**A Grammar of Jalkun**

(Mandé language family, Burkina Faso)

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**fragmentary early draft, do not cite**

brown text from a grammar template, to be gradually replaced, disregard

black new material typed in for this language

blue transcriptions for this language

green transcriptions for other languages, reconstructions, and formulas

pink data to be incorporated later into the section

red comments to oneself (e.g. data to be elicited, section to be rewritten)

orange temporary cross-refs to examples in other sections

**Contents**

1 Introduction 1

1.1 Mande languages 1

1.2 Jalkunan language 2

1.3 Previous and contemporary study of Jalkunan 3

1.3.1 Prost (1968) 3

1.3.2 Our fieldwork 3

1.3.3 Acknowledgements 4

2 Sketch 5

2.1 Phonology 5

2.1.1 Segmental phonology 5

2.1.2 Syllabic shapes and tone levels 5

2.1.3 Tonal effects of 3Sg versus non-3Sg forms 5

2.1.4 Segmental phonological rules 6

2.2 Nouns, NPs, and pronouns 6

2.2.1 The nominal suffix 6

2.2.2 Possession 7

2.2.3 Pronominal categories 7

2.3 Postpositions 8

2.4 Inflectable verbs 8

2.5 Main clauses and constituent order 8

2.6 Nominalized clauses and constituent order 8

2.7 Relative clauses 8

2.8 Interclausal syntax 8

3 Phonology 9

3.1 Internal phonological structure of stems and words 9

3.1.1 Syllables 9

3.1.2 Metrical structure 9

3.2 Consonants 9

3.2.1 Comments on specific consonants 10

3.2.1.1 *h* 10

3.2.1.2 *ʔ* 10

3.2.1.3 *r* and *ʔr* 10

3.2.1.4 *z* 11

3.2.1.5 *v* 11

3.2.1.6 *p* versus *kp* 11

3.2.1.7 Voiceless obstruents (*k/g* and *t/d* variation medially) 11

3.2.2 Consonant clusters 12

3.2.2.1 Word- and morpheme-initial *CC* clusters 12

3.2.2.2 Medial geminated *CC* clusters 12

3.2.2.3 Medial non-geminate *CC* clusters 12

3.2.2.4 Medial triple *CCC* clusters 12

3.2.2.5 Final *CC* clusters 12

3.3 Vowels 12

3.3.1 Short and (oral) long vowels 12

3.3.2 Nasalized vowels 14

3.3.3 Initial vowels 16

3.3.4 Stem-final vowels 16

3.3.5 Vowel sequences (*ɔɛ* diphthong) 16

3.4 ATR Harmony 17

3.5 Verb-stem ablaut 18

3.6 Segmental phonological rules 18

3.6.1 Trans-syllabic consonantal processes 18

3.6.1.1 *r*-Nasalization (/nr/ → *nn*, /Nv-r/ → *Nv-n*) 18

3.6.1.2 *r*‑Lateralization (/lr/ → *ll* ) 19

3.6.1.3 *r*-Deletion (/lr/→ *l* ) 19

3.6.1.4 Deletion of intervocalic sonorants before diminutive *-lī* 19

3.6.1.5 Syncope or epenthesis? 20

3.6.2 Apocope 20

3.6.3 Final Truncation in imperative verbs 25

3.6.4 Vowel-vowel and vowel-semivowel sequences 26

3.6.4.1 *n*-Epenthesis 26

3.6.4.2 vv-Contraction 27

3.6.5 Local vowel-consonant interactions 29

3.6.5.1 Monophthongization 29

3.7 Cliticization 30

3.8 Tones 30

3.8.1 Lexical tone patterns 31

3.8.1.1 Lexical tone melodies for unsegmentable noun stems 31

3.8.1.2 Lexical tone patterns for adjectives and numerals 34

3.8.1.3 Tone contours or H‑tone accent? 34

3.8.2 Grammatical tone patterns 34

3.8.2.1 Grammatical tones for verb stems 34

3.8.2.2 Grammatical tones for noun stems 34

3.8.2.3 Grammatical tones for adjectives and numerals 35

3.8.3 Tonal morphophonology 35

3.8.3.1 Autosegmental tone association 35

3.8.3.2 Atonal morphemes 35

3.8.4 Tone sandhi processes 35

3.8.4.1 Final Tone-Raising (LL#L-to-LH#L) 35

3.8.4.2 Floating-Tone Docking I (certain nouns and adjectives) 35

3.8.4.3 Floating-Tone Docking II (3Sg versus non-3Sg) 36

3.8.5 Phonology of Floating-Tone Docking II 38

3.9 Intonation contours 39

3.9.1 Phrase and clause-final terminal contours (↑↓→) 39

3.9.2 Intonational prolongation (→) 39

4 Nominal, pronominal, and adjectival morphology 40

4.1 Nouns 40

4.1.1 Simple nouns and suffixes 40

4.1.1.1 Simple monotonal nouns 40

4.1.1.2 Simple bitonal nouns 41

4.2 Derived nominals 42

4.2.1 Diminutives (*-lī* ) 42

4.2.2 Verbal nouns 44

4.2.3 Instrument nominals absent 44

4.2.4 Uncompounded agentives (*X míʔī-nà* ) 44

4.3 Pronouns 44

4.3.1 Basic personal pronouns 44

4.3.1.1 Subject pronominals 44

4.3.1.2 Possessor pronouns 45

4.3.1.3 Preverbal object pronouns 46

4.3.1.4 Independent and predicative pronouns 49

4.3.2 Postverbal object pronouns 50

4.4 Determiners 51

4.4.1 Definite morphemes 51

4.4.1.1 ‘This/that’ (*míⁿ* ) 51

4.4.1.2 ‘This/that’ (*mìíⁿ* ) plus near- and far-distal particles 51

4.4.2 Demonstrative adverbs 52

4.4.2.1 Locative adverbs 52

4.4.2.2 Emphatic and Approximinative modifiers of adverbs 52

4.4.3 Presentatives (‘here’s/there’s …!’) 52

4.5 Adjectives 53

4.5.1 Simple adjectives 53

4.6 Numerals 54

4.6.1 Cardinal numerals 54

4.6.1.1 ‘One’, ‘same (one)’, and ‘other’ 54

4.6.1.2 ‘2’ to ‘10’ 54

4.6.1.3 Decimal/vigesimal multiples (‘20’ to ’200’) and combinations 56

4.6.1.4 ‘Thousand’ 58

4.6.1.5 Currency 59

4.6.1.6 Reduplicated or iterated distributive numerals 59

4.6.2 Ordinal adjectives 59

4.6.2.1 ‘First’ (*dáálá* ) and ‘last’ (*kùdɔ́rɔ̀mà-nà* ) 59

4.6.2.2 Other ordinals (suffix *-ɲa-*) 60

4.6.3 Fractions and portions 60

5 Nominal and adjectival compounds 61

5.1 Nominal compounds 61

5.1.1 Noun-noun compounds 61

5.1.2 Possessive-type compounds 61

5.1.3 Compounds with final verbal noun 61

5.1.4 Agentive compounds 61

5.1.5 Compounds with *dí* ‘child’ and *bōō* ‘fruit’ 62

5.1.6 ‘Owner of X’ compounds (*māā-nā* ) 62

5.1.7 Instrumental relative compounds (‘oil for rubbing/for eating’) 62

5.2 Adjectival compounds 63

5.2.1 Bahuvrihi (“Blackbeard”) compounds [n̄ â] or [n̄ nûm] 63

5.2.1.1 With adjectival compound final [n̄ â] 63

5.2.1.2 With numeral compound final [n̄ nûm] 63

6 Noun Phrase structure 64

6.1 Organization of NP constituents 64

6.1.1 Linear order 64

6.1.2 Distribution of singular nominal suffix (*‑rà* etc.) 66

6.1.3 Distribution of plural nominal suffix (*‑nū* ) 67

6.1.4 Nominal suffixes in subject function 67

6.1.5 Nominal suffixes in other syntactic functions 70

6.2 Possession 71

6.2.1 Addition of a possessor to an NP 71

6.2.2 Alienable and inalienable possession 72

6.2.2.1 Lexically all-L‑toned nouns as possessums 72

6.2.2.2 Lexically all-M‑toned nouns as possessums 74

6.2.2.3 Lexically all-H‑toned nouns as possessums 75

6.2.2.4 Tone of modifiers following inalienably possessed noun 75

6.2.3 Recursive possession 78

6.3 Core NP (noun plus adjective) 78

6.3.1 Noun plus regular adjective 78

6.3.1.1 Tones of N-Adj combinations 79

6.3.1.2 Inventory of basic adjectives by tonal type 82

6.3.1.3 Adjective sequences 83

6.3.2 Adjective *ŋŋŋ* ‘certain (ones)’ 84

6.3.3 Expansions of adjective 84

6.3.3.1 Adjectival intensifiers 85

6.3.3.2 ‘Good to eat’ 85

6.4 NPs including a numeral 85

6.4.1 Nominal suffixation in the presence of a numeral 85

6.4.2 Tones of noun plus numeral 85

6.4.2.1 Noun plus unsegmentable numeral 85

6.4.2.2 Noun plus bimorphemic numeral ‘6’ to ‘9’ 87

6.4.2.3 N-Adj-Num sequences 88

6.5 NP with determiner 89

6.5.1 Noun plus demonstrative 89

6.6 Universal and distributive quantifiers 89

6.6.1 Universal ‘all’ (*bùʔù* ~ *búʔú* ) 89

6.6.2 Distributive ‘each’ 90

7 Coordination 91

7.1 NP coordination 91

7.1.1 NP conjunction (‘X and Y’) 91

7.1.1.1 Ordering of coordinands 92

7.1.1.2 Conjunction with final summative quantifier 92

7.1.1.3 ‘X and Y’ with a modifier or postposition 92

7.1.2 “Conjunction” of verbs or VP’s 93

7.2 Disjunction 93

7.2.1 ‘Or’ (*ŋŋŋ*) 93

7.2.2 Clause-level disjunction 93

8 Postpositions and adverbials 94

8.1 Dative and benefactive 94

8.1.1 No dative postposition with ‘give’ or ‘show’ 94

8.1.2 Dative *mà* (non-3Sg *má* ) after ‘say’ 94

8.1.3 Benefactive *kɛ̄ⁿ* 95

8.2 Instrumental and comitative 95

8.2.1 Instrumental *dɛ̀* (non-3Sg *dɛ́* ) 95

8.2.2 Comitative *dò* 96

8.3 Locational postpositions 96

8.3.1 Locative, allative, and ablative functions 96

8.3.2 Simple locative postpositions 97

8.3.2.1 Temporal adverbs and place names without a postposition 97

8.3.2.2 Locative *tɔ̀* (non-3Sg *tɔ́* )‘in’ 97

8.3.2.3 Locative *dù* (non-3Sg *dú* ) ‘in, inside of’ 98

8.3.2.4 Locative *mà* (non-3Sg *má* ) ‘on’ 98

8.3.3 *glà* (non-3Sg *glá* ) ‘next to’ 99

8.3.4 *kìnà* (non-3Sg *kíná* ) ‘in front of’ 100

8.3.5 *kùtɔ́rɔ́ mà* (non-3Sg *kútɔ́rɔ́ mà* ) ‘behind’ 100

8.3.6 *gbɔ̀lɔ̀kɔ̀* (non-3Sg *gbɔ́lɔ́kɔ́* ) ‘over/above’ or ‘on top of’ 101

8.3.7 *kùtɔ̀* (plural *kútɔ́* ) ‘under’ 101

8.3.8 *kɛ̀ⁿ* (non-3Sg *kɛ́ⁿ* ) ‘chez’ 102

8.3.9 *fúúlú* ‘between’ 102

8.3.10 *cɛ̌ŋgɔ̀-rɔ̀* (non-3Sg *cɛ́ŋgɔ̀-rɔ̀* ) ‘in the middle of’ 102

8.3.11 Temporal uses of ‘in front of’ and ‘behind’ 103

8.3.12 *fó* ‘until/all the way to’ 103

8.3.13 *fùùrù* ‘within (time span)’ 103

8.4 Purposive-Causal ‘for’ (*ŋŋŋ*) 104

8.5 Other adverbs (or equivalents) 104

8.5.1 Similarity (*ŋŋŋ* ‘like’) 104

8.5.2 Extent (‘a lot’, ‘a little’) 104

8.5.3 Specificity 104

8.5.3.1 ‘Approximately’ (*ŋŋŋ*) 104

8.5.3.2 ‘Exactly’ (*ŋŋŋ*, *ŋŋŋ*, *ŋŋŋ*) 104

8.5.3.3 ‘Specifically’ (*ŋŋŋ*) 104

8.5.4 Evaluation 104

8.5.4.1 ‘Well’ and ‘badly’ 104

8.5.4.2 ‘Proper, right, (socially) normal’ (*ŋŋŋ*) 104

8.5.5 Manner adverbs 104

8.5.6 Spatiotemporal adverbials 105

8.5.6.1 Temporal adverbs 105

8.5.6.2 ‘First’ (*ŋŋŋ*) 105

8.5.6.3 Spatial adverbs 105

8.5.7 Expressive adverbials (EAs) 106

8.5.8 ‘Flat and wide’ 106

8.5.8.1 ‘Straight’ (*ŋŋŋ*) 106

8.5.8.2 ‘Apart, separate’ (*ŋŋŋ*) 106

8.5.8.3 ‘Always’ (*ŋŋŋ*), ‘never’ (*ŋŋŋ*) 106

8.5.8.4 ‘Exclusively, together’ (*ŋŋŋ*) 106

8.5.8.5 ‘All, entirely’ (*ŋŋŋ*) 106

8.5.9 Reduplicated (iterated) adverbials 106

8.5.9.1 Distributive adverbial iteration 106

8.5.9.2 ‘Scattered, here and there’ (*ŋŋŋ*) 106

9 Verbal derivation 107

9.1 Reversive verbs absent 107

9.2 Morphological causative absent 107

9.3 Morphological passive absent 107

9.4 Ambi-valent (labile) verbs without suffixal derivation 108

9.5 Deadjectival inchoative and factitive verbs 108

10 Verbal inflection 110

10.1 Inflection of regular indicative verbs 110

10.1.1 Valency 110

10.1.1.1 Intransitive and transitive 110

10.1.1.2 Pseudo-transitive verbs 111

10.1.1.3 Pseudo-reflexive (middle) verbs 112

10.1.2 Structure of verbal paradigms 113

10.1.2.1 Stem alternations for intransitive verbs 113

10.1.2.2 Stem alternations for transitive verbs 116

10.1.2.3 Analysis of verb-stem alternations 118

10.2 Negation (*=rĒʔ* ) 120

10.3 Indicative AN categories 123

10.3.1 Perfective system (including perfect) 123

10.3.1.1 Perfective 123

10.3.1.2 Experiential perfect ‘have ever’ (*dú* ) 126

10.3.1.3 Recent perfect 127

10.3.2 Imperfective positive system 127

10.3.2.1 Enclitic /H+=∅/ on subjects in the imperfective system 127

10.3.2.2 Present 130

10.3.2.3 Future (*sà* ) 134

10.3.2.4 Progressive (*-ya* ) 136

10.4 Stative form of verbs (reduplicated and unreduplicated) 139

10.4.1 Stative positive 139

10.4.2 Stative negative (=*ŋŋŋ‑*) 139

10.5 Temporal clitics and particles 139

10.5.1 Past particle *kɛ́* 139

10.5.1.1 Past imperfective (positive and negative) 139

10.5.1.2 Past progressive (positive and negative) 139

10.5.1.3 Past perfect (positive and negative) 139

10.5.1.4 Past experiential perfect (positive and negative) 139

10.5.1.5 Past recent perfect (positive and negative) 139

10.5.1.6 Past stative (positive and negative) 139

10.5.2 ‘Still’, ‘up to now’, ‘(not) yet’ 139

10.6 Imperatives and Hortatives 139

10.6.1 Imperatives and prohibitives 139

10.6.2 Hortatives 142

10.6.2.1 Hortative (*-ŋŋŋ*, plural *-ŋŋŋ*) 142

10.6.2.2 Hortative negative (*-ŋŋŋ*, plural *-ŋŋŋ*) 142

10.6.2.3 Indirect/quoted imperative (*-ŋŋŋ*, plural *-ŋŋŋ*) 142

10.6.2.4 Indirect/quoted prohibitive (*-ŋŋŋ*, plural *-ŋŋŋ*) 142

10.6.3 Indirect/quoted hortative 142

11 Clause, VP, and predicate structure 144

11.1 Clausal constituents 144

11.1.1 Subjects 144

11.1.1.1 Subjects in indicative main clauses 144

11.1.1.2 Subjects in relative and complement clauses 144

11.1.1.3 Subjects of imperative and hortative verbs 144

11.1.1.4 Subjects of lexicalized subject-verb combinations 144

11.1.2 Simple transitives 144

11.1.2.1 Direct objects of simple transitives 144

11.1.2.2 *ŋŋŋ* ‘do’ or ‘say’ with onomatopoeias and loanwords 144

11.1.2.3 Lexicalized verb-object combinations 144

11.1.2.4 Forms of cognate nominals associated with verbs 144

11.1.2.5 Grammatical status of cognate nominal 144

11.1.3 Clauses with additional arguments and adjuncts 144

11.1.3.1 Syntax of expressive adverbials (EAs) 144

11.1.3.2 Adverbial phrases with verbs of motion, being in, and putting 144

11.1.3.3 Ditransitives 144

11.1.3.4 Valency of causatives 144

11.1.4 Verb Phrase 144

11.2 ‘Be’, ‘become’, ‘have’, and other statives and inchoatives 144

11.2.1 ‘It is’ clitics 144

11.2.1.1 Identificational ‘it is X’ 145

11.2.1.2 ‘It is not X’ (*=rē* ) 146

11.2.2 Copula 147

11.2.2.1 Positive ‘X is Y’ (*kùⁿ*, plural *kúⁿ* ) 147

11.2.2.2 Negative ‘X is not Y’ (*kù=nē*, plural *kú=nē*) 147

11.2.3 Existential and locative quasi-verbs and particles 148

11.2.3.1 Positive ‘X is present (somewhere)’ 148

11.2.3.2 Negative ‘X is not present/X is abent (somewhere)’ 149

11.2.3.3 Past-time forms of ‘X is present (somewhere)’ (*cè* ) 150

11.2.4 Other stative locational and positional quasi-verbs 150

11.2.4.1 Other stative locational quasi-verbs (‘be in/on’) 150

11.2.4.2 Stative stance/position quasi-verbs 150

11.2.5 ‘Become’, ‘happen’, and ‘remain’ predicates 150

11.2.5.1 ‘Remain’ (*ŋŋŋ*) 150

11.2.5.2 ‘Become, be transformed into’ (*ŋŋŋ*) 150

11.2.5.3 ‘Become’ related to ‘be (somewhere) quasi-verbs (*ŋŋŋ*) 150

11.2.6 Mental and emotional statives 150

11.2.6.1 ‘Know’ (*sɔ̀* ) 150

11.2.6.2 ‘Want, like’ (*kà* ) 151

11.3 Quotative verb 151

11.3.1 ‘Say’ (*tɔ̀ʔɔ̀, cɛ̀*) 151

11.4 Adjectival predicates 152

11.4.1 Positive adjectival predicates 152

11.4.2 Negative adjectival and stative predicates (*=ŋŋŋ*) 152

11.5 Possessive predicates 152

11.5.1 ‘X have Y’ 152

11.5.2 ‘X be with Y’ 154

11.5.2.1 Predicate is PP with *dɛ̀* ‘with’ 154

11.5.2.2 Predicate is *dó* 154

11.5.3 ‘Y belong to X’ predicates (*mìkùⁿ*, 3Sg *míkùⁿ* ) 154

12 Comparatives 156

12.1 Asymmetrical comparatives 156

12.1.1 Predicative adjective with *ŋŋŋ* ‘than’ and comparandum 156

12.1.2 Verbal predicate plus *ŋŋŋ* ‘than’ 156

12.1.3 ‘Surpass’ (*ŋŋŋ*) 156

12.1.4 ‘Be better, be more’ (*ŋŋŋ‑*) 157

12.1.5 ‘Best’ (*ŋŋŋ*) 157

12.2 Symmetrical comparatives 157

12.2.1 ‘Equal; be as good as’ (*ŋŋŋ*) 157

12.2.2 ‘Same (equal)’ (*ŋŋŋ*) 158

12.2.3 ‘Attain, equal’ (*ŋŋŋ*) 158

12.3 ‘A fortiori’ (*ŋŋŋ*) 158

13 Focalization and interrogation 159

13.1 Focalization 159

13.1.1 Basic syntax of focalization 159

13.1.1.1 Which constituents can and cannot be focalized? 159

13.1.1.2 Linear position and form of focalized constituent 159

13.1.1.3 Form of verb following a focalized constituent 160

13.1.1.4 Effect on reduplication of verb 160

13.1.1.5 Effect on cognate nominals and other fixed subject/object nouns 161

13.1.2 Subject focalization 161

13.1.3 Object focalization 161

13.1.4 Focalization of PP or other adverb 161

13.1.5 Focalization of postpositional complement 162

13.1.6 Focalization of verb or VP 162

13.2 Interrogatives 162

13.2.1 Polar (yes/no) interrogatives (*ŋŋŋ*) 162

13.2.2 ‘Who?’ (*ŋŋŋ*) 163

13.2.3 ‘What?’ (*ŋŋŋ*), ‘with what?’, ‘why?’ 163

13.2.4 ‘Where?’ (*ŋŋŋ*) 164

13.2.5 ‘When?’ (*ŋŋŋ*) 164

13.2.6 ‘How?’ (*ŋŋŋ*) 164

13.2.7 ‘How much/many?’ (*ŋŋŋ*) 165

13.2.8 ‘Which?’ (*ŋŋŋ*) 165

13.2.9 ‘So-and-so’ (*ŋŋŋ*) 165

13.2.10 Embedded interrogatives 166

14 Relativization 167

14.1 Basics of relative clauses 167

14.2 Head NumP 169

14.2.1 Tone-dropping on final word(s) of head NP in relative clause 169

14.2.2 Restrictions on the head of a relative clause 170

14.2.3 Conjoined NP as head 171

14.2.4 Headless relative clause 171

14.2.5 Head noun doubled after relative clause 171

14.3 Preverbal (or: preparticipial) subject pronoun in non-subject relative 172

14.4 Verb (or: verbal participle) in relative clause 173

14.4.1 Participles of positive perfective-system verbs 174

14.4.2 Participles of positive imperfective-system and stative verbs 174

14.4.3 Participles of negative perfective-system verbs 175

14.4.4 Participles of negative imperfective-system and stative verbs 175

14.4.5 Participle of Past clitic *=ŋŋŋ* 176

14.5 Relative clause involving verb- or VP-chain 176

14.6 Late-NP elements that follow the verb (or verbal participle) 177

14.6.1 Determiners (demonstrative and definite) 177

14.6.2 Free Plural particle (*ŋŋŋ*) 177

14.6.3 Non-numeral quantifiers (‘each’, ‘all’) 178

14.7 Grammatical relation of relativized-on NP 178

14.7.1 Subject relative clause 178

14.7.2 Object relative clause 178

14.7.3 Possessor relative clause 179

14.7.4 Relativization on the complement of a postposition 179

15 Verb (VP) chaining and adverbial clauses 180

15.1 Direct chains (without chaining morpheme) 180

15.1.1 Verbal Noun of directly chained verbs 181

15.1.2 Presence of AN suffix in nonfinal verb in direct chains 181

15.1.3 Arguments of directly chained verbs 181

15.1.4 Negation of direct verb chains 182

15.1.5 Direct chains including *ŋŋŋ* ‘leave’ 182

15.1.6 Direct chains including a motion verb 182

15.1.7 Durative verb-iterations chained to a motion verb 183

15.1.8 Chains including *ŋŋŋ‑* ‘be/do together’ 183

15.1.9 Chaining with *ŋŋŋ* ‘go with’, ‘take along with oneself’ 183

15.2 Temporal adverbial clauses with overt chaining or subordinating morpheme 184

15.2.1 Adverbial clauses expressing temporal simultaneity or overlap 184

15.2.1.1 Noun-headed temporal relative clause (‘[at] the time when …‘) 184

15.2.1.2 Backgrounded durative clauses (*ŋŋŋ*) 185

15.2.1.3 Backgrounded durative clauses with iterated stem and (*ŋŋŋ*) 186

15.2.1.4 Imperfective subordinator *-ŋŋŋ* 186

15.2.1.5 Imperfective *-ŋŋŋ* on activity verb plus time-of-day verb 186

15.2.1.6 Imperfective *-ŋŋŋ* plus *ŋŋŋ‑* ‘be’ quasi-verb 186

15.2.1.7 ‘Since …‘ clauses (*ŋŋŋ*) 187

15.2.2 Adverbial clauses expressing a chronological sequence 187

15.2.2.1 Clauses with *ŋŋŋ* ‘and then’ (different subject, anterior) 187

15.2.2.2 Clauses with *‑ŋŋŋ* (same-subject, anterior) 188

15.2.2.3 Clauses with *ŋŋŋ* ‘and then’ (same-subject, anterior, future time) 188

15.2.2.4 ‘Worked until got tired’ = ‘worked for a very long time’ 189

15.2.2.5 ‘No sooner did…, than …‘ (*ŋŋŋ*) 189

15.2.3 Chronological reversal (‘before …‘ clauses) 189

15.3 Spatial and manner adverbials 190

15.3.1 Spatial adverbial clause (‘where …‘) 190

15.3.2 Manner adverbial clause (‘how …‘) 190

15.3.3 Headless adverbial clause as spatiotemporal or manner clause 190

15.3.4 ‘From X, until (or: all the way to) Y’ 191

15.3.5 ‘As though …‘ clause 191

16 Conditional constructions 192

16.1 Hypothetical conditional with *ŋŋŋ* ‘if’ 192

16.1.1 Regular antecedent clause 192

16.1.2 ‘Unless’ antecedent 193

16.2 Alternative ‘if’ particles 193

16.2.1 ‘Even if …‘ (*ŋŋŋ*) 193

16.2.2 ‘As soon as …‘ (*ŋŋŋ*) 193

16.3 Willy-nilly and disjunctive antecedents (‘whether X or Y …‘) 193

16.4 Counterfactual conditional 193

17 Complement and purposive clauses 194

17.1 Quotative complements 194

17.1.1 Direct versus indirect in quotative complements 194

17.1.2 ‘Say that …‘ with inflectable ‘say’ verb (*ŋŋŋ*) 194

17.1.3 Quotative clitic *ŋŋŋ* 195

17.1.4 Jussive complement (reported imperative or hortative) 196

17.1.4.1 Quoted imperative 196

17.1.4.2 Embedded hortative 196

17.2 Factive (indicative) complements 197

17.2.1 ‘Know that …‘ complement clause 197

17.2.2 ‘See (find, hear) that …‘ 198

17.2.2.1 Direct-perception type (relative-clause complement) 198

17.2.2.2 Recognition (inference, hearsay) construction 198

17.2.3 Factive complement with *ŋŋŋ* ‘it is certain’ 198

17.3 Verbal Noun (and other nominal) complements 199

17.3.1 Structure of Verbal Noun Phrase 199

17.3.2 ‘Prevent’ (*ŋŋŋ*) 199

17.3.3 ‘Dare’ (*ŋŋŋ*) 199

17.3.4 ‘Consent’ (*ŋŋŋ*) 200

17.3.5 ‘Want’ (*ŋŋŋ*) 200

17.3.6 ‘Forget’ (*ŋŋŋ*) 200

17.3.7 Obligational (*ŋŋŋ* ‘duty’) 201

17.3.8 ‘Be afraid to’ (*ŋŋŋ*) 201

17.3.9 ‘Begin’ (*ŋŋŋ*) 202

17.3.10 ‘Finish’ (*ŋŋŋ*) 202

17.3.11 ‘Cease’ (*ŋŋŋ*) 202

17.4 Locative verbal noun or other nominal complement 203

17.4.1 ‘Help’ (*ŋŋŋ*) 203

17.5 Direct chain complements 203

17.5.1 ‘Be able to, can’ (*cyɛ́* ) 203

17.6 Purposive, causal, and locative clauses 204

17.6.1 Clauses with Purposive postposition *ŋŋŋ* ‘for’ 204

17.6.2 Purposive clauses with Imperfective participle 205

17.6.3 Purposive clause with motion verb 205

17.6.4 Causal (‘because’) clause (*ŋŋŋ*) 205

17.6.5 ‘Because of’ (*ŋŋŋ*) 206

18 Anaphora 207

18.1 Reflexive 207

18.1.1 Reflexive possessor 207

18.1.1.1 Reflexive possessor of postverbal NP 208

18.1.1.2 Reflexive postpositional complements 210

18.1.1.3 Reflexive possessors in conjunctions 210

18.1.1.4 Reflexive possessor of preverbal object 210

18.1.2 Reflexive nonsubject argument (*yéʔré*~ *yɛ́ʔrɛ́* ) 212

18.1.2.1 Reflexive postverbal NP 213

18.1.2.2 Reflexive preverbal object 213

18.2 Reciprocal 214

18.2.1 Reciprocals (*ɲùʔùⁿ* ) 214

18.2.1.1 Reciprocal postverbal object 214

18.2.1.2 Reciprocal preverbal object 215

18.2.2 ‘Together’ (*ŋŋŋ*) 215

18.3 Emphatic pronouns 216

18.4 Logophoric and indexing pronouns 217

18.4.1 True third person logophoric function 217

18.4.2 Non-logophoric topic-indexing function 218

19 Grammatical pragmatics 218

19.1 Topic 218

19.1.1 Topic (*ŋŋŋ*) 218

19.1.2 ‘Now’ (*ŋŋŋ*) 218

19.1.3 ‘Also, too’ (*dóʔó* ) 218

19.1.4 ‘Even’ (*ŋŋŋ*) 218

19.2 Preclausal discourse markers 218

19.2.1 ‘Well, …‘ (*ŋŋŋ*) 218

19.2.2 ‘So, …‘ (*ŋŋŋ*) 218

19.2.3 ‘But …‘ (*ŋŋŋ*) 218

19.2.4 ‘Lo, …‘ (*ŋŋŋ*) 218

19.3 Pragmatic adverbs or equivalents 218

19.3.1 ‘Again’, ‘not again’, ‘on the other hand’ 218

19.4 ‘Only’ particles 218

19.4.1 ‘Only’ (*ŋŋŋ*) 218

19.4.2 ‘Just (one)’ (*ŋŋŋ*) 218

19.5 Phrase-final emphatics 218

19.5.1 Phrase-final *ŋŋŋ* ‘exactly’ (confirming) 218

19.5.2 Clause-final *ŋŋŋ* ‘sure’ (firm agreement or answer) 218

19.5.3 Clause-final *ŋŋŋ* (admonitive) 218

19.6 Backchannel and uptake checks 218

19.7 Greetings 218

20 Text 218

References 218

Index 218

# Introduction

## Mande languages

Languages of the Mande family are widely spoken in central and southern Mali, southwestern Burkina Faso, northern Côte d’Ivoire, and Guinea-Conaky. There are extensions into Ghana, Sierra Leone, Liberia, Guinea-Bissau, Gambia, and Senegal. Among the best-known languages in the family are the Manding group including Bambara, Jula, and Mandinka.

The spread of Mande beyond northern Guinea-Conakry and southern Mali into this broader region is attributable to the expansion of the medieval Mande empire (12th-14th C.), and more recently to extensive networks of Jula-speaking merchants. In Burkina, the area including Bobo Dioulasso (second-largest city in Burkina) and points north and west of that city is mostly populated by speakers of Mande languages. As its name (Bobo “Jula”-sso) suggests, the city is itself a hybrid of old-stock Bobo and newer Jula-speaking populations. There is also another important Mande block in west central Burkina including the Marka and Samo languages. These two main Mande blocks are separated by speakers of Bwamu, a Gur language. Especially in Mali, the Bwamu people and languag are misleadingly called “Bobo.”

The medieval Mande expansion was less intensive in the plateau between Banfora and Bobo Dioulasso in SW Burkina and the mountainous Mali-Burkina border to their west. This area remains mostly populated by several Senoufo groups and by speakers of various Gur languages like Toussian, Turka, Wara, and Natioro. Other than a few strictly Jula-speaking villages, the only Mande language spoken near Jalkunan is Dzuungo, which is not closely related genetically.

Using a more-or-less current model of the language family, the Mande languages of Burkina Faso have the genetic relationships in (xx1). A few languages of the immediately adjacent part of southeastern Mali are included, in italics. The first genetic split is east/west. The west then splits into central-southwest and northwest. Two central-SW divisions represented in Burkina are Manding, which includes Jula, and the very small Jogo-Jeri division, to which Jalkunan belongs. Many of the non-Jula Mande languages of western Burkina and the adjacent southeast of Mali belong to northwestern Mande.

(xx1) divisions languages

eastern Bisa, Samo

western

central-SW

Jogo-Jeri Jalkunan

Manding Jula, Bolon, Marka, Sininkere

northwestern

Samogo Dzuungo, Seenku, *Bankagooma, Jowulu, Duungooma*

Soninke-Bobo Bobo Madaré, Konabéré

## Jalkunan language

The language described here is spoken in one three-part village cluster, Blédougou (or just Blé), in the plateau west of Banfora in extreme southwest Burkina Faso. The cluster consists of three sections (local French: *quartiers*), separate but within walking distance from each other. Blédougou constitutes a Mande-speaking pocket surrounded by Senoufo-speaking and one or two Jula-speaking villages.

Jalkunan has been classified as part of the Jogo-Jeri division of the Manding-Jogo branch of Mande, which consists entirely of the Jogo (aka Ligbi) language spoken by a small population on the Côte d’Ivoire-Ghana border, plus Jeri-Jalkunan.

As of this writing (9/2016) there is an unresolved issue whether Jalkunan is a distinct language, or one of two dialects of a single language. The positions at this date by the Glottolog and Ethnologue websites are as follows:

(xx1) a. Glottolog

Jeri language, with two dialects:

Jeli, code jeri1241

Jalkunan, code jalk1242 or jeri1242

b. Ethnologue (SIL)

two languages

Jeri Kuo, ISO (639-3) code jek

Jalkunan, ISO (639-3) code bxl

Jeri (Kuo) ~ Jeli (Kuo) is spoken by members of a leatherworker caste of Mande origin in several villages or village quarters in the vicinity of Korhogo in north central Côte d’Ivoire. The zone is dominated by ethnic Senoufou.

Literature on Jeri of Côte d’Ivoire is as follows. Kastenholz (1991-MS), eventually published as Kastenholz (2001), provides a word-list and background comments, growing out of a wider dialectal survey. Tröbs (1998) is only substantial grammatical work; see also Tröbs (2013) on an issue involving postpositions. Literature on Jeri ethnicity includes Frank (1995) and Launey (1995).

In Jalkunan, the noun *jɛ̀l* (with nominal suffix *jɛ̀l-lá* singular or *jɛ̀l-láà-nū* plural), which may be cognate to “Jeli” and “Jeri,” denotes members of a pottery-making caste who are present at the nearby mostly Jula-speaking village of Kangoura (1 km from Bledougou), the village of Kawara (Natioro- and Jula-speaking) between Timba and Sindou, and at Sindou itself (the provincial capital). The *jɛ̀l-láà-nū* are said to speak a distinctive dialect of Jula, not Jalkunan. Oddly, there are no blacksmiths, leatherworkers, potters, or other artisan castes resident in Blédougou itself.

The “Jal-” of “Jalkunan” may also be related to this cognate set. In the language itself, Blédougou village is called *jàlsà-dù*, of which *dù* is probably a frozen locative marker. The syllable *sà* syllable is obscure, but it might be a compound final related to *sàà* ‘house; village’. The locally popular etymology of *jàlsà-dù* is a derivation from *jálá*, a species of tiny biting flies or bees, who (the story goes) were there to “welcome” the first settlers. The language itself is called *jàlìkùⁿ* (with nominal suffix *jàlìkù-ná*) or less often without nasalization *jàlìkù* (suffixed *jàlìkù-rɔ́*).

## Previous and contemporary study of Jalkunan

### Prost (1968)

R. P. André Prost was a giant of West African linguistics. He authored numerous works of his own and and collaborated with long-term missionaries and others to produce valuable grammars, dictionaries, and sketches of languages in many families. The 14-page sketch he made of Jalkunan (Prost 1998), based on a few days’ work with a young student he encountered in an undisclosed location, brought the language to the attention of West Africanists. As Prost stated in his paper, the material was preliminary, and he did not attempt tonal markings. Nevertheless, in a very short time and under less than ideal circumstances he was able, characteristically, to describe the essentials of this language. His short paper presents a basically correct analysis of NP morphosyntax, and provides some insights into the verbal system, as well as giving a basic lexicon (though mostly without tone markings).

### Our fieldwork

An an extension of an NSF-funded project directed by Heath and focused on Dogon and on the language isolate Bangime, Vu Truong (then a recent B.A. graduate of Brandeis) undertook fieldwork on Jalkunan out of the project’s Burkina base in Bobo Dioulasso during the period 2012-14. In fall 2014 he enrolled in the University of Chicago Ph.D. program in Linguistics.

I had some involvement with Jalkunan during that time period. He made the first contacts with Blédougou in 2012, and returned twice for three-day visits to collect flora-fauna vocabulary and to collect flora specimens. Later, he prepared a workshop on Jalkunan grammar, with a native speaker (my assistant), as part of the International Conference on Mande Languages, held in Bobo Dioulasso in 2014.

With Truong unable to return to Burkina during school year 2016-17, the project’s deadline for promised products on Jalkunan among other languages, Heath took a leave of absence from University of Michigan to complete the fieldwork. He worked with a Jalkunan speaker during most of September 2016 and wrote this grammar from scratch.

### Acknowledgements

The fieldwork by myself and the first year of fieldwork by Truong was funded by the National Science Foundation, Documenting Endangered Languages program, grant BCS-1263150 (2013-17).

I and my team thank the people of Blédougou for their warm hospitality and cooperation.

I am especially indebted to my assistant, Wamara Traoré. He is a resident of Blédougou but was willing to relocate to our base in Bobo Dioulasso for most of the work. He is a traditional hunter as well as farmer. With some hunter colleagues he led us on the flora-collecting trips in the vicinity of Blédougou.

# Sketch

This sketch describes basic features of the language, all of which are described more fully in later chapters.

## Phonology

### Segmental phonology

Basic consonants that can occur word-initially include voiceless obstruent like *k* and *s,* voiced obstruents like *g* and (marginally) *z*, nasals, lateral *l*, and (marginally) h. Other consonants that can occur intervocalically are tap *r* and glottal stop *ʔ*.

There are seven vowel qualities with two high vowels {*i u*}, four mid-height vowels including an ATR opposition {*e o*} versus {ɛ ɔ}, and a low vowel a. ATR harmony is evident in some combinations (like negative enclitic *‑rē* ~ *‑rɛ̄* ), but overall it is not strict. All qualities occur in nasalized and oral forms, and as short or long vowels, for a total of 7x2x2 = 28 vowel phonemes.

### Syllabic shapes and tone levels

The canonical syllable is *Cv* or *Cvv* (*vv* = long vowel or vowel sequence). *Cvv* may be lexical or it may be due to contraction at a boundary.

There are three tone levels H, M, and L. Most syllables are level-toned. However, contour tones HL, HM, LH, MH, and LHL can be expressed on single syllables.

### Tonal effects of 3Sg versus non-3Sg forms

Singular NPs and 3Sg pronouns differ from plural NPs and 3Pl pronouns in their tonal effects on immediately following words. 1Pl belongs with the other plurals in this respect, while 1Sg, 2Sg, and 2Pl (the three M‑toned pronominals) mostly avoid having to choose because M‑Spreading overrides any ablaut-like tonal processes. As preverbal objects, however, where they take L‑toned forms, they are treated like the plurals. On this basis the division may really be between 3Sg (including singular NPs) and everything else.

In any event, the distinction has wide-ranging effects. It applies to NP-verb sequences (whether the NP is an intransitive subject or a transitive object), to possessor-possessum combinations, and to NP-postposition combinations.

### Segmental phonological rules

Because of the *Cv(v)* syllable norm there are few segmental phonological processes other than *vv*‑Contraction. Initial tap *r* in suffixes and enclitics is nasalized to *n* after nasal syllables, including any syllable beginning with a nasal. *r*‑Naalization is very conspicuous since two of the most important morphemes in the language are the ubiquitous nominal suffix *-rà* ~ *-rɔ̀* and the negative enclitic *=rē* ~ *=rɛ̄*.

Voiceless stops tend to be voiced intervocalically, e.g. *k*→*g*. Since the voicing is so common it is difficult in some cases to decide that the voiceless stop is lexical (underlying). A similar situation occurs with medial nasal-stop clusters, which often lose the stop, e.g. *ŋg*→*ŋ* (or sometimes →*ŋŋ*, keeping the old metrical structure).

## Nouns, NPs, and pronouns

Basic linear order is Poss-N-Adj-Num. Plurality is marked by a suffix, but is omitted in NPs containing a nonsingular numeral.

### The nominal suffix

The most distinctive feature of Jalkunan nouns is what I call the “nominal” suffix, which occurs in some but not all syntactic contexts. It occurs word-finally on nouns, or on the adjective in an N-Adj sequence. It is not affected by the presence or absence of a preceding possessor. The abbreviation “Nom” in interlinears may suggest “nominative” (case), but this is not altogether unfortunate, since the distribution of the suffix overlaps in part with that of nominative (subject) case in other languages.

Broadly speaking, the nominal suffix is present at the end of NPs that can be described as prosodically independent: citation forms, predicate nominals, and postverbal nouns used as adverbs (without a postposition). It cannot be used in combinations where the NP is closely phrased with a following element: object of a following verb, intransitive subject followed by the verb, possessor of a following noun, left conjunct in a conjoined NP, NP complement of a postposition, NP followed by a discourse particle like ‘only’. The syntactic function that sits on the fence is subject: the nominal suffix is absent when followed by a nonpronominal object NP, but present in several combinations with pronominal objects.

There is a plural suffix which is added to the nominal suffix and occurs in the same position in NPs (e.g. after a simple noun, or after the adjective in N-Adj). Plurals have their own word-final nominal suffix (hence N-Nom-Pl-Nom). The medial -Nom- is obligatory in all syntactic positions, but the word-final -Nom is subject to syntactic restrictions, and in fact is more restricted than the word-final ‑Nom on singular nouns.

Example: noun *mɛ̀ʔɛ̀ⁿ* (variant *mìʔìⁿ* ) ‘person’, with nominal suffix *mɛ̀ʔɛ̀‑ná* from /mɛ̀ʔɛ̀ⁿ‑rá/. The bare form *mɛ̀ʔɛ̀ⁿ* (variant *mɛ̀ʔɛ́ⁿ* in some contexts by tone sandhi) is always used as possessor, object, or postpositional complement, while suffixed *mɛ̀ʔɛ̀‑ná* is the citation form and occurs in subject function before some pronominal objects. The plural is *mɛ̀ʔɛ̀‑ná‑àⁿ* ‘people’, with final nominal suffix *mɛ̀ʔɛ̀‑ná‑à‑nū*. The final nominal suffix ‑nū is syntactically restricted, but the medial nominal suffix *‑ná‑* is present regardless of syntactic context.

### Possession

There is no segmental possessive (genitive) morpheme. Possessors, whether pronominal or nonpronominal, directly precede the possessed noun (possessum). The possessum undergoes tonal changes, the details depending on the possessum’s input (lexical) tones, on the category of the possessor, and on whether possession is alienable or inalienable (the latter includes body parts and kin terms).

For example, *ɲí-ná* ‘tooth’ is lexically H‑toned. It has possessed forms like *mā ɲī-nā* ‘my tooth’, *à ɲì-ná* ‘his/her tooth’, and *mùʔùⁿ ɲí-ná* ‘our tooth’. The {LH} tones of ‘his/her tooth’ are standard for nouns with 3Sg possessors, alienable or inalienable. However, the application of M‑Spreading in ‘my tooth’ and the {H} tones of ‘our tooth’ (not automatically carried over from lexical tones) are features of inalienable possession. See §6.2.2 for details.

### Pronominal categories

Jalkunan is unusual among Mande languages in sharply distinguishing human from nonhuman pronominal categories in the third person. The primary forms of the pronouns, along with reflexive possessor forms, are in (xx1).

(xx1) category basic reflexive possessor (§18.1.1)

1Sg *mā āⁿ*

2Sg *wō ē* ~ *ī*

1Pl *mùʔùⁿ āāⁿ*

2Pl *ēēⁿ ēēⁿ* ~ *īīⁿ*

3SgHum *à à*

3SgNonh *è* *è* ~ *ì*

3PlHum *ààⁿ ààⁿ*

3PlNonh *èèⁿ èèⁿ* ~ *ììⁿ*

Of particular interest is the segmental convergence, in the reflexive possessor paradigm only, between third human and first person, on the one hand, and third nonhuman and second person, on the other. The segmentally convergent categories are systematically distinguished by tones in the reflexive possessor paradigm (M for 1st/2nd, L for third). For discussion see §18.xxx.

The other well-documented Mande language with a roughly similar distinction in third person pronouns is Jowulu (or Jɔ) in the Mali-Burkina border area (I thank Valentin Vydrine for pointing me to this language). Jowulu distinguishes masculine, feminine, and neuter in the 3Sg and human versus nonhuman in the 3Pl (Carlson 1993: 23). The forms are 3MascSg *ú*, 3FemSg *ní*, 3HumPl *ki̋*, and 3NonhPl *yìrì* (for typographic reasons I modify Carlson’s tonal accents, so that acute = high and double acute = superhigh). The Jowulu forms do not appear to be cognate to the Jalkunan forms, with the possible exception of nonhuman plural (Jowulu *yìrì*, Jalkunan èèⁿ ).

## Postpositions

There are several basic monosyllabic or bisyllabic postpositions (simple locative and several more specific spatial categories, instrumental, comitative, and benefactive). They are subject to the tonal processes mentioned above, appearing in L‑toned form after singular NPs or pronouns and in H‑toned form after plural NPs or pronouns, except that M‑toned pronouns (1Sg, 2Sg, 2Pl) spread their M‑tone into the postposition. Thus *kìnà* ~ *kíná* ~ *kīnā* ‘in front of’ in *sàá kìnà* (< /sàà kìnà/) ‘in front of the house’, *sàà-rá-àⁿ kíná* ‘in front of the houses’, and *mā kīnā* ‘in front of me’.

## Inflectable verbs

## Main clauses and constituent order

## Nominalized clauses and constituent order

## Relative clauses

## Interclausal syntax

# Phonology

## Internal phonological structure of stems and words

### Syllables

Open syllables (are the norm. Monosyllabic words and stems may be *Cv* or *Cvv* (*v* = any vowel quality).

Word-final short vowels may be deleted by syncope (medial) or apocope (final), creating *CvC* syllables. There are also some stems with medial CC clusters whose first consonant is syllabified with the preceding vowel.

### Metrical structure

## Consonants

The consonantal phonemes are in (xx1).

(xx1) Consonants

1 2 3 4 5 6 7 8 9

labial *p b m f v w*

alveolar *t d n s z l r*

glottalized  *ʔr*

alveopalatal *c j ɲ y*

velar *k g ŋ*

labial velar *kp gb ŋm*

laryngeal *ʔ* *h*

*key to columns: 1. aspirated voiceless stops and affricates; 2. voiced stops and affricates; 3.nasals, 4. voiceless fricatives (including sibilants); 5. voiced fricatives (including sibilants); 6. laterals; 7. other sonorants (taps, semivowels); 8. glottal stop; 9. laryngeal (aspiration)*

The orthography differs from IPA as indicated in (xx2).

(xx2) a. *c* is IPA [tʃ]

b. *j* is [dʒ]

c. *ʔr* is a tap with simultaneous glottal stop [ɾʼ]

d. ligatures are omitted for labial velars (but they are unit phonemes)

### Comments on specific consonants

#### *h*

This consonant is uncommon and is limited to stem-initial position in borrowings: *hɛ́ɛ́rɛ́* ‘well-being’.

#### *ʔ*

Glottal stop *ʔ* is common stem-medially between two short vowels: *bùʔúⁿ* ‘liver’, *dóʔó* ‘younger brother’. It does not occur word- or stem-initially, or word- or stem-finally except in negative enclitic *=rĒʔ*.

Usually ʔ within a stem is flanked by short vowels of identical quality. Nominal examples are *bàʔà* ‘wild onion’, *zɛ́ʔɛ̀nɛ́* ‘wild date tree (Balanites)’, *bòʔòkááⁿ* ‘tall grass spp. (*Hyperthelia*, *Diheteropogon*)’, and *níínààⁿ-tùʔùgú* ‘praying mantis’. Aspectual alternations such as imperfective *dàʔà* and E‑stem perfective *dɛ̀ʔɛ́* for the verb ‘let go, set free’ show that this is systematic at least for verbs. Exceptions are wòʔùl‑dì ‘mid-sized honey bee sp.’ and ɲíʔɛ̄nāā ‘get wet’.

#### *r* and *ʔr*

Tap *r* and glottalized *ʔr* do not occur word-initially. They do not occur word-finally, except in words like *máʔr̀* ‘mango’ when apocopated from *máʔrù*.

r can occur as first member of medial CC clusters: *bàrkár* ‘herb sp. (*Leucas*)’, *màrfá* ‘rifle’.

Other than this, both *r* and *ʔr* are limited to medial intervocalic position; *r* also occurs in the negative enclitic *=rĒʔ*, which usually follows a vowel. However, syncope/apocope can create *Cr* clusters, which can feed CC-adjustment rules like *r*‑Lateralization and *r*‑Deletion.

*ʔr* is phonetic [ɾʼ] with simultaneous glottal stop and (weak) tap. One could argue that it is a cluster of ʔ with r, but the simultaneity of the glottal stop argues for unit phoneme status. An alternative analysis is that it is the result of syncope from /ʔvr/ with some vowel *v*. This is plausible diachronically, but there is no good evidence for it synchronically. For example, nominal suffix *‑rà* (or tonal variant) allows syncope of a preceding vowel under some conditions, but there are no cases of *Cvʔv‑rà* syncopating to *Cvʔ-rà* [Cvɾʼà]. Examples of non-syncopation are *dèʔè‑rá* ‘cream of millet’ and *jóʔó‑rá* ‘Jula person’.

Examples of *ʔr* [ɾʼ] are the nouns *gúmàʔrà* ‘palm-frond bed’, *ɲɔ́kɔ̀ʔrɔ̀* ‘face’, *bɔ́ʔrɔ́* ‘loam’, *wɔ́ʔrɔ́* ‘thigh’, *fáʔrā* ‘cave’, *kóʔrō* ‘night’, *yɛ̀ʔrɛ̀* ‘néré tree’ (*Parkia*), *máʔr̀* ~ *máʔrù* ‘mango’, and the verbs *kàʔrà* ‘break, snap’, *bɛ́ʔrɛ̄* ‘yam (*Dioscorea*)’, *jɔ̀ʔrɔ̀* ‘jump’, *bàʔrà* ‘hit’, *tòʔrɔ̀* ‘sell’, *nɔ̀ʔrɔ̀* ‘affix’, *sèʔrà* ‘sweep’, *sònsóⁿʔrà* ‘squat’, and *kɔ̀ʔrìyáà* ‘get old’. I have no examples involving preceding high vowel *i* or *u*, but a following *i* or *u* is allowed, as shown by examples above and by several I‑stem perfectives of the verbs above (*kàʔrí* ‘broke’, etc.).

#### *z*

*z* is uncommon initially and seems to be limited to loanwords and to cultural vocabulary that can be suspected of being loanwords: *záʔàmɛ́* ‘rice cooked with sauce in it’, *zɛ́ʔɛ̀nɛ́* ‘wild date tree (*Balanites*)’. There are more examples of *z* intervocalically, but they too are flora-fauna or other cultural items: *sìzó* ‘scissors’ (< French), *táábìzɔ̀ŋɔ́* ‘Abdim’s stork’, *séⁿzé* ‘waterbuck’ (also in Jula), *kɔ̀ɔ̀ⁿzíⁿ* ‘fruit of tree sp. (*Annona*)’. As Prost already notes, medial *s* is sometimes pronounced *z*. I have observed this in the semi-reduplicative verb *sòⁿsóⁿʔrà* ‘squat’.

#### *v*

*v* is uncommon initially and unattested medially. My examples of word-initial *v* are flora-fauna terms: *vìlàⁿ* ‘fat mouse (*Steatomys*)’, *vègè-kùⁿ*, one of two synonyms for ‘wild grape tree (*Lannea*)’, *vóó* ‘river crab’, *vɔ̀ɔ̀ⁿ-vɔ̄ɔ̄ⁿ* ‘mud-dauber wasp’ (onomatopoeic).

In formulae like *CvCv*, *v* represents any vowel. It is necessary to use lowercase *v* to allow tone diacritics.

#### *p* versus *kp*

As already observed by Prost, *p* appears to be absent from native lexicon and occurs in borrowings and in cultural lexical items that are likely to have been borrowed. Some examples are *pɛ́lɛ̄* ‘chili pepper’, *álà-pɛ̀rɛ́n̄-káⁿ* ‘thunder’, *tápɛ́tí* ‘plastic sandals’, *kápɔ̀n* ‘daba (hoe) type’, *pándà*l ‘pants’, *pɔ̀sɔ́n* ‘poison’, *pítòl* ‘bulbul (bird)’, *pɔ̀tɔ̀‑pɔ̀tɔ́* ‘jatropha (tree)’.

By contrast, labial velar *kp* (a unit phoneme) is common word-initially in native vocabulary: *kpááⁿ* ‘die’, *kpɔ́ɔ́lɔ́* ‘time(s)’, *kpɔ́* ‘foot’, etc.

#### Voiceless obstruents (*k/g* and *t/d* variation medially)

Voiceless obstruents are common stem- and word-initially. They may occur intervocalically but they are much less common there. Variation between *k* and *g* is common in the medial position in *CvCv* stems, with *k* preferred in careful speech: *dùkù* ‘the bush, the outback’, usually *dùgù* in allegro speech. The relationship between intervocalic *t* and *d* is similar, as in *kítā* ~ *kídā* ‘bad’.

Based on my assistant’s strong tendency to pronounce such words with the voiced stop in allegro speech, and with the voiceless stop in careful “elicitation-ese,” I am not sure that there is a phonemic distinction in intervocalic position. That is, it may be that all cases of stem-internal intervocalic *g* and *d*, and perhaps *gb* and *b*, can be pronounced as voiceless in careful speech.

### Consonant clusters

#### Word- and morpheme-initial *CC* clusters

#### Medial geminated *CC* clusters

#### Medial non-geminate *CC* clusters

#### Medial triple *CCC* clusters

#### Final *CC* clusters

## Vowels

The inventory is (xx1). Tones

(xx1) oral nasal

short long short long

u u: uⁿ uuⁿ

o o: oⁿ ooⁿ

ɔ ɔ: ɔⁿ ɔɔⁿ

a a: aⁿ aaⁿ

ɛ ɛ: ɛⁿ ɛɛⁿ

e e: eⁿ eeⁿ

i i: iⁿ iiⁿ

### Short and (oral) long vowels

Both short and long vowels occur frequently in monosyllabics. A few examples among many are in (xx1).

(xx1) a. *Cv* monosyllabics

*nouns*

*dí* ‘child’

*kpɔ́* ‘foot’

*bé* ‘uncle’

*ɲì* ‘blood’

*pronouns*

*mā* 1Sg

wō 2Sg

*adjectives*

*gbɔ́* ‘big’

*ɲɛ́* ‘good’

*numerals*

*flā* ‘come’ (perfective)

*verbs*

*bà* ‘fall’ (imperfective)

*sɛ̌* ‘come’ (perfective)

b. *Cvv* monosyllabics

*nouns*

*kóō* ‘back (body)’

*féē* ‘calabash’

*lóó* ‘mask’

*gbíí* ‘boil (on skin)’

*adjectives*

*táā* ‘hot’

*kpēē* ‘white’

*numerals*

*táá* ‘ten’

*verbs*

*bàâ* ‘sleep’ (imperfective)

*sàà* ‘build’ (imperfective)

In nonmonosyllabic stems, long vowels are less common than short vowels in all positions. Nonmonosyllabic verbs especially tend to have only short vowels. The most common shape that does include a long vowel is *CvvCv*, followed by *CvCvv* (xx2a‑b). Medial long vowels in trisyllabics occur in a few loanwords (xx2c).

(xx2) a. *CvvCv*

*nouns*

*jààgbè* ‘courage’

*bɔ̀ɔ̀rɔ́* ‘sack’

*báárá* ‘work (n)’

*numerals*

*sóóló* ‘5’

*búúlī* ‘thousand’

*verbs*

*mììlí* ‘think’ (perfective; variant *mììrí* )

*fɛ̀ɛ̀ní* ‘untie’ (perfective)

*mààsɛ́* ‘bow, bend over’ (perfective)

b. *CvCvv*

*nouns*

*sìlàà* ‘daytime’

*jàŋgbáā* ‘cat’ (and other variants)

*verbs*

*mùníī* ‘crawl’ (perfective)

*nɛ̀nɛ́ɛ̀* ‘taste’ (perfective)

c. *CvCvvCv*

*nouns*

*tùbààbú* ‘white person’

*lìmààmí* ‘imam’

### Nasalized vowels

Short and long nasalized vowels have the same distribution as oral short and long vowels. Any vowel quality can be nasalized. Because a syllable-initial nasal consonant induces phonetic nasalization of the vowel, the examples given here involve syllables beginning with oral consonants.

(xx1) a. *Cv* monosyllabics

*nouns*

*sɛ́ⁿ* ‘thing’

*tóⁿ* ‘arrow’

*demonstratives*

*míⁿ* ‘this’

*verbs*

*kpāⁿ* ‘die’ (imperfective)

*bɛ̌ⁿ* ‘draw (water)’ (imperative)

*kìⁿ* ‘fly away’ (imperative)

b. *Cvv* monosyllabics

*nouns*

*cííⁿ* ‘breast’

*gbááⁿ* ‘shoulder’

*kwééⁿ* ‘crops’

*dɔ̀ɔ̀ⁿ* ‘dance (n)’

*kùùⁿ* ‘penis’

*pronouns*

*ēēⁿ* 2Pl

*ààⁿ* human 3Pl

*verbs*

*jɔ̀ɔ̂ⁿ* ‘steal’ (imperfective)

*kpàâⁿ* ‘kill’ (imperfective)

In nonmonosyllabics, it is easiest to find phonemically nasalized vowels word-finally (xx2b) than initially or medially, where vocalic nasalization is more strongly associated with nasal consonants. Some long nasalized vowels are in (xx2). These include some *CvCvv* stems with nasalized medial *C*, on the grounds that phonemic nasalization is more readily heard in final long than short vowels.

(xx2) a. nonfinal long nasalized vowel

*nouns*

*cīīⁿ-yí* ‘breast-milk’ (compound)

b. final long nasalized vowel

*nouns*

*jàŋgbáāⁿ* ‘cat’ (variants include *jàŋmáāⁿ* )

*kūmɛ̄ɛ̄ⁿ* ‘food’

*kūmāāⁿ* ‘cold(ness)’

*verbs*

*sàmɛ́ɛ̄ⁿ* ‘pull’ (perfective)

*mɔ̀mɔ́ɛ̄ⁿ* ‘crawl’ (perfective)

Some nonmonosyllabics with short nasalized vowels are in (xx3). Nonfinal nasalized vowels are rare unless preceded by a nasal consonant. Final nasalized vowels are common

(xx3) a. nonfinal short nasalized vow*el*

*nouns*

*cíⁿwù ‘termitary’*

b. final short nasalized vowel

*nouns*

*dúléⁿ* ‘*fishing apparatus’*

*búʔúⁿ ‘liver’*

*gbíríⁿ ‘wilderness’*

*bààgéⁿ ‘tea’*

*fààndáⁿ ‘pauper’*

*sààbíⁿ ‘roof’*

Several verb stems have some alternations between *Cvnv* and *Cvⁿ*. The short form is the imperative.

(xx4) imperfective imperative gloss

*dɔ̀nɔ̀ dɔ̀ⁿ* ‘chew’

*gbɛ̀nà gbɛ̌ⁿ* ‘throw’

*jàʔánà jàʔáⁿ* ‘descend’

### Initial vowels

### Stem-final vowels

### Vowel sequences (*ɔɛ* diphthong)

The diphthong *ɔɛ* occurs in verbs with basic vowel(s) *ɔ* that add a mid-height front vowel *ɛ* in the perfective. However, the diphthong is monophthongized in the perfective negative (xx1a). No diphthong is created even in the positive when the high front vowel *i* rather than *ɛ* is used in the perfective (xx1b). The other vowel quality in verb stems that is not already a front vowel and that can acquire *ɛ* in the perfective is the low vowel *a*, which is replaced by *ɛ* rather than forming a diphthong with it (xx1c). There is therefore no #*aɛ* diphthong.

(xx1) imperfective perfective PfvNeg gloss

a. *sɔ̄ɔ̄ sɔ̀ɛ́* *sōō=rēʔ* ‘enter’

*bɔ̄ bɔ̀ɛ́* *bōō=rēʔ* ‘exit’

*sɔ̀ɔ̀ sɔ̀ɛ̀* *sòò=rēʔ* ‘put (sth) in’

*jɔ̌ɔ̀ⁿ jɔ̀ɛ́ⁿ* *jɔ̀ɔ́=nɛ̄ʔ* ‘steal’

*dɔ̌ɔ̀ⁿ dɔ̀ɛ́ⁿ* *dɔ̀ɔ́=nɛ̄ʔ* ‘step on’

*mɔ̀mɔ̂ⁿ mɔ̀mɔ́ɛ̄ⁿ* *mɔ̀mɔ́ɔ̄=nɛ̄ʔ* ‘carry on back’

b. *būlɔ̄ bùlí* ‘return, go back’

*dùtɔ̀lɔ̀ dùtɔ̀lí* ‘point at’

c. *kpāⁿ kpɛ̌ⁿ* ‘die’

*bàà bɛ̌* ‘fall’

*dòsā dòsɛ́* ‘add’

A +ATR diphthong *oe* would seem to be structurally possible. However, the *ɔɛ* diphthong occurs only in perfectives of monosyllabic verbs. Verbs of this shape that have *oo* in the perfective negative and/or other forms, like ‘enter’, ‘exit’, and ‘put (sth) in’ in (xx1), have ‑ATR *ɔɛ* in the perfective.

## ATR Harmony

The key ATR (advanced tongue root) opposition is ‑ATR {*ɛ ɔ*} versus +ATR {*e o*}. Within simple (noncomposite) stems, including aspect-marked verb stems, harmony is respected. For example, *tòlóē* ‘rotted’ and *bɔ̀ɛ́* ‘exited’ are perfective forms of verbs, ending in the perfective stem-final *e* or *ɛ*, the choice based on ATR value of the rest of the stem.

ATR Harmony is also central to the variation between *=rēʔ* and *=rɛ̄ʔ* variants of the all-purpose clause-final negative enclitic (§10.2), and that between *=ē* and *=ɛ̄* variants of the ‘it is’ enclitic (§12.2.1.1). It has no effect on the nominal suffix *‑rà* (and variants), progressive suffix *‑yá*, or other suffixes not involving mid-height vowels.

The two ATR-harmonizing enclitics mentioned bring out the covert ATR value of high and low vowels. The full set of vowels in each harmonic class are these:

(xx1) -ATR {*ɛ ɔ a*}

+ATR {*e o i u*}

For example, the negative enclitic takes the form *=rɛ̄ʔ* after a syllable containing the low vowel *a* (xx2a) as well as one containing overtly ‑ATR {*ɛ ɔ*} or, and it takes the form *=rēʔ* after a syllable containing a high vowel {*i u*} (xx2b) as well as one containing overtly +ATR {*e o*}. See §10.2 for more examples.

(xx2) a. *è sá ꜜsáá=rɛ̄ʔ* ‘It will (not) come.’

b. *é kìí=nēʔ* ‘It did not fly’

*bí=í gùⁿ=nēʔ* ‘(don’t shorten it!’

The ATR‑harmonic class of a verb is usually not constant. ‑ATR vocalism is shifted to +ATR, optionally before the negative enclitic (which then itself adjusts to the new ATR value of the stem), and obligatorily in the progressive verb form (§10.1.2.3, §10.3.2.4).

(xx3) imperative perfective imperfective progressive gloss

a. +ATR in progressive only

*dɛ̌ dɛ̀ɛ́ dɛ̀ɛ̀ dè-yá* ‘heat (sb)’

*mɔ̀ɔ́ mɔ̀ɛ́ mɔ̀ɔ̀ mó-yā* ‘rub’

In addition, there are a few verbs that shift from +ATR in the perfective and imperative to ‑ATR in the imperfective stem (§10.1.2.3).

(xx4) imperative perfective imperfective gloss

a. shift to ‑ATR in imperfective

*wě wěē wɛ̀ɛ̀* ‘bathe (sb)’

*dàkó dàkóī dàkɔ̂* ‘catch (sth thrown)’

Given that *i* and e are +ATR, while *a* is ‑ATR, the recurrent opposition within third person pronouns between nonhuman *e* ~ *i* and human *a* can be thought of as a kind of sound symbolism: +ATR = nonhuman and ‑ATR = human. In reflexive possessor pronouns, this is expanded by including second person pronouns in the +ATR group and first person pronouns in the ‑ATR group (§18.1.xxx).

## Verb-stem ablaut

Each regular verb occurs in a number of TAM inflections. These are distinguished from each other partly by inflectional morphemes that follow the subject NP, and partly by verb-stem alternations.

As explained in §10.1.2, the imperfective stem has the most lexically specific information (vocalism, tone), and I generally use it as a citation form. The perfective is characterized by a final front vowel {*i e ɛ*}, which can be analysed either as a suffix or as a final-vowel (and in some cases stem-wide) vowel mutation. Perfectives with mid-height *e* or *ɛ* form one subset of perfectives, the choice between the two depending on ATR‑harmonic class (xx1a); those with *i* are a second subset (xx1b).

(xx1) imperfective perfective +3Sg gloss

a. *ɲìnâ ɲìnɛ́* ‘forget’

*wàá wěē* ‘go’

*dàʔà dɛ̀ʔɛ́(ɛ̄)* ‘escape’

b. *búlɔ́ bùlí* ‘go back’

*díbɛ́ dìbí* ‘be extinguished’

## Segmental phonological rules

### Trans-syllabic consonantal processes

#### *r*-Nasalization (/nr/ → *nn*, /Nv-r/ → *Nv-n*)

A suffix- or enclitic-initial tap *r* is nasalized to *n* following a nasal consonant or a nasal syllable. The latter is defined as *Nv(v)* or *Cv(v)ⁿ*, i.e. either a syllable beginning with a nasal consonant or containing a nasalized vowel.

*r*-Nasalization applies to nominal suffix *‑ra* ~ *‑rɔ* (tone variable) and to negative enclitic *=re* ~ *=rɛ*.

(xx1) a. *kàr-mūʔūⁿ* ‘holy man’, with nominal suffix *kàr-mūʔūⁿ=nā*

b. *ɲáā-nà=∅* ‘it’s a woman’, negated as *ɲáā-nà=∅=nɛ̄*

A counterexample is provided by cases like the noun *cɛ́ŋgɔ̀* ~ *cɛ́ŋŋɔ̀* ‘middle’, where *ŋg* is in the process of simplifying to *ŋ* via *ŋŋ*. In principle, *r*-Nasalization of the nominal suffix should apply after variant *cɛ́ŋŋɔ̀* but not after variant *cɛ́ŋgɔ̀*, whose oral stop *g* prevents nasalization from spreading rightward. However, the actual forms are *cɛ́ŋgɔ̀‑rɔ̀* ~ *cɛ́ŋŋɔ̀‑rɔ̀* without nasalization of the suffix (§8.3.xxx).

#### *r*‑Lateralization (/lr/ → *ll* )

Tap *r* assimilates to an immediately preceding *l*, resulting in a geminated *ll*. As with *r*‑Nasalization (preceding section), this process affects nominal suffix *‑ra* ~ *‑rɔ* and negative enclitic *=re* ~ *=rɛ*.

*r*‑Lateralization can be fed by Apocope in the sense of stem-final short-vowel deletion before a consonant. This is the case with the basic nominal suffix *-rà* (and variants). When the preceding stem ends in a vowel, the suffixal consonant is always *r* (or nasalized *n*). When the stem-final vowel is apocopated, an /lr/ cluster may be created, and this shifts to *ll*. For example, *sìⁿyélé* ‘charcoal’ has an apocopated suffixed form *sìⁿyél-là*, evidently from /sìⁿyélé‑rà/ via apocopated /sìⁿyél‑rà/. See, however, the following section.

#### *r*-Deletion (/lr/→ *l* )

There are also some nouns ending in *lv* (*v* = any short vowel) after which the nominal suffix has the form *‑a* ~ *‑ɔ* (tone depends on noun stem) without the suffixal *r* or assimilated second l. The simplest phonological analysis is that /lvr/ apocopates to /lr/ and the *r* is then deleted instead of assimilating to the lateral. An alternative is a two-step derivation with assimilation to /ll/ followed by degemination to *l*.

#### Deletion of intervocalic sonorants before diminutive *-lī*

Though not a productive process, there are a number of cases where a final syllable from the set {lv nv *rv*}, i.e. an alveolar sonorant plus any short vowel, loses the sonorant before diminutive suffix ‑lī or variant. The resulting vowel cluster contracts. An example is *kàʔrà* ‘unmarried woman’, diminutive *kàà‑lì* ‘young girl’. There are additional minor phonological idiosyncracies of these diminutives; see §4.2.1 for examples and discussion.

#### Syncope or epenthesis?

Short high vowel *i* appears in extra-short (clipped) and centralized form in the contexts *C\_rv* and *C\_lv* (v = any vowel). For example, *dí* ‘child’ combines with the nominal suffix as *dí‑rá*, which is heard as [də́ɾá] with a clipped schwa-like vowel.

Where the *C\_rv* or *C\_lv* sequence is internal to a stem, reanalysis as *Crv* or *Clv* may be in progress. This seems to be the case with the numeral *flā* ‘2’ and the second word in fōʔō glān ‘flour from roasted millet grains’, among other examples. A brief schwa is sometimes heard, as in [fə̄lā]. One could argue that it is epenthetic, but in syllable-by-syllable pronunciation my assistant sometimes syllabifies as *fī.lā*.

A similar example is *fìlí* ~ *fílí* ‘threw’ (perfective). In the first tonal variant, which follows a 3Sg object, the first vowel is reduced to a clipped schwa but nonetheless bears the initial L‑tone, so one hears [fə̀lí]. If reanalysis as /fli/ plus LH tone had occurred, one would expect phonetic [flǐ] with the pitch rise concentrated on the final vowel. In the monotonal variant *fílí*, which follows a non-3Sg object, there is no clear schwa: [flí].

### Apocope

Stem- and word-final short vowels, especially but not exclusively {*i* *u*}, are deleted under some conditions. In general, Apocope occurs when the relevant word is phrased with a following word, rather than prepausally (or in isolation). In cases where a word that can occur prepausally with the final vowel preserved loses this vowel at lest optionally before any following element beginning with Cv (suffix, enclitic, or word), I refer to the final-vowel deletion as Apocope. I reserve Syncope for vowel-deletion not involving stem- or word-final position (preceding section). However, there is little practical difference between Apocope and Syncope in this language.

Singular nouns and adjectives occur in two basic forms, one with word-final nominal suffix -rà or variant (obligatory prepausally, before the imperfective enclitic, and in perfectives before some third person object pronouns), the other without (always phrased with a following word). My three elicitation frames for singular nouns, designed to bring out lexical tones and segments, involve a) the suffixed form (prepausal) showing the nominal suffix, b) the form before numeral flā ‘two’, and c) the form as direct object before a verb beginning with L‑tone (jìɛ́ ‘saw’ with a non-3Sg subject such as 1Sg). The second environment flattens an HM noun to HH. The third environment is favorable to Final Tone-Raising, which is not immediately relevant here. In general, the best choice for lexical representation of segments and tones is the third environment after undoing Final Tone-Raising.

The data in (xx1a‑c) and abundant other data not presented here show that the stem-final vowel is never apocopated after an obstruent, glottal stop, or cluster. Unit phoneme ʔr is not a cluster and does allow Apocope (xx1d), most obviously with ‘mango’ but also in the suffixed form of ‘soil’ (< /bɔ́ʔrɔ́-rɔ́/ by Apocope and r‑Deletion).

(xx1) suffixed ‘two \_\_s’ ‘(I) saw \_\_’ gloss

a. medial obstruent

fūgū-rā fūgū fūgú ‘hill, mountain’

sìbì-rá sìbì sìbí ‘meat’

b. medial glottal

mìʔì-ná mìʔìⁿ mìʔíⁿ ‘person’ (~ mɛ̀ʔɛ̀ⁿ )

c. medial cluster

fúrnó-rà fúrnó fúrnó ‘burner’

d. ʔr is not a cluster

máʔr̀-rá máʔr̀ máʔr̀ ~ máʔrù ‘mango’

bɔ́ʔr-ɔ́ bɔ́ʔrɔ́ bɔ́ʔrɔ́ ‘soil’

In CvLv stems with medial sonorant L, some stems do not apocopate in any position (xx2a‑c). It is difficult to determine whether Apocope has applied with Cvyi and Cvwu stems, with homorganic semivowel and short vowel (xx2d). (xx2) has all relevant CvCv stems in my working lexicon (excluding flora-fauna) after the first month of fieldwork.

(xx2) suffixed ‘two \_\_s’ ‘(I) saw \_\_’ gloss

a. medial nasal

n

dínɛ̄-nà dínɛ́ dínɛ̄ ‘religion, Islam’

dòŋò-ná dòŋò dòŋó ‘termitary’

dùnú-nɔ̀ dùnú dùnú ‘cylindrical tomtom’

jɛ́nɛ́-nà jɛ́nɛ́ jɛ́nɛ́ ‘shed, stall’

jínā-nà jíná jínā ‘devil, djinn’

kúnɔ̄-nà kúnɔ́ kúnɔ̄ ‘wooden bowl’

níní-nà níní níní ‘tongue’

nɔ̀nɔ́-nɔ̀ nɔ̀nɔ́ nɔ̀nɔ́ ‘milk’

sɔ́nɔ̄-nɔ̀ sɔ́nɔ́ sɔ́nɔ̄ ‘maize’

~ sɔ᷆n-nɔ̀

ŋ

bíŋí-nà bíŋí bíŋí ‘granary’

cɛ́ŋɔ̀-rɔ̀ cɛ́ŋɔ̀ cɛ́ŋɔ̀ ‘middle’

kàŋá-nà kàŋá kàŋá ‘froth, foam’

kpàŋà-ná kpàŋà kpàŋá ‘soap’

kpēŋū-nɔ̄ kpēŋū kpēŋú ‘dike’

lòŋá-nà lòŋá lòŋá ‘hourglass tomtom’

nɔ̀ŋɔ̀-nɔ́ nɔ̀ŋɔ̀ nɔ̀ŋɔ́ ‘friend’ or ‘side’

tɔ̀ŋɔ̀-nɔ́ tɔ̀ŋɔ̀ tɔ̀ŋɔ́ ‘cauldron’

m

bòmò-rá bòmò bòmó ‘stomach’

jàmù-nà jàmù jàmú ‘surname’

jèmé-nà jèmé jèmé ‘tall basket’

jɔ̀mɛ́-nà jɔ̀mɛ́ jɔ̀mɛ́ ‘bag’

làmó-rà làmó làmó ‘tax’ (< Fr. *l’impôt*)

sɔ̀mɛ́-nà sɔ̀mɛ́ sɔ̀mɛ́ ‘marrow’

tàmà-ná tàmà tàmá ‘spear’

b. medial semivowel

síyá-rà síyá síyá ‘type, sort’

c. medial liquid

l

fílā-rà fílā fílá ‘Pullo, Fulbe person’

mèlɔ́-nɔ̀ mèlɔ́ⁿ mèlɔ́ⁿ ‘watermelon’

yūlō-nā yūlōⁿ yūlōⁿ ‘couscous steamer’

r

gbírī-nà gbíríⁿ gbírīⁿ ‘wilderness’

d. doubtful cases (homorganic yi, wu)

yi

ɲàyí-rà ɲàyí ɲàyí ‘tears (n)’

sɔ́yí-ná sɔ́yíⁿ sɔ́yíⁿ ‘strap’

gɔ̀yì-rá gɔ̀yì gɔ̀yí ‘gravel’

kɔ̄yī-rā kɔ̄yī kɔ̄yí ‘belly’

wu

cíⁿwù-rɔ́ cíⁿwù cíⁿwù ‘low termitary’

In bòmò-rá ‘stomach’ and làmó-rà ‘tax’ in (xx2a), the failure of suffixal r to nasalize suggests recently departed pronunciations with medial nasal-stop cluster, which in the case of ‘tax’ is consistent with the foreign source.

Apocope does, however, often occur in one or more forms of many other CvLv stems. In those cases where the stem takes the form CvL(v) in unsuffixed contexts but bisyllabic CvL‑a/ɔ or CvL‑La/ɔ in the suffixed form, rather than trisyllabic CvLv‑ra/ɔ, Apocope has evidently applied in the suffixed form, i.e. /CvLv‑ra/ → /CvL‑ra/ followed by adjustments to /Lr/ (e.g. /lr/→ ll by r‑Laterialization or → l by r‑Deletion). In this analysis, the choice between ungeminated CvL‑a/ɔ and geminated CvL‑La/ɔ is a matter of CC-cluster processes, and Apocope can be assumed to have applied in either case.

(xx3) suffixed ‘two \_\_s’ ‘(I) saw \_\_’ gloss

a. medial l

*Apocope before ‘two’, /l-r/ cluster realized as* l

bɛ́l-á bél bɛ́lɛ́ ‘medication’

cál-à cél cálā ‘road’

jùl-ɔ́ jùl jùlɔ́ ‘leaf’

kɔ́l-ɔ́ kɔ́l kɔ́lɔ́ ‘hill, mountain’

kpɔ̀l-ɔ́ kpòl kpɔ̀lɔ́ ‘skin’

sɔ̀l-ɔ́ sɔ̀l sɔ̀lɔ́ ‘gear’

tál-á tál tálá ‘sun’

tɔ́l-ɔ̀ tól tɔ́lɔ̄ ‘ear’

wàl-á wàlà wàlá ‘urine’

wál-à wál ~ wálá wálā ‘noise’ or ‘shout’

wùl-á wùl wùlá ‘dog’

yál-á yál yálá ‘egg’ or ‘bone’

yál-à yál yálā ‘hole’

*Apocope before ‘two’, /l-r/ cluster realized as* ll

búl-lá búl búlú ‘grub’

dál-lá dál dálí ‘grub’

jél-lá jél jélé ‘grub’

kél-lá kél kélé ‘courtyard’

ɲi᷆l-là ɲíl ɲílī ‘eyes’

pɛ᷆l-là pɛ́l pɛ́lɛ̄ ‘chili pepper’

súl-lá súl súlú ‘shade’

túl-lá túl túlú ‘metal’

wál-lá wál wálí ‘work (n)’

*no Apocope before ‘two’,* /l-r/ *realized as* l

bál-áⁿ báláⁿ báláⁿ ‘balafon (xylophone)’

kál-á kálá kálá ‘home’

*no Apocope before ‘two’,* /l-r/ *cluster realized as* ll

bàl-láⁿ bàlàⁿ bàláⁿ ‘Senoufo person’

~ bàl-ná

tél-lá télé télé ‘oil’

wèl-lá wèlè wèlé ‘scales; bark’

ye᷆l-là yélé yélē ‘thorn’

b. medial n

*Apocope before ‘two’, /n-r/ cluster realized as* nn

sán̄-nà sán sánū ‘gold’

tàn-ná tàn tàná ‘totem’

*no Apocope before ‘two’, /n-r/ cluster realized as* nn

kpɛ́n-ná kpɛ́nɛ́ kpɛ́nɛ́ ‘courtyard’

kún-ná kúnú kúnú ‘village’

mùn-ná mùnù mùnú ‘rice (crop)’

c. medial m

*no Apocope before ‘two’*

nɔ́m̄-nà nɔ́m nɔ́mī ‘skullcap’

d. medial r

*Apocope before ‘two’*

sér̄-rà sér sérī ~ sér̄ ‘prayer’

wár̄-rà wár wárī ‘money’

*no Apocope before ‘two’*

màr-rá màrà màrá ‘chronic malaria’

sár̄-rà sárá sárrā ‘tobacco’

wór̄-rà wóró wórō ‘kola nut’

e. medial ʔr

*Apocope before ‘two’ and sometimes ‘see',* /ʔr-r/ *realized as* ʔrr

fáʔr-à fáʔŕ fáʔrā ‘cave’

kàʔr-á kàʔr̀ kàʔrá ‘unmarried woman’

máʔr̀-rá máʔr̀ máʔr̀ ‘mango’ (variant)

~ máʔrù ~ máʔrù

sɛ̀ʔr-á sɛ̀ʔr̀ sɛ̀ʔrɛ́ ‘porridge woman’

*no Apocope before ‘two’,* /ʔr-r/ *realized as* ʔr

wɔ́ʔr-ɔ́ wɔ́ʔrɔ́ wɔ́ʔrɔ́ ‘thigh’

bɛ́ʔr-à bɛ́ʔrɛ̄ bɛ́ʔrɛ́ ‘thigh’

bɛ́ʔr-à bɛ́ʔrɛ̄ bɛ́ʔrɛ́ ‘thigh’

kóʔn̄-nà kóʔró kóʔrō ‘night’ (for kóʔrōⁿ ?)

bàʔr-á bàʔrà bàʔrá ‘calabash tomtom’

A small number of CvL stems appear not to have a lexical final vowel, even in object function. Unless further study brings out a vowel-final object form, these nouns do not require synchronic Apocope.

(xx4) suffixed ‘two \_\_s’ ‘(I) saw \_\_’ gloss

jén-ná jén jén ‘ax’

bu᷆l-là búl bu᷆l ‘inheritance’

sɔ᷆l-là sɔ᷆l sɔ᷆l ‘weeding daba’

kɔ᷆l-là kɔ᷆l kɔ᷆l ‘cotton (crop)’

tòn-ɔ́ tòn tǒn ‘heap’

### Final Truncation in imperative verbs

Imperative and imperfective forms of verbs are generally closely related, but the ending of the imperative stem is shorter than than of the imperfective. A vowel or an entire syllable at the end of the imperfective is absent from the imperative.

There are two analytical options: a) the imperfective adds a suffix to the basic stem, which is identical or similar to the imperative; b) the imperative undergoes final truncation.

Some examples are in (xx1). Further data are in chapter 10.

(xx1) Ipfv (3Sg) Imprt (Sg) gloss

a. long versus short vowel

*dɛ̀ɛ̀ dɛ̌* ‘heat (sth)’

*bɔ̄ɔ̄ bɔ̄* ‘exit, go out’

*bàà bǎ* ‘put down’

*kpààⁿ kpǎⁿ* ‘kill’

*nɛ̀nɛ́ɛ̀ nɛ̀nɛ́* ‘taste (sth)’

*dòʔòyáà dòʔòyá* ‘shrink (sth)’

b. final *Nv* versus zero

*kònò kǒ* ‘expand (sth)’

*bɛ̀nà bɛ̌ⁿ* ‘draw water’

*kànà kǎⁿ* ‘ruin (sth)’

*gbàʔàlánà gbàʔàlá* ‘become thin; dry off’

*c. jyɛ̀ jǐ* ‘see; get’

*bálīyà bàlì* ‘accept, consent’

*tùwɔ̂ⁿ tǔⁿ* ‘apply hide covering’

*bìlɛ̀ bìlí* ‘give’

The examples in (xx1a) involve a final long vowel in the imperfective corresponding to a short vowel in the imperative. One could derive either from the other, by a lengthening or a shortening rule.

In (xx1b), at first sight it looks impossible to derive the imperfective from the imperative, since there is no correlation of final nasalized vowel in the imperative with the final *nv* syllable in the imperfective; note also ‘kill’ in (xx1a) and ‘apply hide covering’ in (xx1c). However, the imperatives in (xx1b), including those like ‘expand (sth)’ that otherwise end in an oral vowel, grow a final *n* when phrased with a following vowel-initial word (xx2a). This does not happen with ‘kill’ or ‘apply hide covering’ (xx2b‑c).

(xx2) a. *sàá kòn [á kɛ̀ⁿ]*

house enlarge.Imprt [3SgHum for]

‘Expand-2Sg the house for him/her!’

b. *klāá kpàⁿ [á kɛ̀ⁿ]*

mouse kill.Imprt [3SgHum for]

‘Kill-2Sg the mouse for him/her!’

c. *è tùⁿ [á kɛ̀ⁿ]*

3SgNonh apply.hide.Imprt [3SgHum for]

‘Cover-2Sg it with hide for him/her!’

So there is a chance that the imperfectives in (xx1b) can be derived from underlying forms of the imperatives including the final *n*. However, it is not clear how the final vowel of the imperfective could be predicted from the vocalism of the imperative, either in (xx1b) or (xx1c). I therefore opt for a subtractive derivation of the imperative from the imperfective. The key is to delete the final vocalic mora (short vowel, or lengthening of a long vowel); this can be followed by Final *n*-Deletion, y‑vocalization, and any other indicated processes affecting consonants that have become word-final.

### Vowel-vowel and vowel-semivowel sequences

#### *n*-Epenthesis

Third-person object pronouns begin with *n* when directly preceded by a subject pronoun. The *n* is not found in other forms of the same pronouns (subject, possessor), and does not occur in object pronouns following nonpronominal subjects, or in clause-initial position (imperatives). Typical forms (omitting some tonal variants) are in (xx1).

(xx1) category subject etc. object after pronominal subject

3SgHum *à ná*

3SgNonh *è ní*

3PlHum *ààⁿ náàⁿ*

3PlNonh *èèⁿ níìⁿ*

The addition of *n* is accompanied by a shift in vowel quality from *e* to *i* in the nonhuman forms. The same shift occurs after future *sà* (§10.2.2.xxx), resulting in 3SgNonh *sí=ì* and 3PlNonh *sí=ììⁿ*.

Since the additional *n* occurs chiefly in pronoun-pronoun combinations, it could be thought of as a linker between pronominal subjects and objects. For example, 2Sg→3SgHumObj could be transcribed *wō-n-í* rather than as *wō ní*. The latter is the transcription I generally use.

#### vv-Contraction

Two vowels come together, within a word or at a boundary, in several contexts. Word-internally, and frequently at boundaries, two vowels contract.

Word-internally, the clearest case is plural suffix *-àⁿ*, which is added to the nominal suffix. The latter has variants *‑rà*, *‑rá*, *‑nà*, and *‑ná*, the choice depending on the tones and nasality of the stem. If the final stem-syllable has a back rounded vowel, there are additional free variants with *ɔ* instead of *a*. All of these variants combine with plural *-àⁿ* to result in *‑rà‑àⁿ*, *‑rá‑àⁿ*, *‑nà‑àⁿ*, *‑ná‑àⁿ* or, with rounded vowel, *‑rɔ̀‑ɔ̀ⁿ*, *‑rɔ́‑ɔ̀ⁿ*, *‑nɔ̀‑ɔ̀ⁿ*, *‑nɔ́‑ɔ̀ⁿ*. Since the rounded variants are optional, one can’t be sure whether /ɔa/ always, or just optionally, becomes *ɔɔ* as opposed to *aa*.

The word-boundary (including enclitic-boundary) examples involve words ending in a vowel (i.e. essentially any word, before apocope) followed by one of the vowel-initial pronouns, in any grammatical function (object, possessor, complement of postposition). The relevant pronouns are those in (xx1), omitting some tonal variants.

(xx1) a. reflexive possessor only

1Sg *āⁿ*

1Pl *āāⁿ*

2Sg *ē*

b. multiple functions

2Pl *ēēⁿ*

3SgHum *à* except object (*ná* )

3SgNonh *è* except object (*ní* )

3PlHum *ààⁿ* except object (*náàⁿ* )

3PlNonh *èèⁿ* except object (*níìⁿ* )

Since there are only two vowel qualities in the second vowel of the contracting *vv* sequence, we cannot determine the outputs for all possible combinations.

In general, the vowel quality of the second contracting vowel, i.e. the vowel of the pronoun, survives in the resulting long contracted vowel. However, as second vowel, *e* is usually treated like *i*. Therefore the usual contracted vowels are *aa* and *ii*. The tones of the inputs are usually preserved.

One of the most common first elements is future particle *sà*, which can precede object pronouns. It combines with the elements in (xx1b) above as shown in (xx2). Combinations with third person object pronouns are based on H‑toned variant *sá*.

(xx2) a. 2Pl *sà* + *ēēⁿ* → sè=èⁿ

b. 3SgHum *sà* + *à* → *sá=à*

3SgNonh *sà* + *è* → *sí=ì*

3PlHum *sà* + *àⁿ* → *sá=à(à)ⁿ*

3PlNonh *sà* + *èèⁿ* → *sí=ì(ì)ⁿ*

A wider range of first vowels can be garnered from combinations of verbs with postverbal objects or postpositional complements. Vowel qualities attested in *Cv* verbs are {*ɔ ɛ e a*} (including nasalized *aⁿ* ). All seven vowel qualities are attested as final short vowels in nonmonosyllabic verbs. There is some variation in contractions depending on speech style, but representative results are in (xx3).

(xx3) verb +3SgHum *à* +3SgNonh *è* gloss

a. monosyllabic verb

*kpāⁿ kpāⁿ=àⁿ kpēⁿ=èⁿ* ‘die’ (imperfective)

*sɔ̄* *sɔ̄=ɔ̀* *sō=ò* ‘enter’ (imperfective)

*bɛ̌ bá=à* *bé=è* ‘fall’ (perfective)

*sɛ̌ sá=à* *sé=è* ‘come/bring’ (perfective)

*wě wɛ́=ɛ̀* *wé=è* ‘bathe’ (imperative)

b. nonmonosyllabic verb

*tìgɛ̀* *tìg=ɛ̀* *tìg=ì* ‘pound’ (imperfective)

*ɲìnɛ́* *ɲín=ɛ̀* *ɲín=ì* ‘forget’ (perfective)

*bēlē* *bēl=ɛ̀* *bēl=è* ‘pass’ (imperative)

*tìgí* *tìg=ɛ̂ tìg=î* ‘pound’ (imperative)

*bùgú* *bùg=ɔ̂* *bùg=ô* ‘butcher’ (imperative)

*būlɔ̄* *būl=ɔ̀* *būl=ò* ‘return’ (imperfective)

*dàkó* *dàk=ɔ̂ dàk=ô* ‘catch’ (imperative)

Usually the result is a contracted long vowel in the monosyllabic cases (xx3a) and a contracted short vowel in the longer stems (xx3b). The distinction between *a* (as in human 3Sg *à*) and *e/i* (as in nonhuman 3Sg *è/ì* ) as second vowel is maintained in the contraction as that between ‑ATR {ɛ ɔ} and either +ATR {*e* *o*} or high vowel i.

There are also some tonal elements in the contractions. *Cv̌* combines with *v̀* as *Cv́=v̀* rather than *Cv̌=v̀*, i.e. <LHL> reduces to <HL> in monosyllabic contractions, see ‘come/bring’ and ‘bathe’ in (xx3a) above. Intransitive *Cv̀Cv́*, as in ‘forget’ (which takes a postverbal PP complement) in (xx3b), becomes *Cv́C=v̀*.

For *Caʔa* and *Cɛʔɛ* verb stems, as with imperfective/perfective forms of *tāʔā* ‘go’ and *dàʔà* ‘receive’, the contracted vowel quality extends to the first syllable (a kind of imbrication), suggesting that such stems are treated (in this context) as having a single vowel quality. The human/nonhuman distinction is then expressed by *Caʔa* or *Cɛʔɛ* versus *Ceʔe* (xx4).

(xx4) verb +3SgHum *à* +3SgNonh *è* gloss

*tāʔā táʔ=à* *téʔ=è* ‘go’ (imperfective)

*tɛ̀ʔɛ́ tɛ́ʔ=ɛ̀ téʔ=è* ‘go’ (perfective)

In verbs whose full stem shape is trisyllabic CvCvnv, the truncated imperative is *CvCvⁿ*, with nasalized vowel, but the n reappears when a vowel is encliticized. This prevents *vv*-Contraction. This is the case with *jàʔánà* ‘descend’ and *sìdánà* ‘ascend’ (xx5).

(xx4) verb +3SgHum *à* +3SgNonh *è* gloss

*jàʔáⁿ jàʔàn=á jàʔàn=í* ‘descend’ (imperative)

*sìdáⁿ sìdàn=á sìdàn=í* ‘ascend’ (imperative)

The encliticized vowel in *jàʔàn=á* and other forms in (xx4) is H‑toned in all examples. This is attributable to Final Tone-Raising, since in all relevant examples the 3Sg morpheme is immediately followed by a postposition or possessed noun which has the initial L‑tone required by a preceding 3Sg (xx5).

(xx5) *jàʔàn= [í/á dɛ̀]*

descend.Imprt [3SgNonh/3SgHum with]

‘Go down with it/with him-or-her!’

### Local vowel-consonant interactions

#### Monophthongization

Monophthongization as a synchronic process applies primarily to words of the monosyllabic diphthongal shape *Cɔɛ*. These are perfective verb stems like *bɔ̀ɛ́* ‘exited’, when they are followed by a negative enclitic. The result in this case is *bɔ̀ɔ̀=rɛ̄ʔ* ‘did not exit’, or *bòò=rēʔ* with optional shift to +ATR vocalism.

Exactly how to formulate the Monophthongization is not transparent. One obvious possibility is to take the bivocalic form *bɔ̀ɛ́* as input and simply spread the features back and rounded from the first mora into the second. An alternative is to argue that the final *ɛ* is clipped, and the resulting /bɔ̀/ is then lengthened. A possible argument in favor of the clipping analysis is that the H‑tone on *ɛ́* in *bɔ̀ɛ́* is also absent from the negative form. One might then compare ‘exit’ with other verbs (xx1).

(xx1) positive negative gloss

a. *à bɔ̀ɛ́ à bɔ̀ɔ̀=rɛ̄ʔ* ‘he/she did (not) exit’

b. *é kǐīⁿ é kìí=nēʔ* ‘it did (not) fly’

c. *è gǔⁿ bí=í gù=nēʔ* ‘(don’t) shorten it!’

One could argue that the final moras of ‘exit’ (xx1a) and ‘fly’ (xx1b), along with their tones, are clipped before the negative clitic, leaving /bɔ̀/ and /kǐ/, and that these are lengthened to *bɔ̀ɔ̀* and *kìí*. Since *é kìí=nēʔ* demonstrates that a *Cv̀v́* form is possible on the surface before the negative clitic, it is not obvious why *bɔ̀ɛ́* would have to drop its final H‑tone, unless this were part of a clipping process. On the other hand, (xx1c) shows that a monomoraic *Cv̀* form is allowable before the negative morpheme, so the motivation for a lengthening process in (xx1a‑b) is unclear.

## Cliticization

The enclitics that I recognize are those in (xx1).

(xx1) Enclitics

*=rĒʔ* (i.e. *=rēʔ* ~ *=rɛ̄ʔ* ) negative (clause-final)

*=Ē* (i.e. *=ē* ~ *=ɛ̄* ) ‘it is’ (identificational)

[H+=∅] (i.e. floating H-tone) imperfective or ‘be’ (hosted by subject)

The first two of these have a vowel that gets its ATR value by harmonizing with the final vowel of the host word. The third is a floating tone that docks on the host.

Third-person pronominals, especially human 3Sg *à* and nonhuman 3Sg *è* ~ *ì*, are normally bracketed syntactically with a following element (such as a postposition), but may encliticize phonologically to a preceding word, via *vv*-Contraction.

Subject and object pronouns can be thought of as proclitics to the following word (verb or possessum). However, I transcribe them as separate particles.

## Tones

There are three tone levels, H[igh], M[id], and L[ow]. Contour tones on single syllables are HL, HM, LH, and MH. I have no clear evidence of ML or LM contours on single syllables.

Using *x* for any vowel, the tone diacritics used here are those in (xx1).

(xx1) *x́* H

*x̀* L

*x̄* M

*x̂* HL

*x̌* LH

*x᷆* HM

*x᷇* MH

There are no ML- or LM-toned syllables.

My use of *x᷆* (HM, i.e. high falling to mid) is distinct from “correct” IPA usage of this diacritic, where it is “mid falling.” This does not create ambiguities in Jalkunan, which lacks ML (“mid falling”) syllables.

Where a syllable contains a long vowel, I add a tonal diacritic to each symbol. For example, long *aa* can appear as level-toned *áá* (H), *àà* (L), or *āā* (M); as bitonal *áà* (HL), *áā* (HM), *àá* (LH), and *āá* (MH); and as tritonal *àâ* or equivalently *ǎà* (LHL).

Where a syllable contains a short vowel and a coda sonorant, I put a tonal diacritic on the sonorant only if its tone differs from that of the vowel. Thus level-toned *án*, *àn*, and *ān*, but contour-toned *áǹ*, *àń*, and so forth. The letter *l* does not lend itself to accents, so a contour tone must be indicated on the vowel: *âl*, *ǎl*, *a᷆l*, *a᷇l*.

### Lexical tone patterns

#### Lexical tone melodies for unsegmentable noun stems

Lexical tone melodies for simple (noncomposite) noun stems may be monotonal (a single tone throughout), bitonal, or tritonal. I include HML and LMH, i.e. stepwise progressions in the same direction, as bitonal for presentational purposes, but nothing substantive rides on this. Lexical melodies are represented in slashes /…/. Parenthesized terminal (L) in some melodies represents an L‑tone on the nominal suffix that is not predictable by regular rule (i.e. that is lexically specified).

(xx1) melody stem with suffix gloss

a. monotonal

/L/ *bù* *bù-rɔ́* ‘excrement’

*sàà* *sàà-rá* ‘house’

*bòʔò bòʔò-rá* ‘ashes’

*jɔ̀lɔ̀kɔ̀ jɔ̀lɔ̀kɔ̀-rɔ́* ‘chain’

/M/ *jū jū-rɔ̄* ‘millet’

*gbāā* *gbāā‑rā* ‘stick’

*bāʔā bāʔā-rā* ‘porridge’

*kɔ̄lɔ̄kɔ̄ kɔ̄lɔ̄kɔ̄-rɔ̄* ‘talk (n)’

*tūlūkānā tūlūkān-nā* ‘gold’

/H/ *dí dí-rá* ‘child’

*náá náá-ná* ‘sauce’

*kɔ́l kɔ́l-ɔ́* ‘agama lizard’

*jóʔó jóʔó-rá* ‘Jula (person)’

b. bitonal (falling or rising)

/H(L)/ *jíⁿ jí-nà* ‘market’

*bé bé-rà* ‘uncle’

*kpɛ́sɛ́ kpɛ́sɛ́-rà* ‘chewstick’

*wáátí wáátí-rà* ‘time’

*hɛ́ɛ́rɛ́ hɛ́ɛ́rɛ́-rà* ‘well-being’

*fɔ́rɔ́bɔ́ fɔ́rɔ́bɔ́-rɔ̀* ‘ox’

*dúníɲá dúníɲá-nà* ‘world’

/HM(L)/ *féē féē-rà* ‘calabash’

*bu᷆l bu᷆l-là* ‘inheritance’

*búʔūⁿ búʔū-nà* ‘liver’

*bɛ́ʔrɛ̄ bɛ́ʔr-à* ‘yam’

*múúlī múūl-là* ‘ridge in field’

*nínáʔāⁿ nínáʔā-nà* ‘scorpion’

/HL/ *kápɔ̀n* *kápɔ̀n-ná* ‘daba (type)’

*ɲɔ́kɔ̀ʔrɔ̀ ɲɔ́kɔ̀ʔr-ɔ́* ‘face’

*kpásùʔùⁿ kpásùʔù-ná* ‘week’

*kókóbàʔà kókóbàʔà-rá* ‘leper’

/LH/

*suffix L-toned*

*jùfá jùfá-rà* ‘pocket’

*sìzó sìzó-rà* ‘scissors’

*pɔ̀sɔ́n pɔ̀sɔ́n-nɔ̀* ‘poison (n)’

*bààgɛ́ⁿ bààgɛ́-nà* ‘tea’

*dɔ̀ʔɔ̀rɔ́ dɔ̀ʔɔ̀rɔ́-rɔ̀* ‘heat’

*ɲɔ̀ʔɔ̀mɛ́ⁿ ɲɔ̀ʔɔ̀mɛ́-nà* ‘camel’

*suffix H-toned*

*sìnáʔáⁿ sìnáʔá-ná* ‘roselle’

*màkár màkár-rá* ‘pity (n)’

/MH/ *gbātá gbātá-rà* ‘shed’

*nāŋgɔ́ nāŋgɔ́-rà* ‘garden’

*ɲāmākú ɲāmākú-rɔ̀* ‘ginger’

/LMH/ *kɔ̀lɔ̄sí kɔ̀lɔ̄sí-rà* ‘rosary’

*bòyākí bòyākí-rà* ‘guava’

c. tritonal

/HLH/ *dáŋkùtɔ́ dáŋkùtɔ́-rɔ̀* ‘nape’

*gbɛ́lɛ̀má gbɛ́lɛ̀má-nà* ‘cassava’

/LHL/ *jàŋgbálà jàŋgbál-à* ‘tail’

/LHM/ *jàbálā jàbálā-rā* ‘white cowpea’

*bɛ̀ɛ́nī bɛ̀ɛ́n̄-nā* ‘sesame’

*tɔ̀ɔ́lɔ̄ tɔ̀ɔ᷆l-lɔ̄* ‘okra’

/LHM(L)/ *sùkár̄ sùkár̄-rà* ‘sugar’

*bànɛ́ʔɛ̄ bànɛ́ʔɛ̄-rà* ‘fatigue’

*ɲàʔálī ɲàʔa᷆l-là* ‘grain of sand’

(xx2) illustrates the three-way tonal distinction for monosyllabic nouns with a single tone.

(xx2) type gloss isolation ‘two \_’s’ ‘I saw \_’

/H/ ‘breast’ *cííⁿ-ná cííⁿ flā māⁿ cííⁿ jɛ̌*

/M/ ‘hair’ *cīīⁿ-nā cīīⁿ flā māⁿ cīíⁿ jɛ̌*

/L/ ‘village’ *sàà-rá sàà flā māⁿ sàá jɛ̌*

L‑toned ‘village’ is easily distinguished from both H‑toned ‘breast’ and M‑toned ‘hair’ in isolation (since the nominal suffix takes H‑toned form) and in the frame ‘two \_’s’ (since the pitch of ‘two’ is higher than that of ‘village’). For a novice fieldworker, the difficulty is distinguishing H from M (‘breast’ from ‘hair’), especially in isolation where both have level non-low toned forms (including the nominal suffix). The distinction is easier to hear before an M‑toned modifier like ‘two’, since one hears a pitch drop from ‘breast’ to ‘two’ but not from ‘hair’ to ‘two’. The distinction is most easily heard in the frame ‘I saw \_’, where ‘hair’ has an audibly rising pitch (MH), due to Final Tone-Raising (schematically LL#L-to-LH#L), while ‘breast’ remains level-toned. In this frame, however, the distinction between M and L is difficult to hear, since L‑toned words like ‘village’ also show a pitch rise (in this case LH) before ‘saw’.

I analyse the melody of ‘village’ and similar words as /L/ rather than /L(H)/, since all stems consisting of L‑toned syllables have an H‑toned nominal suffix. However, positing an /L(H)/ melody, or a lexical rule that /L/ nouns are automatically converted into /L(H)/, would also yield the correct outputs.

Things are more difficult with stems consisting of H‑toned syllables. Consider (xx3), which repeats ‘breast’ from the preceding array and adds two new stems.

(xx3) type gloss isolation ‘two \_’s’ ‘I saw \_’

/H/ ‘breast’ *cííⁿ-ná cííⁿ flā māⁿ cííⁿ jɛ̌*

/H(L)/ ‘wall’ *kógó-rɔ̀* *kógó flā māⁿ kógó jɛ̌*

/HM(L)/ ‘calabash’ *féē-rà féé flā māⁿ féē jɛ̌*

The stem-tones of both ‘breast’ and ‘wall’ are H‑toned. The difference is that the nominal suffix in the isolation form is H‑toned for ‘breast’ but L‑toned for ‘wall’. This distinction is not based on prosodic weight of stems, so the suffixal tone must be lexically specified. Lexical representations for such stems must add a floating tone (or some morphophonological device with similar effect) to ‘breast’ (H), or to ‘wall’ (L), or to both. I treat the ‘wall’ type as /H(L)/, equivalent to /H/ plus floating L that is realized on the nominal suffix (if present) and disappears otherwise. The ‘breast’ type is represented as simple /H/. This entails that for these stems the H‑tone of the stem spreads to the suffix (a morphophonological process). Justification for this choice includes the fact that a floating L, but not H, can also spread from a noun into an adjective that would otherwise begin with an H‑tone (§4.xxx).

‘Calabash’ in (xx3) is also H‑toned in ‘two calabashes’, but this is due to a tone-leveling process. In ‘I saw (a/the) calabash’, the noun has falling HM tone. The suffixed form continues the tone decline, resulting in an HM‑L word-level pattern. A case can be made that these stems should be analysed as lexically /HM/. This would entail the existence of an automatic process assigning L‑tone to the suffix. I do not rule this analysis out, but no independently documented tone rule will account for an L‑toned suffix after an HM‑toned stem. I will label the melody as /HM(L)/.

The three-way melodic distinction in (xx3) above is possible for stems with two or more moras (*Cvv*, *CvCv*, and longer). However, with monomoraic stems (*Cv*) it reduces to a two-way distinction between /H/ and /H(L)/. This is because the *Cv‑ra* suffixal form of *Cv* stems is too brief to allow an HML tone progression. The short first syllable in *CvCv* words must be monotonal. An example is *jíⁿ* ‘market’, suffixed form *jí-nà*.

#### Lexical tone patterns for adjectives and numerals

#### Tone contours or H‑tone accent?

### Grammatical tone patterns

#### Grammatical tones for verb stems

#### Grammatical tones for noun stems

The lexical tone melodies of nouns are described in §3.7.xxx above. The tones of the noun may be modified by tone sandhi processes, principally Final Tone-Raising (LL#L becomes LH#L).

More interestingly, nouns undergo tonal ablaut processes when preceded by a possessor. This takes the form of word-level tone overlays {L}, {H}, or {LH} on the noun (including its nominal prefix if present). The choice between overlays depends on the lexical tone melody and alienable/inalienable status of the possessum and on the grammatical category of the possessor.

When the possessor is an M‑toned pronoun (1Sg *ma*̄, 2Sg *wo*̄, 2Pl *ēē* ), inalienable nouns also surface as M‑toned.

#### Grammatical tones for adjectives and numerals

### Tonal morphophonology

#### Autosegmental tone association

#### Atonal morphemes

### Tone sandhi processes

#### Final Tone-Raising (LL#L-to-LH#L)

This rule dissimilates what would otherwise be an L‑toned stretch across a boundary. The final syllable (or monosyllabic mora) of the form on the left is raised. It is difficult to determine whether the raised tone is M or H, since there is no distinction between L.M and L.H bisyllabic stems, and none between <LM> and <LH> monosyllabics.

This process does not apply to N-Adj combinations.

#### Floating-Tone Docking I (certain nouns and adjectives)

Some nouns and adjectives have lexical tone melodies that include a final floating L‑tone that is realized, if at all, on a suffix or on a following word.

Consider (xx1), which presents several nouns in their bare form, along with their suffixal form and their combinations with the M‑toned adjective ‘red’ and the H‑toned adjective ‘long’.

(xx1) noun gloss suffixed ‘red’ ‘long’

a. *yíʔé* ‘fish’ *yíʔé-rá yíʔé kān-nā yíʔé sūmāā-nā*

*fōʔō* ‘flour’ *fōʔō-rā fóʔó kān-nā fóʔó sūmāā-nā*

*ɲùʔùⁿ* ‘wrap (n)’ *ɲùʔù-ná ɲùʔùⁿ kān-nā ɲùʔùⁿ súmáá-ná*

b. *kpɛ́sɛ́* ‘chewstick’ *kpɛ́sɛ́-rà kpɛ́sɛ́ kàn-nà kpɛ́sɛ́ sùmàà-nà*

*kúrūⁿ* ‘boat’ *kúrú-nà kúrúⁿ kàn-nà kúrúⁿ sùmàà-nà*

*tòfá* ‘boat’ *tòfá-rà tòfá kàn-nà tòfá sùmàà-nà*

*mōtó* ‘motorcycle’ *mōtó-rà mōtó kàn-nà mōtó sùmàà-nà*

The stems in (xx1a) are followed by M‑ or H‑toned suffixes and modifiers. Those in (xx1b) are followed by L‑toned suffixes and modifiers. This suggests that all of the stems in (xx1) are followed by a lexically specified following L‑toned element that is realized either on the nominal suffix or on the entire following modifier.

#### Floating-Tone Docking II (3Sg versus non-3Sg)

A somewhat similar, but not lexically specified, process takes the form of a pervasive split between two types of NPs (including pronouns) that have different tonal effects on a following possessum, verb, or postposition. The consistent groupings are those in (xx1).

(xx1) nonpronominal NPs pronominals

a. followed by H‑tone

plural NPs 1Pl, 3Pl (human and nonhuman)

b. followed by L‑tone

singular NPs 3Sg (human and nonhuman)

Omitted from this inventory are 1Sg, 2Sg, and 2Pl pronominals. This is because, in their basic forms, they are M‑toned, and the process of M‑Spreading applies to the following element (postposition, inalienable possessum, imperative verb). This masks their belonging to one or another of the more abstract groups in (xx1). See, for example, the postposition paradigms in chapter 8, the inalienable part of the possessed noun paradigms in §6.2.2.1‑3, and the 1Sg object of imperative in (xx1) in §4.3.1.3.

However, there are some following elements that do not undergo M‑Spreading after 1Sg, 2Sg, and 2Pl pronominals. These elements are alienable possessums and nonimperative verbs.

Alienable possessums are only indirectly relevant to the issue at hand, since they undergo tonal ablaut for all possessor categories. The relevant point here is that there is a split between 3Sg possessor and all other possessors. 3Sg possessors (nonpronominal and pronominal) control {LH} overlay on the possessum. For lexically L‑toned alienable possessums, this is indistinguishable from the {LH} controlled by other possessors (§6.2.2.1). However, lexically M‑toned and H‑toned alienable possessums appear with the same {LH} overlay after 3Sg possessors, but have {L} overlay with other possessors (all plurals, plus 1Sg and 2Sg); see §6.2.2.2‑3 below. Because the tonal effects on following elements are different for alienable possession and the binary division in (xx1) above, this evidence is not conclusive, but it does show that another part of the tonology makes the division in (xx2).

(xx2) nonpronominal NPs pronominals

a. followed by {LH}-toned alienable possessum (all lexical tonal types)

plural NPs 1Pl, 2Pl, 3Pl (human and nonhuman)

1Sg, 2Sg

b. followed by {L}-toned alienable possessum (unless lexically L‑toned)

singular NPs 3Sg (human and nonhuman)

In other words, here it’s 3Sg against non-3Sg rather than all singulars against all plurals.

Stronger evidence for 3Sg versus non-3Sg as the split comes from combinations of pronominal subjects with perfective intransitive verbs, and of pronominal objects with transitive verbs. M-Spreading does not apply in these combinations.

The only nonimperative verbs that can directly follow the subject, without an intervening aspectual particle or enclitic, are perfective intransitives. These verbs have an tone pattern beginning LH after a 3Sg pronoun or singular NP, and a tone pattern beginning H after all other pronouns (including 1Sg and 2Sg) and all plural pronouns and NPs. For example, the paradigm of perfective ‘fell’ in (xx3) in §10.2.1.1 distinguishes only two tonal forms of the verb, 3Sg *bɛ̌* and non-3Sg *bɛ́*. A subset of that paradigm, showing the behavior of 1Sg and 2Sg, is reproduced here as (xx3).

(xx3) a. *mā bɛ́* ‘I fell’

*wō bɛ́* ‘you-Sg fell’

*mùʔùⁿ bɛ́* ‘we fell’

*ēēⁿ bɛ́* ‘you-Pl fell’

*ààⁿ bɛ́* ‘they (human) fell’

b. *à bɛ̌* ‘he/she fell’

The split falls along the same lines in combinations of pronominal objects with transitive verbs. For example, in perfective paradigms of transitives like ‘hit’, 1Sg and 2Sg objects have either M‑ or L‑toned form, depending on the subject category. In either case, the following verb begins with H‑tone (*báʔrī* ‘hit’), as it does when it follows any plural object (pronominal or nonpronominal). By contrast, 3Sg objects (pronominal or not) require a following verb beginning with L‑tone (*bàʔrí* ‘hit’). Subject category does not affect verbal tones in these transitives. In (xx4a), 1Sg object *mā* or *mà* and 2Sg object *wō* or *wò* is followed by H‑initial *báʔrī*, the same tonal form used after plural objects in (xx4b). 3Sg human object *ná* and singular NPs are followed by L‑initial *bàʔrí* (xx4c). For fuller data and analysis see especially §4.3.1.3.

(xx4) a. *wō mà báʔrī* ‘You-Sg hit-Past me.’

*à mā báʔrī* ‘He/She hit-Past me.’

*mā wò báʔrī* ‘I hit-Past you-Sg.’

*à wō báʔrī* ‘He/She hit-Past you-Sg.’

b. *ēéⁿ mùʔùⁿ báʔrī* ‘You-Pl hit-Past us.’

*à dí-rá-àⁿ báʔrī* ‘He/She hit-Past the children.’

c. *mā ná bàʔrí* ‘I hit-Past him/her.’

*à ná bàʔrí* ‘He/She hit-Past him/her.’

*mùʔùⁿ dí bàʔrí* ‘We hit-Past the child.’

The evidence shows that there is a pervasive distinction between 3Sg and non‑3Sg (including 1Sg and 2Sg) with respect to tonal effects on following elements. In those contexts where 1Sg, 2Sg, and 2Pl (the three M‑toned pronominals) trigger M‑Spreading, this masks the assignment of these three categories to the 3Sg and non‑3Sg division, which therefore reduces to singular versus plural.

The category “3Sg” in the 3Sg versus non-3Sg split includes NPs based on ordinary nouns (those that can end in the nominal suffix, even when the suffix is absent). It does not include personal names. For example, the personal name *bákàrì* is followed by the H‑toned form of a postposition, as in (xx1a), and by the H‑initial form of an immediately following verb, as in (xx1b‑c). As alienable possessor, *bákàrì* also imposes {L} rather than {LH} tone on a following possessum. In all these respected, *bákàrì* patterns with the “non-3Sg” side of the split.

(xx1) a. *mā sɛ́ [bákàr dɛ́]*

1Sg come.Pfv [B with]

‘I have brought Bakari.’

b. *bákàr bɛ́*

B fall.Pfv

‘Bakari fell.’

c. *mā bákàr báʔrī*

1Sg B hit.Pfv

‘I hit Bakari.’

d. *bákàr wùl-à*

B dog-Nom

‘Bakari’s dog’

There remains the issue how to describe these tonal effects. Does 3Sg have a floating L that attaches to the following word? Does non-3Sg have a floating H? This is addressed in the following section.

### Phonology of Floating-Tone Docking II

In the case of Floating-Tone Docking I, which applies to suffixed nouns and within noun-adjective and noun-numeral combinations, it seems clear that one set of noun stems is followed by a floating L that is expressed on a following element within the NP.

By contrast, Floating-Tone Docking I is symmetrical (3Sg is followed by L, non-3Sg is followed by H) and is semantic (categorial) rather than lexical.

finish

## Intonation contours

### Phrase and clause-final terminal contours (↑↓→)

### Intonational prolongation (→)

# Nominal, pronominal, and adjectival morphology

## Nouns

### Simple nouns and suffixes

Most nouns may occur with or without a nominal suffix (-Nom in interlinears). The primary form of the suffix is *-ra* (tones depend on those of the stem). Both the consonant and the vowel are subject to changes. The tap *r* becomes *n* after a nasal syllable (e.g. *na* or *baⁿ* ) or after a nasal consonant (due to syncope of a final vowel). After *l*, the tap *r* either disappears, typical of monosyllabic *Cvl* stems as in *wùl-á* ‘dog’, or assimilates and becomes *l*, typical of nomonosyllabics such as *CvCvl(v)* stems as in *dàʔàl-lá* ‘mat’. The vowel *a* of the suffix assimilates to *ɔ* after a syllable with a back rounded vowel {*u o ɔ*}.

As explained more fully in chapter 6 on NP structure, the presence or absence of the nominal suffix, and if present its location (suffixed to the noun or to a following modifier), depends on what other modifiers occur in the NP, and on the syntactic function (subject, object, possessor, complement of postposition, etc.) of the NP as a whole. For present purposes one can think of the suffixed form as the independent (or absolute) form of the noun, obligatory in citation and other independent forms and frequent as clausal subject. The bare (unsuffixed) form is used when the noun is followed by certain modifiers (which in some cases themselves bear the nominal suffix), when the unmodified noun is directly governed by a transitive verb or by a postposition, and under some conditions optionally for subjects.

Nouns with no following modifier may be pluralized by adding plural suffix *-nū* to the noun, which in this case must take the nominal suffix (even in direct object or postpositional complement function). The suffix is more properly *‑ ̀:nū*, i.e. it adds an L‑toned extension of the preceding vowel (that of the nominal suffix). The suffixal *nū* syllable is often apocopated or entirely elided, but its nasality and its M‑tone are then pronounced on the preceding vowel. Thus *dí-rá* ‘child’, plural *dí-ráà-nū* ‘children’, the latter also pronounced *dí‑ráà‑n̄ or dí‑ráàāⁿ‑∅*. Plural pronouns also end in nasalized vowels, which is probably not an accident.

#### Simple monotonal nouns

(xx1) presents suffixed, pre-modifier, direct object (before an L‑initial verb such as *jɛ̌* ‘saw’), and plural forms of simple (uncompounded) nouns of monotonal (noncontoured) melody, i.e. /H/, /M/, and /L/. For the first two, the suffix adopts the tone of the stem, resulting in H-H and M-M at word level (xx1a‑b). The hyphens in H-H etc. represent the morpheme boundary. An /L/-toned stem, by contrast, has an H‑toned suffix (xx1c). This suggests that independent nouns require at least one nonlow tone. Before *jɛ̌* ‘saw’, what would otherwise be a final L or M tone on the noun becomes rising LH or MH.

(xx1) gloss suffixed modified ‘saw X’ plural

a. H-H < H

‘child’ *dí-rá dí dí dí-ráà-nū*

‘water’ *yí-rá yí yí yíí-ráà-nū*

‘father’ *jɛ́ⁿ-ná jɛ́ⁿ jɛ́ⁿ jɛ́ⁿ-náà-nū*

‘foot’ *kpɔ́-rɔ́ kpɔ́ kpɔ́ kpɔ́-rɔ́ɔ̀-nū*

‘millet’ *jú-rɔ́ jú jú jū-rɔ̄ɔ̀-nū*

‘hand’ *bɔ́l-ɔ́ bɔ́l bɔ́l-ɔ́ bɔ̄l-ɔ̄ɔ̀-nū*

b. M-M < M

‘stick’ *gbāā-rā gbāā gbāá gbāā-rāà-nū*

‘belly’ *kɔ̄yī-rā kɔ̄yī kɔ̄yí kɔ̄yī-rāà-nū*

c. L-H < L

‘head’ *wù-rɔ́ wù wǔ wù-rɔ́ɔ̀-nū*

‘sheep’ *tàgà-rá* *tàgà* *tàgá* *tàgà-ráà-nū*

‘bull’ *yìgì-rá* *yìgì* *yìgí yìgə̀-ráà-nū*

‘goat’ *bàà-rá* *bàà* *bàá* *bàà-ráà-nū*

‘stone’ *kùgù-rá* *kùgù* *kùgú* *kùgù-ráà-nū*

‘house’ *sàà-rá sàà sàá sà:-ráà-nū*

‘dog’ *wùl-á wùl wùl-á wùl-áà-nū*

‘mat’ *dàʔàl-lá dàʔàl(ì) dàʔàlí dàʔàl-láà-nū*

#### Simple bitonal nouns

A minority of simple (uncompounded) nouns have a contoured (generally bitonal) melody, either falling (xx1a‑c) or rising (xx1d‑e). After a noun with falling melody (including LHM), the nominal suffix is L‑toned (xx1a‑c). A *CvCv* suffixed form from *Cv̂* or *Cv̂l* noun is realized as *Cv́Cv̀*, since a nonfinal short *Cv* syllable cannot bear a contour tone. A noun with /LH/ melody, even if bisyllabic, shifts its final H‑tone onto the suffix (xx1d-e).

(xx1) gloss suffixed modified ‘saw X’ plural

a. HM-L < HM

‘maize’ *sɔ́nɔ̄-nɔ̀ sɔ́nɔ́ sɔ́nɔ̄* *sɔ́n̄-nɔ̀ɔ̀-nū*

*sɔ́n̄-nɔ̀* (syncopated)

‘woman’ *ɲáāⁿ-nà ɲááⁿ ɲáāⁿ ɲáàⁿ-nàà-nū*

‘mother’ *níìⁿ-nà nííⁿ níīⁿ níìⁿ-nàà-nū*

b. H-L < HL

‘road’ *cál-à cél cál-à cál-àà-nū*

c. LHM-L < LHM

‘man’ *dìkín̄-nà dìkíní dìkínī dìgín-nàà-nū*

~ *dìkín* ~ *dìkín̄*

d. L-H < LH

‘rope’ *mɔ̀-nɔ́ mɔ̀ⁿ mɔ̌ⁿ mɔ̀-nɔ́ɔ̀-nū*

variant: *mɔ̀ɔ́n-nà* *mɔ̀ɔ́n-nàà-nū*

‘person’ *mìʔì-ná mìʔìⁿ mìʔíⁿ mìʔⁿì-náà-nū*

variant: *mɛ̀ʔɛ̀-ná mɛ̀ʔɛ̀ⁿ mɛ̀ʔɛ̀ⁿ mɛ̀ʔⁿɛ̀-náà-nū*

also cpd: *dá-mɛ̄ʔ-nà dá-mɛ̄ʔn dá-mɛ̄ʔ-nàà-nū*

## Derived nominals

### Diminutives (*-lī* )

A number of nouns have a diminutive derivation with suffix *‑lī* ~ *‑lì*, or *‑nī* ~ *‑nì* after a nasal syllable (*Nv*, *Cvⁿ* ). If the input noun has a final sonorant-vowel syllable, the sonorant is deleted and the vowels contract into a long vowel. The vocalism of *kpúú‑lī* ‘toe’ is probably analogical to that of *búú‑lī* ‘finger’, but a sound-symbolic preference for long high vowels in diminutives may also be at work, as more clearly in *wíí‑lī* ‘puppy’. Except for ‘rope’, the typical tone patterns are either H‑toned stem plus M‑toned suffix (from non-L‑toned input), or all L‑toned (from L‑toned input).

Diminutives can denote a small instance of a normally larger entity (xx1a), a digit as opposed to a hand or foot (xx1b), or a juvenile human (xx1c) or animal (xx1d). A special application to ethnicities is in (xx1e).

(xx1) noun gloss diminutive gloss

a. *gbāā* ‘stick, wood’ *gbáá-lī* ‘twig’

*mɔ̀ⁿ* ‘rope’ *mɔ̀ɔ́-nī* ‘rope’

*jɛ̀nɛ́* ‘shed, booth’ *jɛ̄ɛ̄-nī* ‘small shed/booth’

b. *bɔ̄lɔ̄* ‘hand’ *búú-lī* ‘finger’

*kpɔ́* ‘foot’ *kpúú-lī* ‘toe’

c. *kámélé* ‘adult man’ (25-40) *káméé-lī* ‘young man’ (to age 20)

*dīkínī* ‘man’ *díkíí-nī* ‘young boy’ (to age 10)

*kàʔrà* ‘unmarried woman’ *kàà-lì* ‘young girl’ (to age 10)

d. *wùl* ‘dog’ *wíí-lī* ‘puppy’

*tèʔè* ‘chicken’ *tìʔí-lī* ‘chick’

*tàgà* ‘sheep’ *tàgà-lì* ‘lamb’

e. *kòò* ‘Natioro person’ *kòò-lì* ‘Wara person’

The Natioro and Wara are two relatively small-population ethnic groups living north and northwest of Blédougou. Their languages, distantly related to the core Gur language family, seem to be closely related.

For similar diminutives of adjectives, see §4.5.xxx below.

A number of nouns that have a diminutive-like ending such as *lī*, and that have senses compatible with diminution or that are often expressed by diminutives in other languages of the zone, but that do not correspond to an unsuffixed noun (known to me), are in (xx2). The cases in (xx2a) seem likely to be original diminutives; *díkáálī* ‘young girl’ is very similar to *díkíí-nī* ‘young boy’ in (xx1c) above. The cases in (xx2b) are less likely.

(xx2) noun gloss

a. *díkáálī* ‘young girl’

*kɔ́ɔ́lī* ‘kidney’

*dūūnī* ‘wide-mouthed gourd’

*cèŋálī* ‘star’

*ɲàʔálī* ‘grain of sand’

*bɛ̀ɛ́nī* ‘fonio (grain)’

*tàfyɛ́lī* ‘square palm-leaf fan’

*wàʔálī* ‘stool’

*dàʔàlì* ‘mat’

*màʔàlì* ‘knife’

b. *fìlàní* ‘twin’

*dàʔàlí* ‘mat’

*múúlī* ‘ridge in plowed field’

*sàfàlì* ‘donkey’

*tùmùlì* ‘shea-tree caterpillar’ (also *tùmùlù* )

As a short high vowel following an unclustered sonornant, the suffixal *ī* is often deleted by apocope (including presuffixal syncope). Representative forms of one diminutive noun are in (xx3).

(xx3) diminutive suffixed ‘I saw X’ ‘two X’s’ gloss

*búú-lī búū-l-là mā búū-l jɛ̌ búúl flà* ‘finger’

*mā búú-lī jɛ̌*

### Verbal nouns

data

### Instrument nominals absent

No derivational mechanism for deriving uncompounded instrument nominals (e.g. ‘blower’, ‘scraper’) is known.

For compounds specifying the function of an entity, see §5.1.xxx below.

### Uncompounded agentives (*X míʔī-nà* )

It is possible to create an agentive from a simple verbal noun, or other noun denoting an activity type, plus *míʔī-nà* ‘person’.

(xx1) a. *klénī* ‘hunt (n), hunting (n)’

b. *klén̄ míʔī-nà* ‘hunter’

However, in practice occupational agentives are always compounds of the type ‘iron-hitting person’, i.e. similar to (xx1b) except that the initial element is itself a compound whose initial denotes a characteristic object and whose final is a nominal form of a verb. See §5.1.xxx for discussion and examples.

## Pronouns

### Basic personal pronouns

The categories are first, second, third (human), and third (nonhuman), crossed with a binary singular/plural distinction. The sections below describe their forms as subjects, objects, possessors, and postpositional complements. For reflexive possessor forms, which segmentally merge first person with third human, and second person with third nonhuman, see §18.1.1.

#### Subject pronominals

Subject pronouns occur in simple form in the same clause-initial position as subject NPs. Nonpronominal NPs are not doubled by (resumptive) 3Sg or 3Pl subject pronouns.

Subject pronouns are followed by the inflectional (aspectual) particles if there is one. If not, they are followed by the first word of the VP, either an object NP or an intransitive verb. There are some tonal interactions between subject pronouns and following words or inflectional particles. The forms in (xx1) are basic.

(xx1) Subject pronouns

regular

a. singular

*1st/2nd*

1Sg *mā*

2Sg *wō*

*3rd*

3SgHum *à*

3SgNonh *è*

b. plural

1Pl *mùʔùⁿ*

2Pl *ēēⁿ*

3PlHum *ààⁿ*

3PlNonh *èèⁿ*

The plural in (xx1b) are bimoraic and either M‑ or L‑toned, so before an L‑tone they are subject to Final Tone-Raising, resulting in *mùʔúⁿ*, *ēéⁿ*, *àáⁿ*, and *èéⁿ*.

Further detail on these pronominals in combinations where they precede verbs or inflectional particles are given in chapter 10.

#### Possessor pronouns

The possessor pronouns are identical to the subject pronouns. They precede the possessum, without a genitive morpheme. The paradigm, and examples with ‘sickle’ and ‘father’ are in (xx1).

(xx1) Possessor pronouns

possessor *wùrɔ̀tɔ̀-rɔ́* ‘sickle’ *jɛ́-ná* ‘father’

a. singular

*1st/2nd*

1Sg *mā* *mā wùrɔ̀tɔ̀-rɔ́* *mā jɛ̄-nā*

2Sg *wō* *wō wùrɔ̀tɔ̀-rɔ́ wō jɛ̄-nā*

*3rd*

3SgHum *à à wùrɔ̀tɔ̀-rɔ́ à jɛ̀-ná*

3SgNonh *è è wùrɔ̀tɔ̀-rɔ́ è jɛ̀-ná*

b. plural

1Pl *mùʔùⁿ mùʔúⁿ wùrɔ̀tɔ̀-rɔ́ mùʔùⁿ jɛ́-ná*

2Pl *ēēⁿ ēéⁿ wùrɔ̀tɔ̀-rɔ́ ēēⁿ jɛ̄-nā*

3PlHum *ààⁿ àáⁿ wùrɔ̀tɔ̀-rɔ́ ààⁿ jɛ́-ná*

3PlNonh *èèⁿ wú-rɔ́ èéⁿ wùrɔ̀tɔ̀-rɔ́ èè jɛ́-ná*

The tones of the possessed noun are not directly relevant to this section. The details are complex and depend on alienability and on the number category of the possessor. See §6.2 for details.

#### Preverbal object pronouns

Object pronouns resemble subject and possessor pronouns, but show more variation in form, mainly because of morphophonological interaction with preceding subject pronouns or NPs, or with intervening inflectional particles. This section covers preverbal objects. Postverbal objects (without a postposition) are independent pronouns (§4.3.xxx below).

We begin by considering object pronouns that occur clause-initially. This is only possible with objects of singular-addressee positive imperative verbs, which have zero subject and no overt inflectional morpheme. All pronominal categories except 2Sg and 2Pl may occur clause-initially in this context. (2Sg and 2Pl objects of imperatives take reflexive form, §18.1.1.) Examples with singular imperative ‘hit!’ and clause-initial object pronoun are in (xx1).

(xx1) Preverbal object pronouns

a. singular

*1st/2nd*

1Sg *mā bāʔrī* ‘Hit-2Sg me!’

2Sg —

*3rd*

3SgHum *à bàʔrì* ‘Hit-2Sg him/her!’

3SgNonh *è bàʔrì* ‘Hit-2Sg it!’

b. plural

1Pl *mùʔùⁿ báʔrí* ‘Hit-2Sg us!’

2Pl —

3PlHum *ààⁿ báʔrí* ‘Hit-2Sg them (human)!’

3PlNonh *èèⁿ báʔrí* ‘Hit-2Sg them (nonhuman)!’

The object pronouns in (xx1) are identical to the corresponding subject and possessor pronouns. We therefore infer that 2Sg *wō* and 2Pl *ēēⁿ*, with M‑tones, would also occur as such clause-initially if they were allowed syntactically.

In most cases, objects are preceded directly either by the subject NP or pronoun (perfective), by the subject plus imperfective /H+*=∅*/ enclitic (present, progressive), by future particle *sà*, or by prohibitive particle *bí*. This section will present the forms used in perfective-aspect clauses. The forms of object pronouns that follow the enclitic and the particles mentioned are best presented in the relevant section of chapter 10.

In (xx2), what are elsewhere M‑toned 1Sg and 2Sg pronouns appear in either M‑toned form (after an L‑tone) or in L‑toned form (after an H‑ or M‑tone). Singular nonpronominal subjects may appear in suffixed or unsuffixed form. The verb takes H‑initial form, as it does following objects other than 3Sg pronouns and singular nouns.

(xx3) 1Sg/2Sg object pronouns after various subjects (perfective)

‘X hit me’ ‘X hit you-Sg’

a. pronominal subjects

*object L‑toned*

1Sg — *mā wò báʔrī*

2Sg *wō mà báʔrī* —

2Pl *ēéⁿ mà báʔrī* —

*object M‑toned*

3SgHum *à mā báʔrī à wō báʔrī*

3SgNonh *è mā báʔrī è wō báʔrī*

1Pl — *mùʔùⁿ wō báʔrī*

3PlHum *ààⁿ mā báʔrī ààⁿ wō báʔrī*

3PlNonh *èèⁿ mā báʔrī èèⁿ wō báʔrī*

b. nonpronominal subjects *mɛ̀ʔɛ̀ⁿ*, *fūgū*, *jóʔó*, *sáléⁿ*, *ɲɔ́ʔɔ̀mɛ́*

‘person’ *mɛ̀ʔɛ̀-ná mà báʔrī* *mɛ̀ʔɛ̀-ná wò báʔrī*

*mɛ̀ʔɛ́ⁿ mà báʔrī* *mɛ̀ʔɛ́ⁿ wò báʔrī*

‘blind one’ *fūgū-rá mà báʔrī fūgū-rá wò báʔrī*

*fūgú mà báʔrī* *fūgú wò báʔrī*

‘Jula person’ *jóʔó-rá mà báʔrī jóʔó-rá wò báʔrī*

*jóʔó mà báʔrī* *jóʔó wò báʔrī*

‘labeo fish’ *sálé-ná mà báʔrī sálé-ná wò báʔrī*

*sáléⁿ mà báʔrī* *sáléⁿ wò báʔrī*

‘camel’ *ɲɔ́ʔɔ̀mɛ́-nà mā báʔrī ɲɔ́ʔɔ̀mɛ́-nà wō báʔrī*

*ɲɔ́ʔɔ̀mɛ́ mà báʔrī ɲɔ́ʔɔ̀mɛ́ wò báʔrī*

In (xx3), 3Sg pronouns are the objects. The verb is therefore L‑initial. After a pronominal subject, these object pronouns begin with a semi-epenthetic linking consonant *n* not found in the subject pronouns, and the tone is high. One could also analyse this as a subject-object linking morpheme *n-*, but since it only occurs with third person object pronouns it belongs to the morphology or morphophonology. The overt vowel in the nonhuman 3Sg object is *i* rather than *e*, hence *ní* when combined with the linker. Nonpronominal subjects require the nominal suffix (*‑rà* or variant) in these combinations, perhaps motivated by the fact that these object pronouns begin with short vowels. Human 3Sg subject acting on 3Sg object (human or nonhuman) has variant forms without the linker *n* (*á* instead of *à ná*, *é* instead of *à ní* ). The H‑tone of *á* or *é* suggests that they may be contractions historically, i.e. \*à (n)á → *á* and \*à (n)í → *é*, but in this scenario one would have expected long vowels, and *í* rather than *é* for the nonhuman object. A better analysis is that the 3Sg subject à is optionally omitted, and when it is omitted the *n* linker (which requires overt subject and object morphemes) is also dropped. With nonpronominals subjects, the final *a/ɔ* of the nominal suffix contracts with nonhuman 3Sg *ì* (or perhaps *è*) to form long *ee* (xx4b, right-hand column). The clitic boundary symbol = is an index of vv-Contraction between subject and object.

(xx4) 3Sg object pronouns after various subjects

‘X hit him/her’ ‘X hit it’

a. pronominal subjects

1Sg *mā ná bàʔrí* *mā ní bàʔrí*

2Sg *wō ná bàʔrí* *wō ní bàʔrí*

3SgHum *à ná bàʔrí à ní bàʔrí*

*á bàʔrí é bàʔrí*

3SgNonh *è ná bàʔrí è ní bàʔrí*

1Pl *mùʔùⁿ ná bàʔrí* *mùʔùⁿ ní bàʔrí*

2Pl *ēēⁿ ná bàʔrí* *ēēⁿ ní bàʔrí*

3PlHum *ààⁿ ná bàʔrí ààⁿ ní bàʔrí*

3PlNonh *èèⁿ ná bàʔrí èèⁿ ní bàʔrí*

b. nonpronominal subjects

‘person’ *mɛ̀ʔɛ̀ⁿ-ná= à bàʔrí* *mɛ̀ʔɛ̀ⁿ-né= è bàʔrí*

‘blind one’ *fūgū-rá= à bàʔrí fūgū-ré= è bàʔrí*

‘Jula person’ *jóʔó-rá= à bàʔrí jóʔó-ré= è bàʔrí*

In (xx4), the objects are plural pronominals. For nonhuman 3Pl object, in the rightmost column replace *náàⁿ* (after pronominal subject) by *níìⁿ*, e.g. *mā níìⁿ báʔrī* ‘I hit them (nonhuman)’, and replace *ààⁿ* (after nonpronominal subject) by *èèⁿ*, e.g. *mɛ̀ʔɛ̀-ná èèⁿ báʔrī* ‘the person hit them (nonhuman)’. 2Pl *ēēⁿ* is dropped to *èèⁿ* directly after a 3Sg subject, but it lacks the epenthetic or linking *n* and therefore remains distinct from nonhuman 3Pl *níìⁿ*.

(xx4) Plural object pronouns after various subjects

‘X hit us’ ‘X hit you-Pl’ ‘X hit them (human)’

a. pronominal subjects

1Sg — *mā ēēⁿ báʔrī mā náàⁿ báʔrī*

2Sg *wō mùʔùⁿ báʔrī* — *wō náàⁿ báʔrī*

3SgHum *à mùʔùⁿ báʔrī à èèⁿ báʔrī à náàⁿ báʔrī*

*áàⁿ báʔrī*

3SgNonh *è mùʔùⁿ báʔrī è èèⁿ báʔrī è náàⁿ báʔrī*

1Pl — *mùʔùⁿ ēēⁿ báʔrī mùʔùⁿ náàⁿ báʔrī*

2Pl *ēéⁿ mùʔùⁿ báʔrī* — *ēēⁿ náàⁿ báʔrī*

3PlHum *ààⁿ múʔúⁿ báʔrī ààⁿ ēēⁿ báʔrī ààⁿ náàⁿ báʔrī*

3PlNonh *èèⁿ múʔúⁿ báʔrī èèⁿ ēēⁿ báʔrī èèⁿ náàⁿ báʔrī*

b. nonpronominal subjects

‘person’ *mɛ̀ʔɛ̀ⁿ-ná* …

*… mùʔùⁿ báʔrī … ēēⁿ báʔrī … ààⁿ báʔrī*

‘blind one’ *fūgū-rā* …

*… mùʔùⁿ báʔrī … ēēⁿ báʔrī … ààⁿ báʔrī*

‘Jula person’ *jóʔó-rá* …

*… mùʔùⁿ báʔrī … ēēⁿ báʔrī … ààⁿ báʔrī*

#### Independent and predicative pronouns

The forms in (xx1) are used in isolation, i.e. not as arguments of a verb. For 2Sg there is variation between *wo* and *wɔ*, with wɔ common before a nasal. There are two alternative 2Pl morphemes, of which *ééⁿ* is more common. 1Pl is sometimes heard with long vowel in the second syllable (*mùʔúú-ń* ‘it’s us’). 3Sg awo can contract in allegro speech to *aa*, in which case it is distinguished from 3Pl *aaⁿ* by presence or absence of nasalization.

(xx1) Pronouns

isolation ‘it’s \_\_’ ‘\_\_ too’ ‘as for me’

1Sg *mā-n* *mā-ní(ī) mā dōʔō mā kɔ̄nī*

2Sg *wō-n* *wō-ní(ī) wō dōʔō wō kɔ̄nī*

1Pl *mùʔú-n(ú)* *mùʔúⁿ-ní(ī) mùʔùⁿ dóʔó mùʔúⁿ kɔ́ní*

2Pl *ēē-n(ū)* *ēēⁿ-ní(ī) ēēⁿ dōʔō ēēⁿ kɔ̄nī*

3SgHum *(à) wɔ̀-n(ù)* *à wɔ̀-ní(ī) à (wò) dóʔó à wò kɔ́ní*

3SgNonh *è wò-n(ù)* *è wɔ̀-ní(ī) è (wò) dóʔó è wò kɔ́ní*

3PlHum *àà-ń àà-ní(ī) ààⁿ dóʔó ààⁿ kɔ́ní*

~ *àà-nú*

3PlNonh *èè-ń èè-ní(ī) èèⁿ dóʔó èèⁿ kɔ́ní*

~ *èè-nú*

Pl *máà-ǹ máà-níì máàⁿ dòʔó máàⁿ kɔ́ní*

The two variants for 3SgHum acting on 3SgHum are illustrated in (xx2).

(xx2) a. *∅ á bàʔrí*

3Sg 3SgHumObj hit.Pfv

‘He-or-she hit-Past him-or-her.’ (two variants)

b. *à ná* *bàʔrí*

3Sg 3SgHumObj hit.Pfv

[ =(a)]

### Postverbal object pronouns

Postverbal NPs including pronouns may occur in bare form, without a postposition, as indirect objects of ‘give’ or ‘show’, or as postverbal objects of a few verbs like *báʔrá* or *màʔà* ‘touch’.

(xx1) a. *à bàʔŕ dí-rá*

3SgHum touch.Pfv child-Nom

‘He/She touched the child.’ (< *bàʔrí* )

b. *à bàʔŕ mā-n*

3SgHum touch.Pfv 1Sg

‘He/She touched me.’

The pronominal forms used in this context are in (xx2). Except for 3Sg they are identical to independent pronouns.

(xx1) Postverbal object pronouns

1Sg *mā-n̄*

2Sg *wɔ̄-n̄*

1Pl *mùʔⁿú-ń*

2Pl *ēē-n̄*

3SgHum *àyà*

3SgNonh *ìyà*

3PlHum *àà-ń* ~ *àà-nú*

3PlNonh *èè-ń* ~ *èè-nú*

## Determiners

### Definite morphemes

#### ‘This/that’ (*míⁿ* )

The all-purpose demonstrative is *míⁿ*, with nominal suffix *mí‑nà*. The plural is *mí‑nà‑àⁿ*, or *mí‑nà‑à‑nū* with nominal suffix. The use of the nominal suffix depends on the higher syntactic environment.

The demonstrative may be used absolutely, i.e. as a one-word NP. It may also follow a noun (and any adjective or numeral). Examples in (xx1) are with *sàà* ‘house’, *gbāā* ‘stick’, and *yíʔé* ‘fish’.

(xx1) a. *sàà mí-nà* ‘this house’

*gbāā mí-nà* ‘this stick’

*yíʔé mí-nà* ‘this fish’

b. *sàà mí-nà-à-nū* ‘these houses’

*gbāā mí-nà-à-nū* ‘these sticks’

*yíʔé mí-nà-à-nū* ‘these fish’

#### ‘This/that’ (*mìíⁿ* ) plus near- and far-distal particles

An alternative demonstrative form *mìí* occurs in independent (citation) forms and predicates, but not in NPs that have subject, object, or other functions within clauses and phrases. It is followed by *nɛ̀* or *bā*. The choice between the two is spatial, with *nɛ̀* the unmarked form and *bā* a marked form denoting a second location farther away. The plural of *mìíⁿ* is *mìí-īⁿ*, with a nasalized plural ending similar to plural suffix *-àⁿ* and variants for nouns.

Examples are in (xx1). *sàà* ‘house’ and *gbāā* ‘stick’ undergo Final Tone-Raising before the initial L‑tone of *mìíⁿ*.

(xx2) a. *sàá mìí nɛ̀* / *bā* ‘that house’

*gbāá mìí nɛ̀* / *bā* ‘that stick’

*yíʔé mìí nɛ̀* / *bā* ‘that fish’

b. *sàá mìí-īⁿ nɛ̀* / *bā* ‘those houses’

*gbāá mìí-īⁿ nɛ̀* / *bā* ‘these sticks’

*yíʔé mìí-īⁿ nɛ̀* / *bā* ‘these fish’

### Demonstrative adverbs

#### Locative adverbs

Some basic spatial adverbs are in (xx1). Some contain demonstrative *mí*. Near-distant *làʔà-mí-tɔ̀* is based on *làʔà-dò* ‘place’.

(xx1) form gloss

a. *nàà* ‘here’

*nà-mí-nɛ̀* ‘here’

b. *dì* ‘over there’

*làʔà-mí-tɔ̀* ‘over there’ (deictic)

c. ŋŋŋ ‘there’ (discourse-definite)

#### Emphatic and Approximinative modifiers of adverbs

### Presentatives (‘here’s/there’s …!’)

The basic presentative construction is *X=∅ nɛ̀* ‘here’s X’ or ‘there’s X’ (with stressed *here* or *there*). Here /H+=∅/ is the locational ‘be’ enclitic.

(xx1) a. *zàkíī=∅ nɛ̀*

Z=be here’s

‘Here’s/There’s Zaki.’

b. *[dí kpɛ́ʔr-à-áⁿ]=∅ nɛ̀*

[child small-Nom-Pl]=be here’s

Pronominal forms include *mā nɛ̀* ‘here I am’, *á=∅ nɛ̀* ‘here/there he/she is!’, and *àáⁿ nɛ̀* ‘here/there they are!’

The final *nɛ̀* may combine with another verb, such as ‘come’ and ‘sleep’. In this case I gloss /H+=∅/ as imperfective (=Ipfv), as usual before present, future, and progressive verbs, but it is the same morpheme as locational ‘be’.

(xx2) a. *zàkíī=∅ sè-yá nɛ̀*

Z=Ipfv come-Prog here’s

‘Here comes Zaki!’

b. *mùʔúⁿ=∅ sè-yá nɛ̀*

Z=Ipfv come-Prog here’s

‘Here we come!’

c. *á=∅ ɲìí bè-yá nɛ̀*

3SgHum=Ipfv sleep(n) fall-Prog here’s

‘There he is, sleeping!’ (French *le voilà qui dort!* )

French counterparts *voici X* and *voilà X* are derived from the imperative of the verb ‘see’, and another option in Jalkunan is based on the imperative of ‘look (at)’, with the focal entity as object.

(xx1) a. *zàkíì lé*

Z look.Imprt

‘Look-2Sg at Zaki (over there)!’

b. dí lě

child look.Imprt

‘Look-2Sg at the child (over there)!’

c. *dí-rá-àⁿ lé*

child-Nom-pl look.Imprt

‘Look-2Sg at the children (over there)!’

## Adjectives

### Simple adjectives

Adjectives follow nouns. In an N-Adj combination with no following modifiers, the nominal suffix *‑rà*, *‑nà*, etc. is added once, to the adjective. The plural suffix *-àⁿ* and variants, and in favorable syntactic contexts its own nominal suffix *‑nū*, are added to the “singular” nominal suffix.

In N-Adj combinations, some tonal changes apply to the noun and/or the adjective. Some of these are predictable tone-sandhi processes. Others are morphosyntactically conditioned ablaut processes. A full discussion of N-Adj combinations and relevant tonal processes is in §6.xxx below. There I argue that the lexical tones of the adjective are best identified by having them follow L‑toned nouns. I assume that analysis here. However, the focus at the moment is on the semantic classes of primary adjectives (i.e. excluding participles derived from verbs).

(xx1) semantic type adjective suffixed gloss

a. color *gbɔ̀ʔɔ̀* *gbɔ̀ʔɔ̀-rá* ‘black’

*kānā kān-nā* ‘red’

*kpēē kpēē-rā* ‘white’

b. dimension *gbɔ́* *gbɔ́-rà* ‘big’

*kpɛ́ʔrɛ̄* *kpɛ́ʔr-à* ‘small’

*gbáʔálá* *gbáʔálá-rà* ‘thin’

*súmááⁿ súmáá-ná* ‘long’

*gúnī* *gúnī-nà* ‘short’

~ *gūn̄-nà*

*bá-kúnī bá-kúnī-nà* ‘short’

~ *bá-kún̄-nà*

c. temperature *táā táā-rà* ‘hot’

*kúmā* *kúmā-nà* ‘cold’

d. evaluation *ɲɛ́ ɲɛ́-nà* ‘good’

*kítā kítā-rà* ‘bad’ (*t* ~ *d* )

e. state *gbé gbé-rà* ‘fresh’

*kútɔ̄* *kútɔ̄-rɔ̀* ‘old’ (*t* ~ *d* )

*wútɔ̄* *wútɔ̄-rɔ̀* ‘new’ (*t* ~ *d* )

f. miscellaneous *wéé* *wéé-rà* ‘other’

## Numerals

### Cardinal numerals

#### ‘One’, ‘same (one)’, and ‘other’

Numeral ‘1’ is *dúlì*. A preceding noun omits its final suffix.

(xx1) with ‘1’ gloss suffixed singular

*wùl dúlì* ‘one dog’ *wùl-á*

*kùgù dúlì* ‘one stone’ *kùgù-rá*

*gbāā dúlì* ‘one stick’ *gbāā-rā*

*dí dúlì* ‘one child’ *dí-rá*

In counting (‘1, 2, 3, …’) ‘1’ is *dúúlì* with long vowel.

#### ‘2’ to ‘10’

The numerals from ‘2’ to ‘10’ are shown in (xx1). There is no plural marking, and no nominal suffix. The “counting” forms are used in recited numerals without modified nouns (‘1, 2, 3, …’). They are the most reliable indicator of lexical tone. Numerals ‘6’ to ‘9’ appear to contain a frozen formative *ma-* plus a version, often irregular, of ‘1’ to ‘4’, respectively. This points to an original base of ‘5’. This morphology is most transparent for ‘8’ vis-à-vis ‘3’.

(xx1) gloss counting lexical tone

‘2’ *flā* /M/

‘3’ *sīgbō* /M/

‘4’ *nāānī* /M/

‘5’ *sóóló* /H/

‘6’ *mī-īlō* /M-MM/

‘7’ *mà-álā* /L-HL/

‘8’ *mà-sīgbō* /L-H/

‘9’ *má-nānì* /H-ML/

‘10’ *táá* /H/

When these numerals are added to a noun (or adjective), the *mà‑* formative in ‘7’ and ‘8’ is raised to H‑tone (the same formative in ‘9’ is already H).

Examples with /L/-melody noun *kùgù* ‘stone’ (suffixed singular *kùgù‑rá* ) are in (xx2).

(xx2) gloss ‘stone’ tone change

‘2’ *kùgù flā*

‘3’ *kùgù sīgbō*

‘4’ *kùgù nāānī*

‘5’ *kùgù sóóló*

‘6’ *kùgù mī-īlō*

‘7’ *kùgù má-álā* yes

‘8’ *kùgù má-sīgbō* yes

‘9’ *kùgù má-nānì*

‘10’ *kùgù tāā*

Combinations with /M/-melody noun *gbāā* ‘stick’ (suffixed *gbāā-rā* ) are in (xx3).

(xx3) gloss ‘stick’ tone change

verify

‘2’ *gbāā flā*

‘3’ *gbāā sīgbō*

‘4’ *gbāā nāānī*

‘5’ *gbāā sōōlō*

‘6’ *gbāā mī-īlō*

‘7’ *gbāā má-álā* yes

‘8’ *gbāā má-sīgbō* yes

‘9’ *gbāā má-nānì*

‘10’ *gbāā tāā*

Combinations with /H/-melody noun *yíʔé* ‘fish’ (suffixed *yíʔé‑rá* ) are in (xx4)

(xx4) gloss ‘fish’ tone change

‘2’ *yíʔé flā*

‘3’ *yíʔé sīgbō*

‘4’ *yíʔé nāānī*

‘5’ *yíʔé sóóló*

‘6’ *yíʔé mī-īlō*

‘7’ *yíʔé má-álā* yes

‘8’ *yíʔé má-sígbō* yes

‘9’ *yíʔé má-nānì*

‘10’ *yíʔé tāā*

When a noun with final floating L-tone is followed by a numeral, the L‑tone is realized on the numeral. The exception is ‘9’, the only numeral ‘2’ to ‘10’ that consistently has a falling tone pattern. Floating-Tone Docking with these numerals involves more extensive spreading than that seen in N-Adj combinations, since here it wipes out underlying nonlow tones rather than merely pushing them rightward. (xx5) illustrates with *ɲáāⁿ* ‘woman’ (suffixed *ɲáā-nà* ), whose lexical melody is /HM(L)/.

(xx5) gloss ‘woman’ tone change

‘2’ *ɲááⁿ flà* yes

‘3’ *ɲááⁿ sìgbò* yes

‘4’ *ɲááⁿ nàànì* yes

‘5’ *ɲááⁿ sòòlò* yes

‘6’ *ɲááⁿ mì-ìlò* yes

‘7’ *ɲááⁿ mà-àlà* yes

‘8’ *ɲááⁿ mà-sìgbò* yes

‘9’ *ɲááⁿ má-nānì*

‘10’ *ɲááⁿ tàà* yes

In careful speech, the underlying nonlow tones of the numerals in (xx5) may reappear. It is likely that variation in pronunciation of these combinations occurs in natural speech.

#### Decimal/vigesimal multiples (‘20’ to ’200’) and combinations

The multiples of ‘10’ are given in (xx1). The system is actually vigesimal, with *jálámā* ‘20’ taking the compound initial forms *jén-* (in ‘30’) and *jáāⁿ-* (elsewhere) before single-digit numerals. Odd-numbered decimals above ‘20’ add *‑r‑tàà* (after *flā* ‘2’ and *sīgbō* ‘3’) or *‑tàà* (after higher decimals). *‑tàà* also occurs in irregular ‘30’, where it has similar additive sense (‘plus 10’), and in ‘200’, where it has direct scope over ‘20’ (20x10 = 200). The use of different allomorphs for ‘20’ avoids homophony between ‘30’ (’20 plus 10’) and ‘200’ (‘ten 20s’). This final *‑tàà* is L‑toned and therefore triggers Final Tone-Raising of preceding L‑ and M‑toned stems (‘50’, ‘70’, ‘130’, ‘170’). Phonetically, H and M tones following *jáāⁿ* are downstepped, but in *jáāⁿ-sóóló-tàà* ‘110’ the middle stem *‑sóóló‑* is still higher-pitched than *‑tàà*, and in *jáāⁿ‑má‑álà* ‘140’ *má‑á* is higher-pitched than *là*, so I do not attribute the lowered pitch of e.g. *‑sóóló‑* to Floating-L Shift triggered by *jáāⁿ‑*.

(xx1) gloss form

‘10’ *táá*

‘20’ *jálámà*

‘30’ *jén-tàà*

‘40’ *jáāⁿ-flā*

‘50’ *jáāⁿ-flā-ŕ-tàà*

‘60’ *jáāⁿ-sīgbō*

‘70’ *jáāⁿ-sīgbō-ŕ-tàà*

‘80’ *jáāⁿ-nāānī*

‘90’ *jáāⁿ-nāāń-tàà*

‘100’ *jáāⁿ-sóóló*

‘110’ *jáāⁿ-sóóló-tàà*

’120’ *jáāⁿ-mī-īlō*

‘130’ *jáāⁿ-mī-īló-tàà*

‘140’ *jáāⁿ-má-álà*

‘150’ *jáāⁿ-má-álà-tàà*

‘160’ *jáāⁿ-má-sīgbō*

‘170’ *jáāⁿ-má-sīgbō-ŕ-tàà*

‘180’ *jáāⁿ-má-nānì*

‘190’ *jáāⁿ-má-nānì-tàà*

‘200’ *jáāⁿ-tàà*

Single-digit numerals may follow the decimal and vigesimal terms to form composite numerals like ‘11’ and ‘56’. In such combinations the decimal terms take the forms illustrated in (xx2). ‘10’ adds what looks like the nominal suffix *-rā* (i.e. /tāā‑rā/ raised to -rá before the single-digit term, which is dropped to {L}.

(xx2) gloss ‘10 plus …’ digit

‘11’ *tāā-rá dùlì* *dúlì*

‘12’ *tāā-rá flà* *flā*

‘13’ *tāā-rá sìgbò* *sīgbō*

‘14’ *tāā-rá nàànì* *nāāní*

‘15’ *tāā-rá sòòlò* *sóóló*

‘16’ *tāā-rá mì-ìlò* *mī-īlō*

‘17’ *tāā-rá mà-àlà* *mà-álà*

‘18’ *tāā-rá mà-sìgbò* *mà-sígbó*

‘19’ *tāā-rá mà-nànì* *má-nānì*

while all higher decimal terms add a linking morpheme *tú*, arguably raised from /tù/ before the tone-dropped single-digit term.

(xx2) gloss ‘20 plus …’ ’30 plus …’ digit

‘21/31’ *jálámà tú dùlì* *jáāⁿ-sīgbō-ŕ-tàà tú dùlì* *dúlì*

‘22/32’ *jálámà tú flà* *jáāⁿ-sīgbō-ŕ-tàà tú flà* *flā*

‘23/33’ *jálámà tú sìgbò* *jáāⁿ-sīgbō-ŕ-tàà tú sìgbò* *sīgbō*

‘24/34’ *jálámà tú nàànì* *jáāⁿ-sīgbō-ŕ-tàà tú nàànì* *nāāní*

‘25/35’ *jálámà tú sòòlò* *jáāⁿ-sīgbō-ŕ-tàà tú sòòlò* *sóóló*

‘26/36’ *jálámà tú mì-ìlò* *jáāⁿ-sīgbō-ŕ-tàà tú mì-ìlò* *mī-īlō*

‘27/37’ *jálámà tú mà-àlà* *jáāⁿ-sīgbō-ŕ-tàà tú mà-àlà* *mà-álà*

‘28/38’ *jálámà tú mà-sìgbò* *jáāⁿ-sīgbō-ŕ-tàà tú mà-sìgbò* *mà-sīgbō*

‘29/39’ *jálámà tú mà-nànì* *jáāⁿ-sīgbō-ŕ-tàà tú mà-nànì* *má-nānì*

#### ‘Thousand’

‘Thousand’ is either *wàʔà* or *búúlī* ‘finger’ For ‘1000’, the numeral ‘1’ is used. After *wàʔà*, single-digit terms from ‘2’ to ‘5’ are tone-dropped. They, along with ‘6’ to ‘8’ which already begin in an L‑tone, induce Final Tone-Raising to *wàʔá* (left data column). After búúlī, ‘2’ and ‘3’ are tone-dropped but others are not (right data column).

(xx1) gloss with *wàʔà* with *búúlì* ‘finger’

‘1000’ *wàʔà dúlì búúlī dúlì*

‘2000’ *wàʔá flà búúlī flà*

‘3000’ *wàʔá sìgbò búúlī sìgbò*

‘4000’ *wàʔá nàànì búúlī nāānī*

‘5000’ *wàʔá sòòlò búúlī sóóló*

‘6000’ *wàʔá mì-ìlò búúlī mì-ìlò*

‘7000’ *wàʔá mà-álà búúlī mà-álà*

‘8000’ *wàʔá mà-sīgbō búúlī mà-sīgbō*

‘9000’ *wàʔà má-nānì búúlī má-nānì*

’10,000’ *wàʔá tàà* *búúlī tāā*

#### Currency

In native languages of the zone, currency is counted in a unit equal to 5 francs CFA (the smallest coin in use). Therefore 100 FCFA is expressed as *wár jálámà* ’20 money units’. The unit term is *wárī* (suffixed *wár̄-rà*).

There is also a special term *kùmɔ́l* meaning ‘2000 francs CFA’. To specify exactly this amount, the phrasing is *kùmɔ́l dúlì* with *dúlì* ‘1’. *kùmɔ́l flā* is ‘4000 francs CFA’, and so forth.

#### Reduplicated or iterated distributive numerals

As in many other languages of the zone, numerals are initially reduplicated (*Cv-*) or completely iterated to express distributivity (‘two each’, ‘two by two’, ‘two at a time’, etc.). Reduplication occurs with ‘1’ and ‘4’ through ‘7’. ‘4’ and ‘5’ have the same unusual tone pattern in their reduplicated forms, in spite of having different tones in their baic forms. Iteration occurs with ‘3’ and ‘8’ to ‘9’. Since ‘2’ is usually monosyllabic, the distinction between reduplication and iteration is moot. The form for ‘10’ is irregular segmentally, but has the same tones as those for ‘4’ and ‘5’.

(xx1) numeral gloss distributive

*dúlì* ‘1’ *dù-dúlì*

*flā* ‘2’ *flà-flá*

*sīgbō* ‘3’ *sìgbò-sīgbō*

*nāānī* ‘4’ *ná-nàànì*

*sóóló* ‘5’ *só-sòòlò*

*mī-īlō* ‘6’ *mì-mī-īlō*

*mà-álà* ‘7’ *mà-má-álà*

*mà-sīgbō* ‘8’ *mà-sīgbō-mà-sīgbō*

*má-nānì* ‘9’ *má-nānì-má-nānì*

*táá* ‘10’ *tá-nàà*

Historically, *tá-nàà* ‘ten each’ may reflect a variant (not used by my assistant) for simple *táá* ‘10’ that had a nasalized vowel (Truong’s lexicon renders ‘10’ as *tāⁿ* ).

### Ordinal adjectives

#### ‘First’ (*dáálá* ) and ‘last’ (*kùdɔ́rɔ̀mà-nà* )

‘First’ as modifying adjective (not adverb) is *dáálá*, with nominal suffix *dáálá-rá*, obscurely related to *dúlì* ‘1’. Examples are *sɛ́ⁿ dààlà-rá* ‘the first thing’ (the noun has a floating L) and *dí dáálá‑rá* ‘the first child’ (< *dí‑rá* ).

#### Other ordinals (suffix *-ɲa-*)

The forms are given here with the nominal suffix. The ordinal suffix is usually M‑toned and requires an M‑toned nominal suffix. In ‘sixth’, however, the whole stem including *‑ɲà‑* is L‑toned, so the suffix is H‑toned *‑ná*.

(xx1) form gloss

a. single-digit numeral

*flā‑ɲā‑nā* ‘second’

*sīgbō-ɲā-nā* ‘third’

*náání-ɲā-nā* ‘fourth’

*sóóló-ɲā-nā* ‘fifth’

*mì-ìlò-ɲà-ná* ‘sixth’

*mà-álà-ɲā-nā* ‘seventh’

*mà-sīgbō-ɲā-nā* ‘eighth’

*má-nànì-ɲā-nā* ‘ninth’

*táá-ɲā-nā* ‘tenth’

b. decimal

*jálámà-ɲā-nā* ‘twentieth’

c. decimal plus single-digit numeral

*tāā-rá dùlì-ɲā-nā* ‘eleventh’

d. hundred

*jáāⁿ-sóóló-ɲā-nā* ‘hundredth’

### Fractions and portions

The noun *gùⁿ* (with nominal suffix *gù-nɔ́* ) has a range of translations including ‘piece’ or ‘half’. It is a homonym of ‘mortar (for pounding)’.

# Nominal and adjectival compounds

## Nominal compounds

### Noun-noun compounds

### Possessive-type compounds

### Compounds with final verbal noun

### Agentive compounds

Compounds denoting persons who have a distinctive occupation or other behavior are generally three-part compounds consisting of a characteristic object, a transitive verb, and the noun *míʔī-nà* ‘person’ (xx1a). Since some Jalkunan verbs occur in multiple object-verb collocations, changing the compound initial (the object) often completely changes the sense of the agentive (xx1b‑c). This includes collocations like ‘do farming’ and ‘do dancing’, but ‘do’ can also be used to create agentives with an initial that denotes an activity like ‘sell’ or ‘buy’. Thus a seller is a ‘selling-doer’ (xx1d).

(xx1) agentive gloss verb

a. *fóʔó-tèè míʔī-nà* ‘rifle-shooter’ *tɛ̀ɛ̀* ‘shoot’

*tùlù-bàʔrì míʔī-nà* ‘iron-beater’ *báʔrá* ‘hit’

*gbàà-bègè míʔī-nà* ‘woodworker’ *bégá* ‘cut’

*sóʔó-tòʔrì míʔī-nà* ‘woodseller’ *tòʔrɔ̀* ‘sell’

*gùn-tìgì míʔī-nà* ‘mortar-pounder’ *tìgɛ̀* ‘pound’

*yí-bɛ̀n míʔī-nà* ‘water draw-er’ *bɛ̀nà* ‘draw water’

*sìbì-kpèèⁿ míʔī-nà* ‘animal-killer (hunter)’ *kpààⁿ* ‘kill’

*kpɔ̀l-tùùⁿ míʔī-nà* ‘leatherworker’ *tùwɔ̂ⁿ* ‘apply hide’

b. *sígí-sèè míʔī-nà* ‘song-singer’ *sàà* ‘sing; build’

*sàà-sèè-míʔī-nà* ‘house-builder’ *sàà* ‘sing; build’

c. *ɲùʔúⁿ-sɔ̀lì míʔī-nà* ‘clothes-sewer/-weaver’ *sɔ̀lɔ̀* ‘weave; sew’

*wù-sɔ̀lì míʔī-nà* ‘hair-braider’ *sɔ̀lɔ̀* ‘weave; sew’

d. *dòò-mèè míʔī-nà* ‘dance-dancer’ *màà* ‘do’

*mùù-mèè míʔī-nà* ‘farmer’ *màà* ‘do’

*tóʔré-mèè míʔī-nà* ‘seller’ *màà* ‘do’

*sànì-mèè míʔī-nà* ‘buyer’ *màà* ‘do’

These decriptive agentives, e.g. ‘iron-beater’ (i.e. ‘blacksmith’), are distinct from caste names like *tɔ̀ⁿ* ‘member of blacksmith caste’, *jɛ̀lɛ̀* ‘member of potter caste’, and *fɔ̀nɔ̀* ‘member of leatherworker caste’. These denote social categories that are often associated with the relevant trade.

### Compounds with *dí* ‘child’ and *bōō* ‘fruit’

For animal species, diminutives are often used to denote juveniles (‘chick’, ‘puppy’); see §4.xxx. An alternative is a compound with *dí* ‘child’, such as *wùl dì* ‘puppy’.

For trees, ‘fruit’ is *bōō*, and this is often compounded: *máʔr̄ bòò* ‘mango fruit’, *bòyākí bòò-rá* ‘guava fruit’.

### ‘Owner of X’ compounds (*māā-nā* )

*māā-nā* ‘owner’ (including the nominal suffix) can create a range of compounds denoting either a proprietor of an entity (such as a selling stand or rifle), or a nominal characteristic such as a beard or a hunched back. Usually *māā-nā* is M‑toned, but in (xx1b) it is L‑toned.

(xx1) a. *dāā-kíīⁿ* ‘beard’ *dāā-kííⁿ māā-nā* ‘bearded one’

*tàbàl* ‘table, stand’ *tàbàl māā-nā* ‘stand seller’

*màrfá* ‘rifle’ *màrfá māā-nā* ‘rifleman’

*kɔ̄yī* ‘belly’ *kɔ̄yī māā-nā* ‘potbellied or pregnant one’

b. *jègì* ‘hump’ *jègì màà-ná* ‘hunchback’

### Instrumental relative compounds (‘oil for rubbing/for eating’)

If an entity has two or more subtypes with distinct functions, the subtypes can be distinguished by adding a compound final based on a verb. The final consists of a form of the verb plus ‑mī- (with nominal suffix *‑mī-nà* ). This morpheme is presumably related to *myɛ̀ⁿ* ‘do’ (perfective *mɛ̌ⁿ*, imperative *mǐⁿ* ). Functional subtypes of *yí* ‘water’ and *télé* ‘oil’ are in (xx1).

(xx1) compound gloss based on verb

a. *yí míí-mī-nà* ‘drinking water’ *myɛ̀ⁿ* ‘drink’ (Pfv *mǐīⁿ* )

*yí wéé-mī-nà* ‘water for bathing’ *wɛ̀ɛ̀* ‘bathe’

b. *télé kúní-mī-nà* ‘eating (cooking) oil’ *kùnò* ‘eat (meal)’

*télé móó-mī-nà* ‘rubbing oil’ *mɔ̀ɔ̀ⁿ* ‘rub’

## Adjectival compounds

### Bahuvrihi (“Blackbeard”) compounds [n̄ â] or [n̄ nûm]

#### With adjectival compound final [n̄ â]

#### With numeral compound final [n̄ nûm]

# Noun Phrase structure

## Organization of NP constituents

### Linear order

The unpossessed NPs in (xx1) are headed by *sàà* ‘house’, which is followed in most examples by an adjective and/or a numeral.

This section focuses on linear order of key elements within NPs. The examples also happen to bring out the distribution of the nominal suffix (-Nom) and of the plural suffix. The nominal suffix is allowed in some but not other clause-level syntactic environments; it will be discussed in following sections rather than here.

(xx1) example type

a. *sàà-rá*  [n]

house-Nom

‘(a) house’

b. *sàà-rá-à-nū* [n]

house-Nom-Pl-Nom

‘houses’

c. *sàà ɲɛ́-nà* [n-a]

house good-Nom

‘(a) good house’

d. *sàà ɲɛ́-nà-à-nū* [n-a]

house good-Nom-Pl-Nom

‘good houses’

e. *sàà dúlì* [n-num]

house one

‘one house’

f. *sàà sīgbō* [n-num]

house three

‘three houses’

g. *sàà ɲɛ́ⁿ dúlì* [n-a-num]

house good one

‘one good house’

h. *sàà ɲɛ́ⁿ sīgbō* [n-a-num]

house good three

‘three good houses’

The linear order so far is N-Adj-Num.

(xx2) a. N (Adj) -Nom (-Pl)

b. N (Adj) Dem

A demonstrative (‘this/that’) may follow the N-Adj-Num sequence (xx3).

(xx3) a. *sàà mī-nà* [n-dem]

house Dem-Nom

‘this house’

b. *sàà mī-nàà-n̄* [n-dem]

house Dem-Nom-Pl

‘these houses’

c. *sàà ɲɛ́ⁿ mī-nà* [n-a-dem]

house good Dem-Nom

‘this good house’

d. *sàà ɲɛ́ⁿ mī-nà-àn̄* [n-a-dem]

house good Dem-Nom-Pl

‘these good houses’

e. *sàà sīgbō mī-nà-àn̄* [n-num-dem]

house three Dem-Nom

‘these three houses’

The examples in (xx4) add the universal quantifier (‘all’) to the various NPs types already given. Addition of ‘all’ has no effect on the form of the preceding elements. The type (xx4c) with numeral plus ‘all’ was difficult to elicit, except with a following verb, whereupon ‘all’ takes the form *bùʔù*.

(xx4) a. *sàà-rá-āⁿ búʔú-nū* [n-quant]

house-Nom-Pl all-Pl

‘all (of) the houses’

b. *sàà ɲɛ́-nā-àⁿ búʔú-nū* [n-a-quant]

house good-Nom-Pl all-Pl

‘all (of) the good houses’

c. *sàà sīgbō búʔú-nū* [n-num-quant]

house three all-Pl

‘all three (of the) houses’

d. *sàà sīgbō mī-nà-àⁿ búʔú-nū* [n-num-dem-quant]

house three Dem-Nom-Pl all

‘all three of these houses’

### Distribution of singular nominal suffix (*‑rà* etc.)

Forms of singular nouns with and without a nominal suffix are given in §4.1. It remains to specify the morphosyntactic contexts in which the suffix occurs.

The first issue is where the nominal suffix occurs within the NP, when it does occur. The suffix can be added to an unmodified noun (xx1a), or to an NP-final adjective or demonstrative (xx1b‑c). In general it is not present when the NP ends in a numeral (xx1d).

(xx1) a. *sàà-rá*

house-Nom

‘(a/the) house’

b. *sàà ɲɛ́-ná*

house big-Nom

‘(a/the) big house’

c. *sàà mī-nà*

house Dem-Nom

‘this house’

d. *sàà sīgmā*

house three

‘three houses’

The syntactic functions that require, allow, or disallow the nominal suffix are summarized in (xx2).

(xx2) a. require or allow the suffix

independent function (citation form, preclausal topic)

subject of clause immediately before most object pronouns

subject of clause immediately before inflectional suffix

right (final) conjunct in ‘X and Y’ conjunction

b. disallow the suffix

preverbal object

subject of clause immediately before verb or nonpronominal

complement of postposition

left (first) conjunct in ‘X and Y’ conjunction

possessor before possessed noun (possessum)

before discourse-functional morphemes

For examples of these syntactic positions and further discussion (especially of subject function), see §6.1.4‑5 below. The “singular” nominal suffix is also part of the plural suffix complex, see the following section. In this combination, the “singular” nominal suffix is protected by virtue of being nonfinal in the word, and it its presence is not subject to syntactic restrictions.

### Distribution of plural nominal suffix (*‑nū* )

The plural suffix *-àⁿ* is added to the noun plus the singular nominal suffix, forming suffix combinations like *‑nà‑àⁿ*, *‑rà‑àⁿ*, and *‑rá‑àⁿ* depending on the form of the singular nominal suffix. The plural has its own nominal suffix *‑nū*, hence *‑àⁿ‑nū* in combinations like *‑nà‑àⁿ‑nū*.

(xx1) gloss singular plural

unsuffixed suffixed unsuffixed suffixed

a. ‘woman’ *ɲáāⁿ ɲáā-nà ɲáā-nà-àⁿ ɲáā-nà-à-nū*

b. ‘sheep’ *tàgà tàgà-rá tàgà-rá-àⁿ tàgà-rá-à-nū*

The syntactic contexts requiring, allowing, and disallowing the singular nominal suffix are similar to those that apply to the plural nominal suffix. However, the plural suffix is more restricted than the singular suffix in subject NPs. Relevant data are in the following two sections.

### Nominal suffixes in subject function

In subject function, a singular NP that is capable of ending in a nominal suffix (e.g. N, N‑Adj, N‑Dem) takes the nominal suffix when immediately followed by some but not other elements.

The nominal suffix is not allowed on subjects that are immediately followed by nonpronominal objects (xx1a‑b), or that are followed directly by (intransitive) verbs (xx2a‑b). Here as elsewhere # means ungrammatical.

(xx1) a. *ɲáāⁿ ( #ɲáāⁿ-nà) tàgá jɛ̌*

woman (#woman-Nom) sheep see.Pfv

‘(A/The) woman saw a/the sheep.’

b. *ɲáāⁿ-nà-áⁿ (* #*ɲáā-nà-à‑nū) tàgá jɛ̌*

woman-Nom-Pl (#woman-Nom-Pl-Nom) sheep see.Pfv

‘(The) women saw a/the sheep.’

(xx2) a. *ɲáāⁿ (* #*ɲáāⁿ-nà) sɛ̌*

woman (#woman-Nom) come.Pfv

‘(A/The) woman came.’

b. *ɲáāⁿ-nà-àⁿ (* #*ɲáā-nà-à‑nū) sɛ́*

woman-Nom-Pl (#woman-Nom-Pl-Nom) come.Pfv

‘(The) women came.’

In transitives with pronominal object directly following the subject, the cliticization of the object pronoun onto the noun favors presence of the nominal suffix. The details are somewhat messy, and the plural nominal suffix is much more restricted than the singular nominal suffix. There may be more variation than is suggested by the following account.

(xx3a‑b) have human 3Sg object *à* in cliticized form. For singular ‘sheep’ as subject, the clitic requires the (singular) nominal suffix on the subject (xx3a). However, plural ‘sheep’ as subject occurs in the unsuffixed form *tàgà-rá-āⁿ*, contracting with cliticized object pronoun *=à* as *tàgà-rá-āⁿ=āⁿ* (xx3b). In this and following examples the ungrammatical forms of the subject NP are omitted; the points to note are the presence/absence of “-Nom” immediately preceding the object pronoun (cliticized or not).

(xx3) a. *tàgà-rá=à jɛ̌*

sheep-Nom=3SgHum see.Pfv

‘The sheep-Sg saw him/her.’

b. *tàgà-rá-āⁿ=āⁿ jɛ̌*

sheep-Nom-Pl=3SgHum see.Pfv

‘The sheep-Pl saw him/her.’

The pattern is similar with human 3Pl object *ààⁿ* (xx4a‑b). However, the pile-up of *a*‑vowels in the plural-subject combination (xx4b) leads to further vocalic contractions, so that (xx4a) and (xx4b) are indistinguishable in allegro speech. The two are only slightly distinct (tonally) from (xx3b) above.

(xx4) a. *tàgà-rá=ààⁿ jɛ́*

sheep-Nom=3PlHum see.Pfv

The sheep-Sg saw them.’

b. *tàgà-rá(-āⁿ)=ààⁿ jɛ́*

sheep-Nom(-Pl)=3PlHum see.Pfv

‘The sheep-Pl saw them.’

1Sg, 2Sg, and 2Pl object pronouns likewise require the word-final nominal suffix on singular subjects, but not on plural subjects (xx5a‑b).

(xx5) a. *tàgà-rá mā* / *wō jɛ᷄*

sheep-Nom 1Sg / 2Sg see.Pfv

‘The sheep-Sg saw me/you-Sg.’

b. *tàgà-rá ēeⁿ jɛ́*

sheep-Nom 2Pl see.Pfv

‘The sheep-Sg saw you-Pl.’

c. *tàgà-rá-āⁿ mā* / *wō jɛ̌*

sheep-Nom-Pl 1Sg / 2Sg see.Pfv

‘The sheep-Pl saw me/you-Sg.

1Pl object *mùʔùⁿ*, the most noun-like of the pronouns prosodically, can take either suffixed or unsuffixed singular subjects, and (like other pronouns) takes the unsuffixed form of a plural subject (xx6a‑b). In (xx6b) its own tones are raised by the preceding plural NP.

(xx6) a. *tàgá* / *tàgà-rá mùʔùⁿ jɛ́*

sheep / sheep-Nom 1Pl see.Pfv

‘The sheep-Sg saw us.’

b. *tàgà-rá-āⁿ múʔúⁿ jɛ́*

sheep-Nom-Pl 1Pl see.Pfv

‘The sheep-Pl saw us.’

When the subject is followed by imperfective enclitic /H+=∅/, i.e. H‑tone (not always overt) without segments, the suffix is overt with singular but not plural subject. This applies to present, future, and progressive clauses. Examples with future *sà* are (xx7a‑b).

(xx7) a. *tàgà-rá=∅ sà sā*

sheep-Nom=Ipfv Fut come.Ipfv

‘The sheep-Sg will come.’

b. *tàgà-rá-āⁿ=∅ sà sā*

sheep-Nom=Ipfv Fut come.Ipfv

‘The sheep-Sg will come.’

The same applies to subjects with /H+=∅/ followed only by a locational expression in the ‘be (somewhere)’ construction.

### Nominal suffixes in other syntactic functions

For a summary of syntactic functions disallowing the nominal suffix on the final word of an NP, see (xxx) in §6.1.3 above. Examples illustrating these contexts will now be given. Here as elsewhere # means ungrammatical.

Preverbal object NPs may not end in a nominal suffix (xx1a‑b).

(xx1) a. *mā ɲáāⁿ (* #*ɲáā-nà) jɛ̌*

1Sg woman (#woman-Nom) see.Pfv

‘I saw a/the woman.’

b. *mā ɲáāⁿ-nà-àⁿ (* #*ɲáā-nà-à‑nū) jɛ́*

1Sg woman-Nom-Pl (#woman-Nom-Pl-Nom) see.Pfv

‘I saw (the) women.’

NPs functioning as complements of postpositions may not end in a nominal suffix (xx2a‑b).

(xx2) a. *mā sɛ́ [ɲáāⁿ* *(* #*ɲáā-nà) dɛ̀]*

1Sg come.Pfv [woman (#woman-Nom) with]

‘I came with (=brought) a/the woman.’

b. *mā sɛ́ [ɲáāⁿ-nà-àⁿ* *(* #*ɲáā-à‑nū) dɛ́]*

1Sg come.Pfv [woman-Nom-Pl (#woman-Nom-Pl-Nom) with]

‘I came with (=brought) saw (the) women.’

The left conjunct of an ‘X and Y’ conjunction may not end in a nominal suffix (xx3a‑b). The right conjunct, not at issue here, may or may not end in a nominal suffix, depending on the syntactic function of the entire conjoined NP.

(xx3) a. *ɲáāⁿ* *(* #*ɲáā-nà) bùʔù mā-n*

woman (#woman-Nom) and 1Sg-Indep

‘(a/the) woman and me’

b. *ɲáāⁿ-nà-àⁿ (* #*ɲáā-nà-à‑nū) búʔú mā-n*

woman-Nom-Pl (#woman-Nom-Pl-Nom) and 1Sg-Indep

‘(the) women and me’

A possessor NP may not end in a nominal suffix. The following possessum, not at issue here, may or may not end in a nominal suffix, depending on the syntactic function of the entire possessed NP.

(xx4) a. *ɲáāⁿ (* #*ɲáā-nà) tàgà-rá*

woman (#woman-Nom) sheep-Nom

‘(a/the) woman’s sheep’

b. *ɲáāⁿ-nà-àⁿ (* #*ɲáā-nà-à‑nū) tàgà-rá*

woman-Nom-Pl (#woman-Nom-Pl-Nom) sheep-Nom

‘(the) women’s sheep’

.

The discourse particle *dòʔò* ‘also, too’ likewise disallows nominal suffixes (xx5a‑b).

(xx5) a. *ɲáāⁿ* *(* #*ɲáā-nà) dòʔò*

woman (#woman-Nom) also

‘(a/the) woman too’

b. *ɲáāⁿ-nà-àⁿ (* #*ɲáā-nà-à‑nū) dóʔó*

woman-Nom-Pl (#woman-Nom-Pl-Nom) also

‘(the) women too’

## Possession

### Addition of a possessor to an NP

The possessor precedes the noun (and the postnominal modifiers). Addition of the possessor allows a nonsingular numeral to add the nominal and plural suffixes that are omitted in unpossessed NPs ending in a numeral.

(xx1) a. *ádámáⁿ sàà-rá* [poss-n]

A house-Nom

‘Adama’s house’

b. *wō sàà-rá-āⁿ* [poss-n]

2Sg house-Nom-Pl

‘your-Sg houses’

c. *wó sàà sígbó-rá-āⁿ* [poss-n-num]

2Sg house three-Nom-Pl

‘your-Sg three houses’

d. *wō sàà ɲɛ́ sīgbō*  [poss-n-a-num]

*sígbó-rá-āⁿ*

2Sg house good three(-Nom-Pl)

‘your-Sg three good houses’

e. *wō sàà-rá-āⁿ búʔú-nū* [poss-n-quant]

2Sg house-Nom-Pl all

‘all your-Sg houses’

### Alienable and inalienable possession

The alienable/inalienable distinction is made in some but not all possessor-possessum combinations. Where the distinction is overt, it is expressed by tones on the possessum. Inalienables are kin terms and body parts.

#### Lexically all-L‑toned nouns as possessums

Noun stems that consist of L‑toned syllables always have an H‑toned nominal suffix, e.g. *wù-rɔ́* ‘head’, *ɲùʔù-nɔ́* ‘wrap (n)’.

(xx1) shows the tonal behavior of these nouns when they follow an M‑toned possessor pronoun (1Sg, 2Sg, or 2Pl). Inalienables (all examples known to me with this lexical tone melody are body parts) become M‑toned. This is attributable to M‑Spreading, with the M‑tone originating in the possessor (xx1a). Alienables have the same tones as when unpossessed (xx1b).

(xx1) L‑toned noun as possessum after M‑toned possessor pronoun

noun gloss ‘my \_\_’ ‘your-Sg \_\_’ ‘your-Pl \_\_’

a. inalienables

*wù-rɔ́* ‘head’ *mā wū-rɔ̄ wō wū-rɔ̄ ēēⁿ wū-rɔ̄*

*ɲì-ná* ‘blood’ *mā ɲī-nā wō ɲī-nā ēēⁿ ɲī-nā*

*sɔ̀-nɔ́* ‘heart’ *mā sɔ̄-nɔ̄ wō sɔ̄-nɔ̄ ēēⁿ sɔ̄-nɔ̄*

*nùʔù-nɔ́* ‘intestine’ *mā nūʔū-nɔ̄ wō nūʔū-nɔ̄ ēēⁿ nūʔū-nɔ̄*

b. alienables

*kɔ̀-nɔ́* ‘bird’ *mā kɔ̀-nɔ́ wō kɔ̀-nɔ́ ēēⁿ kɔ̀-nɔ́*

*gù-nɔ́* ‘mortar’ *mā gù-nɔ́ wō gù-nɔ́ ēēⁿ gù-nɔ́*

*mɔ̀-nɔ́* ‘rope’ *mā mɔ̀-nɔ́ wō mɔ̀-nɔ́ ēēⁿ mɔ̀-nɔ́*

*tù-rɔ́* ‘millet cake’ *mā tù-rɔ́ wō tù-rɔ́ ēēⁿ tù-rɔ́*

*tòʔò-rá* ‘pot, jar’ *mā tòʔò-rá wō tòʔò-rá ēēⁿ tòʔò-rá*

*ɲùʔù-nɔ́* ‘wrap (n)’ *mā ɲùʔù-nɔ́ wō ɲùʔù-nɔ́ ēēⁿ ɲùʔù-nɔ́*

(xx2) shows combinations of these nouns with 1Pl and 3Pl (human and nonhuman) possessor pronouns. In their basic (underlying) form, these pronouns are L‑toned and bimoraic. Inalienable nouns, including the nominal suffix, are subject to an {H} overlay after these possessors (xx2a). Alienables have the same tones as when unpossessed. Since the alienable possessums begins with an L‑tone, a preceding bimoraic L‑toned possessor undergoes the tone sandhi rule Final Tone-Raising (e.g. *mùʔùⁿ* → *mùʔúⁿ* ).

(xx2) L‑toned noun as possessum after other plural possessor pronouns

noun gloss ‘our \_\_’ ‘their \_\_’

human nonhuman

a. inalienables

*wù-rɔ́* ‘head’ *mùʔùⁿ wú-rɔ́ ààⁿ wú-rɔ́ èèⁿ wú-rɔ́*

*ɲì-ná* ‘blood’ *mùʔùⁿ ɲí-ná ààⁿ ɲí-ná èèⁿ ɲí-ná*

*sɔ̀-nɔ́* ‘heart’ *mùʔùⁿ sɔ́-nɔ́ ààⁿ sɔ́-nɔ́ èèⁿ sɔ́-nɔ́*

*nùʔù-nɔ́* ‘intestine’ *mùʔùⁿ ɲúʔú-nɔ́ ààⁿ ɲúʔú-nɔ́ èèⁿ ɲúʔú-nɔ́*

b. alienables

*kɔ̀-nɔ́* ‘bird’ *mùʔúⁿ kɔ̀-nɔ́ àáⁿ kɔ̀-nɔ́ èéⁿ kɔ̀-nɔ́*

*gù-nɔ́* ‘mortar’ *mùʔúⁿ gù-nɔ́* *àáⁿ gù-nɔ́ èéⁿ gù-nɔ́*

*mɔ̀-nɔ́* ‘rope’ *mùʔúⁿ mɔ̀-nɔ́ àáⁿ mɔ̀-nɔ́ èéⁿ mɔ̀-nɔ́*

*tù-rɔ́* ‘millet cake’ *mùʔúⁿ mɔ̀-nɔ́* *àáⁿ mɔ̀-nɔ́ èéⁿ mɔ̀-nɔ́*

*tòʔò-rá* ‘pot, jar’ *mùʔúⁿ tòʔò-rá* *àáⁿ tòʔò-rá èéⁿ tòʔò-rá*

*ɲùʔù-nɔ́* ‘wrap (n)’ *mùʔúⁿ ɲùʔù-nɔ́* *àáⁿ ɲùʔù-nɔ́ èéⁿ ɲùʔù-nɔ́*

After 3Sg possessor pronouns, lexically all-L‑toned nouns undergo no overt tonal changes. There is also no tonal or other distinction between inalienable and alienable. Comparison with nouns of other tone classes (see the following sections) suggests that the rising tone pattern of the possessed forms, both alienable and inalienable, actually involve an {LH} tone overlay. For the nouns in (xx3), the result is accidental homophony of possessed and unpossessed forms.

(xx3) L‑toned noun as possessum after 3Sg possessor pronoun

noun gloss ‘his/her \_\_’ ‘its \_\_’

a. inalienables

*wù-rɔ́* ‘head’ *à wù-rɔ́ è wù-rɔ́*

*ɲì-ná* ‘blood’ *à ɲì-ná è ɲì-ná*

*sɔ̀-nɔ́* ‘heart’ *à sɔ̀-nɔ́ è sɔ̀-nɔ́*

*nùʔù-nɔ́* ‘intestine’ *à nùʔù-nɔ́ è nùʔù-nɔ́*

b. alienables

*kɔ̀-nɔ́* ‘bird’ *à kɔ̀-nɔ́ è kɔ̀-nɔ́*

*gù-nɔ́* ‘mortar’ *à gù-nɔ́* *è gù-nɔ́*

*mɔ̀-nɔ́* ‘rope’ *à mɔ̀-nɔ́ è mɔ̀-nɔ́*

*tù-rɔ́* ‘millet cake’ *à tù-rɔ́* *è tù-rɔ́*

*tòʔò-rá* ‘pot, jar’ *à tòʔò-rá* *è tòʔò-rá*

*ɲùʔù-nɔ́* ‘wrap (n)’ *à ɲùʔù-nɔ́* *è ɲùʔù-nɔ́*

The /LH/ overlay applies to the stem-final mora when the nominal suffix is absent: *à wǔ* ‘his/her head’, *à tòʔó* ‘his/her pot’. In isolation, or before a non-low tone, this distinguishes the possessed form from the unpossessed form (*wù*, *tòʔò* ). However, the distinction is very often masked by Final Tone-Raising, which raised the final mora (to *wǔ* and *tòʔó* ) before an L‑tone.

#### Lexically all-M‑toned nouns as possessums

In (xx1), ‘my’ represents the M‑toned pronouns (including 2Sg and 2Pl), ‘his/her’ represents the two L‑toned 3Sg pronouns, and ‘our’ represents the L‑toned plural pronouns (1Pl, 3PlHum, 3PlNonh). Again, inalienable is distinct from alienable, except in the 3Sg forms.

The 3Sg possessors control a rising {LH} overlay on the possessum, whether alienable or inalienable. Unlike the case with L‑toned noun stems (preceding section), this overlay is audible for the M‑toned nouns.

The inalienables have the same tone patterns with these all‑M‑toned nouns as with the all‑L‑toned nouns described above. M‑toned possessors like ‘my’ spread the M‑tone into the noun, including the nominal suffix. L‑toned plural possessors require an all‑H‑toned possessum.

For alienables, both ‘my’ and ‘our’ possessor types control {L} on the possessum. In the ‘our’ type, the L‑toned possessor must therefore undergo Final Tone-Raising before the L‑initial possessum.

(xx1) M‑toned noun as possessum after possessor pronouns

noun gloss ‘my \_\_’ ‘his/her\_\_’ ‘our \_\_’

a. inalienables

*kɔ̄yī-rā* ‘belly’ *mā kɔ̄yī-rā à kɔ̀yì-rá mùʔùⁿ kɔ́yí-rá*

*gɔ̄gɔ̄-rɔ̄* ‘chest’ *mā gɔ̄gɔ̄-rɔ̄ à gɔ̀gɔ̀-rɔ́ mùʔùⁿ gɔ́gɔ́-rɔ́*

b. alienables

*kɔ̄-nɔ̄* ‘honey’ *mā kɔ̀-nɔ̀ à kɔ̀-nɔ́ mùʔúⁿ kɔ̀-nɔ̀*

*jū-rɔ̄* ‘millet’ *mā jù-rɔ̀ à jù-rɔ́ mùʔúⁿ jù-rɔ̀*

*bāʔā-rā* ‘porridge’ *mā bàʔà-rà à bàʔà-rá mùʔúⁿ bàʔà-rà*

*kɔ̄lɔ̄kɔ̄-rɔ̄* ‘talk (n)’ *mā kɔ̀lɔ̀kɔ̀-rɔ̀ à kɔ̀lɔ̀kɔ̀-rɔ́ mùʔúⁿ kɔ̀lɔ̀kɔ̀-rɔ̀*

#### Lexically all-H‑toned nouns as possessums

The nouns in (xx1) are H‑toned, including the nominal suffix. The possessed forms of these nouns have the same tone patterns as the M‑toned nouns discussed in the preceding section. 3Sg possessors require {LH} overlay on both alienable and inalienable nouns. Inalienables undergo M‑Spreading after M‑toned possessor pronouns like ‘my’, and have an {H} overlay after other plural possessor pronouns like ‘our’. Alienables drop to {L} after both the ‘my’ and ‘our’ types.

(xxx) H‑toned noun as possessum after possessor pronouns

noun gloss ‘my \_\_’ ‘his/her\_\_’ ‘our \_\_’

a. inalienables

*ɲí-ná* ‘tooth’ *mā ɲī-nā à ɲì-ná mùʔùⁿ ɲí-ná*

*sú-nɔ́* ‘nose’ *mā sū-nɔ̄ à sù-nɔ́ mùʔùⁿ sú-nɔ́*

*kpɔ́-rɔ́* ‘leg’ *mā kpɔ̄-rɔ̄ à kpɔ̀-rɔ́ mùʔùⁿ kpɔ́-rɔ́*

*jɛ́-ná* ‘father’ *mā jɛ̄-nā à jɛ̀-ná mùʔùⁿ jɛ́-ná*

*dí-rá* ‘child’ *mā dī-rā* *à dì-rá* *mùʔùⁿ dí-rá*

*tóʔó-rá* ‘name’ *mā tōʔō-rā à tòʔò-rá mùʔùⁿ tóʔó-rá*

b. alienables

*yí-rá* ‘water’ *mā yì-rà à yì-rá mùʔúⁿ yì-rà*

*bí-ná* ‘grass’ *mā bì-nà à bì-ná mùʔúⁿ bì-nà*

*yíʔé-rá* ‘fish’ *mā yìʔè-rà à yìʔè-rá mùʔúⁿ yìʔè-rà*

#### Tone of modifiers following inalienably possessed noun

In this section the issue is the tonal treatment of Poss-N-Adj and Poss-N-Num combinations.

In simple possessor-possessum combinations, the possessor undergoes no tonal changes other than simple tone sandhi (Final Tone-Raising before L‑toned possessum). The possessum does undergo tonal ablaut, after which the possessum (with or without its final nominal suffix) has one of the following tone patterns, using bisyllabics as examples: MM, HH, LL, , LH. Of these, MM and HH are limited to inalienable possession, LL is limited to alienable possession, and LH occurs in both types of possession.

(xx1) a. MM (inalienable only, M‑toned pronominal possessor)

‘my head’ *mā wū-rɔ̄*

‘my tooth’ *mā ɲī-nā*

b. HH (inalienable only, plural possessor)

‘our head’ *mùʔùⁿ wú-rɔ́*

‘our tooth’ *mùʔùⁿ ɲí-ná*

c. LL (alienable only, non-3Sg possessor)

‘my millet’ *mā jù-rɔ̀*

‘my fish’ *mā yìʔè-rà*

‘our millet’ *mùʔúⁿ jù-rɔ̀*

‘our fish’ *mùʔúⁿ yìʔè-rà*

d. LH

*non-3Sg, alienable only*

‘my rope’ *mā mɔ̀-nɔ́*

‘our rope’ *mùʔúⁿ mɔ̀-nɔ́*

*3Sg, alienable or inalienable*

‘his/her head’ *à wù-rɔ́*

‘his/her tooth’ *à ɲì-ná*

‘his/her rope’ *à mɔ̀-nɔ́*

‘his/her millet’ *à jù-rɔ́*

‘his/her fish’ *à yìʔè-rá*

When an adjective is added to a possessor-possessum combination, we need to determine whether the domain of the ablaut overlay that applies to the possessum includes the adjective.

(xx2) presents Poss-N-Adj combinations. In (xx2a), M‑Spreading into the noun feeds into the rule that M‑toned nouns are raised to H‑toned before modifiers. The noun is therefore H‑ rather than M‑toned before the adjective, and no M‑Spreading into the adjective can occur. The adjective therefore has its lexical tones.

In (xx2b‑c), the possessum has a level-toned ablaut overlay {H} or {L}. This overlay extends to the end of the adjective, erasing the adjective’s lexical tones (xx2a‑c). In the case of {H}, the adjective is downstepped (xx2b).

By contrast, the {LH} overlay stops at the possessum, while the adjective takes its lexical tones. This is true for both non-3Sg (xx2d) and 3Sg (xx2e) possessors. Moreover, the {LH} overlay on the noun is flattened to {L}, but the L‑toned noun does not undergo Final Tone-Raising before an L‑toned adjective (‘our black rope’, ‘his/her black fish’).

(xx2) Poss-N-Adj combinations

a. possessum M‑toned (*mā ɲī-nā* ‘my tooth’)

*mā ɲí gbòʔò-rá* ‘my black tooth’ *gbòʔò* ‘black’

*mā ɲí kān-nā* ‘my red tooth’ *kānā* ‘red’

*mā ɲí ꜜsúmáá-ná* ‘my long tooth’ *súmááⁿ* ‘long’

b. possessum H‑toned (*mùʔùⁿ ɲí-ná* ‘our tooth’)

*mùʔùⁿ ɲí ꜜgbóʔó-rá* ‘our black tooth’ *gbòʔò* ‘black’

*mùʔùⁿ ɲí ꜜkán-ná* ‘our red tooth’ *kānā* ‘red’

*mùʔùⁿ ɲí ꜜsúmáá-ná* ‘our long tooth’ *súmááⁿ* ‘long’

c. possessum L-toned (*mùʔúⁿ yìʔè-rà* ‘our fish’)

*mùʔúⁿ yìʔè gbòʔò-rà* ‘our black fish’ *gbòʔò* ‘black’

*mùʔúⁿ yìʔè kàn-nà* ‘our red fish’ *kānā* ‘red’

*mùʔúⁿ yìʔè sùmàà-nà* ‘our long fish’ *súmááⁿ* ‘long’

d. possessum LH-toned, non-3Sg possessor (*mùʔúⁿ mɔ̀-nɔ́* ‘our rope’)

*mùʔúⁿ mɔ̀ gbòʔò-rá* ‘our black rope’ *gbòʔò* ‘black’

*mùʔúⁿ mɔ̀ kān-nā* ‘our red rope’ *kānā* ‘red’

*mùʔúⁿ mɔ̀ súmáá-ná* ‘our long rope’ *súmááⁿ* ‘long’

e. possessum LH-toned, 3Sg possessor (*à yìʔè-rá* ‘his/her fish’)

*à yìʔè gbòʔò-rá* ‘his/her black fish’ *gbòʔò* ‘black’

*à yìʔè kān-nā* ‘his/her red fish’ *kānā* ‘red’

*à yìʔè súmáá-ná* ‘his/her long fish’ *súmááⁿ* ‘long’

In simple N-Num combinations without a possessor, regular tone sandhi applies (including Floating-Tone Docking), but there is no tonal ablaut as such. When a possessor is added, the obvious issue (as with Poss-N-Adj above) is whether the tone overlay that the possessor imposes on the possessed noun stops with that noun or also extends to the numeral. It turns out, however, that there is also a morphological issue. In Poss-N-Num combinations, unlike simple N‑Num, the numeral is often (though not always) provided with a plural suffix, which (as always) requires a preceding nominal suffix. The plural suffix *‑àⁿ* may itself be followed by a final nominal suffix *‑n̄* ~ *‑nū*, in syntactic positions that allow it.

(xx3) illustrates Poss-N-Num combinations. (xx3a) and (xx3d‑e) are tonally parallel to (xx2a) and (xx2d‑e) above. (xx3b‑c) show that the ablaut overlay {H} or {L} does not extend to the numeral, so here there is a divergence between (xx3b‑c) and (xx2b‑c) above.

(xx3) Poss-N-Num combinations

a. possessum M-toned (*mā ɲī-nā* ‘my tooth’)

*mā ɲí sīgbō-rā-à-n̄* ‘my three teeth’ *sīgbō* ‘3’

*mā ɲí ꜜsóól-lá-à-n̄* ‘my five teeth’ *sóóló* ‘5’

*mā ɲí mà-sīgbō-rā-à-n̄* ‘my eight teeth’ *mà-sīgbō* ‘8’

b. possessum H‑toned (*mùʔùⁿ ɲí-ná* ‘our tooth’)

*mùʔùⁿ ɲí sīgbō-rā-à-n̄* ‘our three teeth’ *sīgbō* ‘3’

*mùʔùⁿ ɲí ꜜsóól-lá-à-n̄* ‘our five teeth’ *sóóló* ‘5’

*mùʔùⁿ ɲí mà-sīgbō-rā-à-n̄* ‘our eight teeth’ *mà-sīgbō* ‘8’

c. possessum L-toned (*mùʔúⁿ yìʔè-rà* ‘our fish’)

*mùʔúⁿ yìʔè sīgbō-rā-à-n̄* ‘our three fish’ *sīgbō* ‘3’

*mùʔúⁿ yìʔè sóól-lá-à-n̄* ‘our five fish’ *sóóló* ‘5’

*mùʔúⁿ yìʔè má-sīgbō-rā-à-n̄* ‘our eight fish’ *mà-sīgbō* ‘8’

d. possessum LH-toned, non-3Sg possessor (*mùʔúⁿ mɔ̀-nɔ́* ‘our rope’)

*mùʔúⁿ mɔ̀ sīgbō-rā-à-n̄* ‘our three ropes’ *sīgbō* ‘3’

*mùʔúⁿ mɔ̀ sóól-lá-à-n̄* ‘our five ropes’ *sóóló* ‘5’

*mùʔúⁿ mɔ̀ má-sīgbō-rā-à-n̄* ‘our eight ropes’ *mà-sīgbō* ‘8’

e. possessum LH-toned, 3Sg possessor (*à yìʔè-rá* ‘his/her fish’)

*à yìʔè sīgbō-rā-à-n̄* ‘his/her three fish’ *sīgbō* ‘3’

*à yìʔè sóól-lá-à-n̄* ‘his/her five fish’ *sóóló* ‘5’

*à yìʔè má-sīgbō-rā-à-n̄* ‘his/her eight fish’ *mà-sīgbō* ‘8’

For *sóóló*, alongside the apocopated *sòòl-lá-à-n̄* there is an unreduced variant *sòòlò‑rá‑à‑n̄*.

### Recursive possession

In combinations of the type [X’s Y]’s Z, possession is recursive. The nominal suffix occurs only on the final possessum Z. Therefore the nominal suffix in ‘my cat’ or ‘my uncle’ in (xx1b) is absent in (xx1c).

(xx1) a. *jàŋgbáā wù-rɔ́*

cat head-Nom

‘the head of the cat’

b. *mā jàŋbáā-rà / bé-rà*

1Sg cat-Nom / uncle-Nom

‘my cat/uncle’

c. *[mā jàŋbáā / bé] wù-rɔ́*

[1Sg cat/uncle] head-Nom

‘the head of my cat/my uncle.’

## Core NP (noun plus adjective)

### Noun plus regular adjective

In the combination N-Adj, the nominal suffix and plural suffix, if allowed by the higher syntactic construction, are added to the adjective and the noun stem is bare.

(xx1) a. *ɲáā-nà*

woman-Nom

‘a/the woman’

b. *ɲáāⁿ ɲɛ̀-ná*

woman good-Nom

‘a/the good woman’

c. *ɲáāⁿ ɲɛ̀-ná-à-nū*

woman good-Nom-Pl-Pl-Nom

‘(the) good women’

#### Tones of N-Adj combinations

Adjectives representing various tonal types are in (xx1). The lexical tones for ‘red’ and ‘black’ are unmistakable, but those of the other three require discussion.

(xx1) adjective tones with suffix gloss

*kānā* MM *kān-nā* ‘red’

*gbòʔò* LL *gbòʔò-rá* ‘black’

*súmááⁿ* HH *súmáá-ná* ‘long’

*gbɔ́* H(L) *gbɔ́-rɔ̀* ‘big’

*táā* / *tàà* HM(L) *táā-rà*, *tàà-rá* ‘hot’

We now combine the adjectives in (xx1) with nouns of various tone classes. Apologies for semantically nonsensical combinations. We must jointly consider tonal processes affecting the noun (other than low-level tone sandhi) and those affecting the adjective.

The most straightforward case is the L‑toned ‘black’ (xx2). In the columns for N tones and N-adj tones in this and the next few arrays, tones for the noun are in caps and those of the adjective in lower case in the “N-adj tones” column. In this column, any tones of the noun that are different from those in isolation are underlined.

(xx2) *gbòʔò* ‘black’ LL

noun N tones with Adj N-adj tones gloss

*yíʔé* HH *yíʔé gbòʔò-rá* HH ll-h ‘fish’

*fōʔō* MM *fóʔó gbòʔò-rá* HH ll-h ‘flour’

*ɲùʔùⁿ* LL *ɲùʔúⁿ gbòʔò-rá* LH ll-h ‘wrap (n)’

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ gbòʔò-rá* HH ll-h ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ gbòʔò-rá* HH ll-h ‘boat’

*tòfá* LH *tòfá gbòʔò-rá* LH ll-h ‘brick’

*mōtó* MH *mōtó gbòʔò-rá* MH ll-h ‘motorcycle’

‘Black’ has invariant L‑toned form throughout, but there are some tonal processes affecting the preceding noun. Two of the changes in noun tones are attributable to regular tone sandhi. ‘Wrap (n)’ goes from LL to LH before an L‑tone by Final Tone-Raising. ‘Boat’ goes from HM to HH by H-Leveling, as it does in all of the following paradigms.

This leaves the shift of M‑toned *fōʔō* to H‑toned *fóʔó*. We will see that this is a general feature of all‑M nouns before adjectives and numerals. The opposition between level M‑ and H‑toned nouns is neutralized.

In (xx3), the adjective is lexically M‑toned. There is now a split into two sets of forms, one with M‑toned adjective (xx3a) and the other with L‑toned adjective (xx3b). I take the former to indicate the lexical tones, especially since the L‑toned noun ‘wrap (n)’ is part of (xx3a).

(xx3) *kānā* ‘red’ MM

noun N tones with Adj N-adj tones gloss

a. adjective M‑toned

*yíʔé* HH *yíʔé kān-nā* HH m-m ‘fish’

*fōʔō* MM *fóʔó kān-nā* HH m-m ‘flour’

*ɲùʔùⁿ* LL *ɲùʔùⁿ kān-nā* LL m-m ‘wrap (n)’

b. adjective L‑toned

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ kàn-nà* HH m-m ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ kàn-nà* HH m-m ‘boat’

*tòfá* LH *tòfá kàn-nà* LH m-m ‘brick’

*mōtó* MH *mōtó kàn-nà* MH m-m ‘motorcycle’

The split between the adjectival tones in (xx3a) and (xx3b) correlates with the tones of the nominal suffix following the same nouns when unmodified. The nouns in (xx3a) have non-low nominal suffixes (*yíʔé‑rá*, *fōʔō‑rā*, *ɲùʔù‑ná* ). Those in (xx4b) have L‑toned suffixes (*kpɛ́sɛ́‑rà*, *kúrú‑nà*, *tòfá‑rà*, *mōtó‑rà* ). The only difference between noun-suffix and noun-adjective tonal patterns is that M‑Spreading applies word-internally in *fōʔō‑rā* but does not extend to the adjective in *fōʔō gbɔ́-rà*.

This suggests that the nouns in (xx3b), but not those in (xx3a), come with an associated floating L‑tone that is realized either on the nominal suffix or, failing that, on the following modifier.

The paradigms of ‘big’ and ‘hot’ split into one set of combinations with H-initial (all‑H or HM) adjective and another with L‑toned adjective. ‘Big’ is *gbɔ́‑rà* in (xx4a) and *gbɔ̀‑rá* in (xx4b). ‘Hot’ is *táā‑rà* in (xx5a) and *tàà‑rá* in (xx5b). This split correlates with tones of the nominal suffixes when added directly to unmodified nouns.

(xx4) *gbɔ́* ‘big’ H(L)

noun N tones with Adj N-adj tones gloss

a. adjective h-l

*yíʔé* HH *yíʔé gbɔ́-rà* HH h-l ‘fish’

*fōʔō* MM *fóʔó gbɔ́-rà* HH h-l ‘flour’

*ɲùʔùⁿ* LL *ɲùʔùⁿ gbɔ́-rà* LL h-l ‘wrap (n)’

b. adjective l-h

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ gbɔ̀-rá* HH l-h ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ gbɔ̀-rá* HH l-h ‘boat’

*tòfá* LH *tòfá gbɔ̀-rá* LH l-h ‘brick’

*mōtó* MH *mōtó gbɔ̀-rá* MH l-h ‘motorcycle’

(xx5) *táā* ‘hot’ HM(L)

noun N tones with Adj N-adj tones gloss

a. adjective hm-l

*yíʔé* HH *yíʔé táā-rà* HH hm-l ‘fish’

*fōʔō* MM *fóʔó táā-rà* HH hm-l ‘flour’

*ɲùʔùⁿ* LL *ɲùʔùⁿ táā-rà* LL hm-l ‘wrap (n)’

b. adjective l-h

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ tàà-rá* HH l-h ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ tàà-rá* HH l-h ‘boat’

*tòfá* LH *tòfá tàà-rá* LH l-h ‘brick’

*mōtó* MH *mōtó tàà-rá* MH l-h ‘motorcycle’

Comparing ‘big’ and ‘hot’ to the consistently L‑toned ‘black’ in (xx2) above, we see that taking ‘big’ and ‘hot’ to be lexically L‑toned on the basis of (xx4b) and (xx5b) would not work. Instead, these stems are lexically H(L) or HM(L) toned, as seen in (xx4a) and (xx5b), and become L‑toned after certain tonal types of nouns that have an associated floating L‑tone.

‘Long’ is the most tonally complex of the adjectives considered here. It surfaces with H, downstepped H, and L tones (xx6). Since its tonal forms are distinct both from the clearly L‑toned ‘black’ in (xx2) above and from the clearly M‑toned ‘red’ in (xx3) above, ‘long’ is best analysed as lexically H‑toned. This is the form that it appears in after an L‑toned noun (xx6b). Its L‑toned form *sùmàà‑ná* in (xx6c) can be explained in the same way as L‑toned *gbɔ̀‑rá* ‘big’ and *tàà‑rá* ‘hot’ in (xx4b) and (xx5b) above, viz., as due to a floating L‑tone associated with the nouns. In (xx6a). M‑toned ‘flour’ merges tonally with the H‑toned ‘fish’. Then both of these nouns induce a drop in the adjectival tones from H to downstepped H.

(xx6) *súmááⁿ* ‘long’ HH

noun N tones with Adj N-adj tones gloss

a. adjective mm-m

*yíʔé* HH *yíʔé ꜜsúmáá-ná* HH ꜜhh-m ‘fish’

*fōʔō* MM *fóʔó ꜜsúmáá-ná* HH ꜜhh-m ‘flour’

b. adjective hh-h

*ɲùʔùⁿ* LL *ɲùʔùⁿ súmáá-ná* LL hh-h ‘wrap (n)’

c. adjective ll-h

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ sùmàà-ná* HH ll-h ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ sùmàà-ná* HH ll-h ‘boat’

*tòfá* LH *tòfá sùmàà-ná* LH ll-h ‘brick’

*mōtó* MH *mōtó sùmàà-ná* MH ll-h ‘motorcycle’

The downstepped H in (xx6a) sounds impressionistically like M‑tone. However if ‘long fish’ were *yíʔé sūmāā-nā* with M‑toned adjective, and therefore *yíʔé sūmāāⁿ* without the nominal suffix, its final syllable would be affected by Final Tone-Raising before an L‑tone. However, *ꜜsúmááⁿ* in (xx1) has level pitch.

verify

(xx1) *mā [yíʔé ꜜsúmáá] jyɛ̌*

1Sg [fish long] see.Pfv

‘I saw a/the long fish.’

#### Inventory of basic adjectives by tonal type

The basic adjectives (not including morphologically complex participles and the like) are organized into tonal types in (xx1). As with nouns, H(L) and HM(L) are not distinguishable in monosyllabic stems. Together they constitute the predominant tonal type for simple adjectives. The forms shown are those that follow an L‑toned noun.

(xx1) tonal type adjective suffixed gloss

a. L *gbɔ̀ʔɔ̀* *gbɔ̀ʔɔ̀-rá* ‘black’

~ *gbòʔò* ~ *gbòʔò-rá*

b. M *kānā* *kān-nā* ‘red’

*kpēē* *kpēē-rā* ‘white’

c. H(L)

monosyllabic *gbɔ́* *gbɔ́-rà* ‘big’

*wéé* *wéé-rà* ‘other’

*gbé gbé-rà* ‘fresh’

*ɲɛ́ ɲɛ́-nà* ‘good’

*ná ná-nà* ‘foreign’

nonmonosyllabic *kpɛ́ʔrɛ̄ kpɛ́ʔr-à* ‘young’

*gbáʔálá* *gbáʔálá-rà* ‘thin’

~ *gbáʔa᷆l-là*

d. HM(L) *táā táā-rà* ‘hot’

*kúmā* *kúmā-nà* ‘cold’

*kítā kítā-rà* ‘bad’ (*t* ~ *d* )

*kútɔ̄* *kútɔ̄-rɔ̀* ‘old’ (*t* ~ *d* )

*wútɔ̄* *wútɔ̄-rɔ̀* ‘new’ (*t* ~ *d* )

*gúnī* *gúnī-nà* ‘short’

~ *gūn̄-nà*

*bá-kúnī bá-kúnī-nà* ‘short’

~ *bá-kún̄-nà*

*kpɛ́ʔrɛ̄* *kpɛ́ʔr-à* ‘small’

e. H *súmááⁿ súmáá-ná* ‘long’

#### Adjective sequences

The combinations in (xx1) include a noun and two adjectives (in some cases a different adjectival order would be preferred, but we are here focusing on tones). The first stage of derivations is tonal adjustments involving the noun and the first adjective, as though the second adjective were absent. Nouns with associated floating L, like *kpɛ́sɛ́* ‘chewstick’, drop tones of any immediately following adjective, and if the adjective itself normally has a floating L (*táā* ‘hot’), the floating tone is eliminated. H‑toned *súmááⁿ* ‘long’ is downstepped after an H‑toned noun. An L‑toned noun undergoes Final Tone-Raising before an L‑toned adjective.

After this first stage, the first adjective is L‑toned in (xx1a), M‑toned in (xx1b), H‑toned in (xx1c), HM-toned with floating L in (xx1d), and downstepped H‑toned in (xx1e). The next stage is the interaction between the two adjectives.

In (xx1a) the first adjective retains this L‑tone, even (unexpectedly) in the combination with an L‑toned second adjective (‘black long chewstick’). Instead of regular Final Tone-Raising, which would produce the incorrect #*kpɛ́sɛ́ sùmàáⁿ gbòʔò-rá*, the first adjective remains L‑toned (as though still under the thrall of the floating L from the noun), and the tonal dissimilation is achieved by raising gbòʔò from L to M.

In (xx1b), the M‑toned first adjective kānā is raised to H‑toned, just as M‑toned nouns are raised before any adjective. This in turn forces downstep on the following H‑toned *súmáá-ná*.

No changes occur in (xx1c), where each word surfaces with its underlying tones.

In (xx1d), *táā* (plus floating L) has not been modified in the first stage, so it levels to H‑toned and its floating L drops the tones of the second adjective.

In (xx1e), súmááⁿ has been downstepped in the first stage. No further changes occur when the second adjective is added. That downstepped H *ꜜsúmááⁿ* rather than M‑toned sūmāāⁿ is the correct analysis is shown by the fact that it does not undergo Final Tone-Raising before the L‑toned adjective *gbòʔò* ‘black’.

(xx1) a. *kpɛ́sɛ́ kpèè súmáá-ná* ‘long white chewstick’

*kpɛ́sɛ́ gbòʔò súmáá-ná* ‘long black chewstick’

*kpɛ́sɛ́ gbòʔò gbɔ́-rà* ‘big black chewstick’

*kpɛ́sɛ́ sùmààⁿ ɲɛ́-nà* ‘good long chewstick’

*kpɛ́sɛ́ sùmààⁿ gbōʔō-rā* ‘black long chewstick’

*ɲùʔúⁿ gbòʔò gbɔ́-rà* ‘big black wrap’

b. *yíʔé káná ꜜsúmáá-ná* ‘long red fish’

*yíʔé káná gbɔ́-rà* ‘big red fish’

c. *ɲùʔùⁿ súmááⁿ gbɔ́-rà* ‘big long wrap’

*ɲùʔùⁿ súmááⁿ kān-nā* ‘red long wrap’

d. *ɲùʔùⁿ táá gbɔ̀-rá* ‘big hot wrap’

*yíʔé táá sùmàà-ná* ‘long hot fish’

e. *yíʔé ꜜsúmááⁿ gbɔ́-rà* ‘big long fish’

*yíʔé ꜜsúmááⁿ gbòʔò-rá* ‘black long fish’

These tonal processes apply in the same way to N-Adj-Num sequences (§6.4.xxx).

### Adjective *ŋŋŋ* ‘certain (ones)’

### Expansions of adjective

#### Adjectival intensifiers

#### ‘Good to eat’

## NPs including a numeral

The forms of numerals are given and discussed in §4.6 above.

### Nominal suffixation in the presence of a numeral

In the absence of a numeral, a simple noun has a nominal suffix (*‑rà* or variant). in isolation and in some phrasal contexts. It is pluralized by adding a plural suffix -àⁿ, to which may be added, in isolation and in a few syntactic contexts, an additional nominal suffix. Thus *dí* ‘child’, with suffix *dí‑rá*, plural *dí‑rá‑àⁿ* ‘children’, with suffix *dí‑rá‑àⁿ‑nū*. If an adjective follows the noun, the nominal suffix and (if semantically correct) the plural suffix are attached to the adjective: *dí ɲɛ́-nà-àⁿ* or suffixed *dí ɲɛ́-nà-àⁿ* ‘good children’. See §4.xxx for details.

When a numeral is added to the mix, both the nominal suffix and the (redundant) plural suffix are dropped.

(xx1) a. *dí (* #*dí-rá-àⁿ* ) *dúlì*

child (#child-Nom) one

‘one child’

b. *dí (* #*dí-rá-àⁿ* )  *flā*

child (#child-Nom-Pl two

‘two children’

c. *dí ɲɛ́ⁿ (* #*ɲɛ́-rà-àⁿ* ) *flā*

child good (#good-Nom-Pl) two

‘two good children’

### Tones of noun plus numeral

#### Noun plus unsegmentable numeral

Morphologically noncomposite numerals are M‑toned or H‑toned. M‑toned numerals are *flā* ‘2’, *sīgbō* ‘3’, and *nāānī* ‘4’. H‑toned numerals are *sóóló* ‘5’ and *táá* ‘10’. For bimorphemic ‘6’ to ‘9’ see the following section.

The tonal patterns in N-Num combinations are similar to those of N-Adj combinations described above.

Combinations of M‑toned numerals with nouns of various tone classes are in (xx1). The numeral remains M‑toned after level-toned nouns, i.e., the nouns that take a non-low nominal suffix when unmodified: *yíʔé-rá* ‘fish’, *fōʔō-rā* ‘flour’, *ɲùʔù-ná* ‘wrap (n)’ (xx1a).

(xx1) Nouns with M‑toned ‘2’, ‘3’, and ‘4’

noun N tones with Num N-num tones gloss

a. numeral M‑toned

*yíʔé* HH *yíʔé flā / sīgbō / nāānī* HH m(m) ‘fish’

*fōʔō* MM *fōʔō flā / sīgbō / nāānī* MM m(m) ‘flour’

*ɲùʔùⁿ* LL *ɲùʔùⁿ flā / sīgbō / nāānī* LL m(m) ‘wrap (n)’

b. numeral L‑toned

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ flà / sìgbò / nàànì* HH l(l) ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ flà / sìgbò / nàànì* HH l(l)) ‘boat’

*tòfá* LH *tòfá flà / sìgbò / nàànì* LH l(l) ‘brick’

*mōtó* MH *mōtó flà / sìgbò / nàànì* MH l(l) ‘motorcycle’

The H‑toned numerals combine with the same nouns in (xx2). The H‑tones of the numerals are heard as such after an L‑toned noun (xx2a). They drop to L after nouns with a final floating L (xx2c). They are downstepped after lexically M‑ and H‑toned nouns, which themselves merge as H‑toned (xx2a).

(xx2) Nouns with H‑toned ‘5’ and ‘10’

noun N tones with Num N-num tones gloss

a. numeral M‑toned

*yíʔé* HH *yíʔé ꜜsóóló / tāā* HH m(m) ‘fish’

*fōʔō* MM *fóʔó ꜜsóóló / tāā* HH m(m) ‘flour’

b. numeral H‑toned

*ɲùʔùⁿ* LL *ɲùʔùⁿ sóóló / táá* LL h(h) ‘wrap (n)’

c. numeral L‑toned

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ sòòlò / tàà* HH l(l) ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ sòòlò / tàà* HH l(l) ‘boat’

*tòfá* LH *tòfá sòòlò / tàà* LH l(l) ‘brick’

*mōtó* MH *mōtó sòòlò / tàà* MH l(l) ‘motorcycle’

#### Noun plus bimorphemic numeral ‘6’ to ‘9’

Numerals ‘6’ to ‘9’ are bimorphemic, consisting of initial *ma-* or *mi‑* representing the base ‘5’ (but unrelated to *sóóló* ‘5’ or to *bɔ̄lɔ̄* ‘hand’) plus a more or less distorted form of ‘1’ through ‘4’.

‘7’ to ‘9’ are bimorphemic beginning with *mà‑* ~ *má‑*. The last numeral in this sequence, *má-nānì* ‘9’, is unique in resisting any tonal changes; it is a kind of tonal island unto itself. The other two have *má‑* drop to *mà‑* after nouns associated with a floating L‑tone (xx3b). The remaining syllables, *‑álà* for ‘7’ (irregularly related to *flā* ‘2’) and *‑sīgbō* (identical to ‘3’), are invariant tonally.

(xx3) Nouns with bimorphemic numerals ‘7’ to ‘9’

noun N tones with Num N-num tones gloss

a. numeral begins with H‑toned *má-*

*yíʔé* HH *yíʔé má-álà* HH hl ‘fish’

*yíʔé má-sīgbō* HH hmm

*yíʔé má-nānì* HH hml

*fōʔō* MM *fōʔō má-álà* MM hl ‘flour’

*fōʔō má-sīgbō* MM hmm

*fōʔō má-nānì* MM hml

*ɲùʔùⁿ* LL *ɲùʔùⁿ má-álà* LL hl ‘wrap (n)’

*ɲùʔùⁿ má-sīgbō* LL hmm

*ɲùʔùⁿ má-nānì* LL hml

b. numeral begins with L‑toned *mà-* (‘7’, ‘8’) or H-toned *má-* (‘9’)

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ mà-álà* HH lhl ‘chewstick’

*kpɛ́sɛ́ mà-sīgbō* HH lmm

*kpɛ́sɛ́ má-nānì* HH hml

*kúrūⁿ* HM(L) *kúrúⁿ mà-álà* HH lhl ‘boat’

*kúrúⁿ mà-sīgbō* HH lmm

*kúrúⁿ má-nānì* HH hml

*tòfá* LH *tòfá mà-álà* LH lhl ‘brick’

*tòfá mà-sīgbō* LH lmm

*tòfá má-nānì* LH hml

*mōtó* MH *mōtó mà-álà* MH lhl ‘motorcycle’

*mōtó mà-sīgbō* MH lmm

*mōtó má-nānì* MH hml

*mī‑īlō* ‘6’ is even more opaque, though etymologically it presumably consists of a variant of *mà‑* ~ *má‑* plus a variant of *dúlì* ‘1’. However, unlike ‘7’ to ‘9’, *mī‑īlō* patterns tonally as though unsegmentable. Therefore, like ‘2’ to ‘4’, it has stem-wide M‑toned and L‑toned forms.

(xx2) Nouns with ML-toned ‘6’

noun N tones with Num N-num tones gloss

a. entire numeral is M‑toned

*yíʔé* HH *yíʔé mī-īlō* HH m(m) ‘fish’

*fōʔō* MM *fóʔó mī-īlō* HH m(m) ‘flour’

*ɲùʔùⁿ* LL *ɲùʔùⁿ mī-īlō* LL mm ‘wrap (n)’

b. entire numeral is L‑toned

*kpɛ́sɛ́* HH(L) *kpɛ́sɛ́ mì-ìlò* HH ll ‘chewstick’

*kúrūⁿ* HM(L) *kúrúⁿ mì-ìlò* HH ll ‘boat’

*tòfá* LH *tòfá mì-ìlò* LH ll ‘brick’

*mōtó* MH *mōtó mì-ìlò* MH ll ‘motorcycle’

#### N-Adj-Num sequences

The combination N-Adj-Num behaves tonally like N-Adj-Adj. First, tonal operations apply between the noun and the first adjective. Nouns like ‘chewstick’ with associated floating L drop the tones of the first adjective, also erasing any floating L associated with this adjective (‘hot’). H‑toned *súmááⁿ* becomes M‑toned after an H‑toned noun like ‘fish’. An L‑toned noun undergoes Final Tone-Raising before an L‑tone (*ɲùʔùⁿ* → *ɲùʔúⁿ* ).

This is then the input to the next stage, where the two adjectives interact tonally. H‑toned *sóóló* ‘5’ drops to L‑toned after an adjective with undeleted floating L (*táā* ‘hot’), and the HM-tones of *táā* flatten to H. M‑toned *kpēē* ‘white’ and *kānā* ‘red’ are raised to H‑toned before any numeral.

(xx1) a. *kpɛ́sɛ́ kpèè sóóló* ‘five white chewsticks’ (< *kpēē* )

*kpɛ́sɛ́ tàà sóóló* ‘five hot chewsticks’ (< *táā* )

*ɲùʔúⁿ gbɔ̀ʔɔ̀ sóóló* ‘five black wraps’

*yíʔé kpéé ꜜsóóló* ‘five white fish’ (< *kpēē* )

*yíʔé táá sòòlò* ‘five hot fish’ (< *táā* )

*ɲùʔùⁿ súmááⁿ ꜜsóóló* ‘five long wraps’

*yíʔé sūmāāⁿ sóóló* ‘five long fish’

b. *yíʔé káná sīgbō* ‘three red fish’

*kpɛ́sɛ́ tàà sīgbō* ‘three hot chewsticks’

*yíʔé táá sìgbò* ‘three hot fish’

*ɲùʔùⁿ súmááⁿ sīgbō* ‘three long wraps’

## NP with determiner

### Noun plus demonstrative

The basic demonstrative mí was described in §4.4.1.

(xx1) a. *wùlà* / *dí mí(-nà)*

dog / child Dim(-Nom)

‘this/that dog/child’

b. *wùlà* / *dí mí-nà-àⁿ(-nū)*

dog / child Dem-Nom-Pl(-Nom)

‘these/those dogs/children’

## Universal and distributive quantifiers

### Universal ‘all’ (*bùʔù* ~ *búʔú* )

This universal quantifier can be used with countable or with mass NPs (xx1a‑b). With a countable NP, it may add a nominal suffix *‑nú* where syntactically allowed.

(xx1) a. *[dí kpɛ́ʔr-à-àⁿ búʔú] wèê*

[child small-Nom-Pl all] go.Pfv

‘All of the children have gone.’

b. *[kɔ̀-nɔ́-ɔ̄ⁿ] [jú bùʔù] dɔ́nī*

[bird-Nom-Pl] [millet all] devour.Pfv

‘The birds ate all the millet.’

c. *à tàgá bìlí [mùʔùⁿ bùʔù-nú]*

3SgHum sheep give.Pfv [1Pl all-Nom]

‘He/She gave the sheep-Sg to us all.’

In (xx1c), *mùʔùⁿ* does not undergo Final Tone-Raising before *bùʔù-nú*.

The full set of pronominal combinations is in (xx2). In the 1Pl combination, Final Tone-Raising does not apply to *mùʔùⁿ* although it is followed by L‑tones.

(xx2) a. *mùʔùⁿ bùʔù-nú* ‘all of us’

*ēēⁿ būʔū-nū* ‘all of you-Pl’

*ààⁿ búʔú-nú* ‘all of them (human)’

*èèⁿ búʔú-nú* ‘all of them (nonhuman)’

b. è bùʔù ‘all of it (nonhuman)’

choice of búʔú versus bùʔù

### Distributive ‘each’

*bùʔù* ~ *búʔú* ‘all’ can also be used in distributive contexts. In (xx1), the speaker gave 200 units (= 1000 francs CFA) to each child, not a total of 200 units to the children as a group.

(xx1) *mā jáāⁿ-tàá bìlí [dí kpɛ́ʔrɛ̄ dù-dúlì bùʔù-nú]*

1Sg 200 give.Pfv [child small one-one each-Nom]

‘I gave 200 (currency units) to each child.’

The distributivity is expressed mainly by keeping ‘small child’ singular in form, and by adding the reduplicated numeral ‘one’, i.e. ‘one by one, one at a time, singly’ (§4.6.1.xxx).

# Coordination

## NP coordination

### NP conjunction (‘X and Y’)

The conjunctive particle is *bùʔù*, often reduced to *bùʔ* in allegro speech. When singular nouns or other simple NPs that can end in a nominal suffix are conjoined, the suffix is omitted on the left conjunct but present on the right conjunct (i.e. at the end of the entire conjoined NP). However, a plural left conjunct has its usual form with the plural ending requiring the nominal suffix (xx1c). In (xx1b), *tàgà* becomes *tàgá* before the L‑toned *bùʔù* by Final Tone-Raising. In (xx1c), the preceding plural noun controls {H} on *bùʔù*, resulting in *búʔú*.

(xx1) a. *díkín bùʔù ɲáā-nà*

man and woman-Nom

‘(a/the) man and (a/the) woman’ (cf. suffixed *díkín̄-nà* )

b. *tàgá bùʔù bàà-rá*

sheep and goat-Nom

‘(a/the) sheep and (a/the) goat’ (cf. suffixed *tàgà-rá* )

c. *díkín̄-nà-àⁿ búʔú ɲáā-nà-ànú*

man-Nom-Pl and woman-Nom-Pl

‘(the) men and women’

When the coordinands are pronouns, the left conjunct has simple form, while the right conjunct has full independent form with suffix *‑n*. H‑toned *búʔú* is used after 3Pl and (usually) 1Pl, but also in some combinations with 1Sg or 2Sg as right conjunct.

(xx1) a. *mā búʔú wɔ̄-n*

1Sg and 2Sg-Indep

‘me and you-Sg’

b. *à bùʔù mā-n*

3SgHum and 1Sg-Indep

‘he/she and me’

c. *ààⁿ búʔú mùʔú-nū*

3PlHum and 1Pl-Indep

‘they and us’

d. *mùʔùⁿ búʔú ēē-nū*

1Pl and 2Pl-Indep

‘we and you-Pl’ (also variant with *mùʔúⁿ* )

e. *ámádù búʔú mā-n*

A and 1Sg

‘Amadou and me’

#### Ordering of coordinands

#### Conjunction with final summative quantifier

#### ‘X and Y’ with a modifier or postposition

*possessor (prenominal and, if present in the language, postnominal)*

*‘My sheep and (my) goats have died.’*

*‘Seydou’s sheep and (his) goats have died.’*

*[is possessor repeated?]*

*adjective*

*‘I only buy plump sheep and (plump) goats.’*

*[is adjective normally repeated in this context?]*

*numeral*

*‘I sold three sheep and (three) goats.’*

*[numeral is normally repeated]*

*determiner (demonstrative, definite)*

*‘These sheep and (these) goats are sick.’*

*‘The sheep and (the) goats are sick.’*

*[is determiner normally repeated ?]*

*‘all’*

*‘All the men and (all the) women will come.’*

*[‘all’ repeated?]*

*[distinguish the true ‘all’ sense from the use of ‘all’ to indicate the end of a lengthy conjoined NP, perhaps involving singular or mass NPs]*

*Accusative*

*‘We saw the men and the women.’*

*[if Accusative morpheme present in the language, where does it occur?]*

*postposition*

*‘I gave the millet [to [the men and the women]]’*

*[dative postposition repeated: ‘to the men and to the women’ ?]*

*Conjoined NP ‘X and Y’ as relative-clause head NP (chapter 14)*

### “Conjunction” of verbs or VP’s

## Disjunction

### ‘Or’ (*ŋŋŋ*)

### Clause-level disjunction

# Postpositions and adverbials

Jalkunan has a full set of postpositions, which combine with preceding NPs to form postverbal adverbial phrases of various types. The NP occurs without its word-final nominal suffix. Before an L‑toned postposition, a noun ending in two or more L‑ or M‑toned moras is subject to Final Tone-Raising.

## Dative and benefactive

### No dative postposition with ‘give’ or ‘show’

There is no dative postposition for the indirect object (recipient) of ‘give’ or ‘show’. The indirect object is expressed by a bare postverbal NP.

(xx1) a. *mā wár̄ bìlí zàkí*

1Sg money give.Pfv **Z**

‘I gave the money to Zaki.’

b. *mā wár̄ bìlì wɔ̄-n*

1Sg money give.Pfv **2Sg-Indep**

‘I gave you-Sg the money.’

c. *mā sàá dùdɔ̀l [āⁿ jɛ̄-nā]*

1Sg house show.Pfv **[1Sg father-Nom]**

‘I showed the house to my father.’

### Dative *mà* (non-3Sg *má* ) after ‘say’

Dative postposition *mà* occurs with the indirect object of ‘say’.

(xx1) a. *mā [n-í bùʔù] tɔ́ʔɛ̀ [bákàrì mà]*

1Sg [Obj-3SgNonh all] say.Pfv [B **Dat**]

‘I told it all (=everything to Bakari.’

b. *mā síní tɔ̀ʔɛ̀ [ɲáāⁿ mà]=nɛ̄ʔ*

1Sg anything say.Pfv [woman **Dat**]=Neg

‘I didn’t say anything to the woman.’ (< *sínī* )

c. *mā síní tɔ̀ʔɛ̀ [ɲáā-nà-àⁿ má]=nɛ́ʔ*

1Sg anything say.Pfv [woman-Nom-Pl **Dat**]=Neg

‘I didn’t say anything to the women.’

For *mà* as a spatial postposition ‘on’, see §8.3.2.4.

### Benefactive *kɛ̄ⁿ*

The complement of this postposition is an NP denoting to the beneficiary of an action.

tone after L-toned noun (*lɛ̀bɛ̀* ‘pigeon’, *mɛ̀ʔɛ̀ⁿ* ‘person’)

(xx1) a. *wō sɛ́ [tē dɛ̀] [mā kɛ̄ⁿ]*

2Sg come.Pfv [tea with] [1Sg **Ben**]

‘You-Sg brought me some/the tea.’

downstep?

b. *mā bāā-rá mèyà [ámádú kɛ́ⁿ]*

1Sg work(n)-Nom do.Ipfv [A **Ben**]

‘I work for Amadou.’

## Instrumental and comitative

### Instrumental *dɛ̀* (non-3Sg *dɛ́* )

In (xx1), the complement of *dɛ̀* denotes an instrument.

(xx1) a. *mùʔùⁿ gbāá bègé [jén dɛ̀]*

1Pl stick cut.Pfv [ax **Inst**]

‘We chopped the wood with an ax.’

b. *mā kàá bàʔrà [kùkú dɛ̀]*

1Sg snake hit.Ipfv [stone **Inst**]

‘I hit-Present the snake with a stone.’ (< *kùkù* )

c. *ààⁿ sɔ́ɛ́ [fàgá dɛ̀]*

3Pl enter.Pfv [force **Inst**]

‘They entered by force.’ (= ‘They barged in.’) (< *fàgà* )

This postposition is also usual in the ‘bring’ and ‘take (there)’ constructions. The verb is intransitive ‘come’ or ‘go’, followed by a PP with dɛ̀ denoting the theme (the transported entity).

(xx2) a. *sā [té dɛ̀]*

come.Imprt [tea **Inst**]

‘Bring the tea!’

b. *sīnì má sà tāʔā [tàgá dɛ̀] jí-nà*

tomorrow 1Sg Fut go.Ipfv [sheep **Inst**] market-Nom

‘Tomorrow I will take (=convey) the sheep-Sg to the market.’

The non-3Sg form is *dɛ́*, as in *tàgà-rá-àⁿ dɛ́* ‘with the sheep-Pl’.

### Comitative *dò*

This postposition *dò* normally takes a human complement, denoting accompaniment.

(xx2) a. *mā bāārá mèyà [zàkí dò]*

1Sg work(n) do.Prog [Z **Comit**]

‘I work with Zaki.’ (< *bāārā* )

b. *bákàrì tèʔè-yá [mā dò]*

B go.Prog [1Sg **Comit**]

‘Bakari is going (on a trip) with me.’

## Locational postpositions

### Locative, allative, and ablative functions

As generally in languages of the zone, the distinction between static locative (‘in’, ‘at’, ‘on’), allative (‘to’), and ablative (‘from’) is expressed by verbs and other predicates, not by PPs. (xx1a‑c) illustrate this for the postposition tɔ̀ ‘in’.

(xx1) a. *má=∅ [sàá tɔ̀]*

1Sg=be [house in]

‘I am in the house.’ (< *sàà* )

b. *mà sɔ́ [sàá tɔ̀]*

1Sg enter.Pfv [house in]

‘I went into the house.’ (< *sɔ́ɛ́*, *sàà* )

c. *mà bɔ́ [sàá tɔ̀]*

1Sg exit.Pfv [house in]

‘I went out from the house.’ (< *bɔ́ɛ́, sàà* )

### Simple locative postpositions

#### Temporal adverbs and place names without a postposition

Simple temporal adverbs like ‘at night’ and ‘during the dry season’ are expressed with postverbal nouns, with their nominal suffix but without a postposition (xx1a‑b).

(xx1) a. *má bāārā ma᷇ⁿ kùmàyèlémà-nà=nɛ́ʔ*

1Sg work(n) do.Ipfv dry.season-Nom=Neg

‘I don’t work in (during) the dry season.’

b. *zàkí bāārā màⁿ kóʔn̄-nà*

Z work(n) do.Ipfv night-Nom

‘Zaki works at night.’

Place names likewise generally occur without a postposition, as with the village/city names in (xx2). However, *jálsá‑dù* ‘Blédougou’ may end in a frozen locative ending.

(xx2) *má=∅ jálsá-dù / bɔ̀bɔ́*

1Sg=be Blédougou / Bobo

‘I am in Blédougou / Bobo Dioulasso.’

One term for ‘village’ is *kúnú*. The suffixed form *kún-ná* can function as a locational without a postposition.

(xx3) *má=∅ kún-ná*

1Sg=be village-Nom

‘I am in in the village.’

#### Locative *tɔ̀* (non-3Sg *tɔ́* )‘in’

This postposition places the moveable entity (trajector) inside a container or other bounded space. In addition to (xx1a‑b) see also the examples in §8.3.1 above.

(xx1) a. *mā kɔ᷇ⁿ sɔ̀ [bɔ̀ɔ̀rɔ́ tɔ̀]*

1Sg honey put.Pfv [sack in]

‘I put the honey in the sack.’

b. *mā ní wɛ̀ɛ́ bààⁿfɔ́rɔ̀ [káár tɔ̀]*

1Sg 3SgNonhObj go.Pfv B [bus **in**]

‘I went to Banfora by (=in the) bus.’

c. *má [kál-á tɔ̀]*

1Sg=be [home-Nom in]

‘I am at home.’

Like other postpositions, this one has a form with H‑toned initial after non-3Sg NPs and pronouns. Compare *bɔ̀ɔ̀rɔ́ tɔ̀* ‘in the sack’ in (xx1a) above with its plural in (xx2).

(xx2) *bɔ̀ɔ̀-rɔ́-ɔ̀ⁿ tɔ́*

sack-Nom-Pl in

‘in (the) sacks’

#### Locative *dù* (non-3Sg *dú* ) ‘in, inside of’

This postposition combines with nouns that denote an enclosing field (not a container as such). Examples are in (xx1).

(xx1) locative gloss noun

*kàáⁿ dù* ‘in the bush (outback)’ *kààⁿ*

*mùúⁿ dù* ‘in the field’ *mùùⁿ*

*yí dù* ‘in the water’ *yí*

*yēgē-kūⁿ dù* ‘in the tree’ *yēgē-kūⁿ*

The non-3Sg variant *dú* occurs in *mùù-ná-àⁿ dú* ‘in the fields’.

#### Locative *mà* (non-3Sg *má* ) ‘on’

This postposition described position on, or motion onto or from, a horizontal or vertical surface, or on a large object that can be thought of as having a surface.

(xx1) a. *kùgù-rá=∅ [dàʔàlí mà]*

stone-Nom=be [mat on]

‘The stone is on the mat.’

b. *zàkí séʔní [kùgú mà]*

Z sit.Pfv [stone on]

‘Zaki is sitting on a rock.’

c. *sīŋāān-ná=∅ [sàà-gúⁿ mà]*

gecko-Nom=be [wall on]

‘The gecko is on the wall.’

d. *kùkú bɛ̀ [mā mā]*

stone fall.Pfv [1Sg on]

‘The stone fell on me.’ (< *bɛ̌* )

e. *kùkù-rá-àⁿ má*

stone-Nom-Pl on

‘on the stones’

For dative use of *mà* with ‘say’, see §8.1.2.

### *glà* (non-3Sg *glá* ) ‘next to’

This postposition denotes position very close to the landmark. It need not be to the side of the landmark (so I gloss ‘next to’ rather than ‘beside’). The postposition is L‑toned after singular nouns (of any tone melody) as shown by Final Tone-Raising on a preceding L- or M-toned noun (xx1).

(xx1) tones noun gloss PP gloss

/L/ *sàà* ‘house’ *sàá glà* ‘next to the house’

/M/ *gbāā* ‘stick’ *gbāá glà* ‘next to the stick’

/H/ *yíʔé* ‘fish’ *yíʔé glà* ‘next to the fish’

After a plural NP the postposition is H‑toned *glá*.

(xx2) *gbāā-rá-àⁿ glá*

stick-Nom-Pl next.to

‘next to the sticks’

Pronominal examples are in (xx3). The M‑toned pronouns spread the M‑tone into the postposition (xx3a). The remaining pronouns follow the singular/plural division seen in nouns (xx3b‑c).

(xx3) a. *mā glā* ‘next to me’

*wō glā* ‘next to you-Sg’

*ēēⁿ glā* ‘next to you-Pl

b. *mùʔùⁿ glá* ‘next to us’

*ààⁿ glá* ‘next to them (human)’

*èèⁿ glá* ‘next to them (nonhuman)’

c. *à glà* ‘next to him/her’

*è glà* ‘next to it’

Examples are in (xx4).

(xx4) a. *bákàrí=∅ [mā glā]*

B=be [1Sg next.to]

‘Bakari is next to me.’

b. *è sáʔá [bákàrì glà*]

3SgNonhObj sit.Imprt [B next to]

‘Sit down next to Bakari!’ (‘sit’ is pseudo-transitive)

One could argue for a representation *gìlà*. If so, syncope to glà is more or less automatic.

### *kìnà* (non-3Sg *kíná* ) ‘in front of’

M‑toned pronouns (1Sg, 2Sg, 2Pl) spread the M‑tone into the postposition (1Sg *mā kīnā*, 2Sg *wō kīnā*, 2Pl *ēēⁿ kīnā* ). For other pronouns, and for all nouns, the form is *kìnà* after a singular, and *kíná* after a plural.

(xx1) a. *má=∅ [sàá kìnà]*

1Sg=be [house in.front.of]

‘I am in front of the house.’

b. *má=∅ [ɲáā-nà-àⁿ kíná]*

1Sg=be [woman-Nom-Pl in.front.of]

‘I am in front of the women.’

c. *è sáʔá [mā kīnā]*

3SgNonhObj sit.Imprt [1Sg in.front.of]

‘Sit down in front of me!’

This postposition is most felicitous when the landmark has a front-back orientation (person, animal, house). However, it can be used with unoriented landmarks (a tree, a well) to denote position relative to the axis linking the landmark to an observer’s position. (xx2) would make sense if the 3Sg referent is close to the well but on such an observational axis.

(xx2) *á=∅ [kɔ̀líⁿ kìnà]*

3SgHum=be [well(n) in.front.of]

‘He/She is in front of the well.’ (< *kɔ̀lìⁿ* )

### *kùtɔ́rɔ́ mà* (non-3Sg *kútɔ́rɔ́ mà* ) ‘behind’

This is a complex postposition combining *mà* ‘on’ with a stem *kùtɔ́rɔ́*, variants *kūtɔ̄rɔ̄* (after M‑toned pronoun) and *kútɔ́rɔ́* (after other plural pronouns and all plural nonpronominal NPs). One suspects that *kùtɔ́rɔ́* originated as a noun meaning ‘back (of body)’ or ‘base’. Its historical relationships to *kóō* ‘back (of body)’ and to the final in *tàá-kùdù* ‘foundation (of house)’ are unclear.

(xx1) a. *má=∅ [[sàá kùtɔ́rɔ́] mà]*

1Sg=be [[house behind] on]

‘I am in front of the house.’

b. *má=∅ [[ɲáā-nà-àⁿ kútɔ́rɔ́] mà]*

1Sg=be [[woman-Nom-Pl behind] on]

‘I am in front of the women.’

c. *è sáʔá [[mā kūtɔ̄rɔ̄] mà]*

3SgNonhObj sit.Imprt [[1Sg behind] on]

‘Sit down behind me!’

### *gbɔ̀lɔ̀kɔ̀* (non-3Sg *gbɔ́lɔ́kɔ́* ) ‘over/above’ or ‘on top of’

This postposition is L‑toned *gbɔ̀lɔ̀kɔ̀*, becoming *gbɔ̄lɔ̄kɔ̄* after M‑toned pronominal (e.g. *mā gbɔ̄lɔ̄kɔ̄* ‘above me’) and *gbɔ́lɔ́kɔ́* after other plural pronouns and nonpronominal NPs. The sense can be ‘over/above X’, denoting position on a vertical axis passing through the landmark X but no contact, or ‘on top of X’, involving contact.

(xx1) a. *kɔ̀-nɔ́-ɔ̄ⁿ=∅ [sàá gbɔ̀lɔ̀kɔ̀]*

bird-Nom-Pl=be [house above]

‘The birds are (in flight) over the house.’

b. *kɔ̀-nɔ́-ɔ̄ⁿ=∅ [sàà-rá-àⁿ gbɔ́lɔ́kɔ́]*

bird-Nom-Pl=be [house-Nom-Pl above]

‘The birds are (in flight) over the houses.’

c. *bákàr sìdánī [sàá gbɔ̀lɔ̀kɔ̀]*

B ascend.Pfv [house on.top.of]

‘B has gone up onto the house (=the roof).’

### *kùtɔ̀* (plural *kútɔ́* ) ‘under’

This postposition is *kùtɔ̀*, becoming kūtɔ̄ after an M‑toned pronoun (*mā kūtɔ̄* ‘under me’) and *kútɔ́* after other plural pronouns and NPs.

(xx1) a. *kùgù-rá=∅ [dàʔàlí kùtɔ̀]*

stone-Nom=be [mat under]

‘The stone is under the mat.’

b. *kùgù-rá=āⁿ [dàʔàl-lá-àⁿ kútɔ́]*

stone-Nom=be [mat under]

‘The stones are under the mats.’

### *kɛ̀ⁿ* (non-3Sg *kɛ́ⁿ* ) ‘chez’

This postposition means ‘chez X’, i.e. ‘at the house/place of X’.

(xx1) a. *mùʔúⁿ wà [zàkíì kɛ̀ⁿ]*

1Pl go [Z chez]

‘Let’s go to Zaki’s place!’

b. *[dí kpɛ́ʔr-à-àⁿ] kɛ́ⁿ*

[child young-Nom-Pl] chez

‘at the children’s place’

### *fúúlú* ‘between’

This postposition appears to require a plural landmark, whether a simple plural pronoun or noun or the conjunction of two singulars. The form is therefore always H‑toned *fúúlú*.

a. *[mā búʔú wō] fúúlú*

[1Sg and 2Sg] between

‘between you-Sg and me’

b. *mùʔùⁿ fúúlú*

1Pl between

‘between us’

c. *[zàkí bùʔù bákàrì] fúúlú*

[Z and B] between

‘between Zari and Bakari’

### *cɛ̌ŋgɔ̀-rɔ̀* (non-3Sg *cɛ́ŋgɔ̀-rɔ̀* ) ‘in the middle of’

‘In the middle of X’ is expressed by a possessed form of *cɛ́ŋgɔ̀* ~ *cɛ́ŋŋɔ̀* ‘middle’, ending in its nominal suffix, rather by than a PP as such. The *g* is often elided, but if so the nasal is prolonged and the metrical shape is preserved. The suffixed form *cɛ́ŋgɔ̀‑rɔ̀* ~ *cɛ́ŋŋɔ̀‑rɔ̀* always has suffixal *r* rather than nasalized *n*.

(xx1) a. *cálā cɛ̀ŋ́gɔ̀-rɔ̀*

road middle-Nom

‘in the middle of the road’

b. *cál-à-àⁿ cɛ́ŋgɔ̀-rɔ̀*

road-Nom-Pl middle-Nom

‘in the middle(s) of the roads’

### Temporal uses of ‘in front of’ and ‘behind’

‘In front of’ can mean ‘before’, and ‘behind’ can mean ‘after’, when combined with an NP used as a temporal reference point.

(xx1) a. *sér̄ kìnà*

prayer in.front.of

‘before the prayer’

b. *[sér kùtɔ́rɔ́] mà*

[prayer behind] on

‘after the prayer’

‘Over’ and ‘under’ are not attested in a temporal (or abstract quantitative) sense, as in ‘over (=more than)’ or ‘under (=less than)’ a quantity.

### *fó* ‘until/all the way to’

*fó* precedes rather than follows the adverb or NP that it has scope over. The sense may be spatial (‘all the way to’) or temporal (‘until’). It is often emphatic.

(xx1) a. *mā fídī bààⁿfɔ́rɔ̀ [fó jàlsà-dù]*

1Sg run.Pfv Ba [**until** Bl]

‘I ran from Banfora (city) all the way to Blédougou.’

b. *mùʔúⁿ sà wál màà [fó síní]*

1Pl Fut work(n) do.Ipfv [**until** tomorrow]

‘We’ll work until tomorrow.’

### *fùùrù* ‘within (time span)’

This morpheme is not strictly speaking a postposition and does not show tone variation. It occurs in temporal phrases beginning with a temporal adverb meaning ‘from now, hence(forth)’, such as *sánī* or *yàní*, continuing with an NP denoting a duration, and ending with *fùùrù*.

(xx1) a. *mùʔúⁿ sà kwéēⁿ bègé màà]*

1Pl Prog crops cut do.Ipfv]

*sánī [[yēé kpèn-dáā] fùùrù]*

from.now [[month end(v)-Nom] until]

‘We’ll harvest the crops within a month from now.’

b. *má sī-ì wàá kúnú*

1Sg Prog-3SgNonhObj go.Ipfv village

*yàní [kpásòʔò flā] fùùrù*

from.now [week two] until

. ‘I will go to the village within two weeks.’

## Purposive-Causal ‘for’ (*ŋŋŋ*)

## Other adverbs (or equivalents)

### Similarity (*ŋŋŋ* ‘like’)

### Extent (‘a lot’, ‘a little’)

### Specificity

#### ‘Approximately’ (*ŋŋŋ*)

#### ‘Exactly’ (*ŋŋŋ*, *ŋŋŋ*, *ŋŋŋ*)

#### ‘Specifically’ (*ŋŋŋ*)

### Evaluation

#### ‘Well’ and ‘badly’

#### ‘Proper, right, (socially) normal’ (*ŋŋŋ*)

### Manner adverbs

### Spatiotemporal adverbials

#### Temporal adverbs

Some of the major temporal adverbs are in (xx1).

(xx1) a. *fî* ‘today; nowadays’

*ŋŋŋ* ‘again’

*lô* ‘yesterday; formerly, in the old days’

*wòsɔ́ʔɔ̄ⁿ tɔ̀* ‘day before yesterday’

*wòsɔ́ʔɔ̄ⁿ tó→ dè* ‘a few/several days ago’

*káā tɔ̀* ‘now’

*sísàⁿ* ‘now’ (< Jula)

b. *síní* ‘tomorrow; in the future’

*síní kɛ́nɛ́* ‘day after tomorrow’

*síní kɛ́nɛ́ kùdɔ́rɔ̀-mà* ‘second day after tomorrow’ (third from today)

c. *bùlù* ‘last year’

*wò ɲɛ́ɛ̀ mà é→ dè* ‘a few/several years ago’

*ɲɛ̄ɛ̄-wè* ‘next year’

*ɲìnà* ‘this year’

(xx2) a. *[mùʔúⁿ sà kwééⁿ bègé màà]*

[1Pl Prog crops cut do.Ipfv]

*ɲàní [yēē dúlì]*

from.now [month one]

‘We’ll harvest the crops one month from now.’

c. *[mùʔúⁿ sà wálí màà]*

[1Pl Prog work(n) do.Ipfv do

*ɲánì [yēē dúlì] tú [kpásòʔr̀ flā]*

from.now [month one] plus [week two]

‘We’ll do the work in a month plus a couple of weeks (=a month and a half) from now.’

#### ‘First’ (*ŋŋŋ*)

#### Spatial adverbs

The following are the main spatial adverbs.

*(xx1) a. ŋŋŋ ‘above, top, summit’*

*ŋŋŋ ‘below, bottom, down’*

*b. ŋŋŋ ‘east’*

*ŋŋŋ ‘west’*

*ŋŋŋ ‘south’*

*ŋŋŋ ‘north’*

*c. ŋŋŋ ‘going backward, in reverse’*

*ŋŋŋ ‘in the rear’*

*ŋŋŋ ‘forward; in front’*

*‘left’ and ‘right’*

### Expressive adverbials (EAs)

### ‘Flat and wide’

#### ‘Straight’ (*ŋŋŋ*)

#### ‘Apart, separate’ (*ŋŋŋ*)

#### ‘Always’ (*ŋŋŋ*), ‘never’ (*ŋŋŋ*)

#### ‘Exclusively, together’ (*ŋŋŋ*)

#### ‘All, entirely’ (*ŋŋŋ*)

### Reduplicated (iterated) adverbials

#### Distributive adverbial iteration

#### ‘Scattered, here and there’ (*ŋŋŋ*)

# Verbal derivation

## Reversive verbs absent

No reversive derivation or productive reversive phrase type was observed. Reversive-like senses are expressed by dedicated lexical items or by semantic extensions. Both ‘unlock’ and ‘open (door)’ are phrased as *dɛ̀ɛ̂* ‘open (door)’, which can also be used in the sense ‘uncover, remove blanket from (sb)’. ‘Take out’ is simply the transitive use of ‘exit, go out’, with no derivational morpheme. There is a dedicated lexical item for ‘untie’ (*fɛ̀ɛ̀nàà* ), used as reversive for the phonologically unrelated ‘tie, bind’ (*kùlɔ́nà*) as well as ‘hobble (animal, with rope)’ (*fìrìkíyà*).

## Morphological causative absent

There is no productive morphological causative. For alternations, using the same ambi‑valent verbs, like intransitive ‘fall’ and transitive ‘knock down’, see §9.xxx below.

If no simple lexical item can express the sense intended, a periphrastic causative using the verb ‘put down’ (imperfective *bàà* ) and a postverbal nominalized verb can be used.

(xx1) *mā ná bɛ̀ fìdì-rá*

1Sg 3SgHumObj put.down running(n)-Nom

‘I made him/her run.’

## Morphological passive absent

There is likewise no morphological passive derivation. If a specific agent is overt, it is the subject. There is no difference in Jalkunan between ‘I was robbed by the bus driver’ and ‘The bus driver robbed me.’ Nonspecific agency is expressed by ‘they’ as subject (xx1).

(xx1) *ààⁿ mā jɔ́ɛ̀ⁿ*

3Pl 1Sg rob.Pfv

‘I was robbed.’ (“They robbed me.”)

## Ambi-valent (labile) verbs without suffixal derivation

Ambi-valent (or labile) verbs can be used intransitively and transitively. Since transitive objects are always nonzero, the existence of a preverbal object is sufficient to indicate transitive status of the verb. Such verbs are very common in Jalkunan. ‘Fall’ and ‘cause to fall, knock down’ are exemplified in (xx1).

(xx1) a. *à bɛ̌*

3SgHum fall.Pfv

‘He/She fell.’

b. *mā ná bɛ̌*

1Sg 3SgHumOjb fall.Pfv

‘I made him/her fall.’

Some of the most common ambi-valent verbs are in (xx2). In the “verb” column the forms given are perfective, then imperfective. If the imperfective is M- or H‑toned in the intransitive it becomes L‑toned (shown in parentheses) in the transitive.

(xx2) Pfv / Ipfv gloss (intr) gloss (tr)

*bɛ̌* / *bàà* ‘fall’ ‘knock down, put down’

*bɔ̀ɛ́* / *bɔ̄ɔ̄* *(bɔ̀ɔ̀)* ‘exit, go out’ ‘take out’

*sɔ̀ɛ́* / *sɔ̄ɔ̄* *(sɔ̀ɔ̀)* ‘enter’ ‘put in’

*kpɛ̌ⁿ* / *kpāāⁿ (kpààⁿ)* ‘die’ ‘kill’

*kàʔrí* / *káʔrá (kàʔrà)* ‘snap, be broken’ ‘snap, break (sth)’

*bìí* / *byɛ́ (byɛ̀)* ‘(fire) be lit’ ‘light (fire)’

## Deadjectival inchoative and factitive verbs

Most basic adjectives have an associated verb that can be used as inchoative (‘X become ADJ’) or factitive (‘Y make X become ADJ’). Using the imperfective as citation form for the verbs, we see that factitives differ from inchoatives, if at all, only in shifting to L‑toned form (in the imperfective).

(xx1) adjective gloss inchoative (factitive)

a. clearly related

*kpēē* ‘white’ *kpɛ̄ɛ̄ (kpɛ̀ɛ̀)*

*kānā* ‘red’ *kānānā* ~ *kānnā (kànnà)*

*gbɔ̀ʔɔ̀* ~ *gboʔò* ‘black’ *gbɔ̀ʔɔ̀ (gbɔ̀ʔɔ̀)*

*ɲɛ́* ‘good’ *ɲàánà (ɲàánà)*

*gbáʔálá* ‘thin’ *gbàʔàlánà*

*kúmā* ‘cold’ *kúmàⁿ (kùmàⁿ)*

*kítā* ‘bad’ *kìtàlíyà (kìtàlíyà)*

*gúnī* ‘short’ *gùnò (gùnò)*

b. suppletive or doubtfully related

*táā* ‘hot’ *dɛ̀ɛ̀ (dɛ̀ɛ̀)*

*súmááⁿ* ‘long’ *sɔ̀ɔ̀ⁿbàà (sɔ̀ɔ̀ⁿbàà)*

*kútɔ̄* ‘old’ *kɔ̀ʔrìyáà*

A number of other verbs also denote intransitive changes of state, but do not correspond to any of the few true (morphologically simple) adjectives in the language. One can, however, use relative clauses based on such verbs as nominal modifiers.

(xx2) inchoative (factitive) gloss

*ɲīʔɛ̄nāā (ɲìʔɛ̀nàà)* ‘become wet’

*dóʔóyáà (dòʔòyáà)* ‘shrink, become small’

*tɔ̀lɔ̀* ‘rot’

*jáá (jàà)* ‘become sweet, delicious’

*kónó* (kònò) ‘grow, become big, widen’

*gbàʔàlánà* ‘dry off’

*gbàà* ‘become difficult or expensive’

*nɛ̀ɛ̀bàà* ‘become bitter(-tasting)’

*ŋùnɔ̀* ‘become sour’

# Verbal inflection

## Inflection of regular indicative verbs

### Valency

#### Intransitive and transitive

For purposes of this chapter, the relevant distinction is between intransitive verbs (defined here as verbs that do not take a preverbal object) and transitive verbs (those that do take a preverbal object). Given this definition, intransitives are distinctive in that they may directly follow the subject without an intervening inflectional morpheme or object NP, namely in the perfective. Similarly, they may occur clause-initially, namely in the imperative. For a more complex and syntactically oriented presentation of valency, see §11.xxx.

Some verbs that translate as transitive, and that normally take a postverbal complement of some sort, are (morphologically) intransitive. In (xx1a‑b), the “object” takes the form of a postverbal PP. In (xx1c‑d), the verbs normally require an NP object, but it appears postverbally (with no postposition). The forms are imperative.

(xx1) a. *sā [sùkár̄ dɛ̀]*

come.Imprt [sugar with]

‘Bring (the) sugar!’

b. *bī [gbāá dɛ̀]*

hold.Imprt [stick with]

‘Hold the stick!’

c. *bàlì wár̄-rà*

accept.Imprt money-Nom

‘Take (accept) the money!’

d. *báʔrī dàʔàl-lá*

touch.Imprt mat-Nom

‘Touch the mat!’

#### Pseudo-transitive verbs

There are two verbs translatable as ‘go’. One of these is *táʔá*, whose morphosyntax is that of a simple intransitive verb. The other is *wàá*, which takes an obligatory nonhuman 3Sg object. The distinction can be observed in the imperative, where only wàá takes an obligatory object pronoun.

(xx1) verb (Sg Pfv) gloss imperative

a. *wàá* ‘go’ *è wǎ*

b. *táʔá* ‘go’ *táʔá*

The pro-forma nonhuman 3Sg “object” of a pseudo-transitive occurs in some but not all syntactic environments. The perfective aspect conjugations of pseudo-transitive ‘go’, true intransitive ‘come’, and true transitive ‘hit’ (here with a true nonhuman 3Sg object) are in (xx3). The pseudo-transitive has an overt nonhuman 3Sg object *ní* only in (xx3a) for 1Sg and 2Sg subject, where it aligns with the transitive. With other subject categories, the pseudo-transitive has no overt object and aligns with the intransitive paradigm (xx3b).

(xx3) subject ‘go’ ‘come’ ‘hit it’

a. 1Sg/2Sg

1Sg *mā ní wěē mā sɛ́ mā ní bàʔrí*

2Sg *wō ní wěē wō sɛ́ wō ní bàʔrí*

b. other

1Pl *mùʔúⁿ wěē mùʔùⁿ sɛ́ mùʔùⁿ ní bàʔrí*

2Pl *ēēⁿ wěē ēēⁿ sɛ́ ēēⁿ ní bàʔrí*

3SgHum *ā wěē ā sɛ̌ à ní bàʔrí*

3SgNonh *ē wěē ē sɛ̌ è ní bàʔrí*

3PlHum *àáⁿ wěē ààⁿ sɛ́ ààⁿ ní bàʔrí*

3PlNonh *èéⁿ wěē èèⁿ sɛ́ èèⁿ ní bàʔrí*

The object marker also occurs before a perfective pseudo-transitive verb when directly preceded by a nonpronominal NP, provided that the NP can end in the nominal suffix (if so, the suffix is obligatory). Pseudo-tranistive (xx3a) has the same morphology as true transitive (xx3b). In both, the nonhuman 3Sg object pronoun takes the allomorph *ēⁿ*, which contracts with the vowel of the nominal suffix. The pronoun is transcribed as a clitic, and is not separately pronounceable.

(xx3) a. *dí-ré=ēⁿ wěē*

child-Nom=3SgNonh go.Pfv

‘The child went.’ (< *dí-rá* )

b. *dí-rá=ēⁿ bàʔríī*

child-Nom=3SgNonh go.Pfv

‘The child hit it.’ (< *dí-rá* )

The structure in (xx3a) is repeated in (xx4a), where an adjective is added to the subject noun. This is because adjectives can take the nominal suffix, which in this construction is obligatory. By contrast, noun-numeral sequences (xx4b) and personal names (xx4c) do not have the nominal affix as subject NPs, and there is no nonhuman 3Sg object marker between them and pseudo-transitives.

(xx4) a. *[tàgà gbɔ́rē]=ēⁿ wěē*

[sheep big]=3SgNonh go.Pfv

‘The big sheep-Sg went.’

b. *[tàgà flā] wěē*

[sheep two] go.Pfv

‘Two sheep went.’

c. *àmàdú wěē*

A go.Pfv

‘Amadou went.’

When the verb is preceded by a nonzero inflectional particle, the pro forma nonhuman 3Sg object is again obligatory before a pseudo-transitive (xx5a). Compare true intransitive (xx5b).

(xx5) a. *dí-rá sī-ì wàá*

child-Nom Fut-3SgNonh go.Ipfv

‘The child will go.’

b. *dí-rá sà sáá*

child-Nom Fut come.Ipfv

‘The child will come.’

#### Pseudo-reflexive (middle) verbs

These verbs have an obligatory object coindexed to the subject. They resemble pseudo-reflexive verbs in Romance languages.

(xx1) verb (Sg Pfv) gloss imperative

a. motion

*jɔ̄ʔrɔ̄* ‘jump’ *ē jɔ̄ʔrī*

*kīyāⁿ* ‘fly away’ *ē kìⁿ*

*mùńnà* ‘crawl’ *ē mūnī*

b. stance

*sā* ‘lie down’ *ē sā*

*bālā* ‘stand; stop’ *ē bāl*

*sàʔà* ‘sit’ *ē sāʔā*

*cónjólà* ‘squat’ *ē cōnjōlō*

*sóⁿsóʔrà* ‘squat’ *ē sōⁿsōʔrī*

*mààséyā* ‘bow, bend over’ *ē máāsā*

This pseudo-reflexive pattern is regular for basic stance verbs. However, most basic motion verbs are simple intransitives. For example, their imperatives occur with no preverbal morphemes (xx2).

(xx2) verb gloss imperative

*sáá* ‘come’ *sā*

*bɔ́ɔ́* ‘exit’ *bɔ̄*

*sɔ́ɔ́* ‘enter’ *sɔ̄*

*sìdánà* ‘ascend’ *sìdá*

*jàʔánà* ‘descend’ *jàʔáⁿ*

*fìdɛ̀* ‘run’ *fìdì*

*kìyà* ‘arrive’ *kī*

### Structure of verbal paradigms

#### Stem alternations for intransitive verbs

Each verb has four basic stems: perfective, imperfective, progressive, and imperative. The progressive has a suffix *‑yá*. The three other stems have less transparently affixal structure, but differ chiefly in their final segment(s), especially the final vowel. We can posit a primary perfective/imperfective split, and think of the imperative as (usually) a shortened form of the imperfective.

Additional tonal variants are created by interactions with preceding NPs (including pronouns). This applies to all stems of transitive verbs, and to perfectives of intransitives. By contrast, imperfective and progressive forms of intransitive verbs are always immediately preceded by an inflectional morpheme, which does not affect verb tones. Imperative forms of intransitives are clause-initial. For intransitives, therefore, no NP-induced tonal effects on verbs occur except for perfectives.

Further tonal and segmental modifications are created by tone sandhi and some other processes involving a following negative enclitic or by a following word. Such details are presented elsewhere.

Examples of intransitive paradigms follow. (xx1) has perfectives ending in *e* or *ɛ* (E‑stem). For perfectives, the tonal form that follows a non-3Sg NP is under the one that follows a 3Sg NP.

(xx1) Intransitives (E-stem perfective)

Pfv Ipfv Imprt Prog gloss

*cɛ̀ɛ́ cáá* — *cé-yá* ‘ripen, harden’

*cɛ́*

*gbɛ̀ɛ́ gbàà* — *gbè-yá* ‘become difficult’

*gbɛ́*

*jɛ̀ɛ́ jáá* — *jé-yá* ‘become sweet’

*jɛ́ɛ́*

*sɛ̀ɛ́ sáá sā sé-yá* ‘come’

*sɛ́ɛ́*

*kpɛ̀ɛ́ⁿ kpááⁿ kpāⁿ kpéⁿ-yá* ‘exit’

*kpɛ́ɛ́ⁿ*

*bɛ̀ɛ́ bàà bà bè-yá* ‘fall’

*bɛ́ɛ́*

*kpɛ̀ɛ́ kpɛ́ɛ́ kpɛ̌ kpé-yá* ‘turn white’

*kpɛ́ɛ́*

*dɛ̀ɛ́ dɛ̀ɛ̀* dɛ̌ *dè-yá* ‘get hot’

*dɛ́ɛ́*

*bɔ̀ɛ́ bɔ́ɔ́ bɔ̄ bó-yá* ‘exit’

*bɔ́ɛ́*

*sɔ̀ɛ́ sɔ́ɔ́ sɔ̄ só-yá* ‘enter’

*sɔ́ɛ́*

*kìɛ́ kiɛ́ kī kí-yá* ‘arrive’

*kíɛ́*

*tɛ̀ʔɛ́ táʔá tāʔā tèʔè-yá* ‘go’

*tɛ́ʔɛ̄*

*dɛ̀ʔɛ́(ɛ̄) dàʔà dàʔà dèʔè-yá* ‘escape’

*dɛ́ʔɛ̄(ɛ̄)*

*kùmɛ́ kúmà* — *kùmá-yà* ‘cool off’

*kúmɛ̄ⁿ* ~ *kùmé-yà*

*bèlé(ē) bɛ́lɛ́ bēlē bélé-yá* ‘pass’

*bélē(ē)*

*ɲìnɛ́ ɲìnâ ɲìnà ɲìné-yà* ‘forget’

*ɲínɛ̄*

*gbɔ̀ʔɛ́ gbɔ̀ʔɔ̀ gbɔ̀ʔɔ̀ gbòʔò-yá* ‘turn black’

*gbɔ́ʔɛ̄*

*tòló(ē) tɔ̀lɔ̀ tólò tòlò-yá* ‘rot’

*tólē*

*jìímɛ̄ jìímàà jìímà jìímè-yà* ‘weep’

*jíímɛ̄*

*bànɛ́ʔɛ̄ⁿ bánɛ́ʔɛ̄ⁿ bànáʔàⁿ bànéʔé-yà* ‘get tired’

*bánɛ́ʔɛ̄ⁿ*

*dòʔòyéē dóʔóyáà dóʔóyà dóʔóyé-yà* ‘shrink’

*dóʔóyéē*

*kɔ̀ʔrìyéē kɔ̀ʔrìyáà kɔ̀ʔrìyá kɔ̀ʔrìyé-yà* ‘grow old’

*kɔ́ʔríyéē*

The intransitives in (xx2) have perfectives ending in *i* (I‑stem).

(xx2) Intransitives (I-stem perfective)

Pfv Ipfv Imprt Prog gloss

*bìí bíɛ́* — *bí-yá* ‘be lit’

bíī

*bùlí(ī) búlɔ́ būlū búlú-yá* ‘go back’

*búlī(ī)*

*dìbí díbɛ́* — *díbí-yá* ‘be extinguished’

*díbī*

*fìdí fìdɛ̂ fìdí fìdí-yà* ‘run’

*fídī*

*kòní kónó kō kóní-yá* ‘grow’

*kónī*

*gùníī gùnò gǔⁿ gùnì-yá* ‘become short’

*gúníī*

*ŋùníī ŋùnɔ̀* — *ŋùnì-yá* ‘become sour’

*ŋúníī*

*ɲàánī ɲàánà ɲǎ ɲàánì-yà* ‘improve’

*ɲáánī*

*mììlíī míílíyà mīīlī míílí-yà* ‘think’

míílíī

*jàʔánī jàʔánà jàʔáⁿ jàʔánì-yà* ‘descend’

*jáʔánī*

*sìdánī sìdánà sìdá sìdánì-yà* ‘ascend’

*sídánī*

*kànàní kán(á)ná* — *kánání-yá* ‘turn red’

*kánání*

*kìtàlíī kìtàlíyà* — *kìtàlí-yà* ‘worsen’

*kítálíī*

*gbàʔàlánī gbàʔàlánà gbàʔàlá gbàʔàlání-yà* ‘become thin; dry’

*gbáʔálánī*

(xx3) gives fuller sets of forms for a few intransitives, including negative forms.

(xx1) category ‘come’ ‘fall’ ‘descend’

Pfv +3Sg *sɛ̀ɛ́ bɛ̀ɛ́ jàʔánī*

Pfv +3Sg Neg *sèè=rēʔ bɛ̀ɛ̀=rɛ̄ʔ jàʔán=nēʔ*

~ *sɛ̀ɛ̀=rɛ̄ʔ*

Pfv -3Sg *sɛ́ɛ́ bɛ́ɛ́ jáʔánī*

Pfv -3Sg Neg *séé=rēʔ bɛ́ɛ́=rɛ̄ʔ jáʔán=nēʔ*

~ *sɛ́ɛ́=rɛ̄ʔ* ~ *béé=rēʔ*

Ipfv *sáá bàà jàʔánà*

Ipfv Neg *sáá=rɛ̄ʔ bàà=rɛ̄ʔ jàʔánà=nɛ̄ʔ*

Prog *sé-yá bè-rá jàʔánì-yà*

Prog Neg *sé-yá=rɛ̄ʔ bè-yá=rɛ̄ʔ jàʔánì-yà=rɛ̄ʔ*

Imprt *sā bà jàʔáⁿ*

Proh *bí sā=rɛ̄ʔ bí bà=rɛ̄ʔ bí jàʔà=nɛ̄ʔ*

Imprt Pl *ēēⁿ sā ēēⁿ bā ēēⁿ jāʔāⁿ*

Proh Pl *ēēⁿ bí sā=rɛ̄ʔ ēēⁿ bí bà=rɛ̄ʔ ēēⁿ bí jàʔà=nɛ̄ʔ*

Verbal noun *sēē bó bà jāʔānī*

#### Stem alternations for transitive verbs

Transitive verbs have paradigms similar to those described above for intransitives. However, all of their forms (including imperfective, progressive, and imperative) are preceded by NPs and therefore have two tonal variants, one with initial L‑tone and the other with initial H‑tone. The difference between intransitives and transitives is striking in the imperfectives, for example. Intransitives (including monosyllabics and *CvCv*) have a single imperfective form, whose tone is lexically assigned. Transitives monosyllabics and most *CvCv* stems have predictable L‑toned and H‑toned forms, correlated with the category of the preceding NP. Many transitives of these light shapes therefore have no lexically specified tones. However, heavier stems such as *CvvCv* and *CvCvCv* do have lexically specified tones in noninitial syllables.

(xx1) Transitives (E-stem perfective)

Pfv Ipfv Imprt Prog gloss

*bɛ̀ɛ́ bàà bǎ bè-yá* ‘put down’

*bɛ́ɛ́ báá bá bé-yā*

*jɛ̀ɛ́ jàà jǎ jè-yá* ‘sweeten’

*jɛ́ɛ́ jáá já jé-yā*

*dɛ̀ɛ́ dɛ̀ɛ̀ dɛ̌ dè-yá* ‘heat (sth)’

*dɛ́ɛ́ dɛ́ɛ́ dɛ́ dé-yā*

*mɛ̀ɛ́ mɛ̀ɛ̀ mɛ̌ mè-yá* ‘hear’

*mɛ́ɛ́ mɛ́ɛ́ mɛ́ mé-yā*

*bɔ̀ɛ́ bɔ̀ɔ̀ bɔ̌ bò-yá* ‘remove’

*bɔ́ɛ́ bɔ́ɔ́ bɔ́ bó-yā*

*mɔ̀ɛ́ mɔ̀ɔ̀ mɔ̀ɔ́ mò-yá* ‘rub’

*mɔ́ɛ́ mɔ́ɔ́ mɔ́ɔ́ mó-yā*

*jìɛ́ jìɛ̀ jǐ jì-yá* ‘see’

*jíɛ́ jíɛ́ jí jí-yā*

*dɔ̀ɛ́ⁿ dɔ̀ɔ̂ⁿ dɔ̀ɔ́ⁿ dòⁿ-yá* ‘step on’

*dɔ́ɛ̄ⁿ dɔ́ɔ̂ⁿ dɔ́ɔ́ⁿ dóⁿ-yā*

*jɔ̀ɛ́ⁿ jɔ̀ɔ̂ⁿ jɔ̀ɔ́ⁿ jòⁿ-yá* ‘rob’

*jɔ́ɛ̄ⁿ jɔ́ɔ̂ⁿ jɔ́ɔ́ⁿ jóⁿ-yā*

*yěē yɛ̀ɛ̂ yèé yè-yá* ‘send (sb)’

*yéē yɛ́ɛ̂ yéé yé-yā*

*fìɛ́ fìɛ̂ fìɛ́ fè-yá* ‘send (sb)’

*fíɛ̄ fíɛ̂ fíɛ́ fé-yā*

Similar paradigms for transitive verbs with I‑stem perfectives are in (xx2).

(xx2) Transitives (I-stem perfective)

Pfv Ipfv Imprt Prog gloss

*kìí kìɛ̀ kìí kì-yá* ‘sow’

*kíī kíɛ́ kíí kí-yā*

*mìí mìɛ̀ mǐ mì-yá* ‘drink’

*míī míɛ́ mí mí-yā*

*dèéī dɛ̀ɛ̂ dèí* ~ *dèé dè-yá* ‘open’

*dééī dɛ́ɛ̂ déí ~ déé dé-yā*

*kèéī kɛ̀ɛ̀ kèé kè-yá* ‘call’

*kéēī kɛ́ɛ́ kéé ké-yā*

*jùlí jùlɔ̀ jùlí jùlì-yá* ‘push’

*júlī júlɔ́ júlí júlí-yā*

*bàʔrí bàʔrà bàʔrí bàʔrì-yá* ‘hit’

*báʔrī báʔrá báʔrí báʔrí-yā*

*sìní sìnà sǐⁿ sìnì-yá* ‘dig’

*sínī síná síⁿ síní-yā*

*fààlíī fààlà fààlí fààlí-yà* ‘gather up’

*fáálíī fáálá fáálí fáálí-yà*

*sɛ̀ɛ̀ní sɛ̀ɛ̀nà sɛ̀ɛ́ⁿ sɛ̀ɛ̀nì-yá* ‘collect wood’

*séénī sɛ́ɛ́ná sɛ́ɛ́ⁿ sɛ́ɛ́ní-yā*

*kùlɔ́nì kùlɔ́nɔ̀ kùlɔ́ kùlɔ́nì-yà* ‘tie’

*kúlɔ́nì kúlɔ́nɔ̀ kúlɔ́ kúlɔ́nì-yà*

*dìmìní dìmìnàà dìmí dìmìnì-yá* ‘hurt (sb)’

*dímíní dímínáá dímí dímíní-yā*

A few fuller transitive paradigms including negative forms are in (xx2). ‘Put is the same stem as ‘fall’ in (xx1) above, i.e. it is one of many ambi‑valent (labile) stems. In the sense ‘put down’ it is not accompanied by the noun *bó* and has a different verbal noun.

(xx3) category ‘taste’ ‘put down’ ‘push’

Pfv +3Sg *nɛ̀nɛ́ɛ̄ bɛ̀ɛ́ jùlí*

Pfv Neg +3Sg *nɛ̀nɛ́ɛ̄=nɛ̄ʔ bɛ̀ɛ̀=rɛ́ʔ jǔl=lēʔ*

Pfv -3Sg *nɛ́nɛ́ɛ̄ bɛ́ɛ́ júlī*

Pfv Neg -3Sg *nɛ́nɛ́ɛ̄=nɛ̄ʔ bɛ́ɛ́=rɛ́ʔ júl=lēʔ*

Ipfv +3Sg *nɛ̀nɛ́ɛ̀ bàà jùlɔ̀*

Ipfv +3Sg Neg *nɛ̀nɛ́ɛ̀=nɛ̄ʔ bàà=rɛ́ʔ jùlɔ̀=rɛ́ʔ*

Ipfv -3Sg *nɛ̀nɛ́ɛ̀ báá júlɔ́*

Ipfv -3Sg Neg *nɛ́nɛ́ɛ̀=nɛ̄ʔ báá=rɛ̄ʔ júlɔ́=rɛ̄ʔ*

Prog +3Sg *nèné-yā bè-yá jùlì-yá*

Prog +3Sg Neg *nèné-yā=rɛ̄ʔ bè-yá=rɛ̄ʔ jùlì-yá=rɛ̄ʔ*

Prog -3Sg *néné-yā bé-yā júlí-yā*

Prog -3Sg Neg *néné-yā=rɛ̄ʔ bé-yā=rɛ̄ʔ júlí-yā=rɛ̄ʔ*

Imprt -3Sg *nɛ̀nɛ́ bà jùlí*

Proh Sg *nɛ̀nɛ́=nɛ̄ʔ bà=rɛ́ʔ jùl=léʔ*

Imprt Pl *nɛ́nɛ́ bá júlí*

Proh Pl *nɛ́nɛ́=nɛ̄ʔ bá=rɛ̄ʔ júl=lēʔ*

VblN *nɛ́nɛ́ɛ̄ bēē júlí*

#### Analysis of verb-stem alternations

The imperfective is the best option for a citation form, since it often has lexical information that is masked in the other forms. For example, a final vowel in the imperfective may be converted to a front vowel in the perfective and clipped off in the imperative. For intransitives, the tone of the imperfective is also unpredictable and therefore lexically specified, while that of the perfective in particular is determined by the preceding NP.

Relevant inflectional morphemes that can occur next to the verb are post-subject inflectional morphemes and the negative enclitic. The post-subject morphemes are future *sà* (and variants), imperfective /H+=∅/, and prohibitive *bí*. They are adjacent to intransitive verbs but are separated from transitive verbs by the object. The negative enclitic is added to the final word of the clause, which is often (but not always) the verb.

The post-subject particles do not interact tonally with the verb. Addition of the negative enclitic directly to the verb is useful in checking the latter’s vowel length and tone. However, the enclitic does induce small phonological changes in the verb form. First, a final-syllable diphthong in the perfective like *ɔɛ* or *oi* is monophthongized before the negative enclitic. Second, especially in light (bimoraic) verbs, ‑ATR vowels are optionally shifted to +ATR, which then also induces ATR Harmony on the enclitic. Both of these phenomena are illustrated by *bɔ̀ɛ́* ‘exited’ becoming negative *bɔ̀ɔ̀=rɛ̄ʔ* varying with *bòò=rēʔ* ‘did not exit’.

The perfective stem ends in a front vowel {*i e ɛ*}, though as just seen this vowel is sometimes masked by Monophthongization before the negative enclitic. The imperfective normally ends in a low or ‑ATR vowel from the set {*ɛ a ɔ*}, rarely +ATR *o*. All known verbs with *e* in the perfective and imperative, and most with *o* in the perfective and imperative, shift this vowel to the ‑ATR counterpart in the imperfective (xx1). In (xx1), all verb forms are of the +3Sg tonal type if transitive, or if perfective intransitive. However, our focus here is on vowel qualities.

(xx1) imperative perfective imperfective gloss

a. shift to ‑ATR in imperfective

*wě wěē wɛ̀ɛ̀* ‘bathe (sb)’

*tě těē tɛ̀ɛ̀* ‘shatter (sth)’

*yě yěē yɛ̀ɛ̂* ‘send on mission’

*dèé dèéī dɛ̀ɛ̂* ‘open’

*bègé bègé bɛ̀gɛ̀* ‘cut’

*dàkó dàkóī dàkɔ̂* ‘catch (sth thrown)’

b. no shift to ‑ATR in imperfective

*kō kòní kónó* ‘grow’

*lě lèní lènà* ‘look at’

*sèʔrí sèʔrí sèʔrà* ‘sweep’

The progressive systematically shifts ‑ATR vowels to +ATR (in the broad sense, including high vowels). Therefore even stems that have ‑ATR vowels in the positive imperative, perfective, and imperfective, must shift it to +ATR before progressive *‑yá*. The known exceptions are multisyllabic verbs with an initial ‑ATR vowel, and may be morphologically segmentable.

(xx1) imperative perfective imperfective progressive gloss

a. +ATR in progressive only

*dɛ̌ dɛ̀ɛ́ dɛ̀ɛ̀ dè-yá* ‘heat (sb)’

*mɔ̀ɔ́ mɔ̀ɛ́ mɔ̀ɔ̀ mó-yā* ‘rub’

b. initial ‑ATR in heavy stem preserved in progressive

*kɔ̀ʔrìyá kɔ̀ʔrìyéē kɔ̀ʔrìyáà kɔ̀ʔrìyé-yà*

The imperative is usually closely related to the imperfective. However, where the perfective and imperfective diverge in vocalism (simple ATR shift, or perfective *i* versus imperfective ‑ATR or low vowel), the imperative sides with the perfective. Factoring this out, the imperative is best derived from the imperfective by stem-final reduction (shortening a final long vowel, deleting a final short vowel). See §3.5.3 for fuller discussion.

## Negation (*=rĒʔ* )

The all-purpose negative enclitic *=rɛ̄ʔ*  ~ *=rēʔ* (or variant, see below) is used with all types of predicate, including negative imperatives (prohibitives). The enclitic is hosted by the otherwise clause-final word. It is therefore separated from the verb if there is a postverbal constituent such as a bare postverbal NP (xx1a) or a PP (xx1b).

(xx1) a. *mùʔúⁿ wɛ̌ɛ̀ bòbó=rēʔ*

1Pl goPfv Bobo=**Neg**

‘We didn’t go to Bobo (city).’

b. *mā dō-sɛ́ [kòó mà]=nɛ̄?*

1Sg add.Pfv [salt on]=**Neg**

‘I didn’t add salt.’

However, since Jalkunan is an S-infl-O-V-X-Neg language, the postverbal position X is often vacant, and the negative clitic is therefore very often hosted by the verb. The form of the verb, especially perfectives, may itself be sensitive to the presence/absence of the enclitic.

Both the consonant and the vowel of the enclitic are subject to phonological alternations. The citation form *=rĒʔ* takes the tap *r* as basic, and is neutral as to *ɛ* versus *e*. Since tap *r* is not normally allowed word-initially, and since the *r* in *=rĒʔ* is subject to the same kind of modifications as seen with nominal suffix *‑rà* (and variants), I transcribe the negative morpheme as an enclitic rather than as a free particle.

*r*‑Nasalization (§3.xxx) converts *r* to *n* after a nasal syllable, such as *Na* or *Caⁿ*, i.e. after a syllable with nasal consonant onset or one with a nasalized vowel. It also applies when the enclitic directly follows a nasal consonant, though this occurs after apocope of a final vowel and so reduces to the *Na* case.

(xx1) a. *à ɲìnɛ́ [sìbí mà]=nɛ̄ʔ*

3SgHum forget.Pfv [meat on]=**Neg**

‘He/She didn’t forget the meat.’

b. *à kpɛ̀ɛ̀=nɛ̄ʔ*

3SgHum die.Pfv=**Neg**

‘He/She didn’t die.’ (< *kpɛ̌ⁿ* )

c. *ɲùʔù-nɔ́-ɔ̀ⁿ* *gbáʔálán=nēʔ*

garmet-Nom-Pl dry.off.Pfv=Neg

‘The clothes didn’t dry.’ (< *gbáʔálánī* )

*r*‑Lateralization (§3.xxx) occurs only when the tap *r* is immediately preceded by *l*, after apocope of a final vowel. The result is an *ll* cluster over the enclitic boundary (xx2a). This process also occurs when the expected result after apocope would be *rr* (xx2b). Apocope in these examples is optional, so fuller forms like *bàʔrí=rēʔ* are also possible, and preferred in careful speech.

(xx2) a. *mā nāàⁿ bál=lēʔ*

1Sg 1SgRefl stand.Pfv=Neg

‘I didn’t stand/stop.’ (< *bálī* )

b. *mā ná bǎʔl=lēʔ*

1Sg 3SgHum hit.Pfv=Neg

‘I didn’t hit him/her.’ (< *bàʔrí* )

ATR Harmony (§3.xxx) determines the surface vowel quality of the enclitic, *ɛ* or *e*. However, when the enclitic directly follows a verb, the verb itself optionally shifts from ‑ATR to +ATR. After any such shift, but before apocope, the enclitic has *ɛ* after a syllable with {*a ɛ ɔ*}, and *e* after a syllable with {*i u e o*}. That is, *a* is treated as ‑ATR and high vowels are treated as +ATR. Apocope of the final word of the host word applies after ATR Harmony.

(xx3) host-final V positive negative gloss

a. ‑ATR

*a* *é sà sāā* *è sá ꜜsáá=rɛ̄ʔ* ‘it will (not) come’

*ɛ* *mā ní jɛ̌* *mā ní jɛ̀ɛ̀=rɛ̄ʔ* ‘I did (not) see it’

*ɔ* *ē sà tɔ̀lɔ̀* *è sá tɔ̀l=lɛ̄ʔ* ‘it will (not) rot’

b. +ATR

*i* *ē bālī bí=í bāl=lēʔ* ‘(don’t) stop!’

*é kǐīⁿ* *é kìí=nēʔ* ‘it did (not) fly’

*u* *è kǔⁿ* *bí=í kù=nēʔ* ‘(don’t) eat it!’

*è gǔⁿ* *bí=í gù=nēʔ* ‘(don’t) shorten it!’

*e* *è lě* *bí=í lè=rēʔ* ‘(don’t) look at it!’

*é wěē* *é wèé=rēʔ* ‘it went/didn’t go’

*è tòlóē è tòló=rēʔ* ‘it rotted’

*o* *è dàkó* *bí=í dàkó=rēʔ* ‘(don’t) catch it!’

The tone of the enclitic is consistently M. Adding the enclitic makes it easy to confirm tonal markings and final vowel length on verbs or other words that host it.

(xx4) host tones positive negative gloss

a. monosyllabics

H *èèⁿ dɛ́ɛ́* *èèⁿ dɛ́ɛ́=rɛ̄ʔ* ‘they got/didn’t get hot’

*mā náàⁿ jíɛ́* *mā náàⁿ jíé=rēʔ* ‘I saw/didn’t see them’

L *á=∅ nàà* *á=∅ nàà=nɛ̄ʔ* ‘he/she is(n’t) here’

M *á=∅ sà sáá à sá ꜛsáá=rɛ̄ʔ* ‘he/she will (not) come’

*má=∅ sà sáá mā sà sáá=rɛ̄ʔ* ‘I will/won’t come’

*á=∅ sà bɔ́ɔ́* *à sá ꜜbɔ́ɔ́=rɛ̄ʔ* ‘he/she will (not) exit’

<HM> *èèⁿ bíī* *èèⁿ bíī=rēʔ* ‘they caught/didn’t catch fire’

<LH> *è dɛ̀ɛ́* *è dɛ̀ɛ̀=rɛ̄ʔ* ‘it got/didn’t get hot’

*è bìí* *è bìí=rēʔ* ‘it caught/didn’t catch fire’

b. nonmonosyllabics

LL *é =∅sà tɔ̀lɔ̀* *è sá tòlɔ̀=rɛ̄ʔ* ‘it will (not) rot’

HH *sóóló=è* *sóólóó=∅=rēʔ* ‘it’s (not) five’

*yíʔé-rɛ́=ɛ̀* *yíʔé-rá=∅=rɛ̄ʔ* ‘it’s (not) a fish’

*é=∅ sà kónó* *è sá ꜜkónó=nēʔ* ‘it will (not) grow’

MM *mī-īló=∅=è* *mī-īló=∅=rēʔ* ‘(not) six’

*jū-rɔ́=∅=ɛ̀* *jū-rɔ́=∅=rɛ̄ʔ* ‘it is(n’t) millet’

*gbāā-rɛ́=∅=ɛ̀ gbāā-rá=∅=rɛ̄ʔ* ‘it is(n’t) a stick’

LH *à fìdí* *à fìdí=rēʔ* ‘he/she ran’

*wùl-á=∅=ɛ̀* *wùl-á=∅=rɛ̄ʔ* ‘it is(n’t) a dog’

*bòbó=∅=è bòbó=∅=rēʔ* ‘it is(n’t) Bobo Dioulasso (city)’

HM *ààⁿ fídī* *ààⁿ fídī=rēʔ* ‘they ran’

*è kìtàlíī* *è kìtàlí=rēʔ* ‘it got worse’

*mā ná bàʔríī* *mā ná bàʔrí=lēʔ* ‘I hit him/her’

HL *jí-nà=∅=ɛ̀ jí-nà=∅=nɛ̄ʔ* ‘it is(n’t) a market’

However, monomoraic <LH> words (certain imperative forms of verbs) flatten to L before the enclitic, since a #Cv̌Cv̄ word is not possible.

(xx5) positive imperative *è gǔⁿ* ‘Shorten it!’

prohibitive *bí=í gù=nēʔ* ‘Don’t shorten it!’

## Indicative AN categories

### Perfective system (including perfect)

Subjects of perfective verbs, pronominal and nonpronominal, have their regular tones (subject to local tone sandhi processes). Thus 1Sg pronoun *mā*, 3Pl pronoun *ààⁿ*, and so forth. This distinguishes perfectives from imperfectives, which require a tonal enclitic morpheme /H+=∅/, i.e. segmental zero plus H‑tone.

#### Perfective

The perfective is the standard way to report an already completed (i.e. past) event.

(xx1) a. *màⁿ sìbí dɔ̀ní(-ì)*

1Sg meat eat.meat.Pfv

‘I ate (the) meat.’

b. *á ∅ wèé bòbó*

3Sg 3SgNonhObj go.Pfv Bobo

‘He-or-she went to Bobo (city).’

The simple perfective is expressed by the E/I‑stem of the verb, with no post-subject inflectional particle. The E/I‑stem ends in a front vowel from the set {*i e ɛ*}, which may be subject to deletion (apocope). There is a strong preference for ‑ATR ɛ over +ATR *e* in perfective positives, but for the +ATR variant in perfective negatives.

For each intransitive or transitive stem there are two tonal forms, based on the pervasive split between 3Sg and non-3Sg NPs and pronouns. The 3Sg form begins with an L‑tone, the non-3Sg form with an H‑tone. Some examples involving morphologically intransitive verbs (those with no preverbal object) are in (xx2), with imperfective forms shown for comparison. As with all verbs, the negative enclitic is hosted directly by the verb only in the absence of postverbal constituents. If the verb and the negative enclitic are separated, the “positive” form of the perfective verb is used.

(xx2) Perfective verbs (intransitive)

positive negative

+3Sg -3Sg +3Sg -3Sg Ipfv (+3Sg) gloss

a. ends in *ɛ*

*monosyllabic*

*bɛ̌ bɛ́ bɛ̀ɛ̀=rɛ̄ʔ bɛ́ɛ́=rɛ̄ʔ bàà* ‘fall’

*dɛ̌ dɛ́ dɛ̀ɛ̀=rɛ̄ʔ dɛ́ɛ́=rɛ̄ʔ dɛ̀ɛ̀* ‘get hot’

*sɛ̌ sɛ́ sɛ̀ɛ̀=rɛ̄ʔ sɛ́ɛ́=rɛ̄ʔ sáá* ‘come’

*kpɛ̌ⁿ kpɛ́ⁿ kpɛ̀ɛ̀=nɛ̄ʔ kpɛ́ɛ́=nɛ̄ʔ kpááⁿ* ‘die’

*bɔ̀ɛ́* *bɔ́ɛ́ bɔ̀ɔ̀=rɛ̄ʔ bɔ́ɔ́=rɛ̄ʔ bɔ́ɔ́* ‘exit’

*sɔ̀ɛ́* *sɔ́ɛ́ sɔ̀ɔ̀=rɛ̄ʔ sɔ́ɔ́=rɛ̄ʔ sɔ́ɔ́* ‘enter’

*nonmonosyllabic*

*ɲìnɛ́* *ɲínɛ̄ ɲìnɛ́=nɛ̄ʔ ɲínɛ̄=nɛ̄ʔ ɲìnâ* ‘forget’ (VO)

*dɛ̀ʔɛ́* *dɛ́ʔɛ̄ dɛ̀ʔɛ́=rɛ̄ʔ dɛ́ʔɛ̄=rɛ̄ʔ dàʔà* ‘escape’

*tɛ̀ʔɛ́* *tɛ́ʔɛ̄ tèʔé=rēʔ téʔē=rēʔ táʔá* ‘go’

b. ends in *e* (rare)

*tòlóē tólē tòló=rēʔ tólō=rēʔ tɔ̀lɔ̀* ‘rot’

~ *tòléē*

~ *tòló*

c. ends in *i*

*bùlíī búlīī bùlú=rēʔ búlū=rēʔ búlɔ́* ‘go back’

*mììlíī míílíī mììlíí=rēʔ míílíí=rēʔ míílíyà* ‘think’

*sìdánī sídánī sìdán̄=nēʔ sídán=nēʔ sìdánà* ‘ascend’

*jàʔánī jáʔánī jàʔán̄=nēʔ jáʔán̄=nēʔ jàʔánà* ‘descend’

*fìdí fídī fìdí=rēʔ fídī=rēʔ fìdì* ‘run’

Using ‘fall’ as the example, (xx3) is the pronominal-subject conjugation and includes some nonpronominal subjects showing that singular nouns require the same tonal form as 3Sg pronouns (xx3b). Of interest is the fact that the M‑toned subject pronouns (1Sg, 2Sg, 2Pl) induce M‑Spreading into the negative, but not positive, perfective verbs.

(xx3) X ‘X fell’ ‘X didn’t fall’

a. non-3Sg perfective

*pronouns, M-toned*

1Sg *mā bɛ́ɛ́ mā bɛ̄ɛ̄=rɛ̄ʔ*

2Sg *wō bɛ́ɛ́ wō bɛ̄ɛ̄=rɛ̄ʔ*

2Pl *ēēⁿ bɛ́ɛ́ ēēⁿ bɛ̄ɛ̄=rɛ̄ʔ*

*pronouns, L-toned*

1Pl *mùʔùⁿ bɛ́ɛ́ mùʔùⁿ bɛ́ɛ́=rɛ̄ʔ*

3PlHum *ààⁿ bɛ́ɛ́ ààⁿ bɛ́ɛ́=rɛ̄ʔ*

3PlNonh *èèⁿ bɛ́ɛ́ èèⁿ bɛ́ɛ́=rɛ̄ʔ*

*plural noun*

‘people’ *mɛ̀ʔɛ̀-ná-àⁿ bɛ́ɛ́ mɛ̀ʔɛ̀-ná-àⁿ bɛ́ɛ́=rɛ̄ʔ*

*personal name*

‘Bakari’ *bákàr bɛ́ɛ́ bákàr bɛ́ɛ́=rɛ̄ʔ*

b. 3Sg perfective

*pronouns*

3SgHum *à bɛ̀ɛ́ à bɛ̀ɛ̀=rɛ̄ʔ*

3SgNonh *è bɛ̀ɛ́ è bɛ̀ɛ̀=rɛ̄ʔ*

*singular nouns*

‘person’ *mɛ̀ʔɛ́ⁿ bɛ̀ɛ́* *mɛ̀ʔɛ́ⁿ bɛ̀ɛ̀=rɛ̄ʔ* (< *mɛ̀ʔɛ̀ⁿ* )

‘wall’ *kógó bɛ̀ɛ́ kógó bɛ̀ɛ̀=rɛ̄ʔ*

‘fish’ *yíʔé bɛ̀ɛ́* *yíʔé bɛ̀ɛ̀=rɛ̄ʔ*

‘onion’ *jābá bɛ̀ɛ́* *jābá bɛ̀ɛ̀=rɛ̄ʔ* (< *jābā* )

‘brick’ *tòfá bɛ̀ɛ́* *tòfá bɛ̀ɛ̀=rɛ̄ʔ*

Perfective forms for transitives that can take a range of objects are in (xx4). The form in the left-hand column, beginning with an L‑tone, follows a 3Sg object pronoun or a singular NP based on a regular noun. The form in the second column, beginning with an H‑tone, follows any other object (all plurals, 1Sg, 2Sg, personal names).

(xx4) Perfective verbs (transitive)

positive negative

+3Sg -3Sg +3Sg -3Sg Ipfv (+3Sg) gloss

a. ends in *ɛ*

*monosyllabic*

*bɛ̀ɛ́ bɛ́ɛ́ bɛ̀ɛ̀=rɛ̄ʔ bɛ́ɛ́= rɛ̄ʔ bàà* ‘put down’

*dɛ̀ɛ́ dɛ́ɛ́ dɛ̀ɛ̀=rɛ̄ʔ dɛ́ɛ́= rɛ̄ʔ dɛ̌ɛ̄* ‘heat (sth)’

*kìɛ́ kíɛ́ kìɛ̀=rɛ̄ʔ kíɛ́=rɛ̄ʔ kìɛ̀* ‘put (in sth)’

*dɔ̀ɛ́ⁿ dɔ́ɛ̄ⁿ dɔ̀ɔ́=nɛ̄ʔ dɔ́ɔ̄=nɛ̄ʔ dɔ̌ɔ̀ⁿ* ‘step on’

*jɔ̀ⁿɛ́ⁿ jɔ́ɛ̄ⁿ jɔ̀ɔ́=nɛ̄ʔ jɔ́ɔ̄=nɛ̄ʔ jɔ̌ɔ̀ⁿ* ‘rob’

*nonmonosyllabic CaCa, ɛ extends to initial syllable*

*dɛ̀ʔɛ́ɛ̄ dɛ́ʔɛ̀ɛ̀ dɛ̀ʔɛ́=rɛ̄ʔ dɛ́ʔɛ̄=rɛ̄ʔ dáʔá* ‘let go’

*sɔ̀ʔɛ́ɛ̄ sɔ́ʔɛ̄ɛ̄ sɔ̀ʔɔ́=rɛ̄ʔ sɔ́ʔɔ̄=rɛ̄ʔ sɔ̀ʔɔ̀* ‘catch’

*mɔ̀mɔ́ɛ̄ⁿ mɔ̀mɔ́ɔ̄=nɛ̄ʔ mɔ̀mɔ́ɔ̀ⁿ* ‘carry on back’

*mɔ́mɔ́ɛ̄ⁿ mɔ́mɔ́ɔ̄=nɛ̄ʔ*

b. ends in *i*

*gìlénī gílénī gìlén̄=nēʔ gílén̄=nēʔ gìlénà* ‘hang up’

*bàʔrí báʔrī bàʔl=lēʔ bâʔl=lēʔ bàʔrà* ‘hit’

*dàkóī dákóī dàkóō=rēʔ dákóō=rēʔ dàkɔ̂* ‘catch (sth thrown)’

The tonal form of the verb depends on the category of the immediately preceding object, whether pronominal or nonpronominal. Examples with ‘he/she hit X’ are in (xx5). X here is the direct object. Of interest is the shift of 3Sg subject à to á before a 3Pl pronoun (xx3a). This permits a distinction between ‘he/she saw you-Pl’ and ‘he/she saw them-Nonh’.

(xx3) X ‘he/she hit X’ ‘he/she didn’t hit X’

a. take “other” perfective form

*pronouns*

1Sg *à mā báʔrī à mā báʔr̄=rēʔ*

2Sg *à wō báʔrī à wō báʔr̄=rēʔ*

1Pl *à mùʔùⁿ báʔrī à mùʔùⁿ báʔr̄=rēʔ*

2Pl *à ēēⁿ báʔrī à ēēⁿ báʔr̄=rēʔ*

3PlHum *á ààⁿ báʔrī á ààⁿ báʔr̄=rēʔ*

~ *à náà(à)ⁿ báʔrī* ~ *à náà(à)ⁿ báʔr̄=rēʔ*

3PlNonh *á èèⁿ báʔrī á èèⁿ báʔr̄=rēʔ*

~ *à níì(ì)ⁿ báʔrī* ~ *à níì(ì)ⁿ báʔr̄=rēʔ*

*plural noun*

‘people’ *à mɛ̀ʔɛ̀-ná-àⁿ báʔrī à mɛ̀ʔɛ̀-ná-àⁿ báʔr=rēʔ*

b. 3Sg perfective form

*pronouns*

3SgHum *à ná bàʔrí à ná bàʔŕ=rēʔ*

~ *á bàʔrí* ~ *á bàʔŕ=rēʔ*

3SgNonh *à ní bàʔrí à ní bàʔŕ=rēʔ*

~ *á bàʔrí* ~ *á bàʔŕ=rēʔ*

*singular nouns*

‘person’ *à mɛ̀ʔɛ́ⁿ bàʔrí* *à mɛ̀ʔɛ́ⁿ bàʔŕ=rēʔ* (< *mɛ̀ʔɛ̀ⁿ* )

‘wall’ *à kógó bàʔrí* *à kógó bàʔŕ=rēʔ* (< *kógō* )

‘fish’ *à* *yìʔé bàʔrí* *à* *yìʔé bàʔŕ=rēʔ* (< *yíʔé* )

‘onion’ *à jābá bàʔrí* *à jābá bàʔŕ=rēʔ* (< *jābā* )

‘brick’ *à tòfá bàʔrí* *à tòfá bàʔŕ=rēʔ* (< *tòfá* )

For the perfective paradigm of pseudo-transitive ‘go’, see §10.1.1.2.

#### Experiential perfect ‘have ever’ (*dú* )

The sense ‘have (ever)’ is expressed by a construction with *dú* following a form of the main verb.

(xx1) a. *wō gbǎⁿ jìì / kpèèⁿ dú=wɔ̀*

2Sg elephant see / kill ExpPf=Q

‘Have you-Sg ever seen/killed an elephant?’ (< *gbàⁿ* )

*b. māⁿ gbǎⁿ jìì / kpèèⁿ dú*

1Sg elephant see / kill ExpPf

‘I have (once) seen/killed an elephant.’

#### Recent perfect

(xx1) *[sàá sèè] dɛ́kɛ́ⁿ*

[house construction] finish

‘The house has already been built.’

### Imperfective positive system

The present (no preverbal inflectional particle) and future (preverbal inflectional particle *sà* ) both make use of the imperfective stem; the two are distinguished by a post-subject particle *sà* which occurs in the future. The comparison of perfective and imperfective stems shows that the imperfective generally shows a lexically unpredictable vowel quality.

The other indicative category, progressive, has a suffix *‑yà* and no preverbal inflectional particle.

In some cases, the vocalism of the imperative resembles the imperfective stem, but in other cases the imperative is truncated or ends in *i* versus *a* different vowel for the imperfective.

#### Enclitic /H+=∅/ on subjects in the imperfective system

In comparison with perfectives, imperfective-system predicates (present, future, and progressive) require a form of the subject pronoun with the final (or only) tone raised. Conjugation paradigms of the present are in (xx1).

(xx1) ‘exit (v)’ ‘fall’

1Sg *má ꜜbɔ́ɔ́ má bàà*

2Sg *wó ꜜbɔ́ɔ́ wó bàà*

1Pl *mùʔúⁿ ꜜbɔ́ɔ́ mùʔúⁿ bàà*

2Pl *ēéⁿ ꜜbɔ́ɔ́ ēéⁿ bàà*

3SgHum *á ꜜbɔ́ɔ́ á bàà*

3SgNonh *é ꜜbɔ́ɔ́ é bàà*

3PlHum *àáⁿ ꜜbɔ́ɔ́ àáⁿ bàà*

3PlNonh *èéⁿ ꜜbɔ́ɔ́ èéⁿ bàà*

The tone-raising occurs not only before L‑tones (‘fall’), but also before H‑tones (‘exit’), which are downstepped. In the paradigm of ‘fall’, the tones of the plural subject pronouns could be accounted for by Final Tone-Raising, since the verb begins with an L‑tone. However, this would not account for the other subject tones for ‘fall’, and it would not account for any of the subject tones for ‘exit’. It is therefore necessary to recognize an enclitic /H+=∅/, segmentally zero but with an H‑tone that is realized on the final mora (or only mora in some cases) of the pronoun. (xx1) can therefore be revised notationally as (xx2). The presence of *=∅* in the transcription is a hint that the H‑tone has attached to the host pronoun.

(xx2) ‘exit (v)’ ‘fall’

1Sg *má=∅ ꜜbɔ́ɔ́ má=∅ bàà*

2Sg *wó=∅ ꜜbɔ́ɔ́ wó=∅ bàà*

1Pl *mùʔúⁿ=∅ ꜜbɔ́ɔ́ mùʔúⁿ=∅ bàà*

2Pl *ēéⁿ=∅ ꜜbɔ́ɔ́ ēéⁿ=∅ bàà*

3SgHum *á=∅ ꜜbɔ́ɔ́ á=∅ bàà*

3SgNonh *é=∅ ꜜbɔ́ɔ́ é=∅ bàà*

3PlHum *àáⁿ=∅ ꜜbɔ́ɔ́ àáⁿ=∅ bàà*

3PlNonh *èéⁿ=∅ ꜜbɔ́ɔ́ èéⁿ=∅ bàà*

/H+=∅/ also occurs after nonpronominal subject NPs. It is audible in (xx3a). For nouns like ‘fish’ in (xx3b) that already end in an H‑tone, there is no audible change. For those like ‘cat’ in (xx3c) and ‘liver’ in (xx3d) whose final two syllables have a falling HL or ML contour, the fall is limited to M‑tone (here functioning as a kind of upstepped L‑tone). The same is true of plurals with final *-àⁿ* (xx3e).

(xx3) a. *bákàrí=∅ ꜛbɔ́ɔ́* / *bàà*

B=Ipfv exit.Ipfv / fall.Ipfv

‘Bakari goes out/falls (regularly).’ (< *bákàrì* )

b. *yíʔé-rá=∅ ꜛbɔ́ɔ́* / *bàà*

fish-Nom=Ipfv exit.Ipfv / fall.Ipfv

‘The fish goes out/falls (regularly).’ (< *yíʔé-rá* )

c. *jàŋgbáá-rā=∅ ꜛbɔ́ɔ́* / *bàà*

cat-Sg=Ipfv exit.Ipfv / fall.Ipfv

‘The cat goes out/falls (regularly).’ (< *jàŋgbáá-rà* )

d. *búʔū-nā=∅ ꜛbɔ́ɔ́* / *bàà*

liver-Sg=Ipfv exit.Ipfv / fall.Ipfv

‘The liver come out/falls (regularly).’ (< *búʔū-nà* )

e, *yíʔé-rá-āⁿ=∅ ꜛbɔ́ɔ́* / *bàà*

fish-Nom-Pl=Ipfv exit.Ipfv / fall.Ipfv

‘(The) fish-Pl go out/fall (regularly).’ (< *yíʔé-rá-àⁿ* )

Imperfective enclitic /H+=∅/ can be equated morphemically with the locational ‘be’ enclitic /H+=∅/. The latter is exemplified in (xx4), and described more fully in §11.xxx below.

(xx4) *bákàrí=∅ [kálá tɔ̀]*

B=be [home in]

‘Bakari is at home.’

The same tone-raising of imperfective subject pronouns occurs when the subject is followed by a future particle *sà* (xx5a) or, in transitives, by an object NP or pronoun.

(xx5) a. *má=∅* / *mùʔúⁿ=∅* / *àáⁿ=∅ sà bɔ́ɔ́*

1Sg=Ipfv / 1Pl=Ipfv / 3PlHum=Ipfv Fut exit.Ipfv

‘I/we/they will go out.’

b. *má=∅* / *mùʔúⁿ=∅* / *àáⁿ=∅ yíʔé dɔ̀nɔ̀*

1Sg=Ipfv / 1Pl=Ipfv / 3PlHum=Ipfv fish eat.meat.Ipfv

‘I/we/they eat fish.’

c. *á=∅ ààⁿ bāʔrā*

3SgHum=Ipfv 3PlHum hit.Ipfv

‘He/She hits them (regularly).’

However, imperfective 3SgHum *á=∅* and 3SgNonh *é=∅* also lower to L‑tone the the onset (first syllable, or onset of monosyllable) of following H‑toned or H‑initial words like *yíʔé* ‘fish’, *yí* ‘water’, and *nínáʔā* ‘scorpion’ (xx6a‑c), and of following M‑toned words like *bāʔā* ‘porridge’, *jū* ‘millet’, and *kūmɛ̄ɛ̄ⁿ* ‘grain-based meal’ (xx6d‑f). For example, contrast *yìʔé* in (xx6a) with *yíʔé* after other pronouns in (xx5b) above. The final H‑tone of the M‑toned words before L‑toned verbs in (xx6d‑f) is due to Final Tone-Raising (tone sandhi) and is unrelated to the tone-lowering.

(xx6) a. *á=∅ yìʔé dɔ̀nɔ̀*

3SgHum=Ipfv fish eat.meat.Ipfv

‘He/She eats fish.’ (< *yíʔé* )

b. *é=∅ yǐ mìyàⁿ*

3SgNonh=Ipfv water drink.Ipfv

‘It (=sheep) drinks water.’ (< *yí* )

c. *á=∅ nìnáʔā kpààⁿ*

3SgHum=Ipfv scorpion kill.Ipfv

‘He/She kills a scorpion (regularly).’ (< *nínáʔā* )

d. *á=∅ bàʔá mìyàⁿ*

3SgHum=Ipfv porridge drink.Ipfv

‘He/She drinks porridge.’ (< *bāʔā* )

e. *á=∅ jǔ kùnɔ̀*

3SgHum=Ipfv millet eat.Ipfv

‘He/She eats millet.’ (< *jū* )

f. *á=∅ kùmɛ̄ɛ́ⁿ kùnɔ̀*

3SgHum=Ipfv meal eat.Ipfv

‘He/She eats a meal.’ (< *kūmɛ̄ɛ̄ⁿ* )

This special tone-lowering is also triggered by singular nonpronominal subject NPs based on regular nouns (xx7a), but not by their plurals (xx7b) or by singular personal names (xx7c).

(xx7) a. *jàŋgbáá-rà=∅ yìʔé dɔ̀nɔ̀*

cat-Nom=Ipfv fish eat.meat.Ipfv

‘A/The cat eats fish.’

b. *jàŋgbáá-rà-àⁿ=∅ yíʔé dɔ̀nɔ̀*

cat-Nom-Pl=Ipfv fish eat.meat.Ipfv

‘(The) cats eat fish.’

c. *bákàrí=∅ yíʔé dɔ̀nɔ̀*

B=Ipfv fish eat.meat.Ipfv

‘Bakari eats fish.’

#### Present

This is a general present, usually denoting regular or habitual events, like the English general present (*she sings*). It is expressed by the imperfective positive verb form. The subject is followed by enclitic /H+=∅/, which adds an H‑tone (not always audible after nonpronominal subjects). Intransitive verbs have an invariant imperfective form, not varying tonally (or otherwise) by subject category. As indicated in the preceding section, the imperfective of a transitive verb is tonally sensitive to the difference between preceding 3Sg and non-3Sg objects.

This inflectional category is a general present, for example describing regularly occurring activities.

(xx1) a. *sóʔóó-sòʔò má=∅ nā bàʔrà*

day-day 1Sg=Ipfv 3SgHumObj hit.Ipfv

‘Every day I hit-Present him/her.’

b. *sóʔóó-sòʔò má=∅ nààⁿ báʔrá*

day-day 1Sg=Ipfv 3PlHumObj hit.Ipfv

‘Every day I hit-Present them.’

c. *má=∅ sìbí bègà*

1Sg=Ipfv meat cut.Ipfv

‘I (regularly) cut-Present (the) meat.’ (< *sìbì* )

d. *má=∅ yíʔé-rá-àⁿ bégá*

1Sg=Ipfv fish-Nom-Pl cut.Ipfv

‘I (regularly) cut-Present (the) fish-Pl.’

e. *ɲɛ́ɛ́-ɲɛ̀ má=∅ nī wàá bòbó*

year-year 1Sg=Ipfv 3SgNonhObj go.Ipfv Bobo

‘Every year I go to Bobo (city).’

Conjugation paradigms of the present of two intransitive verbs with initial L‑tone are in (xx1). They illustrate the tone-raising enclitic on the subject (inaudible on singular ‘woman’ because of its falling tone pattern), and the constant form of the imperfective verb. For additional paradigms see the preceding section.

(xx2) ‘run’ ‘descend’

1Sg *má=∅ fìdɛ̂ má=∅ jàʔánà*

2Sg *wó=∅ fìdɛ̂ wó=∅ jàʔánà*

1Pl *mùʔúⁿ=∅ fìdɛ̂ mùʔúⁿ=∅ jàʔánà*

2Pl *ēéⁿ=∅ fìdɛ̂ ēéⁿ=∅ jàʔánà*

3SgHum *á=∅ fìdɛ̂ á=∅ jàʔánà*

3SgNonh *é=∅ fìdɛ̊ é=∅ jàʔánà*

3PlHum *àáⁿ=∅ fìdɛ̂ àáⁿ=∅ jàʔánà*

3PlNonh *èéⁿ=∅ fìdɛ̊ èéⁿ=∅*

‘woman’ *ɲáā-nà=∅* …

… *fidɛ̂* … *jàʔánà*

‘women’ *ɲáā-nà-áⁿ=∅* …

… *fidɛ̂* … *jàʔánà*

Two more paradigms, this time with intransitive verbs whose imperfectives normally begin with H‑tone, are in (xx3). The H‑tone is downstepped after the final H‑tone of the subject.

(xx3) ‘think’ ‘go’

1Sg *má=∅ ꜜmíílíyà má=∅ ꜜtáʔá*

2Sg *wó=∅ ꜜmíílíyà wó=∅ ꜜtáʔá*

1Pl *mùʔúⁿ=∅ ꜜmíílíyà mùʔúⁿ=∅ ꜜtáʔá*

2Pl *ēéⁿ=∅ ꜜmíílíyà ēéⁿ=∅ ꜜtáʔá*

3SgHum *á=∅ ꜜmíílíyà á=∅ ꜜtáʔá*

3SgNonh *é=∅ ꜜmíílíyà é=∅ ꜜtáʔá*

3PlHum *àáⁿ=∅ ꜜmíílíyà àáⁿ=∅ ꜜtáʔá*

3PlNonh *èéⁿ=∅ ꜜmíílíyà èéⁿ=∅ ꜜtáʔá*

‘woman’ *ɲáā-nà=∅* …

… *míílíyà*

‘women’ *ɲáā-nà-áⁿ=∅* …

… *ꜜmíílíyà*

In the case of ‘go’, the downstepped H sounds more like L than M, but it behaves as H‑toned phonologically. It does not undergo Final Tone-Raising before an L‑tone, and its pitch is higher than that of a following M‑toned negative enclitic *=rɛ̄ʔ*.

(xx4) a. *má=∅ ꜜtáʔá bòbó*

1Sg=Ipfv go.Ipfv B

‘I go (regularly) to Bobo Dioulasso.’

b. *má=∅ ꜜtáʔá=rɛ̄ʔ*

1Sg=Ipfv go.Ipfv=Neg

‘I don’t go.’

Each intransitive verb has an invariant positive form and an invariant negative form in the present. A sample of intransitives showing positive/negative relationships is in (xx5).

(xx5) Intransitive imperfectives

positive negative gloss

a. H-toned

*bɔ́ɔ́ bɔ́ɔ́=rɛ̄ʔ* ‘exit (v)’

*sɔ́ɔ́ sɔ́ɔ́=rɛ̄ʔ* ‘enter’

*kpááⁿ kpáá=nɛ̄ʔ* ‘die’

*sáá sáá=rɛ̄ʔ* ‘come’

*táʔá táʔá=rɛ̄ʔ* ‘go’

*búlɔ́ búlɔ́=rɛ̄ʔ* ‘go back’

b. L-toned

*bàà bàà=rɛ̄ʔ* ‘fall’

*dɛ̀ɛ̀ dɛ̀ɛ̀=rɛ̄ʔ* ‘become hot’

c. contour-toned

*fìdɛ̂ fìdɛ́ɛ̀=rɛ̄ʔ* ‘run’

*míílíyà míílíyà=rɛ̄-?* ‘think’

*sìdánà sìdánà=nɛ̄ʔ* ‘ascend’

*jàʔánà jàʔánà=nɛ̄ʔ* ‘descend’

A sample transitive conjugation is (xx6). The tonal form of the verb depends on the category of the immediately preceding object: *bàʔrà* after 3Sg, *báʔrá* after non-3Sg. The third person object pronouns have their usual *n*‑initial form, and (since they begin with an H‑tone) they are downstepped after the H‑tone of the imperfective subject enclitic.

(xx6) object ‘he/she hits \_\_’

a. 1Sg *á=∅ mà báʔrá*

2Sg *á=∅ wò báʔrá*

2Pl *á=∅ èèⁿ báʔrá*

1Pl *á=∅ mùʔùⁿ báʔrá*

3PlHum *á=∅ ꜜnáàⁿ báʔrá*

3PlNonh *á=∅ ꜜníìⁿ báʔrá*

‘the children’ *á=∅ dí-rá-àⁿ báʔrá*

‘Bakari’ *á=∅ bákàrì báʔrá*

b. 3SgHum *á=∅ ꜜná bàʔrà*

3SgNonh *á=∅ ꜜní bàʔrà*

‘the child’ *á=∅ dí bàʔrà*

More examples of transitive presents are in (xx7)

(xx7) Transitive imperfectives

positive negative gloss

*+3Sg -3Sg +3Sg -3Sg*

a. level-toned

*bàʔrà báʔrá bàʔr̀=rɛ̄ʔ báʔŕ=rɛ̄ʔ* ‘hit’’

*bɛ̀gɛ̀ bɛ́gɛ́ bɛ̀gɛ̀=rɛ̄ʔ bɛ́gɛ́=rɛ̄ʔ* ‘cut’

*bìlɛ̀ bílɛ́ bìlɛ̀=rɛ̄ʔ bílɛ́=rɛ̄ʔ* ‘give’

*bɔ̀nɔ̀ bɔ̀nɔ̀ bɔ̀nɔ̀=nɛ̄ʔ bɔ́nɔ́=nɛ̄ʔ* ‘pour out’

*dùtɔ̀lɔ̀ dútɔ́lɔ́ dùtɔ̀lɔ̀=rɛ̄ʔ dútɔ́lɔ́=rɛ̄ʔ* ‘point at’

*dìmìnàà dímínáá dìmìnàà=nɛ̄ʔ dímínáá=nɛ̄ʔ* ‘hurt (sb)’

b. contour-toned

*dàkɔ̂ dákɔ̂ dàkɔ́ɔ̀=rɛ̄ʔ dákɔ́ɔ̀=rɛ̄ʔ* ‘catch (sth thrown)’

*kùlɔ́nɔ̀ kúlɔ́nɔ̀ kùlɔ́nɔ̀=nɛ̄ʔ kúlɔ́nɔ̀=nɛ̄ʔ* ‘tie’

*dùtɔ́ʔɔ́nɔ̀ dútɔ́ʔɔ́nɔ̀ dùtɔ́ʔɔ́nɔ̀=nɛ̄ʔ dútɔ́ʔɔ́nɔ̀=nɛ̄ʔ* ‘cover (sb)’

*fìrìkíyɛ̀ fíríkíyɛ̀ fìrìkíyɛ̀=rɛ̄ʔ fíríkíyɛ̀=rɛ̄ʔ* ‘hobble (animal)’

#### Future (*sà* )

Future particle *sà* occurs in post-subject position, preceding any objects as well as the verb, which takes the same imperfective form as in the present.

(xx1) has the positive and negative conjugations of an intransitive verb. The positive conjugation is straightforward. The subject has the /H+=∅/ enclitic typical of the imperfective system, and the future particle *sà* is L‑toned. In the negative conjugation, there is no enclitic on the subject. The M‑toned subject pronouns spread the M into the future particle, which surfaces as sā (xx1a). The other pronouns are followed by H‑toned *sá* (xx1b).

(xx1) subject ‘will run’ ‘will not run’

a. 1Sg *má=∅ sà fìdɛ̂ mā sā fìdɛ́ɛ̀=rɛ̄ʔ*

2Sg *wó=∅ sà fìdɛ̂ wō sā fìdɛ́ɛ̀=rɛ̄ʔ*

2Pl *ēéⁿ=∅ sà fìdɛ̂ ēēⁿ sā fìdɛ́ɛ̀=rɛ̄ʔ*

b. 1Pl *mùʔúⁿ=∅ sà fìdɛ̂ mùʔùⁿ sá fìdɛ́ɛ̀=rɛ̄ʔ*

3SgHum *á=∅ sà fìdɛ̂ à sá fìdɛ́ɛ̀=rɛ̄ʔ*

3SgNonh *é=∅ sà fìdɛ̂ è sá fìdɛ́ɛ̀=rɛ̄ʔ*

3PlHum *àáⁿ=∅ sà fìdɛ̂ ààⁿ sá fìdɛ́ɛ̀=rɛ̄ʔ*

3PlNonh *èéⁿ=∅ sà fìdɛ̂ èèⁿ sá fìdɛ́ɛ̀=rɛ̄ʔ*

c. ‘the child’ *dí-rá=∅ sà fìdɛ̂ dí-rá sá fìdɛ́ɛ̀=rɛ̄ʔ*

‘the children’ *dí-rá-āⁿ=∅ sà fìdɛ̂ dí-rá-àⁿ sá fìdɛ́ɛ̀=rɛ̄ʔ*

In (xx2), the imperfective verb is H‑toned *táʔá*. In the negative conjugation, it is downstepped after the H‑toned variant *sá* (xx2b). In the negative column of (xx2a), the sā appears to drop slightly in pitch before the H‑toned verb. I take this to be a low-level dissimilation, and notice that 2Pl *ēēⁿ* has flat pitch, as it would before an M (or H) tone rather than an L‑tone.

(xx2) subject ‘will go’ ‘will not go’

a. 1Sg *má=∅ sà táʔá mā sā táʔá=rɛ̄ʔ*

2Sg *wó=∅ sà táʔá wō sā táʔá=rɛ̄ʔ*

2Pl *ēéⁿ=∅ sà táʔá ēēⁿ sā táʔá=rɛ̄ʔ*

b. 1Pl *mùʔúⁿ=∅ sà táʔá mùʔùⁿ sá ꜛtáʔá=rɛ̄ʔ*

3SgHum *á=∅ sà táʔá à sá ꜜtáʔá=rɛ̄ʔ*

3SgNonh *é=∅ sà táʔá è sá ꜛtáʔá=rɛ̄ʔ*

3PlHum *àáⁿ=∅ sà táʔá ààⁿ sá ꜛtáʔá=rɛ̄ʔ*

3PlNonh *èéⁿ=∅ sà táʔá èèⁿ sá ꜛtáʔá=rɛ̄ʔ*

c. ‘the child’ *dí-rá=∅ sà táʔá dí-rá sá ꜛtáʔá=rɛ̄ʔ*

‘the children’ *dí-rá-āⁿ=∅ sà táʔá dí-rá-àⁿ sá ꜛtáʔá=rɛ̄ʔ*

Transitive verbs are preceded by an object (NP or pronoun). The verb is therefore separated from the future particle *sà* and does not interact with it tonally. The verb is imperfective in form (as in the present) and has the usual tonal variants depending on whether it is immediately preceded by a 3Sg object (including a singular NP based on a regular noun) or by a non-3Sg object (everything else). ‘Hit’ is therefore L‑toned in (xx2a) but H‑toned in (xx2b).

(xx2) a. *má=∅ sà dí bàʔrà*

1Sg=Ipfv Fut child hit.Ipfv

‘I will hit the child.’

b. *má=∅ sà dí-rá-àⁿ báʔrá*

1Sg=Ipfv Fut child hit.Ipfv

‘I will hit the child.’

However, the object immediately follows *sà*, and we must consider the interactions between *sà* and object pronouns.

We have seen above that *sà* itself is L‑toned after all subjects in the positive conjugation. (xx3) shows how this *sà* combines with object pronouns in positive transitives. In (xx1a), the usually M‑toned pronouns become H‑toned as objects after *sà*. Since in this construction they are always followed by an H‑initial verb, this verb is downstepped. In (xx3b‑d), the other object pronouns have their usual L‑toned forms. The future particle is L‑toned *sà* before 1st/2nd person objects (xx3a‑b), but becomes H‑toned *sá* before third person objects (xx3c‑d). Nonhuman third person forms have vowel quality *i* rather than *e* in the contraction. In 3Pl object forms *sá=à(à)ⁿ* and *sí=ì(ì)ⁿ*, the length of the object pronoun vowel is usually not audible because of the contraction with the vowel of *sá*.

(xx3) Object pronouns in the positive transitive future

object *sà* plus object example with ‘he/she hit’

a. 1Sg *sà má* *á=∅ sà má ꜜbáʔrá*

2Sg *sà wó* *á=∅ sà wó ꜜbáʔrá*

2Pl *sà ééⁿ á=∅ sà ééⁿ ꜜbáʔrá*

b. 1Pl *sà mùʔùⁿ á=∅ sà mùʔùⁿ báʔrá*

c. 3PlHum *sá=à(à)ⁿ á=∅ sá=à(à)ⁿ báʔrá*

3PlNonh *sí=ì(ì)ⁿ á=∅ sí=ì(ì)ⁿ báʔráà*

d. 3SgHum *sá=à* *á=∅ sá=à bàʔrà*

3SgNonh *sí=ì á=∅ sí=ì baʔrà*

When a future clause is negated, we saw above that there is a split in subject pronouns between those that take sā (due to M‑Spreading) and those that take *sá*. It turns out that this tonal split has no effect on a following object pronoun. Using 1Sg *mā sā* (or, with first person object, 2Sg *wō sā*) and human 3Sg *à sá* as examples, (xx4) shows how these combine with object pronouns. The verb is ‘hit’ in all examples. In (xx4a), the three normally M‑toned pronouns become L‑toned. The other object pronouns have their usual L‑toned forms (xx4b‑c). Therefore all object pronouns in the future negative are L‑toned.

(xx4) Object pronouns in the negative future transitive

object *mā/wō sā* plus object *à sá* plus object

a. 1Sg *wō sā mà báʔrá-rɛ̄ʔ à sá mà báʔrá=rɛ̄ʔ*

2Sg *mā sā wò báʔrá-rɛ̄ʔ à sá wò báʔrá=rɛ̄ʔ*

2Pl *mā sā èèⁿ báʔrá-rɛ̄ʔ à sá èèⁿ báʔrá=rɛ̄ʔ*

b. 1Pl *wō sā mùʔùⁿ báʔrá-rɛ̄ʔ* *à sá mùʔùⁿ báʔrá=rɛ̄ʔ*

3PlHum *mā sā=à(à)ⁿ báʔrá-rɛ̄ʔ à sá=à(à)ⁿ báʔrá=rɛ̄ʔ*

3PlNonh *mā sī=ì(ì)ⁿ báʔrá-rɛ̄ʔ à sí=ì(ì)ⁿ báʔrá=rɛ̄ʔ*

c. 3SgHum *mā sā=à bàʔrà-rɛ̄ʔ à sá=à bàʔrà=rɛ̄ʔ*

3SgNonh *mā sī=ì bàʔrà-rɛ̄ʔ á sí=ì bàʔrà=rɛ̄ʔ*

#### Progressive (*-ya* )

The progressive is expressed by its own special verb form ending in *‑yá ~ -yà*. The subject has the same /H+=∅/ enclitic as the other imperfective system categories. The subject pronouns therefore have the same H‑toned form in progressive (xx1a) as in present (xx1b), in contrast to their non-high tonal forms in perfective (xx1c).

(xx1) a. *má=∅* / *á=∅ sìbí bègè-yá*

1Sg / 3SgHum meat cut-Prog

‘I am/He-or-she is cutting (the) meat.’ (< *sìbì* )

b. *má=∅* / *á=∅ sìbí bègà*

1Sg / 3SgHum meat cutIpfv

‘I cut/He-or-she cuts the meat (regularly).’

c. *mā* / *à sìbí bègé(è)*

1Sg / 3SgHum meat cut.Pfv

‘I/He-or-she cut-Past the meat.’

Intransitive progressives have only a single tonal form, since progressive verbs directly follow the subject with its imperfective clitic. Examples showing their morphophonological relationship to the perfective and imperfective are in (xx2). The tones of the progressive are closest to those of the (intransitive) imperfective. This is probably because both of these forms are invariant and reveal lexical tones, whereas the intransitive perfective is subject to tonal variation depending on the category of the subject. The vocalism of the progressive is closely related to that of the perfective, except that ‑ATR vowels shift to +ATR.

(xx2) Intransitive progressives compared to imperfective & perfective

progressive Pfv +3Sg Ipfv gloss

a. *ɔ* to *o* before *-ya* suffix

*bó-yá* *bɔ̀ɛ́ bɔ́ɔ́* ‘exit’

*só-yá* *sɔ̀ɛ́ sɔ́ɔ́* ‘enter’

b. *a* to *e* before *-ya* suffix

*sé-yá* *sɛ̌ sáá* ‘come’

*kpéⁿ-yá* *kpɛ̌ⁿ kpááⁿ* ‘die’

*dè-yá* *dɛ̌ dɛ̀ɛ̀* ‘become hot’

*ɲìné-yà ɲìnɛ́ ɲìnâ* ‘forget’ (Verb X)

*tèʔè-yá* *tɛ̀ʔɛ́ tàʔà* ‘go’

*jìímè-yá jìímɛ̄ jìímàà* ‘weep’

c. *i* or *u* before *-ya* suffix

*imperfective ends in a*

*sìdánī-yà* *sìdánī sìdánà* ‘ascend’

*jàʔánī-yà* *jàʔánī jàʔánà* ‘descend’

*imperfective ends in ɛ*

*míílí-yà* *mììlíī míílíyà* ‘think’

*fìdí-yà* *fìdíì fìdɛ̂* ‘run’

*imperfective ends in ɔ*

*búlú-yá* *bùlíì búlɔ́* ‘go back’

Transitive progressives, like other transitive verbs, are subject to tonal modifications based on whether the immediately preceding object is 3Sg or non-3Sg as explained in §3.xxx and elsewhere.

(xx3) a. *má=∅ ꜜná bàʔrì-yá*

1Sg=∅ 3SgHumObj hit-Prog

‘I am hitting him/her.’

b. *má=∅ ꜜnáàⁿ báʔrí-yà*

1Sg=∅ 3PlHumObj hit-Prog

‘I am hitting them.’

Some further examples of the forms of transitive progressives are in (xx4).

(xx4) progressive +3Sg progressive -3Sg gloss

*bè-yá béé-yà* ‘put down’

*dè-yá dé-yà* ‘heat (sth)’

*dɔ̀ⁿ-yá dóⁿ-yà* ‘step on’

*jǒⁿ-yà jóⁿ-yà* ‘rob’

*bàʔrì-yá bàʔrì-yá* ‘hit’

*sòʔò-yá sóʔó-yà* ‘catch’

*mòmó-yà mómó-yà* ‘carry on back’

Intransitive positive and negative conjugations are in (xx5).

(xx5) subject ‘am going out’ ‘am not going out’

a. 1Sg *má=∅ ꜜbó-yá má=∅ ꜜbó-yá=rɛ̄ʔ*

2Sg *wó=∅ ꜜbó-yá wó=∅ ꜜbó-yá=rɛ̄ʔ*

2Pl *ēéⁿ=∅ ꜜbó-yá éⁿ=∅ ꜜbó-yá=rɛ̄ʔ*

b. 1Pl *mùʔúⁿ=∅ ꜜbó-yá mùʔúⁿ=∅ ꜜbó-yá=rɛ̄ʔ*

3SgHum *á=∅ ꜜbó-yá á=∅ ꜜbó-yá=rɛ̄ʔ*

3SgNonh *é=∅ ꜜbó-yá é=∅ ꜜbó-yá=rɛ̄ʔ* 3PlHum *àáⁿ=∅ ꜜbó-yá àáⁿ=∅ ꜜbó-yá=rɛ̄ʔ*

3PlNonh *èéⁿ=∅ ꜜbó-yá èéⁿ=∅ ꜜbó-yá=rɛ̄ʔ*

c. ‘the child’ *dí-rá=∅ ꜜbó-yá dí-rá=∅ ꜜbó-yá=rɛ̄ʔ*

‘the children’ *dí-rá-āⁿ=∅ bó-yá dí-rá-àⁿ bó-yá=rɛ̄ʔ*

## Stative form of verbs (reduplicated and unreduplicated)

### Stative positive

### Stative negative (=*ŋŋŋ‑*)

## Temporal clitics and particles

### Past particle *kɛ́*

#### Past imperfective (positive and negative)

#### Past progressive (positive and negative)

#### Past perfect (positive and negative)

#### Past experiential perfect (positive and negative)

#### Past recent perfect (positive and negative)

#### Past stative (positive and negative)

### ‘Still’, ‘up to now’, ‘(not) yet’

## Imperatives and Hortatives

### Imperatives and prohibitives

Each verb has an imperative form. It is generally closely related to the imperfective, but shorter at the end, suggesting a truncation process (subtractive morphology), see §3.xxx for discussion. The negatic enclitic *=rĒʔ* may be added to form the prohibitive. As in other negative clauses, if there is a postverbal constituent such as a PP, the verb and the (clause-final) negative enclitic are separated.

The positive singular-addressee imperative consists simply of the verb, with no overt subject pronominal (xx1a). The positive plural-addressee imperative has the regular 2Pl subject *ēēⁿ*, which commonly triggers M‑Spreading into the verb (xx1b). In the prohibitive, in addition to the clause-final negative enclitic, there is a post-subject inflectional morpheme *bí* (xx1c). This morpheme may be preceded by 2Pl *ēēⁿ* to produce a plural-addressee prohibitive (xx1d).

(xx1) a. *fìdí* ‘run-2Sg!’

b. *ēēⁿ fīdī* ‘run-2Pl!’

c. *bí fìdì=rēʔ* ‘don’t-2Sg run!’

d. *ēēⁿ bí fìdì=rēʔ* ‘don’t-2Pl run!’

Examples of intransitive imperatives and prohibitives are in (xx2). Many singular imperatives are LH‑toned, flattening to L‑toned before the negative enclitic. The imperfective is given for comparison. H‑toned imperfectives correspond to M‑toned imperatives.

(xx2) Imperatives

imperative prohibitive Ipfv gloss

Sg Pl Sg Pl

a. imperfective H‑toned

*sɔ̄ ēēⁿ sɔ̄ bí sɔ̄=rɛ̄ʔ ēēⁿ bí sɔ̄=rɛ̄ʔ sɔ́ɔ́* ‘enter’

*bɔ̄ ēēⁿ bɔ̄ bí bɔ̄=rɛ̄ʔ ēēⁿ bí sɔ̄=rɛ̄ʔ sɔ́ɔ́* ‘exit’

*sā ēēⁿ sā bí sā=rɛ̄ʔ ēēⁿ bí sā=rɛ̄ʔ sáá* ‘come’

kpāⁿ *ēēⁿ kpāⁿ bí kpāⁿ=nɛ̄ʔ ēēⁿ bí kpāⁿ=nɛ̄ʔ kpááⁿ* ‘die’

*fìdì ēēⁿ fīdī bí fìdì=rɛ̄ʔ ēēⁿ bí fìdì=rɛ̄ʔ fìdɛ́* ‘run’

*táʔá ēēⁿ tāʔā bí tāʔā=rɛ̄ʔ ēēⁿ bí tāʔā=rɛ̄ʔ táʔá* ‘go’

b. imperfective L‑toned

*bà ēēⁿ bā bí bà=rɛ̄ʔ ēēⁿ bí bà=rɛ̄ʔ bàà* ‘fall’

*dàʔà ēēⁿ dāʔā bí dàʔà=rɛ̄ʔ ēēⁿ bí dàʔà=rɛ̄ʔ dàʔà* ‘escape’

*c. imperfective contour-toned*

*mīīlì ēēⁿ mīīlì bí mīīlī=rēʔ ēēⁿ bí mīīlī=rēʔ míílí-yà* ‘think’

*jìímà ēēⁿ jīīmà bí jìímà=nɛ̄ʔ ēēⁿ bí jìímà=nɛ̄ʔ jìímàà* ‘weep’

*sìdá ēēⁿ sīdā bí sìdà=rɛ̄ʔ ēēⁿ bí sìdà=rɛ̄ʔ sìdánà* ‘ascend’

*jàʔáⁿ ēēⁿ jāʔāⁿ bí jàʔà=nɛ̄ʔ ēēⁿ bí jàʔà=nɛ̄ʔ jàʔánà* ‘descend’

In all transitive imperatives, the tonal form of the verb is subject to the usual variation, beginning with L‑tone after 3Sg object and with H‑tone after non-3Sg object. (xx3) shows the 3Sg forms.

(xx3) a. *è bàʔrí*

3SgNonh hit.Imprt

‘Hit-2Sg it!’

b. *ēéⁿ ∅ bàʔrí*

*ēēⁿ ní bàʔrí*

2Pl 3SgNonh hit.Imprt

‘Hit-2Pl it!’ (two variants)

c. *ɛ̄ɛ́ⁿ ∅ bàʔrí*

*ēēⁿ ná bàʔrí*

2Pl 3SgHum hit.Imprt

‘Hit-2Pl him/her!’ (two variants)

d. *bí=í bàʔr̀=rēʔ*

*Proh=3SgNonh hit.Imprt=Neg*

*‘Don’t-2Sg hit it!’ (variant bàʔl=lēʔ* )

*e. ēēⁿ bí=í bàʔr̀=rēʔ*

2Pl Proh=3SgNonh *hit.Imprt=Neg*

*‘Don’t-2Pl hit it!’*

(xx4) shows the non-3Sg forms, here nonhuman 3Pl.

(xx4) a. *èèⁿ báʔrí*

3PlNonh hit.Imprt

‘Hit-2Sg *them (nonhuman)!’*

b. *ēēⁿ= è(è)ⁿ báʔrí*

*ēēⁿ níìⁿ báʔrí*

2Pl 3PlNonh hit.Imprt

‘Hit-2Pl *them (nonhuman)!’ (two variants)*

c. *ɛ̄ɛ̄ⁿ= ɛ̀(ɛ̀)ⁿ báʔrí*

*ēēⁿ náàⁿ báʔrí*

2Pl 3PlHum hit.Imprt

‘Hit-2Pl *them (nonhuman)!’ (two variants)*

d. *bí=ì(ì)ⁿ báʔŕ=rēʔ*

*Proh=3PhNonh hit.Imprt=Neg*

*‘Don’t-2Sg hit them (nonhuman)!’*

*e. ēēⁿ bí=ì(ì)ⁿ báʔŕ=rēʔ*

2Pl Proh=3SgNonh *hit.Imprt=Neg*

*‘Don’t-2Pl hit them (nonhuman)!’*

*Additional transitive examples are in (xx5). The imperfectives given for comparison are the 3Sg forms (beginning with L-tone). The prohibitive inflectional morpheme bí and objects are omitted.*

(xx5) imperative prohibitive Ipfv gloss

+3Sg -3Sg +3Sg -3Sg

*dɛ̌ dɛ́ dɛ̀=rɛ̄ʔ dɛ́=rɛ̄ʔ dɛ̀ɛ̀* ‘heat’

*jǐ jí jì=rēʔ jí=rēʔ jyɛ̀* ‘see’

*bǎ bá bà=rɛ̄ʔ bá=rɛ̄ʔ bàà* ‘put down’

*kpǎⁿ kpáⁿ kpà=nɛ̄ʔ kpá=nɛ̄ʔ kpààⁿ* ‘kill’

*bɔ̌ bɔ́ bɔ̀=rɛ̄ʔ bɔ́=rɛ̄ʔ bɔ̀ɔ̀* ‘remove’

*bàʔrí báʔrí bàʔr̀=rēʔ báʔŕ=rēʔ bàʔrà* ‘hit’

*fɛ̀ɛ́ⁿ fɛ́ɛ́ⁿ fɛ̀ɛ̀=nɛ̄ʔ fɛ́ɛ́=nɛ̄ʔ fɛ̀ɛ̀nàà* ‘untie’

*dùtɔ́ʔɔ́ⁿ dútɔ́ʔɔ́ⁿ dùtɔ́ʔɔ́=nɛ̄ʔ dútɔ́ʔɔ́=nɛ̄ʔ dùtɔ́ʔɔ́nò* ‘shut’

*fìrìkí fíríkí fìrìkì=rē? fíríkí=rēʔ fìrìkíyà* ‘hobble (animal)

*The few verbs that have +ATR perfectives but ‑ATR imperfectives are +ATR in the imperative. In (xx6), both the imperfective and perfective are 3Sg forms.*

(xx6) imperative prohibitive Pfv Ipfv gloss

+3Sg -3Sg +3Sg -3Sg

*wě wé wè=rēʔ wé=rēʔ wěē wɛ̀ɛ̀* ‘bathe (sb)’

*tě té tè=rēʔ té=rēʔ těē tɛ̀ɛ̀* ‘shatter (sth)’

*yě yé yè=rēʔ yé=rēʔ yěē yɛ̀ɛ̂* ‘send on mission’

*dèé déé dèè=rēʔ déé=rēʔ dèéī dɛ̀ɛ̂* ‘open’

*bègé bégé bègè=rēʔ bégé=rēʔ bègé bɛ̀gɛ̀* ‘cut’

### Hortatives

#### Hortative (*-ŋŋŋ*, plural *-ŋŋŋ*)

#### Hortative negative (*-ŋŋŋ*, plural *-ŋŋŋ*)

#### Indirect/quoted imperative (*-ŋŋŋ*, plural *-ŋŋŋ*)

*wishes and imprecations like ‘may God protect you’ and ‘let him (= tell him to) come’*

#### Indirect/quoted prohibitive (*-ŋŋŋ*, plural *-ŋŋŋ*)

### Indirect/quoted hortative

*cross-ref to jussive complements, §17.1.4.*

# Clause, VP, and predicate structure

## Clausal constituents

### Subjects

#### Subjects in indicative main clauses

#### Subjects in relative and complement clauses

#### Subjects of imperative and hortative verbs

#### Subjects of lexicalized subject-verb combinations

### Simple transitives

#### Direct objects of simple transitives

#### *ŋŋŋ* ‘do’ or ‘say’ with onomatopoeias and loanwords

#### Lexicalized verb-object combinations

#### Forms of cognate nominals associated with verbs

#### HHGrammatical status of cognate nominal

### Clauses with additional arguments and adjuncts

#### Syntax of expressive adverbials (EAs)

#### Adverbial phrases with verbs of motion, being in, and putting

#### Ditransitives

#### Valency of causatives

### Verb Phrase

## ‘Be’, ‘become’, ‘have’, and other statives and inchoatives

### ‘It is’ clitics

#### Identificational ‘it is X’

The ‘it is’ clitic occurs in clauses of the simple type ‘it is X’, where ‘it’ denotes a referent established by discourse or physical context and X provides further identification of this referent.

If X is a pronoun, it takes the independent form with suffix *-n*, here vocalized as *‑ni.* The vowel is lengthened and has falling HM tone. I transcribe this as *‑ní=ī*. Additional pronominal forms are in §4.3.1.4. A similar *=ī* with HM-tone occurs after nouns ending in a high vowel (xx1b‑c). After other vowels the clitic appears as *=ɛ̄* or *=ē* depending on the ATR value of the final vowel (xx1d). Final *a* requires *=ɛ̄* and assimilates, resulting in *…ɛ́=ɛ̄* (xx1e).

(xx1) a. *mā-ní=ī*

1Sg-Indep=it.is

‘It’s me.’

b. *bákàrí=ī*

B=it.is

‘It’s Bakari.’ (< *bákàrì* )

c. *àmàdú=ì*

A=it.is

‘It’s Amadou.’ (*ámádù* )

d. *kóló=ē*

K=it.is

‘It’s Kolo.’

e. *wámàrɛ́=ɛ̄*

W=it.is

‘It’s Wamara.’ (*wámàrà* )

If X is a common noun, as is often the case, the clitic follows the nominal suffix whether the noun is singular or plural. The result for singular nouns is always *‑rɛ́=ɛ̀* or (if the stem is nasal) *‑nɛ́=ɛ̀*, in either case with final L‑tone (xx2a‑c). In (xx2c) the floating L‑tone, audible in suffixed *gí‑nà*, is realized as downstep. Corresponding plurals have *‑à-ní=ī* (from *-à-nū* ) with final M‑tone (xx2d).

(xx2) a. *tàgà-rɛ́=ɛ̀*

sheep-Nom=it.is

‘It’s a sheep.’ (< *tàgà-rá* )

b. *ɲáā-nɛ́=ɛ̀*

woman-Nom=it.is

‘It’s/She’s a woman.’ (< ɲáā-nà )

c. *jí-ꜜnɛ́=ɛ̀*

market-Nom=it.is

‘It’s a/the market.’ (< *jí-nà* )

d. *tàgà-rá-à-ní=ī*

sheep-Nom-Pl-Nom=it.is

‘It’s/They’re sheep.’

The nouns *sɛ́ⁿ* ‘thing’, suffixed *sɛ́-nà*, and optionally *mɛ̀ʔɛ̀ⁿ* and variants ‘person’, suffixed *mɛ̀ʔɛ̀-ná*, have an extension with *dò* ‘other’ used in this construction.

(xx3) a. *sɛ́ⁿ-dò=éē*

thing-other=it.is

‘It’s something.’ (#*sɛ́‑ꜜnɛ́=ɛ̀* rejected by assistant)

b. *mɛ̀ʔɛ́ⁿ-dò=éē*

person-other=it.is

‘It’s someone.’ (*mɛ̀ʔɛ̀-nɛ́=ɛ̀* also possible)

#### ‘It is not X’ (*=rē* )

The ‘it is X’ construction described above is negated by attaching the all-purpose negative enclitic *=rē* to the X element. There is no segmental ‘it is’ morpheme. However, X must end in an H‑tone unless X ends in a floating L‑tone (as with ‘woman’). This H‑tone on most instances of X can be taken as the audible part of a segmentally zero ‘it is’ enclitic preceding the negative enclitic, corresponding to H‑tone plus *‑ē* and variants in the positive counterparts. The morphological form of X is the same as in the positive ‘it is X’ construction. The *r* of the enclitic becomes *n* after a nasal consonant or a nasal syllable (such as *na*). This alternation is also typical of the nominal suffix *‑rà* ~ *‑nà*. The effect is that the enclitic has the nasal form *=nē* after all pronouns (xx1a) and plural nouns (xx1e), as well as after some singular nouns like ‘woman’ (xx1d).

(xx1) a.. *mā-ní=∅=nē*

1Sg-Indep=it.is=Neg

‘It isn’t me.’

b. *bákàŕ=∅=rē*

Bakari=it.is=Neg

‘It isn’t Bakari.’ (< *bákàrì* )

c. *tàgà-rá=∅=rɛ̄*

sheep-Nom=it.is=Neg

‘It’s not a sheep.’

d. *ɲáā-nà=∅=nɛ̄*

woman-Nom=it.is=Neg

‘It’s not a woman.’

e. *tàgà-rá-à-ń=∅=nē*

sheep-Nom=it.is=Neg

‘It’s/They’re not sheep-Pl.’

### Copula

#### Positive ‘X is Y’ (*kùⁿ*, plural *kúⁿ* )

The copula is *kùⁿ* (singular subject) or *kúⁿ* (plural subject). The construction is *X Y kùⁿ* meaning ‘X is Y’. X here is the starting point, such as a pronoun, and Y specifies a class to which X belongs or an identity that X is coreferential with. Y does not take the word-final nominal suffix before *kùⁿ*. As subject (topic), X normally takes the suffix if singular (xx1c), but often omits the word-final suffix in the plural (xx1d).

(xx1) a. *mā ɲáāⁿ* / *tàgá* / *bákàr kùⁿ*

1Sg woman / sheep / Bakari Cop

‘I am a woman/a sheep/Bakari.’

b. *mùʔúⁿ ɲáā-nà-àⁿ* / *tàgà-rá-àⁿ kúⁿ*

1Pl woman- / sheep-Nom-Pl Cop

‘We are women/sheep-Pl.’

c. *ɲáā-nà bàláⁿ kùⁿ*

woman-Nom Senoufo-Nom-Pl Cop

‘The women are Senoufos (ethnicity).’ (< *bàlàⁿ* )

d. *ɲáā-nà-áⁿ bàl-láⁿ-àⁿ kúⁿ*

woman-Nom-Pl Senoufo-Nom-Pl Cop

‘The women are Senoufos (ethnicity).’ (< *ɲáā-nà-àⁿ* )

#### Negative ‘X is not Y’ (*kù=nē*, plural *kú=nē*)

‘X is Y’ (preceding section) is negated by adding the negative enclitic *=rē*. Because of the nasality of *kùⁿ* (and plural *kúⁿ* ), the enclitic always takes nasal form *=nē*.

(xx1) a. *mā ɲáāⁿ kù=nē*

1Sg woman Cop=Neg

‘I am not a woman.’

b. *mùʔùⁿ ɲáā-nà-àⁿ* / *tàgà-rá-àⁿ kú=nē*

1Pl woman- / sheep-Nom-Pl Cop=Neg

‘We are women/sheep-Pl.’

### Existential and locative quasi-verbs and particles

#### Positive ‘X is present (somewhere)’

The construction is of the form ‘X be [location]’, with any locational phrase (‘here’, ‘in the village’, etc.). The existential-locational ‘be’ has variable form. For singular nouns, it has the form *ń*, likely reduced from *ín*, and not syllabified with a preceding word-final vowel. A noun ending in the singular nominal suffix (*-rà* etc.) shifts the suffixal vowel quality to *e*.

(xx1) a. *bákàr=ń [mùúⁿ dù]*

B=be [field in]

‘Bakari is (present) in the field.’

b. *zàkí=ń dè*

Z=be there.Def

‘Zaki is present (here/there).’

c. *bákàr=ń nàà*

B=be here

‘Bakari is here.’

d. *tàgà-ré=ń nàà*

sheep-Nom=be here

‘The sheep-Sg is here.’

When the subject X is a plural noun, there is no segmental ‘be’ morpheme. In (xx2a‑c) there is no tonal indication of a ‘be’ morpheme; the final H‑tone of the plural nouns in (xx2a‑b) would occur anyway because of Final Tone-Raising. However, in (xx2d‑e) this explanation for the final H‑tone in ‘women’ and ‘men’, respectively, is invalid since the following locational begins with an H‑tone and so should not trigger Final Tone-Raising. This indicates that there is a tonal ‘be’ morpheme, represented segmentally as an enclitic *=*∅.

(xx2) a. *ɲáā-nà-áⁿ=∅ [mùúⁿ dù]*

woman-Nom-Pl=be [field in]

‘The women are in the field.’

b. *búgū-rà-áⁿ=∅ [dùgú dù]*

hut-Nom-Pl=be [the.bush in]

‘The huts are (out) in the bush.’

c. *tàgà-rá-āⁿ=∅ [mùúⁿ dù]*

sheep-Nom-Pl=be [field in]

‘The sheep are in the field.’

d. *ɲáā-nà-áⁿ=∅ [bíŋí tɔ̀]*

woman-Nom-Pl=be [granary in]

‘The women are inside the granary.

e. *dìgín̄-nà-áⁿ=∅ [yí dù]*

man-Nom-Pl=be [water in]

‘The men are in the water.’

Pronoun subjects also show the final H‑tone.

(xx3) *má* / *mùʔúⁿ* / *àáⁿ* / *ēéⁿ* / *á =∅ [yí dù]*

1Sg / 1Pl / 3Pl / 2Pl / 3SgHum =be [water in]

‘I am/we are/they are/you-Pl are/he-or-she is in the field.’

(< *mā* / *mùʔùⁿ* / *ààⁿ* / *ēēⁿ* / *à* )

#### Negative ‘X is not present/X is abent (somewhere)’

The positive ‘X is present (somewhere)’ (preceding section) is negated by adding negative enclitic =rē (or nasalized *=nē* ) to the locational expression (i.e. clause-finally).

(xx1) a. *á=∅ [mùúⁿ dù]=rē*

3Sg=be [field Loc]=Neg

‘He/She is not in the field.’ (< *à* )

b. *zàkí=ń nàà=nē*

Z=be here=Neg

‘Zaki is not here.’

c. *zàkí=ń dè= rē*

Z=be there.Def=Neg

‘Zaki is absent (from here/there).’

#### Past-time forms of ‘X is present (somewhere)’ (*cè* )

The past morpheme *cè* follows the subject plus ‘be’ enclitic.

(xx1) a. *á=∅ cè [mùúⁿ dù]*

3Sg=be Past [field Loc]

‘He/She was in the field.’ (< *à* )

b. *á=∅ cè [mùúⁿ dù]=rēʔ*

3Sg=be Past [field Loc]=Neg

‘He/She was not in the field.’ (< *à* )

### Other stative locational and positional quasi-verbs

#### Other stative locational quasi-verbs (‘be in/on’)

#### Stative stance/position quasi-verbs

### ‘Become’, ‘happen’, and ‘remain’ predicates

#### ‘Remain’ (*ŋŋŋ*)

#### ‘Become, be transformed into’ (*ŋŋŋ*)

#### ‘Become’ related to ‘be (somewhere) quasi-verbs (*ŋŋŋ*)

### Mental and emotional statives

#### ‘Know’ (*sɔ̀* )

(xx1) a. *mā ní sɔ̀*

1Sg 3SgNonhObj know

‘I know (it).’

b. *mā ń sɔ̀=rɛ̄*

1Sg 3SgNonhObj know=Neg

‘I don’t know.’

c. *mā ń sòò kɛ́*

1Sg 3SgNonhObj know Past

‘I knew.’

d. *mā ń sòò kɛ́=rɛ̄*

1Sg 3SgNonhObj know Past=Beg

‘I did not know.’

#### ‘Want, like’ (*kà* )

This is a transitive verb with regular preverbal objects. It does not take aspectual inflections (perfective versus imperfective).

(xx1) a. *wō kpɛ̄ kà*

2Sg what? want

‘What do you want?’

b. *mā yí kà*

1Sg water want

‘I would like some water.’

c. *mā dɔ̀lɔ́ kà=rɛ́ʔ*

1Sg millet.beer want=Neg

‘I don’t like/want millet beer.’

## Quotative verb

### ‘Say’ (*tɔ̀ʔɔ̀, cɛ̀*)

Vu also *dē*, *kú*

(xx1) a. *mā ní tòʔéē* / *cɛ̌*

1Sg 3SgHumOjb say.Pfv / say.Pfv

‘I said it.’

## Adjectival predicates

### Positive adjectival predicates

### Negative adjectival and stative predicates (*=ŋŋŋ*)

## Possessive predicates

### ‘X have Y’

In the basic predication of possession ‘X have Y’, the possessum Y is the subject and ends in the ‘be (somewhere)’ enclitic /H+*=∅*/. This is followed by the possessor X and a possessive morpheme which takes L‑toned form *kà* after third singular pronoun or NP, elsewhere *ká*. Some examples are in (xx1).

(xx1) a. *tàgà-rá=∅ [mā ká]*

sheep-Nom=be [1Sg Poss]

‘I have a sheep.’

b. *tàgà-rá=∅ [bákàr ká]*

sheep-Nom=be [B Poss]

‘Bakari has a sheep.’

c. *tàgà-rá-āⁿ=∅ [bákàr k*á]

sheep-Nom-Pl=be [B Poss]

‘Bakari has some sheep.’ (contracted from /bákàrí kà/ ?)

d. *bákàrí=∅ [mā ká]*

B=be [1Sg Poss]

‘I have Bakari.’

e. *dí-rá=∅ [tàgá kà]*

child-Nom=be [sheep Poss]

‘The sheep has a child (=lamb).’

f. *dí-rá=∅ tàgà-rá-àⁿ ká*

child-Nom=be sheep-Nom-Pl Poss

‘The sheep-Pl have a child (=lamb).’

The paradigm is (xx2). The 3Sg form is pronounced *à kà* in isolation but is heard as *ŋ̀ kà* in allegro speech after a vowel (such as that of the nominal suffix of a noun).

(xx2) a. M-toned pronouns

1Sg *mā ká*

2Sg *wō ká*

2Pl *ēēⁿ ká*

b. other plural pronouns

1Pl *mùʔùⁿ ká*

3PlHum *ààⁿ ká*

3PlNonh *èèⁿ ká*

c. 3Sg pronouns

3SgHum *à kà* ~ (… *ŋ̀ kà* )

3SgNonh *è kà*

d. singular noun

‘sheep-Sg’ *tàgá kà*

e. plural noun

‘sheep-Pl’ *tàgà-rá-àⁿ ká*

The predicate is negated in the usual way by adding enclitic *=rɛ̄ʔ* clause-finally. The noun ‘money’ as subject optionally simplifies from *wár̄-rá=∅* (xx2b) to *wár̄* (xx2a).

(xx3) a. *wár̄ [mā ká]=rɛ̄ʔ*

money [1Sg Poss]=Neg

‘I don’t have any money.’

b. *wár̄-rá=∅ [à kà]=rɛ̄ʔ*

money-Nom=be [3SgHum Poss]=Neg

‘He/She doesn’t have any money.’

c. *wár̄-rá=∅ [mùʔùⁿ ká]=rɛ̄ʔ*

money-Nom=be [1Pl Poss]=Neg

‘We don’t have any money.’

Past-time forms are in (xx4).

(xx4) a. *tàgá cè [mā ká]*

sheep be.Past [1Sg Poss]

‘I had a sheep.’

b. *wár̄ cé [mà ká]=rɛ̀ʔ*

money be.Past [1Sg Poss]=Neg

‘I didn’t have any money.’

### ‘X be with Y’

#### Predicate is PP with *dɛ̀* ‘with’

The phrasing ‘X be [with Y]’ can be used to describe attributes, temporary (xx1a) or inherent (xx1b). A PP based on postposition dɛ̀ ‘with’ is the predicate.

(xx1) a. *tàgà-rá=∅ [mɔ̀ɔ́-n dɛ̀]*

sheep-Nom=be [rope-Dim with]

‘The sheep has a rope on it.’ (< *mɔ̀ɔ́-nī* )

b. *tàgà-rá=∅ [gbǒ dɛ̀]*

sheep-Nom=be [horn with]

‘The sheep has horns.’ (< *gbò* )

#### Predicate is *dó*

more exx., including past and more pronouns (verb or postp)??

(xx1) a. *tàgà-rá=∅ mā dó*

sheep-Nom=Ipfv 1Sg be.with

‘I am with a sheep.’

### ‘Y belong to X’ predicates (*mìkùⁿ*, 3Sg *míkùⁿ* )

In this construction, the possessum Y is the known starting point, and its belonging to X is predicated. Y is the subject, followed by the possessor X and the form *mìkùⁿ*. The latter is invariant for possessum number. If X is a nonpronominal NP, it omits the nominal suffix before *mìkùⁿ* (xx1d).

(xx1) a. *[sàà mí-nà] bákàrí mìkùⁿ*

[house Dem-Nom] B belong

‘This/That house is Bakari’s.’

b. *[sàà mí-nà-àⁿ] bákàrí mìkùⁿ*

*zàkíì míkùⁿ*

[house Dem-Nom-Pl] B/Z belong

‘These/Those houses are Bakari’s/Zakari’s.’

c. *[sàà mí-nà] ɲáā-nà-áⁿ mìkùⁿ*

[house Dem-Nom] woman-Nom-Pl belong

‘This/That house belongs to the women.’

d. *[sàà mí-nà] ɲáā mìkùⁿ*

[house Dem-Nom] woman belong

‘This/That house belongs to the women.’

My assistant used the tonal form *míkùⁿ* after 3Sg pronominals, which are L‑toned, and some personal names like Zaki as in (xx1b) above. The pronominal paradigm is (xx2).

(xx2) 1Sg *mā mìkùⁿ*

2Sg *wō mìkùⁿ*

1Pl *mùʔúⁿ mìkùⁿ*

2Pl *ēéⁿ mìkùⁿ*

3SgHum *à míkùⁿ*

3SgNonh *è míkùⁿ*

3PlHum *àáⁿ mìkùⁿ*

3PlNonh *èéⁿ mìkùⁿ*

# Comparatives

## Asymmetrical comparatives

### Predicative adjective with *ŋŋŋ* ‘than’ and comparandum

*construction with predicate adjective (perhaps with conjugated ‘it is’ clitic).*

*Is there a ‘more’ word adjacent to the predicate?*

*Is there a ‘than’ particle adjacent to the comparandum?*

*examples*

*‘I am taller than he (is).’*

*‘I am fatter than you-Sg (are).’*

*Past clitic may be added to the predicate.*

*negative version*

*‘I am not taller than he (is).’*

*Past: ‘I was not taller than he (was).’*

### Verbal predicate plus *ŋŋŋ* ‘than’

*The predicate is an imperfective or perfective verb. There may or may not be an overt ‘more’ element adjacent to the predicate. There may be a ‘than’ element adjacent to the comparandum.*

*examples*

*‘He eats (meals) more than I (do).’*

*‘I cultivate more fields than they do.’*

### ‘Surpass’ (*ŋŋŋ*)

*The verb ‘pass (by)’ may also mean ‘surpass, exceed’, denoting the transition from equality or inferiority to superiority in the relevant dimension. This dimension may be specified by a nonfinal chained verb/VP or by a NP.*

*examples*

*‘You surpass me in height.’*

*‘I surpass you in running.’*

### ‘Be better, be more’ (*ŋŋŋ‑*)

*This construction involves a verb (perhaps a defective stative verb, cf. §11.2) or a predicate with conjugated ‘it is’ clitic.*

*examples*

*‘I am better than you-Sg (are).’*

*‘Mangoes are better than wild grapes.’*

*‘There are more mice than lions here.’*

*If the predicate is stative or nonverbal, the Past clitic may be added.*

### ‘Best’ (*ŋŋŋ*)

*‘X is the best (of a set)’*

*Perhaps a nonverbal predicate with ‘it is’ clitic*

*how is the reference set expressed?*

*examples:*

*‘X is the prettiest woman’ (‘X is the prettiest [of the women’)*

*nonpredicative?*

*‘The prettiest woman is in Bamako.’*

## Symmetrical comparatives

### ‘Equal; be as good as’ (*ŋŋŋ*)

*Transitive verb ŋŋŋ- ‘equal [verb], be equal to, be as much as’.*

*often bǎ(:)-*

*in Najamba, a special sense of gwe ‘go out’*

*stative (‘be equal to’) or active (‘catch up to, come to equal’)*

*how is the dimension of comparison expressed?*

*examples:*

*‘I am (or: have become) as good as he is (at dancing).’*

*negation expresses an asymmetrical comparative*

*‘I am not as good as he is (at dancing).’*

*Fr valoir in cues:*

*X vaut Y (en qch) ‘X is as good as Y (in sth)’*

*negative: X ne vaut pas Y (en qch)*

### ‘Same (equal)’ (*ŋŋŋ*)

*A quantifier ‘each, all’ may occur as the predicate in a sense similar to ‘be same/equal’.*

*how is the dimension of comparison expressed?*

*examples:*

*‘we two are same/equal in height’*

### ‘Attain, equal’ (*ŋŋŋ*)

*ŋŋŋ- ‘arrive at, reach, attain’ may occur in comparatives with the sense ‘attain the level of (someone, in some respect)’.*

*usually dɔ̌: ~ dwɛ́ or the like*

## ‘A fortiori’ (*ŋŋŋ*)

*‘X, a fortiori Y’*

*(local French: ‘X, a plus forte raison Y’)*

*may be sákkò ~ sáŋkò etc. (regional form shared with e.g. Fulfulde)*

*or may be of the type represented by wê̂→y (Yorno So), yé∴ (Jamsay)*

*examples:*

*‘I don’t have money to buy a goat, much less (buy) a cow.’*

*‘I don’t have anything for myself to eat, never mind (anything) to give you.’*

*some languages like to include a ‘talk, speak’ verb:*

*‘I dont have money to buy a goat, much less talk of (buying) a cow’*

# Focalization and interrogation

## Focalization

*this section: brief summary of major patterns. Primary exemplification can be given under "subject focalization" and the sections following it (cross-refs can be made to examples in those sections).*

*focalization: remainder of clause is backgrounded (defocalized), one constituent (usually a NP or noun-like adverb) is foregrounded, as in content questions (‘who’, etc.) and answers to them.*

*format of examples: in free translations, underline (the translation of) the focalized constituent and add, in brackets, [focus]. This is necessary since free English translations (with clefts) may be ambiguous, as in ‘It’s the man who came yesterday’, which has two readings (and two syntactic bracketings).*

### Basic syntax of focalization

#### Which constituents can and cannot be focalized?

*what constituents can be focalized?*

*NP (including pronoun)*

*noun-like adverb (e.g. ‘yesterday’)*

*entire PP, or just the NP complement of a postposition (?)*

*what constituents cannot be focalized using the primary focalization construction? (What construction is used to emphasize them?)*

*verb (?)*

*try: ‘I didn’t sell [focus] a goat, I bought a goat.’*

*VP, clause (?)*

*[truth can be emphasized using Emphatic particles, Chap. 19]*

*expressive adverbial (?)*

*[always highlighted, so outside the syntactic focalization system]*

#### Linear position and form of focalized constituent

*is the focalized constituent fronted to clause-initial position?*

*try direct objects and PPs in the presence of a nonzero clause-initial subject NP*

*‘It was me/It was Seydou [focus] that the women saw in the market.’*

*‘It was to you [focus] that I gave the money.’*

*Is there some morphological marking on the focalized constituent?*

*e.g. Focus particle after focalized NP*

*Focus particle usually just a special use of the ‘it is’ clitic*

#### Form of verb following a focalized constituent

*What effect does the presence of a preceding focalized constituent have on the form of the verb, in contrast to nonfocalized clauses? (Note: the changes below often occur whether or not the focalized constituent is overtly marked by the ‘it is’ clitic.)*

*neutralization of marked aspectual categories into a reduced binary perfective/imperfective opposition?*

*omission of pronominal-subject suffix on verb or neutralization of all pronominal categories to 3Sg form, in subject focalization? (check 3Pl as well as 1st/2nd persons)?*

*tone-dropping of verb? (especially important when there is no suffixal change, as perhaps in Perfective Negative and Imperfective Negative)*

*replacement of regular main-clause verb by a corresponding AN-marked participle, perhaps agreeing with the focalized constituent in intrinsic features? (if so, are there distinct participial forms for subject and non-subject focalization? How similar are the participial forms to those in relative clauses?)*

*try perfective positive first, then go through all other AN categories including Stative and Past*

*‘Who [focus] slaughtered the goat?’*

*Jamsay: perfective positive is tone-dropped and stripped of Perfective-1 suffixes (reduced to unsuffixed Perfective); other AN verb forms usually undergo tone-dropping but no conspicuous suffixal changes; pronominal-subject suffixes are present for non-subject focus, but absent for subject focus.*

*Najamba: special participle-like verb forms, distinguishing subject from non-subject focus.*

#### Effect on reduplication of verb

*Are Cv- or Ci- reduplicated syllables in the verb (e.g. reduplicated Stative) blocked in the presence of a focalized constituent?*

*‘Who is standing there?’ [subject focus]*

*‘Where are you standing? [non-subject focus]*

*Is Existential particle (ya, etc.) in ‘be (somewhere)’, ‘have’, and similar stative predications absent in focalized clauses?*

*‘Who has a cow?’ [subject focus]*

*‘What do you have?’ [non-subject focus]*

#### Effect on cognate nominals and other fixed subject/object nouns

*Are pro-forma (nonreferential) cognate nominals usually omitted when another constituent is focalized?*

*‘Who is weeping?’*

*‘Whom did he insult?’*

*Can cognate nominals be focalized?*

*‘Weeping is what they did.’*

*Can fixed (low-referentiality) subject and object nouns be focalized?*

*‘Sky (=rainy season] [focus] has approached.’*

### Subject focalization

*Summarize features (mostly already briefly mentioned above)*

*position and any morphological marking of focalized subject*

*form of verb*

*several examples*

*‘It is we [focus] who will sweep.’*

### Object focalization

*summary of construction*

*position of focalized object*

*if language has Accusative suffix/clitic on NPs and/or pronominals, is this marking present on focalized object?*

*form of verb*

*several examples*

*‘That [focus] is what I’m looking for.’*

### Focalization of PP or other adverb

*is entire PP (or just the NP complement) focalized?*

*position of focalized adverb or PP*

*form of verb*

*examples (including spatial, dative, and instrumental)*

*‘It’s to the fields [focus] that I am going.’*

*‘It was with this [focus] that I worked.’*

*‘It’s to you-Sg [focus] that I said (it).’*

### Focalization of postpositional complement

*Can the NP complement of a postposition be focalized (without focalizing the whole PP)? [usually not, so PP focalization is used even when the postposition is part of the understood background]*

*example*

*‘I didn’t put it [in the house], I put it [in the granary] [focus]’*

### Focalization of verb or VP

*[usually the focalization system does not allow for verb or VP focalization, except to the extent that the verb is somewhat focal in sentences with no NP singled out for focus]*

*if there is a more overt verb or VP focus construction of some kind, discuss it here*

## Interrogatives

### Polar (yes/no) interrogatives (*ŋŋŋ*)

*Interrogative particle added at the end of an otherwise indicative sentence.*

*interlinears: Q = (polar) interrogative particle*

*usually ma*

*Tomo Kan: alternatively just intonational prolongation (→)*

*prosody*

*does ma have an intrinsic phonological tone?*

*or does the preceding tone spread into it?*

*is it subject to intonational prolongation?*

*does intonational pitch make it difficult/impossible to determine phonological tone?*

*in polar interrogatives, are both clauses (positive and negative) usually explicitly stated?*

*‘Will he come, or will he not come?’*

*perhaps there is a range of options, ranging from full form of both clauses, and reduced form of second clause, to total omission of second option?*

*If the Q particle occurs just once, between the two clauses, is it grouped prosodically with the clause to its left or with that to its right?*

*Is interrogative ma dinstinguishable from, or identical to, the ‘or’ particle*

*(segmental form, tone, intonation)*

*Is ma also optionally added to content (WH) interrogative clauses?*

*examples, including intonational marking*

### ‘Who?’ (*ŋŋŋ*)

b. *māʔā-ní=ī*

who?-Indep=it.is

‘Who is it?’

*Is the content (WH) interrogative overtly focalized?*

*form of ‘who?’ word (relationship to other lexical items)*

*optional plural form?*

*expandible as e.g. ‘who person’?*

*predicative form?*

*examples including predicative ‘who?’*

*‘Who came yesterday?’*

*‘Who-Pl did you see?’*

*‘It is who?’ (= ‘Who is it?’)*

*‘Who are you?’*

*‘Whose house is this?’ cross-ref to ‘Y belong to X’ §11.5.2*

### ‘What?’ (*ŋŋŋ*), ‘with what?’, ‘why?’

*form of ‘what?’ interrogative; relationship to other forms*

*optional plural form?*

*predicative form?*

*examples including predicative forms*

*‘What did you eat?’*

*‘That is what?’ (‘What is that?’)*

*‘with what?’ (instrumental form of ‘what?’)*

*example*

*‘for what?’ = ‘why?’ (with Purposive postposition?)*

### ‘Where?’ (*ŋŋŋ*)

*form of ‘where?’ interrogative; relationship to other forms*

*used with Locative postposition or by itself?*

*predicative form?*

*examples*

*‘Where are you going?’*

*‘It is where?’ (‘Where is it?’)*

*‘Where are you?’*

### ‘When?’ (*ŋŋŋ*)

*form of ‘where?’ interrogative; relationship to other forms*

*perhaps more than one form including ‘which time?’ with noun ‘time’*

*used with Locative postposition or by itself?*

*predicative form?*

*examples including predicative forms*

### ‘How?’ (*ŋŋŋ*)

*form of ‘how?’ interrogative; relationship to other forms*

*optionally iterated? (full reduplication)*

*examples*

*‘How will you fix the basket?’*

*combined with ‘do’ verb as ‘do how?’ (= ‘do what?’)?*

*subordinated ‘(by) doing how, ...’ as another way of asking ‘how?’*

### ‘How much/many?’ (*ŋŋŋ*)

*form of ‘how much/many?’ interrogative; relationship to other forms*

*usually not pluralizable morphologically*

*distributive iteration: ‘how.much?-how.much?’*

*meaning ‘how much each?’ (price per unit)*

*combines with preceding core NP (like numeral, with no tonal interaction?)*

*if noun is countable, does it appear in plural form?*

*examples*

*‘How much sugar did you buy?’*

*‘How many sheep do you have?’*

*‘It is how much?’ (predicative)*

*may co-occur with topicalized expression in partitive function*

*‘My cows, how many of them died?’*

*iterated for distributive sense (‘how much [= price] each?’)*

*ordinal: how-manieth? (nonexistent English, but cf. French quantième)*

### ‘Which?’ (*ŋŋŋ*)

*form of ‘which?’ interrogative; relationship to other forms*

*may be used absolutely, or as modifying adjective?*

*tonal effect on preceding core NP? (tone-dropping?)*

*examples*

*‘Which mango do you want?’*

*‘Which of your cows are you selling?’*

### ‘So-and-so’ (*ŋŋŋ*)

*‘So-and-so’ = substitute (function over) any of a range of personal names*

*used in generalized contexts like: ‘If you encounter someone you know in the field at twilight, you should say “Hey So-and-so, let’s go back to the village”’*

*form of ‘So-and-so’ word; relationship to other forms*

*examples*

*‘This cow belongs to So-and-so’*

### Embedded interrogatives

*embedded polar interrogatives:*

*‘He doesn’t know whether they have arrived in Bamako’*

*such a construction may also be used constructions with ‘know’ and factive complement (presupposed to be true)*

*‘He doesn’t know that they have arrived in Bamako’*

*(better ex: ‘He doesn’t know whether (= that) I am in Douentza’)*

*embedded content interrogatives: these may take the same form as main-clause interrogatives, or they may involve substitutions, using generic nouns like ‘person’, ‘thing’, ‘place’, ‘time’, manner’, ‘quantity’*

*‘I don’t know [who is coming]’ or ‘I don’t know [the person [who is coming]]’*

*examples:*

*‘I don’t know ...’*

*‘... who is coming’*

*‘... what we will eat’*

*‘... where they are dancing’*

*‘... when they will come’*

*‘... how they will farm’*

*‘... how much they ate’*

*‘... which house they lodge (“go down”) in’*

*‘... why they went away’*

# Relativization

*Relative clauses are referentially restrictive (not parenthetical).*

*note: using French cues in elicitation can lead to misunderstanding*

*[le chien que j’ai frappé] may be misunderstood as focalized (clefted) ‘it’s the dog [focus] that I struck’. Therefore it’s best to put the relative clause in a larger sentential context, such as [Où est [le chien que j’ai frappé]?] or [Voilà [le chien que j’ai frappé]].*

## Basics of relative clauses

*brief summary of major features of relative clauses*

*few or no examples here*

*extensive exemplification should be given in the subsections below, including e.g. "subject relatives"*

*correct the following inventory as needed*

*a. The* ***head NumP*** *(i.e. the head NP up to and including a numeral) remains in clause-internal position (i.e. the relative is* ***internally headed****). The head NumP may therefore be preceded by an AdvP (‘yesterday’) and/or a (subject) NP within the relative clause, and/or it may be separated from the verb by intervening constituents.*

*[Toro Tegu exceptionally has a clause-initial head NumP, arguably fronted]*

*b. The clause-internal head NumP* ***drops tones*** *if unpossessed, arguably with the relative operator RelOp as tonosyntactic controller; the drop is audible on the final word of the core NP, i.e. N(Adj), and on the numeral.*

*c. In a few Dogon languages, the head NumP ends with an* ***overt Relative morpheme*** *(Toro Tegu kà: ~ kà:ⁿ, Ben Tey kà:ⁿ), which arguably controls the tone-dropping on the head NumP. One might posit an* ***inaudible RelOp*** *in the same position in the other languages, accounting for tone-dropping in the head NumP.*

*[Tomo Kan exceptionally has is a Relative morpheme nɛ that immediately follows the subject. This applies to both subject and non-subject relatives, so the Relative morpheme is not attached to the head NumP as such]*

*[Toro Tegu, the only known Dogon language with regularly clause-initial head NumPs, not only has Relative kà: ~ kà:ⁿ at the end of this head NumP but also has a clause-final Relative morpheme ŋ́ (etymologically a demonstrative) following the verb and any postverbal elements such as dative NPs)]*

*d. if the head NumP has a* ***preposed possessor*** *(‘[Seydou’s dogs] that got sick’), the possessor (NP or pronoun) has its usual tonal form, and the possessed NP has its usual possessor-controlled tone contour. That is, the possessor-possessed sequence is a* ***tonosyntactic island****, unaffected tonally by the RelOp. This is clearly the case when the possessor-controlled contour is {HL} or anything other than {L}. If the possessor-controlled contour is {L} it cannot be distinguished from the {L} controlled by RelOp, unless the domains controlled by the possessor and the RelOp differ (i.e. when the possessor does not control tones on an adjective or a numeral while RelOp does control them).*

*[Jamsay exceptionally has RelOp override the possessor as tonosyntactic controller, so the possessor too is tone-dropped]*

*e. the verb of the corresponding main clause (with AN suffix and, in some languages, a pronominal-subject suffix) usually undergoes some* ***categorial neutralizations*** *or is replaced by a* ***verbal participle****; there is* ***no pronominal-subject suffix*** *(see h); there may or may not be noun/adjective-like suffixation* ***agreeing with the head*** *NP (e.g. Human Sg).*

*[in Nanga the participle usually has no head-NP agreement, but does have Animate Plural agreement in negative participles only; in languages (Nanga, Tommo So) with little or no head-NP agreement on the participle, determiners that do mark these categories commonly follow the verb or verbal participle]*

*f. the head NP is* ***bifurcated****, the NumP along with any possessor remaining clause-internal, while late-NP elements including determiners (demonstratives and Definite morphemes) and non-numeral quantifiers (free Plural morpheme, ‘all’, ‘each’) are positioned after the verb or verbal participle.*

*g. if the possessor NP is the head NumP (‘the man whose dog ran away’), i.e. in a* ***possessor relative****, it is treated like any other head NP and is tone-dropped; in this event, the possessed NP (‘dog’) appears in unpossessed tonal form (i.e. is tonally unbound), as in [man.L dog ran-Ppl.HumSg], or else it appears with a resumptive possessor pronoun, as in [man.L [3SgPoss dog.(H)L] ran-Ppl.HumSg]*

*h. in non-subject relatives (‘the man whom I saw’, ‘the day when I saw the man’, etc.), a* ***pronominal subject*** *is expressed by an independent pronoun (or by a special series of pronominal elements), usually* ***procliticized*** *to the verb or verbal participle.*

*j. In some languages, the relative clause proper may be followed by a simple noun copied from the fuller head NP, hence a particular kind of* ***double-headed*** *relative.*

*If bifurcation works as indicated above, the break-off point being between the numeral and the determiners, we could model the construction syntactically as a NP of the form*

*[[Poss [N Adj Num]] Rel Det ‘all’]*

*where Rel consists of RelOp plus a clause containing a second copy of at least the [Poss [N Adj Num]] portion of the head NP (perhaps immediately followed by a RelOp]. This model requires that the underlined elements shown above be deleted, while the clause-internal copy of the (possessed) NumP is not deleted. This deletion pattern is somewhat ad hoc, but the analysis will account for the linear order in the languages, including the fact that the audible head NumP may be preceded by an AdvP and/or another NP within the relative clause. Presumably the possessor is bracketed with the NumP and this combination is dominated by the RelOp, i.e. [[Poss [N Adj Num]] Rel Det ‘all’]*

*The analysis would have to be modified for Toro Tegu, whose relative-head NumPs appear to be fronted, but Toro Tegu does have the same bifurcation pattern as the others.*

## Head NumP

*The head NP is bifurcated. The sequence Poss-[N-Adj-Num], i.e. maximally a possessed NumP, remains internal to the relative clause. The remaining late-NP elements, including determiners and non-numeral quantifiers, follow the verb (verbal participle). Here we focus on the internal head NumP, and on general restrictions on what kinds of NP can function as head.*

### Tone-dropping on final word(s) of head NP in relative clause

*comparison of NPs in their usual main-clause form and in their tone-dropped form.*

*start with unpossessed NPs of various shapes*

*the house that fell*

*the big house that fell*

*the six houses that fell*

*the six big houses that fell*

*then possessed NPs of various shapes*

*Seydou’s house that fell*

*Seydou’s big house that fell*

*Seydou’s six houses that fell*

*Seydou’s six big houses that fell*

*possibilities (might be ambiguous in a particular language):*

*a) possessor-possessed functions as a tonosyntactic island and is not affected tonally by the RelOp (indicated when the possessor-controlled tone contour is anything other than {L} and when the possessor controls tones on the entire NumP)*

*b) possessor and RelOp jointly control tones on the NumP (clearly the case when the NumP begins with a non-{L} possessor-controlled contour, and where at least the numeral is clearly tone-dropped by the RelOp, i.e. in languages where possessors do not control tones on the entire NumP)*

*c) if the entire NumP is {L}, and if possessors control tones on entire NumP’s, control of {L} could be attributed to either the possessor, the RelOp, or both.*

*d) if the possessor should control a non-{L} contour, but we get {L} on the entire NumP, the RelOp must be the controller.*

### Restrictions on the head of a relative clause

*head may not be*

*pronoun*

*‘we who are here’ (expressed as ‘we [people who are here]’)*

*demonstrative*

*expressive adverbial*

*grammatical relation of head NP may be*

*subject*

*object*

*possessor*

*complement of postposition (overt or covert)*

*hence dative, temporal, spatial, manner*

*head may be definite or indefinite*

*(definite or other determiner can follow the verb)*

### Conjoined NP as head

*‘[men and women] who eat dog meat’ is not idiomatic Dogon*

*normally (re-)phrased as two conjoined relative clauses*

*‘[the men who eat dog meat] and [the women who eat dog meat]’*

*however, a conjoined NP construction may be forced when no such rephrasing is possible without changing the sense*

*‘(These are) [the men and (the) women] who fought each other?’*

### Headless relative clause

*not very common, since semantically light ‘thing’, ‘person’, ‘critter’, ‘place’, etc. are commonly overt as relative heads*

*but examples do occur where the head NP, either a semantically vague element like ‘place/situation’ or an unspecified or obvious NP, is omitted*

*for headless relatives as adverbial clauses, see §15.5.3.*

### Head noun doubled after relative clause

*In some languages, the relative clause proper may be followed by a simple noun copied from the fuller head NP, hence a particular kind of* ***double-headed*** *relative.*

*[…time.L…2SgO 1SgS see-Pfv(-Ppl)] time.(H)L*

*‘(at) the time when I saw you’*

*Does this construction occur in the language?*

*If so:*

*when the head NP in the relative clause proper is modified (e.g. by an adjective or numeral), is the copy limited to just the noun? What about late-NP elements like determiners?*

*is the double-headed construction confined to temporal, spatial, and manner adverbial clauses, or more general?*

*is the post-relative copied head noun possessed in tonal form, or have other evidence of being "possessed" by the main relative clause?*

*[Jamsay: overt Possessive morpheme mà is used, with no tonal change (this is the usual alienable possession construction in this language]*

*[…time.L…2SgO 1SgS see-Pfv(-Ppl)] mà time*

*[some other languages: copied noun is {HL} or {L} toned, suggesting a possessed-noun status]*

*This double-headed construction is common with nouns like ‘time’, ‘place’, and ‘manner’, and may evolve into the primary type of spatiotemporal and manner adverbial clauses (in which case the relative-clause structure may become less transparent). See §15.2.1.1 for temporal clauses, §15.3.1‑2 for spatial and manner clauses.*

## Preverbal (or: preparticipial) subject pronoun in non-subject relative

*Even in Dogon languages that have pronominal-subject suffix (or enclitic) paradigms on verbs in main clauses, pronominal subjects in relatives (only non-subject relative clauses are relevant) are always proclitic to the verb. Hence main clause [house buy-Pfv-1SgS] ‘I bought a house’, but relative [house.L 1SgS buy-Pfv(-Ppl) Def] ‘the house that I bought’.*

*The distinction is either absent, or more subtle, in languages where pronominal subjects are preverbal even in main clauses. But carefully observe the following:*

*obligatoriness:*

*Is a preverbal subject pronoun required even when the subject is already expressed by a nonpronominal NP? (‘the goat that Seydou killed yesterday’: is there a resumptive 3Sg subject pronoun coindexed to clause-initial Seydou?)*

*forms:*

*Are the preverbal subject pronouns identical in form (including tone) to some or all other independent pronominal paradigms (possessor, object, complement of postposition, independent form)?*

*[Jamsay: L‑toned, identical to inalienable possessor pronouns, but unlike the other pronominal series, all of which are H‑toned]*

*[Yanda: identical to inalienable possessor pronouns, which include some H- and some L‑toned forms]*

*[Togo Kan: identical in form (but not position) to clause-initial subject pronouns in main clauses]*

*position:*

*Do the preverbal subject pronouns appear in the regular clause-initial subject position (so that they precede e.g. object NPs, dative PPs, and the like)? (‘the day when I slaughtered the goat’, ‘the money that I gave to you’) [Toro Tegu, where relatives differ from main clauses only with 3Sg and 3Pl subjects, which are enclitics to the verb in main clauses]*

*Or are they proclitics that occur directly before the verb? [Jamsay, Togo Kan] Do they follow even object pronouns (‘the day when I saw you’) and Existential ya/yɛ (‘the house that I have’)?*

*When the relative clause contains a direct verb chain, does the preverbal subject pronoun intervene between them, or does it precede the first chained verb (‘the day when I can eat here’, ‘the day when I fell down [fall go.down-Pfv]’). Discuss here or give cross-ref to §14.5.*

*It is possible for subject pronouns to be preverbal in both main and relative clauses, yet differ from one to the other in terms of obligatoriness (e.g. resumptive 3rd person subject pronouns in relatives only), form (allomorphs different), and/or position (clause-initial versus immediate preverbal position).*

*examples*

## Verb (or: verbal participle) in relative clause

*Briefly describe the main morphological characteristics of the verb or verbal participle in relatives (details and full exemplification are in the subsections below).*

*The term "participle" is appropriate when this form of the verb has some noun/adjective-like feature, such as intrinsic-category agreement with the head NP. The term "verb" may be used when the verb merely lacks a final pronominal-subject suffix, and is otherwise fairly similar in form to the corresponding inflectable main-clause stem.*

*Summarize the neutralizations of AN categories (whether obligatory or just usual in practice) that take place in relative clauses. Add or delete categories as appropriate for the language. Details and examples in the following sections.*

*(xx2) Participles (all categories of active verbs)*

*category suffix(es) similar AN morpheme*

*Perfective -ŋŋŋ ? (variable)*

*(Perfective-1a) -ŋŋŋ Recent Perfect -ŋŋŋ-*

*(Perfective-1b) -ŋŋŋ Recent Perfect -ŋŋŋ-*

*(Perfective-2) -ŋŋŋ Recent Perfect -ŋŋŋ-*

*Recent Perfect -ŋŋŋ Recent Perfect -ŋŋŋ-*

*Experiential Perfect -ŋŋŋ ExpPerf -ŋŋŋ ‑*

*Perfective Negative -ŋŋŋ Perfective Negative -ŋŋŋ-*

*Recent Perfect Negative -ŋŋŋ Recent Perfect Neg-ŋŋŋ-*

*Experiential Perfect Neg -ŋŋŋ ExpPerfNeg -ŋŋŋ-*

*Imperfective (or: Present) -ŋŋŋ- Imperfective -ŋŋŋ-*

*(Future) -ŋŋŋ Progressive -ŋŋŋ-*

*Progressive -ŋŋŋ Progressive -ŋŋŋ-*

*{Habitual} -ŋŋŋ Progressive -ŋŋŋ-*

*Imperfective Negative -ŋŋŋ Imperfective Negative -ŋŋŋ-*

*Progressive Negative -ŋŋŋ Progressive Negative -ŋŋŋ-*

### Participles of positive perfective-system verbs

*Marked perfective categories may be neutralized with the simple Perfective in relative clause participles. For example, either an unsuffixed verb (or verbal participle) without an AN suffix (but with a particular tone contour), or a verb (or verbal participle) based on Perfective-2 -sa-/-so-, may be required in relatives. Discuss.*

*add other categories in (xx1) as needed (e.g. Perfective-1)*

*(xx1) category suffix(es)*

*in Rel clause in main clause*

*Perfective -ŋŋŋ -ŋŋŋ-*

*(Perfective-1a) -ŋŋŋ -ŋŋŋ-*

*(Perfective-1b) -ŋŋŋ -ŋŋŋ-*

*(Perfective-2) -ŋŋŋ -ŋŋŋ-*

*Recent Perfect -ŋŋŋ Recent Perfect -ŋŋŋ-*

*Experiential Perfect -ŋŋŋ ExpPerf -ŋŋŋ ‑*

*examples*

*‘the dog that I hit’*

*‘the man who has (just) finished eating’*

*‘a man who has (ever) seen an elephant’*

### Participles of positive imperfective-system and stative verbs

*(add marked categories, e.g. Future or Habitual, as needed)*

*(xx1) category suffix(es)*

*in Rel clause in main clause*

*Imperfective (or: Present) -ŋŋŋ- -ŋŋŋ-*

*(Future) -ŋŋŋ -ŋŋŋ-*

*Progressive -ŋŋŋ -ŋŋŋ-*

*Stative -ŋŋŋ -ŋŋŋ-*

*examples (imperfectives)*

*‘the goat that I will slaughter’*

*‘a dog that bites children’*

*‘the woman who is sweeping the yard’*

*examples (statives)*

*‘the woman who is standing over there’*

### Participles of negative perfective-system verbs

*(xx1) category suffix(es)*

*in Rel clause in main clause*

*Perfective Negative -ŋŋŋ -ŋŋŋ-*

*Recent Perfect Negative -ŋŋŋ -ŋŋŋ-*

*Experiential Perfect Neg -ŋŋŋ -ŋŋŋ-*

*examples*

*‘the cow that did not fall down’*

*‘a woman who has not (just) finished eating’*

*‘a man who has never seen an elephant’*

### Participles of negative imperfective-system and stative verbs

*(xx1) category suffix(es)*

*in Rel clause in main clause*

*Imperfective Negative -ŋŋŋ -ŋŋŋ-*

*Progressive Negative -ŋŋŋ -ŋŋŋ-*

*Stative Negative -ŋŋŋ -ŋŋŋ-*

*examples (imperfective, progressive)*

*‘(I don’t like) a person who doesn’t work’*

*‘the cows that they will not milk’*

*‘a person who is not sweeping (progressive)’*

*examples (stative)*

*‘(I don’t like) a person who doesn’t have a house’*

*‘a person who isn’t sitting (in seated position)’*

*‘(I’m looking for) a man who is not tall’*

*‘a man who is not a Dogon’*

*‘a moment when I was not in Douentza’*

### Participle of Past clitic *=ŋŋŋ*

*The Past clitic =ŋŋŋ has participial forms in several Dogon languages (those in which this clitic is conjugatable).*

*For positive relative clauses, the form of the participle is shown in (xx1), along with the regular inflectable form for comparison. Negative counterparts are in (xx2).*

*(xx1) Participle of Past clitic (positive polarity)*

*category inflected participle*

*Past Imperfective ŋŋŋ ŋŋŋ*

*Past Progressive ŋŋŋ ŋŋŋ*

*Past Perfect (< Perfective) ŋŋŋ ŋŋŋ*

*(Past Perfective-1a) ŋŋŋ ŋŋŋ*

*(Past Perfective-1b) ŋŋŋ ŋŋŋ*

*(Past Perfective-2) ŋŋŋ ŋŋŋ*

*Past Recent Perfect ŋŋŋ ŋŋŋ*

*Past Experiential Perfect ŋŋŋ ŋŋŋ*

*(xx2) Participle of Past clitic (negative polarity)*

*category inflected participle*

*Past Perfect Neg ŋŋŋ ŋŋŋ*

*Past Imperfective Neg ŋŋŋ ŋŋŋ*

## Relative clause involving verb- or VP-chain

*Only the final verb in a chain has the relative-clause form (e.g. participial, in some languages)?*

*Nonfinal chained verbs have their usual bare-stem form?*

*In non-subject relatives, if there is preparticipial subject pronominal, does this pronominal immediately precede the final participialized verb, i.e. splitting the verbs in the chain?*

*Do nonpronominal subject NPs precede the nonfinal verb(s) in a direct verb chain?*

*May a nonpronominal subject NP be resumed by a pronominal subject marker preceding the participle?*

*examples*

*‘the cow that I will buy and bring’*

*‘the cow that my father will buy and bring’*

*‘the child who fell down’ (< ‘fall’ plus ‘go down’)*

*‘the day when I fell down’*

## Late-NP elements that follow the verb (or verbal participle)

### Determiners (demonstrative and definite)

*Determiners (‘this/that’, ‘the’) with scope over the head NP appear in post-participial position.*

*Do those determiners that are elsewhere controllers of tone-dropping have this effect on the verb (or verbal participle?)*

*examples*

*‘the house that you see’*

*‘this man whom you see’*

*‘that (aforementioned) child who ran away’*

*examples of indefinite (undetermined) relatives*

*‘I’m looking for...*

*...a cow that you haven’t milked’*

*...two cows that you haven’t milked’*

### Free Plural particle (*ŋŋŋ*)

*The free Plural morpheme (usually be) may follow the verbal participle.*

*not common except when no other marker of head-NP plurality is possible (as with inanimates in some languages)*

*linear position vis-a-vis determiners and ‘all’?*

*examples*

*‘the mosquitoes that bit me’*

### Non-numeral quantifiers (‘each’, ‘all’)

*‘all’ and (if present in the language) ‘each’ also appear after the participle*

*If there is an ‘each’ quantifier that controls tone-dropping, what preceding elements are affected (just the verbal participle?)*

*examples*

*‘Bring all the cows that you have not milked!’*

*‘(For) each house that fell, we will give 2 million (riyals)’*

*‘any person who has not finished eating’*

## Grammatical relation of relativized-on NP

### Subject relative clause

*this and the following sections mainly exemplify the points already described. Begin each section with a summary of the features relevant to the particular syntactic type of head NP*

*subject relatives (brief list of features)*

*head NumP is tone-dropped (core NP, numeral)*

*late-NP elements occur after verb (or verbal participle)*

*in some languages, verbal participle agrees with head NP (subject NP)*

*no preparticipial subject pronominal (since subject must be nonpronominal)*

*examples (mix of elicited and textual exx)*

*‘the man who saw me in the market’*

*‘some men who saw me in the market’*

*‘(Where is) the stone that injured me’*

*‘the person who didn’t hit me’*

### Object relative clause

*object relatives (brief list of features)*

*head NumP tone-droppedas with all head NPs*

*determiners and non-numeral quantifiers shifted to post-participial position*

*verbal participle agrees with head NP (here, the object NP)*

*pronominal subject is expressed by a preverbal (preparticipial) subject pronominal*

*is there Accusative marking on the (object) head NP?*

*examples (mix of elicited and textual exx)*

*‘the cows that I sold’*

*‘the cows that I did not sell’*

*‘what we ate was not meat’*

### Possessor relative clause

*possessor relatives (brief list of features)*

*head NP (possessor NP) tone-dropped (core NP, numeral) as usual*

*determiners and non-numeral quantifiers shifted to post-participial position*

*verbal participle agrees with head NP (possessor NP)*

*pronominal subject expressed by a preparticipial subject pronominal*

*Does the possessed NP revert to its regular (unpossessed) tones as in main clauses with no possessor?*

*Or is the possessor resumed by a 3Sg or 3Pl possessor pronoun?*

*examples (mix of elicited and textual exx, including alienable and inalienable possession if this distinction is meaningful in the language)*

*‘the man whose house fell’*

*‘the man whose cow died (naturally)’*

*‘the man whose father has gone away’*

### Relativization on the complement of a postposition

*where (if at all) does the postposition appear in the relative clause?*

*examples:*

*‘the woman to whom I said that’ (dative)*

*‘the daba (hoe) with which I do farm work’ (instrumental)*

*‘the honey for which they came’ (purposive)*

*‘the hole (pit) that he fell into’ (locative)*

*Adverbial relative clauses like ‘(the time) when you came’ or ‘(the place) where the cows died’, and manner adverbial relative clauses like ‘(the way) how they work’, can be analysed as slightly reduced forms of PP-complement relatives; see §15.5.*

# Verb (VP) chaining and adverbial clauses

*define direct and loose chains (hold off examples until subsections below)*

*direct chain: verbs concatenated without overb subordinating morphology, usually treated as forming a single clause, with a single set of complements (preceding the verbs). Nonfinal verbs in the direct chain have bare-stem form (or a special chaining form).*

*loose chain: the nonfinal clause has an overt subordinator, maintains its identity as a separate clause at least to some extent (all verbs in the chain may be immediately preceded by their respective complements).*

## Direct chains (without chaining morpheme)

*examples of direct chains*

*‘fall’ + ‘go down’ = ‘fall down’*

*‘run’ + ‘go in’ = ‘run in(to)’*

*‘put down’ + ‘leave/abandon’ = ‘put down (and leave) (sth, in a place)’*

*‘go’ + ‘come’ = ‘go (somewhere) and come back’*

*Each verb denotes a co-event. The verbs combine into a conceptually integrated whole. In many cases (but not in ‘go and come [back]’) the co-ovents overlap in time.*

*For cases where the final verb is specialized in chain-final function in a particular sense, e.g. ‘get, obtain’ in the sense ‘be able to’, see §17.5.*

*are direct chains used in the same manner in perfective and imperfective (especially future-time) predications? Compare past-time indicatives with e.g. imperatives.*

*‘he fell down’ (fall + go down) versus ‘he will fall down’ and imperative ‘fall down!’; also ‘he went and came (back)’ versus ‘he will go and come (back)’ and imperative ‘go and come (back)!’*

*[Togo Kan: some combinations denoting simultaneous co-events are always expressed as direct chain. Others, which denote a chronological sequence and normally have the same subject, are expressed in perfective contexts with a Same-Subject Anterior subordinator, and in imperfective contexts with either Pseudo-Conditional dè or with a direct chain]*

*test for this with:*

*‘he fell down’ (fall + go down)*

*‘he will fall down’*

*‘he went and came (back)’*

*‘he will go and come (back)’*

### Verbal Noun of directly chained verbs

*Normally the VblN suffix is added only to the final verb in the chain.*

*Do nonfinal verbs drop tones (i.e. function as compound initials)?*

*examples:*

*‘fall’ + ‘go down-VblN’ = ‘falling down (verbal noun)’*

### Presence of AN suffix in nonfinal verb in direct chains

*Usually no aspect-negation suffix is allowed in nonfinal verbs in chains. However, there may be some cases where an AN suffix or a related morpheme does occur in nonfinal verbs (e.g. Imperfective -m- in Nanga durative clauses).*

*Perfective (positive) system suffixes (e.g. Jamsay Perfective-1b -tì-) sometimes have variants (Jamsay tí) that may occur after a nonfinal chained verb, forcing a chronological-sequence interpretation of the chain. This is relevant to the discussion as to whether the marked Perfective suffixes are really auxiliiary verbs chained to the preceding verb (§10.1.2).*

*Negative suffixes are not used on nonfinal verbs in direct chains. The whole chain must be positive or negative.*

### Arguments of directly chained verbs

*Since directly chained verbs constitute a conceptually unified whole, they generally take a single set of complements. This is most apparent when one of the verbs is normally intransitive and the other is transitive.*

*examples*

*[sheep hit kill-Pfv-3SgS] = ‘he/she hit and killed a sheep’*

*[sheep kill get-Ipfv-3SgS] = ‘he/she can kill a sheep’*

*[sheep go kill-Pfv-3SgS] = ‘he/she went and killed a sheep’*

*note especially the last example, where ‘sheep’ cannot be construed as bracketed with the adjacent ‘go’.*

*Usually it is not possible to break up the chained verbs by inserting a non-verb constituent (other perhaps than proclitic pronominal subjects in relative clauses) between them.*

*e.g. no #’run [sheep kill-Pfv-3SgS’ = ‘he/she ran and killed the sheep’.*

*verify position of object pronoun and relative-clause subject pronoun:*

*‘I hit and killed it’*

*‘the day when I hit and killed the sheep’*

### Negation of direct verb chains

*Only the final verb in the chain may be negated. The negation has semantic scope over the entire sequence, though in some contexts only one of the denoted co-events is understood to be false.*

*‘he didn’t go and come (back)’*

*(either he neither went nor came back, or e.g. he went but did not come back)*

### Direct chains including *ŋŋŋ* ‘leave’

*Transitive ŋŋŋ ‘leave, abandon (sth)’ (e.g. Jamsay dàɣá) is often added to verbs like ‘put down’, ‘tie up’, and ‘knock down’ denoting actions that typically result in the theme being stationery in a location. Often the ‘leave’ verb is not needed in an idiomatic English free translation.*

*examples*

*‘He put it down (and left it) there.’*

### Direct chains including a motion verb

*Purposive clauses with a motion verb (‘go and VP’ in the sense ‘go in order to VP’) should be treated separately from simple direct chains (look for special tone contours or suffixes on the nonfinal verb), see §17.6.3.*

*For (non-purposive) direct chains, which are covered here, distinguish cases where a) motion and co-event are chronologically sequenced (in either order); b) motion is simultaneous to co-event. If direct chains are not used in a particular type, indicate briefly what construction is used with a cross-ref.*

*motion followed by co-event (if direct chains, not in purposive form)*

*‘he went and came (back)’*

*‘he went there and fell into a hole’*

*motion following co-event (if direct chains)*

*‘I will eat and go back home.’*

*motion simultaneous with co-event (if direct chains)*

*‘fall/jump and go.down’ = ‘fall down’, ‘jump down’*

*‘run and go.up/go.down’ = ‘run up’, ‘run down’*

*‘run and go.in/go.out’ = ‘run in(side)’, ‘run out’*

*‘went along (while) singing/smoking’*

### Durative verb-iterations chained to a motion verb

*Any special constructions like this one (in Nanga), involving direct chains without an overt subordinating suffix or particle, can be covered in separate subsections here.*

*Nanga type with iterated verb (first one with HL tone, others with L tone), then a motion verb:*

*[dance(noun) dance.HL-dance.L] come-Pfv-3Sg*

*‘He/She came dancing along’*

*Include a cross-ref to this section at the beginning of §15.2, below. If there is a somewhat similar construction used as a purposive complement for a motion verb, clarify the difference here and in §17.6.3.*

### Chains including *ŋŋŋ‑* ‘be/do together’

*By itself, the verb ŋŋŋ is an intransitive verb meaning ‘gather together, assemble’. It occurs chained with another VP to translate adverbial ‘together’. Thus ‘work together’ is expressed as ‘get together and work’.*

*examples*

### Chaining with *ŋŋŋ* ‘go with’, ‘take along with oneself’

*If the language has no such specialized form, but just uses the regular Instrumental/Comitative postposition, indicate this briefly here.*

*The stem ŋŋŋ (Jamsay and Togo Kan jíjɛ̀, Ben Tey jíjɛ̀→, Nanga jɛ́jɛ̀→) appears to function syntactically like a transitive verb with a sense like ‘have/take (something, someone) with oneself’. However, its phonological form is aberrant: the {HL} tone contour and in some cases the intonational prolongation are not normal for bare stems of verbs.*

*The context is that subject has the object (e.g. a tool, a dog, or a child) in his/her custody while in motion. The stem occurs only in nonfinal position in chains, chiefly with motion verbs: [X ŋŋŋ] go-Pfv-1Sg ‘I took X along with me’ or ‘I went (there) with X’. The stem is not inflected, so its status as a verb is not transparent. The alternative would be to take it as a specialized postposition. The form of the complement X may clarify the syntax.*

*form of preceding complement X?*

*Accusative marking possible at least for human NP?*

*form of pronominal object?*

*does the form of X clarify whether it is a direct object, or a postpositional complement? [If there is accusative marking of NPs, or a specialized accusative form of at least one pronoun, it should be possible to determine this. Otherwise it may be ambiguous.]*

*examples*

*‘X took the sheep along with him.’*

*‘Take this child along with you.’*

*‘They took me along (with them)’*

## Temporal adverbial clauses with overt chaining or subordinating morpheme

### Adverbial clauses expressing temporal simultaneity or overlap

*Subsections in this section may be deleted, combined, split, or rearranged (and reorganized) to suit a particular language.*

*Indicate in each case (except the relative-clause type) whether the construction requires same subjects in the main and adverbial clauses. How is different subject expressed (‘while he was working, we ate’)?*

*If relevant, cross-refs to durative complements of ‘see’ and ‘find’ (§17.2.2.), and uninflected verb-stem iterations in narrative (§11.6.1).*

#### Noun-headed temporal relative clause (‘[at] the time when …‘)

*This is a relative clause (Chapter 14) headed by a temporal noun (‘time’, ‘moment’, ‘day’, ‘year’, ‘era’, etc.) in adverbial function. The same relative clause construction is used for spatial and manner adverbial clauses (§15.3).*

*Logically, the relative clause should be the complement of a postposition (‘at [the time when he fell]’), but the postposition is often omitted.*

*Is a locative postposition required/common/uncommon at the end of the entire relative clause?*

*Is a definite morpheme common/uncommon at the end of the relative clause?*

*Is the ‘time’ noun optionally/obligatorily repeated after the relative clause proper, perhaps in possessed-noun tonal form? (see §14.2.5). If so:*

*is there any sign of lexical specialization, whereby one term meaning ‘day’ is used in the relative clause proper and a synonymn as the doubled noun? (also check for ‘year’, ‘time/moment’)*

*examples*

*‘the year when they came here’*

*‘the beautiful day when I saw you’ (adjective not repeated on copy?)*

*‘those three long days when I did farm work in the field’*

#### Backgrounded durative clauses (*ŋŋŋ*)

*[If ŋŋŋ is identifiable as the Imperfective morpheme, combine with adjacent subsections.]*

*Particle/suffix ŋŋŋ is used in backgrounded durative clauses, which precede a foregrounded event predication. The ŋŋŋ clause denotes a temporally extended activity, such as motion, that persists through a temporal span T that leads up to and may overlap with the following event E. Usually the activity is first introduced as a main clause, and the verb is then repeated (one or more times) in durative-clause form, before the next event E is introduced.*

*same-subject requirement?*

*form of verb that ŋŋŋ follows (bare stem, etc.)?*

*if anything unusual (unpredictable) about the verb form, give a table with representative examples (including irregular verbs) of the bare stem and the ŋŋŋ form.*

*(xx1) bare stem with ŋŋŋ gloss*

*ŋŋŋ ŋŋŋ ‘come’*

*must the two clauses have the same subject?*

*is the subject overtly indicated in the [... verb ŋŋŋ] clause, or just in the surrounding main clauses?*

#### Backgrounded durative clauses with iterated stem and (*ŋŋŋ*)

*is the [... verb ŋŋŋ] durative clause often iterated as a whole in narratives?*

*examples, including textual examples*

*‘The two of them were coming;* ***come ŋŋŋ, come ŋŋŋ, come ŋŋŋ*** *[= they kept coming and coming]. (Then) a storm arose.’ (ŋŋŋ).*

*if relevant, cf. uninflected verb iteration (§11.6).*

#### Imperfective subordinator *-ŋŋŋ*

*Subordinating suffix/particle morphemically identifiable as the regular Imperfective suffix, but here on a verb without pronominal-subject inflection in a nonfinal VP that is followed by an intrinsically durative or stative final verb.*

*same-subject requirement?*

*examples:*

*[combine with neighboring subsections if not formally distinct]*

#### Imperfective *-ŋŋŋ* on activity verb plus time-of-day verb

*Imperfective VP denoting a prolonged activity (ending in Imperfective subordinator), followed by a time-of-day verb.*

*The two verbs are conceptually integrated as in direct chains, but here the nonfinal verb is explicitly imperfective and has an overt subordinator*

*examples*

*‘We spent the night dancing.’ = ‘We danced all night.’*

*‘They will spend the (mid-)day making tea.’*

*[combine with neighboring subsections if not formally distinct]*

#### Imperfective *-ŋŋŋ* plus *ŋŋŋ‑* ‘be’ quasi-verb

*VP ending in Imperfective subordinator, followed by ‘be (somewhere)’ quasi-verb (bu-, etc.).*

*a kind of progressive (‘be a-running’)*

*may be identical or related in form to the regular progressive, or (if there is a distinct progressive inflection) this may involve a more literal spatial ‘be (somewhere)’*

*examples, including negative*

*‘My friend is (here), eating a meal.’*

*‘My friend is not (here), eating a meal.’*

*[if other constructions involving the Imperfective suffix are attested, add extra subsections]*

#### ‘Since …‘ clauses (*ŋŋŋ*)

*[possibly more than one construction; if so, add subsection, etc.]*

*description and examples*

*‘Since they came, they have not eaten any meat’*

*‘Since she got sick, she has not gone outside’*

*brief mention of the ‘since X’ construction where X is a noun/adverb (‘since yesterday’, ‘since the day when you came’)*

### Adverbial clauses expressing a chronological sequence

#### Clauses with *ŋŋŋ* ‘and then’ (different subject, anterior)

*(not all Dogon languages have an explicitly different-subject subordinator, but all seem to have at least one construction that is especially common with different subjects)*

*(conceivably a language could have more than one different-subject subordinators, with different temporal profiles (anterior, simultaneous))*

*interlinear gloss: ‘and.DS’*

*Clauses with particle/suffix/clitic ŋŋŋ following the verb denote eventualities that precede in time the reference time (in the main clause). The subject of the ŋŋŋ clause is referentially disjoint from that of the main clause, and is therefore overtly expressed (for example, by an independent pronoun). Either clause may be separately negated.*

*form (including tones) of verb to which ŋŋŋ is attached?*

*If interesting/unpredictable, add a full table with representative verbs (including irregular verbs)*

*expression of pronominal subject?*

*examples*

*‘Amadou pulled the rope and (then) it snapped.’*

*‘They brought the food, then we ate.’*

*‘You went to him, (but) he didn’t give it to you.’*

#### Clauses with *‑ŋŋŋ* (same-subject, anterior)

*subordinator ‑ŋŋŋ requiring that the clause have the same subject as the reference clause (usually a following main clause), and specifying that the two eventualities are chronologically sequenced (cf. English ‘having VP-ed, ...’)*

*Is the entire temporal sequence in the past, or it could also be in the future? If so, combine analysis and examples in the following subsection into one subsection.*

*in which clause is the subject NP expressed?*

*interlinear gloss: ‘and.SS’*

*form (including tones) of verb to which ŋŋŋ is attached?*

*If interesting/unpredictable, add a full table with representative verbs (including irregular verbs)*

*examples*

*‘They roasted and (then) ate the meat.’*

*‘You went to him, and/but you didn’t find him there.’*

#### Clauses with *ŋŋŋ* ‘and then’ (same-subject, anterior, future time)

*[if not distinct in form from preceding type, combine the two subsections and their examples]*

*Similar to the preceding, but the entire temporal sequence is in the future (so the following clause has a verb in imperfective/future, imperative, or hortative form)*

*interlinear gloss: ‘then.SS’*

*form (including tones) of verb to which ŋŋŋ is attached?*

*If interesting/unpredictable, add a full table with representative verbs (including irregular verbs)*

*examples:*

*‘Let’s eat and then go!’*

*‘He/She will do farm work and then go.’*

*‘They will roast and (then) eat the meat.’*

*‘Roast and (then) eat the meat!’*

#### ‘Worked until got tired’ = ‘worked for a very long time’

*Is there a special construction with a verb meaning ‘get tired’, used in contexts implying long duration?*

*examples, including negative*

*‘He ran (and ran) until he got tired.’*

*‘He ate (and ate) until he got tired.’*

#### ‘No sooner did…, than …‘ (*ŋŋŋ*)

*Cf. French dès que ...*

*indicates that the following event took place or began immediately afterwards*

*may involve an ‘all’ quantifier (pu⇒ etc.) at the end of the clause.*

*expression of pronominal subject?*

*structural difference between same-subject and different-subject combinations?*

*examples*

*‘As soon as we came (=arrived here), we went to bed’*

*‘As soon as we came, it rained’*

*‘As soon as we arrive in Douentza, we will go to bed’*

*‘As soon as you touch Seydou, he will weep’*

*‘As soon as Fanta sits down, (every time) she falls asleep’*

*There may be a semantically similar conditional construction; if so, cross-ref to §16.2.2 (‘as soon as…’).*

### Chronological reversal (‘before …‘ clauses)

*‘before’ clauses are highly variable in structure in Dogon languages*

*describe in detail*

*form of verb*

*subordinators*

*expression of subject (NP or pronoun)*

*If form of verb is interesting/unpredictable, add a full table with representative verbs (including irregular verbs)*

*examples*

*‘Before they came back, I hid (myself).’*

*‘We’ll work before we eat’*

## Spatial and manner adverbials

### Spatial adverbial clause (‘where …‘)

*The noun ŋŋŋ ‘place’ occurs in L‑toned form as the relative head. The construction is similar to that for temporal adverbials (‘at the time when…’), see §15.2.1.1.*

*examples*

*‘We will spend the night where we ate last night.’*

### Manner adverbial clause (‘how …‘)

*A relative clause with ŋŋŋ ‘manner’ as head NP may function as a NP (xx1.a).*

*With ŋŋŋ ‘like’ this can become a manner adverbial clause (xx1.b).*

*examples*

*‘I work (like) the (same) way he/she works.’*

*‘The way he drives, we can reach Bamako in one day.’*

### Headless adverbial clause as spatiotemporal or manner clause

*The ‘time’, ‘place’, or ‘manner’ head noun may be omitted. The result is a headless adverbial relative clause whose exact interpretation requires inference. In some cases there may be no determinable specific head noun, and something like ‘situation’ may be useful in translation. Contextual clues may force one or the other reading; for example, a ‘like’ particle forces a manner adverbial reading.*

*examples:*

*‘(The time) when he/she fell is far away (= was long ago).’*

*‘I work like (the way) he/she works.’*

### ‘From X, until (or: all the way to) Y’

*here: X and Y are clauses (not NPs)*

*the ‘from X’ construction (X = clause) is cross-linguistically variable*

*note: direct translation from French may produce non-idiomatic constructions.*

*one widespread Dogon construction involves the verb ‘take, pick up’ (Jamsay yàŋá etc.) at the end of the ‘since’ clause, hence ‘VP take Subordinator, ...’ = ‘from (the time that) VP, ...’*

*example*

*‘From when they (= their mothers) bear themx (=they are born), until when theyx die, they are wicked.’*

### ‘As though …‘ clause

*examples*

*‘You-Sg are crying (weeping) as though you hadn’t eaten.’*

*‘They are crying as though they hadn’t eaten.’*

# Conditional constructions

## Hypothetical conditional with *ŋŋŋ* ‘if’

### Regular antecedent clause

(xx1) a. *xxx xxx xxx*

rain(n) rain.fall-Ipfv-3SgSbj=if, go.in-Ipfv-1PlSbj

‘If it is raining, we’ll go in.’

b. *xxx xxx xxx xxx*

1Sg=Acc leave-Pfv-2SgSbj=if, 2Sg=Acc Rdp-kill-Ipfv-1SgSbj

‘If you-Sg leave me, I’ll kill you.’

c. *xxx xxx xxx xxx*

1Sg=Acc hit-Pfv-2SgSbj=if, 2Sg=Acc Rdp-kill-Ipfv-1SgSbj

‘If you-Sg hit me, I’ll kill you.’

d. *xxx xxx xxx*

S 1Sg=Acc hit-Pfv-3SgSbj=if,

*xxx xxx*

3Sg=Acc Rdp-kill-Ipfv-1SgSbj

‘If Seydou hits me, I’ll kill him.’

e. *xxx xxx*

fall-Pfv-2SgSbj=if, arise-MP.Imprt

‘If you-Sg fall, get up!’

f. *xxx xxx*

fall-Pfv-2PlSbj=if, arise-MP.Imprt-PlAddr

‘If you-Pl fall, get up!’

g. *xxx xxx*

there.Def go.back-MPPerf--1SgSbj=if,

*xxx xxx*

1Sg=Acc Rdp-kill-Ipfv-3PlSbj

‘If I go back there, they’ll kill me.’

### ‘Unless’ antecedent

## Alternative ‘if’ particles

### ‘Even if …‘ (*ŋŋŋ*)

### ‘As soon as …‘ (*ŋŋŋ*)

## Willy-nilly and disjunctive antecedents (‘whether X or Y …‘)

*examples*

*‘Whether it rains or not, we are going.’*

## Counterfactual conditional

*examples*

*‘If the locusts hadn’t come, we would have gotten (= were going to get) a lot of millet in the granary.’*

*‘If the doctor had been there, I would have been cured.’*

# Complement and purposive clauses

## Quotative complements

*Quotations are marked by up to three distinct features:*

*(xx1) a. inflectable* ***‘say’ verb*** *(ŋŋŋ), preceding or following the quotation, §17.1.2;*

*b. invariable* ***quotative particle*** *ŋŋŋ following the quotation (or multiple segments of the quotation), §17.1.3;*

*c.* ***logophoric*** *pronouns substituting for (original) first person pronouns, §18.2.*

### Direct versus indirect in quotative complements

*reported speech involves a mix of direct and indirect discourse*

*direct features:*

*initial vocatives (‘hey you!’)*

*aspectual category on verb normally the same as in the original*

*no ‘that’ complementizer*

*indirect features:*

*pronominal person category recomputed*

*so ‘hey you!’ appears in most contexts as ‘hey 3Sg!’*

*logophoric replaces original 1Sg or 1Pl in direct quote*

### ‘Say that …‘ with inflectable ‘say’ verb (*ŋŋŋ*)

*For the inflectable ‘say’ verb see §11.3.*

*May it either precede or follow the quotation?*

*When it precedes, is it set off prosodically, or is it followed by a special interjection?*

*form of pronominal subject?*

*examples*

*‘Hex said that hex is going tomorrow.’*

*‘I said that I am not going.’*

*‘Shex will say that shex is sick.’*

*‘(The) people will say that they are cured.’*

*‘I didn’t say that I can stop the locusts.’*

*‘Hex didn’t say that theyy will come.’*

*The ‘say’ verb may also take a NP complement (‘what?’, ‘that’, ‘nothing’, etc.)*

*Is the conjugatable ‘say’ verb usually omitted when the invariant Quotative clitic/particle is present?*

### Quotative clitic *ŋŋŋ*

*usually wa or lo*

*Occurs at the end of quoted clauses*

*and (in some languages) also after quoted vocatives or topicalized constituents*

*also after subject of quoted clause?*

*atonal, with tone spread from element to the left?*

*functins:*

*typically used when quoted speaker is third person (hearsay modality)*

*also used with first/second person quoted speaker to indicate “quotation marks,” as in [did you say “dog”?] and [yes, I said “dog”]*

*also used with quoted imperatives/hortatives (jussive complements)?*

*examples*

*‘He/shex said that he/shex has no sugar.’*

*‘Hyena said to hare: hey you, go!’*

*‘Amadou said that the people have sown (the millet).’*

*extended quotations: ŋŋŋ is typically repeated after each clause*

*examples*

*‘He/she said that the people will come, (but that) they won’t eat here.’*

*omitted when it would be adjacent to the ‘say’ verb?*

*omitted in negative contexts (‘X didn’t say that ...’)?*

*examples:*

*‘Amadou did not say that the people have sown (the millet).’*

*‘Did he say that the people have sown (the millet)?’*

*omitted with factive complement (ending in Definite morpheme)?*

*‘If he says (= claims) that the people have sown (the millet), it’s false.’*

### Jussive complement (reported imperative or hortative)

#### Quoted imperative

*When imperative ‘Sweep the courtyard!’ is quoted (‘They told him [to sweep the courtyard]’), the original imperative may appear in the same imperative form (Jamsay), or in a 3rd person Hortative as in e.g. ‘may God protect you!’ (Nanga).*

*singular and plural subject of Imperative distinguished or merged?*

*quotative particle added at end?*

*overt pronominal denoting the original addressee may be present, perhaps as a quoted vocative (‘hey you!’ expressed as ‘hey 3Sg!’)*

*examples*

*‘I told him to slaughter a sheep. ‘*

*‘They told me to come. ‘*

*reported prohibitives (negative imperatives)*

*‘I told him not to slaughter a sheep. ‘*

*‘They told me not to come.’*

#### Embedded hortative

*quoted form of ‘let’s go!’ (hortative)*

*Does the verb takes regular hortative form, or a special quoted-hortative form?*

*expression of the original 1Pl (dual or plural) subject? (perhaps a dative in the ‘say’ clause, or perhaps a quoted vocative)*

*quotative particle present at end?*

*any difference between 1st, 2nd, and 3rd person quoted speaker?*

*examples*

*‘They said (to me), let’s go!’*

*‘He said (to me), let’s go!’ (original dual-subject hortative)*

*‘You said (to him), let’s go!’*

*‘You said (to me), let’s go!’*

*‘I said (to him), let’s go!’*

*‘I said (to you), let’s go!’*

*reported hortative negative*

*examples*

## Factive (indicative) complements

*This type of complement may be translated as ‘(the fact/proposition) that …’. It occurs with verbs like ‘know’ and ‘see/hear’ in the main clause. There is no ‘that’ complementizer.*

*verb of the complement clause has regular AN marking?*

*how are pronominal subjects expressed?*

*subject of factive clause expressed as a possessor?*

*definite morpheme often follows factive clause?*

*Briefly describe the structure here, and give examples in the subsections below.*

### ‘Know that …‘ complement clause

*if the 3Pl subject inflections are somewhat irregular or formally specialized in main-clause inflectional morphology, for example in negative AN inflections, be sure to include examples with 3Pl subject in these subsections.*

*examples*

*‘I know that you are not coming.’*

*‘You know that I am not coming.’*

*‘You know that he is not coming.’*

*‘You know that they are not coming.’*

*‘I know that you did not come.’*

*‘You know that I did not come.’*

*‘You know that he did not come.’*

*‘You know that they did not come.’*

*‘I know that you will come.’*

*‘I know that they will come.’*

*‘I know that you came.’*

*‘I know that they came.’*

*no distinction between ‘X doesn’t know [that S]’ and ‘X doesn’t know [whether S]’? (see §13.2.2)*

### ‘See (find, hear) that …‘

*Are there different constructions for*

*a) direct perception (‘I saw him fall[ing]’) and*

*b) recognition after the fact, often by inference from circumstantial evidence (‘I saw that he had fallen’).*

#### Direct-perception type (relative-clause complement)

*is the complement factive (as with ‘know’), or imperfective/durative?*

*examples*

*‘I saw the cow fall[ing]’ or ‘I saw the cow about to fall’*

*‘I saw the children dance (dancing).’*

#### Recognition (inference, hearsay) construction

*factive-type complement?*

*perhaps competing with a resultative complement?*

*perceiver has not perceived the actual event, but perceives the aftermath and infers what has happened*

*examples (including negative complements)*

*‘I saw that the cow had fallen’ = ‘I saw the cow (having) fallen’*

*‘I saw (= see) that you-Sg didn’t take the motorcycle away.’*

*‘I heard (= hear) that you-Sg are going to Bamako.’*

### Factive complement with *ŋŋŋ* ‘it is certain’

*ŋŋŋ ‘it is certain’ may precede an ordinary indicative clause, denoting a future event that is (all but) certain, or a situation or a past event that one infers from strong evidence or reasoning. tilay is a regionally ubiquitous form.*

*examples*

*‘It’s certain (definite) that I will go to Anda.’*

*‘He/She has certainly left Sevare (by now).’*

## Verbal Noun (and other nominal) complements

*Complements whose verb is in morphological verbal-noun form.*

*Complement is often really a VP (subjectless), but some main-clause control verbs (‘prevent’) also require a subject*

*Definite morpheme common at end?*

### Structure of Verbal Noun Phrase

*describe the form of subject NP and object NP*

*--same as in main clause? (e.g. Accusative marking on object)*

*--possessor form?*

*describe the form of subject pronominal and object pronominal*

*--object same as in main clause, or possessor?*

*--subject expressed as possessor, or as independent pronoun?*

*Subsections below are for specific main-clause verbs that take these complements. If the verbs do not in fact take verbal-noun complements, the relevant subsection should be relocated elsewhere. If the verb takes a mix of verbal-noun and other complements, the subsection may remain here.*

### ‘Prevent’ (*ŋŋŋ*)

*describe semantics of verb (perhaps more than one such verb)*

*perhaps a basically transitive verb like ‘cut’ or ‘block’*

*complement is verbal-noun clause, with the agent specified*

*agent in possessor form?*

*or treated as direct object of ‘prevent’ verb in main clause?*

*examples*

*‘The rain prevented me from going to Douentza.’*

*‘Millet farming [topic], the hot sun prevented me from doing it.’*

*‘The noise prevented Amadou from sleeping.’*

### ‘Dare’ (*ŋŋŋ*)

*describe semantics of verb (may be fairly tricky)*

*(Fr oser)*

*subjects of two clauses are coindexed, so complement does not repeat subject.*

*examples*

*‘They don’t dare go down.’*

*‘Do you-Sg dare get close to the elephant(s)?’*

*‘He/She dared (had the audacity) to speak to me.’*

### ‘Consent’ (*ŋŋŋ*)

*semantics of verb (often one sense of the ‘accept, receive’ transitive verb)*

*distinguish same- from different-subject constructions*

*examples*

*‘The chief has agreed to come.’ (same subject)*

*‘Our father has consented to our going to Bamako.’ (different subject)*

*‘He did not agree that we do the marriage.’*

### ‘Want’ (*ŋŋŋ*)

*semantics of ‘want’ verb (‘want, like, love’, etc.)*

*same-subject vs. different-subject constructions*

*examples (same subject)*

*‘I want to go.’*

*‘We don’t even want to see him/her.’*

*examples (different subject), requiring expression of complement subject*

*‘Your-Sg father doesn’t want you-Sg to come here.’*

### ‘Forget’ (*ŋŋŋ*)

*discussion of semantics of verb.*

*verb may have irregular or defective paradigm; if so, give a table of its most important inflectable stems*

*(xx1) ‘Forget’*

*Perfective-1a ŋŋŋ‑*

*Perfective Negative ŋŋŋ‑*

*Imperfective ŋŋŋ‑‑*

*Imperfective Negative ŋŋŋ‑*

*Imperative ŋŋŋ*

*Prohibitive ŋŋŋ‑*

*may take factive as well as verbal-noun complements, in different senses*

*factives: subject may be same or different, complement denotes prior event*

*verbal noun: main-clause subject forgets to do sth that he/she intended to do*

*examples (factive)*

*‘I forgot that you had come.’*

*‘I forgot that I had told him to come.’ (be careful with semantics)*

*examples (verbal-noun)*

*‘Don’t forget to come tomorrow!’*

*‘I forgot to water the garden’*

*brief mention of ‘remember’ (perhaps reversive of ‘forget’)*

### Obligational (*ŋŋŋ* ‘duty’)

*‘X must VP’ may be expressed as e.g. ‘[X’s ... verb-VblN] [it’s a duty]’, including the ‘it is’ predicative form of the noun ‘duty, obligation.’ There may be variants of this construction.*

*examples*

*‘I must go to Sevare.’ (“My going to Sevare is a duty.”)*

*‘I had to go to the field.’ (“I went to the field out of a duty.”)*

### ‘Be afraid to’ (*ŋŋŋ*)

*In the sense ‘X be afraid to VP’, where the VP has the same logical subject as the main clause, the complement may have a verbal noun.*

*example*

*‘He was afraid to come here.’*

*complement with different subjects?*

*example:*

*‘I’m afraid he/she will hit me.’*

*‘Hex’s afraid I will hit himx/y.’*

### ‘Begin’ (*ŋŋŋ*)

*The main and subordinated clauses must have a shared subject.*

*complement: chained verb, or verbal noun?*

*examples*

*‘He/She began to eat (the meal).’*

*‘He/She began to weep.’ (cognate nominal, cf. koyo koyo‑)*

*‘He/She began to slaughter the sheep.’*

### ‘Finish’ (*ŋŋŋ*)

(xx1) a. *màⁿ làʔá sèʔrí(ì)*

1Sg place sweep.Pfv

‘I swept (the place).’

b. *màⁿ làʔá sɛ̀ʔrì dɛ́gɛ́ⁿ*

1Sg place sweep finish

‘I have finished sweeping (the place).’

*The construction is similar to that of ‘begin’ (preceding subsection).*

*examples*

*‘He/She doesn’t stop (= keeps on) eating.’*

*‘They have finished farming (=weeding).’*

*‘I havent’ (yet) finished writing.’*

*alternative constructions with similar meaning?*

*‘Their farming is finished’ = ‘they have finished farming’*

*Recent Perfect (jɛ- etc.) is used in the sense ‘finish VP-ing’ as well as ‘have (already) VP-ed’?*

### ‘Cease’ (*ŋŋŋ*)

*discuss semantics of verb(s)*

*may be special case of the transitive ‘leave, abandon’ verb*

*may suggest a definitive abandonment of the activity, or it may just mean ‘finish, stop (doing)’ in a particular instance*

*examples:*

*‘He has ceased to eat meat.’ (= has had enough for now, or has become a vegetarian?)*

*‘I will stop singing.’ (retire from a singing career, or finish up a song set?)*

## Locative verbal noun or other nominal complement

*In this construction, the complement consists of a Locative PP, whose complement in turn is a verbal-noun clause.*

### ‘Help’ (*ŋŋŋ*)

*relocate ‘help’ to another section if not of this syntactic type*

*semantics of ‘help’ (in some lgs, a special case of ‘add, increase’), perhaps ‘increase the manpower (in accomplishing sth)’*

*may also take the form ‘X help Y [in [VP-ing]]’ with verbal noun (or other nominal, e.g. a cognate nominal related to a verb)*

*examples*

*‘He/She helped me to sit down.’*

*‘Amadou helped me (= doctor) to treat you’*

*‘He/She helped me to tie up the cow.’*

*‘Amadou helped you in (doing) the farming’*

## Direct chain complements

*Direct verb chains (nonfinal verb is in bare-stem form), but with a final inflected verb that is specialized for this construction (at least in the relevant sense).*

*Cross-refs to any instances of this construction in other sections in this chapter, i.e. as optional alternatives to another construction.*

### ‘Be able to, can’ (*cyɛ́* )

This stative verb takes a nominalized verbal complement. The usual form is *cyɛ́* ‘can’, but there is also a past form *cíẁⁿ* ‘could’.

(xx1) a. *wó=∅ cyɛ́ sǎà*

2Sg=Ipfv can come.Q

‘Can you-Sg come?’

b. *má=∅ cyɛ́ sàà / sɔ̀ɔ̀*

1Sg=Ipfv can come / enter

‘I can come/go in.’

c. *má=∅ cyɛ́=rɛ̄ʔ*

1Sg=Ipfv can=Neg

‘I can’t.’

d. *á=∅ cyɛ́ sàà*

3SgHum=Ipfv can come

‘He/She can come.’

e. lò *má=∅ cíẁⁿ sā=rɛ̄ʔ*

yesterday 1Sg=Ipfv could come=Neg

‘Yesterday I couldn’t come.’

Transitive examples are in (xx2a‑b).

(xx2) a. *má=∅ cyɛ́ kùkú kùtɔ̀-láʔáná=nēʔ*

1Sg=Ipfv can rock displace-lift.Ipfv=Neg

‘I can’t lift the rock (out/away).’

b. *lò má=∅ cíⁿ=ìⁿ kùtɔ̀-láʔá=rɛ̄ʔ*

yesterday 1Sg=Ipfv could=3SgNonh displace-lift=Neg

‘Yesterday I couldn’t lift it.’

## Purposive, causal, and locative clauses

### Clauses with Purposive postposition *ŋŋŋ* ‘for’

*(purposive clauses including the Purposive postposition)*

*there may be more than one such construction, involving e.g. Imperfective marking, Imperfective Negative marking, and perhaps Imperative Negative (and Imperative positive?) complement verbs. If so, one might divide this into two or more subsections*

*examples (same subject)*

*‘They will go up (and stand) on the barrel in order to replaster the house (= ceiling).’*

*‘We have come in order to speak with the chief.’*

*examples (different subject)*

*‘I put the pot down, so that they (could) eat.’*

*‘Hex gave us hisx bicycle, so that we (could) go to Anda.*

*examples (negative complement)*

*‘We’ll fix the roof, so the roof beam(s) won’t fall.’*

*‘We (have) blocked the doorway, so that the sheep-Pl will not eat the mango(s).’*

*‘We’ll take food (along), so as not to die (= starve) on the way.’ [same subject]*

*‘I will make noise, so that you-Sg do not sleep.’*

*‘I will spend the night in a chair, so as not to sleep.’*

### Purposive clauses with Imperfective participle

*an Imperfective complement may occur in combinations suggesting (but not forcing) a purposive reading*

*example*

*‘They are sitting eating’ (= in order to eat.’)*

### Purposive clause with motion verb

*there may be a specific type of purposive clause used in combination with a main-clause motion verb (‘go’, ‘come’, etc.)*

*[Jamsay: complement verb is in bare-stem form with overlaid {HL} contour]*

*[Nanga: bare verb with tone-dropping, followed by Locative postposition]*

*If such a construction is basically purposive, describe here. Do not confuse with formally similar non-purposive constructions involving a motion verb, cf. §15.1.6-7.*

*examples:*

*‘Shex went to in order to bring herx father.’*

*‘I went in order to put out the fire.’*

*‘They came in order to drink the water.’*

*no negative counterpart?*

### Causal (‘because’) clause (*ŋŋŋ*)

*‘because’ particle at beginning or end of causal clause?*

*clause otherwise in main-clause form?*

*examples*

*‘We can’t go to the village because the road isn’t good.’*

### ‘Because of’ (*ŋŋŋ*)

*‘because of X’ (X a NP)*

*perhaps a special case of the Purposive postposition*

*perhaps a more specific morphology*

*examples:*

*‘We went into the house because of the rain.’*

# Anaphora

## Reflexive

### Reflexive possessor

This construction occurs when the possessor of a nonsubject NP is coindexed with the clausemate subject. In this context, the possessor is always pronominal. The basic forms, subject to modifications due to contractions and morpheme fusion, are those in (xx1). Nonreflexive forms are shown for comparison.

(xx1) reflexive nonreflexive

1Sg *āⁿ mā*

2Sg *ē* ~ *ī wō*

1Pl *āāⁿ mùʔùⁿ*

2Pl *ēēⁿ* ~ *īīⁿ ēēⁿ*

3SgHum *à à*

3SgNonh *è* ~ *ì è*

3PlHum *ààⁿ ààⁿ*

3PlNonh *èèⁿ* ~ *ììⁿ èèⁿ*

The third person categories have essentially the same forms in reflexive and nonreflexive function. Since the third person categories are those for which reflexives would have the greatest disambiguating function (*He saw himself* versus *He saw him*), disambiguation does not seem to play much of a role here. Instead, what seems to be going on is a reduction in form of the 1st/2nd person possessors. This takes the unusual form of a segmental (but not tonal) merger of first person with human third person, and of second person with nonhuman third person. The segmentally merged forms remain distinct due to the generalization of M‑tone among 1st/2nd persons, versus the regular L‑tone for third persons. This is brought out by rearranging the categories in the fashion of (xx2).

(xx2) Reflexive possessors

M-toned

L‑toned

1Sg *āⁿ*

3SgHum *à*

1Pl *āāⁿ*

3PlHum *ààⁿ*

2Sg *ē* ~ *ī*

3SgNonh *è* ~ *ì*

2Pl *ēēⁿ* ~ *īīⁿ*

3PlNonh *èèⁿ* ~ *ììⁿ*

This sound-symbolic merger of third human with first person, and of third nonhuman with second person, is extraordinary. Whether it is unique in the world’s languages I cannot say. Parallels may be hard to find in other Mande languages, most of which do not distinguish ±human or ±animate in third person pronouns. Diachronically, one suspects that the starting point for the Jalkunan development was the segmental identity of 2Pl *ēēⁿ* and nonhuman 3Pl *èèⁿ*, and that this suggested analogical extensions of other third person forms into 1st/2nd person forms. Not being a Mande‑ist, I leave the diachronic issue to specialists.

Except for objects in imperatives with second person possessor, as in ‘Help your father!’, reflexive possessors do not occur clause-initially. Since they begin with vowels, and since preceding words normally end in vowels, they are generally subject to *vv*‑Contraction. This can make it difficult to determine whether the vowel of a second or nonhuman third person pronoun is *e* or *i*.

#### Reflexive possessor of postverbal NP

In (xx1), the relevant possessum is postverbal, so there are no morphological interactions with inflectional morphemes that follow the subject. Vocalic contractions are indexed by the use of the enclitic boundary symbol =.

(xx1) a. *mā wár̄ bìlà= [àⁿ jɛ́-ná]*

1Sg money give.Pfv [**1SgReflPoss** father-Nom]

‘I gave (the) money to my father.’ (< *bìlí* )

b. *wō sà wár̄ bìlì= [ì jɛ́-ná]*

2Sg Fut money give.Ipfv [**2SgReflPoss** father-Nom]

‘You-Sg will give the money to your father.’ (< *bìlɛ̀* )

c. *wár̄ blì= [ì jɛ́-ná]*

money give.Imprt [**2SgReflPoss** father-Nom]

‘Give-2Sg the money to your father!’

Teasing apart the reflexive possessor vowels from their contractions with the final vowels of preceding words, (xx2) presents paradigms for alienables, and (xx3) does so for inalienables. The tones of the possessums are what we would expect for these nouns based on the patterns described in §6.2.2 above. For example, the {LH} tone overlay for possessums after 3Sg possessors is regular. M‑Spreading from M‑toned inalienable but not alienable possessors is also regular. Rising tones in forms like *āáⁿ* and *àáⁿ* are due to tone sandhi (Final Tone-Raising) before an L‑tone.

(xx2) Reflexively possessed alienables

‘fish’ ‘bird’ ‘fire’

*yíʔé* *kɔ̀ⁿ* *tāā*

1Sg *āⁿ yìʔè-rà āⁿ kɔ̀-nɔ́ āⁿ tàà-rà*

2Sg *ē yìʔè-rà ē kɔ̀-nɔ́ ē tàà-rà*

1Pl *āáⁿ yìʔè-rà āáⁿ kɔ̀-nɔ́ āáⁿ tàà-rà*

2Pl *īíⁿ yìʔè-rà* *īíⁿ kɔ̀-nɔ́ ēéⁿ tàà-rà*

3SgHum *à yìʔè-rá à kɔ̀-nɔ́ à tàà-rá*

3SgNonh *è yìʔè-rá è kɔ̀-nɔ́ è tàà-rá*

3PlHum *àáⁿ yìʔè-rá àáⁿ kɔ̀-nɔ́ àáⁿ tàà-rà*

3PlNonh *èéⁿ yìʔè-rá èéⁿ kɔ̀-nɔ́ èéⁿ tàà-rà*

(xx3) Reflexively possessed inalienables

‘father’ ‘child’

*jɛ́ⁿ* *dí*

1Sg *āⁿ jɛ̄-nā āⁿ dī-rā*

2Sg *ē jɛ̄-nā ē dī-rā*

1Pl *āāⁿ jɛ̄-nā āāⁿ dī-rā*

2Pl *ēēⁿ jɛ̄-nā* *ēēⁿ dī-rā*

3SgHum *à jɛ̀-ná à dì-rá*

3SgNonh *è jɛ̀-ná è dì-rá*

3PlHum *ààⁿ jɛ́-ná ààⁿ dí-rá*

3PlNonh *èèⁿ jɛ́-ná èèⁿ dí-rá*

#### Reflexive postpositional complements

The reflexive forms used in postpositions are identical to the reflexive possessor forms. The reflexive noun *yéʔré* is not present.

(xx2) a. *mā dèrèké jyà= [āⁿ kūtɔ̄]*

1Sg boubou see.Pfv [**1SgRefl** under]

‘I found the boubou (=garment) under me.’ (< *dèrèkè*, *jyɛ̌* )

b. *ēēⁿ dèrèké jyì= [īīⁿ kūtɔ̄]*

2Pl boubou see.Pfv [2PlRefl under]

‘You-Pl found the boubou under yourselves.’

c. *wō dèrèké jyì= [ī kūtɔ̄]*

2Sg boubou see.Pfv [2SgRefl under]

‘You-Sg found the boubou under yourself.’

#### Reflexive possessors in conjunctions

In a conjunction of the type ‘X and X’s Y’, where the possessor inside the right conjunct X’s Y is coindexed with the left conjunct X, reflexive possessor forms are used. This is observable when X is a first or second person pronoun (xx1a), and is moot when X is a third person pronoun or NP (xx1b).

(xx1) a. *[mā būʔā= [āⁿ jɛ́-ná]] sàà síní*

[1Sg and [1SgReflPoss father-Nom] Fut.come.Ipfv tomorrow

‘I and my father will come tomorrow.’ (< *bùʔù* )

b. *[bákàrì búʔá= [á dòʔò-rá]*

[B and [3SgReflPoss younger.brother-Nom]

*sàà síní*

Fut.come.Ipfv tomorrow

‘Bakari and his brother will come tomorrow.’ (< *búʔú* )

In these examples, *sàà* is contracted from *sà sā* ‘will come’.

#### Reflexive possessor of preverbal object

In the examples to follow, the possessed NP is a preverbal object, so the construction in Jalkunan is of the type [1Sg Infl [ReflPoss N]]’. The pronominal subject, inflectional morpheme (if any), and reflexive possessor can become partially fused.

In (xx1), *kɔ̄yī* ‘belly’ (inalienable) and *bāʔā* ‘porridge’ take their regular possessed tonal forms, namely *kɔ́yí* (except 3Sg possessed *kɔ̀yí* ), and *bàʔà* (except 3Sg possessed *bàʔá* ). *bàʔà* becomes *bàʔá* secondarily by tone sandhi (Final Tone-Raising) before an L‑tone.

(xx1) a. *mā [nāāⁿ kɔ́yí] jyɛ̌*

1Sg [1stReflPoss belly] see.Pfv

‘I saw my belly.’

b. *mā* *[nāáⁿ bàʔá] jyɛ̌*

1Sg [1SgReflPoss porridge] see.Pfv

‘I saw my porridge.’

c. *mùʔùⁿ [nāāⁿ kɔ́yí] jyɛ̌*

1Pl [1stPoss belly] see.Pfv

‘We saw our belly.’

d. *mā* *[nāáⁿ bàʔá] jyɛ̌*

1Sg [1SgReflPoss porridge] see.Pfv

‘We saw our porridge.’

e. *à [ná kɔ̀yí] jyɛ̌*

3SgHum [3SgReflPoss belly] see.Pfv

‘He saw his (own) belly.’

f. *à [ná bàʔá] jyɛ̌*

3SgHum [3SgReflPoss porridge] see.Pfv

‘He saw his (own) porridge.’

g. *ààⁿ [náāⁿ kɔ́yí] jyɛ̌*

3PlHum [3PlReflPoss belly] see.Pfv

‘Their saw their (own) belly.’

h. *ààⁿ [náāⁿ bàʔá] jyɛ̌*

3PlHum [3PlReflPoss porridge] see.Pfv

‘They saw their (own) porridge.’

Combinations of subjects, inflectional morphemes, and reflexive possessors for preverbal objects are in (xx2). As usual, the present and future have an imperfective enclitic /H+=∅/ on the subject. In the perfective and present, which have no nonzero inflectional morpheme separating subject from object, n separates them. This is probably the same n that occurs in combinations of a pronominal subject with a third-person pronominal object. The *n* does not occur in the progressive, which has a nonzero inflectional morpheme *sà*.

(xx2) perfective present future imperative

1Sg *mā nāāⁿ má=∅ nāāⁿ má=∅ sààⁿ* —

2Sg *wō nīī wó=∅ nīī wó=∅ sìì* *∅ é*

1Pl *mùʔùⁿ nāāⁿ mùʔú=∅ nāāⁿ mùʔúⁿ=∅ sààⁿ* —

2Pl *ēēⁿ nīīⁿ ēéⁿ=∅ nīīⁿ ēéⁿ=∅ sììⁿ ēēⁿ nīīⁿ*

3SgHum *à ná á=∅ ná á=∅ sáá* —

3SgNonh *è ní é=∅ ní é=∅ síí* —

3PlHum *ààⁿ náāⁿ àáⁿ=∅ nāāⁿ àáⁿ=∅ sáāⁿ* —

3PlNonh *èè níīⁿ èéⁿ=∅ nīīⁿ èéⁿ=∅ síīⁿ* —

Sg NP *(n)á =∅ sáà*

Pl NP *(n)áàⁿ =∅ sáāⁿ*

In (xx3) the subjects are nonpronominal NPs.

(xx3) a. *zàkí [ná wùlá] bàʔrí*

Z [3SgReflPoss dog] hit.Pfv

‘Zaki hit-Past his (own) dog.’

b. [*zàkí bùʔù bákàrì] náàⁿ wùlá bàʔrí*

*[Z and B] 3PlReflPoss dog hit.Pfv*

‘Zaki and Bakari hit their (own) dog.’

Imperative examples are in (xx4).

(xx4) a. *bí= [í wùlá / dóʔō] bàʔr=léʔ*

Proh [2SgReflPoss dog/younger.brother] hit.Imprt=Neg

‘Don’t-2Sg hit your dog/your younger brother!’

b. *ēēⁿ bí= [ííⁿ wùlá / dóʔō] bàʔr=léʔ*

2Pl Proh [2PlReflPoss dog/younger.brother] hit.Imprt=Neg

‘Don’t-2Pl hit your dog/your father!’

### Reflexive nonsubject argument (*yéʔré*~ *yɛ́ʔrɛ́* )

Explicit reflexives of the ‘X hit X’s self’ type, i.e. with coindexed subject and object, require a reflexively possessed noun *yéʔré*, comparable to *-self* in English reflexives. *yéʔré* is not attested other than in this construction. A ‑ATR variant *yɛ́ʔrɛ́* is also used occasionally by my assistant.

(xx1) a. *mā nāāⁿ yēʔré bàʔrí*

1Sg 1SgReflPoss self hit.Pfv

‘I hit-Past myself.’

b. *mā sààⁿ yéʔré bàʔrà*

1Sg Fut.SgReflPoss self hit.Ipfv

‘I will hit myself.’

#### Reflexive postverbal NP

In (xx1), the reflexive is a postverbal NP, so the reflexive possessor pronoun lacks the initial *n* and contracted with the final vowel of the verb.

(xx1) a. *mā báʔr= [àⁿ yéʔré]*

1Sg touch.Pfv [1SgReflPoss self]

‘I touched myself.’ (< *báʔrī* )

b. *ēēⁿ sà báʔré= [ēēⁿ yɛ̄ʔrɛ̄*]

2Pl Fut touch.Ipfv [2PlReflPoss self]

‘You-Pl will touch yourselves.’ (< *báʔrá* )

#### Reflexive preverbal object

The paradigm for indicative clauses with a reflexive preverbal object is (xx1). The basic tonal form is *yéʔré*, becoming *yèʔré* with the {LH} pattern associated with 3Sg subjects. M‑toned *yēʔrē* in the 1Sg and 2Sg perfective is due to M‑Spreading from M‑toned pronominals. This *yēʔrē* becomes *yēʔré* before an L‑tone by regular Final Tone-Raising, as in (xx1a) above.

(xx1) perfective present progressive

1Sg *mā nāāⁿ yēʔrē má=∅ nààⁿ yéʔré má=∅ sààⁿ yéʔré*

2Sg *wō nīī yēʔrē wó=∅ nìì yéʔré wó=∅ sìì* *yéʔré*

1Pl *mùʔùⁿ nāāⁿ yéʔré mùʔú=∅ nààⁿ yéʔré mùʔúⁿ=∅ sààⁿ yéʔré*

2Pl *ēēⁿ nīīⁿ yéʔré ēéⁿ=∅ nììⁿ yéʔré ēéⁿ=∅ sììⁿ yéʔré*

3SgHum *à ná yèʔré á=∅ ná yèʔré á=∅ sáá yèʔré*

*á yèʔré*

3SgNonh *è ní yèʔré é=∅ ní yèʔré é=∅ síí yèʔré*

3PlHum *ààⁿ náàⁿ yéʔré àáⁿ=∅ nààⁿ yéʔré àáⁿ=∅ sáàⁿ yéʔré*

3PlNonh *èè níìⁿ yéʔré èéⁿ=∅ nììⁿ yéʔré èéⁿ=∅ síīⁿ yéʔré*

Sg NP *(n)á yèʔré =∅ ná yèʔré =∅ sáá yèʔré*

Pl NP *(n)áàⁿ yéʔré =∅ náàⁿ yéʔré =∅ sáàⁿ yéʔré*

The imperative is illustrated in (xx2a‑b).

(xx3) a. *ē yéʔré bàʔrì*

2SgReflPoss self hit.Imprt

‘Hit yourself!’

b. *ēēⁿ nīīⁿ yéʔré bàʔrì*

2Pl 2PlReflPoss self hit.Imprt

‘Hit yourselves!’

## Reciprocal

### Reciprocals (*ɲùʔùⁿ* )

This morpheme behaves behaves like a possessed inalienable, compare (xx1a) in §6.2.2.1. Its morphosyntax resembles that of reflexive *yéʔré*. However, as a preverbal object it allows more contractions than *yéʔré* does with pronominal subjects. The sense is reciprocal (‘each other’).

#### Reciprocal postverbal object

In (xx1), the reciprocal phrase is a postverbal object.

(xx1) a. *mùʔùⁿ báʔr= [āāⁿ ɲūʔūⁿ]*

1Pl touch.Pfv [1PlReflPoss Recip]

‘We touched each other.’ (< *báʔrī* )

b. *ēēⁿ báʔr= [īīⁿ ɲūʔūⁿ]*

2Pl touch.Pfv [2PlReflPoss Recip]

‘You-Pl touched each other.’

c. *ààⁿ báʔr= [ààⁿ ɲúʔúⁿ]*

3PlHum touch.Pfv [3PlHumReflPoss Recip]

‘They touched each other.’

#### Reciprocal preverbal object

The paradigm for combinations of preverbal reciprocal objects with various (always plural) subjects and with post-subject inflectional morphemes is (xx1).

(xx1) Reciprocals

perfective present progressive

1Pl *mùʔùⁿ nāāⁿ ɲūʔūⁿ mùʔú=∅ nààⁿ ɲúʔúⁿ mùʔúⁿ=∅ sààⁿ ɲúʔúⁿ*

*mùʔà=àⁿ ɲúʔúⁿ*

2Pl *ēēⁿ nīīⁿ ɲūʔūⁿ ēéⁿ=∅ nììⁿ ɲúʔúⁿ ēéⁿ=∅ sììⁿ ɲúʔúⁿ*

3PlHum *ààⁿ náàⁿ ɲúʔúⁿ àáⁿ=∅ náàⁿ ɲúʔúⁿ àáⁿ=∅ sáàⁿ ɲúʔúⁿ*

3PlNonh *èè níìⁿ ɲúʔúⁿ èéⁿ=∅ níìⁿ ɲúʔúⁿ èéⁿ=∅ síīⁿ ɲúʔúⁿ*

Pl NP *(n)áàⁿ ɲúʔúⁿ =∅ náàⁿ ɲúʔúⁿ =∅ sáàⁿ ɲúʔúⁿ*

*∅ ɲùʔùⁿ*

A transitive verb following *ɲùʔùⁿ* takes its plural form, beginning with an H‑tone, e.g. *báʔrī* ‘hit (perfective)’.

The variant *∅ ɲúʔúⁿ* after plural noun (which then ends in plural *-àⁿ* ) might be thought of as a contraction, but the tonal patterns are not completely consistent with this. The two variant constructions are illustrated in (xx2a‑b).

(xx2) a. *dí-rá-àⁿ náàⁿ ɲúʔúⁿ báʔrī*

child-Nom-Pl 3PlReflPoss Recip hit.Pfv

‘The children hit-Past each other.’

b. *dí-rá-àⁿ ∅ ɲùʔùⁿ báʔrī*

child-Nom-Pl ∅ Recip hit.Pfv

[=(a)]

*ɲùʔùⁿ* in (xx2b) is tonally distinct from *ɲúʔúⁿ* in (xx2a). The absence of an overt “possessor” in (xx2b) suggests that the noun is lexically L‑toned *ɲùʔùⁿ*, though in the majority of actual sentence examples it becomes *ɲūʔūⁿ* by M‑Spreading or *ɲúʔúⁿ* by tonal ablaut (as inalienably possessed by a plural possessor).

### ‘Together’ (*ŋŋŋ*)

*Some Dogon languages have a ‘(we/you/they) together’ construction consisting of a ‘together’ noun (with possessed-noun tone contour) preceded by a nonsingular pronominal possessor that is usually coindexed to the clausemate subject.*

*(xx1) category form*

*1Pl ŋŋŋ*

*2Pl ŋŋŋ*

*Reflexive Plural ŋŋŋ*

*examples*

*‘We came together.’*

*‘The people farmed (= raised) millet together.’*

*antecedent may be direct object instead of subject*

*‘We cooked [leaves and onions] together.’*

## Emphatic pronouns

*Emphatic pronouns (‘I did it myself’, etc.) are morphologically associated with reflexives in English and many other languages, so they are described in this chapter.*

*perhaps two or three types (each gets a subsection)*

*a) adverbial ŋŋŋ ‘(by) oneself’ after an independent pronoun;*

*b) numeral ‘one’ after independent pronoun (‘1Sg one’ = ‘me, alone (by myself)’*

*c) possessed form of ‘head’ or other body-part noun (‘my head’ = ‘myself’), though in some languages this might be the simple reflexive form (in which case it belongs in the preceding section); is e.g. 3Pl form ‘their head’ with singular ‘head’?*

*discuss sense and pragmatic context of each type (for example, ‘I did it myself’ implies that it might have been expected that other people share in the work, but they did not, = ‘I did it alone’)*

*examples (including textual examples, with comments on context); include examples where the emphatic pronoun is direct object or other non-subject*

*‘He didn’t send his son, (rather) he came himself.*

*‘We will do the farming ourselves.’*

*‘Hamidou went himself (in person).’*

*‘She didn’t call my son, she called me myself (i.e. directly).’*

*‘You can’t cut up the meat alone.’*

*‘I can’t lift the water jar by myself.’*

*‘The children can’t pick up the water jar by themselves (=without help).’*

*‘My father cannot do the farming by himself.’*

*‘We work for ourselves.’ (lit.: “we do the work of our head” ?)*

*‘They work for themselves.’*

*‘I work for myself.’*

## Logophoric and indexing pronouns

### True third person logophoric function

*Logophoric pronoun ia coindexed with attributed author of a speech or thought quotation;*

*corresponds to 1Sg and 1Pl in the original (direct) quotation*

*logophorics used only when the author is a third person (not the current speaker or addressee)?*

*forms (with discussion)*

*same as reflexive, topic-indexing?*

*syntax*

*as subject, requires regular 3Sg or 3Pl pronominal-subject suffix on verb?*

*behaves like personal pronouns, or like nouns?*

*a) in morphological appearance*

*b) as possessors (if special construction for pronominal possessors)*

*c) as subjects (check linear position in relative clause containing a direct chain, e.g ‘hex said that [the cow that he-Logox killed (and) left-Participle] is still there’ = [... fall go.down-Participle]; same linear position as e.g. preparticipial 1Sg in ‘[[the cow that I killed (and) left-Participle] is still there] (?)*

*Accusative marking in direct-object function? (‘He said that I hit him’)*

*elicited examples (ordinary clause, and quoted equivalent) showing relationship of logophoric to nouns and to other pronouns*

*‘he jumped down’*

*‘the man jumped down’*

*‘I jumped down’*

*‘hex said that he-Logox jumped down’*

*(non-logophoric) ‘hex said that shey jumped down’*

*elicited examples including relative-clause subject position*

*‘the day he/she jumped down’*

*‘the day the man jumped down’*

*‘Hex said, the day he-Logox jumped down, …’*

*no logophoric with current 1st/2nd person as quoted author?*

*‘I said that I can’t come.’*

*‘You-Sg said that you-Sg can’t come.’*

*singular antecedent included in plural logophoric*

*‘Amadoux said that theyxy (e.g. Amadou and Seydou) are going to Mopti.’*

*‘Amadoux said you went to their-LogoPlxy (=Amadou & his family’s) house.’*

*more examples including textual exx. of logophorics*

*long-distance anaphora (logophoric in embedded clause)*

*‘Amadoux said [you saw that [he-Logox was injured]]’*

*‘Amadoux said [you said [that you would kill him-Logox]]*

*quotation embedded in another quotation: can higher antecedent bind a logophoric in the embedded quotation (resulting in ambiguity)?*

*‘Amadoux said [Seydouy said [he-Logo will kill him-Logo]]*

*(perhaps ambiguous as to which antecedent each logophoric is coindexed to (Seydou kill Amadou, or Amadou kill Seydou); if reflexive pronoun is identical to logophoric pronoun, this sentence should also have two additional readings in which he-Logo is antecedent of him-Refl (Amadou kill Amadou, Seydou kill Seydou).*

### Non-logophoric topic-indexing function

*subject of main clauseis coindexed to the subject of a relative clause (the latter may have a Reflexive/Logophoric pronoun). If reflexive and logophoric are identical in form, such cases (which do not involve quotation) should be labeled Refl in interlinears.*

*examples*

*‘I will do as much as I can.’*

*‘Amadoux will do as much as hex can.’*

*‘The people will do what they can.’*

*no anaphora when antecedent is object, dative, or other non-subject*

*‘Hex showed me a bird that hex (had) killed.’ (antecedent is subject)*

*‘I showed himx the damage that hex (or: shey) had made.’ (antecedent is object or dative)*

# Grammatical pragmatics

## Topic

### Topic (*ŋŋŋ*)

isolation ‘as for me’

1Sg *mā-n* *mā kɔ̄nī*

1Pl *mùʔú-n(ú)* *mùʔúⁿ kɔ́ní*

2Sg *wō-n* *wō kɔ̄nī*

2Pl *ēē-n* *ēēⁿ kɔ̄nī*

3SgHum *(à) wɔ̀-n* *à wò kɔ́ní*

3SgNonh *è wɔ̀-n* *è wò kɔ́ní*

3PlHum *àà-ń*, *àà-nú ààⁿ kɔ́ní*

3PlNonh *èè-ń*, *èè-nú èèⁿ kɔ́ní*

Pl *máà-ǹ máàⁿ kɔ́ní*

### ‘Now’ (*ŋŋŋ*)

### ‘Also, too’ (*dóʔó* )

This particle is added to NPs including pronouns.

(xx1) a. xxx

‘the child too’

b. xxx

‘the children too’

The pronominal paradigm is (xx2). The optional *wò* in the 3Sg forms is related to their independent pronoun shapes, human *(à) wɔ̀-n* and nonhuman *è wɔ̀-n*.

(xx2) Pronominal paradigm of ‘also, too’

a. 1Sg *mā dōʔō*

2Sg *wō dōʔō*

2Pl *ēēⁿ dōʔō*

b. 1Pl *mùʔùⁿ dóʔó*

3PlHum *ààⁿ dóʔó*

3PlNonh *èèⁿ dóʔó*

c. 3SgHum *à (wò) dóʔó*

3SgNonh *è (wò) dóʔó*

Pl *máà-ǹ máàⁿ dòʔó*

### ‘Even’ (*ŋŋŋ*)

*‘Even the little kids will do farm work (= weeding).’*

*‘He/She didn’t even greet (=say hello).’*

*cross-refs to other sections in grammar involving ‘even’, e.g. ‘even if’ conditional antecedents §16.2.1.*

## Preclausal discourse markers

### ‘Well, …‘ (*ŋŋŋ*)

### ‘So, …‘ (*ŋŋŋ*)

### ‘But …‘ (*ŋŋŋ*)

### ‘Lo, …‘ (*ŋŋŋ*)

## Pragmatic adverbs or equivalents

### ‘Again’, ‘not again’, ‘on the other hand’

## ‘Only’ particles

### ‘Only’ (*ŋŋŋ*)

### ‘Just (one)’ (*ŋŋŋ*)

## Phrase-final emphatics

### Phrase-final *ŋŋŋ* ‘exactly’ (confirming)

### Clause-final *ŋŋŋ* ‘sure’ (firm agreement or answer)

*examples*

*Q: Did you see the fire?*

*A: I sure did.*

*‘Money sure is hard to come by.’*

*‘It sure is hot today!’*

### Clause-final *ŋŋŋ* (admonitive)

*examples*

*‘Watch our for wild animals now!’*

*‘Now don’t you go to the field without a hat!’*

## Backchannel and uptake checks

## Greetings

*a) time-of-day greetings*

*‘good morning’ to ‘good night’*

*‘good morning’ may be expressed as ‘did you sleep well?’ (i.e. retrospective), ‘good evening’ as ‘did you spend the day well?’; ‘good night’ often prospective (‘let’s spend the night well’ etc.).*

*indicate time of day (range of hours) when each greeting is appropriate*

*perhaps a default ‘hello’ in the middle of the day*

*b) situational greetings like ‘hello in the field/at work/at the well/at the market)’, referring to a location and activity that the interlocutor is in or is coming back from; typical forms are ‘you and (the) field’ or ‘hello in the field’.*

*c) greetings to travelers (best wishes on departing, welcome on arriving):*

*‘welcome!’ (perhaps imperative ‘approach the house!’)*

*‘bon voyage’ (perhaps ‘arrive there in health!’)*

*d) condolences*

*from the visitor to the deceased’s family*

*e.g. ‘greetings in high worth’*

*to the visitor as he is about to depart*

*e.g. ‘may God lengthen your life’*

*or ‘may God put distance between us (and the deceased)*

*to one returning home after presenting condolences in another village*

*e.g. ‘greetings in running’*

*analysis may require cultural explanations*

*e) good wishes at marriages and major Muslim holidays*

*‘May God show you next year!’*

*f) Islamic greetings*

*assala:mu walaykum (generally a formal greeting among men)*

*response: malaykumussalaam (or similar)*

*‘amen’ (often a reply to a good wish)*

*‘thanks’ (albarka, < Arabic ‘the blessing’), said to one’s host after a meal, also said to a merchant in politely declining to buy at the price proposed*

*invitation (to eat, etc.): usually bisimil(l)a (< Arabic ‘in the name of God’)*

*Ask if the old people use(d) greeting phrases that are now out of fashion.*

# Text

(xx1) X: *ŋŋŋ...*

X:

*ŋŋŋ...*

*ŋŋŋ...*

*ŋŋŋ...*

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# Index

*model for index, from Jamsay grammar (additions/comments in pink). Jamsay forms (to be replaced) are here colored dark yellow. References should ultimately be to pages, but while drafting the grammar section references like §6.2.1 are all that one can do.*

**1. prosody (grammatical)**

now **use {L}, {HL}, {LH} etc. as overlaid tone contours**

all-L tone, 8

{HL} tone, 8, 109 (phonology)

all-H tone, 8

final intonation, 8-9

**2. selected morphemes**

list grammatical morphemes (affixes, clitics, particles)

also any irregular or otherwise interesting stems

do not list every stem that occurs in examples

**3. grammar**

adjective,

as predicate,

participle of predicate,

comparative,

adverb

manner,

spatiotemporal,

adverbial clauses,

adverbial, (intonation),

‘a fortiori’,

‘again’,

agentive,

‘also’,

anaphora,

anaphoric,

antipassive (ambi-valent verb),

apocope,

apposition,

approximative,

aspect,

aspect-negation suffix,

augment,

autosegmental,

backchannel,

bahuvrihi,

‘be’

locative/existential,

‘it is X’ (identificational),

‘because’,

‘before ...’ clause,

bracketing (within NP),

causative,

valency of,

with kàrà,

chaining (of verbs or VPs),

arguments of chained verbs,

cliticization,

clusters,

cognate nominal,

comparatives,

compounds

nominal, (phonology),

adjectival,

bahuvrihi,

instrumental,

conjunction,

conditionals,

consonants,

deadjectival verb,

definite,

defocalized verb or adjective,

deictic (see demonstrative)

demonstrative,

denominal verb,

detachability (of NP component),

in relatives,

discourse markers,

disjunction,

dissimilation (consonants),

distributive

‘each’,

iterated adverbials,

with quantifiers,

‘do’,

dual,

dying-quail,

emphatic,

epenthesis,

epistemic,

‘even’,

‘even if’,

experiential perfect,

factitive (verb),

factive clause,

focalization,

effect on verb morphology,

fraction,

greetings, (intonation),

habitual,

hortative,

negative,

embedded,

‘have’,

hiatus,

imperative,

quoted (jussive),

imperfective, (see also Habitual)

unsuffixed,

reduplicated,

negative,

inchoative,

intensifier,

interrogatives,

embedded,

intonation,

iteration,

jussive,

locative,

locative clause,

logophoric,

manner adverbial

simple adverbial,

adverbial clause,

mediopassive (ambi-valent verb),

metathesis (consonants),

metrical structure,

modal

obligation,

‘behooves’,

‘had better’,

certainty,

epistemic,

Monophthongization,

motion verbs,

Nasalization-Spreading,

negative

Imperfective,

Perfective,

Stative,

scope,

noun phrase,

numeral,

bahuvrihi compounds,

obligation,

‘only’,

ordinal,

participle,

passive,

past,

perception verb,

perfect

experiential perfect,

recent perfect,

perfective,

unsuffixed,

unsuffixed, in participle,

unsuffixed, in narrative climax,

reduplicated,

negative,

person

rd as indirect nd,

implied st,

plural,

possessive,

predicates,

in ‘before...’ clause,

possessor relative,

postposition,

relative clause,

prohibituve,

pronouns,

L-toned preverbal subject,

independent (H-toned),

possessor,

pronominal-subject suffixes,

purposive

purposive-causal postposition,

purposive clause,

negative purposive clause,

quasi-verb,

quotation

quotative verb,

quotative complement,

‘what they call X’,

‘if they have said ...’,

recent perfect,

reduplication, (see also iteration)

reflexive,

relative clauses,

with repeated head noun,

headless,

instrumental compounds,

reversive,

‘since ...’,

‘So-and-so’,

spatial adverbial

deictic adverbs,

other simple adverbs,

adverbial clause,

stance verbs,

stative,

‘be in’,

stance verbs,

existential-locational ‘be’,

subject

pseudo-subject,

syllables,

temporal adverbial

simple adverbs, .

adverbial clauses,

‘together’,

tonal locative,

tone,

in stem iterations,

in verb chains,

tone-dropping,

topic,

valency,

of causatives,

verb,

derived,

inflection,

verbal noun,

of chained verbs,

verb phrase, (see also chaining)

vowels,

vv-Contraction,

‘want’,

‘intend to’,

‘whatchamacallit?’,

‘with’ (accompaniment),

*sample verb paradigms*

*This section, to be deleted when no longer necessary can be used to assemble simple paradigms of verbs and their "principal parts"; the data can then be reassembled in Chapter 10, Inflectional Verbal Morphology. To quickly locate this section, avoid using the word "sample" elsewhere in the grammar. Do not include stative-only quasi-verbs (‘be [somewhere]’, ‘have’, ‘want’, ‘know’, etc.) here. Also omit adjectival inchoatives (‘be red’), reversives (‘unhook’), causatives (‘make drink’), and other sets that can be directly elicited in the relevant grammar sections (Chapter 9).*

*Inflectional categories can be relabeled or added, e.g. Progr[essive], Fut[ure], if they are not predictable from the basic forms shown. The "bare" form is the one used in nonfinal position in chains, often elicitable in ‘X can VERB’ construction. Imprt = imperative. If the verb is normally accompanied by a fixed nominal in the sense indicated, this can be indicated by a comment below the paradigm.*

*Copy and paste the two-line formula below, then fill in the forms for each verb. Some glosses are already suggested. Re-organize by verb stem shape: Cv, Cv:, CvC, CvCv, CvCCv, Cv:Cv, etc. For CvCv stems, it may be useful to subdivide by medial consonant (especially sonorants). If the language distinguishes a (nonmonosyllabic) class whose bare stem ends in a high vowel (e.g. i) from another whose bare stem ends in a non-high vowel, separate them as well. Separate special morphological classes (Mediopassive, Causative, etc.) from others. The two-line segment with ‘xxx’ for the gloss can be copied and pasted as many times as wished below.*

*‘gloss’ Imprt Ipfv IpfvNeg*

*bare Pfv PfvNeg Progr*

*‘xxx’ ŋŋŋ ŋŋŋ ŋŋŋ*

*ŋŋŋ ŋŋŋ ŋŋŋ ŋŋŋ*

*MONOSYLLABIC*

Cv intransitive

‘come’ *sá sà sáá (sá) sáá rɛ̀*

*sáá sɛ́ (sɛ̌) sé: ré sèè-yá*

‘go out’ *bɔ́ sà bɔ́ɔ́ bɔ́ɔ́ rɛ̀*

*bɔ́ɔ́ bwɛ́ (bwɛ̌) bóó ré bòò-yá*

‘go in’ *sɔ́ sà sɔ́ɔ́ sɔ́ɔ́ rɛ̀*

*sɔ́ɔ́ swɛ́ (swɛ̌) sóó ré sòò-yá*

‘arrive’ *ŋŋŋ sà kyɛ́ɛ́ (sà) kyɛ́ɛ́ rɛ̀*

*kyɛ́ɛ́ kyɛ́ (kyɛ̌) kyɛ́ɛ́ rɛ́ kìì-yá*

[also ‘can VP’ with following verb]

Cv transitive

(transitive imperative: rising-tone after *è*, L-tone after noun object)

‘put’ *è kyɛ̌ sí=í kyɛ̀ɛ̀ sí=í kyɛ̀ɛ̀ rɛ́*

*kyɛ̀ɛ̀ kyɛ̌ kyɛ̀ɛ̀ rɛ́ kèè-yá*

*([‘put X in Y’]*

‘heat’ *è dɛ̌ sí=í dɛ̀ɛ̀ (sí=í) dɛ̀ɛ̀ rɛ́*

*dɛ̀ɛ̀ dɛ̌ dɛ̀ɛ̀ ré dèè-yá*

‘build’ *è sǎ sí=í sàà (sí=í) sàà rɛ́*

*sàà sɛ̌ sèè ré sèè-rá*

‘lay out’ *è bǎ sí=í bàà sí=í bàà rɛ́*

*bàà bɛ̌ bèè ré bèè-yá*

‘shatter’ *è tě sí=í tɛ̀ɛ̀ sí=i tɛ̀ɛ̀ rɛ́*

*tɛ̀ɛ̀ tèéè tèé rè tèè-yá*

‘go’ *è wǎ sí=í wàá sí=í wàá rɛ̀*

*wàá má-n-í wɛ̌ɛ̀ (á wɛ̌ɛ̀) (*~ *wěè) wèé rè wè-yá*

*[transitive with pro forma 3Sg object]*

‘convey’ *è wà [á/é dɛ̀] sí=í wá [á/é dɛ̀] wá [á\é dɛ̀] rɛ́*

*wá [á/é dɛ̀] wá [á/é dɛ̀] wá [á/é dɛ̀] rɛ́ wèè-yá [X dɛ̀]*

*[based on ‘go’; /ae/ contracts to ee ; also táʔá ~ téʔé dɛ̀]*

‘bathe’ *ē wē sá=á wɛ̀ɛ̀ sá=á wɛ̀ɛ̀ rɛ́*

*wɛ̀ɛ̀ má-n-ááⁿ wěè (á wěè) wěé rè wèè-yá*

*[transitive with pro forma 3Sg object]*

‘lie down’ *ē sā má sà=àⁿ sáá má sà=à sáá rɛ́*

(*á sá=á sàà*) (à sá=á sàà rɛ́)

*sàà mà-n-ààⁿ sɛ́ (á sɛ̌) sɛ́ɛ́ rɛ́ (~séé ré) sèè-yá*

*[stative sèèní* ~ *sèén-nɛ̀ ‘be lying down’, Fr. être couché]*

*[plural imperative ēēⁿ-n-īī sā*

Cvⁿ ~ Cvnv transitive

‘shave’ *è sə̌ⁿ sà [à wú] sə̀nà sá [à wú] sə̀nɛ̀ nɛ́*

*sə̀nà* ~ *sìyàⁿ sə̀ní(ì) sə̌n nè sə̀nì-yá*

*[often with wù-rɔ́ ‘head’]*

*‘eat (meat)’ è dɔ̌ⁿ sí=í dɔ̀nɔ̀ sí=í dɔ̀n(ɔ̀) nɛ́*

*dɔ̀nɔ̀* ~ *dɔ̀rɔ̀ⁿ dɔ̀ní(-ì) dɔ̌n nè dɔ̀nì-yá*

*[used with noun sìbì-rá ‘meat’]*

‘pour’ *è bɔ̌ⁿ sí=í bɔ̀nɔ̀ sí=í bɔ̀nɔ̀ nɛ́*

*bɔ̀nɔ̀ bɔ̀níì bɔ̌n-nè bɔ̀nì-yá*

‘dig’ *è sǐⁿ sí=í sə̀nà sí=sə̀nà nɛ́ⁿ*

*sɛ̀nà sə̀níìⁿ sə̌n nèⁿ sɛ̀nì-ⁿyá*

‘buy’ *è sǎⁿ sí=í sànà sí=í sànà nɛ́*

*sànà sàníì sǎn-nì sànì-yá*

‘eat (meal)’ *è kǔⁿ sí=í kùnɔ̀ sí=í kùnɔ̀ nɛ́*

*kùnɔ̀ kùní(ì) kǔn-nè kùnì-yá*

*[used with noun kùmɛ̀ɛ̀-ná ‘meal’]*

*Cv(v)ⁿ*

‘die’ *kpáⁿ sà kpááⁿ sà kpááⁿ nɛ̀*

*kpáⁿ kpɛ́ⁿ (kpɛ̋ⁿ) kpɛ̀ɛ̀ⁿ nɛ́ kpèⁿ-yá*

‘kill’ *à kpǎⁿ sá=á kpààⁿ sá=á kpààⁿ nɛ̀*

*kpààⁿ kpɛ̀ⁿ kpɛ̀ɛ̀ⁿ nɛ́ kpèèⁿ-yá*

[same as ‘die’]

‘cook (meal)’ *è mǎⁿ sí=í mààⁿ =í mààⁿ nɛ́ⁿ*

*mààⁿ mɛ̀ⁿ mɛ̀ɛ̀ⁿ nɛ́ⁿ mèⁿ-yá*

*[Fr préparer (repas)]*

‘do farming’ *mùúⁿ màⁿ sà mùúⁿ mààⁿ sà mùúⁿ mààⁿ nɛ́ⁿ*

*ŋŋŋ mùúⁿ mɛ̀ⁿ mùú mɛ̀ɛ̀ⁿ nɛ́ⁿ mùúⁿ mèⁿ-yá*

*[Fr cultiver, refers focally to weeding in July]*

‘hear’ *mɛ́ɛ́ⁿ-mɛ̀ⁿ sà X mɛ́ɛ́ⁿ-mɛ̀ⁿ mɛ́ɛ́ⁿ-mɛ̀ⁿ nɛ́*

*síí mɛ̀ɛ̀*

*mɛ̀ɛ̀ⁿ mɛ̀ɛ́ⁿ-mɛ̀ mɛ́ɛ́-mɛ̀ⁿ nɛ́ mèèⁿ-yá*

*mɛ̀ⁿ mɛ̀ɛ̀ⁿ nɛ́*

‘understand’ *è mɛ̌ⁿ sí=í mɛ̀ɛ̀ⁿ sí=í mɛ̀ɛ̀ⁿ nɛ́*

*mɛ̀ɛ̀ⁿ á mɛ̀ⁿ è mɛ̀ɛ̀ⁿ nɛ́ mèⁿ-yá*

[= ‘hear’]

*Cv with fixed object or chained elements*

‘fall’ *bó bà sà bó bàà sà bó bàà rɛ́*

*bó bàà bó bɛ́ (bɛ̌) bó béé ré bó bè-yá*

*[with optional bó]*

‘have fun’ *fɔ̀ɔ́ⁿ bà sà fɔ̀ɔ́ⁿ bàà sà fɔ̀ɔ́ⁿ bàà rɛ́*

*fɔ̀ɔ́ⁿ bàà fɔ̀ɔ́ⁿ bɛ̀ fɔ̀ɔ́ⁿ bɛ̀ɛ̀ rɛ́ fɔ̀ɔ́ⁿ bèè-yá*

*[Fr s’amuser, with noun fɔ̀ɔ́ⁿ ‘fun’]*

‘sing’ *sə̀gí sà sà sə̀gí sàà sà sə̀gí sàà rɛ́*

*sə̀gí sàà sə̀gí sɛ̀ sə̀gí sɛ̀ɛ̀ rɛ́ sə̀gí séé-rá*

*[used with noun sə̀gì-rá ‘song’]*

‘speak’ *kɔ̀lɔ̀gɔ́ kyɛ̀ sà kɔ̄lɔ̄gɔ̄ kyɛ̀ɛ̀ kɔ̄lɔ̄gɔ̄ kyɛ́ɛ́ rɛ̀*

*ŋŋŋ kɔ̀lɔ̀gɔ́ kyɛ̀ kɔ̀lɔ̀gɔ̀ kyéé ré kɔ̀lɔ̀gɔ́ kyèè-yá*

*~ kyɛ́ɛ́ rɛ́*

*[tones inconsistent; cf ‘arrive’]*

‘bring’ *sà [X dɛ̀] sà sáá [X dɛ̀] sáá [X dɛ̀] rɛ́*

(*sá=á dɛ̀, sé=é dɛ̀*) (*sà sá=á dɛ̀, sà sé=é dɛ̀*)

*sáá [X dɛ̀] sɛ́ [X dɛ̀] sɛ̀ [X dɛ̀] rɛ́ sè-yá [X dɛ̀]*

*[based on ‘come’]*

‘abandon’ *kà X (dè) sà kàà X (dè) sà kàà X dè ré*

(*sà káá yā dè, sà káá yē dè*)

*kàà X (dè) kɛ́ X dè kɛ́ X dè ré kè-yá X dè*

*[leave behind, leave alone, etc.]*

‘hold’ *bìì X dɛ̀ sà byɛ́ X dɛ̀ sà byɛ́ X dɛ̀ rɛ́*

*byɛ́ bíí X dɛ̀ bíí X dɛ̀ rɛ́ bì-yà X dɛ̀*

*Cvvⁿ*

‘fly (away)’ *é kíⁿ sá=á kyɛ̌ɛ̀ⁿ sá=á kyɛ̀ɛ́ⁿ nɛ̀ⁿ*

*kyɛ̌ɛ̀ⁿ é kìíìⁿ é kìíⁿ nèⁿ é nì kììⁿ-yá*

‘throw’ *è* *gbɛ̌ⁿ sí=í gbɛ̀nà sí=í gbɛ̀nɛ̀ nɛ́*

*gbɛ̀nà gbɛ̀n-í(ì) gbɛ̌n nè gbɛ̀nì-yá*

*[synonym fə̀lí]*

‘steal’ *à* *jɔ̌ⁿ sá=á jɔ̌ɔ̀ⁿ sá=á jɔ̀ɔ́ⁿ nɛ̀*

*jɔ̌ɔ̀ⁿ jɔ́ɛ̀ⁿ jɔ̀ɔ́ⁿ nɛ̀ jòòⁿ-yá*

‘step on’ *à dɔ̌ⁿ sá=á dɔ̌ɔ̀ⁿ sá=á dɔ̀ɔ́ nɛ̀ⁿ*

*dɔ́ɔ̀ⁿ dɔ́ɛ̀ⁿ dɔ́ɔ̀ⁿ nɛ̀ⁿ dòòⁿ-yà*

*[Fr marcher sur]*

*BISYLLABIC*

CvCv intransitive

‘go’ *táʔá sà táʔá má sà táʔá rɛ̀ (à sá tàʔá rɛ̀)*

*tàʔá tɛ́ʔɛ́-ɛ̀ tɛ́ʔɛ̀ rè tèʔè-yá*

‘go back’ *búlú sà búlɔ́ sà búlɔ́ rɛ̀*

*búlɔ́ búlí-ì (à bùlí-ì) bǔl lè bùlù-yá*

*[Fr retourner]*

‘touch’ *báʔr X sà báʔrá X báʔrá X rɛ́*

*ŋŋŋ bâʔr X báʔr X ré bàʔrì-yá X*

[related to transitive ‘hit’]

CvCv transitive

‘receive’ *è dàʔá sí=í dàʔà sí=í dàʔà rɛ́*

*dàʔà dɛ̀ʔɛ́ɛ̀ dɛ̀ʔɛ́ rɛ̀ dèʔè-yá*

‘sit (down)’ *é sáʔá sá=à sàʔà sá=à sàʔà rɛ́*

*sàʔà sɛ́ʔɛ́ɛ̀ sɛ̀ʔɛ́ rɛ̀ sèʔè-yá*

*[stative sìʔiní ‘be seated, be sitting’]*

‘hit, strike’ *à bàʔrí sá=á bàʔrà sá=á bàʔrà rɛ́*

*bàʔrà bàʔrí(ì) báʔr rè bàʔrì-yá*

‘post’ *è nɔ̀ʔrí sí=í nɔ̀ʔrɔ̀ sí=í nɔ̀ʔrɔ̀ rɛ́*

*nɔ̀ʔrɔ̀ nɔ̀ʔrí nɔ̀ʔrí rɛ̀ nɔ̀ʔrì-yá*

*[Fr afficher, as in posting a notice on the wall]*

‘throw’ *è fə̀lí sí=í fɛ̀lɛ̀ sí=í fə̀lɛ̀ rɛ́*

*fə̀lɛ̀ fə̀líì fə̌l lè fə̀lì-yá*

[synonym *gbɛ̌ⁿ*]

‘bump’ *à jùlí sá=á jùlɔ̀ sá=á jùlɔ̀ rɛ́*

*jùlɔ̀ jùlí(ì) jûl lè jùlì-yá*

*[Fr cogner]*

‘catch’ *à sɔ̀ʔɔ̀ sá=á sɔ̀ʔɔ̀ sá=á sɔ̀ʔɔ̀-rɛ́*

*sɔ̀ʔɔ̀ sòʔé(è) sòʔó rè sòʔò-yá*

‘carry2’ *à mɔ̀mɔ́ⁿ sá=á mɔ̀mɔ́ɔ̀ sá=á mɔ̀mɔ́ɔ̀ⁿ nɛ̀ⁿ*

*mɔ̀mɔ́ɔ̀ⁿ X mɔ̀mɔ́ɛ̀ⁿ X mɔ̀mɔ́ɔ̀ⁿ nɛ̀ⁿ X mòmó-yà*

*[‘carry (baby) on one’s back’]*

‘say’ *è tɔ̀ʔɔ́ sí=í tɔ̀ʔɔ̀ sí=í tɔ̀ʔɔ̀ rɛ́*

*tɔ̀ʔɔ̀(-mà) tòʔé(è) tòʔó rè toʔò-yá*

‘carry1’ *è jìgí sí=í jìgɛ̀ sí=í jìgɛ̀ rɛ́*

*jìgɛ̀ jìgí(ì) jìgí rè jìgì-yá*

*[‘carry (load) on one’s head’]*

‘give’ *è bə̀lí, è bə̀lá sí=í bə̀là ~ bə̀lɛ̀ sí=í bə̀lɛ̀ rɛ́*

*bə̀lɛ̀ bə̀lí(-ì) bə̌l lè bə̀lì-yá*

‘stand; stop’ *é bálí sá=á bàlà sá=á bàlà rɛ́*

*bàlà bálíì bâl-lè bàlì-yá*

*[transitive]*

*[stative bǎl-nɛ̀* ~ *bàlì-ní-nɛ̀‘be standing’]*

‘harvest’ *è bègé (jú bègè) sà jú bègà sà jú bègɛ̀ rɛ́*

*bègà jú bègéè jú bègé rè jú bègì-yá*

*[‘harvest (jú-rɔ́ millet) by cutting off seed spike’]*

‘break’ *è kàʔrí sí=í kàʔrà sí=í kàʔrà rɛ́*

*kàʔrà kàʔrí(ì) kàʔrí rè kàʔrì-yá*

*[harvest maize sɔ́ɔ̀n-nɔ̀, break stick by snapping]*

‘jump’ *è jòʔrí sá-á jòʔrò jòʔrò rɛ́*

*jòʔrò jòʔríì jòʔrí rè jòʔrì-yá*

‘add’ *dòsà X mà sà dósáá X mà dósáá X mà nɛ́*

*dòsá X mà dòsɛ́ X mà dòsɛ́ X mà nɛ́ dòsè-yà X mà*

*[Fr augmenter]*

‘butcher’ *è bùgú sí=í bùgɔ̀ sí=í bùgɔ̀ rɛ́*

*bùgɔ̀ X bùgúè bùgú rè bùgù-yá*

*[‘skin and butcher (a slaughtered animal)’, Fr dépouiller]*

‘pound’ *è tìgí sí=í tə̀gɛ̀ sí=í tə̀gɛ̀ rɛ́*

*tə̀gɛ̀ tə̀gí(ì) tə̀gí rè tìgì-yá*

*[‘pound with pestle in mortar’, general term; Fr piler]*

‘push’ *á júlì sá=á jùlɔ̀ sá=á jùlɔ̀ rɛ́*

*jùlɔ̀ jùlíì jǔl lè jùlù-yá*

‘sell’ *è tòʔrí sí=í tɔ̀ʔrɔ̀ sí=í tɔ̀ʔrɔ̀ rɛ́*

*tɔ̀rɔ̀ tòʔrí tòʔrí rè tòʔrì-yá*

‘cut (slice)’ *è bègé sí=í bɛ̀gɛ̀ sí=í bɛ̀gɛ̀ rɛ́*

*bɛ̀gɛ̀ bègé bègé rè bègè-yá*

*‘sweep’ làʔá sèʔrì sà làʔá sèʔrà sà làʔá sèʔrà rɛ́*

*ŋŋŋ làʔá sèʔríì làʔá sèʔrí rè làʔá sèʔrì-yá*

*Cvⁿ* ~ Cvnv

‘look’ *è lě sí=í lènàⁿ sí=í lènàⁿ nɛ́*

*lènàⁿ lèní(ì)ⁿ lèníⁿ nèⁿ lènìⁿ-yá*

‘buy’ *è sǎⁿ sí=í sànà sí=í sànà nɛ́*

*sànà sàníì sǎn-nì sànì-yá*

‘eat (meal)’ *è kǔⁿ sí=í kùnɔ̀ sí=í kùnɔ̀ nɛ́*

*kùnɔ̀ kùní(ì) kǔn-nè kùnì-yá*

*‘*draw water’ *è bɛ̌ⁿ sí=í bɛ̀nà sí=í bɛ̀n nɛ́*

*bɛ̀nà bɛ̀níì bɛ̌n nè bɛ̀nì-yá*

Cvyv ~ Cyvv

‘see’ *ŋŋŋ sá=á gìyɛ̀ sá=á gìyɛ̀ rɛ́*

*gìyɛ̀ gyɛ́ (gyɛ̌) gyɛ̀ɛ̀ rɛ́ gìì-yá*

‘open (door)’ *è dèý sí=í dɛ̀ɛ̀ sí=í dɛ̀ɛ̀ rɛ́*

*dɛ̀ɛ̀ sàá dèyí(ì) dèyí rè dèy-yá*

[*bó-rɔ́* ‘door’, *sàà-rá* ‘house’]

‘sow (seeds)’ *è kǐ sí=í kìyɛ̀ sí=í kìyɛ̀ rɛ́*

*kìyɛ̀ kyìíì kyìí rè kìì-yá*

*~ kìí rè*

*[Fr semer]*

‘get, obtain’ *è gǐ sí=í gìyɛ̀ sí=í gìyɛ̀ rɛ́*

*gìyɛ̀ gyɛ̀ gyɛ̀ɛ̀ rɛ́ gìì-yá*

*~ gèè ré*

‘drink’ *è mǐⁿ sí=í mìyɛ̀ⁿ sí=í mìyɛ̀ nɛ́*

*mìyɛ̀ⁿ mìí(ì)ⁿ mìíⁿ nè mìì-yá*

CvCvv

‘catch’ *è dàkó sí=í dàkɔ́ɔ̀ sí=í dàkɔ́ɔ̀ rɛ̀*

*dàkɔ́ɔ̀ dàkóè dàkóó rè dàkó-yà*

*[catch sth thrown]*

‘run’ *fə̀dí sà fə̀dɛ́ɛ̀ sà fɛ̀dɛ́ɛ̀ rɛ́*

*fə̀dɛ́ɛ̀ fə̀dí fɛ̀dí rè fə̀dí-yà*

‘squeeze’ *à dɛ̀rɛ́ sá=á dɛ̀rɛ́ɛ̀ sá=á dɛ̀rɛ́ rɛ̀*

*dɛ̀rɛ́ɛ̀ dɛ̀rɛ́ɛ̀ dɛ̀rɛ́ rɛ̀ dɛ̀rɛ́-yà*

*[Fr serrer]*

CvCvvⁿ

‘taste’ *è nɛ̀nɛ́ⁿ sí=í nɛ̀nɛ́ɛ̀ⁿ sí=í nɛ̀nɛ́ɛ̀ⁿ nɛ́*

*nɛ̀nɛ́ɛ̀ⁿ nɛ̀nɛ́ɛ̀ⁿ nɛ̀nɛ́ɛ̀ⁿ nɛ́ⁿ nɛ̀nɛ́ⁿ-yà*

‘finish’ *dákáⁿ má sì=ɪ̀ dàkááⁿ má sì=ɪ̀ dàkááⁿ nɛ̀*

*á sí=í dàkááⁿ á sí=í dàkááⁿ nɛ̀*

*dákááⁿ dɛ̀kɛ́ⁿ dɛ̀kɛ́ɛ́ⁿ nɛ̀ dɛ̀kɛ́ⁿ-yà*

*[also used in the sense ‘die’] tó dɛ̀kɛ̀ɛ̀ⁿ nɛ́*

‘pull’ *è sàmáⁿ sí=í sàmáàⁿ sí=í sàmáàⁿ nɛ̀*

*sàmáàⁿ sàmɛ́ɛ̀ⁿ sàmɛ́ɛ́ⁿ nɛ̀ sàmɛ́ⁿ-yà*

(~ *sàmáⁿɛ̀ⁿ*)

*‘forget’ ɲìnàⁿ X sà ɲìnáàⁿ sà ɲìnàⁿ nɛ́*

*ɲìnàⁿ ɲínɛ̀ɛ̀ⁿ X ɲínɛ̀ⁿ X nɛ̀ ɲìnɛ̀ⁿ-yá X*

CvCCv (not including *Cvʔrv*)

‘slaughter’ *è fòlsá si=í fòlsá fòlsáá rɛ̀*

*fòlsá fòl(ì)lsɛ́ fòl(ì)sèè ré fòl(ì)sè-yá*

*[‘cut the throat of’, Fr égorger]*

‘treat’ *à bèlmàⁿ sá=á bèlmààⁿ sá=á bèlmààⁿ nɛ́*

*bèlmààⁿ X bélmɛ́ⁿ X bélmɛ́ɛ́ⁿ nɛ̀ⁿ bélméⁿ-yá*

(*má-n-á bèlmɛ́ⁿ*, *má-n-á bèlmɛ̀ɛ̀ nɛ́*)

*[‘(doctor) treat (sick person)’, Fr. soigner]*

*CvvCv*

‘insult’ *à kɔ̀nɔ́ sá=á kɔ̀ɔ́nɔ̀ sá=á kɔ̀ɔ́nɔ̀ nɛ́*

*kɔ́ɔ́nɔ̀ kɔ́ɔ́nì(ì) kɔ́ɔ́n nɛ̀ kɔ́ɔ́nì-yá*

*CvvCvv*

‘collect’ *è sɛ̀ɛ́ⁿ sí=í sɛ̀ɛ̀nààⁿ sɛ̀ɛ̀nààⁿ nɛ́*

*sɛ̀ɛ̀nààⁿ sɛ̀ɛ̀nɛ́ sɛ̀ɛ̀n né sɛ̀ɛ̀nì-yá*

*[‘collect firewood’ with noun sóʔò-rà ‘(fire-)wood’]*

‘reply’ *è gyààbí sí=í gyààbí-yà gyààbí-yɛ̀ rɛ́*

*gyààbí-yɛ̀ gyààbí(ì) gyààbíí rè gyààbíí-yà*

‘gather’ *è fààlí sí=í fààlí-yɛ̀ fààlíy-ɛ̀ rɛ́*

*fààlí-yɛ̀ fààlíì fààlí rè fààlí-yà*

‘send’ *è ɲààⁿkyɛ́ sí=í ɲààⁿkyɛ́ sí=í ɲààⁿkyɛ́ɛ́ rɛ̀*

*ɲààⁿkyɛ́ɛ́ ɲààⁿkyɛ́ ɲààⁿkèè ré ɲààⁿkìì-yá*

‘dance’ *dòómà sà dòómààⁿ dòómààⁿ nɛ́*

*dòómààⁿ dòómɛ̀ dòómɛ̀ɛ̀ nɛ́ dòómè-yà*

*[cf noun dòò-ró ~ dɔ̀ɔ̀-nɔ́ ‘dance’]*

‘sleep’ *ɲìíbà sà ɲìíbàà ɲìíbàà rɛ́*

*ɲìíbàà ɲìíbɛ̀ ɲííbɛ̀ɛ̀ rɛ́ ɲìíbèè-yá*

‘think’ *míílí sà míílɛ́ɛ̀ sà míílɛ́ɛ̀ rɛ́*

*mììlɛ́ɛ̀ mììlíì mììlí rè míílí-yà*

CvCvⁿ ~ CvCvnv

‘go up’ *sə̀dá sà sə̀dá-nà (sá) sə̀dá-nà nɛ̀*

*sə̀dá-nà sə̀dá-nì sə̀dá-n nè sə̀dá-nì-yá*

‘go down’ *jàⁿʔá sà gyàʔáⁿ-nà gyàʔá-nà nɛ́*

*gyàʔá-nà jàⁿʔán-ì gyàʔáⁿ-nì-n nè gyàʔáⁿ-nì-yá*

[also means ‘give birth’]

‘hang up’ *è gə̀lé si-í gə̀lénà gə̀lénàà nɛ́*

*gə̀lénà gə̀lénì gə̀lên nè gə̀lénì-yà*

*[e.g. garment on hook; Fr accrocher]*

*‘crawl’ é múnúⁿ sá=á mǔnnɔ̀ⁿ sá=á mǔnnɔ̀ⁿ nɛ́ⁿ*

*ŋŋŋ múnúnìⁿ mùnún nèⁿ mùnúnìⁿ-yà*

*[‘(baby) crawl’, Fr. marcher à quatre pattes]*

‘roll’ *mə̀níⁿ sí=í mǐnnàⁿ sí=í mǐnnàⁿ nɛ́*

*mǐnnàⁿ mə̀níⁿ mɛ̀nín nè mè-mènínìⁿ-yà*

*[tire roll along]*

CvCvCv

‘squat’-1 *é sóⁿzóʔrí sá-á sòⁿzóʔrɔ̀ sá=á sòⁿzóʔrɔ̀ rɛ́*

*sòⁿzóʔrɔ̀ sòⁿzóʔrìì sòⁿzóʔrì rè sòⁿzóʔrí-yà*

*[stative sòⁿzóʔr-nì ‘be squatting’, Fr. être accroupi]*

‘squat’-2 *é cóⁿjóló sá-á còⁿjólɔ̀ sá=á còⁿjólɔ̀ rɛ́*

*còⁿjólɔ̀ còⁿjólìì còⁿjôl lè còⁿjólí-yà*

*[stative còⁿjól-nì ‘be squatting’, Fr. être accroupi]*

‘point at’ *à dùdɔ́lí sá=á dùdɔ̀lɔ̀ dùdɔ̀lɔ̀ lɛ́*

*dùdɔ̀lɔ̀ dùdɔ́lìì dùdǒl-lè dùdɔ̀lì-yá*

‘consent’ *bàlíyà sà bálìyà bálìyà rɛ́*

*bálìyà bálìyà bálìyà rɛ́ bàlìyé-yà*

*CvCvCvCv*

‘shake’ *à yùgùyúgú sá-á yùgùyúgɔ̀ yùgùyúgɔ̀ rɛ́*

*yùgùyúgɔ̀ yùgùyùgú-ì yùgùyúgú rè yùgùyúgú-yà*

*‘*roll’ *è kòlòŋgóló sí=í kòlòŋgóló-nàⁿ sí=í kòlòŋgóló-nàⁿ nɛ́*

*kòlòŋgóló-nà kòlòŋgóló-nììⁿ kòlòŋgóló-nìⁿ nèⁿ kòlòŋgóló-nìⁿ-yà*

*[roll a tire along]*

‘shut (door)’ *sàá dùtɔ́ʔɔ́ⁿ sí=í dùtɔ́ʔɔ́nɔ̀ sí=í dùtɔ́ʔɔ́nɔ̀ nɛ́*

*dùtɔ́ʔɔ́nɔ̀ sàá dùtɔ́ʔɔ́-nì dùtɔ́ʔɔ́-n nè sàá dùtɔ́ʔɔ́-ní-yà*