adaya
dare-IRR-NEG=2.A go-PTCP there
'You would not dare to go there.'

(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.'

distinction is made between singular and plural second-person addressees, so that the marker is ᳬ *-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, as in (188b), where ᳬᳫ *gira-* is shortened to ᳬᳫ *gir-* before appending the imperative marker.

(188) a. *Tangu* *yām,* *Yan!*
tang-u yām Yan
listen-IMP 1SG.DAT Yan
'Listen to me, Yan!'

b. *Giru* *māy!*
gira-u māy
hurry-IMP INT
'Hurry up!'

Notably, imperative-marked 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 mood, however. Hence, for instance, (189) is grammatical, while the examples in (190) are not.

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 refrain from this action. Example (190a) shows the imperative verb as preceded

(189) *Saroyu* *yas!*
sara-oy-u yas
leave-NEG-IMP 1SG.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!'

by a locative topic marker, which is not logically impossible, but unacceptable by convention.[35] Example (190b) takes this one step further by displaying a cliticized object pronoun in the fashion of morphological passives (compare section 4.5.1). This is likewise ungrammatical, since imperatives generally imply a direct order to a second-person addressee, not an indirect order to arrange for a third person to be acted on.

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. Since 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. Regarding agreement morphology, the same restrictions as with 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!'

35 The translation of 'Ozymandias' in section B.3 deviates from this rule in the line ꩡꩱꩻꩲꩻꩲꩻꩲꩻꩲ *sa silvu gumo nā* 'my works, behold them'. This is poetic license, however.

Table 4.24: 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	*ḳila-*	*ḳila*	'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'

Example (191a) contains an imperative verb form, ꩌꩁ *sahu*, addressing a second person singular or plural. Example (191b), on the other hand, shows the corresponding hortative form, ꩌꩁ꩜ꩌꩁ *sahu-sahu*, in which a group including the speaker is addressed.

4.5.5 Modals

Modals in Ayeri express the notions of ability, desire, permission, requirement, obligation, and also of continuation, as indicated by Table 4.24. They can generally act as both fully inflectable intransitive verbs, as well as clitics which occur in combination with fully inflected content verbs.

(192) a. *Rua bahavāng baho, ang bihanoyya mirampaluy nas.*
rua= baha=vāng baho ang=bihan-oy=ya.Ø mirampaluy nas
must=shout=2.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. As a clitic, it rather acts similar to a prefix, like the progressive marker ꩆꩀ *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. This is illustrated 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 considered unacceptable, however, as (193) shows.

(193) **Ruavāng* *bahayam* *baho.*
rua=vāng baha-yam baho
must=2.AT shout-PTCP loudly
'You have to shout loudly.'

Regarding example (192b) and the modal's ability to inflect, Ayeri also has a verb that generally means 'do', namely, *mira-*. However, it is not common either to use this verb as a dummy to carry the inflection instead of the modal verb like in (194). 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 Table 4.24 should look reasonable to English speakers, Ayeri uses two verbs for modal particles which may seem odd: *vaca* 'like to', to express taking pleasure in doing something, and *diva* 'stay, remain', to express that the action is being prolonged. 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.'

The fact that modal particles in Ayeri retain their verbal semantics in spite of shedding verb morphology is probably even more obvious from examples (195) and (196), which show the alternation between full-verb use in (a) and modal use in (b) for both *vac-* and *div-*. In comparison to the other modals in Table 4.24,

(196) a. *Ang divay* *rangya* *tasela.*
ang=div=ay.Ø rang-ya tasela
AT= stay=1SG.TOP home-LOC tomorrow
'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.'

these two verbs in particular also stand out by virtue of their roots ending in a consonant instead of a vowel like in the other cases. This suggests that they may have been grammaticalized as modals only relatively recently, and there appears to be variation at least for ར *vac-*, for instance, in (197).

(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), ཡ *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 is that of the jussive mood in that the speaker issues an order or request to arrange for an action to happen instead of making a direct order to a second person. For convenience, (185b) is repeated here as (198). While the version without ཡ *mya* is an indirect order, including the modal adds a modicum of politeness by phrasing the indirect order as an instruction. Essentially, thus, adding the modal has an effect comparable to the use of the subjunctive 'he call' instead of the indicative 'he calls' in the English translation.

(198) *Arapnang,* *sa* (*mya*) *garayāng* *hatay.*
arap=nang sa= (mya=) gara=yāng hatay-Ø
require=1PL.A PT=(shall=)call=3SG.M.A police-TOP
'We require that he call the police.'

In addition to this use, ཡ *mya* is also used in commands to third persons, whether direct or indirect. This use is displayed in (199). 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 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.[36] This form is marked by appending ꠞꠣꠢꠤ *-yam* to the verb root. The participle is generally the form of verbal complements of intransitive subordinating verbs. For instance, ꠘꠤꠞ *cun-* 'begin' or ꠣꠢꠤꠢꠞ *manang-* 'avoid' both allow complementation with another verb, as shown in (200).

(200) a. *Cunyo pero perinang makayam.*
cun-yo pero perin-ang maka-yam
begin-3SG.N slowly sun-A shine-PTCP
'The sun slowly began to shine.'

b. *Manangye ang Nilan pengalyam badanas saha yena.*
manang-ye ang=Nilan pengal-yam badan-as saha yena
avoid-3SG.F A= Nilan meet-PTCP father-P in.law 3SG.F.GEN
'Nilan avoids to meet her father-in-law.'

The subordinated verb may also be fronted into the position between the subordinating verb and the subject, as in (201), especially when the subordinate verb is intransitive, like ꠣꠢꠤꠢꠞ *makayam* 'shining' in (201a). As (200b) shows in comparison to (201b), by fronting the subordinated verb, the arguments of the subordinate verb become available for topicalization. Compare section 6.4.3 for details on the syntactic operations possible with subordinating verbs, that is, control verbs (p. 372) and raising verbs (p. 375).

4.5.7 Other affixes

In the section on noun morphology, we have already encountered a number of proclitics that may attach to noun heads (see sections 3.2.5 and 4.1.4). Some of these can also attach to verbs. Furthermore, verbs may be modified by certain

[36] It might as well be referred to as an infinitive, but 'participle' is now the established term.

(201) a. *Cunyo pero makayam perinang.*
cun-yo pero maka-yam perin-ang
begin-3SG.N slowly shine-PTCP sun-A
'The sun slowly began to shine.'

b. *Sa manangye pengalyam ang Nilan badan saha yena.*
sa= manang-ye pengal-yam ang=Nilan badan-Ø saha yena
PT=avoid-3SG.F meet-PTCP A= Nilan father-P in.law 3SG.F.GEN
'Her father-in-law, Nilan avoids to meet him.'

quantifier clitics. The latter are dealt with in more detail in section 4.8; only a few relevant examples will be given here.

Prefixes

We have already encountered the prefix ᜇ *da-* 'so, such' in the previous section, as well as in the section on noun prefixes (see sections 3.2.5, p. 80; 4.1.4; and 4.5.6). With nouns, ᜇ *da-* 'such' patterns as a demonstrative with the deictic prefixes ᜁᜇ *eda-* 'this' and ᜀᜇ *ada-* 'that'. Distinguishing between near and far is not possible with verbs,[37] but pointing out that something is happening 'in this way, so' is still possible, hence ᜇ *da-* is also applicable to verbs. ᜇ *da-* can therefore act 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.

(202) a. *Da-mingya ang Diyan.*
da=ming-ya ang=Diyan.
so=can-3SG.M A= Diyan
'Diyan can (do it).'

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 ᜇ *da-* with verbs is related to the abbreviation of ᜇᜅ *danya* 'such one' as described in sections 3.2.5 (p. 78) and 4.2.2, where the demonstrative part, ᜇ *da-* may be split off the pronoun and attached to the adjective directly to express 'the ADJECTIVE one'. This practice has possibly been extended to verbs, as illustrated in (202). Example (102) from the mentioned section is

37 Unless there were a distinction between actions performed in the speaker's proximity and actions performed at a distance. Ayeri, however, does not make such a distinction. A cursory web search did not turn up evidence from natural languages either.

repeated here as (203) for the reader's convenience. When ད་ *da-* is used as an abbreviation for ད་རྒྱས་ *danyās* (such.one-P) or ད་རྒྱས་ཀྱི *danyaley* (such.one-P.INAN), as in (204), it may also appear prefixed to the verb.

(203) *Sa noyang* *da-tuvo.*
sa= no=yang da=tuvo-Ø
PT=want=1SG.A such=red-TOP
'I want the red one.'

(204) *Mya da-vehoyyāng.*
mya= da=veh-oy=yāng
shall=one=build-NEG=3SG.M
'He is not supposed to build one.'

As mentioned above, ད་ *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. ད་ *da-* in both examples in (205) has a presentative function rather than an anaphoric one.

(205) 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 ད་ *da-*, verbs may also host the ཀུ་ *ku-* 'like' proclitic, which we have already seen with both nouns and adjectives (compare sections 3.2.5, 4.1.4, and 4.3.4). The English translation in this context may rather be 'as though' than 'like', as indicated in (206), but the function is the same: expressing alikeness and resemblance.

(206) *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 (sections 3.2.5, p. 80, and 4.2.6), རང་ *sitang* 'self', the reflexive clitic, can appear as a prefix on verbs as well. This may be the case when

the patient of a transitive sentence signifies the same entity as the agent. Example (118) is repeated here as (207) for convenience.

(207) *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 refer to the same person. This means that instead of using the reflexive object pronoun ཏཱཥཱ་ཡེ *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 hosting proclitics, verbs may also host enclitics, namely, adverbial suffixes denoting degree, such as ཨ་ནི *-ani* 'not at all', ཨ་ཁེ *-ikan* 'much', ཀ་ཁ *-kay* 'a little', or ཨ་ངས *-ngas* 'almost' (also see sections 3.2.5, p. 94, and 4.8). 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, as in (208).

(208) 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 2.TOP
'It is you I just want to talk to.'

4.6 Adverbs

Adverbs in Ayeri are the counterparts of adjectives with regards to the modification of verbs and phrases. Like adjectives, they do not display agreement, though attributive adverbs may as well take suffixes for comparison ('run *faster*', 'climb *better*'). Adverbs may likewise be modified by the usual quantifying and grading suffixes, which have been analyzed here as being adverbial in nature themselves here. 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 (209a), where the attributive adjective བཟང་ *ban* 'good' follows the more functional adverb རིས་ *iri* 'already'. In (209b), on the other hand, the descriptive adjective ཕྱི་ *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* ('tightness of construction'): the closer the bond between two juxtaposed terms is, the higher is its degree of grammaticalization. This explains why རིས་ *iri* must follow the verb in (209a), while descriptive adverbs less central to the verb's meaning typically follow with increasing optionality.

(209) 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.'

Adverbs do not show agreement, however, attributive adverbs can be negated. This makes them very similar to adjectives, except that they do not modify nouns. The negative suffix for attributive adverbs is ཡོ་ *-oy*, which is demonstrated in (210).

(210) *Ersasayan napayoy ang Temisi.*
ers-asa-yan napay-oy ang=Temisi
cook-HAB-3PL.M spicy-NEG A= Northerner
'The Northerners cook in an unspicy way.'

The adjective རྒན་ *napay* 'spicy' has been seamlessly converted into an adjective here and negated to རྒན་ཡོ་ *napayoy* 'unspicy(ly)'. The semantic difference from the same sentence with the verb negated instead of the adverb in (211) is up to the choice of the speaker.

(211) *Ersasoyyan* *napay* *ang* *Temisi.*
ers-asa-oy-yan napay ang=Temisi
cook-HAB-NEG-3PL.M spicy A= Northerner
'The Northerners don't cook in a spicy way.'

Comparison of adverbs

Since actions may be 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. In order to form the comparative, the enclitic ᎿᏂᏗ *-eng* is appended to the adverb as shown in (212a). The superlative carries the enclitic ᏙᏳ *-vā* as a marker, as in (212b).

(212) a. *Ang rije* *ban-eng* *Sipra* *na* *Tapan.*
ang=rig-ye ban=eng Ø= Sipra na= Tapan
AT= draw-3SG.F good=COMP TOP=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.'

Māy and voy

The discourse particles ᏗᏥ *māy* 'yes' and ᏉᏲ *voy* 'no' can also appear in the fashion of 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 ᏗᏥ *māy* 'yes' and ᏉᏲ *voy* 'no' normally express affirmative/agreeing and negative/disagreeing responses as answers to closed questions, ᏗᏥ *māy*, for one, can be used adverbially as an intensifier, as in (213). In a similar way, ᏉᏲ *voy* can be used for negative intensification, which is demonstrated in (214). The negative intensifier replaces negation on the verb in this case, though the verb may still be negated as well for very forceful negation.

Besides this emphatic use, both ᏗᏥ *māy* and ᏉᏲ *voy* can also be used in tag questions. In this context, they reflect the expectation of the person asking with regards to the answer. Example (215a) poses a question with the expectation of an affirmative answer. This is indicated by using the affirmative particle, ᏗᏥ *māy*, after the verb. Example (215b), on the other hand, indicates that the asker has doubts about the issue in question and expects their opposite to decline or to

(213) 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.'

(214) 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 not a bad day at all.'

disagree. The negative particle, ꠞ *voy*, is placed in the position of adverbs—after the verb—accordingly.

(215) 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?'

4.6.2 Sentence adverbs

Ayeri also allows adverbs to modify clauses as a whole, for instance, to express the stance of the speaker, to concede an argument, or simply in order to connect clauses in an argumentative chain.

Stance adverbs

Adverbs indicating the stance of the speaker towards an assertion or a statement are, for instance: ꠀꠟꠟ *ankyu* 'really', ꠟꠟꠋꠢ *cuyam* 'actually, indeed, in fact', ꠑꠟꠊꠢ *kalam* 'honestly', ꠟꠟꠑꠢ *kuban* 'fortunately', ꠟꠟꠑꠞꠞ *kuniru* 'unfortunately', ꠓꠞꠊ *nilay* 'probably',

ཡོ་ཡོ། *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 (216) gives an instance of either position.

(216) 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, ཨ་ཤ་ *arēn* 'however, anyway' and ཉ་ཡ་ *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 (216b) above already showed an example of ཉ་ཡ་ *nārya* being used as a sentence adverb. With regards to this word, it is important to note that ཉ་ཡ་ *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 meaning, as illustrated by example (217) below.

(217) 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 ད:ཉ་ *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 an NP or a complementizer phrase (CP) as a complement. In the latter case, which is shown in (218b), there is no locative case agreement of the whole CP with the postposition, since there is no fitting agreement target to attach it to.

(218) 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.'

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: པོ་ཏན་ཡ། *deramyam* 'after all', རྐྱེ་ཆུ་ནས། *kaybunay* 'by the way', རྒྱ་ནས་ཀཱ *ku-nasya* 'as follows', སྨན་ཞུ *menanya* 'on the one hand', སྨི་རྒྱལ་ལུ *mirampaluy* 'otherwise', བཟོད་ཅེ *nāreng* 'rather', ནང་ལ *naynay* '(and) also, moreover, furthermore', ཕཱལ་ཅུ *palunganya* 'on the other hand', གཅན *panca* 'finally, eventually, in the end', གཞན *pinyan* 'please', རིང་ཡིན *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, པོ་ཏན་ཡ། *deramyam* 'after all' transparently derives from པོ་ཏ། *deram* 'matter of fact' declined for dative case (ཡ། *yam*, see section 4.1.3); རྒྱ་ནས་ཀཱ *ku-nasya* is derived from a phrase literally meaning 'as (it) follows'; and ཕཱལ་ཅུ *palunganya* 'on the other hand' literally means 'in difference', from ཕཱལ་ཅུ *palungan* 'difference, distinction'. Of the list given above, it may be noted that གཞན *pinyan* 'please' (from གཞ *pinya-* 'ask') is often found at the beginning of polite requests, as illustrated by (219).

(219) *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 since they connect two otherwise independent statements to show their relation to each other. Their meaning extends that of the 'pure', logical conjunctions ནང *nay* 'and' and སོ་ཡང *soyang* 'or'.[38] Part of this small class of words

[38] 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 4.9.

are the expressions ཏཱ *bata* 'if, whether',[39] ཁཡ *kada* 'then, thus', ཁཡ:ཁཡ *kada-kada* 'so that ...again', ཁ་ལྡ་ *kadāre* 'so that', ནཱ་ཡ *naynay* 'moreover, furthermore, and also', ནཱ་ཡ *nāreng* '(but) rather', ནཱ་ཡ *nāroy* 'but not', ནཱ་ཡ *nārya* 'but, except that, though, yet', ཟི་ཡ *sining* 'that is', and ཡ་ཡ་ཡ *yanoyam* 'because, for, since'. Examples are provided by (220). Regarding (220b), it needs to be pointed out that ནཱ་ཡ *nārya* can also be used as a regular adverb. In those cases it is considered to have less contrastive force, however: postposed ནཱ་ཡ *nārya* is best translated as 'though, although' (compare section 4.6.2).

(220) a. *Le rimasayang kunang sirutayya, kadāre ming toryang ban-eng.*
le= rima-asa=yang kunang-Ø sirutay-ya kadāre ming=tor=yang ban=eng
PT.INAN=shut-HAB=1SG.A door-TOP night-LOC so.that can= sleep=1SG.A good=COMP
'I usually shut 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.'

Since verbs can be negated and reduplicated for grammatical purposes, the adverbs ཁཡ:ཁཡ *kada-kada* 'so that ...again' and ནཱ་ཡ *nāroy* 'but not' are mostly used with predicative adjectives, since equative 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 ཁཡ:ཁཡ *kada-kada* and ནཱ་ཡ *nāroy*, respectively. An example of each is given in (221).

As described above (section 4.5.3), partial reduplication of the verb expresses iterative aspect, which in Ayeri is used to mean both 'VERB again' and 'VERB back'. The reduplicated form ཁཡ:ཁཡ *kada-kada*, as displayed in (221a), is irregular if we assume that it is formed from ཁ་ལྡ་ *kadāre* 'so that'; the regular outcome of iterative reduplication would be *ཁ:ཁ་ལྡ་ **ka-kadāre*. As a conjunction, however, it is relatively frequent. 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 (221b) likewise exhibits slight irregularity if we consider

[39] Conditional protasis and apodosis are often unmarked in Ayeri, however, it may still be desirable occasionally to use a particle to indicate them explicitly.

(221) 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
1SG.A north-GEN indeed but.not 1SG.A stupid
'I may be from the north, but I am not stupid.'

Table 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'

that it is the negated form of ꠁꠣꠞꠀ *nārya* 'but'; the regular outcome would have been *ꠁꠣꠞꠀꠟꠀ **nāryoy*, which simplified to ꠁꠣꠞꠀꠟꠀ *nāroy*, presumably as well due to its relatively high token frequency.

4.6.3 Demonstrative adverbs

Besides demonstrative pronouns like ꠅꠘꠣꠞ *adanya* 'that (one)' (see section 4.2.2), and indefinite pronouns like ꠟꠀꠞꠀꠤ *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 Table 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 ꠘꠣ *da-* 'such' are unattested. Thus, instead of the hypothetical form with ꠘꠣ *da-*, a full-NP adverbial with a generic noun has to be used: *ꠘꠣꠟ **daya* → ꠘꠣꠟꠀꠟꠀꠟ *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. Using them as modifiers of NPs as in (222a) is thus not possible, while using simple demonstrative ꠅꠘꠣ *eda-* 'this' together with a noun as in (222b) or using ꠅꠘꠣꠟꠀ *edaya* 'here' as a pro-form fully replacing the NP ꠅꠘꠣꠞꠀꠟꠀ *eda-nangaya* 'in this house' as in (222c) is generally unproblematic.

(222) 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's (2013) sample are listed as duodecimal. Even though duodecimal numeral systems only occur rarely in natural languages, they are not entirely unheard of. Thus, for instance, Cain and Gair (2000) report that in Maldivian, 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).

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 ᦶᦵᦸ *kay* 'three', ᦵᦸᦶ *iri* 'five', and ᦸᦵᦸᦷ *hen* 'eight' may be an exception: as a quantifier, ᦶᦵᦸ *kay* means 'a little, few'; ᦵᦸᦶ *iri* means 'already', which might refer to the fact that a full hand has been counted off; and ᦸᦵᦸᦷ *hen* also means 'all'. Ayeri moreover appears extremely sophisticated in possessing a way of forming large numerals by a theoretically open-ended, recursive process.

4.7.1 Cardinal numerals

Since people and concrete things are usually present in a countable manner, I want to comment first on how complete entities are handled with regards to numerals. After this, a discussion of how to express fractional amounts will follow.

Table 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*

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) to 11 × 12° (B) is given in Table 4.26.[40] An example of simple modification by a numeral is given in (223).

(223) *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 ཡ *yo* 'four' modifies the noun བཟའ *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 ་ཏན *-lan* to the numbers from 0 to B, which are given in Table 4.27. These numerals themselves act as heads for forming compounds with lower numerals to fill in the 12° numerals 11, 12, 13, ..., 21, 22, 23, etc. Thus, one counts on from རྩེ་ཏན *menlan* 'dozen' in the way illustrated by (224).

(224) a. རྩེ་ཏན་རྩེ *menlan-men* (11),
རྩེ་ཏན་རམ *menlan-sam* (12),
རྩེ་ཏན་རྒྱ *menlan-kay* (13),
etc.

b. རམ་ཏན་རྩེ *samlan-men* (21),
རམ་ཏན་རམ *samlan-sam* (22),
རམ་ཏན་རྒྱ *samlan-kay* (23),
etc.

[40] For the sake of typographic simplicity, A and B will be used to mean 10 × 12° and 11 × 12°, respectively. An index '10' indicates base 10 explicitly, while an index '12' indicates base 12.

Table 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*

In order to form yet higher numbers, the suffix །ནང་ *-nang* is appended to numerals: རྨེན་ *menang* (← རྨེན་ *men* '1' + །ནང་ *-nang*), རྒྱུ་ *samang* (← རྒྱ *sam* '2' + །ནང་ *-nang*), རྐེ་ནང་ *kaynang* (← རྐེ *kay* '3' + །ནང་ *-nang*), etc. While རྨེན་ *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, the series in (225) emerges.

(225)

རྒྱུ་ *samang*	$12^{(2-1)\times 4} = 12^{4}$	myriad
རྐེ་ནང་ *kaynang*	$12^{(3-1)\times 4} = 12^{8}$	myriad myriads
ཡོ་ནང་ *yonang*	$12^{(4-1)\times 4} = 12^{12}$	myriad myriad myriads
ཨི་རི་ནང་ *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 in turn, for instance, as in (226).

(226) 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 (226a), རྒྱ *sam* modifies རྨེན་ *menang* to indicate that there are two sets of 100_{12}. Likewise, in (226b), རྒྱུ་ *samang* is modified by བཅུ་དང་ཉིས་ཧོ་ *henlan-miye* to mean 86_{12} times $10\,000_{12}$. Unit words like རྨེན་ *menang*, རྒྱུ་ *samang*, etc. may also

be used as (inanimate) nouns, so it is possible to speak of *menangye* 'hundreds'. To express 'hundreds of people', however, the head of the genitive NP is pluralized exceptionally, even if it is a *plurale tantum*, like *keynam* 'people' in (227). In (227), *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 formally singular, which is illustrated in (227a). In (227b), *keynam* still receives otherwise redundant plural marking to express the difference in meaning from (227a).

(227) 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 order to indicate that myriad groups have been skipped, the conjunction *nay* 'and' is used to avoid confusion, as shown in (228), or simply to avoid having two single-digit numerals following each other, as illustrated by (229).

(228) 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

$100\ 0086_{12} = 2\ 986\ 086_{10}$

(229) a.

ʔ*menang*	*mal*	*ito*
100	A	7

b.

menang	*mal*	*nay*	*ito*
100	A	and	7

$A07_{12} = 1\ 447_{10}$

Fractions

So far, we have explored only whole numbers. Things can often be divided up into smaller parts as well, though. The main way to express common fractions like $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, etc. is to prepend *men* 'one' to the denominator. The full paradigm of

Table 4.28: Simple fractions from ½ to ⅛

Numeral	Word	Numeral	Word
$\frac{1}{2}$	*mesam*	$\frac{1}{7}$	*menito*
$\frac{1}{3}$	*menkay*	$\frac{1}{8}$	*menyen*
$\frac{1}{4}$	*menyo*	$\frac{1}{9}$	*menveya*
$\frac{1}{5}$	*meniri*	$\frac{1}{A}$	*memal*
$\frac{1}{6}$	*memiye*	$\frac{1}{B}$	*mentam*

fractional numerals from $\frac{1}{2}$ to $\frac{1}{B}$ is given in Table 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 (230) shows.

(230) 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, ཨ: *men-* is prefixed to the denominator head word, for instance, as in (231a). However, this may become confusing if numerators are used, so (231b) would be expressed less ambiguously as (231c), 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 et al. (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 et al. 2014: 626)

(231) a. *memallan-hen*
men-mallan-hen
$1/\ 10 \times 12^1 + 8$
$\frac{1}{A8_{12}} = \frac{1}{128_{10}}$

b. ? *memenang* *ito* *menlan-yo* *kay*
men-menang ito menlan-yo kay
$1/\ 12^2$ 7 $1 \times 12^1 + 4$ 3
$\frac{3}{714_{12}} = \frac{3}{1024_{10}}$

c. *menangan* *ito* *menlan-yo* *nernanyena* *kay*
menang-an ito menlan-yo nernan-ye-na kay
12^2-NMLZ 7 $1 \times 12^1 + 4$ part-PL-GEN 3
'three of the 1 024th part'

Table 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*	A th	*malan*
5th	*iran*	B th	*taman*

Unfortunately, neither Chung et al. (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.[41] In Ayeri, ordinals are firmly treated as noun-like elements due to the derivational suffix ꠁꠣꠞ *-an* (compare section 4.1.7). Since nouns 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 (232). The paradigm for the ordinal numerals from 0 to B can be found in Table 4.29.

As (232a) shows, the ordinal numeral may serve as an anaphora meaning 'the *n*th (one)'. In these cases, animacy is determined by the word the ordinal references for purposes of case marking and agreement. Since ordinals are treated as

41 The collective wisdom of the internet's conlanging community holds that one cannot truly innovate grammatical structures; there is always a natural language which has evolved the same construction, only with more complications. This is referred to as 'ANADEW': 'a nat[ural]lang[uage] already dunnit except worse' (Teoh 2003).

(232) 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 ku-menan diyan Mahān bahalanya*
ang=girend-ya ku=menan diyan Ø= Mahān bahalan-ya
A= arrive-3SG.M like=first worthy TOP=Mahān finish-LOC
'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.'

nominals, they can also be modified by both a relative clause, as (232b) shows, and an adjective, as shown in (232c). In order to include an entity whose rank in a series is given, the counted entity appears as a genitive attribute; compare (232d).

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' behaves like a 'tight' noun compound, while ordinals involving unit words for powers of 12 higher than 1 behave as 'loose' compounds (compare section 4.1.5, p. 131). In order to illustrate, the whole numeral རྐལ་ཅན་ཟླ་ཕྱེ། *kaylan-miye* in (233a) is nominalized and inflected for case, yielding རྐལ་ཅན་ཟླ་ཕྱེ་ཡན། *kaylan-miyanley*. This is analogous to such nouns as བཏྭཱ་ཟླ་ཀུན། *betaynimpur* 'grape' (literally 'wine-berry'), which inflects as a single unit—a 'tight' compound.

(233) 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 (233b), on the other hand, only the first unit word, ཕྱེད། *menang*, is nomi-

nalized and inflected, yielding *menanganley*, with *kaylan-miye* following it uninflected. This is analogous 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 Table 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. An example of both uses of a multiplicative numeral is given by (234).

(234) 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 three.times A= Anang
'Anang already tried it three times.'

Compound multiplicative numerals are treated as analogous 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; see (235).

(235) a. *kaylan-tamanyam*
kay-lan-tam-an-yam
$3 \times 12^1 + 11$-NMLZ-DAT
'3B (= 47_{10}) times'

b. *menanganyam men samlan-kay*
menang-an-yam men sam-lan-kay
12^2-NMLZ-DAT 1 $2 \times 12^1 + 3$
'123 (= 171_{10}) times'

4.7.4 Distributive numerals

Distributive numerals are formed similar to multiplicative numerals in that they are based on a derivation of the respective ordinal numeral, which itself has the form of a nominalized cardinal numeral (compare Table 4.29). The derivational affix in this case is the instrumental marker, ꦌꦺꦫꦶ *-eri* (compare section 4.1.3, p. 122). Distributive numerals refer to groups of *n*, as example (236) shows.

(236) *Ang sarayon burangye kong besonya samaneri.*
ang=sara-yon burang-ye-Ø kong beson-ya sam-an-eri
AT= go-3PL.N animal-PL-TOP inside ship-LOC two-NMLZ-INS
'The animals went inside the ship two by two.'

The formation of composite numerals resembles 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. Example (237) illustrates inflected forms of distributive numerals.

(237) a. *henlan-yaneri*
hen-lan-yo-an-eri
$8 \times 12^1 + 4$-NMLZ-INS
'84 by 84 (= 100_{10})'

b. *menanganeri miye tamlan-yo*
menang-an-eri miye tam-lan-yo
12^2-NMLZ-INS 6 $11 \times 12^1 + 4$
'6B4 by 6B4 (= $1\,000_{10}$)'

4.7.5 Number ranges

Ayeri treats cardinal numerals more like adjectives than nouns, so using means of case marking is not possible. On the other hand, adpositions take both NPs and CPs as complements, so that an adjective should be able to act as a complement of an adposition as well. Since the numeral in the adpositional phrase (PP) is treated like an adjective, it 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 ꦥꦺꦱꦤ꦳ *pesan* '(up) until'. When counting starts at ꦩꦺꦤ꦳ *men* 'one', this numeral may be dropped, like in English 'count to ten' instead of 'count from one to ten'; compare (238).

(238) *Kurye ang Pila (men) tam pesan.*
kur-ye ang=Pila (men) tam pesan
count-3SG.F A= Pila (1) B until
'Pila counts from 1 to B (= 1 ...11_{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 genitive and dative case, or again པར་ *pesan* with its prepositional object in the locative case. Context is needed to disambiguate whether the dative form of the numeral is a multiplicative derivation or an actual ordinal numeral in the dative case. Examples of this are given in (239).

(239) 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 one=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
one=dozenth-LOC until
'Mr. Magay is here from the eighth to the dozenth day.'

བས་ *samanena* 'from the first' in (239a) and ཟླས་ *henanena* 'from the eighth' in (239b) use the genitive case marker ས་ *-ena* (compare section 4.1.3) to indicate the starting point. ཟླ:ཡིན22ཨ *da-malanyam* 'to the tenth one' and ཟླ:ཕེད22ཡིན22ཀར་ *da-menlanya pesan* 'up until the dozenth one' indicate the end points using dative case. Since ཕེད22ཡིན་ *menlan* in (239b) is embedded in a PP headed by the postposition ཀར་ *pesan*, it appears in the locative case instead of the dative case like ཡིན་ *malan* in (239a).

4.8 Quantifiers and Intensifiers

The most common words expressing degree or quantity (both subsumed under the label 'quantifier' here) do not only follow verbs, nouns, adpositions, adjectives, or other adverbs, but they cliticize to them, that is, they are dependent morphemes (compare section 3.2.5, p. 94). The word stem—a lexical head which is usually inflected—serves as the host for the clitic in all of these cases. Examples of degree and quantifier suffixes and how they interact with different parts of speech have already been given in all the relevant sections; an example from each section is repeated here in (240) for convenience. As we will see below, there are common quantifiers which behave like regular, free words as well. It is possible to combine both the suffixed and the free kinds with other quantifiers as long as those quantifiers permit modification with regards to degree.

(240) a. With a noun (7b):

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 (133):

Eda-prikanreng *napay-eng*
eda=prikan-reng napay eng
this=soup-A.INAN spicy rather
'This soup is rather spicy.'

c. With an adposition (138):

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 (208a):

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 quantifiers can be used to express both quantity and degree. Especially prominent in this regard is ꠁꠘꠀꠇ *-ikan*, which encompasses all of 'many', 'much' and 'very', as displayed in examples (240a) and (240c): in the former case it appears as a quantifier of a countable entity (ꠘꠗꠔꠁꠘꠀꠇ *ganang-ikan* 'many children') and in the latter case as an intensifier (ꠔꠔꠁꠘꠀꠇ *pang-ikan* 'way behind'). The complete set of degree and quantifier suffixes is listed in Table 4.30.

Grading and quantifying expressions which deviate form the pattern of cliticization and instead are used as independent words are, most notably: ꠀꠝꠟꠉ *ankyu* 'really', ꠇꠤꠔꠔꠁ *diring* 'several', ꠄꠇꠝꠔꠁ *ekeng* 'over-, overly, too', ꠅꠔꠔꠁꠘꠂ *hengas* 'almost all', ꠀꠘꠀꠇꠁꠘꠀꠇ *ikan-ikan* 'altogether, totally', ꠀꠘꠀꠇꠔꠘꠀꠇ *ikanvānya* 'at most, by and large', ꠘꠗꠀꠇ *kagan* 'excessively, far too', ꠔꠀꠇꠘꠀꠇꠔꠁꠔ *menikaneng* 'another (one more)', ꠔꠀꠇꠗꠉ *miday* 'approximately', ꠔꠔꠁꠔꠔꠁ *palung* 'another (a different kind)', ꠅꠔꠗꠝꠉ *regandey* 'bit by bit, gradually', ꠘꠀꠇ *sano* 'both', ꠔꠗꠝꠀꠇꠘꠀꠇ *varyānya* 'at least'. Besides, adjectives denoting a degree, like ꠀꠔꠀꠇ *ipan* 'drastic, extreme, radical' can also be used as intensifiers by way of adverbial uses. The conversion is not explicitly marked. ꠀꠔꠀꠇ *ipan* in (241) can thus also be used to mean 'extremely' rather than 'extreme'.

Table 4.30: Degree and quantity suffixes

Suffix	Degree	Quantity
-ani	not at all	none at all
-aril		some
-eng	rather, more	more
-ben	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	

(241) *Yang valuy ipan, sa silvyang va.*
yang valuy ipan sa= silv=yang va.Ø
ISG.A glad extremely PT=see=ISG.A 2.TOP
'I'm extremely glad to see you.'

4.9 Conjunctions

Section 4.6.2 already dealt with conjunctive adverbs as sentence adverbs and their conjunction-like behavior. The present section is about the 'purely logical' conjunctions ᨿᨿ *nay* 'and' and ᨾᨶᨿᨿ *soyang* 'or', as well as their combination with ᨠᨾᨣᨾᨣ *kamo* 'equal(ly), likewise' to form correlative conjunctions, that is, conjunctions made up of two parts which act together to form a construction.

4.9.1 Simple conjunction and disjunction

Coordination is commonly achieved by the conjunction ᨿᨿ *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. The example sentences in (242)

are ordered by increasing level of coordination: (242a) combines two adjective-phrase (AP) heads, ཏཱ་ཛ *taran* 'quiet' and བཟློ *saco* 'cool', which together make up the predicative AP that is equated to རྔང་ཁྱིམ་ *nangāng* 'a/the house'. In (242b), then, two patient NPs, དཀར་ལན་རྩྭ་ཟས་ *prikanley napay* 'spicy soup' and ཤེ་ཏཱ་ཟས་ཀཱི *betayley paso* 'sweet berry', together form the object of the verb, དཔལ་ *valyye* '(she) enjoys'. Lastly, (242c) shows two main clauses coordinated, that is, ང་ཀུ་ཀཱི *nāng pisu* 'we are tired' on the one hand, and ཏཱ་ཕ་ཎ་ *tapannang* 'we are thirsty' on the other.

(242) 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. *Ang valyye* [NP [NP *prikanley napay*] *nay* [NP *betayley paso*]].
ang=valy=ye.Ø prikan-ley napay nay betay-ley paso
AT= enjoy=3SG.F.TOP soup-P.INAN spicy and berry-P.INAN sweet
'She enjoys spicy soup and sweet berries.'

c. [IP [S *nāng pisu*] *nay* [IP *tapannang*]].
nāng pisu nay tapan-nang
IPL.A tired and be.thirsty-IPL.A
'We are tired and are thirsty.'

Just as དེ *nay* expresses *con*junction, སོ་ཡང་ *soyang* 'or' expresses *dis*junction. It is likewise placed between two disjuncts and works at all levels as well—lexical heads, phrases, and clauses. Inclusive and exclusive 'or' are not formally distinguished in Ayeri by the disjunction སོ་ཡང་ *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 4.9.2).

As above, (243) shows different syntactic contexts for སོ་ཡང་ *soyang*. In (243a), two adjectives, མཱ་ཧི *mino* 'happy' and མ་ཀུ *giday* 'sad' are put in opposition as phrasal heads making up a predicative AP. Then, in (243b), the choice is between two NPs, ཁ་ཀཱ་ཏ་ཟས *karon sati* 'cold water' and ཁ་ལཱ་ཏ་ཟས *gali sati* 'cold juice', which jointly form the object of མ་རྔ་ཀ་ *ginvāng* 'you drink'. Lastly, in (243c), two main clauses are in opposition—either disjunct forms a complete sentence on its own.

4.9.2 Complex conjunction and disjunction

English has a number of 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 ཁ་ཨོ *kamo* 'equally, same, likewise' together with a conjunction for many of these.

(243) 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 [NP *karon sati*] *soyang* [NP *gali sati*]]?
le= no= gin=vāng karon-Ø sati soyang gali-Ø sati
PT.INAN=want=drink=2.A water-TOP cold or juice-TOP cold
'Do you want to drink cold water or cold juice?'

c. [IP [IP *Beratu edauyi*] *soyang* [IP *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!'

ཁོ—ར *kamo … nay* 'equally … and' is equivalent to 'both … and': the correlative construction emphasizes that two options are equal to each other. རྣོ *sano* 'both' may be used as a synonym to ཁོ *kamo* as well here; compare (244a). Alternatively, it is possible to use a construction with ནར *naynay* '(and) also', as in (244b).

(244) a. *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.'

b. *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 (244a) may be translated more literally as 'I like grains and beans equally', with two NPs in alternation, both being objects of a transitive verb, དཔྱ *vac-* 'like'. With predicative adjectives, the verb ཁཡ *kama-* '(be) equal' may be used, which (245) shows, also compare section 6.4.1.

(245) *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.'

ཁཡ *kama-* is one of Ayeri's copular verbs used to express equality between two properties of its subject. The literal meaning of (245) 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 ནར *nay* is placed between both

predicative terms here. In order to express literal 'be as … as', thus, the conjunction is dropped, as in (246).

(246) *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.'

ཁམོ—ཅིས *kamo … nay* is used to express 'the … the', that is, a proportional or antiproportional relationship between two amounts, sizes, or properties; using བཟོ *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 ཨེང་ *-eng* 'more, rather' or its opposite, ཨི་ཁོ *-ikoy* 'less'. See (247) for an example of the former.

(247) *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 ཁམོ—རྒྱང *kamo … soyang* 'equally … or', as illustrated by (248). For its negative opposite, 'neither … nor', the verb is negated. ཨ་ཡབ *miraya* '(he) does' and ཁ་ཡང *kamatang* 'they are equally' in (248) thus need to change to ཨ་ཡ་ཡབ *miroyya* '(he) does not' and ཁ་ཡ་ཡང *kamoytang* 'they are not equally' to express the sentences' negative counterpart.

(248) 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. *Kamatang* *mabo* *soyang* *krito* *mirampaluy.*
kama=tang mabo soyang krito mirampaluy
be.equal=3PL.M.A hungry or angry otherwise
'They are either hungry or otherwise angry.'

5 Syntactic typology

While the previous chapter dealt largely with the various parts of speech and their inflectional properties, the present chapter and the next will elaborate on how these words combine into syntactic phrases.[1] Since Ayeri is a verb-initial language, it is probably rather comfortably analyzed in terms of Lexical-Functional Grammar (Bresnan 1982; more recently, Bresnan et al. 2016; Dalrymple 2001; Falk 2001), since LFG does not require complicated derivations below the surface structure of sentences.[2] It will be assumed here that, even though Ayeri's unmarked constituent order is VSO with predicate and predication not adjacent to each other, it is configurational in that there is a verb phrase (VP) which c-commands a number of other constituents as complements and adjuncts in transitive sentences.

5.1 Lexical-functional grammar

In principle, LFG assumes that grammar operates on different structural levels in parallel: 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*,

[1] Since trees and tableaus are large, many regularly numbered examples in the following will appear not in place, but floated to the next page. Furthermore, note that the analyses following hereafter are likely neither complete nor flawless; they are merely first steps.

[2] Passivization, for instance, is assumed to be a lexically motivated alternation in predicate structure (SUBJ is blocked, so the nominative is assigned to OBJ, and the original SUBJ is expressed by an OBL_{agt}), rather than an internal derivational process (Bresnan et al. 2016: 23 ff.).

which stands for 'constituent structure' or 'categorial structure'" (Bresnan et al. 2016: 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).[3]

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'" (42). The f-structure is depicted as an argument-value matrix (AVM) which maps the relations between 'subject' (SUBJ), 'object' (OBJ), 'predicator' (PRED), etc. as functional abstractions of noun phrase (NP), verb phrase (VP), verb (V^0), etc. (42). Complement-taking predicators, such as verbs or adpositions, are also presented with their *a-structure* spelled out. That is, subcategorized-for arguments are 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 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 monorepresentation principle, information distributed over different morphemes which logically belongs to a single grammatical function is unified in f-structure.

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 respectively corresponds ('links', 'maps') to which part of the f-structure. Regarding the different functions distinguished, LFG assumes the functional hierarchies given in (1), following Bresnan et al. (2016: 97, 100).

[3] The basic recursive rules of X-bar theory are observed:

1. XP → YP, X′ (specifier rule)
2. X′ → X′, ZP (adjunct rule)
3. X′ → X^0, WP (complement rule)

The principle of economy of expression furthermore dictates that, trees be pruned of empty terminal nodes and non-branching preterminal nodes, since these do not provide structurally or semantically relevant information (Bresnan et al. 2016: 119–128). Nodes are defined in their status by functional annotations rather than by their position in the tree alone.

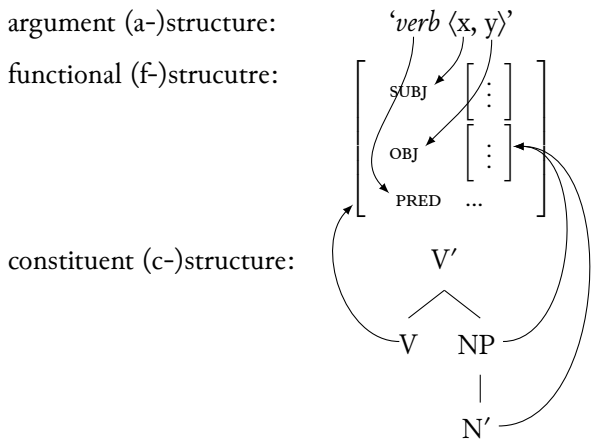


Figure 5.1: F-structure mappings (Bresnan et al. 2016: 15)

(1) a. Grammatical functions (GFs):

$$\overbrace{\text{SUBJ} > \text{OBJ} > \text{OBJ}_\theta}^{\text{core}} > \overbrace{\text{OBL}_\theta > \text{XCOMP, COMP} > \text{ADJ}}^{\text{noncore}}$$

b. (Non-)argument functions (AFs/$\overline{\text{AFs}}$):

$$\underbrace{\text{TOP FOC}}_{\text{non-a-fns}}\ \overbrace{\text{SUBJ OBJ OBJ}_\theta\ \text{OBL}_\theta\ \text{XCOMP COMP}}^{\text{a-fns}}\ \underbrace{\text{ADJ}}_{\text{non-a-fns}}$$

c. Discourse functions (DFs):

$$\overbrace{\text{TOP FOC SUBJ}}^{\text{d-fns}}\ \underbrace{\text{OBJ OBJ}_\theta\ \text{OBL}_\theta\ \text{XCOMP COMP ADJ}}_{\text{non-d-fns}}$$

The functions listed in (1) will also appear in phrase-structure rules and c-structure trees together with arrows which symbolize inheritance of feature information from the current level (↓) of the tree to the next (↑). For instance, '(↑ SUBJ) = ↓' means that the information subsumed by the current node ('down') is passed on as part of the subject function of the next higher level ('up') in the tree. Concise information on notational formalisms of LFG can be found, for instance, in Butt and King (2015).

5.2 Typological considerations

Verbs govern the relations of the various phrase types to each other and they are thus central to the formation of clauses. Just from looking at the numerous examples in the previous section, it should have become clear that Ayeri's preferred

word order is verb-first, which opens up a few typological questions—first and foremost, whether Ayeri actually has a VP, or in terms of generative grammar: whether it is configurational. As we have seen, Ayeri definitely has a constituent structure as far as NPs, adjective phrases (APs), adpositional phrases (PPs), etc. are concerned. However, due to VSO word order, it is not obvious whether verb and object actually form a VP constituent together, since V and O are not adjacent to each other. Since Ayeri marks topics in terms of morphology, it will also be necessary to discuss how this mechanism works and how it relates to the notion of the subject.

A discussion of subject, topic, and configurationality is interesting also in that Ayeri's syntactic alignment looks superficially similar to the Austronesian, or Philippine, alignment system. Tagalog, an Austronesian language of the Malayo-Polynesian branch, spoken mainly in the Philippines (Hammarström et al. 2017; Schachter and Otanes 1972), usually serves as the academic poster child in descriptions of this system. Ayeri departs from Tagalog's system in a number of ways, though, and very probably towards the more conventional. Austronesian alignment is therefore not necessarily the best model to liken Ayeri's syntax to. It will nonetheless be informative to compare both systems based on the work of Kroeger (1991, 1993a), who provides an analysis of Tagalog's syntactic alignment at least roughly in terms of the LFG framework and describes some heuristics which may be helpful in establishing what is actually going on in Ayeri.[4]

As mentioned above, Ayeri's unmarked constituent order gives the verb first, and then, in decreasing order of bondedness to the verb, the phrases which make up the verb's arguments: subject (agent), direct object (patient), indirect object (dative), followed by adverbials in the genitive, locative, instrumental, and causative case. Ayeri's basic constituent order is thus VSO, a trait it has in common with about 7% of the world's natural languages according to Dryer (2013a). Following

[4] As mentioned in the introductory chapter, I started Ayeri in late 2003—then still in high school and not knowing much about linguistics. Of course, I had to go and pick as a model the one alignment system which has long been "a notorious problem for both descriptive grammarians and theoretical syntacticians" to the point where it "sometimes seems as if Austronesian specialists can talk (and write) of nothing else" (Kroeger 2007: 41). In the following comparison between Ayeri and Tagalog, I will be quoting Kroeger (1991) (thesis manuscript) instead of Kroeger (1993b) (published book) since the former should be more easy to access for conlang hobbyists than the latter. Unfortunately, however, the pagination of the manuscript differs from that of the published version and it contains some obvious mistakes in a couple of interlinear glosses. Since there is a lot of contradictory and plainly misleading information on Tagalog's syntactic alignment floating around conlang-related groups on the internet, it is important to me to point people to sources containing information which is up to academic standards here especially.

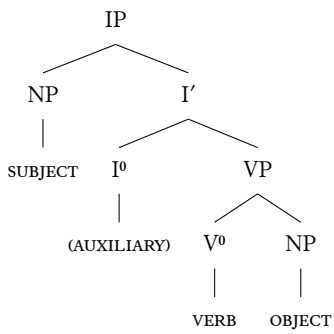
the format of previous statements on word order typology, we can declare the generalization in (2), which is consistent also with previous observations on word order typology, where the head preceded the modifier. The head is here represented by the verb, the modifier by the object—like English, thus, Ayeri is a VO language. In addition to this, however, Ayeri regularly places the verb as the head of the clause itself first.

(2) a. Order of subject, object, and verb: VSO

b. Order of verb and object: VO

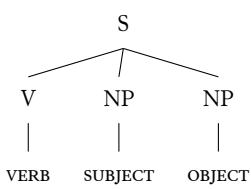
It is commonly assumed that languages have a subject which occupies a certain position in the constituent structure, and which commands a constituent jointly formed by the verb and its dependents—the predicate. An SVO sentence in English thus very generally looks like in (3) (compare the examples in Bresnan et al. 2016: 101–111).

(3)



However, Ayeri is a VSO language, so the question arises how the basic constituent structure should be represented as a tree diagram, since V and O are not adjacent. As an initial hypothesis one might assume that they cannot form a unit together, since S somehow stands in between the constituents it is supposed to command. A very first stab at diagramming would probably be to come up with a flat, non-configurational structure, all but lacking a VP, as shown in (4).

(4) ?



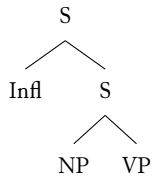
Such a structure does not do Ayeri justice in that, if S, O, and V were all at the same level structurally, it should not be possible, for instance, to replace V and O together by an anphora like 'do so'. Ayeri, however, allows precisely this. In spite of not being adjacent, V and O must form a unit of some kind. The verb canonically agrees with S by default; situations where it agrees with O are very restricted. Moreover, Ayeri has NP–XP constructions where XP is not a maximal projection of a verb, so NP and XP are probably contained in a small-clause constituent S separate from the verb at least for the purpose of copular clauses. Furthermore, the verb in the initial position shows inflection, so we might rather construe it as an I^0 than a V^0, projecting an inflectional phrase (IP), which frees up VP and V^0 for other purposes. The conclusion Chung and McCloskey (1987) come to for Irish, which is also a VSO language, is shown in (5a). Bresnan et al. (2016) give the chart in (5b) for Welsh, likewise a VSO language (also compare Dalrymple 2001: 66, sourcing Sadler 1997). Kroeger (1991) suggests the two structures depicted in (5c) for Tagalog, based on the suggested constituent structure for Celtic languages.

What all of these c-structures have in common is that the inflected verb appears in I^0, which is a sister of S. S, in turn, is a small clause containing the arguments of the verb. In the case of Irish and Welsh, however, there is a VP sister of the subject NP which itself does not have a head, but contains the object NP as a complement. In the case of Tagalog, S is non-configurational, that is, while XP may contain an infinite verb, the subject and object NPs are on equal footing regarding certain functional and structural traits usually associated with subjects, as we will see further on.

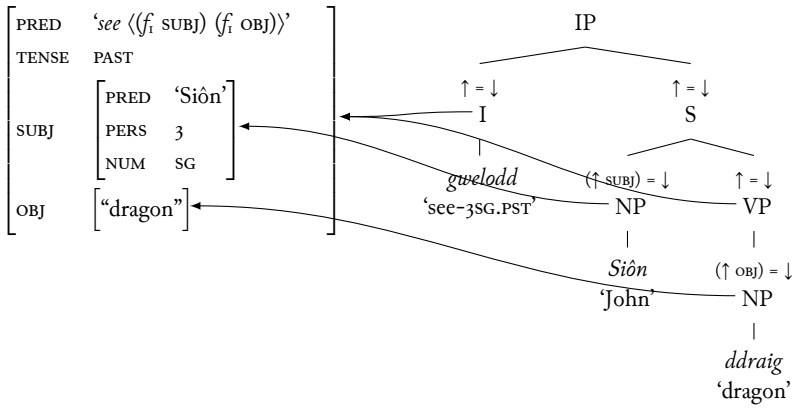
Bresnan et al. (2016: 129–138) inform that the phenomenon of the verb ending up in a position in the c-structure tree higher than it should normally appear in (5b) is commonly known as 'head movement'. Since LFG is based on the assumption that all nodes in a syntactic structure are base-generated, that is, that there are no transformational rules generating the surface structure from a deeper layer of representation underneath it, there cannot be a trace of V^0 left behind in VP. LFG thus avoids empty categories on the assumption that there is no information contained in an empty node. The functional information provided by the verb is not lost; it is merely now provided by the verb in I^0. Essentially, the Welsh example does not violate endocentricity, since the finite verb in I^0 still forms the verbal head in the functional structure representation of the clause. With regards to constituent structure, V^0, if present, c-commands its NP sister; both V^0 and the object NP are dominated by VP. Compare the formal definitions in (6).

The AVM in (5b) shows that the contents normally found in V^0 are provided by the head of its equivalent functional category, I^0. I^0 and VP are said to map into the same f-structure (Bresnan et al. 2016: 136). Endocentricity still holds in that

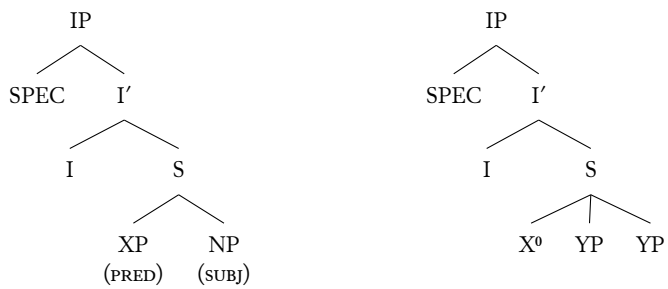
(5) a. Irish (Chung and McCloskey 1987: 235):



b. Welsh (adapted from Bresnan et al. 2016: 134):



c. Tagalog (Kroeger 1991: 131):



(6) a. Exhaustive domination (Carnie 2013: 121):

"Node A exhaustively dominates a set of terminal nodes {B, C, ..., D}, provided it dominates all the members of the set so that there is no member of the set that is not dominated by A and there is no terminal node G dominated by A that is not a member of the set."

b. C-command (Carnie 2013: 127):

"Node A c-commands node B if every node dominating A also dominates B, and neither A nor B dominates the other."

IP dominates all nodes below it, thus also I^0 and the object NP. In addition, I^0 c-commands its sister node and all of its children, hence also the object NP. As Bresnan et al. (2016) put it: "X is an extended head of Y if X is the X′ categorial head of Y [...], or if Y lacks a categorial head but X is the closest element higher up in the tree that functions like the f-structure head of Y" (136). For our example, replace X with I^0 and Y with VP in the second half of the quote: I^0 is the closest element higher up in the tree that functions like the f-structure head of VP, which itself lacks a categorial head.

The analysis of the sentence structure of Celtic languages shows that VSO languages do not automatically need to be considered 'non-configurational' and lacking a VP if the notion of extended heads is accepted. In any case, tests need to be performed to see whether one of the analyses presented in (5) holds true for Ayeri as well.

5.3 'Trigger languages'

The notorious term 'trigger language' comes up in discussions on Conlang-L as early as 1995, where it may well have originated as an established term in the conlang community for what will be described below in brief. That is, I have not been able to find any earlier mentions of the term 'trigger' as referring to an alignment system in the archives; other mainstays of the conlang community, such as the ZBB, were established only about a decade later. In a message dated December 16, 1995, John Cowan writes that he wants "to propose a reform of Radilu, to make it use the Tagalog concept of a 'trigger'" (Cowan 1995). By his definition, this entails that

> each clause contains one noun phrase which is not marked for case, but rather has a distinct marking called the "trigger marker". [...] The verb carries a marking (which of course looks nothing like the noun case markers) that tells the true case of the trigger. [...] This involves changing the name of "nominative" and "accusative" to "actor" and "patent" [*sic*], since there is no longer a "subject" or "object" as such. Of course, word order is free (Cowan 1995)

He also notes that "Usually the trigger is definite (Tagalog doesn't have articles)" (Cowan 1995). Essentially, it seems that the motivation for Cowan's system is that the 'trigger' indicates that a certain NP is definite. As we will see below, this is similar to how Tagalog marks one of its relations on the verb, with that relation being definite. Things are more complicated in reality, though. Especially the claim that Tagalog lacks subjects and objects is problematic. However, the term 'trigger' seems to have currency in that, for instance, Schachter (2015) chooses it explicitly to refer to the "non-case-marked argument" (1659)—apparently, he re-

gards the *ang* marker as not a case marker. In a parenthetical remark he adds that some

> previous treatments have referred to the argument in question as the *topic* and some as the *subject*. However, as will become clear below, each of these labels appears to carry some inappropriate connotation, making a netural term like *Trigger* seem preferable. [...] There also seems to be good reason to reject the term *focus*. (1659)

It may be noted that term 'focus' is used in Schachter and Otanes (1972), the main reference grammar of Tagalog. What is interesting in comparing Schachter's (2015) and Kroeger's (1991) respective analyses of Tagalog's syntactic alignment is that both make the same observation in spite of coming to opposite conclusions: Tagalog is ambiguous as to whether the subject notion is vested in the NP whose role is marked on the verb or the actor NP, since certain syntactic constructions typically associated with subjects apply to either or both. While this ambiguity leads Schachter (1976, 2015) to ultimately conclude that Tagalog lacks a single unified relation which can be analyzed as a syntactic subject,[5] Kroeger (1991) reaches the opposite conclusion by performing further tests and taking a functionalist rather than purely structuralist perspective. Thus, he reasons:

- "Tagalog has a well-defined grammatical subject" (225). What Schachter (1976) lists as evidence against are special cases which can be explained by the high semantic and pragmatic prominence of actors more generally (Kroeger 1991: 225). Tagalog basically applies the notion of a logical subject distinct from the syntactic subject to some constructions, though the syntactic subject is more important overall (36).
- "grammatical relations are defined independently of phrase structure" (225)
- "patients can become subjects even when the agent is expressed as a direct (non-oblique) argument of the verb" (225)
- "Subject selection in Tagalog does not work by demotion or suppression of thematically more prominent arguments. Rather, all arguments seem to be equally eligible for mapping onto the subject relation" (226).

Kroeger (1991) also provides evidence based on statistics and examples that the marked-for relation, which he classifies as being in the nominative case according to his hypothesis that it is the syntactic subject, is neither especially salient in

5 Cowan's (1995) sketch may be based on Schachter (1976). Curiously, Schachter (2015) does not acknowledge Kroeger (1991) at all, nor does he refer to any other research more recent than 1985. The reason may be that Schachter retired in the early 1990s, as the UCLA linguistics department's Department history (2017) suggests. Furthermore, note that the handbook article quoted from here was published posthumously.

terms of pragmatic topichood, nor does it show signs of carrying pragmatic focus specifically. He finds that rather, nominative marking works independent of discourse functions (Kroeger 1991: 56 ff.). All things considered, the term 'trigger language' is probably ill-fitting, not just for Ayeri.

The tests for typical properties associated with grammatical subjects which Kroeger (1991) performs partially extend those presented in Schachter (1976). Moreover, his conclusions build on a more modern, functionally oriented approach than Schachter's. For this reason, I will follow Kroeger rather than Schachter. Either way, we will have to test verb agreement, syntactic pivot, relativization, control of secondary predicates, raising, and control.[6] First of all, it will be helpful, however, to define some terms which will be used in the discussion below.

5.4 Definition of terms

The terms 'subject', 'topic', and 'focus' were already used a number of times above, but it seems advisable to sketch out working definitions in order to preclude confusion before continuing to look at how Ayeri fares with regards to these notions in more detail. As we will see, all of subject, topic, and focus relate to different ways in which the relative prominence of certain NPs is raised; subject and topic are also closely related to each other. It ought to be noted that while LFG treats topic and focus as grammaticalized discourse functions outside of the argument-structure frame of a verb, it treats the subject as both a discourse function and an argument function; topic and focus, on the other hand, must be identified with a corresponding argument function (Bresnan et al. 2016: 99–100; also compare (1) above, p. 241).

5.4.1 Subject

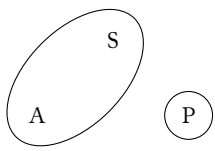
The subject can be defined in a variety of ways, and maybe especially because the notion of a subject is so basic, Comrie (1989) notes that if

> linguists were invariably in agreement in stating which noun phrase, in each construction in each language, is the subject, then we could, perhaps, accept this inter-subjective agreement, and devote correspondingly less energy to trying to find an explicit definition of subject. However, it turns out that, in a wide range of cases, this inter-subjective agreement is lacking. (104)

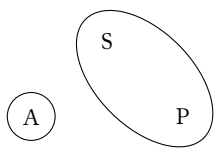
[6] The tests which Kroeger (1991) dismisses as irrelevant to determining subjecthood in Tagalog have been omitted here if they were also not profitable to answering this question for Ayeri. The same applies to a number of tests which are specific to the grammar of Tagalog and thus have no application in Ayeri.

Dixon (2010b) defines a subject as "the entity about which something is affirmed or denied" (76). He goes on to explain that, ignoring copular clauses like *We are tired and thirsty*, every language has two varieties of clauses: intransitive ones, where the verb has just one core argument, and transitive ones, where the verb has two core arguments. A basic definition based on this is given by the chart in (7). It shows the definition of the notion of subject for both nominative–accusative languages and ergative–absolutive languages. Languages of the world differ based on how they prefer to treat the two nominal relations of a transitive verb in relation to intransitive verbs: they may have a strong preference to either treat the agent (A)—the entity that prototypically acts in some way—or the patient/undergoer/theme (P)—the entity which is prototypically affected or handled by the action in some way—the same as S, the sole argument of an intransitive verb. In the former case, the language is said to have NOM–ACC alignment (7a) with S/A being the nominative subject, whereas in the latter case (7b), the language is said to have ERG–ABS alignment with S/P being the absolutive subject.

(7) a. nominative–accusative alignment (S/A—P):



b. ergative–absolutive alignment (S/P—A):



Comrie (1989) illustrates this difference with an example from Chukchi, which we will here contrast with English.[7] While English treats the actor of the intransitive sentence (8a) the same as that of the transitive one (8b)—both sentences use *I* in the nominative—Chukchi appears to use a different pronoun for the actor of the intransitive sentence (9a) than for the actor of the transitive one (9b)—absolutive *ɣəm* versus ergative *ɣəmnan*, respectively. At least in Standard English, it would be ungrammatical to use the pronoun *me* in place of *I* in (8b), since *me* can only be used for first-person objects of the verb, but not for subjects of transitive clauses.

[7] In English, *you* is the same for both singular and plural as well as subjective and objective case, which is why I replaced it with the less ambiguous *her* in (8).

(8) a. *I* *came*
ISG.NOM come.PST
S

b. *I* *saw* *her*
ISG.NOM see.PST 3SG.F.OBL
S/A P

(9) Chukchi (adapted from Comrie 1989: 104):

a. *ɣəm* *tə-yet-ɣʔek*
ISG.ABS came-ISG
S
'I came.'

b. *ɣəm-nan* *ɣət* *tə-lʔu-ɣət*
ISG.ERG 2SG.ABS saw-ISG-2SG
A S/P
'I saw thee.'

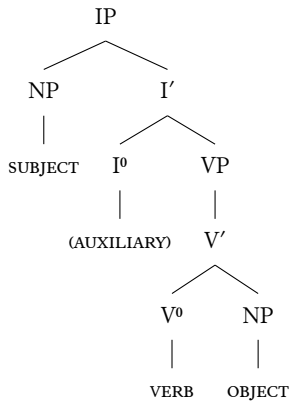
However, Comrie (1989) also urges to consider that grammatical relations and their representation in morphology are not always as clear-cut as in the example above. While he characterizes the prototypical subject as the intersection of agent and topic as far as cross-linguistic evidence is concerned (107), he also points out that subjects do not necessarily have to unite all the properties typically associated with them (110). This seems to be the case with Tagalog, for instance, as observed by both Schachter (1976) and Kroeger (1991), and may considerably complicate making a definitive statement.

Moreover, Comrie (1989) points out that statistically, languages of the world show a strong preference for NOM–ACC alignment, possibly due to the fact that human perception values actors as more relevant to discourse than patients, which is why actors are far more likely also to be pragmatic topics (120). Yet, though, dominantly NOM–ACC-aligned languages may show a bias towards an ERG–ABS treatment, for instance, of resultative constructions. On the other hand, dominantly ERG–ABS languages show a bias towards a NOM–ACC treatment, for instance, of addressees of imperatives (116–119).

According to Carnie (2013), from the point of view of constituent structure (which is key in Generative Grammar), a subject is conventionally understood as a "DP that has the property indicated by the predicate phrase. What the sentence is about. In most sentences, this surfaces in the specifier of TP" (221). However, as we have seen above, this notion is challenged by languages such as Tagalog (Kroeger 1991: 225). What Carnie (2013) refers to in terms of constituent structure was basically already indicated by (3), except with different labels; the example is

repeated here for convenience as (10). For systemic reasons, Carnie (2013) refers to a determiner phrase (DP) subject which serves as the specifier of a tense phrase (TP). This corresponds to the subject NP and the IP here. Unlike GG, LFG treats tense as a semantic feature, not as a functional head with a fixed position in constituent structure, hence the difference in labeling.

(10)

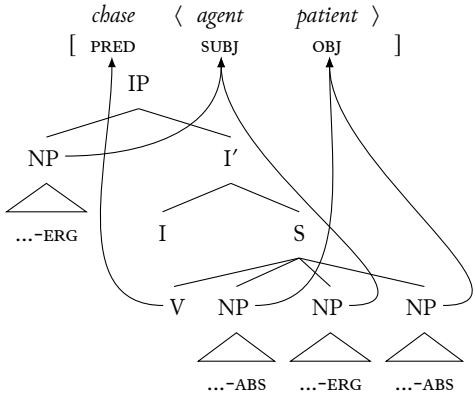


LFG defines a subject function, SUBJ. Which argument of the verb the subject is mapped onto is understood to be based on the relative prominence of the subject argument along some dimension compared to other arguments. For instance, NOM–ACC languages prefer the semantically most prominent available role of a verb's argument structure, ERG–ABS languages instead pick the argument most affected by the actor's action, and active languages focus on the argument in control of the action (Bresnan et al. 2016: 95–96). The mapping between grammatical functions like SUBJ and the lexical components that make it up also does not need to be a one-to-one correspondence, since LFG allows for the distributed exponence of grammatical features like in the example of Warlpiri in (11). The only condition is that grammatical functions be uniquely defined within their minimal f-structure (45).[8] As (11) shows, multiple NPs in different positions in the constituent structure may feed semantic information to a single function defined by the argument structure of the verb.

The subject role $\hat{\theta}$ is defined as "the most prominent semantic role of a predicator" (Bresnan et al. 2016: 330), thus signifies the logical subject. Furthermore, Bresnan et al. (2016) devise two a-structure features, [± o] (objective) and [± r] (restrictive). According to this classification, SUBJ is assigned the features [– r,

8 The functional bundle of a predicator and its arguments (Bresnan et al. 2016: 230, 250). This is essentially LFG's equivalent of the logical form (LF).

(11) Warlpiri (Bresnan et al. 2016: 325):



– o], since the subject is not restricted to a certain semantic role, nor needs to have a semantic role.[9] Also, subjects do not complement transitive predicators like objects do, so they are not 'objective'. Bresnan et al.'s (2016) lexical mapping theory assumes that all languages have subjects, which goes counter to Schachter's (1976, 2015) claim that subjects are possibly not universal (Bresnan et al. 2016: 330–331).

5.4.2 Topic

The notion of topic refers essentially to who or what a longer stretch of conversation is about. Givón (1983) defines the topic of a 'thematic paragraph'—as he calls a coherent unit of discourse above the level of a single sentence—as "the continuity marker, the *leitmotif*" (8). Thus, the topic is

> the participant *most crucially involved* in the action sequence running through the paragraph; it is the participant most closely associated with the higher-level "theme" of the paragraph; and finally, it is the participant most likely to be coded as the *primary topic*—or grammatical subject—of the vast majority of sequentially-ordered clauses/sentences comprising the thematic paragraph. (8)

This indicates that topic and subject are closely related concepts, as already mentioned above in reference to Comrie (1989). Languages employ various means to indicate topics; right- and left-dislocation, as known from English, or topic-marking particles as in Japanese and Korean, are only two among many possibilities (Dixon 2010b: 174).

Topicality also interfaces with definiteness in that chain-initial topics may be definite (already introduced into discourse) or indefinite (newly introduced into

[9] This ought to make Kroeger's (1991) analysis compatible to LFG as well.

discourse), while chain-medial topics and chain-final topics are always expected to be definite (Givón 1983: 10). Dixon (2010b: 171) adds that topic NPs are coreferential with arguments of clauses immediately preceding or following the current clause. Moreover, the strategy of passivization (in NOM–ACC languages) or of antipassivization (in ERG–ABS languages) exists, among others, in order to keep a certain discourse item persistent in the highly topical subject position even if it would otherwise be the object of the clause. This is related in turn to the notion of syntactic pivot in clause coordination (172).

5.4.3 Focus

Regarding the definition of focus, Dixon (2010b: 174) only mentions contrastive focus, which raises the prominence of a certain NP within a single clause. It is not necessary for the focused NP to be coordinated with another NP by 'or'. Dixon (2010b) also warns that focus is often confused with topic. Perhaps this is in part also, as Bresnan et al. (2016) mention, due to the fact that English may use the topic position for either topic or focus under certain circumstances (98):

(12) Q: What did you name your cat?
A: ROSIE I named her. (*Rosie* = FOC)

The answer to a *wh*-question is considered focused, so *Rosie* in (12) is the focus in 'I named her ROSIE'. However, in the example above, *Rosie* is fronted, which following Givón (1983), constitutes a disruptive action used to establish a new topic of conversation: left-dislocation in languages with rigid SVO word order such as English is typically associated with low topic continuity, and left-dislocated NPs can be found most often as initiating a topic chain (32).

5.5 Tests on subjecthood

As initially mentioned, Ayeri was originally conceived under an impression of what was described in the quote by Cowan (1995) above in terms of 'trigger language' (also compare Schachter 2015). That is, in simple declarative statements, the semantic macrorole of a definite NP is marked on the verb. This is itself a very basic account of what can be observed in Tagalog and other Philippine languages, compare (13) (emphasis mine).[10] Further effects will be discussed in more detail below.

[10] The italicizing in (13) is not supposed to be read as marking contrastive focus—this is one of the 'mistakes' that led to Ayeri's system, basically, besides then also mixing up focus and topic.

(13) Tagalog (Kroeger 1991: 14, adapted from Foley and Van Valin 1984: 135):

a. *B-**um**-ili* ***ang=lalake*** *ng=isda* *sa=tindahan.*
PFV.AV-buy NOM=man GEN=fish DAT=store
'*The man* bought fish at the store.'

b. *B-in-ili-**Ø*** *ng=lalake* ***ang=isda*** *sa=tindahan.*
PFV-buy-OV GEN=man NOM=fish DAT=store
'The man bought *the fish* at the store.'

c. *B-in-ilh-**an*** *ng=lalake* *ng=isda* ***ang=tindahan.***
PFV-buy-DV GEN=man GEN=fish NOM=store
'The man bought fish *at the store*.'

d. ***Ip**-in-**am**-bili* *ng=lalake* *ng=isda* ***ang=pera.***
IV-PFV-buy GEN=man GEN=fish NOM=money
'The man bought fish *with the money*.'

The examples in (13) show variations on the same sentence, differing in the distribution of the definite NP which Kroeger (1991) classifies as being the subject of the respective sentence on syntactic grounds. The subject NPs are marked with the clitic *ang*, and their role in the clause is reflected by the voice marking on the verb (the root is *bili* 'buy'): in (13a) the subject is the actor, in (13b) it is the object, in (13c) it is a location, and in (13d) it is an instrument. What is remarkable is that this voice marking goes beyond mere passivization,[11] so even the oblique arguments of (13cd) can become subjects of their respective clauses. Ayeri is at least superficially similar, compare (14).

Like Tagalog, Ayeri marks a privileged NP on the verb, however, in Ayeri, this is the topic, not the subject (this will be subject to further scrutiny below). Unlike in Tagalog, the marked NP is not marked by a particle, but by the very absence of case marking on the NP itself. The marker corresponding to the role of the topic NP appears as a clitic in the shape of the corresponding NP's case marker in its proclitic form at the left-most edge of the clause, before the verb (compare sections 4.1.3 and 4.5). While the marker on the verb is thus related to nominal case markers in Ayeri, Tagalog uses a number of affixes for voice marking which are not obviously related to case markers on nouns. For instance, non-subject actors are marked by the genitive clitic *ng* (pronounced *nang*), while actor voice is marked by *mag-* or *-um-* (Schachter and Otanes 1972: 74, 78; Kroeger 1991: 16–18). In Ayeri, on the other hand, non-topic animate agents are marked on NPs by ؛ڡَڒْ

[11] Note that Kroeger (1991) avoids the terms *active voice* and *passive voice* that Schachter (2015) objects to as inappropriate, even though what Tagalog does essentially appears to work along those lines, except in a more generalized way.

(14) a. ***ang***=*int-ya* ***ayon-Ø*** *inun-ley* *moton-ya*
AT=buy-3SG.M man-TOP fish-P.INAN store-LOC
'*The man*, he bought fish at the store.'

b. ***le***=*int-ya* *ayon-ang* ***inun-Ø*** *moton-ya*
PT.INAN=buy-3SG.M man-A fish-TOP store-LOC
'*The fish*, the man bought it at the store.'

c. ***ya***=*int-ya* *ayon-ang* *inun-ley* ***moton-Ø***
LOCT=buy-3SG.M man-A fish-P.INAN store-TOP
'*The store*, the man bought fish there.'

d. ***ri***=*int-ya* *ayon-ang* *inun-ley* ***pangis-Ø***
INST=buy-3SG.M man-A fish-P.INAN money-TOP
'*The money*, the man bought fish with it.'

-*ang* or ᨅᨊ᨞ *ang*, and animate agent-topics are marked on the verb by ᨅᨊ᨞ *ang* as well.

5.5.1 Verb agreement

One of the most prominent features of Ayeri with regards to verbs and their relation to subjects is verb agreement with third-person NPs. This was already discussed at length in section 3.2.5 (p. 89 ff.) and section 4.5.

Kroeger (1991) mentions that Tagalog has optional number agreement of predicates with the nominative NP if the nominative argument of the clause is plural. This is independent of whether the nominative argument is also the actor of the clause or not (24–25), compare (15). The arrows in (15) mark government and agreement relationships: the verb governs role and case assignment (top arrow), while the nominative NP controls plural agreement on the verb (bottom arrow). As the arrows illustrate, the relationship between the assignment of the subject role and thus nominative case and plural agreement on the verb are symmetric: the verb agrees in both (15a) and (15b) with the respective nominative NP, whether it is the agent or not.

Person agreement in Ayeri is fixed to the agent NP in canonical cases, whether it is the topic of the clause or not. In (16a), we can see the verb determine that the agent argument is also the topic, with the verb agreeing itself in person with the agent: ᨅᨕᨚᨕᨚ *Ajān* is a male name; the verb corresponds with masculine agreement. In (16b), however, the relation is asymmetric in that the marking on the verb shows that the patient argument is the topic, while the verb still displays masculine person agreement. We know that the verb agrees with ᨅᨕᨚᨕᨚ *Ajān* rather than with ᨠᨠᨚ *Pila* because the latter is a female name, so the verb should have feminine agreement if

(15) Tagalog (adapted from Kroeger 1991: 24–25, from Aspillera 1969: 122–123):

a. *nagsisi-kain na ang=mga=bata ng=hapunan*

AV.IMPF.PL-eat already NOM=PL=child GEN=supper
S/A P

'The children are eating their supper already.'

b. *pagsu-sulat-in ni=Linda ang=mga=liham*

FUT.PL-write-OV GEN=Linda NOM=PL=letter
A S/P

'Linda will write the letters.'

it were to agree with the patient NP. The verb instead continues to agree with the agent NP in spite of not being the topic of the clause. Topicalization appears to have no influence on the distribution of person agreement on the verb; the agent NP remains the subject. This is a very NOM–ACC trait.

(16) a. *Ang manya Ajān sa Pila.*
ang=man-ya Ø=Ajān sa=Pila

AT=greet-3SG.M TOP=Ajān P=Pila
S/A P

'Ajān, he greets Pila.'

b. *Sa manya ang Ajān Pila.*
sa=man-ya ang=Ajān Ø=Pila

PT=greet-3SG.M A=Ajān TOP=Pila
S/A P

'Pila, Ajān greets her.'

In agentless clauses, however, the verb agrees with the patient argument, which makes Ayeri less typical a NOM–ACC language, and more similar in this regard to what an ERG–ABS language would be expected to do. Passivization of a transitive clause as a strategy for keeping the topic constant as a subject is essentially pre-empted by Ayeri's use of a topic particle in the VP. Hence, a sentence like (17a)—as a parallel to (15b)—sounds odd, while (17b) is fine.

(17) a. ? *Sa manye* *ang Ajān* *Pila.*
sa=man-ye ang=Ajān Ø=Pila

PT=greet-3SG.F A=Ajān TOP=Pila
A S/P

'Pila, she is greeted by Ajān.'

b. *Manye* *sa Pila.*
man-ye Ø=Pila
greet-3SG.F P=Pila
S/P

'Pila is greeted.'

5.5.2 Syntactic pivot

Since we have just dealt with aspects of syntactic alignment and found that Ayeri behaves a little oddly with regards to this, it may be interesting to perform another test on declarative statements and their syntactic pivot as well. A simple test which Comrie (1989: 111–114) describes in this regard is to test coreference in coordinated clauses. In coordinated clauses, it seems to be not uncommon for the subject of the second conjunct to drop out. Thus, in English, which behaves very much in terms of NOM–ACC alignment in this regard, we get the result in (18).

(18) a. *The cat hunts the mouse.*
A P

b. *The cat comes here.*
S

c. *The mouse comes here.*
S

d. *The cat hunts the mouse and* ___ *comes here.*
A P S

In the English example in (18), *the cat* constitutes the coreferential subject in (18d). This NP is the intransitive subject S of (18b) and the agent A of (18a). English thus has NOM–ACC alignment, since it typically treats S and A alike. In an ERG–ABS language, then, we would expect the opposite case: S and P should be treated alike.

This is indeed the case in the examples of Dyirbal in (19), where we find that *balan dʸugumbil* 'the woman' is coreferential in (19d). This is the S of (19c), and

the P of (19a). Dyirbal, thus, treats S and P alike, as predicted for an ERG–ABS language—at least in this case, since Comrie (1989: 113) also explains that 1SG and 2SG pronouns in Dyirbal behave in terms of NOM–ACC. Comrie (1989) also notes that some languages do not show a clear preference for whether the A or P of the transitive clause in the first conjunct is the preferred reference of the S of the intransitive clause in the second conjunct.

(19) Dyirbal (adapted from Comrie 1989: 112):

a. *balan dʸugumbil* *baŋgul yaṛaŋgu* *balgan*
DET woman-ABS (P) DET man-ERG (A) hit
'The man hit the woman.'

b. *bayi yaṛa* *baninʸu*
DET man-ABS (S) came.here
'The man came here.'

c. *balan dʸugumbil* *baninʸu*
DET woman-ABS (S) came.here
'The woman came here.'

d. *balan dʸugumbil* *baŋgul yaṛaŋgu* *balgan,* *baninʸu*
DET woman-ABS (P) DET man-ERG (A) hit (S) came.here
'The man hit the woman, and [the woman] came here.'

For Tagalog, as Kroeger (1991) explains, "the deletion is not obligatory but null nominative arguments are always interpreted as referring to the nominative argument of the main clause" (30). Due to the way Tagalog treats subjects, however, the nominative argument can be formed by either NP in (20) with the voice marked accordingly on the verb.[12]

What can be observed in Tagalog is that in (20a), the dropped S argument in the second conjunct, *bago umalis* … 'before … leaves', is coreferential with *Marvin*, since he is marked as the subject of the first conjunct. Since *Marvin* is the theme

[12] Thus, compare the English passive sentence *Marvin*$_i$ *was asked by Derek*$_j$ *before he*$_i$ *left* with (20a). In English, the reference of *he* is ambiguous between the syntactic subject *Marvin* and the agent *Derek*, however. As we have seen above, though, Tagalog would also be able to make a subject of an oblique argument, not just of the patient/theme or the recipient. The actor of the Tagalog sentence is also basically an object, not demoted to an adverbial as in English (Kroeger 1991: 38–44).

(20) Tagalog (adapted from Kroeger 1991: 31, from Ramos and Cena 1990: 151–152):

a. *tinanong ni=Derek si=Marvin, bago umalis*

PFV-ask-OV GEN=Derek NOM=Marvin before PFV.AV-leave
A P S

'Derek asked Marvin before [Marvin] left.'

b. *nagtanong si=Derek kay=Marvin, bago umalis*

PFV.AV-ask NOM=Derek DAT=Marvin before PFV.AV-leave
A P S

'Derek asked Marvin before [Derek] left.'

(P) of *tanong* 'ask', the clause needs to be marked for objective voice. On the other hand, in (20b), it is *Derek* who is the subject of the clause, so it is also he who leaves; the verb in the first conjunct clause is marked for actor voice according to the asker as the actor (A) being the subject.

In order to now investigate what the situation is in Ayeri, let us return to our initial set of examples. These examples featured two animals which are treated both as animate neuters. Anaphoric reference is therefore potentially ambiguous between פַּרַל *paral* 'cat' and פּרַבַרַה *prabara* 'mouse' in (21).

While it is possible in Ayeri to not repeat the coreferential NP in a conjunct clause verbatim, Ayeri still appears to avoid an empty subject slot. Thus, the verb סַהַיוֹנְיִ *sahayong* 'it comes' in (21d) displays a pronominal clitic, יוֹנְיִ *-yong* 'it', which constitutes the resumptive subject pronoun of the clause. In (21d) at least, this pronoun is coreferential with the subject in the first conjunct, פַּרַל *paral* 'cat'. Seeing as Tagalog switches the subject around by altering the voice marking on the verb, it is certainly illustrative to check how Ayeri fares if the topic is swapped to פּרַבַרַה *prabara* 'mouse'.

In (22), the resumptive pronoun is indicated to not refer to the first conjunct's agent/subject, פַּרַל *paral*, but to its theme/object, פּרַבַרַה *prabara*. This may be explained by topicalization: the sentence is about the mouse, so the underspecified argument in the second conjunct, in absence of topic marking that would indicate otherwise, corresponds to the topic. Interestingly, the result is structurally similar to the example of Tagalog in (20) above. It is too early yet, however, to conclude that what was called 'topic' so far is the subject after all; Ayeri is merely not completely unambiguous in this context. Since Tagalog allows any NP of a clause to be the subject, as illustrated by (13), let us test whether the behavior just

(21) a.

Ang kimbyo	*paral*	*prabarās.*	
ang=kimb-yo	paral-Ø	prabara-as	
AT= hunt-3SG.N	cat-TOP	mouse-P	
	A	P	

'The cat hunts the mouse.'

b.

Sahayo	*paralang*	*edaya.*
saha-yo	paral-ang	edaya
come-3SG.N	cat-A	here
	S	

'The cat comes here.'

c.

Sahayo	*prabarāng*	*edaya.*
saha-yo	prabara-ang	edaya
come-3SG.N	mouse-A	here
	S	

'The mouse comes here.'

d.

Ang kimbyo	*paral*	*prabarās*	*nay*	*sahayong*	*edaya.*
ang=kimb-yo	paral-Ø	prabara-as	nay	saha=yong	edaya
AT= hunt-3SG.N	cat-TOP	mouse-P	and	come=3SG.N.A	here
	A	P		S	

'The cat, it hunts the mouse, and it comes here.'

(22)

Sa kimbyo	*paralang*	*prabara*	*nay*	*sahayong*	*edaya.*
sa= kimb-yo	paral-ang	prabara-Ø	nay	saha=yong	edaya
PT=hunt-3SG.N	cat-A	mouse-TOP	and	come=3SG.N.A	here
	A	P		S	

'The mouse, the cat hunts it, and it comes here.'

described for Ayeri also holds in other contexts of topicalization. Example (23) presents sentences of differently case-marked topic NPs each, but in every case, the agent NP and the topicalized NP consist of a human referent. Both referents share the same person features so that the verb in the coordinated intransitive clause can theoretically license either of them as its subject.

In each of the sentences in (23), it is the topicalized NP which is identified as the antecedent for ᨿᨕᨚᨕᨚᨕᨚ *sarayāng* 'he leaves'. Does this mean Ayeri does, in fact, use Austronesian alignment? While the examples in (23) certainly suggest it, let us not forget that the verb in the coordinated clause could theoretically pick either the agent NP or the topicalized NP of the first conjunct as its subject. Things look slightly different, however, if the reference of the verb is unambiguous, for instance, because the topicalized argument cannot logically be the agent of the coordinated clause, as shown in (24).

(23) a. *Yam ilya ang Akan ilonley Maran nay sarayāng.*
yam= il-ya ang=Akan ilon-ley Ø= Maran nay sara=yāng
DATT=give-3SG.M A= Akan present-P.INAN TOP=Maran and leave=3SG.M.A
'Maran, Akan gives him a present, and he leaves.' (Maran leaves)

b. *Na pahya ang Maran ilonley Diyan nay sarayāng.*
na= pah-ya ang=Maran ilon-ley Ø= Diyan nay sara=yāng
GENT=take.away-3SG.M A= Maran present-P.INAN TOP=Diyan and leave=3SG.M.A
'Diyan, Maran takes the present away from him, and he leaves.' (Diyan leaves)

c. *Ya bahaya ang Diyan Maran nay sarayāng.*
ya= baha-ya ang=Diyan Ø= Maran nay sara=yāng
LOCT=baha-3SG.M A= Diyan TOP=Maran and leave=3SG.M.A
'Maran, Diyan shouts at him, and he leaves.' (Maran leaves)

d. *Ri su-sunca ang Diyan ilonley Sedan nay sarayāng.*
ri= su∼sunt-ya ang=Diyan ilon-ley Ø= Sedan nay sara=yāng.
INST=ITER∼claim-3SG.M A= Diyan present-P.INAN TOP=Sedan and leave=3SG.M.A
'Sedan, Diyan reclaims the present with his help, and he leaves.' (Sedan leaves)

e. *Sā pinyaya ang Maran tatamanyam Sedan nay sarayāng.*
sā= pinya-ya ang=Maran tataman-yam Ø= Sedan nay sara=yāng
CAUT=ask-3SG.M A= Maran forgiveness-DAT TOP=Sedan and leave=3SG.M.A
'Sedan, he makes Maran ask for forgiveness, and he leaves.' (Sedan leaves)

(24) *Le ilya ang Akan ilon yam Maran nay sarayāng.*
le=il-ya ang=Akan ilon-Ø DAT=Maran nay sara=yāng

PT.INAN=give-3SG.M A=Akan present-TOP DAT=Maran and leave=3SG.M.A
A P R S

'The present, Akan gives it to Maran, and he leaves.' (Akan leaves)

In (24), the first conjunct's verb, as the head of its clause, specifies that the topic of the clause is the patient (P), which is embodied by ꩜ꩍ *ilon* 'present'. This NP, however, is not a very typical agent for the verb in the second conjunct, ꩌꩍ *sara-* 'leave'. Besides, this verb is conjugated so as to require an animate masculine controller, whereas ꩜ꩍ *ilon* is inanimate, as shown by the topic marker ꩍ *le*. ꩜ꩍ *ilon* is thus not a suitable controller for ꩌꩍ꩏ꩍ *sarayāng*, since their person-feature values clash with each other—the ANIM and GEND values in particular, see (25).

As before, there are two masculine NPs in the first conjunct which form suitable antecedents on behalf of being animate masculine as required: the agent (A) ꩜ꩍ *Akan* and the recipient (R) ꩌꩍ *Maran*. Of the remaining non-topic NPs, Ayeri considers the agent to rank higher as a secondary topic on the thematic hierarchy

(25)	a.	ꩁꩀꩍꩲ *ilon*	N	(↑ PRED)	=	'present'
				(↑ INDEX)	=	↓
				(↓ PERS)	=	3
				(↓ NUM)	=	SG
				(↓ ANIM)	**=**	–
				(↓ GEND)	**=**	**INAN**
	b.	ꩈꩁꩌ꩔ꩲ *sarayāng*	I	(↑ PRED)	=	'*leave* ⟨(↑ SUBJ)⟩'
				(↑ SUBJ)	=	↓
				(↓ PRED)	=	'*pro*'
				(↓ PERS)	=	3
				(↓ NUM)	=	SG
				(↓ ANIM)	**=**	+
				(↓ GEND)	**=**	**M**
				(↓ CASE)	=	A

than the recipient, compare (26). The agent hence forms the preferred controller for ꩈꩁꩌ꩔ꩲ *sarayāng*. In cases where the topic in the first conjunct can safely be ruled out as the controller of the pronominal in the second conjunct, the syntactic pivot defaults to the highest-ranking semantically coherent NP. Ayeri therefore mostly groups the intransitive subject and the transitive agent together.

(26) Thematic hierarchy (Bresnan et al. 2016: 329):

agent > beneficiary > experiencer/goal > instrument > patient/theme > locative

For most verbs, this is also reflected by case marking, as we have seen above in (21): the S of an intransitive clause receives the same case marker as the A of a transitive clause: ꩍ꩔ꩲ *-ang*/ꩍ꩔ꩲ *ang* for animate referents, and ꩍꩀꩲ *reng*/ꩍꩀꩲ *eng* for inanimate referents (compare section 4.1.3). The case described initially, where the topic marking determines the controller of the coordinated intransitive clause, is essentially a strategy to disambiguate between two possible controllers for the same target. This is broadly reminiscent of Tagalog's syntax. On the other hand, when only one of the referents in the transitive conjunct is eligible as the controller of the subject of the intransitive conjunct at the same time, A and P are regularly indicated by person agreement, since Ayeri requires a resumptive pronominal clitic in the intransitive clause, as indicated above. The affix on the verb thus has the status of a pronominal predicator, compare (27).

In (27a), the verb in the second conjunct, ꩈꩁꩌ꩔ꩲ *sarayāng* 'he leaves' is marked for a masculine third-person subject. The only available controller in the first conjunct is ꩀꩍꩈ *Lita* on behalf of being male, since ꩆꩍꩌ꩔ꩲ *Kumang* is female. Hence, in (27b) the verb of the intransitive conjunct, ꩈꩁꩌꩀꩲ *sarayeng* 'she leaves', finds its controller only in ꩆꩍꩌ꩔ꩲ *Kumang*.

(27) a. *Ang tinisaya Lita sa Kumang nay sarayāng.*
ang=tinisa-ya Ø=Lita sa=Kumang nay sara=yāng
AT= hug-3SG.M TOP=Lita P=Kumang and leave=3SG.M.A
A P S

'Lita, he hugs Kumang, and he leaves.'

b. *Ang tinisaya Lita sa Kumang nay sarayeng.*
ang=tinisa-ya Ø=Lita sa=Kumang nay sara=yeng
AT= hug-3SG.M TOP=Lita P=Kumang and leave=3SG.F.A
A P S

'Lita, he hugs Kumang, and she leaves.'

5.5.3 Quantifier float

Another property usually associated with subjects is the ability of quantifiers referring to the subject NP to 'float' into the VP. This is possible also in English, consider, for instance, example (28).

(28) English:

a. ***All** the children are writing letters.*

b. *The children are **all** writing letters.*

Both of these sentences are equal in meaning: for all children in the set, every child is writing an unspecified amount of letters. It is not the case in (28b) that, for an unspecified amount of children, together they write the total amount of letters. *All* refers to *the children* in both cases, even though *all* is not placed in the subject NP, *the children*, in (28b). Kroeger (1991) mentions an example from Schachter and Otanes (1972) concerning *lahat* 'all', which is also able to float into a position right after the sentence-initial verb from the NP it normally modifies and which it would normally occur in, as (29) shows.

In (29a), *lahat* 'all' refers to the children, which constitute the subject NP according to voice and case marking. Example (29b), then, represents the opposite case, where it refers to the letters, which are marked as the subject this time. Of course, it is equally possible in English to say *The letters are all written by the children*, where *the letters* is the subject that the floated *all* refers to.

As pointed out in section 4.8, a lot of clitic quantifiers in Ayeri have a double meaning as intensifiers. For instance, ᨕᨑᨗᨀᨘᨑᨗᨀᨘᨑᨗᨀᨘ

(29) Tagalog (adapted from Kroeger 1991: 22, from Schachter and Otanes 1972: 501):

a. *sumusulat* *lahat* *ang=mga=bata* *ng=mga=liham*
AV.IMPF-write all NOM=PL=child GEN=PL=letter
'All the children are writing letters.'
Not: *'The children are writing all the letters.'

b. *sinusulat* *lahat* *ng=mga=bata* *ang=mga=liham*
IMPF-write-OV all GEN=PL=child NOM=PL=letter
'The/some children write all the letters.'
Not: *'All the children are writing letters.'

the suffixed quantifiers, if appended to the VP, are understood to modify the verb as an intensifier and are thus unsuitable for floating. The only exception is ཡ་ཤས་ *-aril* 'some', which only pertains to NPs as a quantifier. However, since the floating of suffixed quantifiers would produce readings which are ambiguous at best, floating of ཡ་ཤས་ *-aril* is avoided as well. Example (30) shows an attempt to float ཚང་རྒྱ *-hen* 'all' into the IP, resulting in a meaning different from the sentence with the unfloated particle for the reasons just stated above.

(30) a. *Ang tahanyan* *ganye-hen* *tamanyeley.*
ang=tahan-yan gan-ye-Ø=hen taman-ye-ley
AT= write-3PL.M child-PL-TOP=all letter-PL-P.INAN
'The children, all of them are writing letters.'

b. !*Ang tahanyan-hen* *ganye* *tamanyeley.*
ang=tahan-yan=hen gan-ye-Ø taman-ye-ley
AT= write-3PL.M=completely child-PL-TOP letter-PL-P.INAN
'?The children, they are completely writing letters.'
Intended: 'The children, they are all writing letters.'

Besides suffixed quantifiers, Ayeri also possesses free quantifiers such as རྒྱ *sano* 'both' or ཏི་རིང་ *diring* 'several', however. These free morphemes only have a quantifying reading, not an intensifying one. They are thus suitable for floating, since they do not produce ambiguities with regards to what is being modified, unlike their enclitic counterparts.

Since, as described above, topicalization has no impact on what constitutes the subject, meaning does not significantly change when the topic of a sentence like (31b) is switched to the patient in example (32a). Unlike in Tagalog in (29b) above, ཡར་ *yanang* 'boy(s)', as the agent NP, remains the subject. The floated རྒྱ *sano* still refers to this NP rather than the locative NP, ལྷ་ཡས་ *layye* '(at) the girls'. This fact is also reflected in morphology by the lack of plural marking on ཡར་ *yanang*, since རྒྱ *sano* indicates the NP's plurality and additional plural marking would be considered

(31) a. *Ang apayan yan sano layjya.*
ang=apa-yan yan-Ø sano lay-ye-ya
AT= laugh-3PL.M boy-TOP both girl-PL-LOC
'The boys, both of them are laughing at the girls.'

b. *Ang apayan sano yan layjya.*
ang=apa-yan sano yan-Ø lay-ye-ya
AT= laugh-3PL.M both boy-TOP girl-PL-LOC
'The boys, they are both laughing at the girls.'

redundant. We would expect the forms ཡན་རྗང་ *yanjang* and ལྕགས་ *lay* if རྣོ་ *sano* were to refer to 'the girls' rather than 'the boys', as in (32b).

(32) a. *Ya apayan sano yanang layye.*
ya= apa-yan sano yan-ang lay-ye-Ø
LOCT=laugh-3PL.M both boy-A girl-PL-TOP
'The girls, the boys are both laughing at them.'

b. *Ya apayan yanjang lay sano.*
ya= apa-yan yan-ye-ang lay-Ø sano
LOCT=laugh-3PL.M boy-PL-A girl-TOP both
'The girls, the boys are laughing at both of them.'

As we have seen above, the modification of subject pronouns with clitic quantifiers is avoided due to many of them serving a double role as intensifiers with related meanings which could be readily understood as referring to the verb instead of the pronoun. With free quantifiers, such as རྣོ་ *sano* 'both' in (33), this problem does not arise, however, so that there is no problem in placing them right after the finite verb. Ambiguity may be in the phrase structure of the clause here, but not at a functional level, as it is clear that the quantifier modifies the subject pronoun due to semantic coherence.

(33) *Ang girenjan sano bahalanya.*
ang=girend=yan.Ø sano bahalan-ya
AT= arrive=3PL.M.A both finish-LOC
'They arrived both at the finish.'

As mentioned in section 4.2.6, it is possible for pronouns to be modified by enclitic intensifiers indirectly by using རང་ *sitang* 'self' as an indeclinable dummy pronoun to carry the clitic so as to avoid ambiguity created by floating the clitic right after the finite verb. This is also possible for the purpose of quantification of pronouns with clitic quantifiers.

Since ᨿᨾᨿ *sitang* is indeclinable, it is the pronominal clitic which carries inflection for case, as (34b) shows. An analysis of ᨿᨾᨿᨿᨶᨾ *sitang-hen* as 'self.TOP=all' is therefore not possible. Moreover, ᨾᨿᨿᨾᨿᨿᨶᨾ *-tang sitang-hen* does not constitute a clitic cluster, because it is possible to place word material between the verb and ᨿᨾᨿᨿᨶᨾ *sitang-hen* in both examples in (34). See section 6.4.3 for an analysis of dummy ᨿᨾᨿ *sitang* in terms of constituent and functional structure.

(34) a. *Ang girenjan panca sitang-hen bahalanya.*
ang=girend=yan.Ø panca sitang=hen bahalan-ya
AT= arrive=3PL.M.A finally self=all finish-LOC
'All of them finally arrived at the finish.'

b. *Ya girendtang panca sitang-hen bahalan.*
ya= girend=tang panca sitang=hen bahalan-Ø
LOCT=arrive=3PL.M.A finally self=all finish-TOP
'The finish, all of them finally arrived there.'

5.5.4 Relativization

Kroeger (1991) observes that in Tagalog only nominative arguments may be relativized. He refers to Keenan and Comrie's (1977) accessibility hierarchy of NPs, according to which, he reports, "if only a single argument of any clause can be relativized, that argument must be the subject" (Kroeger 1991: 24). That is, the argument in the main clause which is modified by a relative clause must be the nominative argument, and there must not appear an overt nominative argument in the relative clause itself. The verb in the relative clause carries inflection for the role of the relativized argument in the relative clause. Thus, (35a) is grammatical, while (35b) is not.

(35) Tagalog (Kroeger 1991: 24, from Foley and Van Valin 1984: 141–142):

a. *bata=ng b-in-igy-an ng=lalake ng=isda*
child=LNK PFV-give-DV GEN=man GEN=fish
'the child which was given fish by the man'

b. **isda=ng nag-bigay ang=lalake sa=bata*
fish=LNK AV-PFV-give NOM=man DAT=child

Ayeri, however, has no such restrictions, so accessibility for relativization is not a good criterion for testing subjecthood, strictly speaking. The following discussion thus serves the purpose only of illustrating how Ayeri handles relative clauses. As shown below, non-topic NPs may be relativized, and relative clauses not uncommonly contain their own agent NP. The relativized NP may even be

referred to in the relative clause by a resumptive pronoun or pronominal clitic, since verbs must not go uninflected. First consider (36).

(36) *Ang ilya inunley ganyam inunaya si gumasayāng edaya.*
ang=il-ya inun-ley gan-yam inunaya-Ø si gum-asa=yāng edaya
AT= give-3SG.M fish-P.INAN child-DAT fisherman-TOP REL work-HAB=3SG.M.A here
'The fisherman who used to work here, he gave fish to the child.'

In (36), ᨠᨿᨿᨣᨿᨣᨿᨣ

(38) *Ang ilya inunaya ganyam inunley si hiro nay lepan.*
ang=il-ya inunaya-Ø gan-yam inun-ley si hiro nay lepan
AT= give-3SG.M fisherman-TOP child-DAT fish-P.INAN REL fresh and tasty
'The fisherman, he gave fish which is fresh and tasty to the child.'

(39) Tagalog (adapted from Kroeger 1991: 29–30):

a. *nagbain na lasing si=Maria ng=isda*
AV.PFV-serve LNK drunk NOM=Maria GEN=fish
'Maria served the fish drunk.' (Maria was drunk)

b. *inibain na hilaw ni=Maria ang=isda*
IV.PFV-serve LNK raw GEN=Maria NOM=fish
'Maria served the fish raw.' (The fish was raw)

c. ? *inibain na lasing ni=Maria ang=isda*
IV.PFV-serve LNK drunk GEN=Maria NOM=fish
'Maria served the fish drunk.' (The fish was drunk)

Kroeger (1991: 30) explains that (39c) is anomalous, since the subject is indicated as *ang isda* 'the fish', however, *lasing* 'drunk' is not a property usually associated with fish—it would fit better with 'Maria'. However, this interpretation would be ungrammatical since 'Maria' is not the subject of the clause. Examples of structurally equivalent phrases in Ayeri can be found in (40).

Secondary predicates in Ayeri also follow the finite verb, and they may refer to the agent. If what was identified as the topic would be the subject like in Tagalog, the reference of the adjective should change in the way shown in (39). This is not the case, however. Thus, in (40a), the topic NP, ᠣᠣᠬᠠᠭᠠᠨ *Migray*, happens to be the same NP that is modified by the secondary predicate, ᠬᠢᠨᠣ *gino* 'drunk': ᠣᠣᠬᠠᠭᠠᠨ *Migray* is drunk. What is more, (40b) generates the same reading even though this time, ᠰᠠᠨᠭᠠᠯ *sangal* 'the room' is marked as the topic of the clause. A reading in which the room is drunk cannot be forced by morphological means, although it needs to be pointed out that predicative adjectives relating to the object inhabit the same postverbal position. Considering structure alone, the sentence in (40b) is ambiguous, though context certainly favors the reading provided in the translation of (40b), since 'drunk' is not typically a property of rooms.

(40) a. *Ang kongaye* *gino* *Migray* *sangalya.*
ang=konga-ye gino Ø=Migray sangal-ya

AT=enter-3SG.F drunk TOP=Migray room-LOC

'Migray, she enters the room drunk.' (Migray is drunk)

b. *Ya kongaye* *gino* *ang Migray* *sangal.*
ya=konga-ye gino ang=Migray sangal-Ø

LOCT=enter-3SG.F drunk A=Migray room-TOP

'The room, Migray enters it drunk.' (Migray is drunk)

Different than in (40), the adjective in (41), ꩡꩲ *sati* 'cold', refers to the object of the clause, ꩆꩡꩲꩍꩲꩍ *kangaley* 'milk', even though ꩆꩡꩲꩍꩲꩍ *kangaley* is not the topic of the clause. By structure alone, ꩔ꩲꩡꩲ꩔ *Niyas* could also be the one who is cold, rather than the milk, however, this would be unlikely considering context and extralinguistic experience. Equally unlikely is the possible interpretation of the milk becoming cold by ꩔ꩲꩡꩲ꩔ *Niyas*' drinking it.

(41) *Ang ginya* *sati* *Niyas* *kangaley.*
ang=gin-ya sati Ø=Niyas kanga-ley

AT=drink-3SG.M cold TOP=Niyas milk-P.INAN

'Niyas, he drinks milk cold.' (The milk is cold)

In difference to Tagalog, thus, it is not morphology but the meaning of the verb which determines whether the postverbal predicative adjective refers to the agent or the patient.[13] However, since in Ayeri, the depictive secondary predicate following the verb can refer to either the agent or the patient depending on context, this test does not have a very clear outcome. At least we could establish here that alternations in the morphological marking of the privileged NP have no impact on the relation between adjective and noun. The marking on the verb is therefore not used for manipulating grammatical relations in this context, unlike in Tagalog. Depictives and resultatives are dealt with in more detail in section 6.4.6.

13 Unfortunately, Kroeger (1991) does not provide any examples of object predicatives in Tagalog, and neither does Schachter and Otanes (1972) readily contain information on these.

5.5.6 Raising

Raising verbs involve the sharing of the subject of an embedded clause with the structural subject or object position of its matrix clause; the complement clause's subject appears as a gap in English. The raised subject is not semantically an argument of the matrix clause's verb. The matrix clause's subject may also be a dummy 'it' or 'there' in English; see (42) and (43). Raising verbs are dealt with in more detail in section 6.4.3 (p. 375).

(42) a. It seemed that John$_i$ knows the answer.
b. John$_i$ seemed $__i$ to know the answer.
c. *John$_i$ seemed it.

(43) a. I expected that Linda$_i$ sings the national anthem.
b. I expected Linda $__i$ to sing the national anthem.
c. !I expected Linda.

Kroeger (1991: 27–28) states that, as expected, raising is restricted to nominative arguments in Tagalog. Non-nominative actors may be raised into the matrix clause as well, however, but at least for some speakers there needs to be a resumptive pronoun—basically, an overt pronominal 'trace' in terms of GG—in the complement clause, as shown in (45). Example (44) shows a case of raising of the nominative argument of the complement clause to the patient of a transitive verb; the nominative argument of the complement clause subsequently is realized as a gap co-indexed with the patient of the matrix clause, that is, the raised argument. In English, one would speak of to-object raising, though here the patient of *gusto*, *sila*, is in its nominative form, so syntactically, *ng Nanay* 'mother', the actor, is the object in this clause. In (45a), the verb of the complement clause, *lutuin* 'cooks', marks its patient argument as the subject. Yet, the non-subject agent, *Charlie*, is raised to occupy the patient role in the matrix clause. The position of the non-subject agent in the complement clause is subsequently realized as a resumptive pronoun, *niya*, co-indexed with the raised NP. Example (45b) shows that it would be ungrammatical to have a gap in its stead.

Kroeger (1991) presumably switches to labeling the raised NP as ABS in (45) because it is the patient-subject of *gusto* 'want' (note the experiencer *ko* occurs in genitive case); the patient of the embedded clause, *suman* 'rice cake', is also marked as a subject with the verb indicating this by object-voice marking. This is basically consistent with how an ERG–ABS language would mark subjects. Unfortunately, Kroeger (1991) only gives examples of 'to-patient' raising, but not of 'to-actor'

(44) Tagalog (adapted from Kroeger 1991: 26):

gusto sila ng=Nanay (na) mag-aral mamayang.gabi

want 3PL.NOM GEN=Mother COMP AV-study tonight

S/P A S/A

'Mother wants them to study tonight.'

(45) Tagalog (adpated from Kroeger 1991: 28):

a. *gusto ko si=Charlie na lutu-in niya ang=suman*

want 1SG.GEN ABS=Charlie COMP cook-OV 3SG.GEN ABS=rice.cake

A S/P A S/P

'I want Charlie to cook the *suman*.'

b. *gusto ko si Charlie$_i$ na lutuin $_{}_i$ ang suman

raising (Carnie 2013: 430). As we will see below, Ayeri has no problem with the former (as to-subject raising), however, it cannot do the latter (as to-object raising), probably for semantic reasons. First of all, let us look at to-subject raising, however.

In (46), ꠘꠗ *Pada* is both the topic and the subject of ꠀꠞꠣꠞ *koron-* 'know', but not of ꠎꠟꠣꠞ *surp-* 'seem', as (46d) shows. However, ꠘꠗ *Pada* can be made the subject of the matrix clause, as shown in (46b). Raising results in an intransitive matrix clause, which means that topicalizing the only argument of the verb is blocked, as illustrated by the ungrammaticality of (46c). The verb in (46b) also becomes infinite, like in English. Unlike in Tagalog, it cannot carry any marking for grammatical relations, that is, there is no voice or agreement morphology available which could manipulate or indicate the grammatical context. Furthermore, it is possible in Ayeri to form a complex predicate like ꠎꠟꠣꠞ꠆ꠀꠞꠣꠞꠍꠣꠝ *surp- koronyam* in (47), literally 'seems knowing', with all of the arguments of the embedded clause becoming available as pseudo-arguments of the matrix clause, that is, the matrix verb is interpreted as a transitive clause and may carry topic marking for any of the following NPs' arguments, even though they are not licensed by the semantics of the verb—compare section 6.4.3 (p. 375) for a more detailed structural analysis.

If the topic is actually the subject, it should be possible to raise non-actor topics into the matrix clause easily. Of course, this is possible in Tagalog, according to Kroeger (1991). In (48a), thus, *Manuel* is the one arrested, so he is the patient of the subordinate clause which acts as the subject of the matrix clause. The fact

(46) a. *Surpreng,* [CP *ang koronye* *Pada* *guratanley*].
surp=reng ang=koron-ye Ø=Pada guratan-ley

seem=3SG.A.INAN AT=know-3SG.F TOP=Pada answer-P.INAN
(dummy S; S/A; P)

'Pada, it seems that she knows the answer.

b. *Surpye* *ang Pada* [VP *koronyam* *guratanley*].
surp-ye ang=Pada koron-yam guratan-ley
seem-3SG.F A=Pada know-PTCP answer-P.INAN
(S; A; P)

'Pada seems to know the answer.'

c. **Ang surpye* *Pada* [VP *koronyam* *guratanley*].
ang=surp-ye Ø=Pada koron-yam guratan-ley

A=seem-3SG.F TOP=Pada know-PTCP answer-P.INAN
(S; A; P)

Intended: 'Pada, she seems to know the answer.'

d. **Surpye* *ang Pada.*
surp-ye ang=Pada
seem-3SG.F A= Pada
'Pada seems.'

(47) *Ang surpye* [VP *koronyam*] *Pada* *guratanley.*
ang=surp-ye koron-yam Ø=Pada guratan-ley

A=seem-3SG.F know-PTCP TOP=Pada answer-P.INAN
(A; P; S/A; P)

'Pada, she seems to know the answer.'

that *Manuel* is a patient-subject of the subordinate verb, *hulihin* 'be caught', is reflected in its being marked for objective voice. The English translation is consequently given with the subordinate clause phrased in the passive voice. Similarly, in (48b), the subordinate verb, *sinuhulan* 'be bribed', is marked for directional voice. According to this, *ang pangulo* 'the president' is a non-actor subject of the subordinate verb here as well. It also is in the matrix clause, since the matrix verb, *napagbintangan* 'be accused of', is marked for directional voice.

(48) Tagalog (adapted from Kroeger 1991: 26):

a. *malapit* *na* *si=Manuel* *na* *hulihin* *ng=polis*

NVOL-close already NOM=Manuel COMP catch-OV GEN=police
S A S/P

'Manuel is about to be arrested by the police.'

b. *napagbintangan* *ang=pangulo=ng* *sinuhulan* *ng=Sindikato*

NVOL.PFV-accuse-DV NOM=president=COMP PFV-bribe-DV GEN=syndicate
S A S/P

'The president was accused of having been bribed by the Syndicate.'

As we have seen above, the marking of the privileged NP on the verb in Ayeri has no effect on grammatical relations; making a transitive verb agree with an NP other than the agent NP was also judged questionable. Thus, we would expect Ayeri to not allow for the same flexibility as Tagalog. The next two sets of example sentences, (49) and (50), thus feature non-actor topics in the complement clause in the (a) examples which we attempt to raise into the subject position of the matrix clause in the (b) examples.

Comparing (49) and (50) with (48a) and (48b), it becomes apparent that Ayeri is very dissimilar to Tagalog with regards to the promotion of a non-actor NP to the subject of the matrix clause in that it is not possible to produce a grammatical result this way. Besides yet more evidence for the disconnect between the marking on the verb and subject assignment and also evidence in favor of an interpretation of the actor NP as the subject, it is possibly the fact that the subordinate verb appears in an infinite form when raising occurs that prevents some of the flexibility of Tagalog observed above. Even if Ayeri were to work like Tagalog by and large, since finiteness in Ayeri also includes topic marking, it would not be possible for the infinite verb to mark the assignment of grammatical roles to its complements, overt or covert.

(49) a. *Surpreng,* [CP *le koronye* *ang Pila* *guratan*].
surp=reng le=koron-ye ang=Pila guratan-Ø

seem=3SG.A.INAN PT.INAN=know-3SG.F A=Pila guratan-TOP
(dummy S; S/A; P)

'The answer, it seems that Pila knows it.'

b. **Surpara* *guratanreng* [VP *ang Pila* *koronyam*].
surp-ara guratan-reng ang=Pila koron-yam
seem-3SG.INAN answer-A.INAN A=Pila know-PTCP
(S; A; P)

Intended: 'The answer seems to be known by Pila.'

(50) a. *Silvreng,* [CP *yam lataya* *ang Maran* *disaley* *Apitu*].
Silv=reng yam=lata-ya ang=Maran disa-ley Ø=Apitu

look=3SG.A.INAN DATT=sell-3SG.M A=Maran soap-P.INAN TOP=Apitu
(dummy S; S/A; T; R)

'Apitu, it appears that Maran sold her the soap.'

b. **Silvye* *ang Apitu* [CP *ang Maran* *latayam* *disaley*]
silv-ye ang=Apitu ang=Maran lata-yam disa-ley
look-3SG.F A=Apitu A=Maran sell-PTCP soap-P.INAN
(S; S/A; T; R)

Intended: 'Apitu appears to have been sold the soap by Maran.'

The examples (44) and (45) from Tagalog quoted initially both feature to-object raising: the subject of the complement clause becomes an object of the matrix clause's verb. This phenomenon is also known as *exceptional case marking* (ECM) or *accusative and infinitive* (ACI) and entails that the matrix verb assigns accusative/objective case to the raised subject (Carnie 2013: 439–442, 445, 451). The raised subject is not semantically an object of the matrix verb, however, but an external agent; see (51).

(51) a. *Mother wants them to study tonight ≠ Mother wants them*

b. *Mary expects him to tidy the room ≠ Mary expects him*

c. *John hears people sing in the street ≠ John hears people*

Ayeri avoids this kind of construction. The reason for this is probably that, even though it treats agent and patient as semantic metaroles rather permissively, case marking is nonetheless based on semantic roles rather than purely based on

syntactic function. Due to the uniqueness condition, a verb in Ayeri cannot have two agent arguments, yet the raised object is an agent, albeit an external one. It is still salient enough as an agent to preclude assigning it patient case, though, compare (52).

(52) a. *Galamye ang Sipra, ang sibunja Ijān sangalas.*
galam-ye ang=Sipra ang=sibund-ya Ø= Ijān sangal-as
expect-3SG.F A= Sipra AT= tidy.up-3SG.M TOP=Ijān room-P
'Sipra expects that Ijān tidy up the room.'

b. **Ang galamye Sipra ang/sa Ijān sibunjam sangalas.*
ang=galam-ye Ø= Sipra ang=/sa=Ijān sibund-yam sangal-as
AT= expect-3SG.F TOP=Sipra A=/P= Ijān tidy.up-PTCP room-P
Intended: 'Sipra expects Ijān to tidy up the room.'

c. **Ang galamye sibunjam Sipra sa Ijān sangalas.*
ang=galam-ye sibund-yam Ø= Sipra sa=Ijān sangal-as
AT= expect-3SG.F tidy.up-PTCP TOP=Sipra P= Ijān room-P
Intended: 'Sipra expects Ijān to tidy up the room.'

The example sentences in (52) show that to-object raising is not possible with verbs of wanting—here using *galam-* 'expect' by way of example. That is, the subject of the complement clause in (52a), *Ijān*, cannot take the object position of the matrix clause in (52b), nor is it possible to form a complex predicate as in (47), with the arguments of the subordinate verb, *sibund-* 'tidy', becoming available as quasi-arguments of the matrix clause's verb, *galam-* 'expect', in (52c). Other verbs which allow to-object raising in English include verbs of wanting like *need* or *want*, or verbs of perception like *see* or *hear*. English also permits this construction for verbs of cognition like *believe*, *consider*, *know*, and *think*, and for verbs expressing a causative relationship like *make* or *let*. As described in section 4.1.3 (p. 121), verbs like *make* or *let* do not have direct counterparts in Ayeri, as Ayeri uses a morphosyntactic strategy rather than a lexical one to express causative relationships. However, as (53) shows, Ayeri does not allow to-object raising with verbs of perception and verbs of cognition either.

5.5.7 Control

Control verbs behave basically in the opposite way of raising verbs: the subject of the subordinate verb is also an argument of the verb in the matrix clause—subject or object—and this argument acts as a controller for the subject of the subordinate verb. The main clause predicate is thus thought to assign two thematic roles. In GG it is assumed that the subject of the lower clause is a silent PRO element which

(53) a. **Ang tangya Yan keynamas malyyam kirinya.*
ang=tang-ya Ø= Yan keynam-as maly-yam kirin-ya
A= hear-3SG.M TOP=Yan people-P sing-PTCP street-LOC
Intended: 'Yan hears people sing in the street.'

b. **Paronyeng sa Avan tesayam.*
paron=yeng sa=Avan tesa-yam
believe=3SG.F.A P= Avan lie-PTCP
Intended: 'She believes Avan to lie.'

is co-indexed with the controller (Carnie 2013: 442–445, 451). An example is given in (54). For a more detailed analysis of control verbs, see section 6.4.3 (p. 372).

(54) a. Subject control:

John$_i$ *tries* [*that John*$_i$ *gets a job*]
= *John*$_i$ *tries* [PRO$_i$ *to* t$_{PRO}$ *get a job*]

b. Object control:

The officer ordered Mary$_i$ [*that Mary*$_i$ *turn back*]
= *The officer ordered Mary*$_i$ [PRO$_i$ *to* t$_{PRO}$ *turn back*]

Kroeger (1991) refers to subject control as 'Equi' and reports that according to Schachter (1976: 505), it is typically the actor of the subordinate verb that is the target of deletion. At first sight, this would be a strong argument in favor of defining the actor NP as the subject, however, he notes that under certain circumstances, "the controllee in a transitive complement clause [is allowed] to be either the Actor (regardless of case marking) or the argument which bears nominative case" (Kroeger 1991: 37). This is the case, for instance, with *himukin* 'persuade' and *magpilit* 'insist on'. Subordinate verbs marked for non-volitive mood form an exception as well (36–37, 96–97). Kroeger (1991) illustrates the main pattern of control in Tagalog with the set of example sentences in (55).

While the nominative argument of the subordinate verb changes between the actor in (55a), the theme in (55b), and the recipient in (55c), it is always the actor which is dropped as the coreferential argument. Why the example sentences in (55) use *balak* 'plan, intend' in its object-voice form is not explained. However, Kroeger (1991) mentions that "alternation in the voice category of the matrix verb and the case marking of the controller does not affect the control relation" (37). In other words: whether the actor in the matrix clause is the syntactic subject or not does not matter; for Tagalog's equivalent of subject-control verbs, the control relationship always finds its origin in the actor argument, although there are a few exceptions, as mentioned above. The set in (56) presents an interesting example of

(55) Tagalog (adapted from Kroeger 1991: 37):

a. *binalak* *niya=ng* [*magbigay* *ng=pera* *sa=Nanay*]

PFV-plan-OV 3SG.GEN=COMP (A) AV-give (S/A) GEN=money (T) DAT=mother (R)

'He planned to give money to Mother.'

b. *binalak* *niya=ng* [*ibigay* *sa=Nanay* *ang=pera*]

PFV-plan-OV 3SG.GEN=COMP (A) IV-give (A) DAT=mother (R) NOM=money (S/T)

'He planned to give the money to Mother.'

c. *binalak* *niya=ng* [*bigyan* *ng=pera* *ang=Nanay*]

PFV-plan-OV 3SG.GEN=COMP (A) DV-give (A) GEN=money (T) NOM=mother (S/R)

'He planned to give Mother (some/the) money.'

('obligatory') control based on the patient/theme argument in Tagalog's equivalent of object-control verbs.

Regarding (56ab), Kroeger (1991) explains that "when the complement verb appears in its volitive (unmarked) form, the controllee must be the Actor of the embedded clause" (93). Thus, *Maria* cannot be the patient subject in (56b), since she is still the controllee. If the verb of the embedded clause is marked for non-volitive mood as in (56c), however, the sentence becomes grammatical: "When the embedded verb is marked for non-volitive mood, the pattern is reversed: the controllee must be the subject, and not the Actor. Actor gaps cannot be controlled in non-volitive complements" (94). The difference between obligatory and non-obligatory control adds a further complication to acceptability, but these details do not need to preoccupy us for the purpose of comparison to Ayeri, which lacks this distinction.

As previously with raising verbs, it is possible to combine a subordinating verb with a full complement clause, as in (57a), a VP niece of the subject NP (57b), or a VP sister of I^0 (57c). In both (57a) and (57b), it is necessarily the actor which is coreferenced, as the bottom arrow shows. In (57c), the bottom arrow instead shows the relation of verb agreement. The arrow on top, as before, shows what the respective verb picks as the clause's topic for all example sentences.

(56) Tagalog (adapted from Kroeger 1991: 93–94):

a. *in-utus-an* *ko* *si=Maria=ng* [*halik-an* *si=Pedro*]

PFV-order-DV ISG.GEN NOM=Maria=COMP kiss-DV NOM=Pedro
A P A P

'I ordered Maria to kiss Pedro.'

b. **in-utus-an* *ko* *si=Maria=ng* [*halik-an* *ni=Pedro*]

PFV-order-DV ISG.GEN NOM=Maria=COMP kiss-DV GEN=Pedro
A P S/P A

'I ordered Maria to be kissed by Pedro.'

c. *in-utus-an* *ko* *si=Maria=ng* [*ma-halik-an* *ni=Pedro*]

PFV-order-DV ISG.GEN NOM=Maria=COMP NVOL-kiss-DV GEN=Pedro
A P S/P A

'I ordered Maria (to allow herself) to be kissed by Pedro.'

(57) a. *Linkaya* *ang Maran,* [CP *ang kondisaya* *agujas.*].
linka-ya ang=Maran ang=kondisa=ya.Ø agu-ye-as

try-3SG.M A=Maran AT=feed=3SG.M.TOP chicken-PL-P
S S/A P

Literally: 'Maran tried that he feeds the chicken.'

b. *Linkaya* *ang Maran* [VP *kondisayam* *agujas*].
linka-ya ang=Maran kondisa-yam agu-ye-as
try-3SG.M A=Maran feed-PTCP chicken-PL-P
S S/A P

'Maran tried to feed the chicken.'

c. *Ang linkaya* [VP *kondisayam*] *Maran* *agujas.*
ang=linka-ya kondisa-yam Ø=Maran agu-ye-as

AT=try-3SG.M feed-PTCP TOP=Maran chicken-PL-P
S/A P S/A P

'Maran, he tried feeding the chicken.'

As with raising verbs, verbal complements appear in an infinite form, the participle. For (57b) the reason may be that there is no overt agent in the clause to agree with, and agreement with the patient does not make sense here because the clause does not express a passive either. In (57c) the reason may be that the main verb already carries person features. If the topic marking on the finite verb is altered as in (58), the meaning of the sentences does not change with regards to grammatical relations and voice, giving us yet more reason to assume that the agent is the grammatical subject, and that topic marking has no influence on these matters. Ayeri thus has actual subject-control verbs in the way English has them.

(58) a. *Linkaya* *ang Maran,* [CP *le kondisayāng* *aguye.*].
linka-ya ang=Maran le=kondisa=yāng agu-ye-Ø

try-3SG.M A=Maran (S) PT=feed=3SG.M.A (S/A) chicken-PL-TOP (P)

Literally: 'The chicken, Maran tried that he feeds them.'

b. *Le linkaya* [VP *kondisayam*] *ang Maran* *aguye.*
le=linka-ya kondisa-yam ang=Maran agu-ye-Ø

PT=try-3SG.M feed-PTCP (S/A) (P) TOP=Maran (S/A) chicken-PL-P (P)

'The chicken, Maran tried feeding them.'

In object-control constructions, the object of the matrix clause's verb is an actual argument of it, as shown in (59). This argument becomes the subject of the embedded clause, and there is no change in the meaning of the verb between both versions of the sentences. We have seen above that Ayeri does not allow to-object raising, since it is not possible to assign patient case to an external agent because Ayeri's case marking is not purely based on grammatical functions, but there is still also some semantic motivation. Ayeri does, however, allow object control, so it seems to be possible at least to implicitly convert the matrix clause's patient or theme to the agent of the embedded clause, while the opposite is apparently not possible. Whether syntactic precedence or some kind of accessibility hierarchy is involved here still needs to be investigated.

The example sentences in (60) follow the format of those preceding. Again, it is generally possible to use a complement clause as in (60ab), as well as to complement the verb in the matrix clause with an infinite clause with object control (60c). However, the strategy of adjoining a VP to IP in order to make the subor-

(59) a. *John asked* [*Mary to give Peter the book*]
= *John asked Mary*

b. *The teacher instructs* [*the students to calculate parables*]
= *The teacher instructs the students*

c. *I persuaded* [*my friend to come along*]
= *I persuaded my friend*

dinate verb's arguments available for topicalization by the matrix clause's verb is not available here because this would cause a doubling of case roles and alike grammatical functions. Such a configuration is considered ungrammatical in Ayeri, compare (60d). As we will see below, however, this is not an issue for intransitive complement clauses.

(60) a. *Pinyaya* *ang Amān,* [CP *ang rimaya* *Kagan* *kunangley*].
pinya-ya ang=Amān ang=rimaya Ø=Kagan kunang-ley

ask-3SG.M A=Amān (S) AT=close-3SG.M TOP=Kagan (S/A) door-P.INAN (P)

'Kagan, Amān asks that he close the door.'

b. *Sa (da-)pinyaya* *ang Amān* *Kagan,* [CP *ang rimaya* *kunangley*].
sa=(da=)pinya-ya ang=Amān Ø=Kagan ang=rimaya kunang-ley

PT=(so=)ask-3SG.M A=Amān (S/A) TOP=Kagan (P) AT=close=3SG.M.TOP (S/A) door-P.INAN (P)

'Kagan, Amān asks him that he close the door.'

c. *Sa pinyaya* *ang Amān* *Kagan* [VP *rimayam* *kunangley*].
sa=pinya-ya ang=Amān Ø=Kagan rima-yam kunang-ley

PT=ask-3SG.M A=Amān (S/A) TOP=Kagan (P) (S/A) close-PTCP door-P.INAN (P)

'Kagan, Amān asks him to close the door.'

d. * *Sa pinyaya* [VP *rimayam*] *ang Amān* *Kagan* *kunangley.*
sa=pinya-ya rima-yam ang=Amān Ø=Kagan kunang-ley

PT=ask-3SG.M (S/A) close-PTCP (P) A=Amān (S/A) TOP=Kagan (P) door-P.INAN (P)

Literally: 'Kagan$_i$, Amān asks closing him$_i$ the door.'

Strictly speaking, it does not matter in (60ab) whether the coreferenced argument is the topic in both clauses or not; it is simply not unlikely that it is. Again, topicalization does not have an effect on grammatical relations—although it was shown above that Tagalog, in the canonical case, deviates from its normal behavior as well with regards to control verbs to the point where this construction has been used as an argument in favor of the actor argument being the subject. As for Ayeri, unlike in coordinated main clauses, topicalization is not a strategy for disambiguation of several possible controllers for the pronominal agent of the complement clause or the infinite VP niece of the subject NP here. Due to the semantics of the verb in the matrix clause, it is clear that the patient argument is to be understood as the agent of the subordinate verb. Thus, there is no ambiguity in anaphoric reference in the complement clause.

As mentioned above, forming a complex predicate and generating the arguments of the embedded verb in (60d) in their basic position is problematic due to the doubling of case roles. However, the 'intermediate' strategy of adjoining the VP of the complement clause, containing all its arguments, to the IP of the matrix clause, as shown in (61), is equally unfavorable. A whole clause would end up center-embedded between the matrix verb and its core arguments this way, which becomes the more awkward the longer clause is. It is possible, however, to use the VP adjunction strategy with intransitive complement clauses, as illustrated by (62), since there are no objects in the adjoined VP to become problematic in terms of doubled case roles or syntactic functions.

(61) ?*Sa pinyaya [VP rimayam kunangley] ang Amān Kagan
sa=pinya-ya rima-yam kunang-ley ang=Amān Ø=Kagan

PT=ask-3SG.M close-PTCP door-P.INAN A=Amān TOP=Kagan
S/A P S/A P

Literally: 'Kagan, Amān asks to close the door him.'

5.5.8 Conclusion

As Table 5.1 shows, Tagalog and Ayeri are not really similar in syntax despite superficial similarities in morphology. According to Kroeger's (1991) thesis—which critically reviews and updates Schachter's (1976) survey by leaning on LFG theory—Tagalog prefers the argument which corresponds to the marking on the verb for most of the traits usually associated with subjects. According to Kroeger's (1991) analysis, this NP is the nominative argument, thus. Schachter and Otanes (1972)

(62) a. *Ang nosaya* [VP *nimpyam*] *Amān* *sa Pada.*
ang=nosa-ya nimp-yam Ø=Amān sa=Pada

AT=order-3SG.M run-PTCP TOP=Amān P=Pada
S S/A P

'Amān, he orders Pada to run.'

b. *Sa nosaya* [VP *nimpyam*] *ang Amān* *Pada.*
sa=nosa-ya nimp-yam ang=Amān Ø=Pada

PT=order-3SG.M run-PTCP A=Amān TOP=Pada
S S/A P

'Pada, Amān orders her to run.'

refer to it as 'focus', Schachter (1976) as 'topic', and Schachter (2015) as 'trigger'.[14] Kroeger (1991) finds in his survey that the nominative argument is largely independent from the actor, so that the logical subject is not necessarily the syntactic subject; what Schachter (1976) calls 'topic' also does not behave like a pragmatic topic in terms of statistics.

Essentially, what Tagalog does, according to Kroeger's (1991) analysis, is to generalize voice marking beyond passive voice, so that any argument of the verb can be the subject. However, unlike passives in English, higher-ranking roles (for passives, the agent) appear not to be suppressed or to be demoted to adverbials in the way of *by* agents in English passive clauses. Linguists have been grappling for a long time with this observation, and constraint-based approaches, such as LFG (recently, Bresnan et al. 2016) or HPSG (Pollard and Sag 1994) pursue, may be able to explain things more succinctly than structuralist ones. In any case, Kroeger (1991) avoids the terms 'active' or 'passive' possibly for this reason, and instead uses 'actor voice' (AV), 'objective voice' (OV), 'dative/locative voice' (DV), etc. (14–15).

Ayeri, in contrast to Tagalog, very much prefers the actor argument (called *agent* here for consistency) for traits usually associated with subjects, independent of whether the agent is also the topic of the clause—in Ayeri it is the topic which is marked on the verb, not the nominative argument. In spite of a few irregularities like patient agreement in agentless clauses and using topicalization as a way to disambiguate the syntactic pivot in ambiguous cases, Ayeri is remarkably consistent with a NOM–ACC language. The fact that there is a subject in the classic, structural

14 'Trigger' is also the term often seen in descriptions of constructed languages in this respect.

Table 5.1: Comparison between Tagalog (Kroeger 1991) and Ayeri

Criterion	Tagalog	Ayeri
Marked on the verb	NOM argument	TOP argument
Verb agreement	optional; if present with NOM, independent of being A	required; typically with A, independent of being TOP
Syntactic pivot	determined by NOM, independent of being A	usually with A, but determined by TOP in ambiguous cases
Quantifier float	referring to NOM, independent of being A	referring to A, independent of being TOP
Relativization	only of NOM, independent of being A	(all NPs may be relativized)
Control of secondary predicates	referring to NOM, independent of being A	referring to A or P depending on semantics, but independent of being TOP
Raising	usually of NOM; A possible but marked for some	only of A, independent of being TOP; no ECM
Control	A deletion target, independent of being NOM (with exceptions)	A deletion target, independent of being TOP

sense is also evidence for the hypothesis that Ayeri is configurational. Since it clearly prefers agent NPs over other NPs, not all arguments of a verb are on equal footing. Tagalog, on the other hand, treats the arguments of verbs in a much more equal manner.

It was pointed out before that in Tagalog, the syntactic pivot depends on what is marked as a subject (Kroeger 1991: 30–31). This and other examples from Kroeger (1991) may make it seem like Tagalog is not fixed with regards to the distinction between NOM–ACC and ERG–ABS alignment. However, Kroeger (1991) also points out that there is a statistically significant preference to select patient arguments as subjects, and that OV forms of verbs are "morphologically more 'basic'" (53) than their respective AV counterparts. These observations point towards an interpretation of Tagalog as syntactically ergative, though Kroeger (1991) deems such an interpretation problematic due to non-nominative agents keeping their status as arguments of the verb—which also distinguishes Tagalog from an ergative languages like Dyirbal, where "ergative (or instrumental) marked agents are relatively inert, playing almost no role in the syntax, and have been analyzed as oblique arguments" (54).

In conclusion, is Ayeri a so-called 'trigger language'? Yes and no. Ayeri incorporates the morphological feature of marking a certain privileged argument of the verb (the topic) on the verb and may therefore be counted among 'trigger languages' by a very broad definition.[15] However, the real-world Austronesian alignment as a syntactic phenomenon is more extensive than that according to the discussion of the various effects described in Kroeger's (1991) survey. Ayeri, in syntactically behaving rather consistently like a NOM–ACC language, misses the point completely if 'trigger language' is understood to also entail syntactic characteristics of Philippine languages.

5.6 Establishing configurationality

As mentioned above, Ayeri's unmarked constituent order is VSO, and unlike Tagalog, it mostly displays correlations between the agent and syntactic traits usually associated with subjects. I will assume, therefore, that the agent argument is, in fact, the syntactic subject for all intents and purposes. It was also pointed out

[15] It seems to me that what conlangers call 'trigger language' mostly refers to just the distinct morphological characteristic of languages like Tagalog by which a certain NP is marked on the verb with a vague notion that this NP is in some way important in terms of information structure.

above that not grouping V and O together does not automatically result in non-configurationality at the sentence level. Moreover, Speas (1990: 128) points out that free word order alone is not sufficient evidence to claim non-configurationality either. While Ayeri canonically marks case overtly on NPs, and NPs have a certain degree of freedom with regards to their ordering, it does not mean that any order is always acceptable, much like **the yellow American big school bus* is not acceptable in English even though all adjectives equally describe *school bus* with no apparent ranking implied.

In his discussion of the status of Tagalog with regards to configurationality, Kroeger (1991) refers to a number of criteria devised in Speas (1990), who investigates the effects (non-)configurationality has on the relation between subject and object from a structuralist perspective. I have implicitly assumed so far that Ayeri is configurational with regards to the verb and its arguments, however, I will apply the mentioned criteria at this point in order to test whether Ayeri indeed has a 'deep' or a 'flat' structure. This will extend the insight that Ayeri makes a functional difference between subject and object gained by the various tests in section 5.5.

One test on configurationality which cannot be applied to Ayeri is that concerning the weak crossover effect (133–135). Ayeri is consistently verb-first and does not permit nominal material to precede a finite verb. Thus, even if we reverse the order of subject and object, the subject NP still c-commands the object NP and case marking unambiguously tells us that the first NP is the object.[16] The other test which cannot be performed concerns noun incorporation, since Ayeri does not make use of it.

5.6.1 V + O as a surface constituent

Even though Ayeri does not group V and O together the way English does, it might still be interesting to see what happens if we try to delete or pronominalize either of them. In English it is possible for V and O to move together (as VP), as well as to replace V′ with 'so' or 'did (so)' (63).

(63) English:

a. *She said she would* ***read the book,*** *and* ***read the book*** *she did.*

b. *Mary* ***read the book,*** *and* ***so*** *did John.*

c. *Anne didn't* ***read the book,*** *but Tom did* ___.

[16] There are limitations on pronominal binding here, however, since pronouns must not precede their binder in both c- and f-structure; compare Bresnan et al. (2016: 213).

Since Ayeri is very strict about the placement of the verb and does not share English's strategy to emphasize a verb with the equivalent of *do*, it is not possible to reproduce (63a).[17] However, it is possible to reproduce (63bc) in Ayeri, as illustrated in (64).

(64) a. *Sa layaye ang Mali koya, naynay da-miraya ang Yan.*
sa= laya-ye ang=Mali koya-Ø naynay da=mira-ya ang=Yan
PT=read-3SG.F A= Mali book-TOP and.also SO=do-3SG.M A= Yan
'The book, Mali read it, and Yan did so as well.'

b. *Sa layoyye ang Anang koya, nārya māy da-miraya ang Tang.*
sa= laya-oy-ye ang=Anang koya-Ø nārya māy da=mira-ya ang=Tang
PT=read-NEG-3SG.F A= Anang book-TOP but AFF SO=do-3SG.M A= Tang
'Anang didn't read the book, but Tang did so.'

Albeit the verb and the object are not adjacent, it appears that together they can be replaced by ꩆꩍꩱꩌꩆ *da-miraya* '(he) did so'. In GG it would probably be assumed that the sentences in (64) actually have ꩍꩌꩆꩍꩲꩌꩆꩍꩲꩌꩆ *layaye koyās* '(she) reads the book' underlying, though it should also be possible to analyze this in terms of f-structure. Ayeri also allows to drop the repeated part completely, as (65) shows.

(65) *Sa layaye ang Mali koya, naynay ang Yan.*
sa= laya-ye ang=Mali koya-Ø naynay ang=Yan
PT=read-3SG.F A= Mali book-TOP and.also A= Yan
'The book, Mali read it, and Yan as well.'

The example in (66) attempts to capture the functional structure of example (64a) as representative of all three sentences in (64ab) and (65). The chart is based on the discussion of apparent V-to-I movement outlined in section 5.2, where I^0 is an extended head of VP, and thus is functionally equivalent to V^0. Hence, even though V and O are not directly adjacent in Ayeri, the pro-verb ꩆꩍꩱꩌꩆꩍꩲꩌꩆꩍꩲꩌꩆꩍꩲ

(66)
$$\begin{bmatrix} \text{CONJ} & \text{'and also'} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{'}read\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'book'} \\ \text{ANIM} & - \\ \text{CASE} & \text{P} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Mali'} \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'}do\ \langle\ \rangle\text{'} \\ \text{TOP} & [\ ] \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Yan'} \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{OBJ} & [\ ] \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

(67) **Ang keca* *Mandan nikaley* *naynay* *miraya* *disuley.*
ang=ket-ya Ø= Mandan nika-ley naynay mira-ya disu-ley
AT= wash-3SG.M TOP=Mandan potato-P.INAN and.also do-3SG.M banana-P.INAN
'Mandan, he washes the potato and as well does the banana.'

What is mostly awkward about this example is that there is a transitive sentence in the second conjunct, but no topic is marked on the verb. If an agent topic were marked as a logical continuation of the first conjunct, it would mean that the verb carried not simply the third-person agreement suffix ཡ *-ya* '-s', but the topic-marked pronominal clitic ཡ *-ya* 'he'. The conjunct, then, would have a separate subject, rendering our test futile. Switching the topic to the object of each conjunct would produce an awkward result as well, though, since topic continuity can be reasonably expected in this case. The verb in the second conjunct would be obliged to carry the third-person pronominal clitic ཡང་ *-yāng* 'he' and thus would again render the test futile. And while a second conjunct with ནད་ཡས་ཁ་ཤས་ *naynay disuley* 'and also the banana' would produce a grammatical outcome, there is no pro-verb in this clause, but the missing elements are simply supplemented by consistency with the context.

5.6.2 Asymmetric influence on thematic roles

According to Speas (1990: 129), the semantic role of the subject is determined by the object, but not vice versa. Hence, for instance, someone who *throws a party* does not hurl it through the air, as someone who *throws a stone* would, and someone who *kills time* is not guilty of murder. This also reaches into the idiomatic use of certain verbs. Basically, this criterion suggests that, in a truly non-configurational language, there ought to be cases where the role of the subject is determined by the actor. This is not the case in Ayeri, though, and a few examples (to varying degrees of idiom-ness) are listed in (68).

(68) གཏོང་པ *taringaya* 'the minister'

a. ཨང་ཤ2ང — རང་ཀུ *ang bengya … sangalya* '… stands in a room'

b. ཨང་ཤ2ང — མཆཀ2ཀ *ang bengya … kanānya* '… attends a wedding'

c. ཨང་ཤ2ང — ཚན་ཟ2ཀང *ang bengya … tesānley* '… admits a lie'

Comparing the examples in (68) is maybe most illustrative since the various shades of meaning differ most there; the common element of the examples in (69) should be more obvious, since to 'remove' or 'take away' a person is likely simply a euphemism for their seizure by police. At least in (68), the semantic role of the subject given at the top cannot be reliably predicted from the combination of the subject and the verb alone: is the minister standing somewhere literally, is he attending an event, or admitting something? In a similar way, is the captain in (69) removing something or arresting someone? In any case, the verb and its complement form a semantic unit in Ayeri, even though they are not adjacent in main clauses of declarative statements.

(69) ལྷ་ཕ་པ *devaya* 'the captain'

a. ཨང་ཀཟ — ཚགས་ཟ2ཀང *ang pahya … telbānley* '… removes a sign'

b. ཨང་ཀཟ — ཀ་ཨཡ2ཤ *ang pahya … pegamayās* '… arrests a thief'

5.6.3 Idioms

Similar to the previous point, there are no idioms involving just a verb and a subject NP, while there are idioms consisting of a set combination of a verb and a complement which is attributed to a subject as a unit (70).

(70) a. ཤ་ཀཤ: ཐོ2ཡ2ང *bras- tihangya* 'bathe in knives'
(be in terrible distress)

b. ཀ་ཐོ: ཐོ2ཀ2ཀ ནཀ2ཀ: 2ཡ *petiga- inunas sapayeri-nama* 'catch a fish with bare hands'
(make a futile attempt)

c. ཏ2ཕ: ཁ2ཕ2ཀ *sic- koyayeley* 'spit books'
(be smartassing)

d. ཏ2ལ: ཏ2ཀ *tabada- venley* 'chew air'
(be poor, have nothing to eat)

e. ཏ2ཡ: ཡ2ཀ2ཀ ཐ2ཡ2ཀ ནཀ2ཀ ཚ2ཡ2ཤ ཐ2ཀ *vihisa- hapangyeley bihanena sarisa kayanyam iri*
'dish out last week's remains for the third time already'
(bring up a topic which has been discussed to death)

Just stating a subject and a verb like, for instance, ꑭꑸꑦꑚꑟꑣꑸꑦꑣꑸꑦꑣꑸꑦ

(73) a. *Surpye ang Apitu vacyam perinas.*
surp-ye ang=Apitu vac-yam perin-as
seem-3SG.F A= Apitu like-PTCP sun-P
'Apitu seems to like the sun.'

b. **Surpye ang Apitu.*
surp-ye ang=Apitu
seem-3SG.F A= Apitu
'Apitu seems.'

c. *Surpreng, ang vacye Apitu perinas.*
surp=reng ang=vac-ye Ø= Apitu perin-as
seem=3SG.INAN.A AT= like-3SG.F TOP=Apitu sun-P
'It seems that Apitu likes the sun.'

d. **Surpa, ang vacye Apitu perinas.*
surp ang=vac-ye Ø= Apitu perin-as
seem AT= like-3SG.F TOP=Apitu sun-P
Literally: 'Seem that Apitu likes the sun.'

(74) a. *Gahaya ang Tipal pengalyam sa Apan.*
gaha-ya ang=Tipal pengal-yam sa=Apan
hope-3SG.M A= Tipal meet-PTCP P= Apan
'Tipal hopes to meet Apan.'

b. **Gahaya ang Tipal, sa pengalreng Apan.*
gaha-ya ang=Tipal sa= pengal=reng Ø= Apan
hope-3SG.M A= Tipal PT=meet=3SG.INAN.A TOP=Apan
Literally: 'Tipal hopes that there will meet Apan.'

c. **Gahareng pengalyam sa Apan.*
gaha=reng pengal-yam sa=Apan
hope=3SG.INAN.A meet-PTCP P= Apan
Literally: 'There hopes to meet Apan.'

5.6.5 Binding

According to Speas (1990), coreference of pronouns in English can be explained by the subject being higher in a clause's structure than the object: the subject c-commands the object. From this, she deduces that if "some language has a 'flat' structure, then the subject and object will c-command each other, and so it is possible for the object to bind the subject" (132). Examples of this are given in (75), with the indicated outcome regarding the expected acceptability. In all of these sentences, the pronoun and the NP containing the name are supposed to bind each other.

In Government and Binding theory, there are three binding principles posited,

(75) a. *Mary$_i$ likes her$_i$ father.*

b. **Mary$_i$'s father likes her$_i$.*

c. *Her$_i$ father likes Mary$_i$.*

d. **She$_i$ likes Mary$_i$'s father.*

referring to the grammaticality of coreference between reflexive pronouns ('anaphora'), personal pronouns, and R-expressions (references to extralingusitic reality, like names):

(76) The Binding Principles (Carnie 2013: 157):

a. An anaphor must be bound [i.e. c-commanded, CB] in its binding domain.

b. A pronoun must be free [i.e. not c-commanded, CB] in its binding domain.

c. An R-expression must be free.

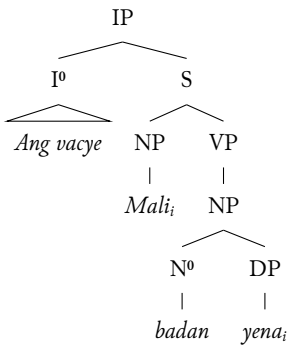
According to these principles, (75a) is expected to be grammatical in a language in which the object c-commands the subject because *Mary* is not bound by the pronoun *her*, whose binding domain is *her father*, so Principle C is not violated. However, in (75b), the pronoun c-commands *Mary* and R-expressions must not be bound even across different binding domains, so Principle C is violated here. Conversely again, *her* in (75c) is free in its binding domain and in a different binding domain than *Mary*, so even though *her father* is commanded by *Mary*, Principle B is not violated. Lastly, (75d) is not possible for this purpose, because *she* cannot be bound by *Mary*, but *Mary* is c-commanded by *she*.

In LFG, however, due to its being based primarily on functional structure, the condition for binding is not based on the c-structure of a clause. Rather, a pronoun is required to have an antecedent in the minimal f-structure of the predicator, that is, "the PRED element and all of the elements whose attributes are functions designated by the PRED" (Bresnan et al. 2016: 230, 250). For the examples above, this means that a reversal of dependency relations is not possible, unless one were to assume that an OBJ could syntactically outrank a SUBJ. Due to LFG's design, even if the structure of the clause were flat, it is assumed that every language has grammatical functions, so that what functions as an object NP cannot normally outrank what functions as a subject NP. Besides, Ayeri does fulfill the requirements based on constituent structure sketched out above as well as the functional requirements; compare examples (77) to (80).

In (77), ཨ་ལི *Mali* is free in c-structure since it is not c-commanded in its domain, whereas the possessive pronoun, ཡེ་ *yena* 'her', is free in its domain even though it is c-commanded by ཨ་ལི *Mali*. Similarly, in f-structure, ཨ་ལི *Mali* inhabits the top of the functional hierarchy by being the SUBJ of the f-structure core

designated by *f*; ᜌᜒᜅᜎ *yena* 'her' is free in its f-structure core *g* and is outranked by ᜋᜎᜒ *Mali* since SUBJ outranks OBJ and its contents. The clause is thus well-formed by either set of criteria.

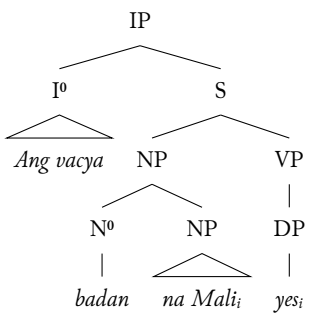
(77) *Ang vacye* *Mali* *badanas* *yena.*
ang=vac-ye Ø= Mali badan-as yena
AT= like-3SG.F TOP=Mali father-P 3SG.F.GEN
'Mali$_i$ likes her$_i$ father.'



$$f\colon \begin{bmatrix} \text{PRED} & \text{'}like\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'Mali}_i\text{'} \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{SUBJ} & \\ \text{OBJ} & g\colon \begin{bmatrix} \text{PRED} & \text{'}father\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'}pro_i\text{'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

In (78), then, ᜋᜎᜒ *Mali* does not c-command the pronoun with which it is co-indexed, ᜌᜒᜅᜎ *yes* 'her'. This pronoun is also free in its domain. The pronoun also cannot c-command the nominal, so that ᜋᜎᜒ *Mali* is completely free. In functional terms as well, both ᜋᜎᜒ *Mali* and ᜌᜒᜅᜎ *yes* 'her' are free within their respective core f-structures, *g* and *f*. The object pronoun, ᜌᜒᜅᜎ *yes* 'her', is also outranked by a subject NP containing its antecedent. Again, the clause is well-formed.

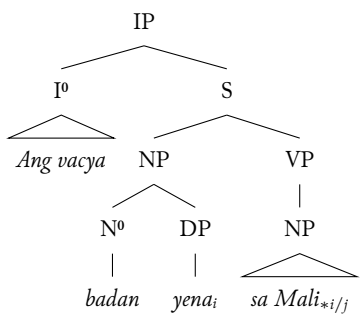
(78) *Ang vacya* *badan* *na* *Mali* *yes.*
ang=vac-ya badan-Ø na= Mali yes
AT= like-3SG.M father-TOP GEN=Mali 3SG.F.P
'Mali$_i$'s father, he likes her$_i$.'



$$f\colon \begin{bmatrix} \text{PRED} & \text{'}like\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & g\colon \begin{bmatrix} \text{PRED} & \text{'}father\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'Mali}_i\text{'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix} \\ \text{SUBJ} & \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'}pro_i\text{'} \\ \text{CASE} & \text{P} \end{bmatrix} \end{bmatrix}$$

In (79), the possessive pronoun, ᨿᨶ *yena* 'her', is again free since ᨕᨘᨕᨗ *Mali* cannot c-command it. Vice versa, ᨕᨘᨕᨗ *Mali* cannot be c-commanded by ᨿᨶ *yena* 'her', so it as well is totally free, as required. Regarding their grammatical functions, both phrases are free in their respective core f-structures, *g* and *f*, again. Well-formedness should theoretically be given in both cases, thus. The sentence still sounds awkward, however, because in terms of LFG, the pronominal f-precedes its binder, which is a further obstacle to binding (Bresnan et al. 2016: 213). An acceptable reading can only be achieved if ᨿᨶ *yena* 'her' does not refer to ᨕᨘᨕᨗ *Mali*, but to a third person.

(79) **Ang vacya* *badan* *yena* *sa Mali.*
ang=vac-ya badan yena sa=Mali
AT= like-3SG.M father 3SG.F.GEN P= Mali
'Her$_i$ father, he likes Mali$_{*i/j}$.'

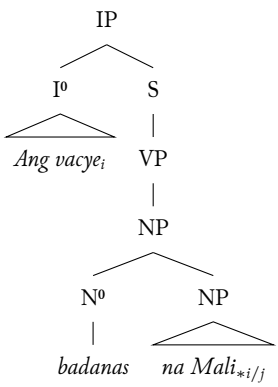


$$f:\begin{bmatrix} \text{PRED} & \text{'}\textit{like}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & g:\begin{bmatrix} \text{PRED} & \text{'}\textit{father}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'}\textit{pro}_i\text{'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix} \\ \text{SUBJ} & \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'Mali}_{*i/j}\text{'} \\ \text{CASE} & \text{P} \end{bmatrix} \end{bmatrix}$$

At last, (80) is not well-formed if the subject pronominal suffix ᨿᨶ *-ye* 'she' is supposed to be co-indexed with ᨕᨘᨕᨗ *Mali*, since ᨕᨘᨕᨗ *Mali* is c-commanded by ᨕᨡᨗᨕᨘᨿᨶ *ang vacye* or its trace, if one assumes the pronominal clitic to leave behind a trace in a superficially empty subject NP to the left of VP. Either way, the object NP containing ᨕᨘᨕᨗ *Mali* is c-commanded, which violates binding principle C. In a functional analysis, the phrase is ungrammatical because the pronominal suffix, as an instance of the subject function, outranks its supposed nominal antecedent, which is a possessor inside an object NP. In order to reach a grammatically sound interpretation, the liker and ᨕᨘᨕᨗ *Mali* again must be different people.

Taking the above into account and looking only at the consituent structure, Ayeri behaves like English in that its equivalent to (75b), that is (78), is grammatical. If Ayeri had a flat structure and c-command were the only condition of binding, we would expect it to be ungrammatical. As described above, however, a functional interpretation essentially makes c-command obsolete in that this condition is replaced by the requirement that the controlling NP's GF outrank the

(80) **Ang vacye* *badanas* *na* *Mali.*
ang=vac=ye.Ø badan-as na= Mali
AT= like=3SG.F.TOP father-P GEN=Mali
'As for her$_i$, she likes Mali$_{*i/j}$'s father.'



$$f\colon \begin{bmatrix} \text{PRED} & \text{'}\textit{like}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'}\textit{pro}_i\text{'} \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{SUBJ} & \\ \text{OBJ} & g\colon \begin{bmatrix} \text{PRED} & \text{'}\textit{father}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'Mali}_{*i/j}\text{'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

controllee's on the functional hierarchy. This way, restrictions on pronominal binding can be accounted for even in truly non-configurational languages.

However, as we have seen above, Ayeri still shows a clear preference for the agent NP regarding most of the characteristics usually associated with subjects. This means that there is a cline between subjects and objects—subjects and objects are not treated fully alike. I will assume, thus, that Ayeri's object NP is embedded in a VP which finds its (extended) head in I⁰ instead of in V⁰, if a full subject NP is present at the same time (compare section 6.4.2).

6 Phrase structures

The previous chapter gave a short overview of the syntactic framework used in this grammar—Lexical-functional Grammar (LFG)—and discussed various questions about Ayeri's syntactic alignment, and whether it is 'configurational' in spite of VSO constituent order. The present chapter, in continuation of chapter 4, finally delves into an analysis of the various phrase types which make up clauses in Ayeri. This means providing information on both their structural and their functional properties, and on how these syntactic properties interface with morphology.

6.1 Noun and determiner phrases

Noun phrases (NPs), and determiner phrases (DPs) as their functional counterpart, fulfill the functions of subject (SUBJ), object (OBJ), secondary object (OBJ$_\theta$), or embody various oblique constituents (OBL$_\theta$). They can also be adjuncts (ADJ), and constitute topic and focus (TOP, FOC). Function assignment to NPs and DPs is controlled by the a-structure of the verb—this also has repercussions on case- and topic-marking, compare section 6.4.7. Even though Ayeri is configurational and case is in part assigned on the grounds of constituent structure, semantics also play a part in case assignment. Taking the opposite perspective, case marking also provides information on the semantics and function of NPs and DPs; compare (1).

The rules in (1) illustrate the typical mappings between case marking and grammatical functions, which are not always unambiguous. As explained above (compare section 4.1.3), the dative case does not only indicate that something is given to this referent or done to their benefit, but also indicates motion towards them. Likewise, the genitive case does not only indicate possession, but also origin, and motion from this referent. Nominal complements of nouns which specify what the noun consists of appear in the instrumental case, besides the instrumental being used to indicate the means or the circumstance by which an action comes

(1) a. $(\downarrow \text{CASE}) = \text{A} \implies (\uparrow \text{SUBJ}) = \downarrow$

b. $(\downarrow \text{CASE}) = \text{P} \implies (\uparrow \text{OBJ}) = \downarrow$
$\vee\ (\uparrow \text{SUBJ}) = \downarrow$

c. $(\downarrow \text{CASE}) = \text{DAT} \implies (\uparrow \text{OBJ}_{recip}) = \downarrow$
$\vee\ (\uparrow \text{OBL}_{exp}) = \downarrow$
$\vee\ (\uparrow \text{PCASE}) = \text{OBL}_{goal}$
$\vee\ (\uparrow \text{PCASE}) = \text{OBL}_{dir}$

d. $(\downarrow \text{CASE}) = \text{GEN} \implies (\uparrow \text{POSS}) = \downarrow$
$\vee\ (\uparrow \text{OBL}_{theme}) = \downarrow$
$\vee\ (\uparrow \text{OBL}_{src}) = \downarrow$

e. $(\downarrow \text{CASE}) = \text{LOC} \implies (\uparrow \text{OBL}_{loc}) = \downarrow$
$\vee\ (\uparrow \text{OBL}_{dir}) = \downarrow$
$\vee\ (\uparrow \text{PCASE}) = \text{OBL}_{loc}$

f. $(\downarrow \text{CASE}) = \text{CAUS} \implies (\uparrow \text{OBL}_{caus}) = \downarrow$

g. $(\downarrow \text{CASE}) = \text{INS} \implies (\uparrow \text{OBL}_{ins}) = \downarrow$
$\vee\ (\uparrow \text{OBL}_{manner}) = \downarrow$
$\vee\ (\uparrow \text{COMP}) = \downarrow$

about. Nominals may also lack case marking, which normally indicates that the respective phrase is (a part of) the topic function of the verb, which is what the supplementary lexical rule in (2) describes.[1]

(2) $\neg(\downarrow \text{CASE}) \implies (\uparrow \text{TOP}) = \downarrow \vee \downarrow \in (\uparrow \text{TOP})$

Instead of case marking on the DP or NP, there is a marker before the verb which provides information on the case and, if AT or PT, also about the animacy of the topicalized phrase. Grammatical information about the topic of a clause is spread over two discontinuous sites this way. This issue does not pose a problem to an LFG-based analysis, however, since both grammatical sites unify their information content in the f-structure feature TOP. I will mostly be using the annotation '$(\uparrow \text{TOP}) = \downarrow$' for topics in the following; '$\downarrow \in (\uparrow \text{TOP})$' only finds application with relative clauses, since these may have secondary topics in addition to the relativized NP. Note that otherwise, only one NP among the arguments of a verb may be the topic of the clause. Moreover, a topic can only be marked if the verb is finite and the number of normally case-marked NPs in a clause is greater than one. Ayeri makes no distinction between complements, adjuncts, and non-arguments of the verb as far as topic-marking is concerned.

1 See section 4.1.3 (p. 124) for a discussion of exceptions to this rule.

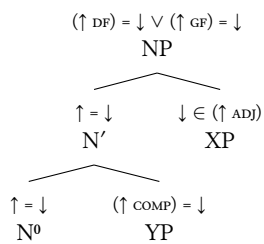
6.1.1 Noun phrases

Nouns are one of the main parts of speech of Ayeri and can be modified by a number of other free elements, as we have seen previously—adjectives, possessive determiners, as well as relative clauses and nominal complements. These typically follow nouns. It was also described before how Ayeri's nouns may host a number of clitics, among which are deictic prefixes and quantifiers, as well as proclitic case markers of proper nouns. These clitics, however, will not be treated as targets of syntactic operations, since LFG follows the approach of lexical integrity. Thus, bound elements like affixes and clitics are assumed not to be reflected or affected by syntax itself. The phrase structure of NPs should thus generally look like depicted in (3), however, there are some caveats which will be described below.

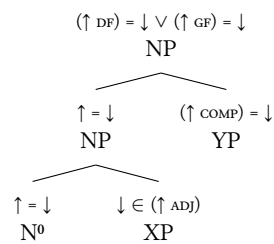
(3) a. $\text{NP} \rightarrow \underset{\uparrow = \downarrow}{\text{N}'} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{XP}}$

b. $\text{N}' \rightarrow \underset{\uparrow = \downarrow}{\text{N}^0} \quad \underset{(\uparrow \text{COMP}) = \downarrow}{\text{YP}}$

(4) a.



b.



The ruleset in (3) defines that NPs have a lexical head which is on the left side, followed optionally by modifiers which may have various relationships to the noun: complement (instrumental nominal, NP/DP; complement clause, CP), and adjunct (adjective phrase, AP; relative clause, CP; quantifier, DP). Altogether, these rules can be represented as a constituent-structure tree as described in (4). The maximal projection of N^0 (that is, NP) is annotated very generally for the function of the NP—basically, an NP can act as either a discourse function (DF) or a grammatical function (GF). Besides, nouns may be modified by possessors and quantifiers. These, however, may better be analyzed as forming DPs which embed the NP as a complement. Example (5) provides an instance of each kind of modifier. Since there is no grammatical context given, NP is unmarked for function in these examples.

(5) a. noun + adjective:

ningan hiro
ningan hiro
story new
'new story'

$$\begin{bmatrix} \text{PRED} & \text{'story'} \\ \text{ADJ} & \left\{\begin{bmatrix} \text{PRED} & \text{'new'} \end{bmatrix}\right\} \end{bmatrix}$$

b. noun + instrumental complement:

kasu bariri
kasu bari-ri
basket meat-INS
'basket of meat'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{basket}\ \langle(\uparrow \text{COMP})\rangle\text{'} \\ \text{COMP} & \begin{bmatrix} \text{PRED} & \text{'meat'} \\ \text{CASE} & \text{INS} \end{bmatrix} \end{bmatrix}$$

c. noun + relative clause:

nanga si incāng
nanga si int=yāng
house REL buy=3SG.M.A
'the house he bought'

$$\begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{ADJ} & \left\{\begin{bmatrix} \text{"which he bought"} \end{bmatrix}\right\} \end{bmatrix}$$

d. noun + possessor:

kegan ayonena
kegan ayon-ena
hat man-GEN
'the man's hat'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{hat}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'man'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix}$$

e. noun + quantifier:

nanga diring
nanga diring
house several
'several houses'

$$\begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{QUANT} & \begin{bmatrix} \text{PRED} & \text{'several'} \end{bmatrix} \end{bmatrix}$$

Of course, it is also possible to combine the nominal modifiers listed in (5). In this case, there is a certain hierarchy, presumably based on Behaghel's first law, "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.'), and also grammatical weight (Wasow 1997):

1. APs and other NPs describing attributes
2. complementary NPs and CPs
3. quantifiers and cardinal numerals
4. possessive genitive NPs and DPs
5. relative clauses

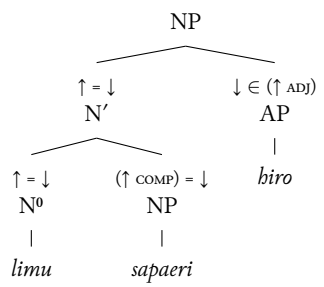
Wasow (1997) writes that "[i]t is very hard to distinguish among various structural weight measures as predictors of weight effects. Counting words, nodes, or phrasal nodes all work well" (102), which means that no single metric can be used to describe the order of constituents in a phrase. However, for instance, relative clauses trail whenever possible, presumably since they tend to contain whole subclauses and therefore a lot of information. It seems advisable not to put an element with much less information content after them, especially when it refers to a different head than all the things inside the relative clause.

The order of NP modifiers seems somewhat jumbled up with regards to the c-structure tree in (4a) which, for instance, gives noun complements as following N^0 before adjectives, while the list above indicates the reversed order. Furthermore, the c-structure tree indicates that relative clauses precede DPs embedding the NP, like possessive NPs and DPs. This is no mistake, however, but part of the caveat mentioned earlier with regards to the phrase structure rules for NPs. That is, due to information structure and modifier scope, Ayeri makes good use of extraposition. For instance, (6a) is theoretically ambiguous as to whether the shirt is new or the wool its is made of—in practice, it would be assumed that the shirt is made of new wool. The problem of ambiguity is solved in (6b) by inverting the order of complement and adjective: the shirt is now unmistakeably characterized as new, and being made of wool. The sentence in (6a) theoretically allows both c-structure interpretations given in (7), however, as mentioned above, the second one is actually the preferred one in such cases.

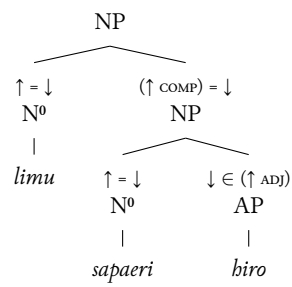
(6) a. !*limu sapaeri hiro*
limu sapa-eri hiro
shirt wool-INS new
'shirt of new wool'
Intended: 'new shirt of wool'

b. *limu hiro sapaeri*
'new shirt of wool'

(7) a.

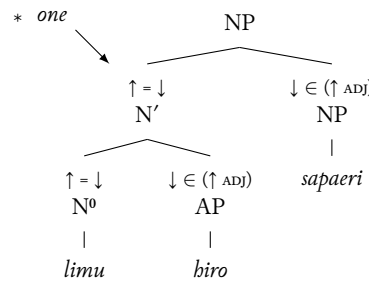


b.



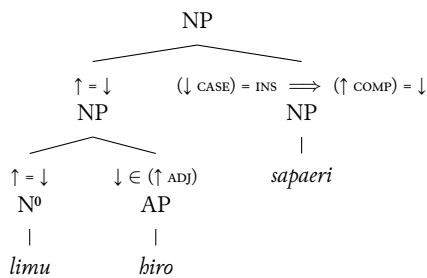
The complement does not become an adjunct, as (8) shows: X′ branches can be replaced by *pro*-forms such as 'one' or 'so'. This, however, produces an odd-sounding result when replacing [illegible] *limu hiro* 'new shirt' with [illegible] *danya* 'one'.[2]

(8) **danya sapaeri*
danya sapa-eri
one wool-INS
'one of wool'



In order to produce correct c- and f-structures for (6b), we may want to analyze the complement NP, [illegible] *sapaeri*, as modifying an NP which jointly holds the nominal head, [illegible] *limu* as well as its adjunct adjective, [illegible] *hiro*. The NP has thus been 'extended' so that one NP is nested within another, as indicated in (4b). Regarding functional annotation, such an analysis creates a problem, since Bresnan et al. (2016) require a phrase adjoined to a phrasal constituent to be either unannotated or to not embody an argument function (100, 107; also compare (1) of chapter 5). COMP is an argument function, though. The possibility of lexocentric specification of an argument function remains open, however. Due to Ayeri's consistent use of case marking, I see no problem in invoking a lexocentric specification for INS as given in (1g): INS specifies in this case that the head of this NP, [illegible] *sapa* 'wool', is a complement of [illegible] *limu* 'shirt'; see an example in (9). Extraposed relative clauses are less problematic since they are adjuncts, and ADJ is not an argument function.

(9)



[2] Carnie (2013) notes that replacing a nominal head with *one* in English is acceptable at least to some speakers (181). Let us assume that Ayeri speakers consider it odd, however.

The c-structure tree in (4) shows that Ayeri prefers consistent head–dependent word order at least for its NPs. As illustrated by previous examples, both adjuncts and complements are mostly appended to the right of their heads, which means that Ayeri may be classified as a rather consistently right-branching language.[3] Regaring word order typology, we can state the generalizations in (10).

(10) a. Order of noun and adjective: N Adj

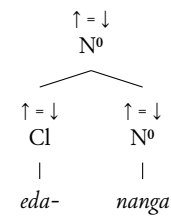
b. Order of noun and genitive: N Gen

c. Order of noun and relative clause: N Rel

As described before (section 3.2.5), nouns can also be modified by a number of clitics which are not represented through syntax. Since it is not possible for these clitic elements to be divided from their phonological hosts, they should be treated as being an integral part of the word they attach to. Hence, N^0 is given in (11) as split into 'Cl' and N^0.

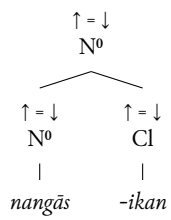
(11) a. noun + deictic prefix:

eda- nanga
eda= nanga
this=house
'this house'



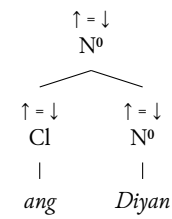
b. noun + quantifier:

nangās -ikan
nanga-as=ikan
house-P =many
'many houses'



c. proper noun + case:

ang Diyan
ang=Diyan
A= Diyan
'Diyan'



[3] A small number of postpositions form an exception to this classification (compare section 4.4.2).

More important to LFG than c-structure trees, however, is f-structure to gather potentially disparate information into semantically coherent functional units.[4] In the following, I will thus give a list of morpholexic specifications in (12) which give an overview of the different semantic and morphological features nouns basically provide (also compare section 4.1). These also form the basis for f-structure matrices of the kind already shown in (64), section 3.2.5 (p. 92). Nouns generally imply a third-person reference; they distinguish number, gender and animacy, as well as case. Clitics, however, may also add information about deixis (12b); likeness can be conveniently dealt with as forming a complex PRED, and quantity feeds the QUANT feature, see (13).

(12)	a.	...	N	(↑ PRED)	=	'...'
				(↑ ANIM)	=	±
				(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
				(↑ GEND)	=	{M, F, N, INAN}
				(↑ NUM)	=	{SG, PL}
				(↑ PERS)	=	3
	b.			(↑ DEIX)	=	{*this*, *that*, *such*}

(13) a. *ganang-hen* *mino*
gan-ang=hen mino
child-A=all happy
'all happy children'

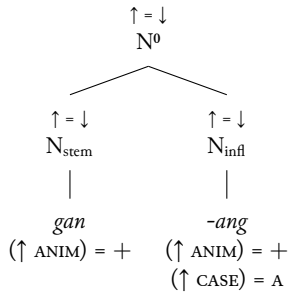
b.
$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'child'} \\ \text{ANIM} & + \\ \text{CASE} & \text{A} \\ \text{QUANT} & \begin{bmatrix} \text{PRED} & \text{'all'} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'happy'} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

It has been pointed out above that nouns intrinsically encode animacy. This has repercussions in the choice of case markers of the agent and patient cases, which need to agree in animacy with the lexical head they attach to. An example of this is given in (14).

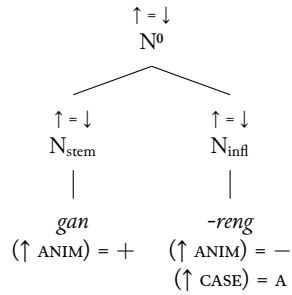
Example (14a) shows a well-formed construction: the noun, ಗನ್ *gan* 'child', is animate, hence the case marker also needs to be animate—the case marker must thus be ಅಂಗ್ *-ang* to be coherent. In contrast to this, example (14b) is not well-formed in that the noun is animate but the case marker, ಇಂಗ್ *-reng*, signals that it is inanimate: the ANIM values of the noun stem and its suffix clash and cannot be

[4] Essentially, c-structure is similar to the tree hierarchy of paragraphs, images, tables, etc. in an HTML file, while f-structure describes semantic properties of elements in the tree similar to how CSS defines the layout properties of these elements.

(14) a.

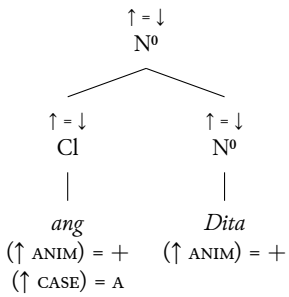


b. *

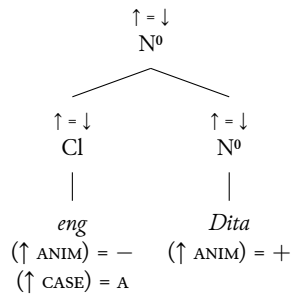


unified for N⁰ itself. The same principle of coherence is, of course, also true for proper nouns, which receive a case-marking proclitic, as illustrated by (15).

(15) a.



b. *



Furthermore, example (13) already showed that nouns may be modified by quantifiers, whether these are numerals or enclitics (see sections 4.7 and 4.8). In these cases, plural marking on the noun is suppressed by the presence of the modifier which supplies the information by itself so that further morphological plural marking by the suffix ཡེ -*ye* on the noun stem itself would be redundant. As shown in section 4.7 (p. 226), however, there are very limited occasions where a noun may be marked for plurality in spite of the presence of a numeral, for instance as in (16).

(16) *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.'

Here, the noun རྐྱེ་རྣམ་ *keynam* 'people' marks plural additionally with the suffix ཡེ -*ye* in spite of being a *plurale tantum* and in spite of the presence of the numeral གཡས་ *menang* 'hundred'. Without plural marking, the meaning of རྐྱེ་རྣམ་གཡས་ *keynam menang* would be 'a hundred people', not generic 'hundreds'.

6.1.2 Determiner phrases

DPs are the functional equivalent of NPs. Determiners (D^0) are a closed class of function words (Bresnan et al. 2016: 102). In English, for instance, articles and pronouns are counted among them (Carnie 2013: 208–211). Ayeri, as argued below, does not possess articles as such. The preposed case markers of proper nouns bear a superficial similarity to cased articles like in German (17) and the suffixed case markers look superficially similar to suffixed articles in Romanian (18) or the Scandinavian languages. The presence or absence of case markers in Ayeri is moreover morphosyntactically controlled by topicalization and thus also interacts with definiteness (compare section 5.4.2). However, as we will see below, the distribution of these case markers differs from that of articles in languages like English or German.

(17) a.

A	***ang***	*Sān*	'Sān'
P	***sa***	*Sān*	'Sān'
DAT	***yam***	*Sān*	'to Sān'
GEN	***na***	*Sān*	'Sān's'
LOC	***ya***	*Sān*	'at Sān'
CAUS	***sā***	*Sān*	'due to Sān'
INS	***ri***	*Sān*	'with/by Sān'

b. German:

NOM.SG	***der***	*mann*	'the man'
ACC.SG	***den***	*mann*	'the man'
DAT.SG	***dem***	*mann*	'to the man'
GEN.SG	***des***	*mannes*	'of the man'

(18) a.

A	*gan**ang***	'a/the child'
P	*gan**as***	'a/the child'
DAT	*gan**yam***	'to a/the child'
GEN	*gan**ena***	'of a/the child'
LOC	*gan**ya***	'at a/the child'
CAUS	*gan**isa***	'due to a/the child'
INS	*gan**eri***	'with/by a/the child'

b. Romanian (Lyons 1999: 75):

PRI.SG	*cart**ea***	'the book'
OBL.SG	*cărț**ii***	'to/of the book'
PRI.PL	*cărț**ile***	'the books'
OBL.PL	*cărț**ilor***	'to/of the books'

While in modern Standard German an article and a demonstrative pronoun, or also a possessive pronoun, cannot co-occur, this appears not to be a problem in Ayeri. As argued in section 3.2.5, both case markers and deictic/demonstrative prefixes in Ayeri are clitics; superficial similarity between possessive pronouns and adjectives has also been noted in section 4.2.1 (p. 148). Furthermore, the preposed case markers of nouns are an exception compared to the much more frequent occurrence of case-marking suffixes on generic nouns. It thus does not seem straightforward to analyze the case markers as heads of DPs.

The German examples in (19) show that determining elements are in complementary distribution for most combinations with each other. The only exception to this is the combination of demonstrative and possessive in (19g), which is grammatically marked, however.[5] On this phenomenon of complementary distribution

[5] Example (19f) differs from (19g) in the declension paradigm of the possessive: (19f) uses the

(19) German:

a. article + noun:

das	*haus*
das	haus
DEF.NOM.SG.N	house

'the house'

b. demonstrative + noun:

dieses	*haus*
dies-es	haus
this-NOM.SG.N.ST	house

'this house'

c. possessive + noun:

mein	*haus*
mein-Ø	haus
1SG.GEN-NOM.SG.N.ST	house

'my house'

d. article + demonstrative + noun:

**das*	*diese*	*haus*
das	dies-e	haus
DEF.NOM.SG.N	this-NOM.SG.N.WK	house

'the this house'

e. article + possessive (weak decl.) + noun:

**das*	*meine*	*haus*
das	mein-e	haus
DEF.NOM.SG.N	1SG.GEN-NOM.SG.N.WK	house

'the my house'

f. demonstrative + possessive (weak decl.) + noun:

**dieses*	*meine*	*haus*
dies-es	mein-e	haus
this-NOM.SG.N.ST	1SG.GEN-NOM.SG.N.WK	house

'this my house'

g. demonstrative + possessive (strong decl.) + noun:

#dieses	*mein*	*haus*
dies-es	mein-Ø	haus
this-NOM.SG.N.ST	1SG.GEN-NOM.SG.N.ST	house

'this house of mine'

of determiners—which also holds true for English—Carnie (2013) writes, "One thing to note about determiners is that they are typically heads. Normally, there can only be one of them in an NP" (208), at least in English. Demske (2001: 9–22) discusses this point for German as well. Regarding the examples of suffixed definite articles in (18b), Dindelegan (2013) states that

> Prenominal demonstrative [*sic*] take a determinerless (articleless) head-noun complement [...] while postnominal demonstratives obligatorily occur in DPs with article-bearing noun heads [...]. The postnominal construction is thus a polydefinite structure, since definiteness is realized twice [...], by the article and by the demonstrative. (297)

'weak' (WK) adjective declension regularly, since a determiner with strong (ST) declension precedes. Example (19g) is an exception in permitting two determiners of the strong declension. Demske (2001: 160–161, 203–205) notes that according to Plank (1992), possessive pronouns may act as modifiers under certain circumstances. This construction is probably a remnant of earlier stages of German (Demske 2001: 173).

Dindelegan (2013) furthermore gives the examples in (20) for these two placement variants (glosses extended based on further information in the grammar).[6]

(20) Romanian (adapted from Dindelegan 2013: 297):

a.	*acest*	*om*	b.	*omul*	*acesta*
	acest-Ø	om-Ø		om-ul	acest-a
	this-PRI.SG.M	man-SG		man-DEF.PRI.SG.M	this-PRI.SG.M
	'this man'			'*this* man'	

Ayeri, however, behaves different from either German or Romanian in treating case markers and demonstrative elements as clitics. The case marker is always present for untopicalized NPs, whether a demonstrative clitic is also present as a modifier or not. The demonstrative clitic merges with the head noun to the point where it is not certain whether it is still a clitic or already an inflectional prefix (section 3.2.5, p. 80), that is, they do not have phrasal status like the postnominal determiners of Romanian, but they are not heads of DP like the prenominal determiners of Romanian either (Dindelegan 2013: 299), due to their status as clitics.

(21)

a.	*ang Sān*		c.	*ang Sān nā*	
	ang=Sān			ang=Sān nā	
	A= Sān			A= Sān ISG.GEN	
	'Sān'			'my Sān'	
b.	*ang eda- Sān*		d.	?*ang eda- Sān nā*	
	ang=eda= Sān			ang=eda= Sān nā	
	A= this=Sān			A= this=Sān nā	
	'this Sān'			'this Sān of mine'	

In all cases listed in (21), the case marker is present and marks the NP simply for agent case, irrespective of other elements. Characteristically, neither the demonstrative prefixes, nor the possessive pronoun/adjective in Ayeri mark case, while they do in German. The case marker thus cannot simply be left out, because the information it provides is not redundant, strictly speaking. Where it *is* left out, it marks the NP as topicalized and it is required, then, that the verb mark the topicalized NP's case. The same is true of common nouns, as shown in (22).

While it has been argued that Ayeri does not possess articles, it does possess a large variety of pronouns. These, as pro-forms, appear in complementary distribution with NPs. Since they encode morphosyntactic functions rather than semantic

6 In declension charts, Dindelegan (2013) indicates the cases as 'NOM ≡ ACC' and 'DAT ≡ GEN' where Lyons (1999) uses PRI and OBL. I will follow the latter convention in glossing here.

(22) a. *veneyang*
veney-ang
dog-A
'a/the dog'

b. *eda- veneyang*
eda= veney-ang
this=dog-A
'this dog'

c. *veneyang nā*
veney-ang nā
dog-A 1SG.GEN
'my dog'

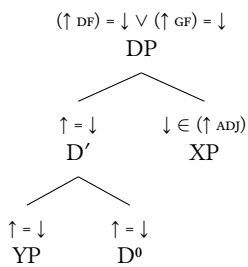
d. *eda- veneyang nā*
eda= veney-ang nā
this=dog-A 1SG.GEN
'this dog of mine'

content, they are ideal candidates for heads of DP. DPs can be modified by APs and CPs, collectively referred to as XP in (23), which gives the phrase structure of DPs. Furthermore, D^0 may consist of a quantifier which can be further specified by an intensifier. D^0 may also be complemented by an NP or another DP, however, since the determiner is a modifier in this case, the embedded nominal phrase precedes D^0 rather than following it. The constituent structure resulting from the phrase structure definition in (23) is given in (24).

(23) a. $\text{DP} \rightarrow \underset{\uparrow = \downarrow}{\text{D}'} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{XP}}$

b. $\text{D}' \rightarrow \underset{\uparrow = \downarrow}{\text{YP}} \quad \underset{\uparrow = \downarrow}{\text{D}^0}$

(24)



Personal pronouns

The morpholexic specifications for personal pronouns are given in (25). Personal pronouns, as a functional category, are a closed class of words. The chart of personal pronouns in Ayeri is given in section 4.2.1. Since personal pronouns are pro-forms, they do not have lexical content for a predicator, but only '*pro*'. Pronouns distinguish all grammatical categories of nouns—number, gender, animacy,

and case; they agree with their antecedents in number, gender, and animacy. In addition to these person features, pronouns also encode person as a deictic category. The reflexive clitic ཤི་ཐང་ *sitang-* additionally defines the personal pronoun as reflexive.

(25)	...	D	(↑ PRED)	=	'*pro*'
			(↑ ANIM)	=	±
			(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
			(↑ GEND)	=	{M, F, N, INAN}
			(↑ NUM)	=	{SG, PL}
			(↑ PERS)	=	{1, 2, 3}
			((↑ PRONTYPE)	=	*refl*)
			((↑ REFL)	=	±)

Personal pronouns, as an exception to the phrase-structure definition in (23), cannot be modified by adjectives. They may nonetheless be modified by relative clauses as well as quantifiers. Modification by a quantifier clitic is only possible for personal pronouns when they are free morphemes; pronominal clitics cannot be modified by quantifiers directly, as described in section 4.2.6. The examples in (26) illustrate key differences between nouns and personal pronouns regarding the distribution of modifiers. As mentioned above, it is possible for pronouns to be modified by relative clauses, which is illustrated by (26d). In this example, the pronoun ཡེ་ *yeng* 'she' is modified by the relative clause ཤི་ཞ *si mino* 'who is happy'.

(26) a. pronoun + adjective:

**yāng*	*hiro*
yāng	hiro
3SG.M.A	new

'new he'

b. pronoun + possessor:

**reng*	*ayonena*
reng	ayon-ena
3SG.INAN.A	man-GEN

'the man's it'

c. pronoun + nominal complement:

**nang*	*bariri*
nang	bari-ri
1PL.A	meat-INS

'we of meat'

d. pronoun + relative clause:

yeng	*si*	*mino*
yeng	si	mino
3SG.F.A	REL	happy

'she who is happy'

Possessive pronouns

The whole paradigm of possessive pronouns is listed in the genitive column of Table 4.6. Possessive pronouns distinguish the same morphological features as personal pronouns: person, number, gender, animacy, and reflexivity. Their case

is fixed to gentive, however. Possessors are subcategorized for by nouns as a complement feeding the POSS feature. The morpholexical specifications possible for possessive pronouns are given in (27). Reflexive possessive pronouns have the meaning 'PRONOUN'S own'.

(27) ... D (↑ PRED) = '*pro*'
(↑ ANIM) = ±
(↑ CASE) = GEN
(↑ GEND) = {M, F, N, INAN}
(↑ NUM) = {SG, PL}
(↑ PERS) = {1, 2, 3}
((↑ REFL) = ±)
(↑ PRONTYPE) = *poss*

Earlier treatments of possessive pronouns analyzed them as adjectives, however, this appears incorrect in that if they were adjectives, they should coordinate with other adjectives. As illustrated in (28a), this is not the case. If possessive pronouns were adjectives, it should also be possible for there to be more than one of them in a clause, just as *new blue car* is possible, with two adjectives modifying *car*. Example (28b) illustrates that there can only be one possessor, though. According to Bresnan et al. (2016), "[s]ubjects and possessors have some properties in common" (100), though they are variably treated as specifiers of NP or heads of DP with an NP complement throughout the book. Let us assume here that like in Welsh, there is a parametric choice not to use the specifier position (130). Thus, possessors and other determiners have to be analyzed as heads of DP which take an NP complement as a co-head; genitive case identifies them as such, see (1d).

(28) a. **nanga hiro nay nā*
nanga hiro nay nā
house new and 1SG.GEN
'*my and new house'

b. **nanga nā yena*
nanga nā yena
house 1SG.GEN 3SG.F.GEN
'*her my house'

As previously mentioned (section 4.2.1, p. 148), like adjectives, possessive pronouns cannot stand by themselves if treated as nominals rather than as modifiers of nominals. They need to be nominalized first, as it were. That is, they need the proclitic ڈ *da-* or full ڈز *danya* 'one' as support to form free possessive nominal expressions such as *mine* or *yours*, except if used as initial predicative nominals. This is illustrated by (29).

(29) a. *Ada-nangāng* *da-nā.*
ada=nanga-ang da-nā
that=house-A one=ISG.GEN
'That house is mine.'

b. *Nā* *ada-nangāng.*
nā ada=nanga-ang
ISG.GEN that=house-A
'Mine is that house.'

Since such independent possessive pronominals already express possession, there is no need to mark them with genitive case additionally. As (30) shows, these forms may be case marked—ཌ་ནཱ *da-nā* 'mine' is the nominal corresponding to the topic marker ལེ *le*. This parallels the use of ཌ་ *da-* with adjectives, compare section 4.2.2.

(30) CONTEXT: ཌཱཌཾ *dadang* 'pen' (INAN):

Le *ming* *eryavang* *da-nā.*
le= ming=ery=vāng da=nā-Ø
PT.INAN=can= use=2.A one=ISG.GEN-TOP
'You can use mine.'

Nominalized possessive pronouns are anaphora to a third-person form, while they additionally refer to a possessor: ཌ་ནཱ *da-nā* in (30) refers to a pen belonging to the person offering the other to use theirs. An attempt to model this process is made in (31): the AVM in (31a) spells out the full functional definition for ཌཱཌཾ་གྱི་ནཱ *dadangley nā* 'my pen'; example (31b) shows the corresponding expression with anaphoric reference, ཌ་ནཱ་ལེ *da-nāley* 'mine'.

(31) a.
$$\begin{bmatrix} \text{PRED} & \text{'}\textit{pen}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{INAN} \\ \text{ANIM} & - \\ \text{CASE} & \text{P} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'}\textit{pro}\text{'} \\ \text{PERS} & 1 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{GEN} \\ \text{PRONTYPE} & \textit{poss} \end{bmatrix} \end{bmatrix}$$

b.
$$\begin{bmatrix} \text{PRED} & \text{'}\textit{pro}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{PERS} & 3 \\ \text{GEND} & \text{INAN} \\ \text{ANIM} & - \\ \text{CASE} & \text{P} \\ \text{PRONTYPE} & \textit{dem} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'}\textit{pro}\text{'} \\ \text{PERS} & 1 \\ \text{NUM} & \text{SG} \\ \text{CASE} & \text{GEN} \\ \text{PRONTYPE} & \textit{poss} \end{bmatrix} \end{bmatrix}$$

Information about the third-person reference is preserved in (31b): the anaphoric reference is indicated by a *pro* requiring a genitive complement which is the same as that of (31a). Demonstratives distinguish fewer features than full pronouns, which is why the feature definitions referring to the possessed are less specific; compare the next section on demonstrative pronouns.

Demonstrative pronouns

The morphology of demonstrative pronouns was described in section 4.2.2. In contrast to personal pronouns, demonstrative pronouns do not mark person; a third-person reference is implied as with nouns, however. Instead, they mark deixis more generally as location in space. Notably, demonstrative pronouns lack a number distinction. As previously discussed, Ayeri distinguishes proximal (𝼀𝼄: *eda-*) and distal (𝼁𝼄: *ada-*) as well as an indefinite 'such' (𝼄: *da-*), which is why the feature definitions in (32) list a DEIX feature encoding *this*, *that*, and *such*, rather than a binary PROX or DIST feature.

(32)	...	D	(↑ PRED)	=	'*pro*'
			(↑ DEIX)	=	{*this*, *that*, *such*}
			(↑ PERS)	=	3
			(↑ ANIM)	=	±
			(↑ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
			(↑ PRONTYPE)	=	*dem*

Regarding the ability of demonstrative pronouns to be modified, it is necessary to distinguish the proximal 𝼀𝼄: *eda-* and distal 𝼁𝼄: *ada-*series from the indefinite 𝼄: *da-*series.[7] The issue at hand here is that the proximal and distal demonstrative pronouns proper are not usually modified, while the indefinite one can be, as demonstrated in section 4.2.2; example (101b) from this section is repeated here as (33c) for convenience. Besides this, it is also possible to form complex demonstratives which incorporate an adjective, both generic and possessive. For illustration, (102) from section 4.2.2 is repeated here as (33d).

It has been argued in section 3.2.5 (p. 84) that 𝼄: *da-* in this case is a simple clitic, as it appears in the same position as the full form 𝼄𝼒𝼝 *danya*; the result is a complex demonstrative form which is inflectable for case. How to represent this in terms of a feature matrix, though? For one, the adjective loses its ability to

[7] Based on the absence of evidence for languages which merge *that* and *such*, Lyons (1999: 152), for one, concludes that demonstratives are inherently definite, that is, he apparently refutes the idea that *such* is an 'indefinite demonstrative'. However, he does not make any suggestions for a better term, which is why I will keep 'indefinite' here.

(33) a. ? *Sa noyang edanya tuvo.*
sa= no=yang edanya-Ø tuvo
PT=want=ISG.A this.one-TOP red
'I want this red one.'

b. ? *Sa noyang adanya tuvo.*
sa= no=yang adanya-Ø tuvo
PT=want=ISG.A that.one-TOP red
'I want that red one.'

c. *Sa noyang danya tuvo.*
sa= no=yang danya-Ø tuvo
PT=want=ISG.A such-TOP red
'I want the red one.'

d. *Sa noyang da-tuvo.*
sa= no=yang da=tuvo.Ø
PT=want=ISG.A such=red.TOP
'I want the red one.'

carry comparison morphology (whether it is interpreted as inflectional or clitic) when being incorporated into a demonstrative form, so (34a) is ungrammatical, and the effective meaning of (34b) differs from what is intended, since ꠁꠞ *-vā* is interpreted in its regular, non-grammaticalized meaning here. Thus, in these cases, the demonstrative must be used in the full form (34c).

(34) a. * *da-tuvo-vāas*
da=tuvo=vā-as
one=red=SUPL-P
Intended: 'the reddest one'

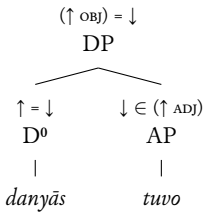
b. ! *da-tuvoas-vā*
da=tuvo-as=vā
one=red-P=most/*SUPL
'most red ones'
Intended: 'the reddest one'

c. *danyās tuvo-vā*
danya-as tuvo=vā
that.one-P red=SUPL
'the reddest one'

The form with the incorporated adjective is basically the same as that of a noun modified by ꠇꠞ *da-*, so it was assumed previously that the proclitic essentially acts as a nominalizer for the adjective. This could also explain why the adjective forfeits its ability to undergo comparison: comparison is not a morphological op-

eration available to nouns, and the comparison morphemes are still loose enough to not jointly undergo derivation to a noun together with the root adjective in the way it is possible, for example, in German to form the deadjectival nouns *das große* 'what is big/great' (for instance, *im großen* 'on a large scale') and *das größte* 'the greatest thing' from the adjective *groß* 'big, large, great' and its superlative form *größt-* 'biggest, greatest', the superlative suffix being *-(e)st*. Both c- and f-structure should therefore look different for the unincorporated and the incorporated adjective, respectively. Example (35) illustrates what the c- and f-structure for the unincorporated adjective looks like, respectively.

(35)



$$\begin{bmatrix} \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'}pro\text{'} \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \\ \text{PRONTYPE} & dem \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'red'} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

The difference between ད: *da-* combined with a noun and the same combined with an adjective is that with a noun, the meaning is 'such a NOUN', while with an adjective the meaning is not 'such an ADJECTIVE one', but 'the ADJECTIVE one'. Thus, the deictic/anaphoric meaning remains, strictly speaking, which is manifest in the fact that the gender of the compound depends on that of the antecedent, as illustrated by (36). For cases where the noun and the adjective are homophones—like ཏོ་ *tuvo* 'red'—the correct interpretation is dependent on context.

(36) a. CONTEXT: རྒྱས་ *seygo* 'apple' (AN):

… *da-tuvoas*
da=tuvo-as
one=red-P.AN
'… the red one'

b. CONTEXT: ཟིན་ *hin* 'box' (INAN):

… *da-tuvoley*
da=tuvo-ley
one=red-P.INAN
'… the red one'

If the analysis that ད: *da-* is a simple clitic and thus equivalent to the full form ཌཱ་ *danya* (albeit restricted in its use) is maintained, the assumption stands to reason that the function embodied by ཌཱ་ *danya* still forms the head of the phrase, so we still have a DP. Since ད: *da-* is no independent word, it cannot be the head of the phrase, so it must not be D⁰. Since there is no other word material for nominal case marking to attach to, the adjective stem is inflected instead of the pronoun.

The most straightforward way to analyze ད:ཏོ་ཡུ་ *da-tuvoley* is probably by

means of inside-out functional uncertainty.[8] Dalrymple (2001: 144) gives an example from Warlpiri which contains a noun with double case marking. This example may serve as a template for a solution to our question, since here as well one lexeme, *pirli-ngka-rlu*, unites two instances of the same feature, compare (37). She explains that the stacked case marking in *pirli-ngka-rlu* 'rock-LOC-ERG', according to Nordlinger (1998), can be represented in f-structure as described in (38).

(37) Warlpiri (Nordlinger 1998: 136, from Simpson 1991):

Japanangka-rlu *luwa-rnu* *marlu* *pirli-ngka-rlu*
Japanangka-ERG shoot-PST kangaroo rock-LOC-ERG
'Japanangka shot the kangaroo on the rock.'

(38) a.

$$\begin{bmatrix} \text{SUBJ} & f\text{:} \begin{bmatrix} \text{CASE} & \text{ERG} \\ \text{OBL}_{loc} & g\text{:} \begin{bmatrix} \text{PRED} & \text{'rock'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

b.

pirli-ngka-rlu	N	(↑ PRED)	=	'rock'
		(↑ CASE)	=	LOC
		((OBL$_{loc}$ ↑) CASE)	=	ERG
		(SUBJ OBL$_{loc}$ ↑)		

What the lexical annotations in (38b) mean, according to Dalrymple (2001: 145–146), is that there is a word with 'rock' for its PRED, which has LOC for its CASE value. The third line states that there is a superordinate f-structure containing an attribute OBL$_{loc}$ (we know from the LOC case marking in *g* that the value of the OBL$_{loc}$ function is *g* itself) which belongs to an f-structure with ERG for the value of its own CASE feature. The fourth line states that again, a superordinate f-stucture must exist, and that the f-structure containing the OBL$_{loc}$ attribute (that is, *f*) is the value of its SUBJ function, since ergative case identifies the NP as the subject.

So how can we transfer this to our composite demonstrative ཌ་རྡོ་རྒྱུ *da-tuvoley* 'a/the red one'? We know that there is a lexical base which is an adjective རྡོ *tuvo* which has 'red' for a PRED. This is embedded as the ADJ of a functional head with deictic features (formerly ཌ་རྒྱ་ལེ *danyaley*, now reduced to a simple clitic ཌ *da-*). The whole compound is marked for patient case, which identifies it as an object. Thus, I propose the f-structure and annotations in (39).

Essentially, we can generate the same f-structure as in (35b) above this way, since ཌ་རྡོ་རྒྱུ *da-tuvoley* and ཌ་རྒྱ་ལེ་རྡོ *danyaley tuvo* should be functionally equiva-

8 To come back to our analogy with HTML et al., inside-out functional uncertainty is similar to traversing the DOM tree upwards in jQuery with `$(this).parent(selector).attr(key)`.

(39) a.

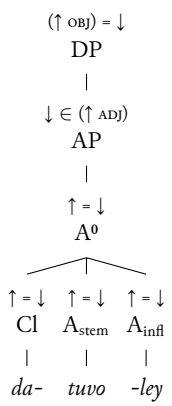
$$\begin{bmatrix} \text{OBJ} \quad f\text{:} \begin{bmatrix} \text{PRED} & \text{‘}pro\text{’} \\ \text{ANIM} & - \\ \text{CASE} & \text{P} \\ \text{PRONTYPE} & dem \\ \text{ADJ} & g\text{:} \left\{ \begin{bmatrix} \text{PRED} & \text{‘red’} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

b.

da-tuvoley	D	(↑ PRED)	=	‘red’
		((ADJ ↑) PRED)	=	‘*pro*’
		((ADJ ↑) PRONTYPE)	=	*dem*
		((ADJ ↑) CASE)	=	P
		(OBJ ADJ ↑)		

lent. The approach with functional uncertainty permits us not to violate lexical integrity, so the c-structure should look like in (40). Secondly, we do not have to assume that the adjective itself untypically inflects for case, at least not at a functional level. The case marker just happens to be stuck on it because it is the next best lexical base to attach it to.

(40)



Interrogative pronouns

Like the other kinds of pronouns, interrogative pronouns as well are a closed class of words in Ayeri. The whole list of them is given in section 4.2.3. Interrogative pronouns, like demonstrative pronouns, only inflect for case and distinguish animacy in agreement with their antecedent. Since interrogative pronouns in Ayeri do not appear in clause-initial position but *in situ*, they probably should not be analyzed as heading a complementizer phrase (CP) like in English (Carnie 2013:

359–369; Dalrymple 2001: 405–408), but as heads of DP. The question word སྲིད *sinya* 'who, what, which (one)' may also serve as an adjective in cases like (41a), however. This case warrants special discussion later, as it differs from the way the majority of interrogative pronouns work. A more canonical example of སྲིད *sinya* in which it acts as a pronoun proper is given in (41b).

(41) a. *Ang pretva kunangya sinya?*
ang=pret=va.Ø kunang-ya sinya
AT= knock=2.TOP door-LOC which
'Which door did you knock at?'

b. *Le tinkaya sinyāng kunang?*
le= tinka-ya sinya-ang kunang.Ø
PT.INAN=open-3SG.M who-A door.TOP
'Who opened the door?'

Note also that neither རྒྱས་ *sikay* 'how (means, circumstance)' nor རྒྱས་ཅི *simin* 'how (way, procedure)' can be combined with an adjective to ask about the extent of an attributive property. རྒྱ་ཁ *sikan* 'how much, how many' is only used for quantity questions and cannot combine with adjectives either. Instead, questions like 'how large' or 'how common' must be phrased using (generic) nouns; see (42). What the question word queries for is both the implied object of the question and new information—the sentence's focus (compare section 5.4.3). For English, Dalrymple (2001) gives the example in (43).

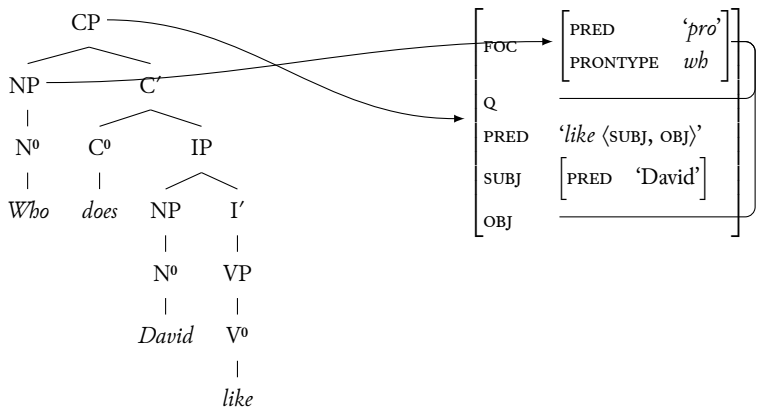
(42) a. *Nahungreng mavayena sinyaley?*
nahung-reng mavay-ena sinya-ley
size-A.INAN world-GEN what-P.INAN
'What is the size of the world?'
or: 'How big is the world?'

b. *Adareng vihay apānya sinya?*
ada-reng vihay apān-ya sinya
that-P.INAN common extent-LOC which
'To what extent is it common?'
or: 'How common is it?'

The AVM in (43a) indicates that information contained in FOC is shared with both the question particle Q and the OBJ of the clause. That is, Q is replacing the OBJ as a pronoun, and as such, embodies the FOC function with the respective properties. The phrase structure in (43b), then, tries to give a formula as general as possible for all question words in English, hence we see XP instead of NP as in example (43a), which is an example of a specific sentence containing the interrogative pronoun *who*. XP corresponds to any phrase type which can contain a

(43) English (Dalrymple 2001: 406):

a. *Who does David like?*

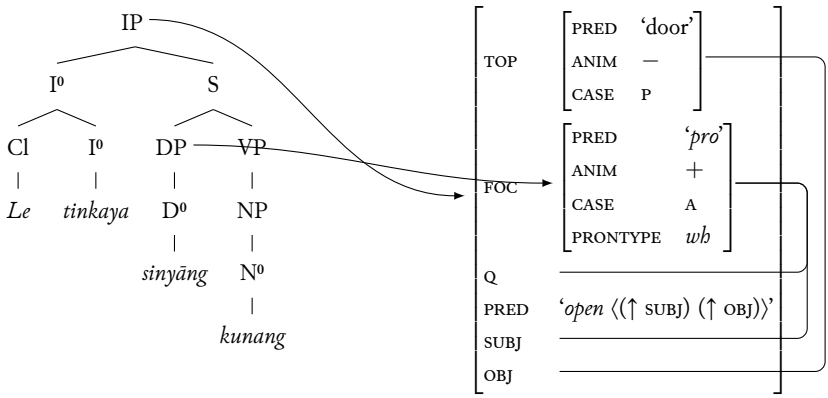


b. $$\text{CP} \rightarrow \begin{pmatrix} \text{XP} \\ (\uparrow \textsc{foc}) = \downarrow \\ (\uparrow \textsc{foc}) = (\uparrow \textsc{QFocusPath}) \\ (\uparrow \textsc{q}) = (\uparrow \textsc{foc WhPath}) \\ (\uparrow \textsc{q prontype}) =_c \textit{wh} \end{pmatrix} \begin{pmatrix} \text{C}' \\ \uparrow = \downarrow \end{pmatrix}$$

question word, that is, NP, adpositional phrase (PP), adverb phrase (AdvP), and AP (Dalrymple 2001: 407). The rather intricate annotation for XP is due to English's fronting of the question word, which necessitates definitions to retrieve the correct corresponding information further down the tree. The annotation basically says that XP is the focus of the clause and specifies that the corresponding information must be found in a location accessible to the *wh*-word (that is, the *wh*-word must c-command it), and there is a requirement that a *wh*-word exist. Since Ayeri does not front interrogative pronouns like English does, the functional annotations of the phrase structure rule should look significantly easier. Yet, however, we still need to account for Q, FOC and its associated GF sharing information. In order to give an example, let us reconsider (41b) in (44).

Example (44) is an attempt to chart the c-strcuture and the accompanying AVM for the sentence, ཀ་ཏིན་ཁ་ཡ་སྙིང་ཀུ་ནང་། *Le tinkaya sinyāng kunang?* 'The door, who opened it?'. Arrows between the c-structure tree and the AVM are analogous to the ones in (43a) for easy orientation. I labeled the phrase containing the interrogative pronoun DP, however, for consistency with the discussion of pronouns above, which were characterized as being nominal, though rather functional than lexical in nature. This also applies to interrogative pronouns.

(44) *Le tinkaya sinyāng kunang?*
'Who opened the door?'



In difference to the English example (43a), the interrogative pronoun is marked for case, and thus also encodes animacy for agents and patients. A full line connects the FOC value to both the value of Q and SUBJ to indicate correspondences between DFs and GFs. The connection between FOC and SUBJ also differs from the English example above, since we are asking for the subject/agent in this case, not for the object/patient as in the previous example.

An exemplary feature set for an interrogative pronoun has already been spelled out for གསྱང་ *sinyāng* above. More generally, interrogative pronouns have the possible values in (45). That is, they do not encode person and number, though at least གསྱ *sinya* inflects for case and thus also encodes animacy for agents and patients. Other pronouns, like གསུ *siyan* 'where' or གཙོ *sikan* 'how many', are invariant, as described in section 4.2.3. If case is not specified, the correct form of གསྱ *sinya* depends on the GF it is anaphorically linked to.

(45) ... D (↑ PRED) = '*pro*'
((↑ ANIM) = ±)
((↑ CASE) = {A, P, DAT, GEN, LOC, INS, CAUS})
(↑ PRONTYPE) = *wh*

Since question pronouns stay *in situ*, it is not necessary to devise an outside-in functional uncertainty rule; the interrogative pronoun is already in the place the argument it stands in for would normally occupy. The interrogative pronoun as such wholly replaces an NP, and it is not possible to join modifiers like adjectives or relative clauses to D′, compare (46).

གསྱ *sinya*'s ability to take a nominal complement may come into play instead,

(46) a. **Ang pengalye* *sinyās* *denisa?*
ang=pengal=ye.Ø sinya-as denisa
AT= meet=3SG.F.TOP who-P famous
'*Whom famous did she meet?'

b. **Ang sarava* *siyan* *veno?*
ang=sara=va.Ø siyan veno
A= go=2.TOP where beautiful
'*Where beautiful did you go?'

however. Such an analysis is provided in (47).[9] The pronoun asking for quantity, ཀོས་ཁ *sikan* 'how much, how many', likewise acts like a nominal modifier, and only ever does—that is, unlike གཟུ *sinya*, it does not have a double role. It may combine with any countable or quantifiable noun, as in (48), to query about it.

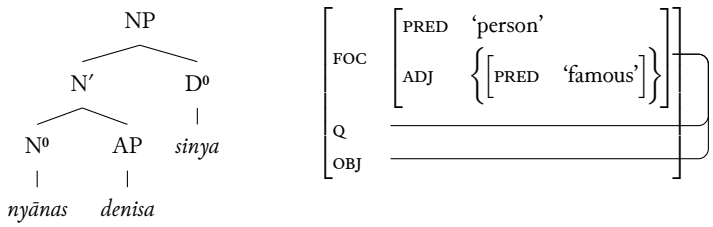
Indefinite pronouns

Indefinite pronouns (Table 4.11) cover a range of both syntactic phrases and semantic roles: they may substitute NPs, but also PPs. They may also form various core arguments (SUBJ, OBJ, OBJ$_{recip}$), as well as various oblique arguments (POSS, OBL$_{loc}$, OBL$_{ins}$, OBL$_{caus}$). Those indefinite pronouns substituting PERSON and THING decline, while those encoding PLACE, TIME, MANNER, and REASON are invariant. Thus, ཨ་ཟ *enya* 'everyone/-thing', ཨ་རི་ལིན་ཟ *arilinya* 'somebody/-thing', and ཀ་ཟ *ranya* 'nobody/-thing' can be declined for all cases, while the groups around ཡ་ཅན *yanen* 'everywhere' and བཏ་ཡོད *tadayen* 'everytime' always imply location (= LOC); the group around ཨ་རྒྱན *arēn* 'in every way' implies a manner (= INS), and ཡ་རི་ལ *yāril* 'for some reason' implies a reason (= CAUS).

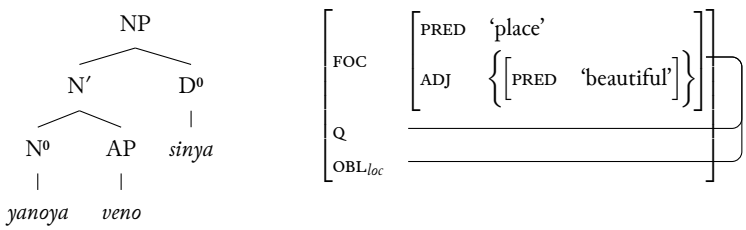
Regarding the functional definition of indefinite pronouns, at least Dalrymple (2001) treats them as lexical items proper, that is, like (↑ PRED) = 'somebody' instead of (↑ PRED) = '*pro*'. Since indefinite pronouns are not composed in a systematic way, I will treat them as lexical items proper here as well. For a discussion of a few regularities in word composition, see section 4.2.4 (p. 159). Example (49) attempts to model the c- and f-structure of a sentence containing an indefinite pronoun indicating place, ཡ་ཅན *yanen* 'everywhere'.

[9] I could not find any information about how to analyze *which* and *how* in terms of LFG. I am assuming that *which*'s function, as an interrogative determiner, is to mark a noun head as being questioned about. The consulted literature sometimes includes a rule for interrogative pronouns to change the sentence type to *wh-question* or similar. Since I am not using such a feature here, I am simply connecting the focus NP with the Q attribute to mark that the clause is supposed to be a question. The problem, then, is what to do with the PRONTYPE feature.

(47) a. *Ang pengalye* *nyānas* *denisa* *sinya?*
ang=pengal=ye.Ø nyān-as denisa sinya
AT= meet=3SG.F.TOP person-P famous which
'Which famous person did she meet?'



b. *Ang sarava* *yanoya* *veno* *sinya?*
ang=sara=va.Ø yano-ya veno sinya
AT= go=2.TOP place-LOC beautiful which
'Which beautiful place did you go to?'

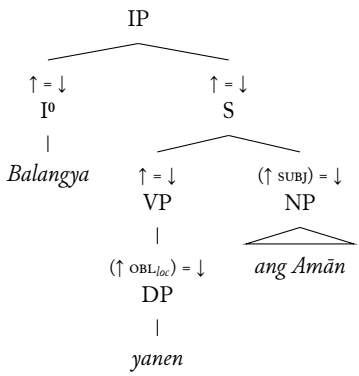


(48) *Sahayan* *keynamang* *sikan?*
saha-yan keynam-ang sikan
come-3PL.M people-A how.many
'How many people came?'

The annotation in example (49) assumes that by its lexical meaning alone, ཡན་རྒྱན་ *yanen* 'everywhere' is identified as the locative adverbial stated in the verb's a-structure (a possible OBJ has been dropped from the example). ཨང་ཨ་མཱན་ *ang Amān* itself does not mark third person singular masculine, but the SUBJ relation receives this information through functional unification with the verb which the subject NP proper controls in terms of agreement. The relevant information is implicitly contained in the NP's INDEX feature (Bresnan et al. 2016: 186–192), which is not shown in the example above. Example (50) gives a generalized list of features which indefinite pronouns may encode.

As noted above, only those indefinite pronouns referring to persons or things

(49) *Balangya* *yanen* *ang Amān.*
balang-ya yanen ang=Amān
search-3SG.M everywhere A= Amān
'Amān searched everywhere.'



$$\begin{bmatrix} \text{PRED} & \text{'}\textit{search}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{OBL}_{loc} & \begin{bmatrix} \text{PRED} & \text{'everywhere'} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Amān'} \\ \text{ANIM} & + \\ \text{CASE} & \text{A} \\ \text{GEND} & \text{M} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{bmatrix} \end{bmatrix}$$

(50) ... D (↑ PRED) = '...'
((↑ ANIM) = ±)
((↑ CASE) = {A, P, DAT, GEN, LOC, INS, CAUS})

decline for case, and thus also for animacy with agent and patient antecedents; for other indefinite pronouns, functional information is provided by the lexicon, as described for [illegible] *yanen* in (49). Regarding their distribution, indefinite pronouns behave like personal pronouns in that it is not possible for them to be modified by nominal or adjectival adjuncts, at least formally, as illustrated in (51).[10]

(51) a. **Ang vacye* *enyaley* *leno.*
ang=vac=ye.Ø enya-ley leno
AT= like=3SG.F.TOP everything-P.INAN blue
'She likes everything blue.'

b. **Ang sarayan* *yāril* *agon.*
ang=sara=yan.Ø yāril agon
AT= go=3PL.M.TOP somewhere foreign
'They are going somewhere foreign.'

10 However, [illegible] *leno* 'blue' in (51a) may be analyzed as a depictive secondary predicate referring to [illegible] *enyaley* 'everything', compare section 6.4.6 (p. 389). The example is marked ungrammatical here since this is not the intended reading.

Instead, it is necessary to modify the indefinite pronoun with a relative clause, as illustrated by (52). Alternatively, it is possible to use a generic noun instead of the indefinite pronoun, like ཉིན་ *linya* 'thing' instead of ཕན་ *enya* 'everything' and ཡུལ་ *yano* 'place' instead of ཡུལ་བར་ *yāril* 'somewhere' in (53).

(52) a. *Ang vacye enyaley si leno.*
ang=vac=ye.Ø enya-ley si leno
AT= like=3SG.F.TOP everything-P.INAN REL blue
'She likes everything that is blue.'

b. *Ang sarayan yāril si agon.*
ang=sara=yan.Ø yāril si agon
AT= go=3PL.M.TOP somewhere REL foreign
'They are going somewhere that is foreign.'

(53) a. *Ang vacye linyayeley-hen leno.*
ang=vac=ye.Ø linya-ye-ley=hen leno
AT= like=3SG.F.TOP thing-PL-P.INAN=all blue
'She likes all blue things.'

b. *Ang sarayan yanoya agon.*
ang=sara=yan.Ø yano-ya agon
AT= go=3PL.M.TOP place-LOC foreign
'They are going to a foreign place.'

Reciprocal pronoun

The reciprocal pronoun རང་ཕན་ *sitanya* 'each other' refers to two antecedents, but morphologically it is very simple in that, again, it only declines for case, so number and gender do not have to be accounted for. Thus, no problems arise in finding the correct form for antecedents with differing person features. Example (54) shows the functional properties of the reciprocal pronoun.

(54) རང་ཕན་ *sitanya* D (↑ PRED) = '*pro*'
(↑ ANIM) = ±
(↑ CASE) = {P, DAT, GEN, LOC, INS, CAUS}
(↑ PRONTYPE) = *recip*

It is notable that རང་ཕན་ *sitanya* cannot appear in the agent case, since 'each other' basically expresses that each entity is acted on by the other in the same way. The reciprocal relationship is captured in the functional annotation by defining PRONTYPE as *recip*. Example (55) illustrates what the AVM for a sentence with a reciprocal pronoun could look like.

(55) *Ang silvyan* *Kan nay Maha sitanyās.*
ang=silv-yan Ø= Kan nay Maha sitanya-as
AT= see-3PL.M TOP=Kan and Maha each.other-P
'Kan and Maha see each other.'

$$\begin{bmatrix}
\text{PRED} & \text{'}\textit{see}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\
\text{TOP} & \begin{bmatrix}
\text{CONJ} & \textit{and} \\
\text{NUM} & 3 \\
\text{GEND} & \text{M} \\
\text{NUM} & \text{PL} \\
\left\{\begin{matrix}
\begin{bmatrix}
\text{PRED} & \text{'Kan'} \\
\text{ANIM} & + \\
\text{CASE} & \text{A} \\
\text{INDEX} & \begin{bmatrix} \text{PERS} & 3 \\ \text{GEND} & \text{M} \\ \text{NUM} & \text{SG} \end{bmatrix}
\end{bmatrix}
\begin{bmatrix}
\text{PRED} & \text{'Maha'} \\
\text{ANIM} & + \\
\text{CASE} & \text{A} \\
\text{INDEX} & \begin{bmatrix} \text{PERS} & 3 \\ \text{GEND} & \text{F} \\ \text{NUM} & \text{SG} \end{bmatrix}
\end{bmatrix}
\end{matrix}\right\}
\end{bmatrix} \\
\text{SUBJ} & \\
\text{OBJ} & \begin{bmatrix}
\text{PRED} & \textit{'pro'} \\
\text{PRONTYPE} & \textit{recip}
\end{bmatrix}
\end{bmatrix}$$

In (55), the two coordinated subject NPs do not share the same features for GEND, since ཁན་ *Kan* is a male name and ཨཙཱ *Maha* is a female name; the verb form སིལ་བ་ཡི *silvyan* 'sees' resolves the conflicting values to masculine. Furthermore, number is resolved to plural from two singular entities being combined. Gender resolution of conjuncts with different gender is discussed in more detail in the next section.

Resolution in third-person pronouns

As alluded to above, it may happen occasionally that a pronominal reference is to third persons of mixed genders. English has no problem here, since it does not distinguish gender in plural, so both 'John' and 'Mary' in (56a) can simply be referred to by the pronoun *them*, which is indifferent to gender (number resolution occurs). Since Ayeri's personal pronouns distinguish gender in the plural as well as in the singular, however, there needs to be a way to deal with groups whose person features cannot easily be unified, which an example is given of in (56b). In addition to this, Ayeri has a two-tier system where three genders—masculine, feminine, neuter—are grouped together as animate, in opposition to inanimate gender, compare (57).

(56) a. CONTEXT: John and Mary

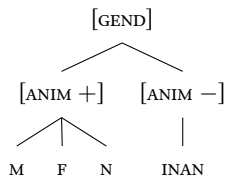
I give ***them*** *the keys.* $\{\text{M, SG}\} \cup \{\text{F, SG}\} \Longrightarrow \{\text{Ø, PL}\}$

b. CONTEXT: Ajān and Pila

Le	*ilyang*	*tinkayye*	***cam.***
le=	il=yang	tinkay-ye-Ø	cam
PT.INAN=give=ISG.A		key-PL-TOP	3PL.M.DAT

'I give them the keys.' $\{\text{M, SG}\} \cup \{\text{F, SG}\} \Longrightarrow \{\text{M, PL}\}$

(57)



If the group referred to has already served as the controller of verb agreement, it is to be expected that the person features of whatever the verb agreement indicates is simply carried through the conversation, if the resolution is justifiable. Otherwise, a speaker will have to decide which pronoun to use. In either case, an animacy hierarchy operates in that animate referents outweigh inanimate ones. Mixed animate groups often default to masculine, though not in all cases. The rules which operate are the following:

1. If the conjuncts are of the same grammatical gender, use that. No gender resolution is necessary, since the person features of the conjuncts coincide.

$$\text{M} \cup \text{M} \Longrightarrow \text{M}$$
$$\text{F} \cup \text{F} \Longrightarrow \text{F}$$
$$\text{N} \cup \text{N} \Longrightarrow \text{N}$$
$$\text{INAN} \cup \text{INAN} \Longrightarrow \text{INAN}$$

2. If a conjunct referring to an animate referent is present, use the masculine form as the default for sexed entities; use neuter otherwise. Resolution to the animate conjunct's gender more generally is also possible.

$$\text{M} \cup \text{INAN} \Longrightarrow \text{M}$$
$$\text{F} \cup \text{INAN} \Longrightarrow \text{M} \vee \text{F}$$
$$\text{N} \cup \text{INAN} \Longrightarrow \text{N}$$

3. For resolution of only animate referents, again, use the masculine form as the default. Resolution to the sexed conjunct's gender (M and F versus N) is possible here as well.

$$\begin{aligned} \text{M} \cup \text{F} &\Longrightarrow \text{M} \\ \text{M} \cup \text{N} &\Longrightarrow \text{M} \\ \text{F} \cup \text{N} &\Longrightarrow \text{M} \vee \text{F} \end{aligned}$$

It is possible that the preference for the masculine form as a default is in part motivated by phonology, since /a/ is by far the most common vowel in Ayeri in all positions (section 1.2). Thus, it is also the least marked one, so that pronominal forms with /a/ are preferred over those with more marked vowels. Corbett (1983) makes an observation on Slovene, Polish, and, to a lesser extent, French that in these languages, the first strategy in gender resolution is to resolve towards a semantically justified gender. If this fails, the second strategy is to resolve towards the form which least ambiguously marks plural. Both strategies are described as a general tendency in gender resolution (205). Since there is almost no syncretism in Ayeri's third-person plural pronouns which would render certain forms ambiguous, the second strategy is moot.[11]

While coordinated NPs may be a very obvious case in which resolution occurs, there are even cases where simplex NPs trigger it. This is the case for lexical hybrids, for one. Hybrid nouns are nouns whose outward, morphological form encodes a gender different from the empirically observable gender of the denoted entity—there is a mismatch between form and meaning, grammatical and apparent gender.

Corbett (2006) quotes the Russian word врач *vrač* '(woman) doctor', which is masculine at the level of syntax, but can be used to refer to female doctors alike at the level of semantics, hence triggering feminine agreement in more than half of the examined relevant cases (158). Another example is German *mädchen* 'girl', which is syntactically neuter, but semantically feminine.[12] Moreover, French *sentinelle* (quoted by Wechsler 2009 as an example) is a feminine noun, but often refers to a male person. English common nouns do not distinguish grammatical gender, but for instance, *child* may refer to both boys and girls, potentially triggering masculine *he* or feminine *she* rather than *it* in anaphoric recourse.

Ayeri's nouns are mainly distinguished by animacy; masculine and feminine only plays a role for those nouns which refer to beings, such as humans, ani-

11 ཐེང་ *teng* is used for both 3PL.F.A and 3PL.INAN.A; ཐན་ *tan* is used for both 3PL.F.GEN and 3PL.INAN.GEN. They all unambiguously indicate plural.

12 The same goes for the German neuter *weib* (compare Fleischer 2012: 165–166), which had been the long-time generic word for 'woman' (Old High German *wīb*, Middle High German *wîp*; cognate to English *wife*) before the feminine *frau*, formerly denoting a woman of high social standing (OHG *frouwa*, MHG *vrouwe*), began to dominate in the first half of the 20th century. *Weib* is now derogatory.

mals, and gods (compare section 4.1). For GEND there is no cross-categorization as such, however, there is for the ANIM feature. Thus, for instance, ཇུ་ཡི *subey* 'slave' is listed in the dictionary as inanimate even though it denotes a person. Conversely, མི་ཚེ *mimān* 'opportunity', གྱལ་ཐེ *myaltan* 'debt', རྣ་ཐང *natranga* 'temple', ནཔ་ཀོ *na-pakaron* 'acid', and བྱི་ *piyu* 'grain' are all listed as animate in spite of not referring to beings, but to things, tangible or abstract. It may also be noted that it is a lot easier to find 'miscategorized' semantic inanimates than semantic animates. However, as noted before, Ayeri is rather generous about what it allows to be categorized as animate. Thus, not only beings count as animate, but also things closely associated with living things, such as events, concepts, or activities executed or connected to them; likewise things giving some semblance of life by growing or moving are often animate.

Of nouns referring to living beings of both sexes, there are ཕ་ཅི *bayhi* 'ruler', ཟཱུ *dapal* 'boss, chief, superior', ཨ *gan* 'child', ཡ་ཕ *lajāy* 'student', ཡ་ལ *ledan* 'friend', and ས་ཕ *sobaya* 'teacher', for instance. All of these should be treated as animate neuters, factually, however, agreement is usually semantic in these cases, if justified; compare (58).

(58) *Yam il-ilya badanang gan$_i$ ajamley yena$_i$.*
yam= il∼il-ya badan-ang gan-Ø ajam-ley yena
DATT=ITER∼give-3SG.M father-A child-TOP toy-P.INAN 3SG.F.GEN
Literally: 'The child, the father gives her her toy back.'

The English translation of this example is maybe slightly odd in that 'child' is resumed by 'her', but in Ayeri ཨ *gan* 'child' is permissible as the referent of ཡ *yena* 'her'. Since ཕ *badan* 'father' denotes a male person, it would be odd for the feminine pronoun to be covariant with ཕ *badan*—the only other permissible reading is that ཡ *yena* refers to a non-present feminine third person, the owner of the toy and the recipient not being the same person ($i \neq j$). However, as the indices show, this was not intended here; identity of the recipient and the owner was. There is no obligation for semantic agreement, so it is possible just as well to use ཡ *yona* 'its' here. It is also a choice of the speaker to use ཨ *gan* 'child' rather than ལ *lay* 'girl' more explicitly.

Besides hybrid nouns, there is also a class of nouns which Corbett (2006) refers to as 'committee nouns' after the observation that the English word *committee* may trigger both singular and plural forms in agreement, with American English preferring singular agreement (*the committee* ***has*** *decided*), British English preferring plural agreement (*the committee* ***have*** *decided*), and Australian English allowing both with some preference for singular forms (212–213). Other typical committee nouns in English are *government*, *team*, and *family*. What these all

have in common is that syntactically, they are singular forms, but semantically, they refer to a group of people. Examples of committee nouns in Ayeri are [illegible] *bayhang* 'government', [illegible] *hatay* 'police', [illegible] *kadang* 'committee, coalition', and [illegible] *pandaha* 'family'. For committee nouns in Ayeri, canonical agreement is singular, since the body denoted by the word as such is taken as the unit of reference. This is illustrated by (59). The canonical gender of the words is thus also animate neuter.

(59) *Ang menuyo pandaha pandāpanas yona.*
ang=menu-yo pandaha-Ø pandāpan-as yona
AT= visit-3SG.N family-TOP relatives-P 3SG.N.GEN
'The family is visiting its relatives.'

Example (59) displays animate neuter singular agreement on the verb, as well as on the possessive pronoun: both agree syntactically with [illegible] *pandaha* 'family' as expected. However, Corbett (2006) points out that cross-linguistically there is a likelihood of semantic agreement to creep in, and that different constituents are differently affected by this, so that he arrives with the gradient described in (60)—the agreement hierarchy.[13]

(60) Agreement hierarchy (Corbett 2006: 206 ff.):

attribute > predicate > relative pronoun > personal pronoun

Corbett (2006) notes on the above chart that for "any controller that permits alternative agreements, as we move rightwards along the Agreement Hierarchy, the likelihood of agreement with greater semantic justification will increase monotonically (that is, with no intervening decrease)" (207). That is, agreement of a target according to the syntactic features of its agreement controller becomes increasingly likely as we go from right to left, whereas agreement according to a controller's semantic features becomes increasingly likely as we go from left to right. Fleischer (2012) also finds that, at least with regards to agreement triggered by the German lexical hybrid *weib* 'woman' as surveyed under a diachronic perspective, the distance between a controller and its target also plays some role in semantic agreement being triggered. This effect is also to be expected in Ayeri, and, according to Corbett's (2006) agreement hierarchy, especially so for personal pronouns, which

13 Wechsler and Zlatić (2003) try to capture Corbett's (2006) agreement hierarchy in terms of constraints on the INDEX (semantic) and CONCORD (formal) features of NPs (Wechsler and Zlatić 2003: 83–94). A detailed survey on how Ayeri fares according to these categories has not been attempted yet.

we have discussed in this subsection. Thus, (59) might be followed up with the sentence in (61).

(61) *Tang mino tadayya si girendtang panca.*
tang mino taday-ya si girend=tang panca
3PL.M.A happy time-LOC REL arrive=3PL.M.A finally
'They are happy when they finally arrive.'

Here, suddenly, anaphora relating to ཏཱཎ་ཧ *pandaha* 'family' before—the subject pronoun ཐང་ *tang* 'they' as well as the pronominal suffix of the verb མཇུག་ཏཱཎ་ཐང་ *girendtang* 'they arrive'—switch to animate masculine plural; semantic agreement has been triggered, and gender and number resolution thus occur. The pronoun of choice is masculine, since this is the default gender for mixed-gender groups of living beings, and plural, since ཏཱཎ་ཧ *pandaha* denotes a group of people. However, no statistics for Ayeri have been compiled on this issue to date, and least of all across a variety of literary genres and across different historical stages of the language.[14]

Quantifiers and Intensifiers

As described in section 4.8, Ayeri's morphemes expressing quantity and degree come in two varieties: free morphemes, such as རྒྱ *sano* 'both' or ཇེ་ཁྱེ་ *ekeng* 'over-, overly, too', and clitic morphemes, such as ཨ་ཁི་ *-ikan* 'much, many, very' or ཨ་ཉ *-nyama* even. In this section, we will first consider nominal quantifiers and then give the morphologically similar intensifiers a closer look.

Nominal quantifiers proper fall under the determiner rubric; they are not like adjectives in that there cannot be more than one quantifier modifying a noun, as in (62a). Moreover, if quantifiers were adjectives, they would also have to coordinate with them. Example (62b) shows that they do not.

Quantifiers can be modified by degree adverbs. However, exceptionally, independent quantifiers happen not to be semantically compatible with intensifiers such as ཇེ་ཁྱེ་ *ekeng* 'over-, overly, too' or ཁ་ཕན་ *kagan* 'excessively, far too', but they may occur with adverbs like ཡི་ཨོ་ *yoming* 'maybe' or ནི་ལ *nilay* 'probably', which express a degree of certainty. The example in (63) illustrates the structural properties of an NP modified by a free quantifier.

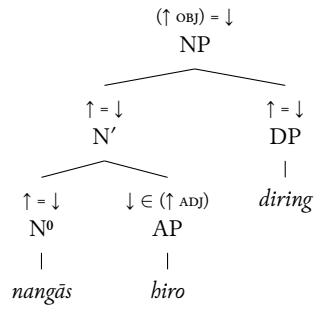
[14] Another difficulty in this regard is that all existing texts in Ayeri are translations from English or German, and conceived as more or less carefully crafted written texts. Any statistics on the effect of distance on semantic agreement (if it can at all be found) will thus likely be skewed as compared to the output of native speakers, both written and spoken.

(62) a. **nanga sano diring*
nanga sano diring
house both several
'*several both houses'

b. **nanga hiro nay sano*
nanga hiro nay sano
house new and both
'*both and new house'

(63) *nangās hiro diring*
nanga-as hiro diring
house-P new several
'several new houses'

$$\begin{bmatrix} \text{OBJ} \quad f\text{:} \begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{ANIM} & + \\ \text{NUM} & \text{PL} \\ \text{CASE} & \text{P} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'new'} \end{bmatrix} \right\} \\ \text{QUANT} & g\text{:} \begin{bmatrix} \text{PRED} & \text{'several'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$



An important property of quantifiers in Ayeri which we have to take into account is that nouns modified by quantifiers do not additionally mark plural, since the quantifier adds the PL value to an NP's NUM feature, as the previous examples indicate. The morpholexical specification for independent quantifiers should thus look like in (64). Since quantifiers manipulate the value of a superordinate f-structure, we invoke the functional uncertainty principle again here.

(64) ... D (↑ PRED) = '...'
((GF ↑) NUM) = PL
(GF QUANT ↑)

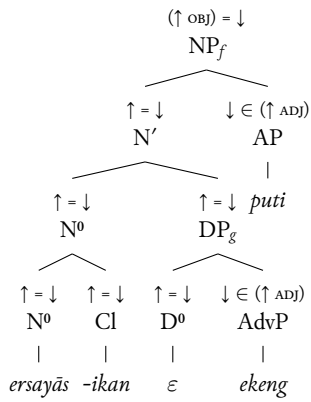
Besides independent quantifying morphemes, there are also enclitic ones, as described earlier in section 4.8. This is illustrated in (65) using the enclitic quantifier �ḷ -*ikan* 'much, many; very'. To further illustrate modification by an intensifier as mentioned above, ꑍꑘꑦꑣ *ekeng* 'too, over-, overly' has been added. Although quantifiers are not adjectives, they have been analyzed here as adjuncts of NP, since modifiers of quantifiers are values of QUANT's ADJ list. That is, if quantifiers were treated as heads of DP with NP as a complement of D⁰, due to D⁰ being a co-head

of N⁰, both adjectives pertaining to N⁰ and adverbs pertaining to D⁰ would write into the ADJ list of the f-structure predicated by N⁰, not into separate lists (Bresnan et al. 2016: 106). Thus, in order for DP not to be a co-head of NP, and to have its own modifiers, it must be subordinate to NP. This way, also, the quantifier DP and other modifiers of nouns, like APs, can switch places as required.

For (65), thus, it needs to be ensured that ꩜ꩡ꩔ *ekeng*, as a part of *g*, does not modify the head of NP, ꩜ꩡ꩔ꩍ *ersaya* 'cook', which is part of *f*, but the head of the DP. This head is an empty node *ε* whose information content is provided functionally by the clitic ꩜ꩡ꩔ꩍ꩔ꩍ *-ikan* on the noun.[15] Moreover, since LFG restricts specifiers of functional categories to the grammaticalized discourse functions (106–107), ꩜ꩡ꩔ꩍ *ekeng* cannot be analyzed as a specifier of D⁰ within its DP. Instead, it has been analyzed here as an adverb.

(65) *ersayās-ikan* *ekeng* *puti*
ersaya-as=ikan ekeng puti
cook-P=many too zealous
'too many zealous cooks'

$$\begin{bmatrix} \text{OBJ} \quad f: \begin{bmatrix} \text{PRED} & \text{'cook'} \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \\ \text{NUM} & \text{PL} \\ \text{QUANT} & g: \begin{bmatrix} \text{PRED} & \text{'many'} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'overly'} \end{bmatrix} \right\} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'zealous'} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$



Since enclitic quantifiers sit in a different position than their independent counterparts, their morpholexical definition differs. For one, we need to provide for a way to place the quantifier clitic's PRED value in QUANT. Secondly, since the quantifier is part of N⁰ for syntactic purposes, we do not need inside-out uncertainty to add the PL value to the f-structure predicated by N⁰. The definitions for enclitic quantifiers are shown in (66) accordingly.

(66) ... D (↑ QUANT PRED) = '...'
(↑ NUM) = PL

[15] Empty nodes are normally omitted from c-structure trees (economy of expression principle, Bresnan et al. 2016: 119–124), but have been included here for illustration.

Quantifiers as well can combine with independent personal pronouns especially in the plural, and demonstrative pronouns. A clitic quantifier can also still be recognized in the interrogative pronoun ཇི་ཁ་ *sikan* 'how many', although here it is incorporated into the pronoun itself. There is no productive combination of interrogative pronouns and quantifiers, with the exception of རྒྱ *sinya* 'who'. With indefinite pronouns, quantifiers are somewhat redundant in some combinations, though it is feasible to use them for emphasis. Combinations of pronouns and quantifying clitics are illustrated in (67).

(67) a. *Ang koronay tas-ikan.*
ang=koron=ay.Ø tas=ikan
AT= know=1SG.TOP 3PL.M.P=many
'I know many of them.'

b. *Yomāra sinyareng-ma?*
yoma-ara sinya-reng=ma
exist-3SG.INAN what-A.INAN=enough
'What is there enough of?'

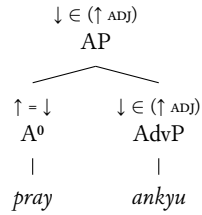
c. *Ang ilye Pada enyaley-kay cam sano.*
ang=il-ye Ø= Pada enya-ley=kay cam sano
A= give-3SG.F TOP=Pada everything-P.INAN=a.little 3PL.M.DAT both
'Pada gave both of them a little of everything.'

d. **Le inttang piyu si-ma ya yomareng bukuno.*
le= int=tang piyu-Ø si=ma ya yoma-reng bukuno-Ø
P.INAN=buy=3PL.M.A grain-TOP REL=enough LOCT exist=3SG.INAN.A storage-TOP
Intended: 'They are buying the grain enough of which is in the storage'

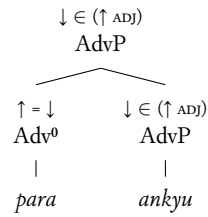
The relativizer ཁ *si* and its forms inflected for agreement cannot be quantified. The simple and most common form of the relativizer, ཁ *si*, is unstressed, which makes it a bad host for a clitic. A relativizer marked for relative-clause internal case, however, may be modified by a quantifier: ཁོ་ *sinā* 'of which' + ཁ་ *-ikan* 'many' results in ཁོ་ཁ *sinā-ikan* 'many of which'. Alternatively, a resumptive pronoun carrying the quantifier may occur in the relative clause.

Besides nouns, adjectives and adverbs as well may be modified by the likes of ཁ *-ikan* 'much, many; very' or ངས *-ngas* 'almost', only that instead of referring to quantity, the enclitics' meaning in this context is related to quality or degree, possibly in such a way as to emphasize the head, in which case they become intensifiers. An overview of the correspondences is given in Table 4.30. Besides enclitic quantifiers and intensifiers, there are also independent morphemes which can act this way, like ཁ་ཁ *ikan-ikan* 'altogether, totally', or ཁ *ipan* 'extremely'. Carnie (2013) at least treats these all as adverbs in the fashion of (68).

(68) a. *bahisley* *pray* *ankyu*
bahis-ley pray ankyu
day-P.INAN great really
'a really great day'



b. *Nimpyeng* *para* *ankyu.*
nimp=yeng para ankyu
run=3SG.F.A fast really
'She is running really fast.'



6.1.3 Nominal clitics

For nominal clitics, we have already seen how preposed case markers work; some nominal clitics are also described in section 3.2.5 in a way to establish why they are clitics rather than affixes or words. In the following subsections, we will have a closer look at the morphosyntax of each group of clitics which can interact with nouns, and with regards to nouns, specifically at those clitics which can interact with more than this one part of speech.

Demonstrative prefixes

For one, there is the series of demonstrative prefixes—or rather, deictic proclitics: ꩜ *eda-* 'this', ꩜ *ada-* 'that', and ꩜ *da-* 'such'. In section 3.2.1 (p. 67), it was reasoned that in Ayeri, to capture all three clitics, a feature DEIX with values *this*, *that*, and *such* should be assumed in the place of PROX, since (↑ PROX) = ± does not apply to ꩜ *da-*, as (69) illustrates.

The functional annotations of the deictic proclitics are thus, very straightforwardly, given in (70). Demonstrative clitics cannot be combined with pronouns of any kind, only with nouns; the combination of ꩜ *da-* with a possessive pronoun does not result in the meaning of **such my*, **such your*, etc., but it derives independent possessive pronouns such as *mine*, *yours*, etc. which do not act as mere modifiers of nouns.

(69) a. *eda-nangās*
eda=nanga-as
this=house-P
'this house'

$$\begin{bmatrix} \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \\ \text{DEIX} & \textit{this} \end{bmatrix} \end{bmatrix}$$

b. *ada-veneyya*
ada=veney-ya
that=dog-LOC
'at that dog'

$$\begin{bmatrix} \text{OBL}_{loc} & \begin{bmatrix} \text{PRED} & \text{'dog'} \\ \text{CASE} & \text{LOC} \\ \text{DEIX} & \textit{that} \end{bmatrix} \end{bmatrix}$$

c. *da-mehirena*
da=mehir-ena
such=tree-GEN
'of such a tree'

$$\begin{bmatrix} \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'tree'} \\ \text{CASE} & \text{GEN} \\ \text{DEIX} & \textit{such} \end{bmatrix} \end{bmatrix}$$

(70) ... Cl (↑ DEIX) = {*this*, *that*, *such*}

Likeness prefix ku-

There is furthermore a clitic expressing likeness and resemblance, ꩜ *ku-* 'like (a)', which precedes common nouns, and which precedes proper nouns if no overt case marker is present and follows them if there is. At least in English this word may constitute a preposition or conjunction. In Ayeri, however, due to being a clitic, it behaves unlike either, which is why it may be treated most easily as a compound expression with the nominal it binds to.

(71) a. *ku-ayon*
ku=ayon
like=man
'as a man'

$$\begin{bmatrix} \text{PRED} & \text{'as-man'} \end{bmatrix}$$

b. *ang Apitu-ku*
ang=Apitu=ku
A= Apitu=like
'like Apitu (does)'

$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'like-Apitu'} \\ \text{ANIM} & + \\ \text{CASE} & \text{A} \end{bmatrix} \end{bmatrix}$$

In cases like (71b), if there are adjectives following the noun, the clitic actually follows the whole NP like the *'s* possessive clitic in English, at least from a logical point of view. Phonetically, however, the enclitic leans on the last word in the phrase. Regarding constituency, it is possible to replace all of ꩜꩕꩜꩕꩜꩕꩜ *ang Apitu puti* with ꩜꩕꩜꩕꩜꩕꩜ *danyāng* 'such one' and to still modify that by ꩜ *ku-*, as illustrated by (72).

(72) a. *ang Apitu puti-ku*
ang=Apitu puti=ku
A= Apitu diligent=like
'like diligent Apitu (does)'

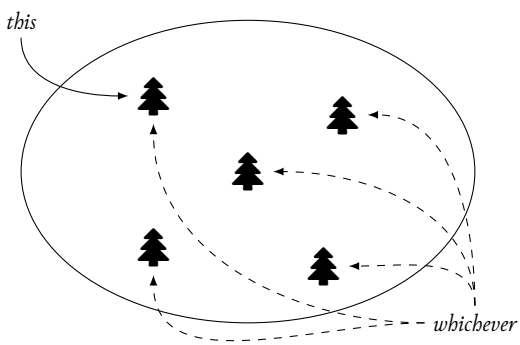
b. *ku-danyāng puti*
ku=danya-ang puti
like=such.one-A diligent
'like the diligent one (does)'

c. *ku-danyāng*
ku=danya-ang
like=such.one-A
'like such one (does)'

Inspecificity prefix mə-

While demonstrative clitics make NPs more specific in selecting a particular specimen out of a group of entities, the proclitic ᨕᨚ *mə-* does the opposite: it expresses that the speaker refers to any representative of a group entities, not a specific one, as in (73). The functional definition for ᨕᨚ *mə-* should thus look as given in (74): the NP it is added to is neither a definite nor specific reference, the speaker means just any representative of the kind the nominal head specifies.

(73)



(74) ᨕᨚ *mə-* Cl (↑ DEF) = –
(↑ SPECIF) = –

Since according to Lyons (1999: 152) demonstratives are inherently definite—and their reference is specific, too—the deictic proclitics ᨕᨚᨗ *eda-* 'this', ᨕᨚᨗ *ada-* 'that', and ᨗ *da-* 'such' are in complementary distribution with the inspecificity

marker, as demonstrated by (75): both combinations of *mə-* and *eda-* in (75cd) result in an ungrammatical sentence because *eda-* encodes [DEF +, SPECIF +] while *mə-* encodes [DEF −, SPECIF −]. Attempting to assign opposing values to the same feature (DEF and SPECIF, respectively) must fail.

(75) a. *Ang nakasyon nihanye eda-mehirya.*
ang=nakas-yon nihan-ye-Ø eda=mehir-ya
AT= grow-3PL.N fruit-PL-TOP this=tree-LOC
'Fruits are growing on this tree.'

b. *Ang nakasyon nihanye mə-mehirya.*
ang=nakas-yon nihan-ye-Ø mə=mehir-ya
AT= grow-3PL.N fruit-PL-TOP whichever=tree-LOC
'Fruits are growing on whichever tree.'

c. **Ang nakasyon nihanye mə-eda-mehirya.*
ang=nakas-yon nihan-ye-Ø mə=eda=mehir-ya
AT grow-3PL.N fruit-PL-TOP whichever=this=tree-LOC

d. **Ang nakasyon nihanye eda-mə-mehirya.*
ang=nakas-yon nihan-ye-Ø eda=mə=mehir-ya
AT= grow-3PL.N fruit-PL-TOP this=whichever=tree-LOC

The inspecificity proclitic *mə-* cannot commonly be combined with pronouns, since personal pronouns as well as demonstrative pronouns have a definite reference; combining the clitic with an indefinite pronoun would be redundant. With interrogative pronouns it is feasible to use *mə-* as an intensifier, though without the vulgar tone of the English translation given in (76).

(76) *Amangreng mə-simin?*
amang=reng mə=simin
happen=3SG.INAN.A whichever=how
'How the fuck did that happen?'

6.2 Adjective and adverb phrases

Adjectives and adverbs in Ayeri are largely similar in that they can both be modified by adverbs like *very*, and they both modify heads: adjectives modify nouns, adverbs modify everything else. Carnie (2013) thus urges his readers to think about whether it is sensible to distinguish between the two categories (51), so let us focus in this section on structural similarities and dissimilarities between the two, as well as their distribution as morphemes.

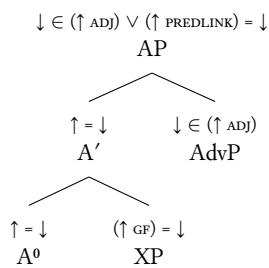
6.2.1 Adjective phrases

As described in the previous section, APs usually constitute adjuncts of NPs or certain kinds of DPs (demonstratives, notably), where they describe properties of these nominal elements. Adjectives are likewise commonly found as predicative complements (PREDLINK) in copular clauses, compare section 6.4.1. Possessive pronouns can be used as modifiers as well, though they are probably still better classified as DP heads. The phrase-structure rule in (77) and the c-structure trees in (78) show how an AP is constructed.

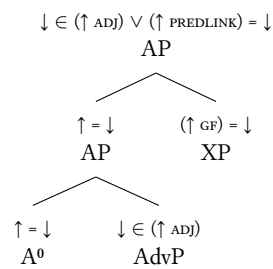
(77) a. $\text{AP} \rightarrow \underset{\uparrow = \downarrow}{\text{A}'} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{AdvP}}$

b. $\text{A}' \rightarrow \underset{\uparrow = \downarrow}{\text{A}^0} \quad \underset{(\uparrow \text{GF}) = \downarrow}{\text{XP}}$

(78) a.



b.



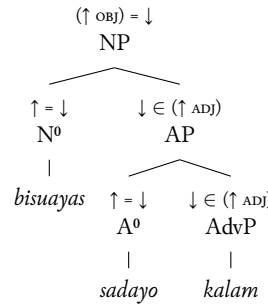
APs have an adjective as their lexical head. This head may be extended by modifiers adjoined to A′; A′ repeats for the adjunction of multiple modifiers. Since modifiers follow their heads here as well, APs are also a right-branching constituent. Complements of adjectives are subsumed under the label XP in the phrase structure rules, which here stands for NP, DP, PP, and CP. An example of each phrase type modifying an adjective is given in (79) and (80).

Example (79a) gives the f- and c-structures for the AP to show that ADJ may be recursive: an adjective which serves as a modifiers of a noun can itself be modified by an adverb. Likewise, an adjective–adverb combination can be complemented by an NP, as shown in (79c). Especially in (79b) and (79c) we can see Ayeri's propensity for using cases with complements where English would use prepositions. Thus, in (79b), 'about' is expressed by putting the nominal complement in the genitive case: the NP complement expresses an oblique theme about which the experiencing subject becomes happy. This, however, should not be conflated with a possessor, POSS, but should be labeled separately as an oblique complement, OBL_{theme}. Similarly, the recipient of the subject's happiness appears as an

(79) a. adjective + AdvP adjunct:

Adareng *bisuayas* *sadayo* *kalam.*
ada-reng bisuay-as sadayo kalam
that-A.INAN idea-P crazy truly
'That is a truly crazy idea.'

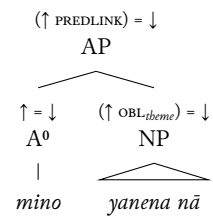
$$\begin{bmatrix} \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'idea'} \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'crazy'} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'truly'} \end{bmatrix} \right\} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$



b. adjective + NP complement:

Yang *mino* *yanena* *nā.*
yang mino yan-ena nā
ISG.A happy son-GEN ISG.GEN
'I am happy about my son.'

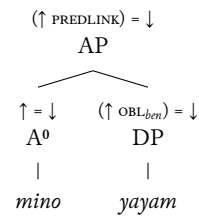
$$\begin{bmatrix} \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{happy}\ \langle(\uparrow \text{OBL}_{\textit{theme}})\rangle\text{'} \\ \text{OBL}_{\textit{theme}} & \begin{bmatrix} \text{PRED} & \text{'}\textit{son}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{CASE} & \text{GEN} \\ \text{POSS} & \begin{bmatrix} \text{"my"} \end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$



c. adjective + DP complement:

Yang *mino* *yayam.*
yang mino yayam
ISG.A happy 3SG.M.DAT
'I am happy for him.'

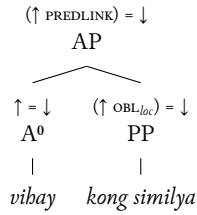
$$\begin{bmatrix} \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{happy}\ \langle(\uparrow \text{OBL}_{\textit{ben}})\rangle\text{'} \\ \text{OBL}_{\textit{ben}} & \begin{bmatrix} \text{"him"} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$



(80) a. adjective + PP complement:

Adareng *vihay* *kong* *similya.*
ada-reng vihay kong simil-ya
that-A.INAN common inside country-LOC
'It is common within the country.'

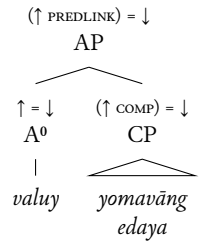
$$\begin{bmatrix} \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{common}\ \langle(\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{OBL}_{loc} & \begin{bmatrix}\text{"within the country"}\end{bmatrix} \end{bmatrix} \end{bmatrix}$$



b. adjective + CP complement:

Yang *valuy,* *yomavāng* *edaya.*
yang valuy yoma=vāng edaya
1SG.A glad exist=2.A here
'I am glad that you are here.'

$$\begin{bmatrix} \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{glad}\ \langle(\uparrow \text{COMP})\rangle\text{'} \\ \text{COMP} & \begin{bmatrix}\text{"you are here"}\end{bmatrix} \end{bmatrix} \end{bmatrix}$$



NP complement in the (ethical) dative in (79c). Instrumental and causative NP complements instead of PPs may be found as well (compare section 6.4.9, p. 415). Moreover, according to Carnie (2013), quantifiers or intensifiers of adjectives are adverbs, so they should find themselves in ADJ. An example of this is given in (81).

(81) a. *luyu-mas*
luyu=mas
strange=kind.of
'kind of strange'

$$\begin{bmatrix} \text{PRED} & \text{'strange'} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'kind of'}\end{bmatrix}\right\} \end{bmatrix}$$

b. *valuy* *ipan.*
valuy ipan
glad extremely
'extremely glad'

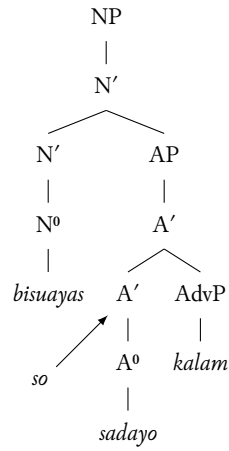
$$\begin{bmatrix} \text{PRED} & \text{'glad'} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'extremely'}\end{bmatrix}\right\} \end{bmatrix}$$

With regards to complements and adjuncts to NP, Carnie (2013) explains, "Since complements are sisters to X and not X′, they cannot stand next to the word *one*. Adjuncts, by definition, can" (182). To target A′ nodes, we need something corresponding to English *so*, which we find in Ayeri ᓇᑉ *da-* 'thus, so, such'. Since adverbs are adjuncts, it is possible to replace the adjective ᓂᓚᑉ *sadayo* 'crazy' in (82a)

with ད *da-* in (82b); the A′ in (82a) being targeted is the sister to AdvP.[16]

(82) a. *bisuayas sadayo kalam*
bisuay-as sadayo kalam
idea-P crazy truly
'a truly crazy idea'

b. *Da-kalam bisuayang.*
da=kalam bisuay-ang
so=truly idea-A
'The idea is truly so.'



Continuing this replacement test for the other example sentences from (79), we can see that the outcomes are ungrammatical; the NPs are dependent on their lexical head, which cannot be omitted or replaced by a pro-form. The idiomatic English translations in (83) somewhat conceal this. The literal translations try to show that the complements are more tightly integrated into the sentence in Ayeri than in the idiomatic translations in an attempt to convey how they must seem non-sensical to an Ayeri speaker.

Further complications arise with regards to complementation in that non-clitic quantifiers like ཁ་ལྟ *ankyu* 'really' cause a complement of an adjective to be extraposed, due to syntactic weight (Wechsler 2009). Example (84a) attempts to illustrate the c-structure for a displaced CP. The corresponding f-structure in (84b) shows that even though the CP is generated in a position different from where it should occur as a complement, the f-structure remains the same: the CP *g* is a complement of *f*'s predicator. Following the annotation rules in Bresnan et al. (2016: 107), an analysis as in (84a) is not unproblematic since they require for the adjoined phrasal node to be either unannotated (↑ = ↓) or not to embody an argument function, while COMP is an argument function. Using lexocentric feature annotation as with NPs is not possible here, since CPs cannot be marked for case.

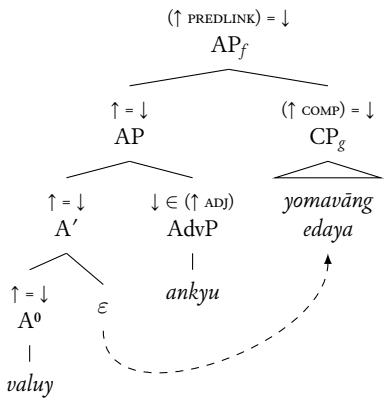
16 Since in LFG, non-branching X′ nodes are omitted for brevity, c-structure trees do not strictly distinguish between complements and adjuncts (Bresnan et al. 2016: 127, fn. 52); functional annotations provide information about the status of a node instead. The tree in (82), however, keeps those X′ nodes which would otherwise be omitted.

(83) a. * *Yang da-yanena nā.*
yang da=yan-ena nā
ISG.A SO=SON-GEN ISG.GEN
'I am so about my son.'
Literally: '*I am my son's so.'

b. * *Yang da-yayam.*
yang da=yayam
ISG.A SO=3SG.M.DAT
'I am so for him.'
Literally: '*I am him so.'

c. * *Yang da-yomavāng edaya.*
Yang da=yoma=vāng edaya
ISG.A SO=exist=2.A here
'*I am so that you are here.'

(84) a. *Yang valuy _ ankyu, [yomavāng edaya].*
yang valuy ankyu yoma=vāng edaya
ISG.A glad really exist=2.A here
'I am really glad you are here.'



b.
$$\begin{bmatrix} \text{PREDLINK} \quad f\text{:} \begin{bmatrix} \text{PRED} & \text{'}glad\ \langle(\uparrow \text{COMP})\rangle\text{'} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'really'}\end{bmatrix}\right\} \\ \text{COMP} \quad g\text{:} & \begin{bmatrix} \text{PRED} & \text{'}exist\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"you"}\end{bmatrix} \\ \text{OBL}_{loc} & \begin{bmatrix}\text{PRED} & \text{'here'}\end{bmatrix} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

As pointed out in section 4.3, Ayeri's adjectives inflect very little, since there is no agreement morphology. However, there exist morphological means of comparison or negation. This is reflected in the functional annotations given in (85). The features DEG, DEG-DIM, and NEG appear in brackets here, since they do not apply universally: adjectives normally appear in the positive in both regards, comparison and polarity, and are morphologically unmarked in these cases. DEG-DIM also does not play a role here, since there are only clitics for positive comparison, and negative comparison is achieved by negating the adjective with the regular negative suffix ᨿᨚᨗ *-oy*. Examples of the different ways an adjective may be morphologically marked and their respective representation as an AVM are given in (86).

(85) ... A

	(↑ PRED)	=	'...'
(	(↑ DEG)	=	{POS, COMP, SUPL})
(	(↑ DEG-DIM)	=	{*equative*, *negative*, *positive*})
(	(↑ NEG)	=	±)

(86) a. *nake-vā*
nake=vā
tall=SUPL
'tallest'

$$\begin{bmatrix} \text{PRED} & \text{'tall'} \\ \text{DEG} & \text{SUPL} \end{bmatrix}$$

b. *mingoy*
ming-oy
capable-NEG
'incapable'

$$\begin{bmatrix} \text{PRED} & \text{'capable'} \\ \text{NEG} & + \end{bmatrix}$$

c. *pasīsoy-eng*
pasīsa-oy=eng
interesting-NEG=COMP
'more uninteresting'

$$\begin{bmatrix} \text{PRED} & \text{'interesting'} \\ \text{DEG} & \text{COMP} \\ \text{NEG} & + \end{bmatrix}$$

We have already seen above (section 4.3.1) that the morphemes used for synthetic comparison of adjectives are grammaticalized clitics literally meaning 'rather, more' (ᨿᨕᨘᨗᨕᨘᨗᨕᨘᨗ

'extremely'. The word stays the same, however: ཕན་ *ipan*, without a derivative affix akin to English *-ly* or French *-ment*. Since adverbs and adjectives are functionally similar, Carnie (2013) poses the question whether adjectives and adverbs should rather be analyzed as being part of the same category. He reasons that

> [b]oth Adj and Adv can be modified by the word *very*, and they both have the same basic function in the grammar—to attribute properties to the items they modify. In fact, the only major distinction between them is syntactic: Adjectives appear inside NPs, while adverbs appear elsewhere. (51)

Adjectives and adverbs are in complementary distribution, which, he writes, would normally be taken as evidence that these two things are of the same category. In fact, the only reason Carnie (2013) adduces for keeping the two categories apart is "because they are familiar to most people," and he prompts the reader to consider that uniting them in a single supercategory "might provide a better analysis and might be better motivated scientifically" (51). Bresnan et al. (2016: 126) also classify both adjectives and adverbs as heads of AP with reference to Emonds (1988). As described in section 4.6, the only morphology attributive adverbs take in Ayeri is comparison morphology and negation. This is the same as with adjectives indeed, hence the morpholexic specifications in (87) appear equal.

(87) ... A (↑ PRED) = '...'
((↑ DEG) = {COMP, SUPL})
((↑ NEG) = +)

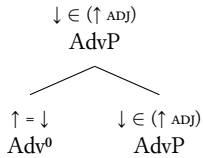
If we look at the phrase structure (88) and the c-structure (89) for adverbs, however, there is a slight difference in that descriptive adverbs at least cannot serve as PREDLINK in equative statements; they also can only be modified by other adverbs, and they cannot take complements.[17] On the other hand, adjectives are restricted to nominal contexts, whereas adverbs may modify any other lexical category: verbs, adjectives, prepositions, as well as other adverbs.

(88) $\text{AdvP} \rightarrow \underset{\uparrow = \downarrow}{\text{Adv}^0} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{AdvP}}$

Example (90) illustrates various modifiers of adverbs. These modifiers are often quantifying/intensifying adverbs, whether clitic ones or free ones. Since adjectives and adverbs are not distinguished by morphology, the heads of both phrases, ཁ་ཚིས *vakisa* 'careful' and ཐོན *bita* 'ordinary, normal', may be interpreted as adjectives as well, depending on context.

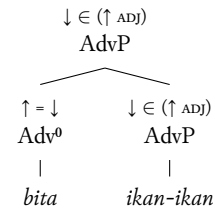
[17] For adjectives, compare (77), (78), and (85) in section 6.2.1.

(89)



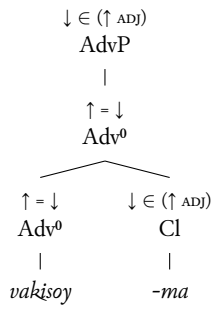
(90) a. *bita* *ikan-ikan*
bita ikan.ikan
ordinarily completely
'completely ordinarily'

$$\begin{bmatrix} \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'ordinarily'} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'completely'} \end{bmatrix} \right\} \end{bmatrix} \right\} \end{bmatrix}$$



b. *vakisoy* *-ma*
vakisa-oy =ma
carefully-NEG=enough
'not carefully enough'

$$\begin{bmatrix} \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'carefully'} \\ \text{NEG} & + \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'enough'} \end{bmatrix} \right\} \end{bmatrix} \right\} \end{bmatrix}$$



Clitic quantifiers, as in (90b), attach immediately to the head they modify rather than to the last word of the AdvP. It may be assumed that the functional scheme given in (87) also holds for them. Carnie (2013) at least treats all modifiers of adjectives and adverbs as adverbs. Even though these usually refer to the extent of the adjective or adverb, they differ from quantifiers of nouns, which were analyzed above as determiners encoding the QUANT feature rather than being plain adjectives. Quantifiers of adjectives and adverbs are also able to be modified in turn, as illustrated by (76) of section 3.2.5 (p. 98), which is repeated in (91), abbreviated. ꠁꠘꠀꠞ *ikan* 'much, many, very' is modified in this case by ꠀꠘꠀꠞ *kagan* 'far too' to convey the meaning 'far too many'.

Besides the parenthetical insertion tests on ꠀꠘꠀꠞ *kagan* in section 3.2.5, the examples in (92) show that ꠀꠘꠀꠞ *kagan* also cannot swap places with other nominal modifiers without a change in meaning (92a), that ꠀꠘꠀꠞ *kagan* does not work when

(91) *keynam -ikan kagan*
keynam-Ø =ikan kagan
people-TOP=many far.too
'far too many people'

the rest of the NP is replaced by an anaphora (92b), and that ꠁꠘꠀꠅꠀꠅ *-ikan* cannot be replaced by an anaphora either (92c). It appears that ꠀꠅꠀꠅ *kagan* is dependent on ꠁꠘꠀꠅꠀꠅ *-ikan*, and that ꠁꠘꠀꠅꠀꠅ *-ikan* has head-like qualities with regards to modification by ꠀꠅꠀꠅ *kagan*.

(92) a. ! *keynam-ikan gino kagan*
keynam=ikan gino kagan
people=many drunk far.too
'many far too drunk people'
Intended: 'far too many drunk people'

b. * *tas kagan*
tas kagan
3PL.M.P far.too
'*far too of them'

c. * *keynam da-kagan*
keynam da=kagan
people so=far.too
'*far too so people'

As (92a) shows, ꠀꠅꠀꠅ *kagan* 'far too' and, alternatively, ꠀꠇꠀꠅꠀꠅ *ekeng* 'too' also work with regular adjectives, and it is possible as well to add further adjuncts to the AdvP, for instance, ꠀꠇꠀꠅ *patu* 'surprisingly' in (93). The AP in this example, ꠀꠅꠀꠅꠁꠘꠀꠅꠁꠘꠀꠅꠀꠅꠀꠅꠀꠅꠀꠅ *keynam-ikan kagan patu* 'many surprisingly far too drunk people', has been interpreted to the effect that both ꠀꠅꠀꠅ *kagan* and ꠀꠇꠀꠅ *patu* modify ꠀꠅꠀꠅ *gino*, rather than ꠀꠇꠀꠅ *patu* modifying ꠀꠅꠀꠅ *kagan*. Evidence for such an analysis is provided by ꠀꠅꠀꠅꠀꠇꠀꠅ *da-patu* 'surprisingly so' being grammatical, while *ꠀꠅꠀꠅꠀꠇꠀꠅ *gino da-patu* '*surprisingly so drunk' not being so. ꠀꠇꠀꠅ *patu* thus must be adjoined to A′ rather than an Adv′ projected by ꠀꠅꠀꠅ *kagan*.

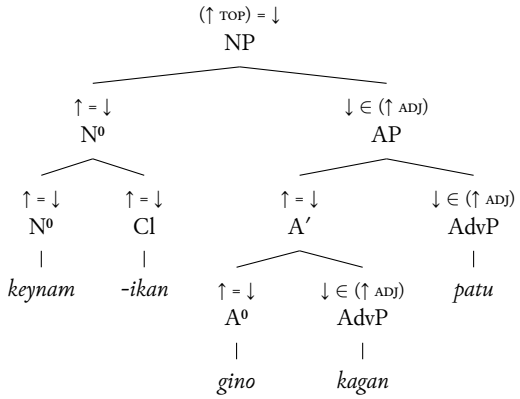
6.3 Prepositional phrases

As described in the section on the morphology of adpositions (section 4.4), Ayeri possesses both prepositions and postpositions, though the former are a lot more common and basic than the latter. Thus, PPs are an exceptional domain in that very limited left-branching is possible insofar as the complement of a postposition

(93) a.

$$\begin{bmatrix} \text{PRED} & \text{'people'} \\ \ldots & \\ \text{QUANT} & \begin{bmatrix} \text{PRED} & \text{'many'} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'drunk'} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'far too'} \end{bmatrix} \\ \begin{bmatrix} \text{PRED} & \text{'surprisingly'} \end{bmatrix} \right\} \end{bmatrix} \right\} \end{bmatrix}$$

b.



precedes its head. The complement of a postposition is, in itself, right-branching again, however. Since the label 'AP' for a more general 'adpositional phrase' has already been used for 'adjective phrase', I will use the common label 'PP' to refer to both prepositional and postpositional phrases, with their respective heads referred to as 'P⁰'. It was mentioned earlier that there is no morphological difference between prepositions and postpositions; head placement is a syntactic issue and the preference of placement is rooted in the lexical entry for each adposition.

LFG categorizes PPs as oblique functions OBL_θ, where θ stands for the thematic role of the phrase (Dalrymple 2001: 9–10). As we have seen in the previous chapter, adpositions in Ayeri usually take adpositional objects in the locative case. Free nominal adjuncts in the dative case and genitive cases with a directional meaning may also occur.

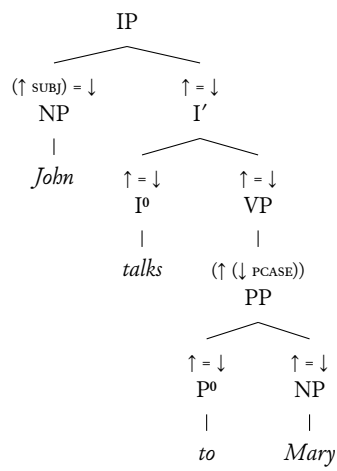
Locative: Standard case for adpositional objects, indicates a LOCATION. It usually corresponds to English 'at', 'in'. It is also used for the GOAL of verbs of motion when they are directed, such as ꠱ꠞ꠰ *sara-* 'go', and for the addressee of verbs of speaking like ꠘꠞ꠰ *nara* 'speak'. Thus, very limitedly, it may also express 'to'.

Dative: Indicates motion along a path towards the direction the adposition indicates (GOAL, DIRECTION). It usually corresponds to English 'to', 'for'. NPs may be marked with dative case freely to indicate direction without being goverened by an adposition. Adpositional objects in the dative case are limited to the prepositions ಕೆಳ್ *avan* 'at the bottom of' and ಮೆಲ್ *ling* 'on top of'.

Genitive: Indicates motion along a path from somewhere (SOURCE). NPs may be marked with genitive case freely to indicate direction without being goverened by an adposition. Genitive case usually corresponds to English 'from' or 'of' in those cases. Genitive case also marks secondary themes, corresponding to English 'about'.

Where English uses a preposition together with the verb to mark an oblique argument, Ayeri usually uses case. The case for English is illustrated by (94). Ayeri, in contrast to English, often uses an NP complement marked with one of the cases in the list above, compare (95). In the case of ನರ: *nara-* 'speak, talk', the complement appears in the locative case, but as an NP, not as a PP. Thus, there is no PCASE attribute necessary here, since there is no preposition to indicate the relation of the complement to the verb because case marking accomplishes this function.

(94) English:

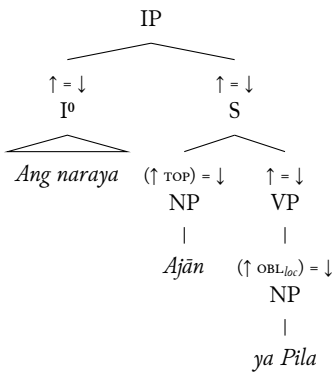


$$\begin{bmatrix} \text{PRED} & \text{'}\textit{talk}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{goal})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'John'} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{OBL}_{goal} & \begin{bmatrix} \text{PRED} & \text{'Mary'} \\ \text{PCASE} & \text{OBL}_{goal} \end{bmatrix} \end{bmatrix}$$

Which oblique case the complement appears in is determined by the a-structure of the verb, not by the semantics of the complement (compare section 6.4.7). Since

dative case is also used for the BENEFICIARY role, the argument expressing the direction of the talking appears exceptionally in the locative here. In (95) it may seem as though ᴜ *ya* is a preposition—which is a reasonable assumption about its history. However, it has been established previously that preposed case markers are proclitics (see section 3.2.5, p. 75). ᴜ *ya* is a case marker, not a preposition; 'at/to Pila' is thus ᴜñᴎᴄ *ya Pila*, not *ᴜñᴎᴄᴜ **ya Pilaya* with additional locative marking on the noun.

(95) *Ang naraya* *Ajān* *ya* *Pila.*
ang=nara-ya Ø= Ajān ya= Pila
AT= talk-3SG.M TOP=Ajān LOC=Pila
'Ajān talks to Pila.'



$$\begin{bmatrix} \text{PRED} & \text{'}\textit{talk}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'Ajān'} \\ \text{ANIM} & + \\ \text{CASE} & \text{A} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{SUBJ} & \text{TOP} \\ \text{OBL}_{loc} & \begin{bmatrix} \text{PRED} & \text{'Pila'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix}$$

In Ayeri, PPs proper may either be locative complements of the verb, as in (95), or free locative adverbials, ungoverned by the verb. The number of verbs taking PP complements is smaller than in English due to case marking, though, as described above. As mentioned initially, Ayeri possesses prepositions as well as postpositions. With regards to word order typology, we can generalize therefore:

(96) Order of noun and adposition: Adp N, N Adp

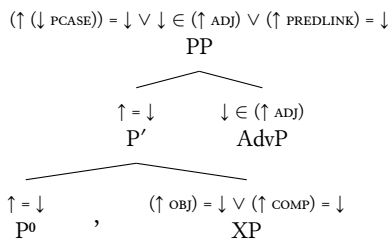
The fact that Ayeri has both prepositions and postpositions is also reflected in the phrase structure rules given in (97). Here, the comma indicates that the two phrases joined by it can occur in either order. Since there are no circumpositions in Ayeri, only ever one site is occupied. XP is used again as a catch-all term for various phrase types which form complements of semantic adpositions in the form of NPs and DPs, but especially the postposition ᵴᴀᴢ *pesan* 'until' may also have a CP complement, that is, a whole complement clause. These complements are governed by the adposition.

The same as in (97) is spelled out in c-tree form in (98). PPs, if not subcategorized for by the verb, are optional information and thus not governed by the verb; the PP is part of the set of adjuncts, then. Some verbs, like ಇಟ್ಟ್ *tapy-* 'put', may take PP complements headed by an adposition, for instance, in cases like *Mary puts the book* [$_{\text{PP}}$ [$_{\text{P}}$ *on*] [$_{\text{NP}}$ *the pile*]]. The PP *on the pile* is not an adjunct here because *She does so on the pile* makes no sense: the PP must be an argument of the verb here, not additional, optional information (again, compare section 6.4.7). Ayeri behaves the same way in this regard. These governed PPs are categorized as OBL_θ with θ replaced by the proper semantic role (*loc*, *goal*, or *src*).

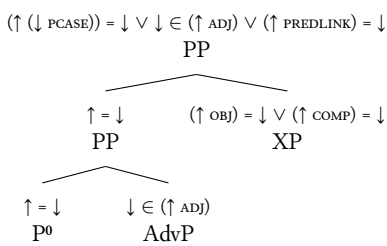
(97) a. $\text{PP} \rightarrow \underset{\uparrow = \downarrow}{\text{P}'} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{AdvP}}$

b. $\text{P}' \rightarrow \underset{\uparrow = \downarrow}{\text{P}^0} \; , \; \underset{(\uparrow \text{OBJ}) = \downarrow \vee (\uparrow \text{COMP}) = \downarrow}{\text{XP}}$

(98) a.



b.



Regarding functional structure, the difference between preposition and postposition is meaningless, so the morpholexical definitions in (99) do not distinguish formally between pre- and postpositions. The TELICITY feature only actually matters for the prepositions ಅವನ್ *avan* 'bottom of' and ಲಿಂಗ್ *ling* 'top of', and will be discussed below. Suffice it to say, position does not imply a goal, hence adpositions are atelic by default. This default is overridden by the proclitic ಮಂಗ *manga*. This particle indicates that a PP has a directional reading: towards the location indicated by the prepositional object, along the path indicated by the adposition.

(99) a. ... P (↑ PRED) = '... ⟨(↑ OBJ)⟩'
((↑ TEL) = −)

b. [illegible] *manga* Cl (↑ PSEM) = *dir*
(↑ TEL) = +

German, for one, encodes the difference between locational and directional uses of a group of prepositions as well, but with an alternation in the prepositional object's case between DAT (locational) and ACC (directional). Thus, *auf dem tisch* (on DEF.DAT.M.SG table) means 'on the table', whereas *auf den tisch* (on DEF.ACC.M.SG table) means 'onto the table'. Butt (2005) defines this alternation (albeit for *in* 'in' and *an* 'at') as in (100).

(100) German (Butt 2005):

PSEM *dir* $\Longrightarrow$ (↑ OBJ CASE) $=_c$ ACC
PSEM *loc* $\Longrightarrow$ (↑ OBJ CASE) $=_c$ DAT

The PSEM feature thus determines the reading of the prepositional object by a requirement that its case be either ACC or DAT, respectively. Since nouns in German always carry case, the PSEM attribute needs to be present in the lexical rules for all prepositions which show the ACC/DAT alternation. In Ayeri, however, the particle [illegible] *manga* alternates with nothing, so the absence of marking *dir* can be interpreted as indicating a locational reading *loc* as the default for adpositional objects in the locative. Different than in German, the presence or absence of directionality marking also does not influence the case of the adpositional object.

Example (101) illustrates the alternation in annotation between a bare adposition and one modified by [illegible] *manga*. In an attempt to model the difference between locational 'in' and directional 'into', [illegible] *manga* is analyzed there as changing the value of the PSEM feature of the f-structure predicated by the adposition to *dir* and the TEL feature to +, as illustrated in (101b). The case of the prepositional object is LOC in both versions of the sentence, which specifies that its superior f-structure's PCASE value is OBL_{loc}.

With the prepositions [illegible] *ling* 'on top of' and [illegible] *avan* 'at the bottom of' there is another alternation, based on case, for verbs which do not encode direction. This is rooted in the etymology of these words: [illegible] *ling* as a noun means 'top', [illegible] *avan* means 'ground, bottom'. The directional variants of these prepositions mean 'to the top, onto' and 'to the bottom'. These readings are telic in that they express the possibility of arriving at the destination specified by the adpositional object. However, Ayeri does not possess separate adpositions to express 'up' and 'down' as atelic concepts. Instead, [illegible] *ling* and [illegible] *avan* double for 'up' and 'down' with

(101) a. *kong* *nangaya*
kong nanga-ya
inside house-LOC
'in the house'

$$\begin{bmatrix} \text{ADJ} \left\{ \begin{bmatrix} \text{PRED} & \text{'}\textit{inside}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{loc} \\ \text{PSEM} & \textit{loc} \\ \text{TEL} & - \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

b. *manga* *kong* *nangaya*
manga=kong nanga-ya
DIR= inside house-LOC
'into the house'

$$\begin{bmatrix} \text{ADJ} \left\{ \begin{bmatrix} \text{PRED} & \text{'}\textit{inside}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{loc} \\ \text{PSEM} & \textit{dir} \\ \text{TEL} & + \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

Table 6.1: Case alternations of ཀླིང་ *ling* and ཨ་ཝཱན་ *avan*

	+ LOC	+ DAT
ling 'top'	on top of	up
manga ling 'to top'	to the top of	up to
avan 'bottom'	at the bottom of	down
manga avan 'to bottom'	to the bottom of	down to

dative complements, respectively, to mark the difference, compare Table 6.1 and Figure 6.1. Note, however, that Ayeri does not possess intransitive adpositions, with the exception of a few verbs where the adposition is a lexicalized part of the expression, for instance, ཟད:རྒྱལ་བཟུང་ *tapy- dayrin* 'save (assets)', with the fossilized, now defunct preposition རྒྱལ་བཟུང་ *dayrin* 'beside, next to' (modern རྒྱལ་ *kayvo*). 'Up' and 'down' thus refer to their transitive uses as in *up the stairs* and *down the hill*, respectively. Example sentences for all configurations are provided in (102).

These examples show that there is an alternation in case similar to the one described above for German. The distinction in Ayeri is not between location and direction, however, but rather between emphasis on a location or destination as a resting or end point (OBL$_{loc}$) and the path towards there (OBL$_{goal}$). Butt (2005) interprets prepositions in German to define PSEM (encoding directedness or its lack), and to thereby govern the case of their complement. In contrast, it is easier in Ayeri to assume that case marking on the prepositional object determines PSEM, and thus also PCASE, for its superior f-structure. ཨང་ *manga* takes precedence over

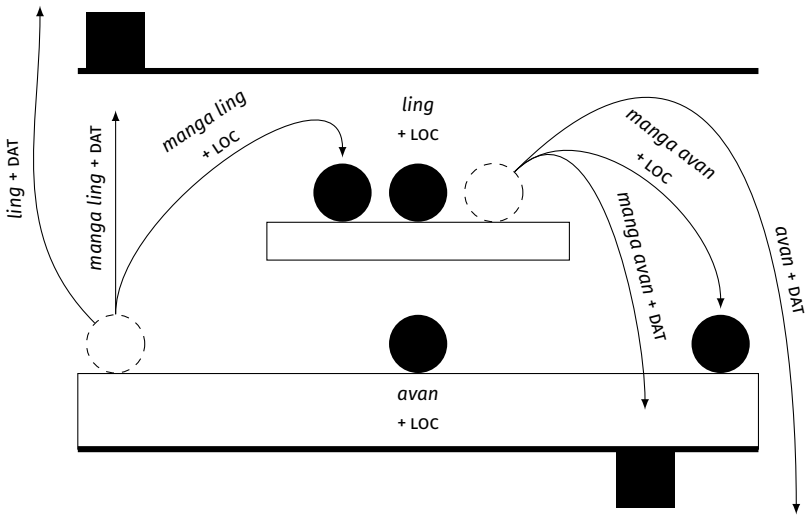


Figure 6.1: Visualization of case alternations of ಗಿಂದ *ling* and ಅವನ್ *avan*

case marking with regards to the PSEM feature. An attempt to model this analysis in terms of lexical rules is presented in (103).

English verbs use prepositions heavily, whether they are idiomatic and part of the lexical entry of the word (*clean up*, *give in*, *come on*) or actually meaningful in connecting complements to the verb (*come from*, *look at*, *talk to*). As we have seen above, Ayeri behaves quite the opposite way in mostly using case for marking verbal complements, and having very few verbs with adpositional particles—compare the list in (140) of section 4.4.1 (p. 177). Different from English, Ayeri cannot stack prepositions as in *crawl out from under the table* or *get out from inside the room*. Instead, it uses nouns, which is no surprise, as most basic prepositions are derived from nouns (compare Table 4.14, p. 173). A phrase like *out from under* may thus be rendered as in (104). In this particular example, ಹೊಗನ್ *agonan* 'outside' is homonymous with the preposition ಹೊಗನ್ *agonan* 'outside of', however, the topic marker at the beginning of the clause shows that there is a corresponding dative NP. Strictly speaking, ಹೊಗನ್ *agonan* is not even necessary, since the first NP complement already indicates a motion from somewhere.[18]

[18] A grammaticalization process similar to that of *inside of the X* to *inside the X* may be a logical next step. What would be possible moreover is the functionalization of the triad LOC–DAT–GEN to indicate *loc*, *goal*, and *src* also with adpositions in general, either with ಮಂ *manga* grammati-

(102) a. *Ang lampyo paray ling nayingya.*
ang=lamp-yo paray-Ø ling naying-ya
AT= walk-3SG.N cat-TOP top.of roof-LOC
'The cat is walking on the roof'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{top of}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{loc} \\ \text{PSEM} & \textit{loc} \\ \text{TEL} & + \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'roof'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix}$$

b. *Ang puco paray manga ling mehirya.*
ang=puk-yo paray-Ø manga=ling mehir-ya
AT= jump-3SG.N cat-TOP DIR= top.of tree-LOC
'The cat jumps onto the tree.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{top of}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{loc} \\ \text{PSEM} & \textit{dir} \\ \text{TEL} & + \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'tree'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix}$$

c. *Ang nimpyan ganye ling turayyam.*
ang=nimp-yan gan-ye-Ø ling turay-yam
AT= run-3PL.M child-PL top.of hill-DAT
'The children are running up the hill.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{top of}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{goal} \\ \text{PSEM} & \textit{dir} \\ \text{TEL} & - \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'hill'} \\ \text{CASE} & \text{DAT} \end{bmatrix} \end{bmatrix}$$

d. *Ang saraya jarmaya manga ling pelangyam.*
ang=sara-ya jarmaya-Ø manga=ling pelang-yam
AT= go-LOC pilgrim-TOP DIR= top.of castle-DAT
'The pilgrim goes up to the castle.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{top of}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{goal} \\ \text{PSEM} & \textit{dir} \\ \text{TEL} & + \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'castle'} \\ \text{CASE} & \text{DAT} \end{bmatrix} \end{bmatrix}$$

(103) $(\uparrow \text{CASE}) = \text{LOC} \implies \left(\begin{array}{l} ((\text{OBJ}\ \uparrow)\ \text{PCASE}) = \text{OBL}_{loc} \\ ((\text{OBJ}\ \uparrow)\ \text{PSEM}) = \textit{loc} \\ (\text{GF OBJ}\ \uparrow) \end{array} \right)$

$(\uparrow \text{CASE}) = \text{DAT} \implies \begin{array}{l} ((\text{OBJ}\ \uparrow)\ \text{PCASE}) = \text{OBL}_{goal} \\ ((\text{OBJ}\ \uparrow)\ \text{PSEM}) = \textit{dir} \\ (\text{GF OBJ}\ \uparrow) \end{array}$

(104) *Yam cacang (agonan) eyranena prihinena.*
yam= cat-yang agonan eyran-ena prihin-ena
DATT=crawl-3SG.M.A outside-TOP underside-GEN table-GEN
'He crawls (to the outside) from the underside of the table.'

Like adjectives, adpositions may be modified by adverbs, for instance, for intensification. This means that items from the class of adverbs categorized as quantifiers (section 4.8) are likely to occur. As we have seen previously, the most common such expressions are enclitic, that is, they merge with P^0 rather than be adjuncts at P′. An analysis of the c- and f-structure of PPs with adverbial modifiers is shown in (105).

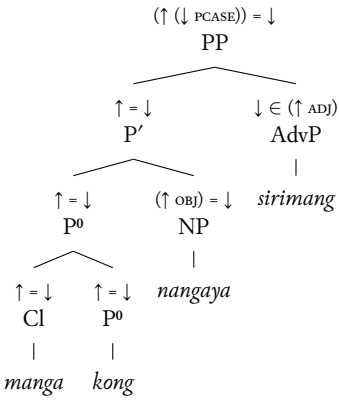
Since with prepositions the adverb comes after the nominal complement as in (105a), there may be potential ambiguity as to constituency, since adjectives and adverbs do not differ in form. One such case is illustrated in (106), where the A-type modifier ລາດຣ *baras* 'rough(ly)' may be interpreted either as an adverb modifying the PP or as an adjective modifying the prepositional object. The individual words are copied again to the very bottom of the c-structure trees in (106) to highlight that different syntactic structures may lead to the same outcome on the surface.

Ambiguity can be resolved in these cases by subordinating the adjective to the noun explicitly with the relativizer ຊົ *si*, as shown in (107). The relative clause, then, essentially means 'which is ADJECTIVE'. The fact that it is somewhat hard to come up with an example is probably telling of the likelihood of such ambiguity. In either case, wrapping an adjective into a relative clause CP to explicitly subordinate it is always a permissible strategy of clarification. This also means in turn that adpositions cannot be modified by relative clauses, however, this should rarely be necessary, if it makes any sense at all.

It was mentioned initially that certain adpositions are also able to take clausal complements. This applies especially when adpositions are used to describe points in or stretches of time. A list of adpositions which can be used for this purpose is given in Table 4.17. Essentially, a subset of spatial prepositions can be used metaphorically to refer to time, like in English. Both ກະມານຸ້ງ *gamaryang* 'I manage (it), I get (it) done' and ສະຫວນ້ຫ້ງ ສິກ *sa-sahaye ang Sipra* 'Sipra returns' in (108) are complete sentences; the preposition ມານ້ຂ *marin* 'in front of, before' ties them together and indicates the second part's relationship to the first: the embedded clause expresses a future state which serves as the background for the matrix clause. The corresponding constituent structure of the PP is shown in (109).

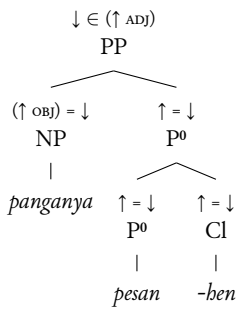
calizing further to solely marking direction, necessitating an obligatory DAT/GEN complement to indicate which way around, or with ມານ *manga* becoming zero, since the cases are already enough to mark direction. The way to express the difference between *top/up* and *bottom/down* would have to change for obvious reasons, though ກ້ານ *ring* from ກ້ານ: *ring-* 'rise, lift' and ດ້ານ *lesa* from ດ້ານ: *lesa-* 'fall', or ດ້ານ *rota* from ດ້ານ: *rot-* 'heave (up)' and ຂ້ານ *kosa* from ຂ້ານ: *kosa-* 'drop (down)' would be good candidates from which to generate new adpositions. Alternatively, ສະ *saha* could become an equivalent of ມານ *manga* to indicate direction *from* the indicated place.

(105) a. *Ang nimpya Tapan manga kong nangaya sirimang.*
ang=nimp-ya Ø= Tapan manga=kong nangaya sirimang
AT= run-3SG.M TOP=Tapan DIR= inside house-LOC straight
'Tapan is running straight into the house.'



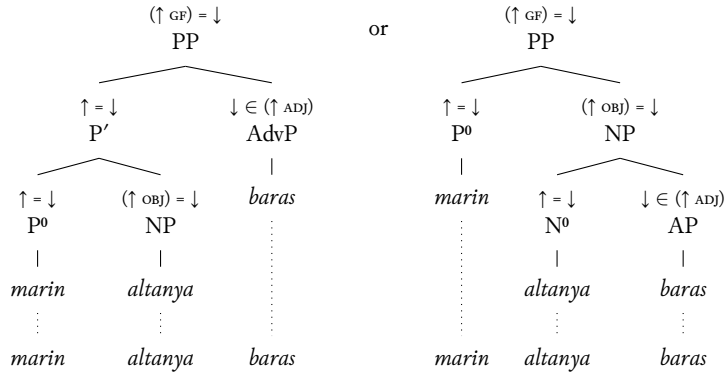
$$\begin{bmatrix} \text{OBL}_{goal} & \begin{bmatrix} \text{PRED} & \text{'}\textit{inside}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{goal} \\ \text{PSEM} & \textit{dir} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'house'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix} \text{PRED} & \text{'straight'} \end{bmatrix}\right\} \end{bmatrix} \end{bmatrix}$$

b. *Ang galamyan panganya pesan-hen.*
ang=galam=yan.Ø pangan-ya pesan=hen
AT= wait=3PL.M.TOP end-LOC until=all
'They waited until the very end.'

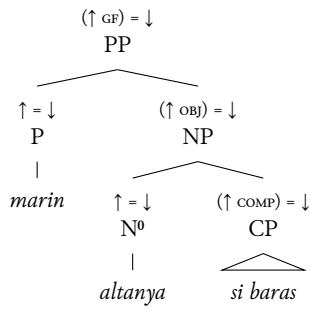


$$\begin{bmatrix} \text{ADJ} & \left\{\begin{bmatrix} \text{PRED} & \text{'}\textit{until}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \text{OBL}_{loc} \\ \text{PSEM} & \textit{loc} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'end'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix} \text{PRED} & \text{'all'} \end{bmatrix}\right\} \end{bmatrix}\right\} \end{bmatrix}$$

(106) *marin altanya baras*
marin altan-ya baras
in.front rock-LOC rough(ly)
'roughly in front of the rock'
or: 'in front of the rough rock'

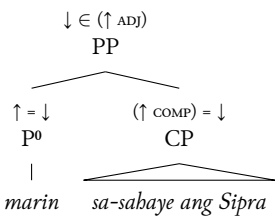


(107) *marin altanya si baras*
marin altan-ya si baras
in.front rock-LOC REL rough
'in front of the rough rock'
literally: 'in front of the rock which is rough'



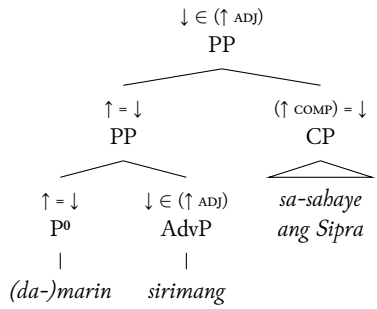
(108) *Gamaryang marin sa-sahaye ang Sipra.*
gamar=yang marin sa∼saha-ye ang=Sipra
manage=ISG.A before ITER∼come-3SG.F A= Sipra
'I'll get it done before Sipra returns.'

(109)



In cases like (109), a free adverbial modifier in the fashion of (105) would attach in the adjunct position, following the clausal complement. For the example above, this is not very awkward, because the embedded clause is very short and does not branch too deeply. For cases where the length or depth of the CP does produce an awkward result, however, it is possible to extrapose it with the preposition optionally marked by 𑀤 *da-* to represent the missing complement, altogether structurally similar to (84). An example of this strategy is given in (110).

(110) *Gamaryāng* *(da-)marin* *sirimang*
gamar=yāng da=marin sirimang
manage=1SG.A such=before straight
sa-sahaye *ang Sipra.*
sa∼saha-ye ang=Sipra
ITER∼come-3SG.F A= Sipra
'I will do it right before Sipra returns.'



6.4 Inflectional and verb phrases

A number of important properties and questions involving verbs have already been touched on in chapter 5 with regards to Ayeri's syntactic alignment. The following sections will elaborate on points raised previously by focusing on aspects of constituent and functional structure of verbal phrase types, both lexical and functional, and of verbs as such.

6.4.1 Equative statements

One of the two basic sentence patterns in Ayeri is that of an equative statement in which a property is attributed to a subject in the fashion of (111).

(111) a. *John is happy.*
b. *John is a man.*
c. *John is at work.*

While English connects the predicative phrase to the subject with a copula, Ayeri does not possess an overt copula in basic equative statements. Instead, subject and quality are simply juxtaposed, as (112) illustrates.

(112) a. *Ang Yān mino.*
ang=Yān mino
A= Yān happy
'Yan is happy.'

b. *Mino ang Yān.*
mino ang=Yān
happy A= Yān
'Yān is happy.'

c. *Ang Yān ayonas.*
ang=Yān ayon-as
A= Yān man-P
'Yān is a man.'

Regarding predicative adjectives, Ayeri permits them to either follow or to precede the subject NP with proper names, as in (112a) and (b), respectively. With common nouns, however, there is a preference for the pattern in (112b) since this makes it unambiguous that the adjective is a predicate rather than attributive of the noun it refers to. Furthermore, Ayeri marks predicative NPs with the patient case as a further quirk, as shown in (112c). It needs to be pointed out here as well that existential statements in more formal language use the existential verb ꯌꯣꯃ *yoma-* 'be (in a place), exist' instead of juxtaposition with locations, as in (113). We will have a closer look at existential statements in section 6.4.4.

(113) *Ang yomayan ganye kardangya.*
ang=yoma-yan gan-ye-Ø kardang-ya
AT= be-3PL.M child-PL-TOP school-LOC
'The children are at school.'

How can we formalize the phrase structure and the functional structure of equative statements in Ayeri, though, especially since there is no overt copula, but the juxtaposition of two phrases creates a predication relationship? I will follow Attia (2008) in this, who rejects the analysis of predicative complements as XCOMP, as described, among others, by Bresnan et al. (2016) in favor of treating them as closed complements of the PREDLINK type (Butt et al. 1999: 70). He maintains that

> the closed complement analysis is the default syntactic representation for all languages. The presence vs. absence of a copula, presence vs. absence of agreement features on the predicate are all paradigmatic alternations that do not affect the syntactic function. (Attia 2008: 105)

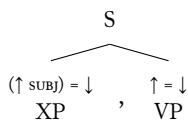
Relatedly, he claims that the "presence or absence of a copula is a parameter of variation. The copula itself is considered semantically redundant" (107). For him,

whether there is an overt copula morpheme or not is secondary to capturing its function, which is present either way. He also attempts to keep f-structure free from artifacts of morphological variation to create a generalized way of describing copular clauses independent of how individual languages deal with them. Attia (2008), in reference to Dalrymple et al. (2004), describes the structure of a copular clause with a zero-copula essentially in the following way (adapted for Ayeri):

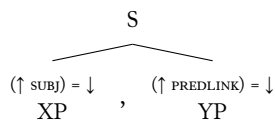
(114) $$\text{S} \rightarrow \underset{(\uparrow \text{SUBJ}) = \downarrow}{\text{XP}}, \underset{\uparrow = \downarrow}{\text{VP}} \vee \left\{ \underset{(\uparrow \text{PRED}) = \text{`}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'}}{\varepsilon} \quad \underset{(\uparrow \text{PREDLINK}) = \downarrow}{\text{YP}} \right\}$$

This equation describes that if no VP is specified, a PRED is introduced into the phrase structure as an empty node which subcategorizes for the required functions, since Attia (2008) argues that whether a nominal takes a PREDLINK is not determined by its lexical entry, but is a constraint on phrase structure (103). XP may be an NP or a DP here, and YP may be an NP, DP, AP, CP, and colloquially a PP; *null-be* is basically a dummy since we still need a label for what assigns PRED in order to establish coherence of the arguments in the clause. XP may stand on either side. The phrase structure rule in (114) results in the c-structures in (115) and corresponds to the f-structure in (116).

(115) a.



b.



(116) a. $$\begin{bmatrix} \text{PRED} & \text{`}\ldots\ \langle(\uparrow \text{SUBJ})\ \ldots\rangle\text{'} \\ \text{SUBJ} & \ldots \\ \ldots & \begin{bmatrix} \text{PRED} & \ldots \end{bmatrix} \end{bmatrix}$$

b. $$\begin{bmatrix} \text{PRED} & \text{`}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \ldots \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \ldots \end{bmatrix} \end{bmatrix}$$

The phrase structure equation in (114) indicates that there is an empty node ε, however, since LFG avoids empty nodes in c-structure graphs, I have not included it in (115). As previously, there is a list of examples of each type of complement in a copular clause in (117).

Another question related to copular clauses is how to treat adverbs, since there is no VP to attach them to. Since Attia (2008) writes that according to linguistic

(117) a. NP with AP complement:

Mabo parayang.
mabo paray-ang
hungry cat-A
'The cat is hungry.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'hungry'} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'cat'} \\ \text{CASE} & \text{A} \end{bmatrix} \end{bmatrix}$$

b. NP + NP complement:

Ang Ijān petāyās.
ang=Ijān petāya-as
A= Ijān idiot-P
'Ijān is an idiot.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Ijān'} \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'idiot'} \\ \text{CASE} & \text{P} \end{bmatrix} \end{bmatrix}$$

c. DP + DP complement:

Yang sitang-yās.
yang sitang-yās
1SG.A self=1SG.P
'I am myself.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{"I"} \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{"myself"} \end{bmatrix} \end{bmatrix}$$

d. NP + CP complement:

Prantanreng, sahatang?
prantan-reng saha=tang
question-A.INAN come=3PL.M.A
'The question is, will they come?'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'question'} \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{come}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{"they"} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

e. DP + PP complement:

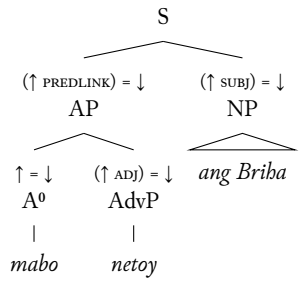
Yāng rangya.
yāng rang-ya
3SG.M.A home-LOC
'He's at home.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{"he"} \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'home'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix}$$

literature, the semantic redundance of the copula is an agreed-upon fact, one might prefer to treat adverbs as part of the predication, that is, as an ADJ within PREDLINK. This is illustrated by (118).

(118) *Mabo* *netoy* *ang Briha.*
mabo netoy ang=Briha
hungry not.anymore A= Briha
'Briha is not hungry anymore.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Briha'} \\ \text{CASE} & \text{A} \\ \text{ANIM} & + \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'hungry'} \\ \text{ADJ} & \left\{\begin{bmatrix} \text{PRED} & \text{'not anymore'} \end{bmatrix}\right\} \end{bmatrix} \end{bmatrix}$$



It is also possible for the emphatic particles ᨿᨾᩣᨿ *māy* and ᨿᩮᨿ *voy* to occur in this context. As described in section 4.6.1 (p. 217 f.), they are used after verbs like adverbs, and may also appear between the two parts of a copular clause. This means that we will have to test whether they are copulaic elements in this context or whether they are adverbial modifiers of predicative nominals in a slightly odd position—modifiers normally follow heads in Ayeri, as a general rule. The former assumption would need us to modify the phrase structure equation in (114) to account for an optional copula element. Since this is a question of constituency, testing word order and replaceability by a pro-form should clarify these matters. First, let us test a sentence without an emphatic particle (119). Ayeri permits the subject and the predicate of a simple copular clause to be reversed, for instance, for contrastive focus, as in (119b). The predicate can also be replaced by a pro-form, which is illustrated by ᨾᩣᨠᩨᨿᩣᨾ *da-cuyam* 'indeed so' in (119c).

Let us now introduce ᨿᨾᩣᨿ *māy* as a positive emphatic particle in (120). Apparently, ᨿᨾᩣᨿ *māy* does not fulfill the role of linking subject and predicate, so (120b) is nonsensical. Instead, it may be fronted together with the predicate (120c). It is also possible for it to stand alone at the beginning of a clause, emphasizing it as such, as shown in (120d); its position here is probably not that of a finite verb. The whole phrase ᨿᨾᩣᨿᩴᨻᩣᨿᩣᨶᩢᨻᩣᨶ *māy nimpayās ban* can also be replaced as a unit, compare (120e). Altogether, it seems that ᨿᨾᩣᨿ *māy* is a discourse particle and as such does not perform the role of a copula. It is rather more similar to a clitic in nature, binding to the left edge of a phrase. As previously, we can test its status as a word by trying to place words between it and the word it follows (121).

(119) a. *Ang Apan nimpayās ban.*
ang=Apan nimpaya-as ban
A= Apan runner-P good
'Apan is a good runner.'

b. *Nimpayās ban ang Apan.*
'A good runner Apan is.'

c. *Da-cuyam ang Apan.*
da=cuyam ang=Apan
so=indeed A= Apan
'Indeed Apan is.'

(120) a. *Ang Apan māy nimpayās ban.*
ang=Apan māy nimpaya-as ban
A= Apan INT runner-P good
'Apan *is* a good runner.'

b. **Nimpayās ban māy ang Apan.*

c. *Māy nimpayās ban ang Apan.*
'A good runner, that Apan *is*.'
or: 'Yes he *is* a good runner.' (countering a claim that he is not)

d. *Māy ang Apan nimpayās ban!*
'What a good runner Apan is!'

e. *Da-cuyam ang Apan.*
'Indeed Apan is.'

(121) **Ang Apan māy, naratang, nimpayās ban.*
ang=Apan māy nara=tang nimpaya-as ban
A= Apan INT say=3PL.M.A runner-P good

As (121) shows, ཁྱོ *māy* cannot stand by itself; it has to 'lean on' what it is meant to emphasize and thus should be treated as a proclitic in the context of copular clauses. The same applies, *mutatis mutandis*, to its negative counterpart ཡོ *voy*. This also means that no modifications to the phrase structure equation in (114) need to be made.

On the other hand, it is also possible for equative statements to contain an adverb, for instance as in *I really am his brother*. In these contexts, the adverb usually appears between the subject and the predicative NP, as (122) demonstrates. The permutation test in (123), then, attempts to establish whether a certain order of the constituents {*yang*; *cuyam*; *netuas yana*} is ungrammatical.

Example (122b) shows that ཅུ་ཡཱམ་ *cuyam* 'really' is optional. If it were the head of the predication, with རྣེ་ཐུ་ཡ་ *netuas yana* 'his brother' being its complement, we would expect this sentence to be ungrammatical. The adverb also does not modify

(122) a. *Yang cuyam netuas yana.*
yang cuyam netu-as yana
1SG.A really brother-P 3SG.M.GEN
'I really am his brother.'

b. *Yang netuas yana.*

c. * *Yang cuyam.*

(123) a. *Yang cuyam netuas yana.* (preferred order)

b. *Yang netuas yana cuyam.*

c. *Cuyam yang netuas yana.*

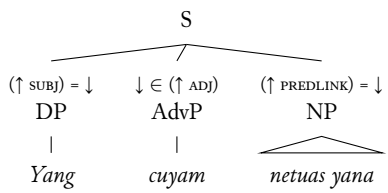
d. *Cuyam netuas yana yang.*

e. *Netuas yana yang cuyam.*

f. *Netuas yana cuyam yang.*

the pronoun ཡང་ *yang* 'I' in (122c). If it were the predication, it would have to be nominalized as རྡ་ཁྱམ་ *da-cuyam* 'really so'. The permutation test in (123) reveals that all sequences are licit. Since there does not seem to be a hierarchy between the constituents, I will assume the structure in (124) for the example in (122a). Since copular clauses form a small clause constituent, S may govern more than two elements. Case marking ensures that the different phrases map on their intended grammatical functions.

(124)
$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"I"}\end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix}\text{"his brother"}\end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'really'}\end{bmatrix}\right\} \end{bmatrix}$$



6.4.2 Inflectional phrases

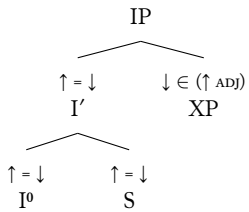
Copular clauses are probably the most basic kind of sentence possible to form in Ayeri. They do not contain a verb, but form a small clause. As we have seen above, Ayeri is very consistently verb-first apart from these small clauses. We have also seen above (section 5.2) that in Welsh—which is also a VSO language—the pattern for transitive clauses is such that there is an inflectional phrase (IP) which governs the verb as an extended head of verb phrase (VP), and a small clause S which contains the subject and a headless VP which in turn carries the verb's

objects; compare section 6.4.1 for a discussion of S. The phrase structure rules for IPs are listed in (125), the corresponding c-structure is given in (126a), and the general morpholexical rule set for finite verbs is given in (127).

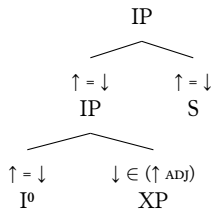
(125) a. $\text{IP} \rightarrow \underset{\uparrow = \downarrow}{\text{I}'} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{XP}}$

b. $\text{I}' \rightarrow \underset{\uparrow = \downarrow}{\text{I}^0} \quad \underset{\uparrow = \downarrow}{\text{S}}$

(126) a.



b.



(127)

...	I		(↑ PRED)	=	'...'
			(↑ TENSE)	=	{PRS, NPST, PST, RPST, NFUT, FUT, RFUT}
			(↑ ASP)	=	{SIMP, PROG, HAB, ITER}
			(↑ MOOD)	=	{IND, IRR, NEG, IMP, HORT}
		(	(↑ MOD)	=	{*ability*, *desire*, *intention*, *permission*, *requirement*, *obligation*, *continuation*})
			(↑ TOP)	=	↓
			(↓ CASE)	=	{A, P, DAT, GEN, LOC, INS, CAUS}
			(↓ ANIM)	=	±
			(↑ SUBJ)	=	↓
		(	(↓ PRED)	=	'*pro*')
			(↓ ANIM)	=	±
			(↓ GEND)	=	{M, F, N, INAN}
			(↓ NUM)	=	{SG, PL}
			(↓ PERS)	=	{1, 2, 3}

In (126a), we can see that the first node branching off of IP on the right is an XP which contains an adjunct. That is, I am assuming here that there is no specifier in the IP, following Bresnan et al. (2016: 130) for Welsh. The subject NP is instead treated as a daughter of S. As we will see, not only AdvP, but also APs, and even NPs may serve as adjuncts of the verb. As discussed previously, Ayeri generally places modifiers right after the head, before complements. This means

that here as well, when adjuncts are involved, S actually shifts to the right so that the phrase structure of IPs is probably better modeled as in (126b) in those cases.

As discussed in section 4.5, verbs can mark a large number of features by means of morphology. Ayeri distinguishes an unmarked present tense from three degrees of past and future tense each (section 4.5.2). Furthermore, it marks a range of grammatical aspects, that is, progressive, habitual, and iterative aspect (section 4.5.3), as well as various moods, namely, irrealis, negative, imperative, and hortative mood (section 4.5.4). Modal particles can also be captured in terms of a functional feature MODALITY (section 4.5.5). Besides this, transitive finite verbs are obligatorily marked for the case and animacy of the clause's topic. Ayeri's system of verb agreement moreover alternates between agreement with full third-person NPs and pronominal clitics. For this reason, the feature (↑ SUBJ PRED) appears in brackets in (127): it is only defined for pronominal clitics (sections 3.2.5, p. 89, and 4.5.1). Absence of tense, mood, and aspect marking specifies that the verb is in the contextually appropriate tense (compare section 4.5.2), indicative mood, and simple aspect.

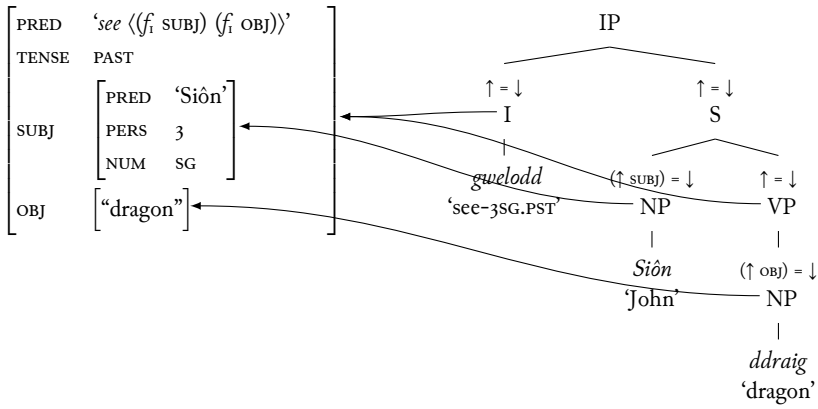
Regarding phrase structure, the explanation about YP in the definition of S given in (114) stated that there may also be a VP complement of a nominal fulfilling the role of a predicate. Since VP carries the non-SUBJ arguments of a verb, making a clause transitive, the discussion of VP's setup is deferred to the next section, 6.4.3. Presently, we mainly deal with intransitive clauses. Besides the VP in S which is not listed in the chart in (126), IP may also carry a second VP as a sister of I^0, functioning as an XCOMP. This VP exists to accommodate control and raising verbs, whose syntax will be discussed in section 6.4.3 (pp. 372 ff.). A secondary-predicative AP or nominal may as well appear in this position (section 6.4.6).

I have so far simply assumed that Ayeri follows the same sentence structure as Welsh does according to existing analyses in the LFG framework, compare (128). According to Bresnan et al. (2016: 130), S is chosen as a governing category for the subject NP and the VP. In place of VP, one may also put a range of other categories—NP, AP, or PP. As illustrated in (126), Ayeri is thought to follow the same scheme. Since Ayeri uses clitic subject pronouns, a SUBJ daughter of S (compare (115a)) only appears if SUBJ is a full NP or expletive བདག་ *sitang* 'self'.

Bresnan et al. (2016) note that in Welsh, the VP in S may be fronted as a unit. Fronting things this way is not possible in Ayeri, however, it is possible to reverse the order of the subject and its complement, for instance, when a relative clause modifies the subject, as in (129). Here, the subject, ཀུ་ཉན་པོ་ཏི་ཀོ་ཡ་ནང་ཏ་མ་ལ་ *runay si petigoynang tamala* follows the object ཨ་ཝུ་ཨ་ *aguas*.

As previously mentioned, the adverb 'usurps' the position of the verb's complement in order to avoid ambiguity in the scope of modification: in (130a) it would be

(128) Welsh (adapted from Bresnan et al. 2016: 134):



(129) *Ang pegaya aguas runay si petigoynang tamala.*
ang=pega-ya agu-as runay-Ø si petiga-oy=nang tamala
AT= steal-3SG.M chicken-P fox-TOP REL catch-NEG-1PL.A yesterday
'The fox we didn't catch yesterday stole a chicken.'

absolutely possible as well for the adverb to be interpreted as an adjective modifying ཨང་ཨ་ཛཱན། *ang Amān*, since adverbs and adjectives are not strictly distinguished by means of morphology, as (131) illustrates. Due to LFG's functional approach, however, both c-structures in (130ab) map to the f-structure shown in (130c) regardless of their individual constituent order. Whatever the actual c-structure realization looks like, coherence is thought to be created by unifying semantic information provided by the individual words at f-structure level.

Quantifier suffixes work with verbs as well, except that they have a grading or intensifying meaning in this context, compare Table 4.30 (p. 234). An example is given in (132a). The suffix is an enclitic with an adverbial meaning here. It thus feeds into the ADJ function at clause level in the way regular adverbs do (132b).

Topic marking

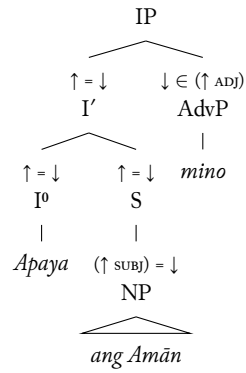
A special morphosyntactic property of the IP is that the verb is marked for the clause's topic by a clitic corresponding to the NP's case marker in its clitic form (see section 4.1.3). Topic marking on the verb works in tandem with case marking on the marked-for NP, which receives zero-marking for case, compare (133).[19] Per-

[19] Topic marking on the verb is "displaced information" (Corbett 2006: 20), since the morphological category encoded by topic marking—case—is not a category of the verb. It may

(130) a. Possibly expected:

?*Apaya*	*ang*	*Amān*	*mino.*
apa-ya	ang=	Amān	mino
laugh-3SG.M	A=	Amān	happily

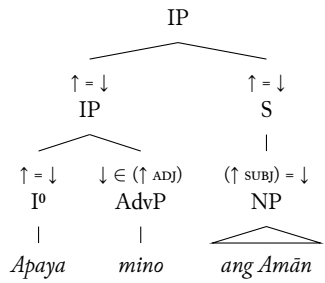
Intended: 'Amān laughs happily.'



b. Found:

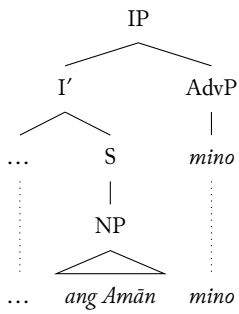
Apaya	*mino*	*ang*	*Amān.*
apa-ya	mino	ang=	Amān
laugh-3SG.M	happily	A=	Amān

Literally: 'Amān happily laughs.'

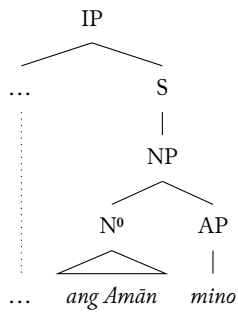


c. $$\begin{bmatrix} \text{PRED} & \text{'}\textit{laugh}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"Amān"}\end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'happily'}\end{bmatrix}\right\} \end{bmatrix}$$

(131) a. ?

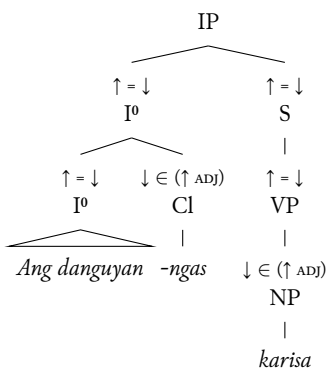


b.



(132) a. *Ang danguyan-ngas* *karisa.*
ang=dangu=yan.Ø=ngas kar-isa
AT= flee=3PL.M.TOP=almost fear-CAUS
'They almost fled out of fear.'

b.



$$\begin{bmatrix} \text{PRED} & \text{'}\textit{flee}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix}\text{"they"}\end{bmatrix} \\ \text{SUBJ} & \\ \text{ADJ} & \left\{\begin{matrix} \begin{bmatrix}\text{PRED} & \text{'almost'}\end{bmatrix} \\ \begin{bmatrix}\text{PRED} & \text{'fear'} \\ \text{CASE} & \text{CAUS}\end{bmatrix}\end{matrix}\right\} \end{bmatrix}$$

sonal pronouns occur in an undeclined base form if topicalized (see section 4.2.1). Morphological topic marking is limited to finite verbs of clauses containing more than one NP. Thus, even though the verb in (132a) specified to subcategorize only for one argument (A), topic can be marked. This is because the causative NP, even though it is no required argument of the verb but simply an adjunct, is eligible for topic marking as well. Another limitation to topic marking is that a matrix verb cannot topic-mark arguments of a subordinate verb if the subordinate verb occurs in the VP complement after the subject NP. Raising is required to make an embedded argument part of the matrix verb's argument structure. However, as described in section 5.5.6, only to-subject raising is permitted in Ayeri.

Functionally, the topic marker—ᨿ *sa* in (133a), ᨠᨿ *ang* in (133b)—provides information about the case of the topicalized NP and thus signals which argument of the verb is the topic as shown in (134a). Unmarkedness for case of a nominal head correspondingly identifies the NP/DP as the clause's topic, which the rule in (134b) tries to capture.

According to Bresnan et al.'s (2016) annotations, possessees are realized schematically with the noun's PRED value modified by appending '…-*of* ⟨(↑ POSS)⟩'—at

therefore be treated as an agreement relationship where the verb agrees in case with the topicalized NP: on morphological grounds, the topicalized NP is a controller and the verb is its agreement target. On the other hand, it is the verb which assigns syntactic roles and thus governs the functional relationships between the various phrases in a clause, so at the level of syntax, the topicalized NP should be the target while the verb is a controller.

(133) a. CONTEXT: Diyas

Sa *no* *si-silvya* *ang* *Tenan*
sa= no= si∼silv-ya ang=Tenan
PT=want=ITER∼see-3SG.M A= Tenan

Diyas.
Ø= Diyas
TOP=Diyas

'Diyas, Tenan wants to see her again.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{see}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{MOD} & \textit{desire} \\ \text{ASP} & \text{ITER} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'Diyas'} \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Tenan'} \\ \text{ANIM} & + \\ \text{CASE} & \text{A} \end{bmatrix} \\ \text{OBJ} & \end{bmatrix}$$

b. CONTEXT: you

Ang *ming* *prantong**va*** *tas.*
ang=ming=prant-ong=va.Ø tas
AT= can= ask-IRR=2.TOP 3PL.M.P

'You could ask them.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{ask}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{MOD} & \textit{possibility} \\ \text{MOOD} & \text{IRR} \\ \text{TOP} & \begin{bmatrix} \text{"you"} & \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \end{bmatrix} \\ \text{SUBJ} & \\ \text{OBJ} & \begin{bmatrix} \text{"them"} & \\ \text{ANIM} & + \\ \text{CASE} & \text{P} \end{bmatrix} \end{bmatrix}$$

(134) a. ... Cl $(\uparrow \text{TOP}) = \downarrow$
$(\downarrow \text{CASE}) = \{\text{A, P, DAT, GEN, LOC, INS, CAUS}\}$
$(\downarrow \text{ANIM}) = \pm$

b. ... N/D $\neg(\downarrow \text{CASE}) \Longrightarrow (\uparrow \text{TOP}) = \downarrow$

least in their English examples (Bresnan et al. 2016: 315). I will, however, omit the *-of* and more generally indicate nouns taking a possessor as '*noun* ⟨(↑ POSS)⟩' with the embedded NP marked for genitive case. Presumably, we want instrumental complements in Ayeri to work along these lines as well for the reason of structural similarity of the construction, except that the attributive, rather than possessive, relationship of the complement is expressed by a difference in case marking: instrumental instead of genitive. An example is given in (135).

NPs with a genitive attribute and with a nominal complement, respectively, have just been discussed individually. Example (136) shows a full sentence with an embedded NP modifying an NP which in turn is an argument of the verb. In (136), the object NP has been topicalized and thus appears as ཝེ *veney* instead of full ཝེཡས་ *veneyas*. That is, the head of the phrase is marked for topic and identifies

(135) a. *kegan ayonena*
kegan ayon-ena
hat man-GEN
'the man's hat'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{hat}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'man'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix}$$

b. *kasu bariri*
kasu bari-ri
basket meat-INS
'basket of meat'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{basket}\ \langle(\uparrow \text{COMP})\rangle\text{'} \\ \text{COMP} & \begin{bmatrix} \text{PRED} & \text{'meat'} \\ \text{CASE} & \text{INS} \end{bmatrix} \end{bmatrix}$$

(136) a. *Sa vacyang veney*
sa= vac=yang veney-Ø
PT=like=1SG.A dog-TOP
na Kaman.
na= Kaman
GEN=Kaman
'Kaman's dog, I like it.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{like}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'}\textit{dog}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \begin{bmatrix} \text{PRED} & \text{'Kaman'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{"I"} \end{bmatrix} \\ \text{OBJ} & \end{bmatrix}$$

b. *Na vacyang veneyas*
na= vac=yang veney-as
GENT=like=1SG.TOP dog-P
Kaman.
Ø= Kaman
TOP=Kaman
'Kaman, I like his dog.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{like}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'Kaman'} \\ \text{CASE} & \text{GEN} \end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix} \text{"I"} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'}\textit{dog}\ \langle(\uparrow \text{POSS})\rangle\text{'} \\ \text{POSS} & \end{bmatrix} \end{bmatrix}$$

the phrase as such. Example (136b) shows that it is no problem either for the topic marker to select an embedded NP which is not part of the a-structure of the verb, but simply an NP within the clause.

Imperatives

While verbs can be inflected for imperative mood, such imperative verbs do not have person agreement and also do not regularly mark topic, except for emphatic imperatives. They imply a second person singular or plural subject (number is not distinguished here) without marking it with ꠞ *-va* or ꠞꠣꠀꠛꠀꠞ *-vāng* specifically, though the ꠞꠤ *-u* suffix can be interpreted as being a fusional morpheme embodying both person-features and information on the mood, as illustrated by the set of morpholexical information in (137). Imperative verbs may also be inflected for other moods and aspects in addition.

(137)	ꠁꠣ *-u*	V_{infl}	(↑ MOOD)	=	IMP
			(↑ SUBJ)	=	↓
			(↓ PRED)	=	'*pro*'
			(↓ PERS)	=	2
			(↓ CASE)	=	A

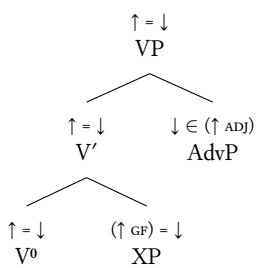
6.4.3 Verb phrases

VPs are distinct from IPs in that they are headed by an infinite verb, if there is a head: since Ayeri is verb-intial, the inflected, finite verb is an extended head of the VP, compare section 5.2. V^0 is an empty node in this case and gets pruned from c-structure. Nevertheless, there are cases where infinite verbs do occur, namely, in clausal complements from which a subject has been raised or in which a subject or object slot is controlled from without. It is also the VP which carries the arguments subcategorized for by the verb apart from the subject in transitive clauses. Here as well, if there is an adverbial modifier in the VP, it follows the head, and V^0's complement and other modifiers are shifted to the right/up. The XP in the phrase structure rules in (138) and their c-structure equivalent in (139a) may be formed by an NP, DP, AP, PP, VP, or CP in decreasing order on the functional hierarchy, and in increasing order regarding syntactic weight. The position may also be left unoccupied for intransitive verbs. As before, adjuncts actually follow the verb so that the complement shifts to the right, which is illustrated in (139b).

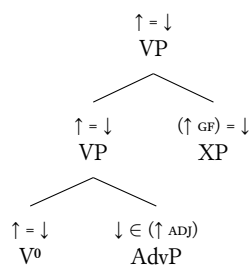
(138) a. $\text{VP} \rightarrow \underset{\uparrow = \downarrow}{\text{V}'} \quad \underset{(\uparrow \text{GF}) = \downarrow}{\text{XP}}$

b. $\text{V}' \rightarrow \underset{\uparrow = \downarrow}{\text{V}^0} \quad \underset{\downarrow \in (\uparrow \text{ADJ})}{\text{AdvP}}$

(139) a.



b.



Since V^0 is an infinite category in Ayeri, VPs cannot form complete independent sentences, as shown by (140a). Such a sentence would only be acceptable as an elliptical statement, for instance as an answer to ꠰꠰꠰꠰꠰꠰꠰꠰꠰꠰ *Sahavāng edaya?*

'Where did you go?'. A complete and grammatical statement is given in (140b). The latter example also shows that infinite verbs may nonetheless be marked for aspect; they can also be negated. However, they do not mark person and topic, and they do not encode a subject by inflection or clitics either. ꓲꓲꓲꓲꓲꓲꓲꓲ *il-ilyam* in (140b) rather receives its subject from the matrix verb, ꓱꓢꓲꓲꓲꓲꓲꓲꓲꓲ

(142) a. verb + NP complement:

Ang konje Bamis seygoley.
ang=kond-ye Ø= Bamis seygo-ley
AT= eat-3SG.F TOP=Bamis apple-P.INAN
'Bamis eats an apple.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{eat}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix}\text{"Bamis"}\end{bmatrix} \\ \text{SUBJ} & \text{———} \\ \text{OBJ} & \begin{bmatrix}\text{"apple"}\end{bmatrix} \end{bmatrix}$$

b. verb + DP complement:

Ang menuya Tikim yas.
ang=menu-ya Ø= Tikim yas
AT= visit-3SG.M TOP=Tikim 1SG.P
'Tikim visited me.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{visit}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix}\text{"Tikim"}\end{bmatrix} \\ \text{SUBJ} & \text{———} \\ \text{OBJ} & \begin{bmatrix}\text{"me"}\end{bmatrix} \end{bmatrix}$$

c. verb + AP complement:

Lentareng ban.
lenta=reng ban
sound=3SG.INAN.A good
'It sounds good.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{sound}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{XCOMP})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"it"}\end{bmatrix} \\ \text{XCOMP} & \begin{bmatrix}\text{"good"}\end{bmatrix} \end{bmatrix}$$

ditransitive verb (P = T). Likewise, the same case is used to mark the donor (D) of ditransitive verbs as marks the agent of monotransitive verbs (A), and the subject (S) of intransitive verbs in canonical cases (S = A = D). The recipient (R) receives extra marking by a third case. Ayeri is an indirective language, thus.

Essentially, Ayeri follows the same order of NPs as English in the construction where the recipient appears as a PP headed by *to*, except that it is not expressed as a PP, but as an NP/DP. Since the secondary object is is an argument of the verb, it is not possible to have multiple recipient NPs (unless one coordinates them), just as it is not possible to have multiple patients with transitive verbs.

Moreover, it is not possible to join either the theme and the recipient, or the recipient and an adjunct with ᨿᨿ *nay* 'and'—only non-arguments can be coordinated this way (Carnie 2013: 181). Patient, recipient, and adjuncts, like ᨠᨠᨿᨠᨿᨿᨿ *kardangya* 'at school' in (144), also cannot randomly switch places with each other. Both the patient and the recipient must be complements of the verb. The recipient is more readily expendable than the theme, however. Example (147) attempts to chart this analysis as a c-structure tree.

Control verbs

Control verbs have already been touched on in section 5.5.7 in order to compare Ayeri to Tagalog in terms of syntactic alignment. In this section, I want to elaborate on their structural and functional properties. Since LFG does not assume empty

(143) a. verb + PP complement:

Ang lampya *Mico*
ang=lamp-ya Ø= Mico
AT= walk-3SG.M TOP=Mico
manga luga *minkayya.*
manga=luga minkay-ya
DIR= among village-LOC
'Mico walks through the village.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{walk}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{\textit{goal}})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{'Mico'} \\ \text{CASE} & \text{A} \\ \text{ANIM} & + \end{bmatrix} \\ \text{SUBJ} & \text{———} \\ \text{OBL}_{\textit{goal}} & \begin{bmatrix} \text{PRED} & \text{'}\textit{among}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PSEM} & \textit{dir} \\ \text{PCASE} & \text{OBL}_{\textit{goal}} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'village'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

b. verb + VP complement:

Linkaya *ang Prano* *sungyam*
linka-ya ang=Prano sung-yam
try-3SG.M A= Prano find-PTCP
tinkayley.
tinkay-ley
key-P.INAN
'Prano tries to find the key.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{try}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{XCOMP})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Prano'} \\ \text{CASE} & \text{A} \\ \text{ANIM} & + \end{bmatrix} \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'}\textit{find}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{SUBJ} & \text{———} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'key'} \\ \text{CASE} & \text{P} \\ \text{ANIM} & - \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

c. verb + CP complement:

Paronyang, *koronyāng.*
paron=yang koron=yāng
believe=1SG.A know=3SG.M.A
'I believe that he knows (it).'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{believe}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{COMP})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{"I"} \end{bmatrix} \\ \text{COMP} & \begin{bmatrix} \text{PRED} & \text{'}\textit{know}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{"he"} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

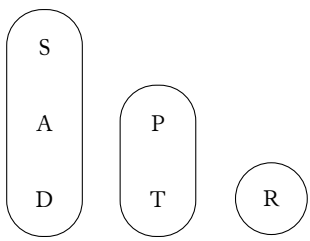
(144) a. *Ang ilya* *Apan koyās* *yam Diya* *kardangya.*
ang=il-ya Ø= Apan koya-as yam=Diya kardang-ya
AT= give-3SG.M TOP=Apan book-P DAT= Diya kardang-ya
'Apan gives Diya a book at school.'

b. **Ang ilya Apan yam Diya koyās kardangya.*

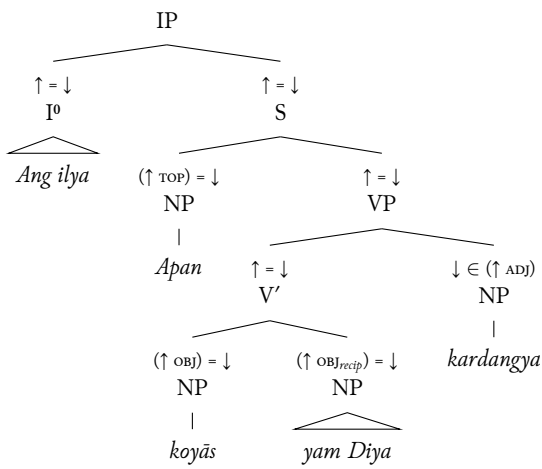
(145)

$$\begin{bmatrix} \text{PRED} & \text{`}\textit{give}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\ (\uparrow \text{OBJ}_{recip})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{`Apan'} \\ \text{CASE} & \text{A} \\ \text{ANIM} & + \end{bmatrix} \\ \text{SUBJ} & \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`book'} \\ \text{CASE} & \text{P} \\ \text{ANIM} & + \end{bmatrix} \\ \text{OBJ}_{recip} & \begin{bmatrix} \text{PRED} & \text{`Diya'} \\ \text{CASE} & \text{DAT} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`school'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \right\} \end{bmatrix}$$

(146)



(147)



nodes to carry semantic or functional value, there is no PRO element in c-structure trees here. VP complements of control verbs are simply treated as XCOMPs, that is, open complements. These XCOMPs are dependent on a matrix predicate for the subject function: control verbs share their semantic subject or object with the semantic subject of a subordinate verb (Bresnan et al. 2016: 289 ff.).Typical subject-control verbs in Ayeri are ꑍꑦ *epa-* 'refuse', ꑣꑦꑚꑦ *linka-* 'try', ꑦꑦ *no-* 'plan',ꑣꑦꑚꑦ *pebuka-* 'promise', ꑦꑦ *sara-* 'go', and ꑣꑦ *vac-* 'like',among others. On the other hand, typical object-control verbs are, for instance, ꑦꑦꑦꑦ *galam-* 'expect', ꑦꑦꑣꑦ *kilis-* 'allow', ꑦꑦꑦ *nel-* 'help', ꑦꑦ *nosa-* 'order', ꑣꑦꑦ *pinya-* 'ask', and ꑦꑦꑦꑦ *tonis-* 'convince'. Examples of the c- and f-structure of control verbs in Ayeri are provided in (148).

Topicalization of subordinate VPs' arguments by matrix verbs is not possible if the subordinate verb stands in between the matrix verb's subject NP and its own arguments. Thus, the ꑦꑦꑦꑦ *nayingas* 'roof' in both (148ab) cannot be the topic of the verb in the respective matrix clauses, ꑣꑦꑚꑦ *linkaya* '(he) tries' and ꑦꑦꑦ *nelye* '(she) helps'. Since topicalization does not apply to infinite verbs, the subordinate verb in both sentences, ꑣꑦꑦꑦ *sidejam* 'repairing', cannot be marked for topic within its own f-structure core either.

The rule by which the subordinate verb appears as a sister of I^0 seems to resemble that which places the matrix verb in I^0. However, there is the restriction that subordinate verbs can only be fronted if this does not result in duplicates of semantic roles in the linear order of constituents in the clause. That is, there must not be two patient arguments after the verb, even if they are part of different f-structures. This means that fronting the verb in order to be able to topicalize NPs subcategorized for by the subordinate verb in (148a) is possible, while it is not in (148b). Example (149) illustrates the successful fronting of a subordinate verb. The topic particle, as usual, appears as a proclitic before the verb, which here encodes an inanimate patient topic, referring to an argument of the subordinate verb, ꑦꑦꑦ *naying* 'roof'. In order to address the TOP function of the matrix verb in this case, we have to use inside-out functional uncertainty and annotate the topicalized NP with ((XCOMP ↑) TOP) = ↓ to signal that TOP is an attribute of the f-structure containing XCOMP. This is an extension to the rules stated in (134a).

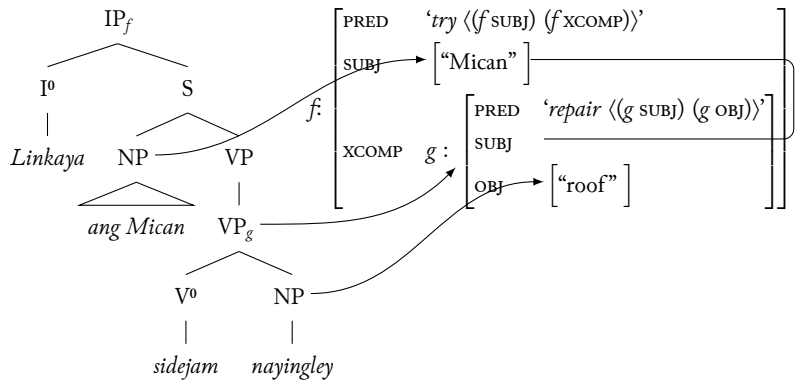
Raising verbs

Raising verbs, like control verbs, are verbs which take a VP complement whose subject is shared with the subject or the object of the matrix verb. They as well have already been dealt with before briefly in section 5.5.6 with regards to questions of syntactic alignment. Here, in contrast to control verbs, the syntactic subject of the matrix verb is not semantically an argument of it, but of the subordinate verb.

(148) a. Subject control:

Linkaya	*ang*	*Mican*	*sidejam*	*nayingley.*
linka-ya	ang=Mican		sideg-yam	naying-ley
try-3SG.M	A=	Mican	repair-PTCP	roof-P.INAN

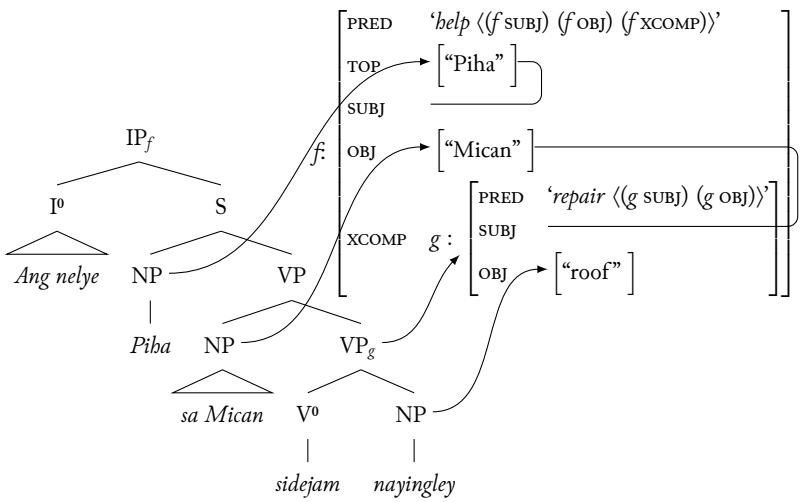
'Mican tries to repair the roof.'



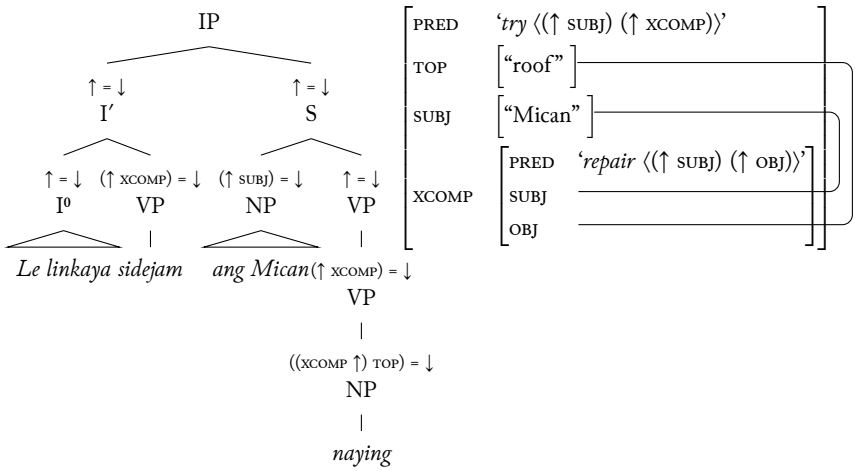
b. Object control:

Ang	*nelye*	*Piha*	*sa*	*Mican*	*sidejam*	*nayingley.*
ang=nel-ye		Ø= Piha	sa=Mican		sideg-yam	naying-ley
AT=	help-3SG.F	TOP=Piha	P=	Mican	repair-PTCP	roof-P.INAN

'Piha helps Mican repair the roof.'



(149) *Le linkaya sidejam ang Mican naying.*
le= linka-ya sideg-yam ang=Mican naying-Ø
P.INAN=try-3SG.M repair-PTCP A= Mican roof-TOP
'The roof, Mican tries to repair it.'



The subject of the matrix verb may thus also be a dummy *it* or *there* in English. Ayeri seems to only have ꠁ꠰꠸꠹ *surp-* 'seem' as a raising verb.[20] Instead of using verbal expressions like *happen*, *tend*, and *be likely*, one may rather use adverbials or adverbs like ꠘꠘ꠸꠹ *mamangeri* 'by coincidence', ꠘ꠷꠸꠹ *krāneri* 'by tendency' and ꠝ꠷꠹ *nilay* 'probably'. English has raising verbs like *expect*, *order*, or *want*, which may take an object and a verbal complement, but whose syntactic object is the semantic subject of the subordinate verb. Ayeri, however, lacks the raising-to-object mechanism and instead requires a complement clause.

Superficially, the charts in (150) look more or less identical to those in (148). However, while the a-structure definitions in the matrix verbs' PRED feature in (148) define their subjects and objects as arguments, the verbs in (150) do not.

20 This is likely an artefact of working mostly in English, since *seem* is a very common verb there. Since it is interesting for Ayeri to have only one verb which works this way, apparently, I decided to leave it in for now. Alternatively, it would be a reasonable next step in grammaticalization for the verb to turn into a modal particle, ꠁ꠰꠸꠹ *surpa*. The dictionary also lists ꠷꠹ *kra-* 'tend' with no further comment, entered on November 22, 2005, and possibly intended to be used as a raising verb meaning 'have a tendency' rather than 'look after, care for'. There is also ꠞ꠷꠹ *ramy-* 'let, let go of' which was intended as a raising causative verb and which was entered early on as well (May 24, 2006). Ayeri can express causative relationships by case marking, though (see section 6.4.9). If need be, ꠞ꠷꠹ *ramy-* can be used with a complement clause instead of a verbal complement.

Instead, (150a) defines only an XCOMP as an argument, and its SUBJ is defined as an athematic subject (Bresnan et al. 2016: 304–308). This is indicated by placing the function label outside of the pointed brackets. The same goes for the OBJ in (150b): here as well, the object is not strictly an argument of the matrix verb. In the accompanying AVMs, the respective athematic functions in *f* are connected to the SUBJ function in *g* in both cases to indicate coherence.

The example sentence in (150b) is also marked ungrammatical in contrast to the previous example, (148b). Even though both sentences may be structurally similar in their constituency, their matrix verbs differ in argument structure:

(151) a. '*help* ⟨(↑ SUBJ) (↑ OBJ) (↑ XCOMP)⟩'

b. '*believe* ⟨(↑ SUBJ) (↑ XCOMP)⟩ (↑ OBJ)'

While *help* subcategorizes for a thematic object, *believe* does not. Its syntactic object is not actually its semantic object here: the status of *someone* in *believe someone* is different from that in *believe someone to do something*. Apparently, Ayeri is able to unify a thematic object with the subject of a subordinate verb, in spite of discrepancies in case marking between agent and patient. On the other hand, an athematic object cannot be unified with the subject of a subordinate verb. Hence, Ayeri allows ꧁꧁꧂ *nel-* 'help' to be an object-control verb, but it does not allow ꧁꧂ *paron-* 'believe' to be a raising-to-object verb. Note again, however, that even raising-to-subject is only common in Ayeri with ꧁꧂ *surp-* 'seem', so Ayeri more generally seems to have an aversion towards raising. Or, assuming that the difference to English is lexical, Ayeri's verbs do not allow for athematic functions with the notable exception of ꧁꧂ *surp-*. Instead of an XCOMP and an athematic function, they subcategorize for a COMP.

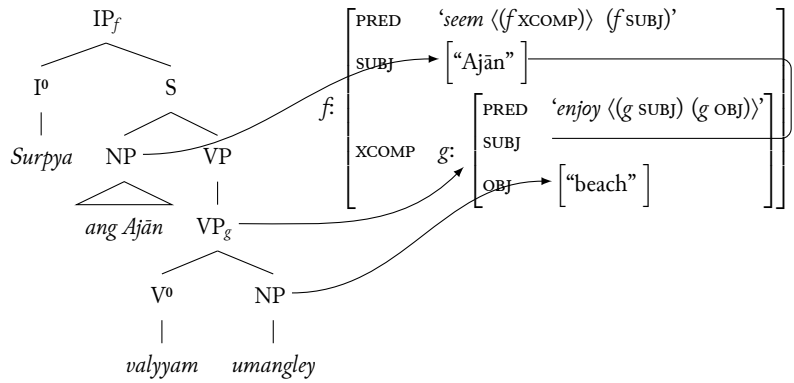
Just as with control verbs, it is possible to front the subordinate verb, effectively generating it as a complement of the matrix verb in I⁰ according to the working hypothesis already used for control verbs. This way as well, it is possible to topicalize arguments of the subordinate verb, the condition being that no argument functions are doubled here as well. Again, the subordinate verb and the VP with its dependent NPs both have to be annotated (↑ XCOMP) = ↓, and the topicalized NP has to be marked with ((XCOMP ↑) TOP) = ↓ in accordance with the position of the topic marker as adjoined to the left edge of the matrix verb's f-structure. Here as well, the subordinate verb is infinite and thus cannot carry topic marking. An example of this is given in (152).

Here, the VP which would normally carry the subordinate V⁰, ꧁꧂ *valyyam* 'enjoying', is headless, just as the VP which would normally contain I⁰, ꧁꧂ *le surpya* '(he) seems'. The subordinate verb is instead found as a sister node of

(150) a. Raising to subject:

Surpya	*ang*	*Ajān*	*valyyam*	*umangley.*
surp-ya	ang=	Ajān	valy-yam	umang-ley
seem-3SG.M	A=	Ajān	enjoy-PTCP	beach-P.INAN

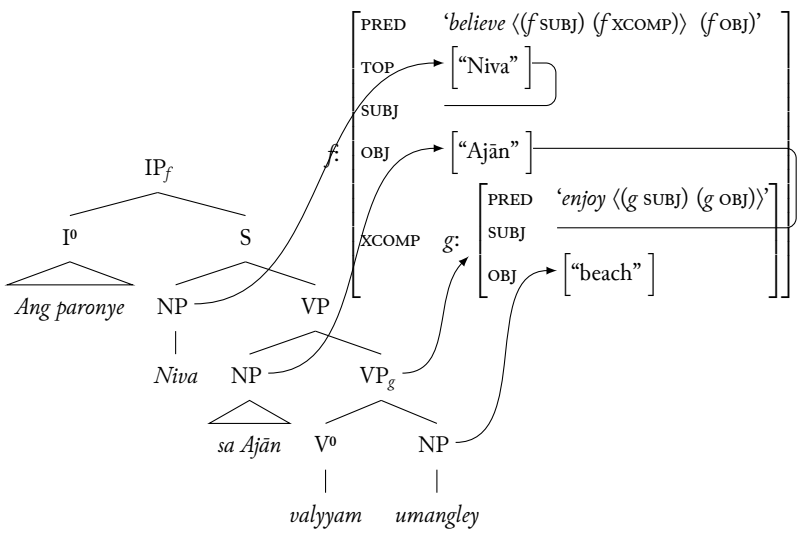
'Ajān seems to enjoy the beach.'



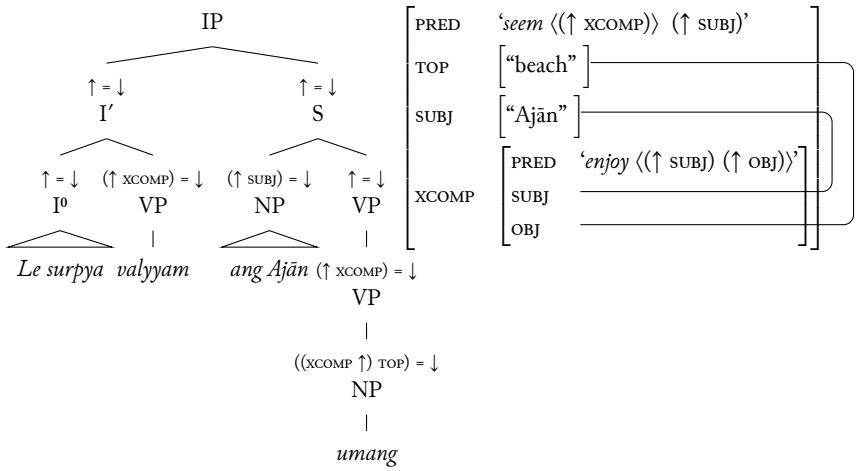
b. Raising to object:

**Ang paronye*		*Niva*	*sa Ajān*	*valyyam*	*umangley.*
ang=paron-ye	Ø=	Niva	sa=Ajān	valy-yam	umang-ley
AT= believe-3SG.F	TOP=	Niva	P= Ajān	enjoy-PTCP	beach-P.INAN

Intended: 'Niva believes Ajān to enjoy the beach.'



(152) *Le surpya valyyam ang Ajān umang.*
le= surp-ya valy-yam ang=Ajān umang-ley
PT.INAN=seem-3SG.M enjoy-PTCP A= Ajān beach-TOP
'The beach, Ajān seems to enjoy it.'



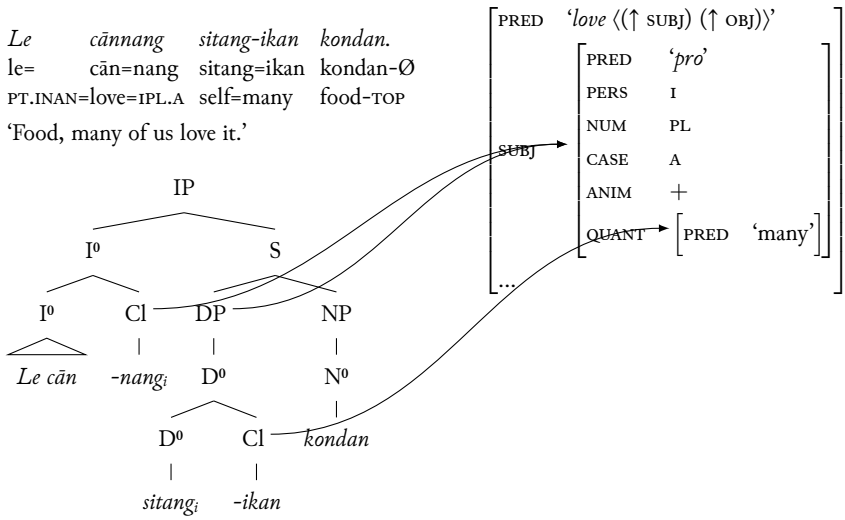
the matrix verb. However, both verbs' complements are generated in their usual position: the VP complementing the matrix verb is a daughter of the VP sister of the subject NP, ꯀꯥꯡ ꯀꯥꯟꯌꯥꯡ *ang Ajān*. This VP, in turn, has an NP complement carrying the object of the subordinate verb, ꯎꯃꯥꯡ *umang* 'beach'. The subordinate VP is discontinuous here as well, so both parts are marked XCOMP. The subordinate verb's object is also the topic which the matrix verb is marked for by ꯂꯦ *le*. In order to place the TOP function at the correct f-structure level, inside-out functional uncertainty is used to indicate that ꯎꯃꯥꯡ *umang* feeds into the TOP function of the superior f-structure which specifies XCOMP.

Expletive sitang

It has been mentioned before that ꯑꯦꯇꯥꯡ *sitang* 'self' can be used as an expletive pronoun so that quantifiers can be attributed indirectly to enclitic subject pronouns, compare section 4.2.6 and section 5.5.3. The quantifier cannot follow the pronominal clitic directly due to the double function of many quantifiers as intensifiers which modify the verb. Ayeri otherwise uses the demonstratives ꯀꯥꯗꯥꯟꯌꯥ *adanya* 'that one' or ꯗꯥꯟꯌꯥ *danya* '(such) one' as dummy pronouns, but these encode a third-person reference (section 6.1.2, p. 311). As (153) shows, it is also possible to quantify personal pronouns of persons other than the third. Hence, ꯑꯦꯇꯥꯡ *sitang*

is used in this context as a dummy pronoun since ordinarily, it does not encode person, but reflexivity. It is therefore neutral to person features while still establishing an anaphoric relationship to its binder. It also gives a clitic quantifier something to lean on other than the verb or an adverb.

(153) *Le cānnang sitang-ikan kondan.*
le= cān=nang sitang=ikan kondan-Ø
PT.INAN=love=IPL.A self=many food-TOP
'Food, many of us love it.'



In spite of རང་གི *sitang* being used as a reflexivizing prefix otherwise, it has not been analyzed as adding (↑ REFL) = + to the SUBJ function in (153). This is because of its use as a dummy in this context; essentially, it adds no meaning besides establishing an anaphoric relationship which is marked in the example as an index *i*. Since it cannot be declined either, all person features rest in the pronominal clitic, ང་ *nang* 'we'. Distributed exponence maps both the pronominal clitic's semantic content and that of the subject DP, རང་གི་ཐོན་ *sitang-ikan*, onto the SUBJ function in the partial f-structure diagram. The only lexical content which the subject DP contains is that of the quantifier clitic, ཐོན་ *-ikan* 'many'. Since this information is quantifying in nature, it feeds into the QUANT list of the SUBJ function to create a unified meaning of 'many of us' in spite of the parts which create this meaning being scattered over I⁰ and the subject DP.

Going by classic, structuralist binding theory, རང་ *sitang* should be able to bind the subject clitic because བཙན་ *cānnang* as a unit c-commands རང་གི་ཐོན་ *sitang-ikan*, among others. In terms of LFG's functionally oriented binding theory, both the subject pronoun and རང་གི་ཐོན་ *sitang-ikan* are part of the same f-structure core created by the predicator བཙན་ *cān-* 'love', and the binder f-precedes the bindee. Thus, it is possible to establish an anaphoric relationship between them.

6.4.4 Existential statements

While Ayeri uses a zero copula, there are nonetheless full verbs expressing existence: ᦶᦺᦸ *yoma-* 'be (in a place), exist', as well as the comparison verbs ᦸᦺᦸ *kama-* 'be as' ᦸᦺᦸᦺᦸ *eng-* 'be more' and ᦸᦺᦸ *va-* 'be most'. Obviously, the comparison verbs are related to the enclitics described in section 4.3.1. By extension, the verb meaning 'give', ᦸᦺᦸ *il-*, can also be used to mean 'be less'. Theoretically, there is also ᦸᦺᦸᦺᦸ *varya-* 'be least',[21] but that has never seen much practical use, and neither has ᦸᦺᦸ *il-* in its negative comparative meaning.

In order to express 'there is', Ayeri uses ᦶᦺᦸ *yoma-* with a dummy subject pronoun: ᦶᦺᦸᦺᦸᦺᦸ *yomareng* 'there is/are', which is a set expression—literally, 'it exists'. ᦶᦺᦸᦺᦸᦺᦸ *yomareng* can be inflected for the usual morphological features of verbs, as shown in (154), where the verb carries negation. Notably, the entity said to exist is treated as its object rather than its subject. Apart from this, ᦶᦺᦸ *yoma-* is usually used with locations, that is, it frequently comes with a locative complement to express that someone or something exists in relation to a place. Less formally, however, a copulaic construction may as well be used for these purposes, compare the examples in (155). The copular-clause strategy comes at the slight disadvantage of not being able to use verb morphology.

(154) a. *Le yomoyreng kanga-ma bibanjyam siku.*
le= yoma-oy=reng kanga-Ø=ma biban-ye-yam siku
PT.INAN=be-NEG=3SG.INAN.A milk-TOP=enough cake-PL-DAT pan
'There is not enough milk for pancakes.'

b. *Le yomareng nārya hemaye-ma.*
le= yoma=reng nārya hema-ye-Ø=ma
PT.INAN=be=3SG.INAN.A though egg-PL-TOP=enough
'There are enough eggs, though.'

An alternative to the comparison strategy by enclitics is to use a verb of comparison as listed initially. Ayeri behaves differently in this from what Stassen (2013) reports on the way 'exceed comparatives' work, however. According to him,

> Exceed Comparatives have as their characteristic that the standard NP is constructed as the direct object of a transitive verb with the meaning "to exceed" or "to surpass". Thus, the construction typically includes two predicates, one which is the comparative predicate, and another which is the "exceed"-verb. (Stassen 2013)

Also compare Beermann et al. (2005). What is described by Stassen (2013) has similarities to a serial-verb construction, as shown in (156).

21 From ᦸᦺᦸ *va-* 'be most' + ᦸᦺᦸᦺᦸ *-arya* (categorial negation).

(155) a. *Ang yomasaya* *Mican*
ang=yoma-asa-ya Ø= Mican
AT= be-HAB-3SG.M TOP=Mican
visamya.
visam-ya
capital-LOC
'Mican is usually in the capital.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{ASP} & \text{HAB} \\ \text{TOP} & \begin{bmatrix}\text{"Mican"}\end{bmatrix} \\ \text{SUBJ} & \\ \text{OBL}_{loc} & \begin{bmatrix} \text{PRED} & \text{'capital'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix}$$

b. *Yāng* *sangalya.*
Yāng sangal-ya
3SG.M.A room-LOC
'He's in the room.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{null-be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"he"}\end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'room'} \\ \text{CASE} & \text{LOC} \end{bmatrix} \end{bmatrix}$$

(156) COMPAREE IS QUALITY exceeds STANDARD

Ayeri does not possess serial-verb constructions, however. Instead, it superficially appears as though comparative verbs take the quality adjective as a modifier, essentially in the way of an adverb. Nonetheless, the subject forms the comparee, and the object the standard. An example is given in (157). More generally, the structure in Ayeri is as stated in (158).

(157) *Eng* *engaran* *nake* *rivanye* *vana* *danyaley* *nana.*
eng= eng-aran nake rivan-ye-Ø vana danya-ley nana
AT.INAN=be.more-3PL.INAN tall mountain-PL-TOP 2.GEN one-P.INAN 1PL.GEN
'Your mountains are higher than ours.'

(158) exceeds QUALITY COMPAREE STANDARD

The way LFG handles comparison of adjectives in predicative contexts is sketched out in Butt et al. (1999: 122), see (159). As expected, the predicative complement is contained within a PREDLINK function. Comparison morphology is represented through functional annotations, DEG and DEG-DIM, to express *more than* as a positive comparative in this case; *-er than* would receive the same annotation because it is functionally equivalent. The adjective itself is analyzed as subcategorizing for a complement which holds the standard of comparison.

Since the functional analysis of LFG is intended to be as independent of the morphology of individual languages as possible, how can we analyze Ayeri in this regard, especially since the verbs encode DEG and DEG-DIM, and the adjective seems to appear in the place an adverb would normally inhabit? In fact, the AVM in (159) has a certain similarity to those presented for control and raising verbs, compare

(159) English (adapted from Butt et al. 1999: 122):

It is more comfortable than a tractor.

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{be}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"it"}\end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{comfortable}\ \langle(\uparrow \text{COMP})\rangle\text{'} \\ \text{DEG} & \text{COMP} \\ \text{DEG-DIM} & \textit{positive} \\ \text{COMP} & \begin{bmatrix}\text{"tractor"}\end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(148) and (150). In all cases, there is a subordinate predicator subcategorizing for a complement. What if rather than treating the quality in the way of an adverb, Ayeri actually generalized the way subordinate verbs can be fronted, treating the adjective in the way of a verbal complement of I^0? This hypothesis neatly coincides with Ayeri's strategy of fronting subordinate verbs in order to enable topicalization of their dependents by making the embedded NPs look like regular arguments of the matrix clause's verb.

First of all, example (160) gives the morpholexical annotations for all comparative verbs, [illegible] *kama-* 'be as', [illegible] *eng-* 'be more', [illegible] *va-* 'be most', [illegible] *il-* 'be less', and [illegible] *varya-* 'be least'. Only the definitions extending those in (127) are listed, however. Here, the verb contains information on the comparison status of the predicative complement as well as about its polarity: the table contains all possible permutations for the values of (↑ PREDLINK DEG) and (↑ PREDLINK DEG-DIM).

Following the hypothesis above, the c-structure of a comparative statement in Ayeri should look like in (161). This is purposefully designed in parallel to (149), even though the subject of the comparative verb is not shared by the a-structure of the adjective. As in (149) and (152), the complement of the verb is understood as a discontinuous constituent of the PREDLINK type. The complement of the adjective is generated in its canonical position as a daughter of the AP in S. Alternatively, it should be possible for the A^0 not to be fronted, just as the subordinate verb in (148) and (150) appears as the head of the subordinate VP. However, this leads to ambiguity in that an adjective, then, directly follows a noun, so modification relationships would not be entirely clear. The preferred way is, thus, to generate the adjective as a complement of I^0.

In order to form clauses of the kind *John is a better doctor than Bill*, with the quality composed of an NP–AP combination, it is necessary to use a relative clause: *John is a doctor who is better than Bill*. Ayeri only allows for A^0 to be fronted if it does not modify a predicative nominal. The sentence in (162a) is thus ungrammat-

(160) a. ᜃᜋ᜔ᜌ᜔: *kama-* I (↑ PRED) = '*be-as* ⟨(↑ SUBJ) (↑ PREDLINK)⟩'
(↑ PREDLINK) = ↓
(↓ DEG) = POS
(↓ DEG-DIM) = *equative*

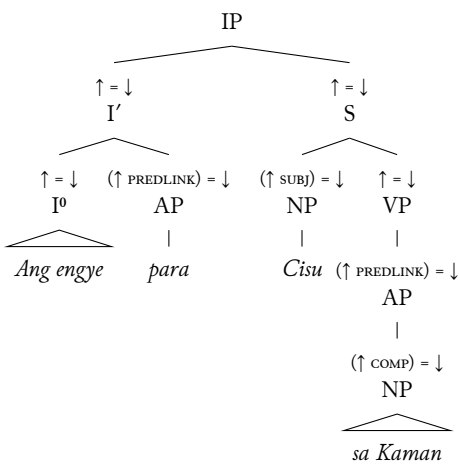
b. ᜎᜅ᜔ᜈ᜔: *eng-* I (↑ PRED) = '*be-more* ⟨(↑ SUBJ) (↑ PREDLINK)⟩'
(↑ PREDLINK) = ↓
(↓ DEG) = COMP
(↓ DEG-DIM) = *positive*

c. ᜍ᜔: *va-* I (↑ PRED) = '*be-most* ⟨(↑ SUBJ) (↑ PREDLINK)⟩'
(↑ PREDLINK) = ↓
(↓ DEG) = SUPL
(↓ DEG-DIM) = *positive*

d. ᜎᜅᜒᜎ᜔: *il-* I (↑ PRED) = '*be-less* ⟨(↑ SUBJ) (↑ PREDLINK)⟩'
(↑ PREDLINK) = ↓
(↓ DEG) = COMP
(↓ DEG-DIM) = *negative*

e. ᜍᜋᜌᜒ᜔: *varya-* I (↑ PRED) = '*be-least* ⟨(↑ SUBJ) (↑ PREDLINK)⟩'
(↑ PREDLINK) = ↓
(↓ DEG) = SUPL
(↓ DEG-DIM) = *negative*

(161) *Ang engye para Cisu sa Kaman.*
ang=eng-ye para Ø= Cisu sa=Kaman
AT= be.more-3SG.F fast TOP=Cisu P= Kaman
'Cisu is faster than Kaman.'



$$\begin{bmatrix} \text{PRED} & \text{'}\textit{be-more}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{TOP} & \boxed{\text{"Cisu"}} \\ \text{SUBJ} & \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'}\textit{fast}\ \langle(\uparrow \text{COMP})\rangle\text{'} \\ \text{DEG} & \text{COMP} \\ \text{DEG-DIM} & \textit{positive} \\ \text{COMP} & \boxed{\text{"Kaman"}} \end{bmatrix} \end{bmatrix}$$

ical because ᨕᨚᨑ *ban* 'good' modifies a predicative noun, ᨀᨚᨛᨗᨚᨕᨗᨚᨑᨗᨚᨑᨗᨚᨑ

attribute a property to their subject, for instance, as in (163). For this reason, they are termed 'semi-copula verbs' here.

(163) a. *Mayaye mino ang Kemis.*
maya-ye mino ang=Kemis
feel-3SG.F happy A= Kemis
'Kemis feels happy.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{feel}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"Kemis"}\end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix}\text{"happy"}\end{bmatrix} \end{bmatrix}$$

b. *Ang tavya sobayās*
ang=tav-ya sobaya-as
AT= become-3SG.M teacher-P
Prano.
Ø= Prano
TOP=Prano
'Prano becomes a teacher.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{become}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix}\text{"Prano"}\end{bmatrix} \\ \text{SUBJ} & \\ \text{PREDLINK} & \begin{bmatrix}\text{"teacher"}\end{bmatrix} \end{bmatrix}$$

The position of the predicative adjective in (163a) is the normal one. Since there are predicative nominals as well, however, this position is also available to NPs, though less typically so. Predicative NPs of semi-copula verbs are otherwise treated like regular objects with regards to constituent order. This also means that as with predicative nominals in copula clauses, complements of semi-copula verbs appear in the patient case. Example (163b) illustrates the first possibility, where a predicative NP appears between the finite verb and the subject NP.

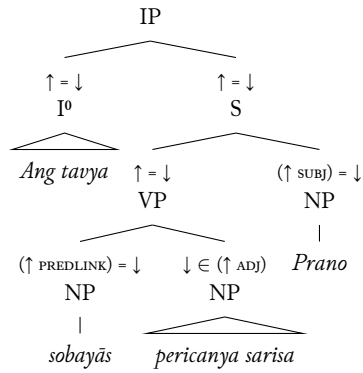
How do we know, however, that in (163b), the subject NP and the VP carrying the object have not simply been inverted? While this is a grammatically valid possibility, another possible constituent-order pattern emerges if we include adjuncts. Both variants are illustarted in (164).

The sentence in (164a) is rendered according to the strategy of inverting the order of subject NP and VP, with the latter containing both the predicative complement and the adjunct: སོན་ཡཱ་ཀཱ་ཕེ་ཅཱ་ས་ཡི་ *sobayās pericanya sarisa* 'a teacher next year' as a whole precedes the subject, ཀཱ་ཡོ *Prano*. In (164b), on the other hand, the predicative nominal, སོན་ཡཱ་ *sobayās*, has been fronted to appear right after the finite verb, ཨང་ཏཱ་ *ang tavya* '(he) becomes', while the adjunct, ཀཱ་ཕེ་ཅཱ་ས་ཡི་ *pericanya sarisa*, still follows the subject.

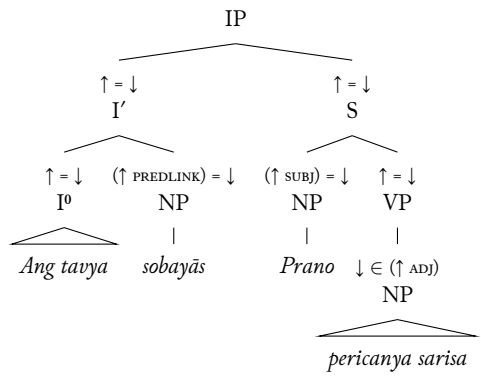
6.4.6 Secondary Predicates

Besides verbs taking predicative adjectives and nominals as complements, there are also verbs taking secondary predicates as complements. These predicative complements can be subdivided further into depictive and resultative secondary predicates. A depictive secondary predicate, on the one hand, "provides information about the

(164) a. *Ang tavya* *sobayās*
ang=tav-ya sobaya-as
AT= become-3SG.M teacher-P
pericanya *sarisa* *Prano.*
perican-ya sarisa Ø= Prano
year-LOC next TOP=Prano
'Prano becomes a teacher next year.'



b. *Ang tavya* *sobayās*
ang=tav-ya sobaya-as
AT= become-3SG.M teacher-P
Prano *pericanya* *sarisa.*
Ø= Prano perican-ya sarisa
TOP=Prano year-LOC next
'Prano becomes a teacher next year.'



state of the entity it refers to. This state holds at the time of the event described by the verb" (Müller 2002: 173). A resultative secondary predicate, on the other hand, refers to "the result of an event [...] specified by the adjective" (173). This difference is illustrated in (165).

(165) a. *Suzy came to work* ***sick.*** (depictive, S)

b. *Jack eats the apple* ***unwashed.*** (depictive, O)

c. *Bill wipes the table* ***clean.*** (resultative)

In (165a), *sick* does not describe the manner in which Suzy came to work, but the state in which she did so. Similarly, *unwashed* in (165b) refers to the state of the apple at the time of being eaten rather than the manner in which it is eaten. It is also possible to interpret the adjective as referring to Jack, but let us assume that in the context of this statement, it is rather more relevant for the apple to be unwashed. In contrast to these two examples, *clean* in (165c) does not refer to the state of the subject or the object at the moment of wiping, but the state of the

table as a result of being wiped.

Unfortunately, Bresnan et al. (2016: 347), while mentioning resultatives, do not go into detail about an LFG analysis of them, and do not say anything at all about depictives. Though they give a few references about LFG-based surveys of resultatives in English, a cursory web search does not bring up papers on depictive predicates in terms of LFG. One has to assume that this topic probably constitutes a desideratum at the time of writing. Dalrymple (2001) does not touch the topic of secondary predication at all, and neither do Butt et al. (1999); Falk (2001) only provides an analysis of resultatives. As far as LFG analyses of resultatives go, Simpson (1983) and Christie (2013) were used to inform the below discussion. Müller (2002) provides analyses of both depictives and resultatives in terms of constraint-based grammar, however, he does so from the point of view of Head-driven Phrase-Structure Grammar (HPSG; Pollard and Sag 1994) and uses only German as his object of study. Nonetheless, his analyses informed the below discussion of depictives.

Depictives

English examples of depictive adjectives were given in (165ab). Moreover, NPs can also be depictive predicates in English, for instance in *John came out of the exam a nervous wreck*, where *a nervous wreck* describes the state of John as he returns from the exam. According to Müller's (2002) analysis, "the subject of the depictive secondary predicate is coindexed with an element of the argument structure of the primary predicate" (196). He suggests for HPSG "a lexical rule that recategorizes predicative adjectives and prepositions so that they can modify verbal elements" as a way to "capture the adjunct properties of depictive secondary predicates" (196). I tried to cast this in (166) as an f-structure in which the depictive secondary predicate is an adjunct of the verb. The anaphoric relationship between SUBJ and the adjective is expressed by *i* as an index which marks that they are co-indexed.

In Ayeri, the depictive adjective, whether it refers to the subject or the object, follows the verb. This nicely fits the analysis fashioned after Müller (2002) above, by which the depictive acts as an adjunct of the verb with reference to one of the verb's arguments. Ayeri makes no formal distinction between adjectives and adverbs, but context should clarify under normal circumstances. An example of depictive secondary predicates in Ayeri is given in (167). In (167a), there is only a subject, ᨕᨑᨚ *Gada*, to be described by the adjective, ᨿᨛᨕᨚ *pisu* 'tired'. In (167b), the adjective, ᨾᨚᨕᨚ *tuvo* 'red' (here in the meaning 'raw') can describe either the subject or the object, but semantically, it makes most sense for it to refer to the object,

(166) English:

Suzy$_i$ came to work sick$_i$.

$$\begin{bmatrix} \text{PRED} & \text{`}\textit{come}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{\textit{to}})\rangle\text{'} \\ \text{TENSE} & \text{PST} \\ \text{SUBJ} & \begin{bmatrix} \text{“Suzy}_i\text{”} \end{bmatrix} \\ \text{OBL}_{\textit{to}} & \begin{bmatrix} \text{PRED} & \text{`}\textit{to}\ \langle(\uparrow \text{OBJ})\rangle\text{'} \\ \text{PCASE} & \textit{to} \\ \text{OBJ} & \begin{bmatrix} \text{“work”} \end{bmatrix} \end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix} \text{PRED} & \text{`sick}_i\text{'} \end{bmatrix}\right\} \end{bmatrix}$$

ခြင်္ဂေ *inun* 'fish'. It may be noted again here that topicalization has no impact on the argument of the verb the secondary predicate refers to (compare section 5.5.5).

As mentioned initially, there is also the possibility of nominal depictives. These are introduced with the proclitic expressing likeness, ခု *ku-*. Since secondary complements are adjuncts, they are not subcategorized for by the verb, so the question is which case they should receive—Ayeri, curiously, does not assign overt case to these NPs.[22] Nominal depictives may appear right after the verb or as adjuncts of the VP if they are heavy. This is illustrated in (168): while the NP ခုကသဲသ *ku-sikataya* 'as a winner' follows the verb directly in (168a), the depictive NP ခုလာဂင်ညီ—ခုဂါ *ku-arilinya … kovaro* 'someone … easily' in (168b) is trailing at the end of the phrase as a result of being modified by a relative clause.

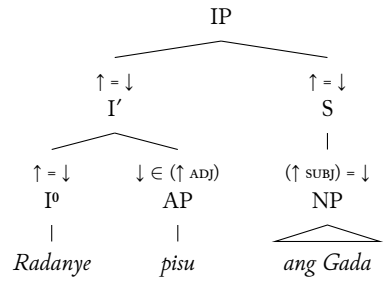
Resultatives

Simpson (1983) comes to the conlusion that resultatives always modify objects, whether they are surface objects or 'underlying objects' (like the subjects of passives or of verbs like *shatter* when used intransitively). Furthermore, according to her, verbs may be analyzed as being subcategorized for resultatives in analogy to control and raising verbs. She proposes, thus, that there is a lexical rule which adds an XCOMP to a verb's subcategorization frame whose subject is the verb's logical object. This observation is squared with the argument structure of verbs in

22 One might be tempted to analyze ခု *ku-* as a case marker used for essive and equative functions. NPs marked with ခု *ku-* may be regularly case-marked in other contexts, though, and Ayeri does not make use of multiple case marking or *suffixaufnahme* otherwise. Moreover, there is none of the usual alternation between overtly marked and zero-marked forms with ခု *ku-*. The distribution of ခု *ku-* is thus different from that of typical case markers.

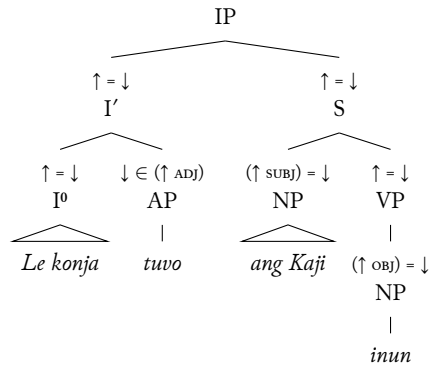
(167) a. *Radanye* *pisu* *ang* *Gada.*
radan-ye pisu ang=Gada
wake.up-3SG.F tired A= Gada
'Gada wakes up tired.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{wake-up}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"Gada}_i\text{"}\end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'tired}_i\text{'}\end{bmatrix}\right\} \end{bmatrix}$$



b. *Le* *konja* *tuvo* *ang* *Kaji*
le= kond-ya tuvo ang=Kaji
PT.INAN=eat-3SG.M raw A= Kaji
inun.
inun
fish-TOP
'The fish, Kaji eats it raw.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{eat}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBJ})\rangle\text{'} \\ \text{TOP} & \begin{bmatrix}\text{"fish}_i\text{"}\end{bmatrix} \\ \text{SUBJ} & \begin{bmatrix}\text{"Kaji"}\end{bmatrix} \\ \text{OBJ} & \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'raw}_i\text{'}\end{bmatrix}\right\} \end{bmatrix}$$



terms of the semantic role of the subject function: according to Perlmutter (1978), intransitive verbs can be grouped into unergative and unaccusative depending on whether their syntactic subject is also their logical subject, or their logical object, compare (169).[23] Müller (2002) seems to argue along similar lines, though from the perspective of HPSG.

In English, a variety of phrase types can form resultative secondary predicates: APs, NPs, and PPs (Simpson 1983; Christie 2013). While English (like other Germanic languages) makes heavy use of intransitive prepositions as constituent parts

23 The terms Perlmutter (1978) introduces, however, appear to be not completely unproblematic today. As Dixon (2010a) writes, "the labels 'unaccusative' and 'unergative' are used for such a wide variety of phenomena as to be essentially imprecise and unclear. [...] Their employment provides the false sense of a universal semantic basis for varied grammatical properties. They are best avoided" (156). In the literature consulted as a theoretical background for this section, 'unaccusative' and 'unergative' are used in their basic definition as provided by Perlmutter (1978) and summarized in (169), and I will stick to this definition here as well. Also compare Bresnan et al. (2016: 334–336).

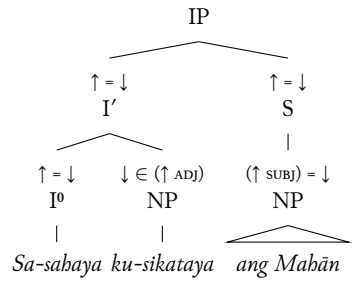
(168) a.

Sa-sahaya	*ku-sikataya*
sa∼saha-ya	ku=sikataya
ITER∼come-3SG.M	as=winner

ang Mahān.
ang=Mahān
A= Mahān

'Mahān returned (as) a winner.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{come}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{ASP} & \text{ITER} \\ \text{SUBJ} & \left[\text{"Mahān}_i\text{"}\right] \\ \text{ADJ} & \left\{\left[\text{PRED} \quad \text{'winner}_i\text{'}\right]\right\} \end{bmatrix}$$



b.

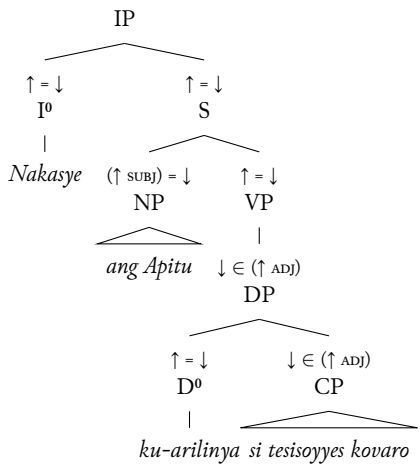
Nakasye	*ang Apitu*
nakas-ye	ang=Apitu
grow.up-3SG.F	A= Apitu

ku-arilinya	*si*
ku=arilinya	si
as=someone	REL

tesisoyyes	*kovaro.*
tesisa-oy=yes	kovaro
betray-NEG=3SG.F.A	easily

'Apitu grew up someone not betrayed easily.'

$$\begin{bmatrix} \text{PRED} & \text{'}\textit{grow-up}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \left[\text{"Apitu}_i\text{"}\right] \\ \text{ADJ} & \left\{\left[\text{"someone}_i \text{ not ..."}\right]\right\} \end{bmatrix}$$



(169) Syntactic typology of intransitive verbs (Perlmutter 1978; Bresnan et al. 2016):

a. unergative

- S_A with [−o] ↦ S
- S typically in control of the action
- ***He*** *ran*

b. unaccusative

- S_P with [−r] ↦ S
- S typically not in control of the action
- ***The tree*** *fell*

of verbs such as *knock out*, *lock in*, or *look over*, this is not so in Ayeri (compare section 4.4.1, p. 175). Examples with transitive adpositions where the PP is not an adjunct should also be hard to find. An example for each phrase type complementing the object of a transitive verb to express a result is given in (170). The sentence in (170d) is adapted from Christie (2013), and here the status of the PP as an argument of the verb is not entirely clear, probably because of the added-argument status of XCOMPs which she asserts. Moreover, in (170b), we can see another use of the dative, that is, to mark resultative NPs. A verb may thus occur exceptionally with more than one complement in the dative case. However, different from a regular recipient or a goal NP, a resultative dative NP also normally occurs after the verb.

(170) a. object NP + resultative AP:

Ang gondaya	***apitu***		*Sedan*	*prihinley.*
ang=gonda-ya	apitu	Ø=	Sedan	prihin-ley
AT= wipe-3SG.M	clean	TOP=	Sedan	table-P.INAN

'Sedan wipes the table clean.'

b. object NP + resultative NP:

Ang visya	***nernanjyam***	***kivo***		*Amān*	*seygoley.*
ang=vis-ya	nernan-ye-yam	kivo	Ø=	Amān	seygo-ley
AT= cut-3SG.M	piece-PL-DAT	small	TOP=	Amān	apple-P.INAN

'Amān cuts the apple into little pieces.'

c. object NP + resultative PP (intransitive):

Ang tapyye	***miday***		*Briha*	*tovaley.*
ang=tapy-ye	miday	Ø=	Briha	tova-ley
AT= put-3SG.F	around	TOP=	Briha	tova-ley

'Briha puts a cloak on.'

d. object NP + resultative PP (transitive):

Ang hiyaye		*Gada*	*suranley*	***avan***	***turayyam.***
ang=hiya-ye	Ø=	Gada	suran-ley	avan	turay-yam
AT= roll-3SG.F	TOP=	Gada	ball-P.INAN	bottom	hill-DAT

'Gada rolls a ball down the hill.'

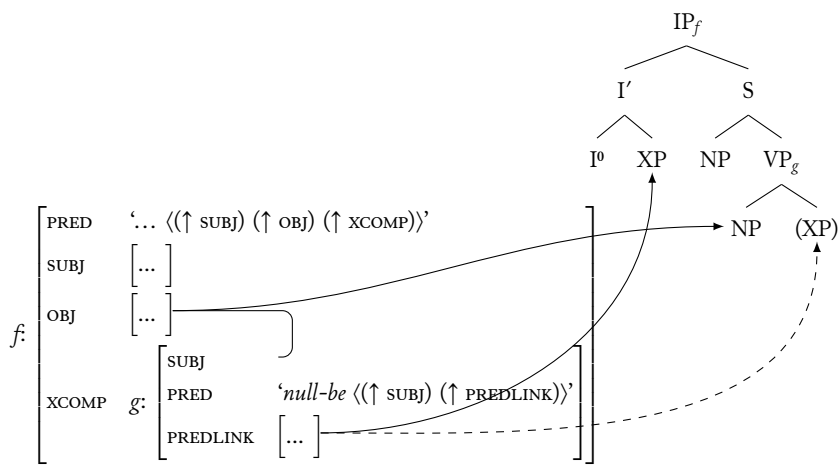
As with other secondary predicates, the normal place for a resultative to appear in is behind the verb, unless the complement is syntactically heavy and in this position makes the connection between the verb and its subject hard to grasp, as is the case with ꩆ꩜꩔꩓꩕꩓ꩍ꩕ꩌ *avan turayyam* 'down the hill' in (170d): compared to the other examples in (170), this phrase consists of two words and contains its own complement. While (170b) also contains a modifier and likewise consists of two

words, the modifier is not an argument but an adjunct. The NP with an adjective is thus relatively more light than the PP still.

According to Simpson (1983), the structure all of the examples in (170) have in common is something along the lines of what is illustrated by (171). This, however, is an interpretation which extrapolates from the article because she only gives the a-structure definition, but no f- and c-structures. Simpson (1983) explicitly likens the a-structure of transitive clauses with unergative verbs to that of control verbs—she analyzes resultative secondary predicates in terms of functional control by interpreting the object of the verb as the subject of the resultative.

My interpretation is that this suggests a structure as described for copular clauses (section 6.4.1), so there should be a *null-be* predicator requiring a subject and a predicative complement as its arguments here as well—the head of the XCOMP is basically the construction itself here as well. This f-structure *g* forms an open complement of the verb in *f*. The XCOMP as a phrase has no equivalent in the form of a maximal projection in the c-structure tree in (171), however, the XP node of the resultative element should be annotated (↑ XCOMP PREDLINK) = ↓. This way, XCOMP is represented functionally.

(171)



Regarding imperfect correspondences between structural levels, Bresnan et al. (2016) mention that "f-structure heads need not correspond only to c-structure heads" (105). Thus, while a c-structure head maps onto an f-structure head, the reverse is not mandatory. Importantly, though, Bresnan et al. (2016) say this in relation to the many-to-one correspondence between the mapping from c-structure into f-structure (the ϕ function). By not representing XCOMP as a phrasal node in the c-structure, we seem to have a to-zero relationship. However, as mentioned

above, the *null-be* predicator is basically a stand-in for the construction itself licensing certain complements. It appears that the construction takes over the function of a head. As a logical consequence, (↑ XCOMP PRED) is not represented by a node in the c-structure but by the relation between its complements. This way, there is a to-one relationship, though on a more abstract level.

Furthermore, with the economy of expression principle of LFG in mind, it may be reasoned that since the resultative XP is also a complement of the verb according to both Simpson (1983) and Christie (2013), we probably do not want it to be included inside an S sister of the object NP if there is usually nothing present in this place. As we have seen, the resultative mostly occupies the spot to the right of the verb, so this S would mostly not occur due to pruning empty nodes. There is little reason, thus, to include it just to force a one-to-one correspondence between f- and c-structure (the ϕ^{-1} function) for the minority of cases.

So far, we have only looked at transitive clauses with resultatives. Ayeri also allows for intransitive clauses with resultatives, though. Since resultative secondary predicates refer to objects, however, the restriction is that the subject of the intransitive verb be semantically a patient, that is, not in control of the action, but being acted on or undergoing a transformation. This becomes evident in (172). ฉักกฺ *Tipal* in (172a) is running, which is typically an action that is willingly performed and controlled by the runner, so that he is a typical agent. The wood in (172b), on the other hand, does not control its burning but is undergoing a change of state. Even if the language treats it as an agent in terms of case marking, it is more typically a patient in terms of semantics. Likewise, it is possible for the patient-subject of a passive verb to be complemented by a resultative, as in (173). The status of the subject as corresponding to the object of a detransitivized verb is more apparent here: unlike with unaccusative verbs, Ayeri retains the patient case marking for subjects of passive verbs. The [−r] marking on the passive subject refers to its role in the argument structure as thematically unrestricted (Bresnan et al. 2016: 324–348; also compare section 6.4.7).

While (172a) was ruled out as ungrammatical (in the meaning intended), it is nonetheless possible to receive a resultative reading from this example as intended with a tweak in morphology: Ayeri permits 'fake reflexives' (Simpson 1983: 145) by which the subject NP is basically doubled as an object to which a result state can be attributed. This typically manifests as a reflexive clitic ศิฉกฺ *sitang-* in front of the verb, compare section 4.2.6. An example of this strategy is given in (174). Here, the OBJ function has been added to the argument structure of the verb. As its position outside of the pointed brackets shows, this object—the fake reflexive—does not receive its syntactic role from the argument structure of the verb, so it must be athematic (compare section 6.4.3, p. 375).

(172) a. Unergative verb:

!*Nimpya*	*pisu*	*ang*	*Tipal.*
nimp-ya	pisu	ang=Tipal	
run-3SG.M	tired	A=	Tipal

'Tipal ran tired(ly).' (Tipal ran in a tired fashion or while being tired)
Intended: '*Tipal ran tired.' (Tipal made himself tired by running)

b. Unaccusative verb:

Napāra	*maganyam*	*mihanreng.*
napa-ara	magan-yam	mihan-reng
burn-3SG.INAN	coal-DAT	wood-A.INAN

'The wood burns to coal.'

(173) *Le hayarara bidanjyam mihan.*
le= hayar-ara bidan-ye-yam mihan-Ø
PT.INAN=chop-3SG.INAN block-PL-DAT wood-TOP
'The wood, it is chopped into blocks.'

$$\begin{bmatrix} \text{PRED} & \text{`}chop_{PASS}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{XCOMP})\rangle\text{'} \\ & [-r] \\ \text{TOP} & \begin{bmatrix} \text{PRED} & \text{`wood'} \\ \text{CASE} & \text{P} \end{bmatrix} \\ \text{SUBJ} & \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{`}null\text{-}be\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \\ \text{PREDLINK} & \begin{bmatrix} \text{“blocks”} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

(174) *Sitang-nimpya pisu ang Tipal.*
sitang=nimp-ya pisu ang=Tipal
self=run-3SG.M tired A= Tipal
'Tipal ran himself tired.' (Tipal made himself tired by running)

$$\begin{bmatrix} \text{PRED} & \text{`}run\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{XCOMP})\rangle\ (\uparrow \text{OBJ})\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{“Tipal}_i\text{”} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`}pro_i\text{'} \\ \text{REFL} & + \end{bmatrix} \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{`}null\text{-}be\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{PREDLINK})\rangle\text{'} \\ \text{SUBJ} & \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{`tired'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

We know that the OBJ function in (174) has been added to the argument structure of the verb since རྩིད་: *nimp-* 'run' is normally intransitive and thus does not subcategorize for an object in its argument structure; compare (175). Adding the reflexive as an object has the advantage of being able to serve as a subject for the resultative adjective གསོ *pisu* in the XCOMP function, however. This way, the state achieved by running—being tired—can be attributed indirectly to the controller of the reflexive, the subject ཐོག་ *Tipal*.

(175) **run* ⟨(↑ SUBJ) (↑ OBJ)⟩

**Sitang-nimpya ang Tipal.*
sitang=nimp-ya ang=Tipal
self=run-3SG.M A= Tipal
'*Tipal ran himself.'

6.4.7 Complex transitive verbs

Most transitive verbs in Ayeri take a complement in the patient case, and possibly also a second complement in the dative case. However, there are a number of verbs as well which take arguments marked for different cases and which are more or less optional. This makes it hard to decide whether they are complements or adjuncts. There have been tests on constituency before, however, more in-depth testing than previously is required here. Needham and Toivonen (2011) discuss various tests which include but also go beyond what Carnie (2013) suggests in order to determine whether an argument is a complement or an adjunct, noting that there is also a third 'in-between' category, which they refer to as *derived arguments*. The verbs listed in (176) will be exemplarily tested for this purpose.

(176) a. རྒྱ: *sara-* 'go'
b. ཨོ་ཤ: *mit-* 'live (in a place)'
c. ཐཔ: *tapy-* 'put'
d. ཤ: *nara-* 'speak'
e. ཐོ: *tiya-* 'make'

The verbs in (176a–d) permit a locative argument; (176d) may also take an argument in the genitive to express the theme, that is, what is talked about; and (176e) may indicate a tool or material as an instrument. The difficulty lies in the fact that "[t]ime and place expressions [...] can be added to the description of any event; they are not tied to specific verb classes" (Needham and Toivonen 2011: 405). On the other hand, they are more central to the argument structure of

certain verbs than others. Needham and Toivonen (2011) also caution that there is evidence for obligatorily required adjuncts (406). Whether there are in Ayeri as well is unclear at present.

Summary of lexical mapping theory

In LFG, the mapping between argument structure and syntactic structure (the α function) is handled by the 'lexical mapping theory' (Bresnan et al. 2016: 324–348). According to this theory, the main argument functions decompose into the feature set displayed in (177a). Here, [± o] stands for '(non-)objective', and [± r] stands for '(un)restricted'. The former refers to the ability (or its lack) of complementing intransitive predicators, the latter refers to restriction (or its lack) to a certain semantic role. In the following, the different semantic features will be referred to by a singleton feature rather than a pair; the abbreviations are given in (177b).

(177) a.

	− r	**+ r**
− o	SUBJ	OBL$_\theta$
+ o	OBJ	OBJ$_\theta$

b.

− o	↦	SUBJ
− r	↦	OBJ(, SUBJ)
+ o	↦	OBJ$_\theta$
− o	↦	OBL$_\theta$

The SUBJ function may embody either [− o] or [− r]: for instance, the syntactic subject of an unergative verb is non-objective [− o] since it acts like a typical logical subject, whereas the syntactic subject of an unaccusative verb is patient-like [− r]; the same goes for the subject of a passive. Semantic roles other than SUBJ, OBJ, and OBJ$_\theta$ are annotated with [− o] as well. The synactic functions in (177) map to the closest available role in the thematic hierarchy (178) (Bresnan et al. 2016: 329).

(178) agent > beneficiary > experiencer/goal > instrument > patient/theme > locative

A typical transitive English sentence like *John eats a sandwich* assigns the agent, *John*, with the most prominent semantic role ($\hat{\theta}$), which is [− o]. If initial in a-structure, [− o] is mapped onto the SUBJ function. The object of eating, *a sandwich*, is assigned [− r], and thus maps to the OBJ function. This is shown in (179).

(179) a-structure: eat_1 ⟨ AGENT PATIENT ⟩
[−o] [−r]
| |
f-structure: SUBJ OBJ

Core participants and optionality test

The first test for argumenthood which Needham and Toivonen (2011) describe is the *core participants* test (404). This is a test based on the intuition about required and optional arguments of verbs.[24] Commonly, complements are considered to be required, whereas adjuncts are considered optional (405–407). The following list discusses the verbs specified for testing in (176).

sara- 'go': The act of going typically entails an agent and a destination. This verb may be used intransitively as *sarayāng* 'I go', but the destination may *optionally* be included as either an NP in the locative case or a PP.

mit- 'live (in a place)': Ayeri distinguishes lexically between being alive, *ten-*, and living in a place. The latter typically entails an agent and an inhabited place. Expressing the inhabited place is *required* for this verb.

tapy- 'put': The verb's meaning specifically entails that an object is transferred from one location or position to another; there usually is an agent and a destination. The destination of putting is *required* for this verb.

nara- 'speak, talk': Speaking typically involves a speaker and possibly a listener. Furthermore, the thing spoken and the content of the message can feature in the action. Ayeri permits this verb to be used intransitively to describe the action of speaking: *narayāng* 'I speak'. A patient (what is spoken), an addressee, and a theme (what is spoken about) may be stated *optionally* with the addressee NP in the locative case and the theme in the genitive case.

tiya- 'make': The creation of something involves a creator and a creation as necessary parts of the process. A tool or material may be *optionally* stated as an instrumental NP. Especially a material is not untypical to occur as an instrument with this verb.

[24] The problem here is in how far a language creator has intuition about his or her language, and again, in how far they are biased by their native language or other secondary languages they have attained a reasonable level of fluency in.

Prepositional content and fixed preposition

Needham and Toivonen (2011) state that "[t]he more semantically contentful the preposition is in the PP accompanying a certain verb, the more likely it is to mark an adjunct" (405). All of the verbs in (176) which can take PPs—specifically ས་ *sara-* 'go', ཏིག་ *mit-* 'live', and ཐཔ་ *tapy-* 'put'—do not require a certain adposition for the locational argument. The prepositions or locative marking are thus semantically contentful, while case marking for ཟེར་ *nara-* 'speak' and ཏེའུ་ *tiya-* 'make' in (176de) is less so.

Iterativity

A distinct property of complements is that they are unique, while adjuncts of the same function may be repeated. For all verbs in (176a–c) it is possible to specify several places, as (180) illustrates. Here, however, the question is whether the second PPs modify the first or the verb. Going to a friend's house and going to the next village may coincide in (180a), but the latter does not necessarily imply the former; coordinating them leads to an odd result as well: *to a friend's house and in the next village*. If the first location adverbial were an adjunct, this should not be a problem, compare (181a). Here, the setting of the kiss is not central to the verb's meaning, and it is no problem coordinating the two locations. As in (180a), coordinating the location adverbials in (180b–d) sounds odd. A location which has all the earmarks of an argument can even occur together with an incidental location where the second location does not describe the first, as in (181b). Combining them with ཏ *nay* 'and' results in a zeugmatic expression at best.

As mentioned above, ཟེར་ *nara-* may include an NP in the genitive case, expressing what is spoken about. To give an example, in (182a) the verb is optionally extended by a listener and a theme. In (182b), there are two optional genitive NPs: the theme, and a locative adverbial. In both cases, a combination with ཏ *nay* 'and' is possible in principle, but the reading again becomes zeugmatic. At last, (183a) attempts to coordinate an instrumental DP with an instrumental NP to express both authorship and material use. These phrases can be coordinated with each other, and coordination with an adverb as in (183b) is possible, too.

VP anaphora test

The VP anaphora test is another standard heuristic for determining the status of a verb's argument, based on the idea that "adjuncts may be added to 'do so' clauses, but arguments may not" (Needham and Toivonen 2011: 407). Example (184) gives a valid instance of such coordination where both adverbials clearly are adjuncts.

(180) a. *Ang sarāy nangaya ledanena (*nay) minkayya mararya.*
ang=sara=ay.Ø nanga-ya ledan-ena nay nā minkay-ya
AT= go=ISG.TOP house-LOC friend-GEN and village-LOC next
'I will go to a friend's house (*and) in(/to) the next village.'

b. *Ang mica ledan nā nangaya (*nay) pang natrangya.*
ang=mit-ya ledan-Ø nā nanga-ya nay pang natrang-ya
AT= live-3SG.M friend-TOP ISG.GEN house-LOC and behind temple-LOC
'My friend lives in the house (*and) behind the temple.'

c. *Ang tapyya Prano usingley hinyanya (*nay) penungya.*
ang=tapy-ya Ø= Prano using-ley hinyan-ya nay penung-ya
AT= put-3SG.M TOP=Prano bucket-P.INAN corner-LOC and shed-LOC
'Prano puts the bucket in a corner (*and) in the shed.'

d. *Ang narāy ya Paso (*nay) renya.*
ang=nara=ay.Ø ya= Paso nay ren-ya
AT speak=ISG.TOP LOC=Paso and market-LOC
'I speak to Paso (*and) at the market.'

(181) a. *Ang vengaye yās lampyanya nay ranya.*
ang=venga=ye.Ø yās lampyan-ya nay ran-ya
AT= kiss=3SG.F.Ø 3SG.M.P park-LOC and home-LOC
'She kissed him in the park and at home.'

b. *Ang vengaye yās bantaya (ˡnay) ranya.*
ang=venga=ye.Ø yās banta-ya nay ran-ya
AT= kiss=3SG.F.Ø 3SG.M.P mouth-LOC and home-LOC
'She kissed him on the mouth (ˡand) at home.'

(182) a. *Ang narāy ya Paso (ˡnay) ganyena.*
ang=nara=ay.Ø ya= Paso nay gan-ye-na
AT speak=ISG.TOP LOC=Paso and child-PL-GEN
'I spoke to Paso (ˡand) about the children.'

b. *Ang narāy ganyena (ˡnay) paranena nā.*
ang=nara=ay.Ø gan-ye-na nay paran-ena nā
AT speak=ISG.TOP child-PL-GEN and opinion-GEN ISG.GEN
'I speak about the children (ˡand) from my point of view.'

(183) a. *Ang tiyāy sitang-rī (nay) mihaneri.*
ang=tiya=ay.Ø sitang=rī nay mihan-eri
AT make=ISG.TOP self=ISG.INS and wood-INS
'I made it by myself (and) from wood.'

b. *Ang tiyāy para (nay) mihaneri.*
ang=tiya=ay.Ø para nay mihan-eri
AT make=ISG.TOP quickly and wood-INS
'I made it quickly (and) from wood.'

As (185) shows, Ayeri does not permit placing the additional arguments of the respective verbs in the 'do so' part as if they were adjuncts. This means that even though they are optional, they behave like arguments for the purpose of this test.

(184) *Ersya ang Tipal tamala nay da-miraya ang Ikan dabas.*
ers-ya ang=Tipal tamala nay da=mira-ya ang=Ikan dabas
cook-3SG.M A= Tipal yesterday and SO=do-3SG.M A= Ikan today
'Tipal cooked yesterday and Ikan does so today.'

(185) a. **Ya saraya ang Kan natrang nay ya da-miraye ang Dita visam.*
ya= sara-ya ang=Kan natrang nay ya= da=mira-ye ang=Dita visam-Ø
LOCT=go-3SG.M A= Kan temple-TOP and LOCT=SO=do.3SG.F A= Dita capital-TOP
'*Kan goes to the temple and Dita does so to the capital.'

b. **Ya micang Litoming nay ya da-mirayāng Vangareng.*
ya= mit=yang Ø= Litoming nay ya= da=mira=yāng Ø= Vangareng
LOCT= live=1SG.A TOP=Litoming and LOCT=SO=do=3SG.M.A TOP=Vangareng
'?I live in Litoming and he does so in Vangareng.'

c. **Ya tapyye ang Apitu tinkayley sayan nay ya da-miraya*
ya= tapy-ye ang=Apitu tinkay-ley sayan-Ø nay ya= da=mira-ya
LOCT=put-3SG.F A= Apitu key-P.INAN hole-TOP and LOCT=SO=do-3SG.M
ang Ulang hin-hin.
ang=Ulang hin∼hin-Ø
A= Ulang box∼DIM-TOP
'Apitu puts the key into the hole and Ulang does so into the case.'

d. **Na naraya ang Sān yā vaham nay na da-miraya ang Bihān*
na= nara-ya ang=Sān yā vaham-Ø nay na= da=mira-ya ang=Bihān
GENT=speak-3SG.M A= Sān 1SG.LOC party-TOP and GENT=SO=do-3SG.M A= Bihān
yea kimay.
yea kimay-Ø
3SG.F.LOC baby-TOP
'?Sān talks to me about the party and Bihān does so to her about the baby.'

e. **Ri tiyanang limuyeley sapa nay ri da-miratang gada.*
Ri= tiya=nang limu-ye-ley sapa-Ø nay ri= da=mira=tang gada-Ø
INST=make=1PL.A shirt-PL-P.INAN wool-TOP and INST=SO=do=3PL.M.A gada-TOP
'?We make shirts from wool and they do so from silk.'

Pseudocleft test

In the pseudocleft test, adjuncts remain in the half of the sentence the verb is extracted from, while complements need to stay with their head, that is, the verb

(compare Needham and Toivonen 2011: 407–408). Hence, *What John did at the restaurant was eat* is grammatical, while **What Mary did from the menu is pick* is not: *at the restaurant* is an adjunct, whereas *from the menu* is a complement. The sentences in (186) apply this schema to the examples from (176) for easy comparison; the order of the focused VP and the rest of the sentence is inverted to match Ayeri's sensitivities about syntactic weight. In all cases, the additional argument(s) cannot be left behind when extracting the verb, so they have the status of complements according to this test as well.

(186) a. **Sarayam adareng si ang mirāy nangaya ledanena.*
sara-yam ada-reng si ang=mira=ay.Ø nangaya ledanena
go-PTCP that-A.INAN REL AT= do=1SG.TOP house-LOC friend-GEN
'*What I do to a friend's house is go.'

b. **Micam adareng si ang miraya ledan nā nangaya.*
mit-yam ada-reng si ang=mira-ya ledan-Ø nā nanga-ya
live-PTCP that-A.INAN REL AT= do-3SG.M friend-TOP 1SG.GEN house-LOC
'*What my friend does in the house is live.'

c. **Tapyyam usingley adareng si ang miraya Prano hinyanya.*
tapy-yam using-ley ada-reng si ang=mira-ya Ø= Prano hinyan-ya
put-PTCP bucket-P.INAN that-A.INAN REL AT= do-3SG.M TOP=Prano corner-LOC
'*What Prano does in the corner is to put the bucket.'

d. **Narayam adareng si ang mirāy ya Paso ganyena.*
nara-yam ada-reng si ang=mira=ay.Ø ya= Paso gan-ye-na
speak-PTCP that-A.INAN REL AT= do=1SG.TOP LOC=Paso child-PL-GEN
'*What I do to Paso about the children is talk.'

e. **Tiyayam adareng si ang mirāy mihaneri.*
tiya-yam ada-reng si ang=mira=ay.Ø mihan-eri
make-PTCP that-A.INAN REL AT= do=1SG.TOP wood-INS
'*What I did from wood is make it.'

Wh-word conjunction test

A further trait of adjuncts is that *wh*-words referring to adjuncts with different semantic roles can be coordinated, while this is not possible for complements (Needham and Toivonen 2011: 408). It appears that question words for most of the non-core arguments in (187) can be coordinated with the exception of (187bc). Apparently, the location of living and that of putting is central enough to the semantics of the respective verbs that it is treated like a *bona fide* argument.

(187) a. *Ang sarāy nangaya ledanena tasela.*
'I am going to a friend's house tomorrow.'

Ang	*sarava*	*siyan*	*nay*	*sitaday?*
ang=sara=va.Ø		siyan	nay	sitaday?
AT=	go=2.TOP	where	and	when

'Where and when do you go?'

b. *Ang mitasaya ledan nā eda-nangaya tadayen.*
'My friend has always lived in this house.'

**Ang*	*mitasaya*	*ledan*	*vana*	*siyan*	*nay*	*sitaday?*
ang=mit-asa-ya		ledan-Ø	vana	siyan	nay	sitaday?
AT=	live-HAB-3SG.M	friend-TOP	2.GEN	where	and	when

'Where and when has your friend lived?'

c. *Ang tapyya vakisarya Prano usingley hinyanya.*
'Prano carelessly put the bucket in the corner.'

**Ang*	*tapyya*	*Prano*	*usingley*	*simin*	*nay*	*siyan?*
ang=tapy-ya	Ø=	Prano	using-ley	simin	nay	siyan
AT=	put-3SG.M	TOP=Prano	bucket-P.INAN	how	and	where

Intended: '*How and where did Prano put the bucket?'

d. *Ang narāy ya Paso renya.*
'I speak to Paso at the market.'

Ang	*narava*	*sinyaya*	*nay*	*siyan?*
ang=nara=va.Ø		sinya-ya	nay	siyan
AT=	speak=2.TOP	who-LOC	and	where

'Where and to whom did you speak?'

e. *Ang tiyāy para mihaneri.*
'I made it quickly from wood.'

Tiyavāng	*simin*	*nay*	*sikay?*
tiya=vāng	simin	nay	sikay
make=2.AT	how	and	what.with

'How and what with did you make it?'

Table 6.2: Collected results of the tests on derived arguments

	sara- 'go' + LOCATION	*mit-* 'live' + LOCATION	*tapy-* 'put' + LOCATION	*nara-* 'speak' + RECIPIENT + THEME	*tiya-* 'make' + INSTRUMENT
Core participant	✓	✓	✓	✓	✓
Optional	✓			✓	✓
Prepositional content	✓	✓	✓		
Fixed preposition/case				✓	✓
Iterable					
***Do so*-replaceable**	✓	✓	✓	✓	✓
Moves with V^0	✓	✓	✓	✓	✓
***Wh*-word conjoinable**	✓			✓	✓

Analysis in terms of LFG

All of the tested verbs show mixed behavior in the little survey above—a summary of the tests is given in Table 6.2. That is, for some tests, the non-core argument behaves like a complement typically would, for others, it behaves as would be expected from an adjunct. Needham and Toivonen (2011) argue that these optional or required in-between arguments are *derived arguments* and should be treated as an additional part of the verb's a-structure, even though they may not fully qualify as complements. Especially the pseudocleft test—labeled 'Moves with V^0' in Table 6.2—"is excellent for two reasons: first, it elicits strong intuitions from speakers [...] and second, it demonstrates a clear and definite difference between arguments and adjuncts" (Christie 2013: 219).

For ꩜: *sara-* 'go', the direction or destination of going expressed by a PP is part of the verb's semantics, so it is core information, which makes it potentially a complement. However, like an adjunct, it appears optionally. As with typical adjuncts, P^0 provides contentful information about the location and is not fixed. It is hard to construct a sentence where multiple locations can be interpreted as adding incidental information about the action. I thus decided to cautiously rule

out iterability of the PP for this verb—another trait typical of complements. Furthermore, the PP is captured by the *do-so* test, which is typical of them as well. Like a typical complement, the PP also has to move with its V^0 in a pseudocleft structure. Unlike a typical complement, however, a question word relating to the PP is conjoinable with the question word for another adverbial expressing a different function. Just going by numbers of tests passed, the score for this verb is a tie between typical traits of complements and typical traits of adjuncts.

The case for both ᨾᩤᨲ᩶ *mit-* 'live' and ᨲᩣᨸᩤ *tapy-* 'put' is similar, except that the PP is required in the way of a typical complement. Moreover, the question word for the PP expressing the locative adverbial cannot be freely conjoined with another *wh*-word, which is another typical trait of complements. The score is thus 6 to 2 in favor of complementhood.

The verbs ᨶᩣᨿ *nara-* 'speak' and ᨾᩣᨿᩤ *tiya-* 'make' differ from ᨿᩣᨿ *sara-* 'go' in their behavior in that they may be modified by a locative and an instrumental NP, respectively. This means that there are no prepositions involved which could provide any contentful information, however, the case markers for these adverbials themselves are to be taken literally as expressing a location and a material or means. There is no free choice about these case markers, even though the degree of grammaticalization of these adverbial cases is possibly not as high as with the core cases—although it was noted before how Ayeri's core cases do not just express function, but that semantics still need to be factored in. The degree of grammaticalization is definitely higher than that of a free PP adjunct. The score is also 6 to 2 in favor of complementhood.

If we treat the PPs, locative NPs, and instrumental NPs of the surveyed verbs as complements, we need to categorize them as oblique functions OBL_θ, with the 'θ' subscript replaced by the respective thematic role: *goal* or *source* for PPs and locative NPs, and *instr* for the instrumental. According to Bresnan et al. (2016: 331) and Needham and Toivonen (2011: 414), roles which encode neither patientlike nor secondary patientlike roles are mapped to [−o], thus embody the OBL_θ function.

6.4.8 Passivization

Passivization is a valency-decreasing operation in that a transitive verb loses its agent argument. In English, passivization is a way to keep a topic in the subject slot, for one. This function is acted out by Ayeri's topic marking, however. Still, there may be contexts in which not stating an agent may be useful. Moreover, we may want to test whether Ayeri allows recipients in ditransitive constructions to be passivized. Another question is how Ayeri fares regarding passivizing the objects of subordinate verbs. Lastly, we need to check whether Ayeri can passivize derived

arguments of complex transitive verbs such as those which were surveyed in the previous section (section 6.4.7).

According to LFG's lexical mapping theory (Bresnan et al. 2016: 324–348; Needham and Toivonen 2011: 413–414), negative/unmarked roles may be suppressed as arguments, that is, [−o] and [−r]. In LFG's understanding, passivization is thus a manipulation of the lexical entry for a verb by which the [−o] argument of the active version of the verb is suppressed to form its passive counterpart. The SUBJ function is then assigned to the next available semantic role, that is, [−r]. Example (188) shows an English verb in active voice and its passive counterpart.

(188) English:

a. AGENT *eats* PATIENT.

a-structure:	*eat₁*	⟨	AGENT	PATIENT	⟩
			[−o]	[−r]	
			|	|	
f-structure:			SUBJ	OBJ	

b. PATIENT *is eaten*.

a-structure:	*eat₂*	⟨	AGENT	PATIENT	⟩
			[−o]	[−r]	
			Ø	|	
f-structure:				SUBJ	

Passive of transitive verbs

As noted initially, Ayeri permits transitive verbs to be detransitivized by making them passive. We have already seen how LFG handles passivization according to Bresnan et al. (2016). Example (189a) shows a regular statement in active voice,[25] Example (189b) shows the corresponding passive version of the sentence.

Just as in the English example in (179), ᨿᨿᨾ *Niyas* in (189a) is identified as corresponding to the agent argument which the verb ᨲᨶᨿ᨞ *kond-* 'eat' subcategorizes for. The agent argument qualifies for [−o], so this is also our subject. The banana, ᨴᨷᨿ *disu*, then, is identified as corresponding to the patient argument and is thus mapped to [−r], forming the object. Since ᨿᨿᨾ *Niyas* is specified as [−o], it is eligible for dropping, forming the passive sentence presented in (189b). Since there is no [−o] to map the subject function to, the subject is mapped onto [−r] instead. While in languages like English the former object appears in the nominative case,

[25] The topicalized argument is marked with an asterisk. This is non-standard, however.

(189) a. *Ang konja Niyas disuley.*
ang=kond-ya Ø= Niyas disu-ley
AT= eat-3SG.M TOP=Niyas banana-P.INAN
'Niyas eats a banana.'

eat₁ ⟨	AGENT	PATIENT ⟩
	[−o]	[−r]
	|	|
	SUBJ*	OBJ
	|	|
	Niyas	*banana*

b. *Kondara disuley.*
kond-ara disu-ley
eat-3SG.INAN banana-P.INAN
'A banana is eaten.'

eat₂ ⟨	AGENT	PATIENT ⟩
	[−o]	[−r]
	Ø	|
		SUBJ
		|
		banana

Ayeri nonetheless keeps the patient marking and the verb agrees with the patient subject.

Also unlike in English, it is not possible to have the verb agree with the patient subject and to reintroduce the agent as an oblique in either the agent or the instrumental case, as illustrated in (190a) (for English, compare Needham and Toivonen 2011: 416). Instead, one may rather keep the active phrasing and choose to topicalize the patient argument as in (190b).

(190) a. **Kondara disuley*
kond-ara disu-ley
eat-3SG.INAN banana-P.INAN
ang/ri Niyas.
ang=/ri=Niyas
A=/INS= Niyas
Intended: 'A banana is eaten by Niyas.'

eat₂ ⟨	PATIENT ⟩	AGENT
	[−r]	[−o]
	|	|
	SUBJ	OBL$_{agt}$
	|	|
	banana	*Niyas*

b. *Le konja ang Niyas disu.*
le= kond-ya ang=Niyas disu-Ø
PT=eat-3SG.M A= Niyas banana-TOP
'The banana, Niyas eats it.'

eat₁ ⟨	AGENT	PATIENT ⟩
	[−o]	[−r]
	|	|
	SUBJ	OBJ*
	|	|
	Niyas	*banana*

Passive of ditransitive verbs

Ditransitive verbs add a third role to the argument structure of a verb. This means that the direct object—marked with the patient case since it is a patient or a theme—is mapped to [−r], while the indirect/secondary object—marked with the dative case since it is a recipient or beneficiary—is mapped to [+o]. As in English ditransitive clauses with dative movement (*x gives y the z*), object and secondary

object appear in the order OBJ—OBJ$_\theta$. However, Ayeri differs from English in its mapping of semantic roles according to the [± o, ± r] scheme introduced above. An example of an active ditransitive sentence is given in (191).

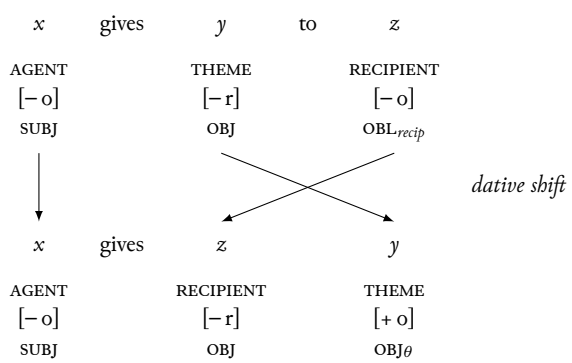
(191) *Ang ningye* *Gada* *budangas* *ledanyam.*
ang=ning-ye Ø= Gada budang-as ledan-yam
AT= tell-3SG.F TOP=Gada news-P friend-DAT
'Gada tells a friend the news.'

tell$_1$ ⟨ AGENT THEME RECIPIENT ⟩
[– o] [– r] [+ o]
SUBJ* OBJ OBJ$_\theta$
Gada *news* *friend*

The question here is which of the arguments of a ditransitive verb can be passivized. According to Bresnan et al. (2016), in English, the subject function, as the syntactic equivalent of [– o], may be dropped. The [– r] role, that is, the recipient or beneficiary, becomes the new subject while the patient or theme remains as a secondary object [+ o]. Example (193) illustrates this using the example sentence from (191). It needs to be duly noted, however, that English behaves a little irregularly here due conflating accusative and dative case into one objective case. This will be especially apparent in comparing English to German—and Ayeri. As Kibort (2007) explains (compare (192)):

> English has lost the morphological means to distinguish [the beneficiary] from the primary object and hence base predicates treat beneficiaries as obliques. [...] However, through dative shift, verbs of a certain class in English are capable of recovering their dative argument position: dative shift (or, dative alternation) in English is a morphosemantic operation on argument structure which alters the mapping of the semantic participants of the predicate onto argument positions by remapping the beneficiary onto the primary object position, and "downgrading" the theme to the secondary object position. (260)

(192) English:



(193) English:

a. *John tells Mary the news.*

tell$_1$	⟨	AGENT	RECIPIENT	THEME	⟩
		[−o]	[−r]	[+o]	
		|	|	|	
		SUBJ	OBJ	OBJ$_\theta$	
		|	|	|	
		John	*Mary*	*news*	

b. *Mary is told the news.*

tell$_2$	⟨	AGENT	RECIPIENT	THEME	⟩
		[−o]	[−r]	[+o]	
		Ø	|	|	
			SUBJ	OBJ$_\theta$	
			|	|	
			Mary	*news*	

c. * *The news is told Mary.*

tell$_2$	⟨	AGENT	RECIPIENT	THEME	⟩
		[−o]	[−r]	[+o]	
		Ø	|	|	
			OBJ	SUBJ	
			|	|	
			Mary	*news*	

German, as mentioned above, works a little different from English. This is illustrated by the example sentences in (194). In (194a), the agent is marked with the nominative case, the recipient with the dative case, and the theme with the accusative case. As in the English example (193b), (194b) drops the agent. Passive voice is expressed by the auxiliary *werden* 'become' with the content verb appearing as a past participle. German furthermore assigns the OBJ function to the theme and the OBJ$_\theta$ function to the recipient. The primary object thus maps onto [−r] and the secondary object onto [+o]. This is the reverse of what English does. If we assign the subject—and thus nominative case—to the recipient and let the theme remain in the accusative, this leads to an ungrammatical outcome. The correct reading is instead achieved in (194c), whose English equivalent (193c) is ungrammatical. The [−r] argument serves as the subject in both languages but is associated with different functions.

In the grammatically correct example (194c), *Anna* is singular, but the verb *werden* has plural agreement which can only be with the plural NP *die neuigkeiten*. We have to assume, thus, that the theme receives the subject role with nominative case, while the recipient remains in the dative and appears at the front of the

clause as a topic. Names in (Standard) German are only marked for genitive case, but replacing *Anna* with a pronoun makes case marking more clear. If we replace *Anna* with the corresponding nominative singular pronoun *sie* 'she' in (194b), the sentence is still wrong. Using the dative singular pronoun *ihr* '(to) her' in (194c), however, results in the desired, grammatically correct result.

(194) German:

a.

Thomas	*erzählt*	*Anna*	*die*	*neuigkeiten.*
Thomas	erzähl-t	Anna	die	neuigkeit-en
Thomas.NOM	tell-3SG.PRS	Anna.DAT	DEF.ACC.PL	news-PL

'Thomas tells Anna the news.'

tell$_1$	⟨ AGENT	RECIPIENT	THEME ⟩
	[−o]	[+o]	[−r]
	|	|	|
	SUBJ	OBJ$_\theta$	OBJ
	|	|	|
	Thomas	*Anna*	*news*

b.

**Anna*	*wird*	*die*	*neuigkeiten*	*erzählt.*
Anna	wird	die	neuigkeit-en	erzähl-t
Anna.NOM	become-3SG.PRS	DEF.ACC.PL	news-PL	tell-PST.PTCP

Intended: 'Anna is told the news.'

tell$_2$	⟨ AGENT	RECIPIENT	THEME ⟩
	[−o]	[+o]	[−r]
	Ø	|	|
		SUBJ	OBJ
		|	|
		Anna	*news*

c.

Anna	*werden*	*die*	*neuigkeiten*	*erzählt.*
Anna	werd-en	die	neuigkeit-en	erzähl-t
Anna.DAT	become-3PL.PRS	DEF.NOM.PL	news-PL	tell-PST.PTCP

'Anna is told the news.'

tell$_2$	⟨ AGENT	RECIPIENT	THEME ⟩
	[−o]	[+o]	[−r]
	Ø	|	|
		OBJ$_\theta$*	SUBJ
		|	|
		Anna	*news*

As we have seen in the previous section, subjects of monotransitive passive verbs in Ayeri retain their patient case marking. The question is, thus, what happens to the subject of ditransitive passive verbs. As we have already seen in (191) above, the recipient receives dative case marking and is classified as [−r].

Considering English's strategy of making the [−r] argument the subject of the passive clause, this theoretically opens a possibility of having a recipient subject in the dative case. As we will see, however, Ayeri does not follow this route.

In analogy to the previous examples in this section, (195a) attempts to construct the sentence in (191) with the [+o] argument as a subject. Parallel to how Ayeri forms passives of monotransitive verbs, this example sentence keeps the dative case marking on the purported subject: the verb shows agreement with a third-person masculine referent, which ꕥꕩꕧꕤ *Ajān* satisfies. This, however, does not produce a valid outcome. Demoting the recipient to a non-core argument would not work either, since dative marking is the only available strategy to mark the recipient as such—Ayeri cannot rephrase the recipient as a PP.

(195)	a.	**Yam*	*ningya*	*budangas*	*tell₂*	⟨	AGENT	THEME	RECIPIENT ⟩
		yam=	ning-ya	budang-as			[−o]	[−r]	[+o]
		DATT=	tell-3SG.M	news-P			Ø	|	|
			Ajān.					OBJ	SUBJ*
			TOP=Ajān					|	|
			TOP=Ajān					*news*	*Ajān*
		Intended: 'Ajān is told the news.'							
	b.	*Yam*	*ningyo*	*budangas*	*tell₂*	⟨	AGENT	THEME	RECIPIENT ⟩
		yam=	ning-yo	budang-as			[−o]	[−r]	[+o]
		DATT=	tell-3SG.N	news-P			Ø	|	|
			Ajān.					SUBJ	OBJ$_\theta$*
			Ø= Ajān					|	|
			TOP=Ajān					*news*	*Ajān*
		'Ajān is told the news.'							

Reversing verb agreement to mark the theme as a subject in (195b), on the other hand, produces a grammatically valid statement. This is an extension of the strategy Ayeri uses for monotransitive verbs: make the patient-marked argument the subject. Ayeri can then mark the recipient as a topic instead. Essentially, Ayeri works like German in this regard, except that case marking on the theme/patient NP does not change to agent, since this makes no sense semantically—the agent case in Ayeri is not fully equivalent to the nominative case of languages such as English or German.[26]

[26] Preferring this strategy may be native-language interference, as a native German speaker. However, I made a rule that only agents or patients can be subjects in Ayeri. This precludes recipients from acting as subjects even if native-language interference were at play. German simply gives convenient evidence for an alternative to English's handling of this phenomenon.

According to Bresnan et al. (2016), "if we try to apply intransitivization to either the active ditransitive argument structure or the passive version, it will fail. Suppressions may apply only to unmarked roles, i.e. those that are negatively specified" (339). The example sentences in (196) and (197) accordingly try removing one of the objects in active voice (196) and in passive voice (197). Suppressing the recipient as a [+o] argument produces a grammatically correct result in spite of not being negatively specified;[27] suppressing the theme as a [−r] argument yields a 'questionable' and an ungrammatical result, respectively, in (196a) and (197a). The sentence in (196a) is not quite grammatical only in that the statement cannot be without context. If read as elliptical, it becomes acceptable. The ungrammatical example in (197a) is due to the rule against recipient subjects.

(196) a. ?*Ang ningye* *Gada* *tell₁* ⟨ AGENT THEME RECIPIENT ⟩
ang=ning-ye Ø= Gada [−o] [−r] [+o]
AT= tell-3SG.F TOP=Gada | Ø |
yam Ajān. SUBJ* OBJ
yam=Ajān | |
DAT= Ajān *Gada* *Ajān*
'?Gada tells Ajān.'

b. *Ang ningye* *Gada* *tell₁* ⟨ AGENT THEME RECIPIENT ⟩
ang=ning-ye Ø= Gada [−o] [−r] [+o]
AT= tell-3SG.F TOP=Gada | | Ø
budangas. SUBJ* OBJ$_\theta$
budang-as | |
news-P *Gada* *news*
'Gada tells the news.'

Interactions between raising verbs and passive voice

Raising verbs provide an argument to the matrix predicate which is not licensed by its semantics (compare section 6.4.3, p. 375). It is thus of interest to explore the interplay between Ayeri's possibly only raising verb, שׂרְפָה *surp-* 'seem', and passive voice. Bresnan et al. (2016) give the a-structure for English *seem* as in (198). They note that *seem* cannot appear in passive voice. As we have seen before, שׂרְפָה *surp-*, like its English counterpart, assigns SUBJ to an external argument. That is, the syntactic subject of *seem* is not its logical subject, hence this argument is given as [−r] instead of [−o]. The [−o] annotation is instead chosen for the experiencer

27 This looks like a case of unspecified object deletion, though Bresnan et al. (2016) note that this typically applies to patients and themes, with no mention of recipients (333).

(197) a. **Ningya* *yam Ajān.* — *tell₂* ⟨ AGENT [−o] Ø, THEME [−r] Ø, RECIPIENT [+o] → SUBJ → *Ajān* ⟩
ning-ya yam=Ajān
tell-3SG.F DAT= Ajān
'Ajān is told.'

b. *Ningyo* *budangas.* — *tell₂* ⟨ AGENT [−o] Ø, THEME [−r] → SUBJ → *news*, RECIPIENT [+o] Ø ⟩
ning-yo budang-as
tell-3SG.N news-P
'The news is told.'

as an oblique function, which is realized in English as a PP, and as a dative NP in Ayeri. Since open complements (labeled PROPOSITION here) are an 'other' function as well, they also receive [−o] annotation.

(198) *seem* ⟨ _ [−r] → SUBJ, EXPERIENCER [−o] → OBL$_{exp}$, PROPOSITION [−o] → XCOMP ⟩

It makes no sense in English to put *seem* into the passive voice with the experiencer becoming the subject (**I am seemed*). Since Ayeri does not permit dative NPs to be subjects of passive verbs, this is not possible there either. The question is, however, whether it is possible to passivize the subordinate verb in order to raise its passive subject. An attempt to construct such a statement is given in (199).

(199) a. *Surpreng,* *valyara* *umangley.*
surp=reng valy-ara umang-ley
seem=3SG.INAN.A enjoy-3SG.INAN beach-P.INAN
'It seems that the beach is enjoyed.'

b. **Surpara* *umangley* *valyyam.*
surp-ara umang-ley valy-yam
seem-3SG.INAN beach-P.INAN enjoy-PTCP
Intended: 'The beach seems to be enjoyed.'

c. **Surpara* *valyyam* *umangley.*
surp-ara valy-yam umang-ley
seem-3SG.INAN enjoy-PTCP beach-P.INAN
Intended: 'The beach seems to be enjoyed.'

While it is unproblematic for the complement clause in (199a) to be in passive voice, raising the patient subject in (199bc) does not yield an acceptable result. This

may be due to Ayeri lacking morphological voice-marking means—the difference is instead realized in the case marking of the subject argument. The verb *valyyam* in (199b) is thus not readily recognizable as a passive verb form. Both sentences are odd in that *surp-* 'seem' is complemented by a patient subject. This is comparable to **The beach is seemed to be enjoyed* in English.

Moreover, *surp-* does not subcategorize for a patient argument, so it would seem odd for it to take a patient subject that makes it look as though it were passivized. There is also a certain structural similarity to unaccusative verbs (compare section 6.4.6, p. 390). Here, the subject is specified as [−r] as well, yet it appears in the agent case. The closest grammatically permissible way to express the intended statement in (199bc) is to topicalize the patient argument of the subordinate verb, as shown in (200).

(200) *Le surptang valyyam umang.*
le= surp=tang valy-yam umang-Ø
PT.INAN=seem=3PL.M.A enjoy-PTCP beach-TOP
'The beach, they seem to enjoy it.'

Passivization of derived arguments

Since derived arguments, as oblique functions, are mapped to [−o] and SUBJ as a [−o] function is eligible for passivization, the question is whether oblique arguments can also become subjects of passive sentences. As (201b) shows, this is not possible. Following the way Ayeri keeps the case marking of patient subjects of passive verbs intact for semantic reasons, the subject in this example has genitive marking. We know from verb agreement with a singular third person that *seles* 'shelf' is supposed to be the subject here. However, as we have seen above, Ayeri only permits agent and patient subjects. Hence, in contrast, (201c) is correct in that in absence of the agent, the patient is assigned the SUBJ function (Bresnan et al. 2016: 334). Verb agreement is here with a plural subject, which *tehasyeley* 'cups' satisfies. If both NPs were inanimate singulars, the sentence would be ambiguous between the passivization strategies in (201b) and (201c).

6.4.9 Causatives

While passives delete one or more arguments, causative constructions add one: the causer. This function has control over an action as a force which motivates or forces the actor of the plain sentence to act. As we have seen before, Ayeri behaves in an untypical way in not making causers subjects (section 4.1.3, p. 121). Bresnan

(201) a. *Ang paye Misan tehasyeley*
ang=pa-ye Ø= Misan tehas-ye-ley
AT= take-3SG.F TOP=Misan cup-PL-P.INAN
selesena.
seles-ena
shelf-GEN
'Misan takes cups from the shelf.'

take₁ ⟨ AGENT THEME SOURCE ⟩
[−o] [−r] [−o]
| | |
SUBJ* OBJ OBL_{src}
| | |
Misan *cups* *shelf*

b. **Na pāra tehasyeley seles.*
na= pa-ara tehas-ye-ley seles-Ø
GENT=take-3SG.INAN cup-PL-P.INAN shelf-TOP
Intended: 'The shelf is taken cups from.'

take₂ ⟨ AGENT THEME SOURCE ⟩
[−o] [−r] [−o]
Ø | |
OBJ SUBJ*
| |
cups *shelf*

c. *Na pāran tehasyeley seles.*
na= pa-aran tehas-ye-ley seles-Ø
GENT=take-3PL.INAN cup-PL-P.INAN shelf-TOP
'The shelf, cups are taken from there.'

take₂ ⟨ AGENT THEME SOURCE ⟩
[−o] [−r] [−o]
Ø | |
SUBJ OBL_{src}*
| |
cups *shelf*

et al. (2016: 342) give the annotation for causers as $\emptyset \rightarrow \hat{\theta}_{\text{causer}}$: a primary causer-subject is added to the argument structure. Causers are given as mapping to [−o] and to the SUBJ function. In Ayeri, causers are also mapped to [−o], but to the OBL_{θ} function rather than to SUBJ, that is, basically like a derived argument which is added to the a-structure of a verb. The agent remains the logical subject, $\hat{\theta}$, and is not demoted to an object or oblique function, and neither is the patient demoted to a secondary object. Ayeri instead topicalizes causers to express the sense of 'Z makes X VERB Y'. An example is provided in (202).

(202) a. *Ang nimpyan pralanye hakasley miye.*
ang=nimp-yan pralan-ye-Ø hakas-ley miye
AT= run-3PL.M recruit-PL-TOP mile-P.INAN six
'The recruits run six miles.'

verb ⟨ AGENT PATIENT ⟩
[−o] [−r]
| |
SUBJ OBJ
| |
recruits *miles*

b. *Sā nimpyan pralanjang hakasley*
sā= nimp-yan pralan-ye-ang hakas-ley
CAUT=run-3PL.M recruit-PL-A mile-P.INAN
miye nosāya.
miye nosāya-Ø
six chief-TOP
'The chief makes the recruits run six miles.'

verb ⟨ AGENT PATIENT CAUSER ⟩
[−o] [−r] [−o]
| | |
SUBJ OBJ OBL_{caus}*
| | |
recruit *miles* *chief*

In (202) the ཁྲན་བཡངས་ *pralanye* 'recruits, rookies' are marked as agent in both (a) and (b) versions, and the རྒན་ཁ་ *hakasley* 'miles' are marked as patient. The verb in both cases has agreement with an animate masculine plural NP, which refers to ཁྲན་བཡངས་ *pralanye*. This also means that the agent NP in both cases is the syntactic subject. In (202b), a causer, གསས་ *nosāya* 'chief' is added as an argument and topicalized, basically for the reason of being the logical subject. A weaker kind of causation may be expressed by putting the causer in the instrumental case, as in (203), essentially as a secondary agent on whose behalf the primary agent acts.

(203)

Ri	*nimpyan*	*pralanjang*	*hakasley*	*miye*	*nosāya.*
ri=	nimp-yan	pralan-ye-ang	hakas-ley	miye	nosāya-Ø
INST=run-3PL.M		recruit-PL-A	mile-P.INAN	six	chief-TOP

'The chief has/lets the recruits run six miles.'

6.5 Complementizer phrases

Various head types, verbs especially, can take complements or adjuncts which are themselves clauses and form subordinate clauses dependent on the main clause. Most notably, these are complement clauses and relative clauses. Another common type of dependent clause is the conditional clause. As before, this section will describe their structure and function.

As (204) and (205) show, the head of a CP is formed by a conjunction, C^0, which also can be empty and is indeed so for some basic purposes in Ayeri. At least in Ayeri, conjunctions cannot be modified, so neither phrase-structure diagram includes a C′ to attach an adjunct to. The complement of C^0 is formed by a verbal phrase type—IP or VP, but also plain S in the case of a copular clause. This means that the complement clause may be finite or infinite. The CP itself may fulfill different grammatical functions: it may be a closed complement when it acts as a complement clause, as well as an adjunct when it acts as a relative clause.

(204) $\text{CP} \rightarrow \begin{array}{cc} C^0 & \text{XP} \\ \uparrow = \downarrow & \uparrow = \downarrow \end{array}$

(205)

$$\begin{array}{c} (\uparrow \text{COMP}) = \downarrow \vee (\uparrow \text{ADJ}) = \downarrow \\ \text{CP} \\ \begin{array}{cc} \uparrow = \downarrow & \uparrow = \downarrow \\ C^0 & \text{XP} \end{array} \end{array}$$

Since conjunctions do not inflect, the morpholexical specification in (206) simply lists a CONJ feature which takes the conjunction as a value, for instance, *and*, *or*, *if*, etc. Relativizers form an exception to this rule, however, so about additional rules for relative pronouns, see below. Ayeri is rather sparse about different conjunction types, compare section 4.6.2 (p. 220). The conjunction corresponding to English *that* is zero, so that simple complement clauses are juxtaposed. Examples of complement clauses are provided in (207).

(206) ... C (↑ CONJ) = '...'

(207) a. finite complement clause:

Tunyang, yomongyeng edaya.
tun=yang yoma-ong=yeng edaya
wish=ISG.A exist-IRR=ISG.A here
'I wish (that) she were here.'

b. infinite complement clause:

Korontang briyyam.
koron=tang briy-yam
know=3PL.M.A celebrate-PTCP
'They know how to celebrate.'

c. final clause:

Garayāng kadāre sahanang yoming.
gara=yāng kadāre saha=nang yoming
call=3SG.M.A so.that come-IPL.A maybe
'He called so that we might come.'

d. conditional clause:

Vāng larau, le tavvāng pasan.
vāng larau le= tav=vāng pasan-Ø
2.A nice PT=get=2.A candy-TOP
'If you're good, you'll get some candy.'

e. relative clause:

Ang koronay adaley si mirayang.
ang=koron=ay.Ø ada-ley si mira=yang
AT= know=ISG.TOP that-P.INAN REL do=ISG.A
'I know what I am doing.'

6.5.1 Complement clauses

Complement clauses like those in (207a–c) are very commonly occurring clausal complements or adjuncts of verbs. The respective c- and f-structures of the sentences in (207a) and (207c) are charted in (208). Since (207a) has a plain clausal complement *g*, the C^0 position in (208a) is empty. Example (208b), on the other hand, contains a final clause *g* as an adjunct of the verb in *f*—the purpose is not required information here. The conjunction, however, marks the subordinate clause *g* as providing a purpose. In this case, the C^0 position is filled with the conjunction, கடாரே *kadāre* 'so that'. The subclauses *g* of both examples in (208) form independent f-structure cores: the verb as a predicator does not contain arguments controlled by the respective superordinate clause *f* in its a-structure.

The infinite complement clause in (207b) is special in that the subordinate clause is formed by a participle. Even if there is a superficial similarity to control and raising verbs (compare section 6.4.3, pp. 372 ff.), this construction is structurally and functionally different, as shown in (209). The thing which is known is a closed complement subcategorized for by the verb in *f*; the predicator of the complement *g*, however, is an intransitive infinite form and hence there is neither a subject nor an object. The a-structure of the verb is thus simply indicated as *null* in this particular case. Infinite verbs are not precluded from having arguments and adjuncts otherwise, compare section 6.4.3.

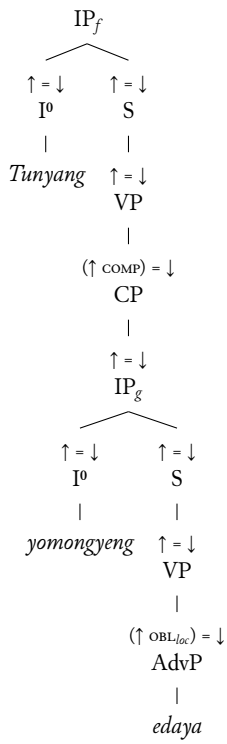
6.5.2 Relative clauses

Relative clauses are clausal adjuncts of nouns. In Ayeri, they are typically headed by a relative pronoun which may agree with its head in case and animacy as well as inflect for its role within the relative clause, compare section 4.2.5. As a pronoun, the relativizer underlies anaphoric control. Functionally, the relative pronoun constitutes a topic which is connected to one of the arguments of the verbs inside the relative clause (Butt et al. 1999: 56–58; Dalrymple 2001: 400–405; Falk 2001: 161–165).[28] This topic is not marked on the verb as such, though, but a different argument of the verb often is.[29] In order to indicate the type of pronoun which the relativizer constitutes, I will use the PRONTYPE feature for consistency with other kinds of pronouns discussed previously. The general morpholexical specification for relative pronouns is given in (210).

[28] These textbooks deal mainly or exclusively with English relative clauses; Bresnan et al. (2016) do not say anything about the f-structure of relative clauses.

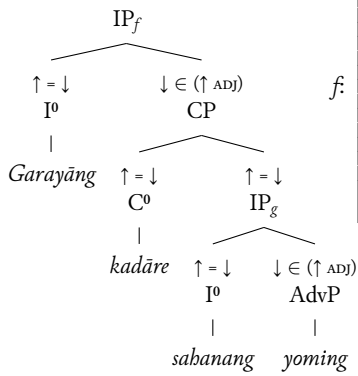
[29] Compare Bresnan et al. (2016: 70–71) for an example of set-valued topics in Russian.

(208) a.



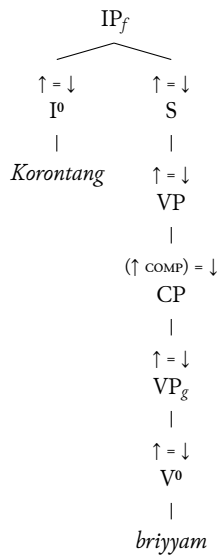
$$f: \begin{bmatrix} \text{PRED} & \text{'}\textit{wish}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{COMP})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"I"}\end{bmatrix} \\ \text{COMP} & g: \begin{bmatrix} \text{PRED} & \text{'}\textit{exist}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{OBL}_{loc})\rangle\text{'} \\ \text{MOOD} & \text{IRR} \\ \text{SUBJ} & \begin{bmatrix}\text{"she"}\end{bmatrix} \\ \text{OBL}_{loc} & \begin{bmatrix}\text{PRED} & \text{'here'}\end{bmatrix} \end{bmatrix} \end{bmatrix}$$

b.



$$f: \begin{bmatrix} \text{PRED} & \text{'}\textit{call}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"he"}\end{bmatrix} \\ \text{ADJ} & \left\{ g: \begin{bmatrix} \text{CONJ} & \textit{so that} \\ \text{PRED} & \text{'}\textit{come}\ \langle(\uparrow \text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"we"}\end{bmatrix} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{'maybe'}\end{bmatrix}\right\} \end{bmatrix} \right\} \end{bmatrix}$$

(209)



$$f\colon \begin{bmatrix} \text{PRED} & \text{`}\textit{know}\ \langle(\uparrow \text{SUBJ})\ (\uparrow \text{COMP})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix}\text{"they"}\end{bmatrix} \\ \text{COMP} & g: \begin{bmatrix} \text{PRED} & \text{`}\textit{celebrate}\ \langle \textit{null}\rangle\text{'} \\ \text{ADJ} & \left\{\begin{bmatrix}\text{PRED} & \text{`how'}\end{bmatrix}\right\} \end{bmatrix} \end{bmatrix}$$

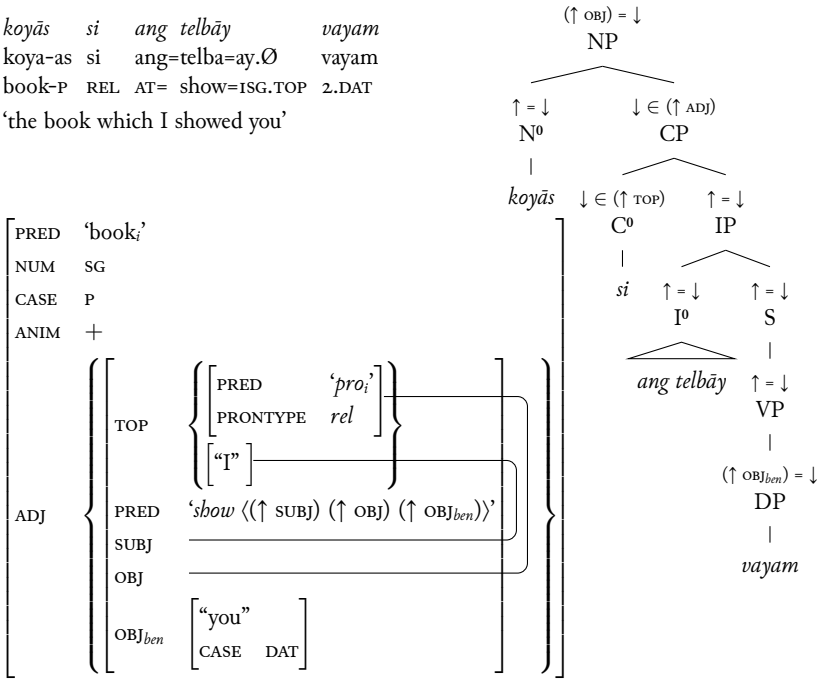
(210)

...	C	(↑ PRED)	=	*'pro'*	
		(↑ PRONTYPE)	=	*rel*	
		(((ADJ ↑) CASE)	$=_c$	{A, P, DAT, GEN, LOC, INS, CAUS}	)
		(((ADJ ↑) ANIM)	$=_c$	±	)
		((GF ADJ ↑)			)
		((↑ CASE)	=	{DAT, GEN, LOC, INS, CAUS}	)
		((↑ ANIM)	=	±	)

According to the definitions in (210), a relative pronoun's agreement with an *external* controller is conceptualized as a constraining equation where the relative pronoun requires being included in the ADJ of a GF which contains CASE and ANIM features which equal the values the relative pronoun specifies. Any roles which the relative pronoun receives from an *internal* predicator are realized by the CASE and ANIM features. Internal additional case marking is limited to those grammatical functions which are not subject or object.

In example (211), we see the plain relativizer ඤ *si* with no external or internal case marking, since the relative clause is directly adjacent to its head and the relative pronoun has the role of a patient within the relative clause. The agent forms the secondary topic of the relative clause. Since we defined case marking for the external head as an effect of agreement, the f-structure would not change if the relativizer were ඤඋ *sas*, that is, marked for an animate-patient controller outside of the relative clause.

(211) *koyās* *si* *ang* *telbāy* *vayam*
koya-as si ang=telba=ay.Ø vayam
book-P REL AT= show=1SG.TOP 2.DAT
'the book which I showed you'

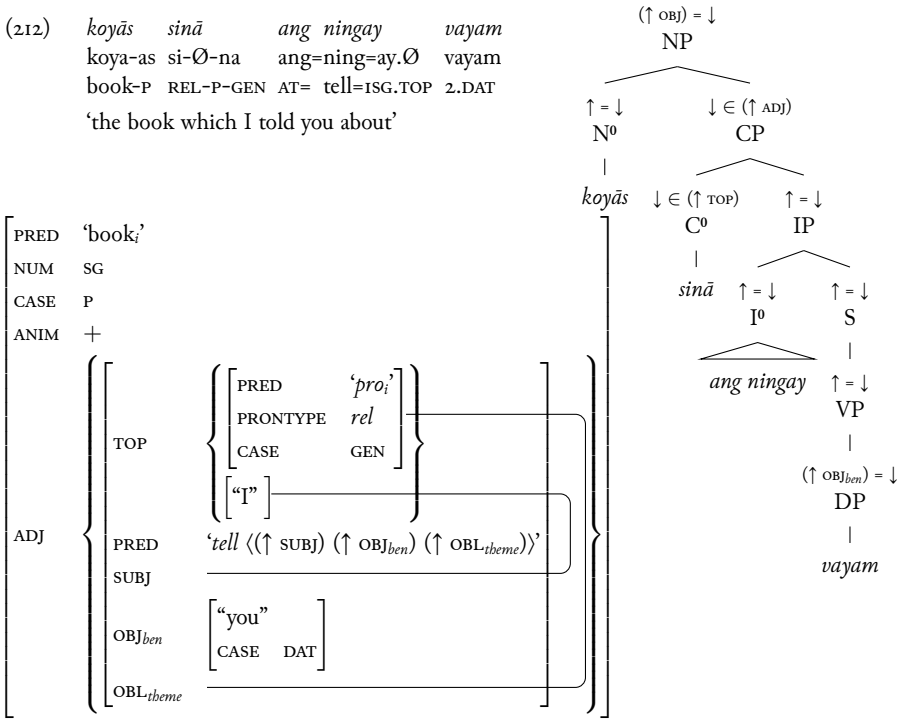


At first glance, the example in (212) is not much different from the previous one, however, the relativizer has been changed to ཟིན *sinā* to mark the controller of the relativizer as the relative clause's OBL$_{theme}$. Accordingly, the f-structure holding information about the relativizer has gained a CASE feature with the attribute GEN to reflect internal case marking of the relativizer. Essentially, the relative pronoun reflects the role of the internal grammatical function it links to as a topic.

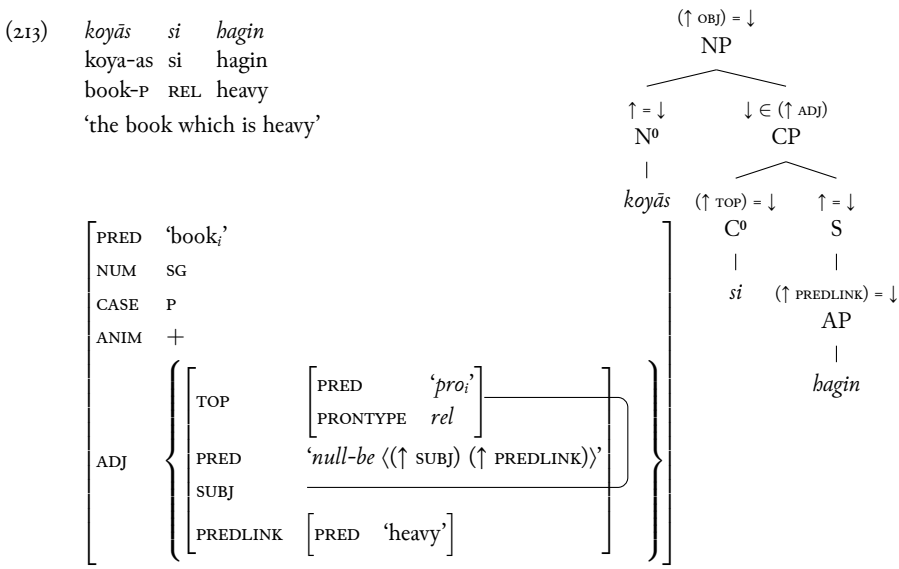
It has been mentioned initially that complement clauses may also have S complements. This is the case with a copular clause complementing the relative pronoun, as in (213). Here, the relativizer substitutes its external controller ཤེས་ *koyās* 'book', which is a patient form, as the copular clause's subject to which the quality ཆགས་ *hagin* 'heavy' is attributed. Since there is no other NP which could be a secondary topic, the topic in (213) is not given as a list of attributes.

The example in (214) illustrates why it may be preferable to use a resumptive pronoun in a relative clause. The relativizer's controller is ཡ་ཡོན་ *ayonas* 'man', which is a possessor in the relative clause. The position which the possessor would usually occupy is redundantly filled here with a resumptive pronoun which is topicalized. As discussed previously, it is grammatical in Ayeri to make a possessor the topic of its superior f-structure, so a construction using ཟིན *sinā* 'whose' as in (212)

(212) *koyās* *sinā* *ang* *ningay* *vayam*
koya-as si-Ø-na ang=ning=ay.Ø vayam
book-P REL-P-GEN AT= tell=1SG.TOP 2.DAT
'the book which I told you about'



(213) *koyās* *si* *hagin*
koya-as si hagin
book-P REL heavy
'the book which is heavy'



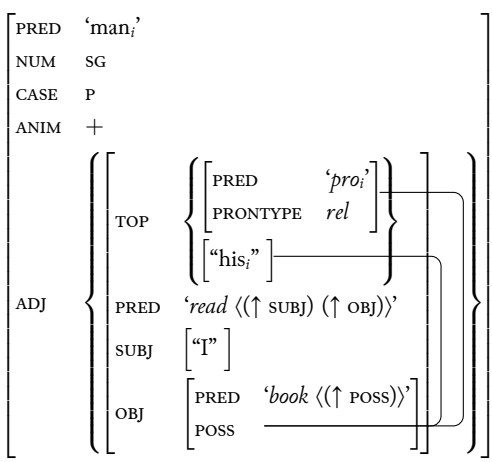
should not be a problem. However, since genitive case may mark both possessors and oblique themes, the construction with the resumptive pronoun may be used to disambiguate between reading someone's book and reading a book about someone. This distinction is obliterated by using ꠞ꠰꠸ *sinā*.

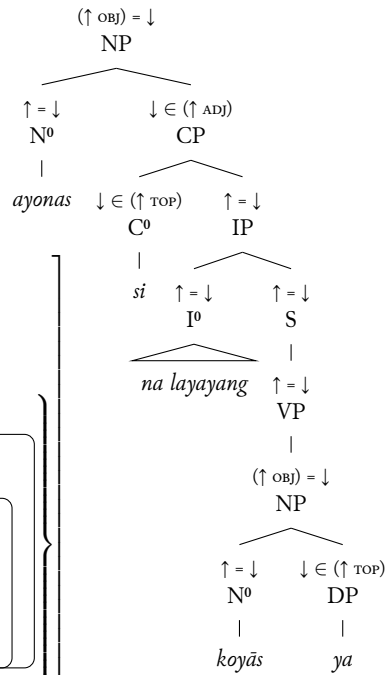
(214)

ayonas	*si*	*na*	*layayang*	*koyās*
ayon-as	si	na=	laya=yang	koya-as
man-P	REL	GENT=read=ISG.A		book-P

ya
ya.Ø
3SG.M.TOP

'the man whose book I read'





All of the relative clauses exemplified so far have been externally headed, however, English at least also allows headless relative clauses. These find use, for instance, in subject clauses, such as in *What they found on the table was a bar of soap*, where *What they found on the table* is a relative clause which has no nominal head to modify. Ayeri avoids this kind of construction and instead uses a generic noun or a dummy pronoun as a head instead, at least in more formal registers. An example with a headless relative clause is given in (215). The sentence in this example is given as questionable, however. What would be preferred in Ayeri is to introduce this sentence with ꠁꠣꠞ꠰꠷꠸꠹ *adareng* 'that' (that-A.INAN). This way, the relative clause is provided with a head in the way of 'that which'. Also note that Ayeri does not distinguish between restricted and unrestricted relative clauses the way English does.

(215) ? *Si ang sungyan prihinya, bituayley disaeri.*
si ang=sung=yan.Ø prihin-ya bituay-ley disa-eri
REL AT= find=3PL.M.TOP table-LOC loaf-P.INAN soap-INS
'What they found on the table was a piece of soap.'

6.5.3 Conditional clauses

Protasis (condition) and apodosis (consequence) in Ayeri may or may not be introduced by a conjunction. The two conjunctions found with conditional clauses are ณฆ *bata* 'if, whether' and ฬษฎ *kada* 'then, thus, so'. Examples of conditional clauses are given in (216). Protasis and apodosis may also appear in the opposite order in these examples. Generally, either conjunction may be dropped, though it is most common to drop the one of the first clause, whether it is the apodosis or the protasis. In more formal language, neither clause may be introduced by a conjunction. The conditional meaning has to be inferred from context in these cases, as there is not even word order inversion to mark the construction as conditional.

(216) a. *Bata sa menuvāng ay, kada ang ersay vayam.*
bata sa= menu=vāng ay.Ø kada ang=ers=ay.Ø vayam
if PT=visit=2.A ISG.TOP then AT= cook=ISG.TOP 2.DAT
'If you visit me, then I will cook for you.'

b. *Ang kondvāng nihagayeley, kada divvāng sapin.*
ang=kond=vāng nihaga-ye-ley kada div=vāng sapin
AT= eat=2.A vegetable-PL-P.INAN then stay=2.A healthy
'If you eat your vegetables, you will stay healthy.'

c. *Sa ripavāng ay, ang gumay vayam.*
sa= ripa=vāng ay.Ø ang=gum=ay.Ø vayam
PT=pay=2.A ISG.TOP A= work=ISG.A 2.DAT
'You pay me, I will work for you.'

As described in section 4.5.2, Ayeri is not very strict about tense marking if tense can be inferred from context. It is common, thus, that both clauses have the same tense marking—very often, this will be none. In order to express a counterfactual conditional, the irrealis mood is used, as in (217). Ayeri does not distinguish between subjunctive and conditional moods; irrealis covers both.

(217) *Yomongyang adaya, sa nelongyang va.*
yoma-ong=yang adaya sa= nel-ong=yang va.Ø
exist-IRR=ISG.A there PT=help-IRR=ISG.A 2.P
'If I were there, I would help you.'

Since Ayeri uses a zero-copula, there is no verb to mark for irrealis in con-

ditions containing a copular clause. An adverb expressing a potential action like ꠀꠟꠁꠞ *yoming* 'maybe, perhaps' may be used in these cases, or no marker at all. Both options are illustrated in (218).

(218) *Yang ijan (yoming), sa intongyang koya-hen si vacyang.*
yang ijan (yoming) sa=int-ong=yang koya-Ø=hen si vac=yang
ISG.A rich (maybe) PT=buy-IRR=ISG.A book-TOP=all REL like=ISG.A
'If I were rich, I would buy all the books I like.'

Besides positive conditions of the kind IF *x* THEN *y*, there are also negative ones of the kind *x* UNLESS *y*: a proposition *x* is valid unless a condition *y* is fulfilled. Ayeri does not possess a dedicated conjunction expressing 'unless', however, it has ꠅꠞꠕꠀ *nārya* as a general-purpose negative conjunction. It may also use negation as a morphological means to mark a negative condition.

Example (219a) displays the first strategy: the negative condition is indicated by the conjunction ꠅꠞꠕꠀ *nārya*. This conjunction can mostly be translated as 'but' in preverbal, clause-initial position. Here, however, it rather serves the purpose of 'except' or 'unless'. Example (219b), on the other hand, is an extension to unintroduced conditional clauses as illustrated by (216c). Here, the negative condition, ꠕꠞꠕꠞꠁꠞ *toroyyāng* '(if) he is not sleeping', is solely expressed by negation of the verb and the juxtaposition of clauses. ꠀꠀ *bata* may also be used together with a verb in negative mood.

(219) a. *Sa-sahoyyang, nārya bengyāng, simalyāng.*
sa∼saha-oy=yang nārya beng=yāng simal=yāng
ITER∼come-NEG=3SG.M.A but admit=3SG.M.A be.sorry=3SG.M.A
'I will not return unless he admits he is sorry.'

b. *Gumasayāng, toroyyāng.*
gum-asa=yāng tor-oy=yāng
work-HAB=3SG.M.A sleep-NEG=3SG.M.A
'He works unless he is sleeping.'
or: 'He works if he is not sleeping.'

A Names

A.1 Masculine names

ཨཇཱན།ཀ *Ajan*
ཨཇཱན།ཀླན།ཀ *Ajān*
ཨ་ཁན།ཀ *Akan*
ཨ་མཱན།ཀ *Amān*
ཨ་པན།ཀ *Apan*
ཨ་པི་ཀན།ཀ *Apican*
ཨ་བན།ཀ *Banan*
བཱཡ་ཧན།ཀ *Bayhan*
བཱཡ་ཁ་ན།ཀ *Baykan*
བི་ཧཱན།ཀ *Bihān*
ཀཱ22ཡ *Canya*
ཌེ22ན *Denan*
ཌི་ཡ་ན *Diyan*
ག22ཧཱན།ཀ *Gahān*
ཧ་ཝ22ན *Hanuan*
ཧ་ཝ་ཡ *Hanvan*
ཧ་ཝ་ཌོ *Hinvo*
ཧ་ཝ་ཡོ *Hiro*
ཨ་ཇ22ན *Ijān*
ཨ་ཁ22ན *Ikan*
ཀ་ཌ22ཡ *Kadijan*
ཀ་ག22ན *Kagan*
ཀ་ཡ22ན *Kaman*
ཀ22ན *Kan*
ཀ22ལ *Kolun*
ཀ22ཡ *Kruy*
ཀ22ཡ *Kruyan*
ལ22ཏཱན *Lantān*
ལ22ཡ *Lanyan*
ལ22ཏ *Latun*
ལ22ཌ *Ledo*
ལ22ཁ *Linko*
ལ22ཏ *Lita*
ཨ22ཧཱ *Mahān*
ཨ22ཀ *Makang*
ཨ22ན *Mangan*
ཨ22ཀ *Mangān*
ཨ22ཡ *Mangyan*
ཨ22ཏ *Maran*
ཨ22ཀ *Mican*
ཨ22ཀ *Mico*
ན22ཧ *Nahang*
ནི22ཏ *Nibān*
ནི22ཡ *Niyas*
ཕ22ལ *Pangal*
ཕ22ཏ *Peran*
ཕ22ཡ *Pinyān*
ཕ22ལ *Pralan*
ཕ22ཡ *Prano*
ཕ22ལ *Pulan*
ས22ལ *Saylan*
ཏ22ན *Sān*
ཏ22ཌ *Sedan*
ཏ22ཀ *Sirtang*
ཏ22ཕ *Sopan*
ཏ22ཧ *Suhing*
ཏ22ཕ *Taboy*
ཏ22ཀ *Tang*
ཏ22ཕ *Tapan*
ཏ22ཡ *Taryan*
ཏ22ལ *Telbān*
ཏ22ན *Tenan*
ཏ22ཌ *Tendan*
ཏ22ཡ *Tenyam*
ཏ22ཀ *Tikim*
ཏ22ལ *Tipal*
ཏ22ཕ *Togas*
ཏ22ཡ *Toryan*
ཏ22ཁ *Tukong*
ཨ22ལ *Ulang*
ཝ22 *Ven*
ཝ22 *Vey*
ཝ22ཁ *Veykan*
ཝ22ཕ *Vipin*
ཝ22ག *Virang*
ཡ22 *Yan*
ཡ22ཕ *Yonang*

A.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.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

B Example Texts

B.1 The North Wind and the Sun

(From Becker 2016c)

> The North Wind and the Sun were disputing which was the stronger, when a traveller came along wrapped in a warm cloak. They agreed that the one who first succeeded in making the traveller take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveller fold his cloak around him; and at last the North Wind gave up the attempt. Then the Sun shone out warmly, and immediately the traveller took off his cloak. And so the North Wind was obliged to confess that the Sun was the stronger of the two. (After Aesop; International Phonetic Association 2007: 39)

Ang manga ranyon adauyi Pintemis nay Perin, engyo mico sinyāng luga toya, lingya si lugaya asāyāng si sitang-naykonyāng kong tovaya mato. Sakantong, engongyo mico danyās palung menanang sirī ang pahongya asāya tovaley yana. Ang gihayo Pintemis minganeri-hen yona. Nay gihayong mico nay mico-eng, nay ang da-naykonya rado nay rado-eng asāya tovaley yana. Subryo deramyam ang Pintemis. Cunyo makayam mato epang ang Perin, nay ang pahya edauyikan asāya tovaley yana. Kada rua bengyo ang Pintemis, ang engyo mico cuyam Perin luga toya sam.

(1)

Ang	*manga*	*ranyon*	*adauyi*	*Pintemis*	*nay*	*Perin,*	*engyo*
ang=	manga=	ran-yon	adauyi	Ø=Pintemis	nay	Perin	eng-yo
AT=	PROG=	argue-3PL.N	then	TOP=North.Wind	and	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.'

(2)

Sakantong,	*engongyo*	*mico*	*danyās*	*palung*	*menanang*	*sirī*
sakan=tong	eng-ong-yo	mico	danya-as	palung	menan-ang	si-ri<i>
agree=3PL.N	be.more-IRR-3SG.N	strong	one-P	other	first-A	REL<-A>-CAUS

ang	*pahongya*	*asāya*	*tovaley*	*yana.*
ang=	pah-ong-ya	asāya-Ø	tova-ley	yana
AT=	remove-IRR-3SG.M	traveler-TOP	cloak-P.INAN	3SG.M.GEN

'They agreed that the first one due to whom the traveler would take off his cloak would be stronger than the other.'

(3) a.

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.'

b.

Nay	*gihayong*	*mico*	*nay*	*mico-eng,*	*nay*	*ang*	*da-naykonya*	*rado*	*nay*
nay	giha=yong	mico	nay	mico=eng	nay	ang=	da=naykon-ya	rado	nay
and	blow=3SG.N.A=	strong	and	strong=COMP	and	AT=	so=wrap-3SG.M	tight	and

rado-eng	*asāya*	*tovaley*	*yana.*
rado=eng	asāya-Ø	tova-ley	yana
tight=COMP	traveler-TOP	cloak-P.INAN	3SG.M.GEN.

'And it blew harder and harder, and the traveler so wrapped his cloak tighter and tighter.'

c.

Subryo	*deramyam*	*ang*	*Pintemis.*
Subr-yo	deramyam	ang=	Pintemis
give.up-3SG.N	after.all	A=	North.Wind

'The North Wind gave up after all.'

(4)

Cunyo	*makayam*	*mato*	*epang*	*ang*	*Perin,*	*nay*	*ang*	*pahya*	*edauyikan*
cun-yo	maka-yam	mato	epang	ang=	Perin	nay	ang=	pah-ya	edauyikan
begin-3SG.N	shine-PTCP	warm	next	A=	Sun	and	AT=	remove-3SG.M	immediately

asāya	*tovaley*	*yana.*
asāya-Ø	tova-ley	yana
traveler-TOP	cloak-P.INAN	3SG.M.GEN

'Next, the Sun began to shine warmly, and the traveler immediately took off his cloak.'

(5) *Kada rua bengyo ang Pintemis, ang engyo mico cuyam Perin*
kada rua= beng-yo ang=Pintemis ang=eng-yo mico cuyam Ø= Perin
thus must=admit-3SG A= North.Wind AT= be.more-3SG.N strong indeed TOP=Sun
luga toya sam.
luga toya sam
among 3PL.N.LOC two
'Thus the North Wind had to admit that the Sun was indeed the stronger among both of them.'

B.2 The Fox and the Rooster

(Adapted from Becker 2016b)

Once upon a time, a hungry fox came to a village. He said to the rooster: "Let me hear your beautiful voice!" The proud rooster closed his eyes and crowed loudly. There the fox grabbed him and and carried him into the forest. When the farmers noticed this, they ran after the fox and cried, "The fox is carrying away our rooster!" There the rooster said to the fox, "Tell them, 'I am carrying my rooster and not yours!'" The fox released the rooster from his mouth and called, "I am carrying my rooster and not yours!" There, however, the rooster quickly flew onto a tree. The fox called himself a fool and trotted off. (After Aesop)

ཨ་ནཔཱཡ། ཨདེ་ཁ་ཅུ་པ་ཅིག་ཡོད་ཀྱི་ཡིན། ཨདེ་ཁ་ཅུ་པ་ལས་ཁ་ཤས་ཆེ་ཆུང་ཆུང་ཅིག་ཡོད་ཀྱི་ཡིན། ཨ་ཡི་ཁ་ཡི་ཁ

(1) a.

Mə-bahisya,	*ang sahaya*	*runay*	*mabo*	*minkayya.*
mə=bahis-ya	ang=saha-ya	runay-Ø	mabo	minkay-ya
some=day-LOC	AT= come-3SG.M	fox-TOP	hungry	village-LOC

'Some day a hungry fox came to a village.'

b.

Ang naraya	*aguyanya:*	*Garu,*	*sa ming*	*tangyang*	*kadāre*	*sekay*
ang=nara=ya.Ø	aguyan-ya	gara-u	sa= ming	tang=yang	kadāre	sekay-Ø
AT= speak=3SG.M.TOP	rooster-LOC	call-IMP	PT=can	hear=1SG.A	so.that	voice-TOP

veno	*vana!*
veno	vana
beautiful	2.GEN

'He spoke to a rooster: "Call, so that I can hear your beautiful voice!"'

(2) a.

Ang rimaya	*aguyan*	*viyu*	*nivajas*	*yana*	*nay*	*garayāng*	*baho.*
ang=rima-ya	aguyan-Ø	viyu	niva-ye-as	yana	nay	gara=yāng	baho
AT= close-3SG.M	rooster-TOP	proud	eye-PL-P	3SG.M.GEN	and	call=3SG.M.A	loudly

'The proud rooster closed his eyes and crowed loudly.'

b.

Sa da-kacisaya	*runayang*	*ya*	*nay*	*sa ninyāng*	*ya*
sa= da=kacisa-ya	runay-ang	ya.Ø	nay	sa= nin=yāng	ya.Ø
PT=SO=grab-3SG.M	fox-A	3SG.M.TOP	and	PT=carry=3SG.M.A	3SG.M.TOP

manga kong	*vinimya.*
manga=kong	vinim-ya
DIR= in	forest-LOC

'There he was grabbed by the fox and carried to the forest by him.'

(3) a.

Tadayya	*si*	*ang kengyan*	*bedangye*	*adaley,*	*ang nimpyan*
taday-ya	si	ang=keng-yan	bedang-ye-Ø	ada-ley	ang=nimp=yan.Ø
time-LOC	REL	AT= notice-3PL.M	farmer-PL-TOP	that-P.INAN	AT= run=3PL.M.TOP

manga pang	*runayya*	*nay*	*bahatang:*
manga=pang	runay-ya	nay	baha=tang
DIR= behind	fox-LOC	and	cry.out=3PL.M.A

'As the farmers noticed, they ran after the fox and cried out:'

b.

Ang manga pahya	*runay*	*aguyanas*	*nana!*
ang=manga=pah-ya	runay-Ø	aguyan-as	nana
AT= PROG= take.away-3SG.M	fox-TOP	rooster-P	1SG.GEN

'The fox is taking our rooster away!'

(4) a.

Nay	*ang naraya*	*aguyan*	*runayya:*	*Ningu*	*cam:*
nay	ang=nara-ya	aguyan-Ø	runay-ya	ning-u	cam
and	AT= speak-3SG.M	rooster-TOP	fox-LOC	say-IMP	3PL.M.DAT

'And the rooster said to the fox: "Tell them:"'

b.

Sa ninyang	*aguyan*	*nā;*	*ninoyyang*	*da-vana.*
sa= nin=yang	aguyan-Ø	nā	nin-oy=yang	da=vana
PT=carry=1SG.A	rooster-TOP	1SG.GEN	carry-NEG=1SG.A	SO=2PL.GEN

'I am carrying my own rooster; I am not carrying yours.'

(5) a.

Ang bomya	*runay*	*aguyanas*	*bantana*	*yana*	*nay*	*garayāng:*
ang=bom-ya	runay-Ø	aguyan-as	banta-na	yana	nay	gara=yāng
AT= release-3SG.M	fox-TOP	rooster-P	mouth-GEN	3SG.M.GEN	and	call=3SG.M.A

'The fox released the rooster from his mouth and called:'

b.

Sa ninyang	*aguyan*	*nā;*	*ninoyyang*	*da-vana.*
sa= nin=yang	aguyan-Ø	nā	nin-oy=yang	da=vana
PT=carry=ISG.A	rooster-TOP	ISG.GEN	carry-NEG=ISG.A	SO=2PL.GEN

'I am carrying my own rooster; I am not carrying yours.'

(6) a.

Ang nunaya	*para*	*nārya*	*aguyan*	*manga*	*ling*	*mehirya.*
ang=nuna-ya	para	nārya	aguyan-Ø	manga=ling		mehir-ya
AT= fly-3SG.M	quickly	though	rooster-TOP	DIR=	on	tree-LOC

'The rooster, though, quickly flew onto a tree.'

b.

Sitang-gasiya	*runayang,*	*yāng*	*depangas,*	*nay*	*lampyāng*	*mangasara.*
sitang=gasi-ya	runay-ang	yāng	depang-as	nay	lamp=yāng	mangasara
REFL=scold-3SG.M	fox-A	3SG.M.A	fool-P	and	walk=3SG.M.A	away

'The fox scolded himself, that he were a fool, and walked away.'[1]

B.3 Ozymandias

(Adapted and corrected from Becker 2011b)

Ozymandias

I met a traveller from an antique land,
Who said – "two vast and trunkless legs of stone
Stand in the desert ... near them, on the sand,
Half sunk a shattered visage lies, whose frown,
And wrinkled lips, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them, and the heart that fed;
And on the pedestal these words appear:
My name is Ozymandias, King of Kings,
Look on my Works ye Mighty, and despair!
Nothing beside remains. Round the decay
Of that colossal Wreck, boundless and bare
The lone and level sands stretch far away." –

(Shelley 2003)

1 This sentence was translated rather literally from the German *der fuchs schalt sich einen narren*, literally 'the fox scolded himself a fool', with *einen narren* 'a fool' as an object-predicative nominal.

Simanjas

Sa pengalyang asano similena tado, ang
naraya: Namāng sam kāryo nay taryankay
bengyon adāhalya. Ya hemayong kiyisa
nasay adany', ahalya, marinas avanu-ngas.
Ang ningyon igān nay nanding dijisu yona
nosānas kilisarya nay sagoyamanas:
Sa layaya ban-ikan tiyanyāng da-dikun
si telujong tarela, ya saprayos linyaye:[2]
sapayas si sagoyong; padangas si kondis'yong.
Nay sa tahanyo eda-narān bengyamanya:
Garanang nā SIMANJAS, bayhiang bayhiyena:
Sa silvu gumo nā, nay prisu, vāng si lita!
Hangara ranyareng palung. Le apanisareng
ahal-nama kebay, pray, soya, litoya kayvay,
miday nernanyēa eda-kiyanena nake.

(1)

Sa pengalyang	*asano*	*similena*	*tado,*	*ang*
sa= pengal=yang	asano-Ø	simil-ena	tado	ang=
PT=meet=ISG.A	traveler-TOP	country-GEN	old	AT=

'I met a traveler from an old country,'

(2)

naraya:	*Namāng*	*sam*	*kāryo*	*nay*	*taryankay*
nara=ya.Ø	nama-ang	sam	kāryo	nay	taryan-kay
say=3SG.M.TOP	leg-A	two	big	and	torso-less

'he said: Two big and torsoless legs'

2 Originally ʔ[illegible] *ʔtelugtong* 'survive' (survive=3PL.N.A), which at least presently is a mistake since [illegible] *dikun* 'passion' is listed in the dictionary as a *singulare tantum*. The same goes for [illegible] *saprayos*, which was plural ʔ[illegible] *ʔsapratos* 'they are stamped' (stamp=3PL.N.P) before. One word of the line in the original poem was not translated as it did not fit the meter in Ayeri, "lifeless," which may be translated as [illegible] *si tenarya* 'which are unalive' (REL unalive).

(3) *bengyon adāhalya. Ya hemayong kiyisa*
beng-yon ada=ahal-ya ya= hema=yong kiyisa
stand-3PL.N that=desert-LOC LOCT=lie-3SG.N.A shattered
'stand in that desert. There lies shattered'

(4) *nasay adany', ahalya, marinas avanu-ngas.*
nasay adanya-Ø ahal-ya marin-as avanu=ngas
near.of that.one-TOP sand-LOC face-P sunken=almost
'close to there, in the sand, an almost-sunken face.'

(5) *Ang ningyon igān nay nanding dijisu yona*
ang=ning-yon igān-Ø nay nanding-Ø dijisu yona
AT= tell-3PL.N frown-TOP and lips-TOP twisted 3SG.N.GEN
'Its frown and twisted lips tell'

(6) *nosānas kilisarya nay sagoyamanas:*
nosān-as kilisarya nay sagoyaman-as
command-P strict and mocking-P
'of strict command and mockery'

(7) *Sa layaya ban-ikan tiyanyāng da-dikun*
sa= laya-ya ban=ikan tiyanya-ang da=dikun-Ø
PT=read-3SG.M well=very creator-A such=passion-TOP
'Very well did the creator read such passion'

(8) *si telujong tarela, ya saprayos linyaye:*
si telug=yong tarela ya= sapra=yos linya-ye-Ø
REL survive=3SG.N.A still LOCT=stamp=3SG.N.P thing-PL-Top
'which still survives, stamped into the things:'

(9) *sapayas si sagoyong; padangas si kondis'yong.*
sapay-as si sago=yong padang-as si kondisa=yong
hand-P REL mock=3SG.N.A heart-P REL feed=3SG.N.A
'the hand that mocks; the heart that feeds.'

(10) *Nay sa tahanyo eda-narān bengyamanya:*
nay sa= tahan-yo eda=narān-Ø bengyaman-ya
and PT=write-3SG.N this=word-TOP pedestal-LOC
'And this word is written on the pedestal:'

(11) *Garanang nā Simanjas, bayhiang bayhiyena:*
garan-ang nā Simanjas bayhi-ang bayhi-ye-na
name-A 1SG.GEN Ozymandias ruler-A ruler-PL-GEN
'My name is Ozymandias, the king of kings:'

(12)

Sa silvu	*gumo*	*nā,*	*nay*	*prisu,*	*vāng*	*si*	*lita!*
sa= silv-u	gumo-Ø	nā	nay	pris-u	vāng	si	lita
PT=see-IMP	work-TOP	1SG.GEN	and	tremble-IMP	2.A	REL	mighty

'Behold my work and tremble, you who are mighty!'

(13)

Hangara	*ranyareng*	*palung.*	*Le*	*apanisareng*
hang-ara	ranya-reng	palung	le=	apanisa=reng
remain-3SG.INAN	nothing-A.INAN	else	PT.INAN=stretch=3SG.INAN.A	

'Nothing else remains. It stretches'

(14)

ahal-nama	*kebay,*	*pray,*	*soya,*	*litoya*	*kayvay,*
ahal-Ø=nama	kebay	pray	soya	lito-ya	kayvay
sand-TOP=only	lonely	smooth	empty	border-LOC	without

'only the lonely, smooth, empty sand, without borders,'

(15)

miday	*nernanyēa*	*eda-kiyanena*	*nake.*
miday	nernan-ye-ya	eda=kiyan-ena	nake
around	part-PL-LOC	this=wreckage-GEN	large

'around the pieces of this large wreckage.'

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Index

accusative-and-infinitive, *see* verbs
adjectives, 64, 67–70, 84 ff., 88 f., 95, 97, 102 f., 125, 128, 131 ff., 135, 137, 142 f., 148, 153, 170 ff., 175, 178 f., 220, 229, 233, 268, 299 ff., 308 f., 311–316, 318, 331, 335–345, 353, 383 f., 386, 388
  depictive, 387, 389 f.
  predicative, 221, 236, 267 f., 357
  resultative, 388, 390–397
adjunct, *see* grammatical function
adpositions, 65, 77 f., 123, 172–181, 233, 344–356
  postpositions, 67, 120, 178 f., 219, 347 f.
  prepositions, 65 f., 77, 103, 118, 120, 123, 172–179, 342
adverbs, 75, 95, 98 f., 198–202, 204, 215–222, 230, 235, 328, 330 f., 335 f., 338, 341–344, 353, 358, 360 f., 364 f., 377, 383, 426
AdvP, *see* phrase types
affix order, 79, 88, 195, 202 f., 205 f., 213
agent, *see* case, semantic role
agglutination, 63, 65 f., 182
agreement, 70 f., 92 ff., 102, 109–114, 116–122, 143, 147 f., 160, 164, 166 f., 170, 181–194, 207 f., 216, 219, 226, 228, 244, 255 f., 262, 271, 277, 279, 289, 302, 308, 315, 323–328, 341, 364, 367, 369, 412, 415, 421
Agta, 137
allomorphy, 11, 16, 120, 122, 140, 195, 197, 206
allophony, 7–12, 16, 19, 41
ambiguity, 11, 49, 100 f., 230, 232, 259 f., 262, 265, 281, 295, 325, 357, 424
animacy, 74, 108 f., 114, 116 f., 119 f., 122, 143, 147, 150, 155, 157 ff., 164, 226, 228, 262, 289, 296, 302, 307 f., 315, 318, 321, 323–328, 364, 371
AP, *see* phrase types
aspect, 69, 194, 200–205, 210, 364, 369, 371
  habitual, 202
  iterative, 202 f., 221
  progressive, 66, 73 f., 200–203

beneficiary, *see* semantic role
binding, 285, 290–294, 381
Box script, 45
Breton, 89, 94
Brāhmī scripts, 45 f., 48

case, 69, 71, 74–77, 83 ff., 88, 92 f., 103 f., 109–125, 130, 138, 142, 145 f., 150, 152 ff., 164, 166 f., 174 f., 178 f., 187 f., 190 f., 206, 228, 231 f., 274, 295 f., 300, 302–306, 308, 310, 313 ff., 318 f., 322, 332, 336, 339, 345 ff., 349 ff., 353, 362, 365, 367 f., 371 f., 378, 390, 395, 407, 412, 421 f.
agent, *see also* semantic role, 74, 92, 114 ff., 121, 124, 148, 150, 166 f., 185–188, 190 f., 193, 242, 254 f., 279, 289, 302, 318, 321 f., 395, 408, 412, 415
causative, 75, 121 f., 155, 171, 242, 415 ff.
dative, 9, 117–120, 142 f., 150, 167, 177, 230, 232, 242, 295, 338, 345 ff., 350, 371, 393, 408, 411 f., 414
genitive, 11, 103, 119 f., 130, 144, 148, 168, 170, 177, 232, 242, 295, 301, 308, 310 f., 336, 346, 368, 424
instrumental, 122 ff., 141, 231, 242, 295, 297, 368, 406, 408, 417
locative, 103, 118, 120, 159, 167 f., 208, 219, 231 f., 242, 345 ff., 382, 406
patient, *see also* semantic role, 74, 115 ff., 148, 166 f., 170, 188, 191, 242, 275, 279, 289, 302, 318, 321, 357, 386 f., 395, 408, 412
causation, 115, 133 f., 275, 415 ff.
causative, *see* case
causer, *see* semantic role
Classical Tibetan, 227 f.
clitics, 64–102, 113 f., 127, 148, 153, 169 f., 172, 175, 179, 184–194, 201, 209, 212–215, 217, 232 f., 262 f., 265 ff., 301–304, 306, 308 f., 311–314, 328–335, 341 ff., 353, 360 f., 364 f., 375, 380 ff., 390, 395
comparative, *see* comparison, verbs
comparison, *see also* verbs, 101 f., 131, 153, 170, 172, 215, 217, 236 f., 312 f., 341 f., 382 ff., 386
complement, *see* grammatical function
complement clause, 43, 68, 89, 205, 275, 277, 279 ff., 347, 353, 356, 370, 377, 414, 419, 422
complementary distribution, 16, 37, 90, 92, 127, 147 f., 193, 222, 306, 334
compounds, 23, 39 ff., 125, 127–139, 171, 224, 227, 229 f., 313
configurationality, 239, 243 f., 246, 284–294
conjunctions, 97, 219–222, 226, 234–237, 417 ff., 425 f.
consonants, 7 ff., 16, 19 f., 23, 25, 29, 47 f.
clusters, 12, 16, 20, 25, 30 f., 56,

94
constituent order, 86, 104, 118 f., 134, 149, 167, 187, 191, 194, 239, 242, 285 f., 295, 299, 307, 315, 317, 333, 339, 345, 356, 360 f., 364, 367, 370, 384, 386 f., 393
control, *see* verbs
coordination, 67, 74, 76 ff., 83 ff., 88, 94–97, 100, 135 f., 234 f., 257–262, 309, 323, 325, 328, 372, 400, 403
copula, 99, 356 ff., 360, 382, 425
copular clause, 99, 244, 336, 358, 360 ff., 382, 386, 394, 417, 422, 426

dative, *see* case
default, 90, 94, 111, 117, 120, 244, 262, 324 f., 328, 349
deixis, 80, 83 f., 150, 153, 198, 213, 302, 308, 311, 313 f., 332
depictive, *see* adjectives
derivation, 23, 70, 77, 86, 134, 139–144, 171 ff., 216, 227 f., 230 ff., 313, 342
desiderata, 5 f., 82 f., 93, 128, 213, 269, 279, 319, 327, 389, 398
Devanāgarī, 45 f., 48
diacritics, 50–56
diminutive, 70, 138 f.
diphthongs, 9 f., 19, 33 f., 36, 54
discourse particles, 73, 214, 217, 360
DP, *see* phrase types
Dyirbal, 257 f., 284

English, 32, 42, 65, 75, 79, 85 f., 95, 111, 116, 129, 141 f., 144, 146, 153 f., 158, 170 f., 174, 178, 185 f., 196, 198, 202, 211, 214, 231, 235, 243, 249, 252 f., 257 f., 263, 270 f., 273, 275, 279, 282, 285 f., 290, 293, 356, 389, 391, 409 f., 413 f.
exceptional case-marking, *see* verbs
experiencer, *see* semantic role

floating, 263–266
focus, *see* grammatical function
French, 81, 109, 160, 325, 342
future, *see* tense

gender, 107–110, 140, 143, 145 f., 164, 182, 302, 307 f., 313, 322–328
genitive, *see* case
German, 65, 129, 146, 160, 179, 304 ff., 313, 325, 327, 349 f., 371, 409–412
gerund, 141–144
goal, *see* semantic role
grammatical function
  adjunct, 86, 95 f., 113, 124, 131, 169, 177, 295, 297, 300 f., 314, 321, 329 f., 336, 338 f., 344, 348, 353, 356, 360, 363 ff., 367, 370, 372, 389 f., 393 f., 397–400, 402 f., 405, 417, 419, 421
  adpositional object, 103, 118, 120, 123, 173 f., 177 f., 232, 345, 349, 353
  closed complement, 122, 124, 219, 295, 300, 357, 378, 417, 419
  focus, 247 f., 253, 295, 316 f., 319, 360

oblique, 74, 93, 295, 319, 336, 345 f., 348, 406, 408, 414 ff., 424
open complement, 75, 204, 212, 357, 364, 375, 378, 380, 390, 393 ff., 397, 414
predicative complement, 86, 99 f., 114 f., 117, 149 f., 188, 309, 336, 342, 356 ff., 360, 383 f., 386 f., 394
primary object, 66, 115, 117, 215, 242 ff., 246, 268, 270, 275 f., 279, 281, 285 ff., 289–295, 316, 363, 370 f., 375, 377 f., 383, 389 ff., 393 ff., 397 f., 407 f., 416, 419, 421
secondary object, 242, 295, 371 f., 408 f., 416
subject, 73 f., 90 ff., 100, 118, 191 ff., 242 ff., 248–295, 320, 323, 356 f., 360, 362 ff., 367, 369–372, 375, 377 f., 380–384, 389 ff., 393 ff., 397 f., 407 f., 411–416, 419, 421 f., 424
topic, 69, 72–75, 79, 84, 92 f., 104 f., 114, 116–122, 125, 153 f., 160, 162, 166, 168, 175, 181 f., 185–188, 190 f., 207, 212, 248, 250, 252–256, 259–262, 264, 266 ff., 271, 273, 279 ff., 295 f., 304, 306, 310, 364–369, 371, 375, 378, 380, 406 ff., 412, 415 f., 419, 421 f.
'trigger', 246 ff., 284
grammaticalization, 67, 101, 117, 132, 142, 145, 150, 159, 167, 174 f., 191, 194, 204, 216, 223

habitual, *see* aspect
hierarchy, 121, 261 f., 266, 279, 298, 324, 327, 362, 370, 398
hortative, *see* mood

idioms, 136, 288 f.
imperative, *see* mood
indicative, *see* mood
instrument, *see* semantic role
instrumental, *see* case
intensifiers, 94, 97, 217, 232 f., 263 ff., 307, 328–331, 335, 338, 380
intonation, 41–44
IP, *see* phrase types
Irish, 89, 94, 244
irrealis, *see* mood
iterative, *see* aspect

Japanese, 252
Javanese script, 46

Kharoṣṭhī, 46
Korean, 252

Lexical-functional grammar, 91, 193, 239 ff., 244, 251 f., 291, 293, 296, 302, 319, 330, 339, 345, 358, 364 f., 372, 383, 395, 398, 405 ff.
location, *see* semantic role
locative, *see* case

Maldivian, 223
marking strategies
dependent-marking, 103, 130

head-marking, 104
modals, 66, 72, 74 f., 199, 205, 209 ff., 364, 377
mood, 69 f., 194, 202, 205–209, 364, 369, 425
hortative, 207 ff.
imperative, 124, 206–209, 369
indicative, 205
irrealis, 74, 205 f., 425
negative, *see also* negation, 74, 206 f., 217, 237, 426
morphophonology, 9, 11 f., 31, 71, 140 f., 195, 202 f., 205 ff.

names, *see* nouns
negation, *see also* mood, 74, 158, 160, 170 f., 206, 216 ff., 220 f., 237, 341 f., 382, 426
negative, *see* mood
nominalization, 29, 84, 139–144, 159, 227, 229, 231, 309 f., 312
nouns, 39, 64, 67–70, 75, 77, 80 ff., 86, 92 f., 95, 100, 103, 107–144, 297–303
common, 119 f., 122, 142, 174, 333, 357
generic, 157–160, 162, 222, 316
proper, 75 ff., 83 f., 88, 112 ff., 116 f., 119 f., 122, 291, 357
NP, *see* phrase types
number, 90, 111 ff., 145 f., 150, 164, 175, 179, 182 f., 190, 192 f., 207 f., 302, 307 f., 311, 318, 322 f., 326 ff., 369
plural, 9, 69, 85, 100, 111, 120, 122, 138, 142, 144, 146, 193, 224, 226, 303, 329, 331
singular, 111, 327
numerals, 57, 112, 159, 223–232, 298, 303

object, *see* grammatical function
oblique, *see* grammatical function

participle, 142, 212, 279, 419
past, *see* tense
patient, *see* case, semantic role
person, 65, 90–94, 104, 117 f., 121 f., 124, 144–148, 182–194, 205–208, 255, 262, 289, 302, 307 f., 310 f., 318, 322–326, 369, 371, 380 f.
phrase types
adjective phrase, 297 f., 307, 317, 330, 336–342, 358, 363 f., 370, 384
adpositional phrase, 336
adverb phrase, 317, 339, 341–344, 363
complementizer phrase, 79, 89, 219, 297 f., 307, 315, 336, 339, 347, 353, 356, 358, 370, 417–426
determiner phrase, 97, 99, 147, 295–299, 304–331, 336, 347, 358, 367, 370, 381
inflectional phrase, 66, 69, 244, 246, 264, 279, 281, 362–369, 417
noun phrase, 67, 70, 76, 78, 81, 83, 86, 88, 90–93, 104, 107, 113, 116–122, 124 f., 130, 147 f., 152 ff., 167, 170, 173, 182, 219, 222, 224, 226, 228, 244, 246, 254 ff., 259, 261–264, 266 f., 273, 285, 290–307, 309, 317 ff., 325,

328 ff., 333 f., 336, 338 f., 344, 346 f., 357 ff., 363 ff., 367–370, 372, 375, 378, 380, 384, 390, 393, 395, 406, 412, 414
prepositional phrase, 103, 231 f., 317, 319, 344–356, 358, 364, 370, 393, 406, 412
small clause, 244, 356–364, 395, 417, 422
verb phrase, 243 f., 246, 264, 277, 279, 281, 294, 358, 364, 367, 370–417
plural, *see* number
Polish, 325
possessor, *see* semantic role
postpositions, *see* adpositions
PP, *see* phrase types
predicative, *see* adjectives, grammatical function
prefixes, 10, 64, 67 ff., 78–86, 88 f., 124, 126 f., 132, 138, 149, 152 f., 167 f., 172, 194–198, 203, 212–215, 227, 306, 332–335, 381
prepositions, *see* adpositions
present, *see* tense
progressive, *see* aspect
pronouns, 64, 67, 88, 92, 104, 144–169, 222, 265, 285, 289–292, 304–328
demonstrative, 67, 84, 149–153, 213, 222, 311–315, 331, 335 f., 380
indefinite, 157–164, 200, 206, 319–322, 331, 335
interrogative, 153–157, 315–319, 331, 335
personal, 65, 70, 144–148, 185, 187 f., 190–194, 208, 265, 291, 307 f., 323, 327, 331, 335, 367, 380
possessive, 86, 103, 148 f., 153, 168, 297, 308–311
reciprocal, 169, 322 f.
reflexive, 67, 80, 167 ff., 215, 291, 308 f., 395, 397
relative, 64, 71, 103, 164–167, 331, 353, 418 f., 421 f.
resumptive, 166, 259, 267, 331, 422, 424
punctuation, 58 f.

quantifiers, 70, 94–102, 112 f., 144, 158, 168 f., 172, 175, 179, 200, 215, 232 f., 263–266, 297 f., 303, 307 f., 328–331, 338 f., 341 ff., 353, 365, 380 f.
questions, *see also* pronouns, 42, 217 f., 316

raising, *see* verbs
recipient, *see* semantic role
reduplication, 39, 70, 137 ff., 202 f., 221
relative clause, 43, 86, 103, 164–167, 175, 179, 229, 266 f., 296–301, 308, 318, 322, 331, 353, 364, 384, 386, 419–424
resolution, 117, 323–328
resultative, *see* adjectives
Romanian, 304, 306
Russian, 325

S, *see* phrase types
Sanskrit, 127, 131
scope, 73, 75 f., 78–82, 84 f., 88, 93, 95, 100, 192, 219, 299
secondary predication, *see* adjectives

semantic role
agent, *see also* case, 67, 80, 93, 114–118, 121 f., 124, 140 f., 150, 167 f., 206, 215, 249 f., 256, 260 ff., 264, 266, 268, 274 f., 279, 281, 284, 289, 372, 378, 395, 406 ff., 412, 415 ff.
beneficiary, 117 ff., 347, 408
causer, 121 f., 319, 415 ff.
experiencer, 114 f., 117, 289, 413
goal, 117 ff., 167, 345 f., 348, 351, 406
instrument, 67, 114, 122 ff., 141, 319
location, 120, 172–181, 319, 348–351, 382
patient, *see also* case, 80, 93, 115–118, 167 f., 191, 215, 249, 256, 264, 267, 274, 279, 281, 371 f., 375, 378, 395, 398, 407 f., 412, 414 ff.
possessor, 103, 119 f., 144, 295, 308 ff., 319, 336, 368, 422, 424
recipient, 93, 115, 117 ff., 167, 262, 336, 371 f., 408, 411 ff.
source, 119 f., 346, 348, 351, 406
theme, 115–118, 249, 279, 336, 346, 371 f., 408, 412, 424
singular, *see* number
Skou, 190
Slovene, 325
source, *see* semantic role
Spanish, 186
stress, 25, 31–41, 64, 69, 71, 73 ff., 81, 102, 331
subject, *see* grammatical function
suffixes, 63–66, 69 f., 74 f., 77, 79, 82 f., 88–102, 104, 111–114, 117, 119 f., 131, 133, 138–141, 143, 145, 159, 168, 171 f., 175, 183 ff., 187 f., 192 ff., 202, 205 ff., 215 f., 220, 224 f., 228, 230, 233, 237, 264, 304
suprasegmental morphology, 64, 71
syllabification, 12, 25, 47, 51
syllable
closed, 10, 14, 19 f., 23, 25, 30, 34
final, 23 ff.
heavy, 34–38, 41
initial, 16–20
medial, 20–23
monosyllabic words, 25–30
open, 14, 16, 20, 23
superheavy, 34, 36 ff.
syllables
heavy, 36
synthesis, 66, 95, 129, 133 ff., 341

Tagalog, 244, 246 ff., 250, 253 ff., 258 f., 262, 264, 266–271, 273 f., 276 f., 281 f., 284 f., 372
Tahano Hikamu, 3, 45–62, 206
telicity, 348 f.
tense, 67, 79 f., 194–199, 201, 203, 213, 251, 364
future, 173, 196–199, 201 f., 353
past, 173, 195–202
present, 194 ff., 198, 201 f., 364
theme, *see* semantic role
topic, *see* grammatical function
'trigger', *see* grammatical function
Turkish, 82, 93

typology, 4 f., 13–16, 63–105, 122, 127 f., 157–164, 191, 194, 201, 239–294, 301, 347

verbs, 12, 63, 65 ff., 69 f., 73 ff., 78 f., 91, 93 ff., 99, 103 f., 109, 112 f., 117, 121 f., 134, 141, 148, 155, 160, 168, 178, 181–215, 217, 221, 237, 242 ff., 251, 254 ff., 262, 264, 267, 285 f., 288 f., 295 f., 306, 342, 346–350, 356–417, 419, 425
- comparative, 236, 382–386
- complex transitive, 397–406
- control, 275–281, 289, 364, 370, 372–375, 378
- ditransitive, 114, 116 f., 371 f., 408–413
- ECM, 271, 274 f., 377 f.
- finite, 244, 285, 363 f., 367, 371, 417
- infinite, 89, 207, 212, 273, 370 f., 375, 378, 417, 419
- intransitive, 167, 209 f., 212, 249, 262, 271, 281, 289, 370 ff., 391 f., 395, 397, 419
- raising, 270–275, 289, 364, 367, 370, 375–380, 413 ff.
- transitive, 115, 117, 167, 188, 215, 249, 289, 362, 364, 370 ff., 393 ff., 397, 406 ff.
- unaccusative, 118, 391, 398
- unergative, 391, 394, 398

voice
- active, 407 ff., 413
- passive, 116, 122, 191, 390, 395, 398, 407–415

vowels, 10 ff., 20, 25, 27, 36, 48 ff., 71

VP, *see* phrase types

Warlpiri, 251, 314

Welsh, 244, 309, 362 ff.

West Greenlandic, 94 f.

word order, 69, 73–77, 83, 85, 88 f., 95, 100, 103, 128 ff., 132, 134, 136 f., 164, 167, 169, 178, 204, 216–220, 224, 231 f., 243, 285, 296 f., 301, 333, 336, 347, 353, 357, 360, 364, 370 f., 375, 378, 380, 384, 389 f., 425

X-bar theory, 240

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