

Cobbinah, Alexander Yao (2013) *Nominal classification and verbal nouns in Bainounk Gubëeher*. PhD Thesis. SOAS, University of London

<http://eprints.soas.ac.uk/17370>

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners.

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this thesis, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g. AUTHOR (year of submission) "Full thesis title", name of the School or Department, PhD Thesis, pagination.

# **Nominal classification and verbal nouns in Bāinounk Gubëeher**

Alexander Yao Cobbinah

Thesis submitted for the degree of PhD in Field Linguistics

2013

Department of Linguistics  
School of Oriental and African Studies  
University of London

## **Declaration for PhD thesis**

I have read and understood regulation 17.9 of the Regulations for students of the School of Oriental and African Studies concerning plagiarism. I undertake that all the material presented for examination is my own work and has not been written for me, in whole or in part, by any other person. I also undertake that any quotation or paraphrase from the published or unpublished work of another person has been duly acknowledged in the work which I present for examination.

Signed: Alexander Cobbinah

Date: 09 August 2013

## Abstract

The complex noun class system of Baïnouk Gubëeher, a hitherto undescribed minority language whose speakers are concentrated in Djibonker, Casamance/Senegal, combines a very large number of prefixes and a plural suffix, which occur in paradigms, conveying number and configurational information. The choice of the paradigm as basic unit of analysis as pursued here provides a new perspective on noun class systems. A detailed description of the paradigms attested in Gubëeher, including their semantic contribution to the nouns they derive from roots are the main concern of this thesis. The systematic aspects of how the paradigms are employed in Gubëeher are highly relevant in this context. Their role in deriving several nouns from one root and the resulting systematic semantic shifts, which are clearly attributable to the paradigm, receive special attention. Another focus lies on the use of the noun class prefixes for the systematic derivation of several types of verbal nouns from eventive roots, most importantly those used as verbal complements (infinitives). In this context the distribution of infinitives derived with several noun class markers from one root – an unexplained and underdescribed areal phenomenon observable in several Casamance languages – is considered in detail. Transitivity and valency are shown to be relevant parameters in infinitive selection.

## List of Contents

Abstract .....	3
List of tables .....	12
List of figures .....	17
Abbreviations .....	18
Acknowledgements .....	20
<b>1 Introduction .....</b>	<b>22</b>
1.1 The topic and research questions of the thesis .....	23
1.1.1 The research questions and interest of the research .....	28
1.1.2 The structure of the thesis .....	29
1.2 Baïnouk at a glance.....	30
1.2.1.1 Baïnouk and Nyun varieties .....	31
1.2.1.2 Genealogical affiliation .....	34
1.2.2 Previous and ongoing research .....	35
1.2.3 History of the Casamance .....	40
1.2.4 Introduction to the cultural context .....	42
1.2.5 Multilingualism and ethnic identity .....	52
1.2.6 Endangerment .....	55
1.2.7 Areal considerations .....	58
1.2.8 Language policy of Senegal .....	63
1.2.9 On variation .....	64
1.2.10 Attitudes and ideologies of participants.....	65
1.3 Previous research on infinitives in noun class languages .....	68
1.3.1 Bantu languages .....	70
1.3.2 Kobiana .....	76
1.3.3 Manjaku, Mancagne, Papel .....	79
1.3.4 Joola (Kuwaatay and Fogny) .....	82
1.3.5 Joola Eegimaa .....	84
1.3.6 Summary of previous research concerning infinitives.....	88
1.4 Theoretical frameworks.....	89
1.4.1 Categorisation.....	91
1.4.1.1 Prototypes and Aristotelian categories .....	91
1.4.1.2 Classical approaches to noun class systems .....	94

1.4.1.3	Prototype based approaches to noun class systems.....	96
1.4.1.4	The limits of semantic networks.....	97
1.4.2	Typologies of systems of nominal classification .....	99
1.4.2.1	Aristotelian and prototypical typologies .....	100
1.4.2.2	The derivational and semantic properties of noun classification systems.....	101
1.4.2.3	The analytical bias of ‘normalised systems’ .....	103
1.4.2.4	The types of classificatory systems.....	104
1.4.2.4.1	Measure nouns and class terms.....	106
1.4.2.4.2	Numeral classifiers .....	107
1.4.2.4.3	Noun classifiers .....	107
1.4.2.4.4	Genitive classifiers.....	108
1.4.2.4.5	Verbal classifiers.....	109
1.4.2.4.6	Gender/Noun class.....	109
1.4.3	Of roots and paradigms .....	110
1.4.3.1	Semantic aspects of unspecificity.....	115
1.4.3.2	Syntactic unspecification of roots in Gubëeher.....	117
1.4.3.2.1	The conversion discussion.....	118
1.4.3.2.2	Conversion in noun class languages.....	119
1.4.3.3	The status of number marking .....	122
1.4.3.3.1	Number marking in Gubëeher .....	125
1.4.3.3.2	The role of the paradigm in number marking .....	131
1.4.3.4	The status of unspecification, polysemy and vagueness.....	135
1.5	Methodology .....	138
1.5.1	Fieldsite and community links .....	138
1.5.2	Data collection.....	140
1.5.3	Interdisciplinarity and collaboration with other researchers.....	142
1.5.4	Procedure for collecting verbal nouns.....	144
1.5.5	Problematic issues .....	146
1.5.5.1	Ethical issues: property rights.....	147
1.5.5.2	Methodological problems .....	149
1.5.5.3	Prescriptive attitudes.....	150
1.5.6	Data management .....	152
<b>2</b>	<b>Sketch grammar .....</b>	<b>155</b>
2.1	Basic typological characteristics .....	155
2.1.1	Syntactic relations .....	157
2.1.2	Subject/ Non-subject distinction .....	158

2.1.3	Marked word order .....	160
2.1.4	Thematic roles .....	161
2.2	Phonology .....	166
2.2.1	Consonants .....	166
2.2.2	Vowels .....	166
2.2.3	Assimilation processes .....	168
2.2.3.1	Vowel harmony .....	168
2.2.3.2	Nasal assimilation .....	170
2.2.3.3	Lenition .....	172
2.2.3.4	Consonant deletion .....	172
2.2.3.5	R-assimilation .....	173
2.2.3.6	Vowel epenthesis .....	174
2.2.4	Orthography .....	174
2.3	Nominal morphology .....	177
2.3.1	The noun class system of Gubëeher .....	178
2.3.1.1	Agreement classes and agreement marking .....	180
2.3.1.2	Nasal-final noun class and agreement prefixes .....	183
2.3.1.3	Prefixation and segmentability in Gubëeher .....	187
2.3.1.4	Agreement types .....	190
2.3.1.4.1	Agreement type 1 .....	191
2.3.1.4.2	Agreement type 2a .....	192
2.3.1.4.3	Agreement type 2b .....	193
2.3.1.4.4	Agreement type 2c .....	195
2.3.1.4.5	Variation in noun class prefixation and agreement .....	196
2.3.2	Possession .....	198
2.3.2.1	Nominal and pronominal possession .....	199
2.3.2.2	Possessee ellipsis .....	202
2.3.3	Nominalising derivational morphology .....	203
2.3.4	Modifiers .....	204
2.3.4.1	Agreeing attributive modifiers (adjectives) .....	204
2.3.4.2	Modifying noun phrase .....	207
2.3.4.3	Quantifiers .....	208
2.3.4.4	Demonstrative pronouns .....	208
2.3.4.5	Numerals .....	212
2.3.5	Interrogative pronouns .....	215
2.3.6	Adverbials .....	217

2.3.7	Complex adpositions .....	219
2.4	Verbal morphology .....	220
2.4.1	Valency and transitivity in Gubëeher .....	220
2.4.1.1	Valency and transitivity in Gubëeher .....	221
2.4.1.2	Ellipsis and unexpressed objects .....	222
2.4.2	Personal pronouns.....	225
2.4.3	TAM overview.....	230
2.4.3.1	Unmarked TAM .....	231
2.4.3.2	Perfect .....	234
2.4.3.3	Inactual.....	237
2.4.3.4	Future .....	239
2.4.3.5	Imperatives.....	241
2.4.3.6	Irreal .....	242
2.4.3.7	Habitual .....	243
2.4.3.8	'Already/' .....	244
2.4.3.9	Venitive.....	245
2.4.3.10	Progressives with auxiliary constructions.....	247
2.4.3.11	Progressives with a locative template .....	248
2.4.4	Verbal extensions .....	248
2.4.4.1	Passivisation .....	250
2.4.4.2	The distinction of passives from reflexives/middles .....	251
2.4.4.3	The reciprocal extension (-ay) .....	254
2.4.4.4	The distributive extension (-ëla).....	255
2.4.4.5	The causative extensions (-un/-liin).....	255
2.4.4.6	The applicative extension (-um) .....	256
2.4.4.7	The reversion extension (-ul) .....	257
2.4.4.8	The benefactive extension (-ur).....	257
2.4.4.9	The anticipatory extension (-intiin) .....	258
2.4.4.10	Composite extensions .....	259
2.5	Clause and predication types .....	260
2.5.1	Verbless predication.....	260
2.5.1.1	Equation and class-inclusion.....	260
2.5.1.2	Location .....	261
2.5.2	Phrase structure .....	263
2.5.2.1	Complementation.....	263
2.5.2.2	Relative clauses .....	265

2.5.2.3	Conditional clauses g- .....	267
2.5.2.4	Conjoined clauses .....	268
<b>3</b>	<b>The noun class paradigms and their semantics .....</b>	<b>270</b>
3.1	The noun class paradigms of Gubëeher .....	272
3.1.1	Noun class pairs .....	274
3.1.1.1	The gu-/ha-paradigm .....	275
3.1.1.2	The bu-/i-paradigm .....	277
3.1.1.3	The bi-/i-paradigm .....	280
3.1.1.4	The si-/mun-paradigm .....	281
3.1.1.5	The sin-/ñan paradigm .....	282
3.1.1.6	The u-/ñan- and u-/in- paradigms .....	283
3.1.1.7	The ko-/ño-paradigm .....	284
3.1.1.8	The ran-/ñan-paradigm .....	284
3.1.1.9	The kan-/ñan-paradigm .....	285
3.1.1.10	The ta-/ja- paradigm .....	285
3.1.1.11	The minor paradigms (si-/i-; si-/ha- ; ran-/mun; fun-/mun-; kun-/ ñan-) .....	286
3.1.2	Noun class triads .....	287
3.1.2.1	The bu-/i-/di- paradigm .....	287
3.1.2.2	The gu-/ha-/ja-paradigm .....	288
3.1.2.3	The gu-/ha-/ba- paradigm .....	289
3.1.2.4	The bu-/i-/ja- paradigm .....	291
3.1.2.5	The bu-/i-/ba- paradigm .....	291
3.1.2.6	The ran-/ñan-/ja-paradigm .....	292
3.1.3	Pairs with suffixed plural .....	292
3.1.3.1	The ji-paradigm with suffixed plurals .....	293
3.1.3.2	The ba-paradigm with suffixed plurals .....	294
3.1.3.3	The a-paradigm with suffixed plural .....	295
3.1.3.4	The ja-paradigm with suffixed plurals .....	296
3.1.3.5	The bi-/a-paradigm bu-/a- and da-/a- paradigms with suffixed plurals .....	297
3.1.3.6	The kan-paradigm with suffixed plurals .....	299
3.1.3.7	The fa-paradigm with suffixed plurals .....	299
3.1.3.8	The ta-paradigm with suffixed plurals .....	299
3.1.3.9	The fun-paradigm with suffixed plurals .....	300
3.1.3.10	The ho- and hu-paradigm with suffixed plurals .....	300
3.1.4	Prefixless nouns with suffixed plurals .....	301
3.1.5	Mixed triads with noun class prefixes and suffixed plurals .....	303

3.1.5.1	The a-/a-(-ŋ)/bi- triad with suffixed count plural .....	304
3.1.5.2	The fa-/fa-(-ŋ)/ja- triad with suffixed count plural .....	304
3.1.6	One-class nouns.....	305
3.1.7	Discussion of selected paradigmatic networks.....	315
3.1.7.1	Paradigmatic networks of the botanical realm .....	316
3.1.7.1.1	Paradigms of the botanic domain .....	318
3.1.7.1.2	The botanic domain as matrix for other classes .....	322
3.1.7.1.3	The botanic domain as actively involved in shaping the system.....	324
3.1.7.2	The derivation of human nouns .....	327
3.1.7.2.1	The derivation of human nouns with the <i>u-/ñan</i> -paradigm .....	327
3.1.7.2.2	The derivation of associative plurals from personal names.....	329
3.1.7.3	Animal names derived from eventive roots .....	329
3.1.7.4	Diminutive and augmentative .....	331
3.1.7.5	The omniclass root 'no' .....	333
3.1.8	At the 'crossing of paradigms' .....	337
3.2	(Grammaticalised) Ellipsis of the head noun .....	342
3.3	Absolute use of noun classes.....	351
3.4	Loan integration .....	355
3.5	Conclusion .....	359
<b>4</b>	<b>Verbal nouns.....</b>	<b>361</b>
4.1	Cognitive views on syntactic categories .....	363
4.2	Types of verbal nouns in Gubëeher .....	366
4.3	Regularly derived non-infinitival verbal nouns.....	368
4.3.1.1	The derivation of human nouns from eventive roots.....	368
4.3.2	The derivation of instruments from eventive and stative roots.....	370
4.3.2.1	The derivation of locations from eventive roots .....	371
4.3.3	Manner nouns .....	373
4.3.4	The derivation of properties from eventive roots.....	374
4.3.5	The gerund.....	379
4.3.6	Other irregularly formed nominalisations from eventive and stative roots ...	380
4.4	The noun class marking of infinitives .....	382
4.4.1	Polysemy and infinitives .....	384
4.4.2	Single and multiple infinitives.....	385
4.4.3	Nominal and verbal properties of verbal nouns.....	390
4.4.4	The morphological and syntactic properties of verbal nouns in Gubëeher ....	392

4.4.4.1	Position and Verbal nouns.....	393
4.4.4.2	Possessive morphology and verbal nouns.....	393
4.4.4.3	Modifiers and verbal nouns.....	397
4.4.4.4	Number marking and verbal nouns.....	398
4.4.4.5	Verbal morphology and verbal nouns.....	399
4.5	The constructional properties of verbal nouns.....	400
4.5.1.1	Infinitival complements.....	401
4.5.1.2	Periphrastic constructions.....	403
4.5.1.3	Non-embedded infinitives.....	403
4.5.1.4	Phrasal Complements.....	405
4.6	The prefixation of infinitives.....	406
4.6.1	<i>Bu</i> -infinitives (default).....	406
4.6.2	<i>Bi</i> -infinitives.....	407
4.6.3	<i>Ja</i> - infinitives.....	407
4.6.4	<i>Gu</i> - infinitives.....	409
4.6.5	<i>Ba</i> - infinitives.....	410
4.6.6	<i>Ta</i> - infinitives.....	414
4.6.7	<i>Mun</i> -infinitives.....	415
4.6.8	<i>Ji-/jin</i> - infinitives.....	415
4.6.9	<i>Sin</i> - infinitives.....	417
4.6.10	<i>Ka</i> - infinitives.....	417
4.6.11	<i>Kun</i> - infinitives.....	420
4.6.12	Other infinitives.....	420
4.7	The distribution of multiple infinitives and infinitival paradigms.....	421
4.7.1	Possessive suffixes with default and non-default infinitives.....	422
4.7.2	Transitivity related parameters and infinitive choice in Gubëeher.....	424
4.7.2.1	Infinitives of intransitive verbs.....	425
4.7.2.2	Valency alternations and infinitive type.....	427
4.7.2.2.1	Unexpressed object alternation and infinitive type.....	428
4.7.2.2.2	Ellipsis and infinitive type.....	433
4.7.2.2.3	Evaluation of the data obtained in the video task.....	434
4.7.2.2.4	Transcript and evaluation of one of the videos from video task.....	437
4.7.2.3	Derived verbs in non-default paradigms.....	440
4.7.2.3.1	<i>Sin</i> -Infinitives of the reciprocal extension.....	441
4.7.2.3.2	<i>Gu</i> -infinitives of the reflexive/middle and distributive forms.....	442

4.7.2.3.3	Other non-default infinitives of the reflexive/middle and distributive extensions .....	445
4.8	Conclusion .....	447
<b>5</b>	<b>Conclusions and further research .....</b>	<b>448</b>
5.1	Summary of the thesis .....	448
5.2	The paradigm approach to nominal classification.....	449
5.2.1	Overview of prefixes and paradigms .....	453
5.2.2	The classification of infinitives.....	461
5.3	Further research .....	463
	References.....	469

## List of tables

Table (1)	Examples for prefixed agreement .....	24
Table (2)	The derivational network of the root liin .....	25
Table (3)	The distribution of default and non-default infinitives across roots .....	27
Table (4)	Existing Literature on Nyun languages .....	37
Table (5)	Bak (Joola languages and Manjaku cluster) names as used in text and literature, immediately adjacent contact languages of Gubëeher in bold face .....	38
Table (6)	Repertoires in Djibonker .....	52
Table (7)	Cognates shared by Gubëeher and Joola Kujireray, and Joola Eegimaa .....	62
Table (8)	Main infinitivising prefixes in Casamance languages .....	69
Table (9)	Infinitives in Bantu languages (all examples from Forges 1983:259f).....	71
Table (10)	Non-infinitival Class 15 nouns in Xhosa.....	73
Table (11)	Infinitives in Xhosa, (Visser 1989:157) .....	74
Table (12)	Types of class 15 items.....	74
Table (13)	Nominal and verbal properties of infinitives in Bantu (Visser 1989) .....	75
Table (14)	Nominal infinitives and class 11 derivations, (Visser 1989:171) .....	76
Table (15)	Kobiana verbal nouns (Doneux 1990) [Glosses added, AC] .....	78
Table (16)	Distribution of verbal nouns in Kobiana, (Doneux 1990:66) .....	79
Table (17)	Middle and reflexives with infinitives in bi- (Coly 2010:99&102) .....	83
Table (18)	Infinitives in Joola Eegimaa (all examples from Sagna 2008: 312ff) .....	87
Table (19)	Factors proposed in the literature underlying the choice of multiple infinitives in chosen noun class languages .....	88
Table (20)	Summary of Dixon's (1986:106f) criteria for types of nominal classification .....	100
Table (21)	Types of classification systems (terminology by Grinevald 2000).....	105
Table (22)	The root 'moot' and its paradigmatic network .....	116
Table (23)	The root ceen in different syntactic frames (Agreement establishing morphology in bold face) .....	118
Table (24)	The Manjaku root lik, (Kihm 2000:14).....	121
Table (25)	The derivational network of the root lód 'build' .....	122
Table (26)	Multiply marked plurals and alternative paradigm with human terms .....	129
Table (27)	The paradigmatic network of the root rac .....	134
Table (28)	List of recorded texts used in the thesis (staged events, narratives, tales).....	153
Table (29)	List of elicitations used in the thesis .....	154
Table (30)	Prototypical properties of the main word classes (Croft 1990:248) .....	156
Table (31)	Consonant phonemes Gubëeher .....	166
Table (32)	Vowel morpheme of Gubëeher.....	167
Table (33)	Vowel series .....	169
Table (34)	Prefix root harmony on the example of a- '3.Sg' .....	169
Table (35)	Vowel harmony .....	170
Table (36)	Nasal assimilation involving the third person plural prefix an-.....	171
Table (37)	Morphemes with final nasals .....	171
Table (38)	Lenition of plosives.....	172

Table (39)	Orthography as used in this thesis (as presented and discussed with key community members at the orthographic workshop in Ziguinchor/October 2010).....	176
Table (40)	Agreement classes, prefixes and agreeing targets in Gubëeher.....	181
Table (41)	Agreeing targets.....	182
Table (42)	The form of noun class prefixes in Gubëeher.....	183
Table (43)	Examples illustrating the deletion of the final nasal on noun class prefixes.....	185
Table (44)	Agreement prefixes in full form (with final nasal) and with deleted nasal.....	186
Table (45)	Prefix status.....	188
Table (46)	Nouns with fused prefixes.....	188
Table (47)	Prenalised stems.....	190
Table (48)	Agreement types.....	191
Table (49)	Bound possessive affixes.....	199
Table (50)	Possessive suffixes, vowel harmony.....	200
Table (51)	Independent possessive pronouns.....	202
Table (52)	Derivational affixes on nouns.....	203
Table (53)	Roots which are used as modifiers but not in verbal frames.....	205
Table (54)	Non-agreeing quantifiers.....	208
Table (55)	Examples of demonstratives in different agreement classes.....	209
Table (56)	Demonstratives of the vocalic classes.....	209
Table (57)	Ordinal and cardinal numbers from one to ten,.....	214
Table (58)	Cardinal numbers higher than ten,.....	215
Table (59)	Interrogative pronouns.....	216
Table (60)	Simplex adverbials.....	217
Table (61)	Ideophones (selection).....	218
Table (62)	Prepositions.....	219
Table (63)	Mono- bi- and trivalent constructions.....	222
Table (64)	Free subject and object pronouns.....	225
Table (65)	Bound subject affixes.....	226
Table (66)	Bound object affixes.....	228
Table (67)	Object pronouns affixes in the perfect aspect.....	229
Table (68)	TAM markers in the affirmative.....	231
Table (69)	TAM markers in the negative.....	231
Table (70)	Paradigm of the negative subjunctive.....	234
Table (71)	Perfect paradigm.....	235
Table (72)	Paradigm of the perfective negative.....	237
Table (73)	Future tense paradigm.....	239
Table (74)	Future negative paradigm.....	240
Table (75)	Examples of venitives.....	245
Table (76)	Verbal extensions.....	249
Table (77)	The reciprocal extension.....	254
Table (78)	The comitative function of -ay.....	255
Table (79)	The distributive extension.....	255
Table (80)	The -liin causative.....	256
Table (81)	The -un causative.....	256
Table (82)	The extension -un with an applicative function.....	256
Table (83)	The applicative extension.....	257

Table (84)	The reversative extension .....	257
Table (85)	The extension -ul with repetitive function .....	257
Table (86)	The benefactive extension .....	258
Table (87)	The extension -ur with verbs of movement .....	258
Table (88)	The anticipatory extension .....	258
Table (89)	Composite extension -ahiin .....	259
Table (90)	Composite extension -una/ina .....	259
Table (91)	Composite extension -indina .....	260
Table (92)	The locative copulas .....	262
Table (93)	Some complement taking verbs in Gubëeher .....	265
Table (94)	Conjunctions .....	268
Table (95)	The notation of noun class paradigms .....	272
Table (96)	Paradigm types and frequency in the lexicon (n = 735) .....	274
Table (97)	Paradigms with at least two prefixed noun class markers (n= 302) .....	275
Table (98)	The gu-/ha-paradigm and long body parts .....	276
Table (99)	The paradigmatic network of the root mañ 'iron' .....	276
Table (100)	Round items in the bu-/i- paradigm (selection) .....	278
Table (101)	The bu-/i- paradigm and round body parts .....	279
Table (102)	Locations in the bu-/i-paradigm .....	279
Table (103)	Nouns of the bi-/i- paradigm .....	280
Table (104)	The si-/mun- paradigm (except trees) .....	281
Table (105)	The sin-/ñan- paradigm (complete) .....	283
Table (106)	Nouns in the u-/ñan and u-/in-paradigms .....	284
Table (107)	The ran-/ñan-paradigm (complete) .....	285
Table (108)	The kan-/ñan-paradigm (complete) .....	285
Table (109)	The ta-/ja- paradigm (complete) .....	286
Table (110)	The minor paradigms .....	286
Table (111)	Triadic noun class paradigms (n=94) .....	287
Table (112)	The bu-/i-/di-paradigm (selection) .....	288
Table (113)	The gu-/ha-/ja-paradigm .....	289
Table (114)	The gu-/ha-/ba- paradigm (selection) .....	290
Table (115)	The bu-/i-/ja- paradigm .....	291
Table (116)	The bu-/i-/ba-paradigm .....	292
Table (117)	The ran-/ñan-/ja-paradigm .....	292
Table (118)	The paradigms with suffixed plural (n= 65) .....	293
Table (119)	Nouns in the ji-paradigm with suffixed plural .....	294
Table (120)	Ba- paradigm with suffixed plural .....	295
Table (121)	Nouns of the a-paradigm with suffixed plural .....	296
Table (122)	The ja-paradigm with suffixed plurals and ja-agreement .....	297
Table (123)	The ja-paradigm with suffixed plurals and a-agreement .....	297
Table (124)	Nouns with bu- or bi-in the singular and alternative plurals in i- and a-(-ŋ) .....	298
Table (125)	The bi-/a-paradigm with suffixed plurals .....	298
Table (126)	The noun dë-neg 'day' .....	298
Table (127)	Nouns of the kan-paradigm with suffixed plural .....	299
Table (128)	Nouns of the fa-paradigm with suffixed plural .....	299
Table (129)	Nouns of the ta-paradigm with suffixed plural .....	300
Table (130)	Nouns of the fun-paradigm with suffixed plural .....	300
Table (131)	Other paradigms with suffixed plurals .....	300

Table (132)	List of loans words in the prefixless paradigm .....	302
Table (133)	List of animate nouns in the prefixless paradigm .....	303
Table (134)	Mixed triadic paradigms.....	304
Table (135)	The a-/a-(-ŋ)/bi-paradigm (selection) .....	304
Table (136)	The fa-/fa-(-ŋ)/ja- triad with suffixed plurals (selection) .....	305
Table (137)	The one-class nouns in the ti-paradigm .....	307
Table (138)	The one-class nouns in the di-paradigm .....	307
Table (139)	The one-class nouns in the mun-paradigm and their connection to liquids across Bāinounk languages .....	308
Table (140)	Derivational network of jil ‘eye’ .....	309
Table (141)	Derivational network of mér ‘salt’ .....	309
Table (142)	The one-class nouns in the ba-paradigm .....	310
Table (143)	The one-class nouns in the gu-paradigm .....	312
Table (144)	The one-class nouns in the bu-paradigm .....	313
Table (145)	The one-class nouns in the ja-paradigm .....	313
Table (146)	Other one-class paradigms.....	314
Table (147)	Paradigms of the botanical domain .....	316
Table (148)	Collective terms for trees.....	317
Table (149)	Paradigmatic network of the root dóóma ‘Saba senegalensis (A.DC.) Pichon [a.k.a. ‘kaba’]’ .....	319
Table (150)	Paradigmatic network of the root taat ‘Annona senegalensis Pers.’ .....	319
Table (151)	Paradigmatic network of the root rac.....	320
Table (152)	Paradigms of the root tillo .....	320
Table (153)	The paradigms of the root jonko ‘manioc’ .....	321
Table (154)	Derivations of the root wuc ‘oil palm’ .....	322
Table (155)	Semantic extensions of the botanical paradigms .....	324
Table (156)	The ‘language and culture’ paradigms.....	327
Table (157)	Semantic network of the root -bëëher .....	328
Table (158)	Semantic network of the root -riin ‘Joola Eegimaa’ .....	328
Table (159)	Personal names and the prefixless paradigm .....	329
Table (160)	Derived animal names.....	330
Table (161)	The paradigmatic network of lód ‘build’ .....	331
Table (162)	The paradigmatic network of liin ‘weave’ .....	331
Table (163)	Derived mass diminutives in the ho-paradigm .....	333
Table (164)	The omniclass root ‘no’ .....	334
Table (165)	Body parts with hybrid genders .....	338
Table (166)	The absolute use of noun class markers .....	351
Table (167)	Absolute use of noun class prefixes with demonstrative base .....	352
Table (168)	Absolute use of prefixes with pronominal bases .....	353
Table (169)	Some loans from Kriolu and Mandinka .....	356
Table (170)	The ‘insect paradigm’ with loans .....	359
Table (171)	Types of verbal nouns and their syntactic properties.....	366
Table (172)	Nouns derived from eventive roots in Gubëeher .....	368
Table (173)	Human derivations in the ji- paradigm with suffixed plural.....	369
Table (174)	Instruments derived with the gu-/ha-paradigm and the applicative extension -um .....	370
Table (175)	Properties derived with the prefix ba- (selection) .....	374
Table (176)	Property nouns in the ba-paradigm .....	376
Table (177)	Properties derived with the si- paradigm (complete) .....	377

Table (178)	Property nouns of items denoting smells derived with the prefix si- .....	378
Table (179)	Properties derived with other paradigms .....	378
Table (180)	Nouns derived from eventive roots .....	381
Table (181)	Infinitives and verbal nouns in Gubëeher .....	385
Table (182)	Examples of single and multiple infinitives .....	387
Table (183)	Nominal and verbal properties after Malchukov (1994) and their relevance for Gubëeher .....	391
Table (184)	Malchukov's (1994) GSM model applied to verbal nouns in Gubëeher (highlighted in bold face where applies) .....	392
Table (185)	The encoding of object and possessive NPs .....	394
Table (186)	Overview of the semantic contribution of noun class prefixes on entities and infinitives .....	406
Table (187)	Bi-infinitives .....	407
Table (188)	Ja-infinitives .....	408
Table (189)	Gu-infinitives .....	410
Table (190)	Derived ba-infinitives from the agricultural domain .....	411
Table (191)	Ba-infinitives .....	412
Table (192)	Ta-infinitives .....	414
Table (193)	Jin- infinitives .....	415
Table (194)	Non-derived sin-infinitives .....	417
Table (195)	Potential si-infinitives .....	417
Table (196)	Ka- infinitives borrowed from French or Wolof .....	418
Table (197)	Other ka(n)-infinitives .....	419
Table (198)	Kun-infinitives .....	420
Table (199)	Other non-default infinitives .....	421
Table (200)	Default vs. non-default infinitives .....	422
Table (201)	Non-default only infinitives .....	426
Table (202)	Semantic differences between default and non-default infinitives .....	432
Table (203)	Verbs and infinitives triggered in the video task .....	435
Table (204)	The correlation between valency and infinitive-prefix type (n=313 infinitival constructions) .....	436
Table (205)	Distribution of infinitive types over construction types for the data in Table (206) .....	437
Table (206)	File DJI110312AC4, stimulus: DJI260212AC2. Consultant HS .....	438
Table (207)	Extensions which trigger the nominalisation with a non-default prefix .....	441
Table (208)	Infinitives in sin- from derived stems (reciprocals) .....	442
Table (209)	Derived unexpressed object alternation with gu-infinitives .....	444
Table (210)	Derived grooming verbs with gu-infinitives .....	445
Table (211)	Derived posture verbs with bu- .....	445
Table (212)	Derived ba- infinitives in the agricultural domain .....	446
Table (213)	Overview of the paradigms sorted by prefixes .....	456
Table (214)	Phonologically related words Gubëeher/Joola (Eeg=Eegimaa, Jir=Kujireray) .....	466

## List of figures

Figure (1)	Bainouk speaking villages (Sauvageot 1973) .....	32
Figure (2)	Nyun languages.....	34
Figure (3)	Bainouk speaking villages in Lower Casamance with contact languages added (Sauvageot 1973) .....	60
Figure (4)	Lexicalised ellipsis on the example of the designation for different meals .....	342
Figure (5)	Ellipsis involving the noun class fa- in Gubëeher (Gb) and Guñaamolo (Gñ) [JF=Joola Fogy] .....	350
Figure (6)	Main predication types (Langacker 1987b:74) .....	364
Figure (7)	Profiling (Langacker 1991:99) .....	365
Figure (8)	The distribution of prefixes with infinitives (n= 659).....	382
Figure (9)	The generalised scale model (GSM), (Malchukov 1994:57).....	391
Figure (10)	The single-class approach .....	450
Figure (11)	Model of noun class and paradigm.....	452
Figure (12)	Schematic overview of the noun class prefixes of Gubëeher and their paradigms (superscript <sup>(n)</sup> indicates that the prefix is part of a paired paradigm with suffixed plural).....	455
Figure (13)	Schema of the paradigms and senses of the prefix ba- in Gubëeher .....	459
Figure (14)	Schema of the paradigms and senses of the prefix sin- in Gubëeher.....	460

## Abbreviations

<b>Abbreviations in glosses</b>	<b>Meaning</b>
*	example or translation is ungrammatical
?	example or translation is controversial
1	1. Person
2	2. Person
3	3. Person
AGR	agreement marker
ANTC	anticipatory
APPL	applicative
AUG	augmentative
AUX	auxiliary
BEN	benefactive
CAUS	causative
CL	class marker
COMP	complementiser
COND	conditional
CONN	connective
DEM	demonstrative
DER	derivational affix
DIM	diminutive
DIST	distal demonstrative
DISTR	distributive
EXCL	exclusive
EXT	unglossable verb extension
FOC	focus
FUT	future
GER	gerund
HAB	habitual
IMP	imperative
INACT	inactual tense
INCL	inclusive
INS	instrument
INT	interjection
IRR	irrealis
IT	iterative

LOC	locative
MOD	modal particle
NEG	negative
OBJ	object
OMN	omniclass root
PART	particle
PASS	passive
PERF	perfective
PL	plural
POSS	possessive
PREP	preposition
PRO	pronoun
REC	reciprocal
REFL	reflexive/middle
REL	relative pronoun
REV	reversive
SUBJ	subject
SBJV	subjunctive
SG	singular
SUB	subordinating morpheme
VEN	venitive

<b>Abbreviations in the text</b>	<b>Meaning</b>
BOREPAB	Bureau d'Organisation, de Recherche, et d'Etude du Patrimoine Baïnouk
Fr.	French
inf.	infinitive
itr.	intransitive
NC	noun class
NP	noun phrase
p.c.	personal communication
tr.	transitive
VN	verbal noun

## Acknowledgements

In the course of writing this thesis I have fully realised to what extent scientific work is a collective process which in my case combined logistic, conceptual and motivational forces without which it would have been impossible for me to undertake this project. In the first place I want to thank my supervisor Friederike Lüpke who has constantly provided help and support in all three areas, as coordinator of the project I was part of, by being always available and interested to discuss aspects of my research and by believing in the quality of my analyses at times when I myself had a hard time doing so. Both Friederike and Rachel Watson, a fellow PhD student have given me invaluable advice and opinion on drafts, ideas and methodological issues which were crucial in pushing me to continuously rethink and consequently pursue the approach I have chosen for the analysis of the noun class system of Gubëeher. Thaks go to DobeS (Dokumentation bedrohter Sprachen) who funded the research project (pots plants and peoples, short “3P”) about Bāinounk language and culture I was priviledged to be part of and the French project Sénélangues for funding during my first year of PhD. The other members of the 3P project, Moustapha Sall, Mathieu Gueye, Amadou Kane Beye and Cheikh Daouda Diatta have contributed from their respective areas of expertise and more importantly proven to me the value of interdisciplinary exchange and teamwork. Of course neither the project nor my PhD related research would have been possible without the great support of the Bāinounk communities we have worked with and I am particularly indebted to the inhabitants of Djibonker for the interest, support and sympathy which have made my field stays not only important experiences in my scientific but also of my personal development. The members of the association BOREPAB (*Bureau d’Organisation, de Recherche, et d’Etude du Patrimoine*

*Bainouk*) have established the first contacts with the village community, particularly to Edouard Sagna of Djibonker/Beenor, who accomodated me in his house in Djibonker and whose entire household has had a substantial part in making me feel at home during my stays with them. May his wife Martine Biagui who deceased during the time I conducted research in Djibonker rest in peace. The Sagnas have accompanied me from the beginning in my efforts to learn Gubëeher and discreetly and patiently saved me more than once from shipwreck on the cliffs of cultural discrepancy. Many of the villagers, who I consider as my teachers rather than my consultants, have contributed plenty of their time and knowledge to my endeavours, most of all Laurent Manga, who has endured seemingly interminable elicitation, transcription and translation sessions with an admirable patience. I thank all of them sincerely and say: *Diin axaan imaato aloxie!* May God make that we have plenty more years together.

Special thanks also go to Sokhna Bao Diop who was shared some of her data on *Bainouk Guñaamolo* with me and my dear friends Iyah in London for reminding me in times of despair with gentle firmness how close liberation was, and Marilena in Cologne for reliable and effective first aid in psychological and linguistic matters.

## 1 Introduction

Bainouk (alternative names and spellings: Nyun, Bañun, Baïnouk<sup>1</sup>, Baynunk) is the cover term for a cluster of minority languages of Casamance, a natural region of southern Senegal with a high linguistic diversity and a high concentration of small languages. The Bainouk languages are genetically quite closely related, with percentages of cognate vocabulary around 70% (Doneux 1990:87, based on wordlists in Bühnen 1988). The Casamance area is bordering Gambia in the north, Guinea-Bissau in the south, and the Atlantic Ocean in the west. The area is dominated by the tidal river Casamance, whose salty marshlands formed by hundreds of tributary waterways define the region, especially in the western part (Basse Casamance/Lower Casamance) where the Bainouk languages are spoken. The Bainouk languages belong to the Atlantic grouping of languages, which have been seen as a branch of the Niger-Congo phylum, but are now generally understood as an areal grouping of languages with some local genetically motivated groupings (Lüpke 2013a), just as at the origin of the term 'Atlantic' (Koelle 1854). The closest genetic relatives are the two minority languages Kobia (also: Buy) and Kasanga (also: Haaca or Gugëcer), each spoken by a few hundred speakers in northern Guinea-Bissau. Gubëeher is spoken by approximately 1,000 -1,500 persons, most of which live in the village of Djibonker (local toponym: Jibëeher) ca. 15 km southwest of the provincial capital Ziguinchor on the main road to Oussouye/Cap Skirring. Not only Gubëeher itself, but all of the languages closely related to it (i.e. the other Bainouk languages and Kobia and Kasanga) and also most of those

---

<sup>1</sup> In an earlier publication (Cobbinah 2010) the spelling 'Bainouk' was used. As a result of a vote which spelling/version should be used henceforth, a panel which included members of BOREPAB and representatives of the three major Bainouk languages communities has decided in October 2010 that the version 'Bainouk' is preferred.

languages spoken in the direct vicinity of Djibonker (Bayot, Joola Kujireray) are almost completely undescribed. Additionally to material gathered in Djibonker, audio recordings which have been made in Niamone (Bainounk Guñaamolo), Djibelor (Bainounk Gubelor) and Jegui/Guinea Bissau (Bainounk Gujaher) will be occasionally used in this thesis.

## 1.1 The topic and research questions of the thesis

This thesis is about the complex noun class system Bainounk Gubëeher employs for the classification of nouns and verbal nouns. So-called noun class, or gender, systems, are abundant in many parts of the world (Europe, Caucasus, Australia, Amazonia, most parts of Africa). Within Niger-Congo languages the best researched noun class systems are those of the Bantu languages, although languages from outside this group, such as the Atlantic languages, have classification systems with very large and sophisticated inventories of noun classes. The phenomenon is usually syntactically defined, with the major criterion being agreement on dependent items (for a definition see chapter 3). Gubëeher has ca. 30 noun class prefixes, which form singular/plural paradigms – some nouns further distinguish between two sets of plural: a count plural and a generic plural. Other nouns form plurals by suffixing a plural marker *-ŋ*. The prefixes of the generic plural can also convey a mass/substance meaning. The following example (1) shows the use of the prefixes *gu-* as a singular noun class prefix, *ha-* as count plural noun class prefix and *ja-* as noun class prefix of the unlimited plural with an additional substance reading with the root *lihan*:

(1)	a)	<i>gu-lihan</i>	b)	<i>ha-lihan</i>	c)	<i>ja-lihan</i>
		CL.gu-stick		CL.ha-stick		CL.ja-stick
		‘stick [singular]’		‘sticks [countable]’		‘sticks’/‘wood’

Agreement is shown on most modifiers such as adjectives, numerals, deictic and relative pronouns and some interrogative pronouns. Table (1) shows a purely prefixed singular/plural pair with some agreeing targets. A full account of the morphological agreement types can be found in chapter 2, and a treatment in terms of semantically motivated paradigms in chapter 3.

Table (1) *Examples for prefixed agreement*

Noun	Gloss	Presentative	Adjective <i>de</i> ‘big’	Interrogative pronoun <i>-ŋ</i> ‘which’	Proximal demonstrative	Distal Demonstrative
<i>gu-sol</i>	‘shirt’	<i>iŋ-gu</i>	<i>gu-de</i>	<i>gu-ŋ</i>	<i>guŋ-gu</i>	<i>gu-ŋoon</i>
<i>ha-sol</i>	‘shirts’	<i>in-ha</i>	<i>ha-de</i>	<i>ha-ŋ</i>	<i>ha-ha</i>	<i>ha-ŋaan</i>

It is widely accepted that the repartition of concepts into noun classes in Niger-Congo languages can be based on semantic principles at least to some extent (Crisma, Marten, and Sybesma 2011; Dingemanse 2006), but the semantic functions of noun class systems, including their so-called ‘derivational’ functions, are not yet very well researched for most of the affected languages, and the topic is surrounded by controversy. The basic assumption adopted in this thesis is, that classification is category-establishing, i.e. used for the derivation of nouns from roots (Kihm 2000; Ferrari-Bridgers 2008) and nouns are accordingly the **result** of the classification of a root by a **class paradigm**. The basic unit of analysis is the noun class paradigm on which the semantic traits underlying nominal classification can be identified most clearly. The flexible character of roots in Gubëeher, which enables many of them

not only to occur in different kinds of syntactic frames (nominal, verbal, adjectival) but also in more than one noun class paradigm without any additional derivational morphology being necessary, is crucial in this respect. Since the result of this process are nouns which differ only in terms of noun class paradigm, it follows that the paradigms themselves must have a meaning. Table (2) shows the paradigms the root *liin* can appear in, forming its derivational network. The examples show that the meaning of the nouns derived from the root *liin* come about compositionally; the root provides the schematic meaning ‘weave’ and the paradigms provide additional semantic information which specifies which aspect of the scheme is activated.

Table (2) *The derivational network of the root liin*

Paradigm	Root	Meaning
<i>u-/ñan-</i>	<i>liin</i>	‘weaver’
<i>si’-/ñá’-</i>		‘spider web’
<i>a-/a-/bi-</i>		‘spider’
<i>ra’</i>		‘to weave cloth (Inf.)’
<i>bu-</i>		‘to weave (Inf.)’
<i>ta-/ja-</i>		‘cloth (plain white)’

The correlation between paradigms and their semantic contribution is to some extent systematic, especially in the botanic domain, but also in other domains. A presentation of the paradigms attested in Gubëeher as well as their semantic value in derivational networks within the nominal sphere will be attempted in chapter 3. Table (2) also shows that noun class paradigms do not only form derivational networks with roots denoting entities, they also serve to derive items from roots denoting events, processes or states, which are compatible with verbal morphology. The result of this process are a variety of verbal nouns, including nouns with agentive, instrumental or locational semantics and also the heterogenous category of

event nouns including infinitives, manner nouns and action nouns which have verbal as well as nominal properties and which are the topic of chapter 4. Again, the choice of noun class paradigm is to some extent systematic, and regular semantic contributions of noun class paradigms to the meaning of the verbal nouns can be identified. A specific focus in chapter 4 lies on the function and distribution of action nouns and infinitives, which exhibits some typological peculiarities, which I will shortly summarise in the following paragraphs.

The phenomenon of multiple infinitives, formed from one root or stem<sup>2</sup> but with several out of a variety of different noun class markers, occurs in all Nyun languages (the Bainouk cluster and Kobiana/Kasanga) and probably in most Bak languages, which include Manjaku, Mancagne, Papel and the Joola languages. In Gubëeher, no additional derivational morphology is necessary for the formation of infinitives; the verbal root or stem is simply prefixed with a noun class marker. In Gubëeher, about half of all available noun class prefixes occur with infinitives, though there are large differences concerning their productivity in terms of how many root types they are compatible with for the formation of infinitives.

The label infinitive as used in this thesis includes those verbal nouns that are mainly used as complements of complement-taking verbs and of auxiliaries in periphrastic constructions. The syntactic and functional characteristics of items subsumed under the label verbal nouns are treated in detail in chapter 4. ‘Infinitive’ is defined not as a formal but as a functional category, since all verbal nouns with infinitival function are polysemous, covering other functions among which action nominal, manner nominalisations, result nouns and others. The most frequently

---

<sup>2</sup> For underived verbs it is impossible for me to tell at this stage of research whether the infinitive is derived from the root or the stem.

occurring noun class prefix used for the derivation of infinitives in Gubëeher is *bu-*. Almost all verbs can derive an infinitive with *bu-*, and if verbs occur with only one infinitive, it is *bu-* in the majority of cases. About 120 out of 592 eventive root types are attested having infinitives other than the one in *bu-* – formed from the same stem but with different noun class prefixes. I will refer to the *bu-* infinitives as ‘default infinitives’ and to all others as ‘non-default infinitives’. Table (3) shows that some verbal stems have only one corresponding infinitive, which may be default or non-default, whereas some stems have two or even three infinitival forms derived from the same base.

Table (3) *The distribution of default and non-default infinitives across roots*

Stem	Gloss	Default infinitive	Non-default infinitive	Non-default infinitive
<i>ñoŋ</i>	‘take’	<i>bu-ñoŋ</i>	/	/
<i>liim</i>	‘rain’	/	<i>ka-liim</i>	/
<i>ŋal</i>	‘bite	<i>bu-ŋal</i>	<i>ji-ŋal</i>	/
<i>bëëx</i>	‘pull’	<i>bu-bëëx</i>	<i>gu-bëëx</i>	<i>jëm-bëëx</i>

As I will show in chapter 4.6, the choice of noun class for the derivation of an infinitive is not entirely arbitrary; neither is the usage of the multiple infinitival verbal nouns for those verbs that have more than one infinitive. The resulting multiple infinitives may differ semantically, as can be illustrated with the root *bëëx* in Table (3): The infinitival verbal noun *bu-bëëx* is not only formally but also semantically the default form and is used for all kinds of different contexts where pulling is involved. *Gu-bëëx* on the other hand has a strong connotation of ‘smoking cigarettes’ and *jëm-bëëx* is used in the context of pulling a fishnet or a boat to the shore. The identification of semantic links between noun class and root is a difficult task even for concrete nouns and even more so for abstract nouns, such as verbal

nouns. Still, some verbs from specific semantic domains cluster in certain noun classes: class *ja-* for example contains mostly infinitives related to the agricultural domain. In chapter 4 I will also present evidence that the use of infinitives sharing the same root but differing in the noun class is also determined by transitivity-related parameters.

### 1.1.1 The research questions and interest of the research

Based on the issues raised in section (1.1) the following major research questions can be identified:

1. Which noun class paradigms can be identified in Gubëeher, what is their semantic basis and in which paradigmatic networks are they actively used for the derivation of nouns?
2. According to which semantic principles are events and entities classified in Gubëeher by noun class paradigms? Are they the same for events and entities?
3. Which range of semantic and syntactic tasks are covered by the verbal nouns in Gubëeher?
4. What is the principle governing the occurrence of infinitives derived with different noun class markers from the same root?

The results of my research are relevant for Africanists and researchers interested in Atlantic languages, especially considering that the validity of the family as a whole is contested while many of the languages supposed to be part of it remain

undescribed or only poorly described. Apart from that, the complexity and the large size of its class marker inventory make the noun class system of Gubëeher typologically relevant. Especially its semantic properties and derivational functions are relevant for a better understanding of nominal classification, considering that these areas are still understudied, even for well-described noun class languages. The typologically unusual phenomenon of multiple infinitives formed from the same root but with different noun class markers, has been noted by other linguists working on Casamance languages but not yet treated in detail. I hope that the data presented in this thesis will help to close these gaps and contribute to a better understanding of this phenomenon and raise awareness for the relevance of this issue.

### **1.1.2 The structure of the thesis**

The thesis is structured as follows. In chapter 1, after providing some basic information on the main theoretical framework I will employ in the areas of classification, word classes and transitivity, I will give an overview of the field site, including a cultural and historical introduction and an outline of methodological issues. I will proceed with a short sketch grammar in chapter 2, which covers mainly those areas of grammar relevant for answering the research questions and provide the basis for understanding the glosses. Chapter 3 is dedicated to issues surrounding noun classification, mainly an identification of noun class paradigms and their semantic properties by analysing their role in paradigmatic networks, especially in the botanic domain. Evidence from ellipsed constructions and the absolute use of noun class markers (i.e. on pronouns and other targets without a head noun) will also be considered. Chapter 4 is an account of how verbal nouns, specifically those with infinitival functions, are derived, what their function and

meaning is with a focus on roots attested with multiple infinitives. The role of noun class semantics in derivation of these items and their syntactic properties will be analysed taking into account the polysemy patterns that are manifest within the different formal categories of verbal nouns. Chapter 5 is dedicated to some issues flagged for future research surrounding language contact with the adjacent Joola languages and especially its influence on noun classification and the formation of verbal nouns.

## 1.2 Baïnouk at a glance

The term Baïnouk might be misunderstood as referring to one language; it is highly questionable to subsume the different varieties grouped under this label as one language (the different and conflicting criteria for identifying a language notwithstanding). Not only are the differences in vocabulary and grammar substantial, distances between the different communities are large and contact between the different language areas is rather rare. The Baïnouk language areas are like small islands scattered across a sea of populations speaking different Joola languages and Mandinka. There is neither a unified “Baïnouk identity” (see Lüpke 2010; de Lespinay 1996), nor do all Baïnouk languages have an unequivocal cover term encompassing all of the ethnic and linguistic groups subsumed under the cover term “Baïnouk”. Rather, we are dealing with isolated pockets of related but not mutually intelligible languages, spoken by people in different cultural surroundings who adhere to three different religions (Christian, Muslim, path of the forebears<sup>3</sup>)

---

<sup>3</sup> The terms ‘traditional religion’ and ‘animism’ are avoided here for their pejorative connotations going back to colonial terminology. The designation ‘path of the forebears’ is based on the use of ‘path’ for ‘religion’ by the speakers of Gubëeher.

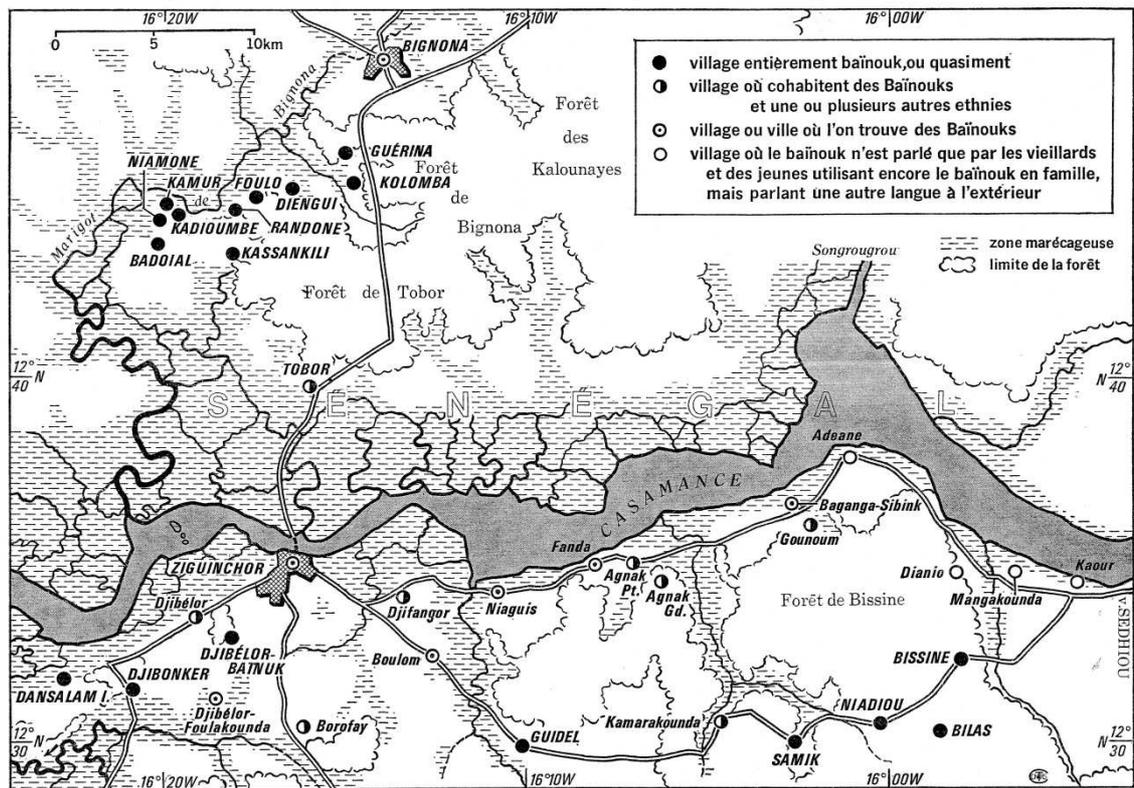
and communicate with outsiders and speakers of Bāinounk languages other than their own in different sets of *linguae francae*.

#### **1.2.1.1 Bāinounk and Nyun varieties**

It is difficult to say with certainty where Bāinounk languages are still spoken and how many speakers each variety has. For detailed data on speaker numbers and other sociolinguistically relevant information on Bāinounk see Lüpke (2010). The most detailed survey available is in the form of a map compiled by Sauvageot (1973), at a time when some varieties were already dying or extremely vulnerable. Bāinounk is with certainty still spoken in and around Niamone (local toponym: Ñamol, see Lüpke 2010 for a detailed description of this speech community), to the southwest of Bignona, and in Tobor. Guñaamolo (of Niamone) and Gutobor (of the village Tobor, situated ca. 10 km north of Ziguinchor) are often regarded as close dialects of one variety. Guñaamolo is also spoken in the village Borofay Bāinounk south of Ziguinchor, said to be populated by migrants from Niamone. South of the river we find the southern dialects comprising Gubēcher in Djibonker, Gubelor in Djibelor and Gufangor in Djifangor, which share many phonological and grammatical traits but are nonetheless quite different from each other. Bāinounk Gujaher is spoken in the area east of Ziguinchor on the south bank of the river Casamance in and around the villages Gudomp, Niaguis, Adeane, and Agnack, and stretching across the border to Guinea Bissau. There, it is spoken in some villages around São Domingo and close to the Senegalese border (Jegui, Beguingue, and others). Most of the Bāinounk languages seem to be only little or not at all mutually understandable, intelligibility often decreasing with growing distance. From my own experience, speakers of Gubēcher have great difficulties understanding both

Guñaamolo and Gujaher if they are not used to hearing it. According to preliminary word-list based analyses conducted by Doneux (1990:87) the shared vocabulary between Baïnouk and the Guinea-branch Nyun languages lies around 30% and between the varieties of Baïnouk between 60 and 70%. So far, no statement can be made about the Baïnouk languages of the northern and the north-eastern parts of Casamance (the historical regions of Sambu, Sonkodu, Yassine and Boudhie) and southern Gambia (Bühnen 1988; Bühnen 1994:527ff). It seems as though Baïnouk is either not spoken anymore at all in these areas, or at best remembered by few old people (Denis Creissels p.c).

Figure (1) *Baïnouk speaking villages (Sauvageot 1973)*



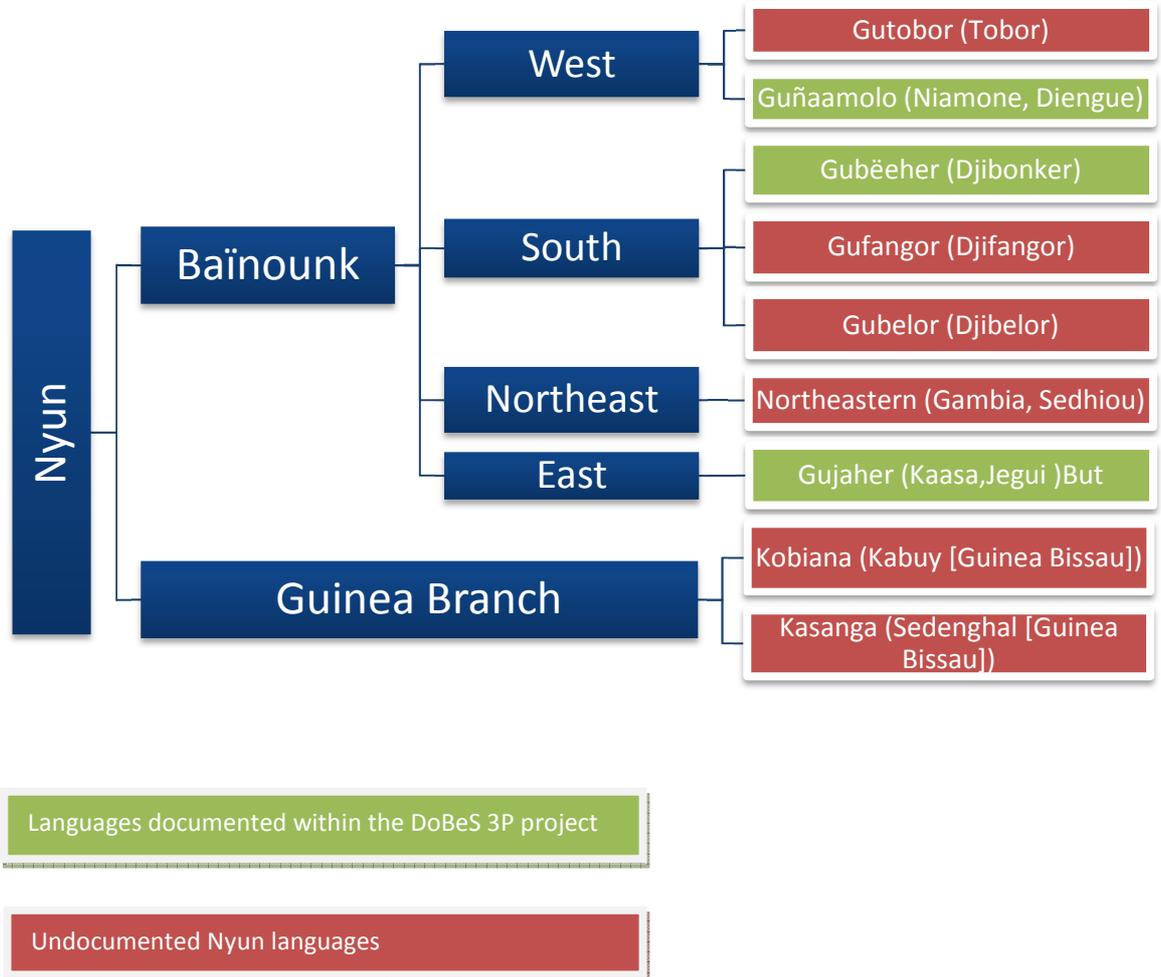
The closest genetic relatives of the Baïnouk languages are the two languages Kobiana (also: Buy) and Kasanga (also: Haaca or Gugöcer), both spoken in northern

Guinea-Bissau. For convenience I will refer to the ensemble of these languages as *Nyun* languages and to the varieties of Bāinounk in general as ‘the Bāinounk languages’, whenever a statement applies to all varieties. When I make a statement about a specific Bāinounk language I will use its exact name (e.g. *Guñaamolo*, *Gubëeher* or *Gujaher*). The term ‘Bāinounk’ is also used as an ethnic designation. In order to refer to a specific group, I will specify its location, e.g. ‘the Bāinounk of Djibonker’ or ‘speakers of Gubëeher’.<sup>4</sup> The following diagram is a synthesis of classifications established by other linguists (Bühnen 1988; Doneux 1990) and observations made in the field.

---

<sup>4</sup> In Gubëeher, the terms *ubëeher* (sg.)/*ñambëeher* (pl.) are used to denote one or many inhabitants of Djibonker. The language is called *gubëeher* or *hëbëeher*. There is no label that refers to the totality of Bāinounk speaking communities, and the root *ñuun* which means ‘Bāinounk’ in other varieties, refers to the Bayot in Gubëeher.

Figure (2) Nyun languages



The DoBeS 3P project mentioned in Figure (2) is an ongoing interdisciplinary research project with a focus on language, (ethno)-botany and (ethno)-archaeology of the major Baïnouk settlement areas. Detailed Information the 3P project, which I am a part of as a PhD student, will be provided in section 1.2.2.

### 1.2.1.2 Genealogical affiliation

The genealogical links and subgrouping within Atlantic used today go back to Sapir, built on lexicostatistic methods. According to this model, the genealogical affiliation

of Bainouk is indicated as Atlantic – Northern Atlantic – Eastern-Senegal Guinea languages – Banhum [Bainouk]/Kobiana/Kasanga. The family tree established by Sapir (1971) is still used in modern textbooks in slightly adapted form (Heine and Nurse 2000:21), although the exact relationships between the Atlantic languages, as well as the overall unity of the subgroup is far from being established, due to very low lexicostatistic percentages ranging in the tens and twenties between the various subgroups (Sapir 1971:47). Doubts concerning the membership of the southern branch and the isolated Bijogo to Atlantic have been expressed by numerous authors for a long time, and the validity of the whole family is put into question, (Dalby 1971; Pozdniakov and Segerer 2010; Lüpke 2013a). The only robust groupings that emerge are local groupings like Bak, including the Joola languages, Balanta, Manjaku, Mancagne and Papel or the Nyun languages, including Bainouk, Kobiana and Kasanga. Some languages, or even entire subfamilies of Atlantic are only now gaining closer attention by linguists.

### 1.2.2 Previous and ongoing research

The languages of the Atlantic family are still largely underresearched, except for the largest and most prominent members from the Northern branch like Wolof, Fula and Sereer, for which monographs and dictionaries are available. The majority of Atlantic languages have received little or no attention from linguists so far and are therefore underrepresented in the typological literature as well. Although complex noun class systems abound throughout the family, no monograph about the topic of nominal classification in Atlantic has been published in the last decades.<sup>5</sup> Even general textbooks about gender and agreement (cf. Corbett 1991) concentrate on

---

<sup>5</sup> Pozdniakov's (1993) monograph on NC systems in Atlantic – the only available – has never been translated from Russian into any other languages.

noun class/gender in Bantu languages and shun the very complex and somewhat different systems of Atlantic languages, mainly for lack of data. Sapir (1971), Wilson (2007) and Doneux (1975) give sweeping typological overviews of a variety of Atlantic languages and issues concerning nominal classification.

The languages of Casamance and Guinea Bissau, including the Bãinounk languages have received relatively little attention from linguistic researchers so far. Unstable political circumstances and a secessionist conflict in the Casamance region and an unstable political situation in Guinea Bissau throughout the 1990s did not contribute favourably to changing this state of affairs. See Table (4) for an overview of literature on Nyun languages. The Bãinounk languages have all remained underdescribed so far<sup>6</sup>, the only information available on Bãinounk Gubëeher consists in few short wordlists compiled by non-linguists, but there is absolutely no information on any aspect of the grammar of Gubëeher.

---

<sup>6</sup> Guñaamolo has received the most linguistic attention so far of all Bãinounk languages (see Table (4)).

Table (4) *Existing Literature on Nyun languages*

<b>Author</b>	<b>Type</b>	<b>Bainounk languages covered</b>
(D’Avezac 1845 (ed.))	Dictionary	probably Northwestern <sup>7</sup>
(Koelle 1854)	Wordlist	(no information provided in the source)
(Tastevin 1936)	Wordlist	Gubelor
(Basso Marques 1947)	Sketch grammar, wordlist	Kobiana, Kassanga
(Wilson 2007)	Wordlist	
(Bühnen 1988)	Wordlist	Gubëeher, Gubelor, Gufangor, Guñaamolo, Gutobor, Northeastern, Gujaher, Kobiana, Kasanga
(De Lespinay 1992)	Dictionary	Gubëeher, Gubelor, Gufangor, Guñaamolo, Gutobor, Northeastern, Gujaher, Kobiana, Kasanga
(NTM 1996; NTM)	Dictionary and alphabetisation manual	Guñaamolo
(Sauvageot 1967; Sauvageot 1987a; Sauvageot 1987b; Sauvageot 2001)	Journal Articles	Guñaamolo
(Doneux 1990)	PhD Thesis	Kobiana

Likewise, the majority of Joola languages in contact with the various Bainounk languages – with the exception of the largest one, Joola Fogny – have remained little or not at all described. Table (5) gives an overview of the Joola languages and the names as used in this thesis, their geographic distribution, and some relevant published literature as well as research projects in progress I know of. The Joola languages are quite closely related, with varying degrees of mutual intelligibility; outliers are Kuwaatay, Karon and the Bayot varieties (Kuhinge, Kugere, Arame). Other language names used in this thesis are: Balanta (elsewhere also referred to as

<sup>7</sup> The dictionary dates back to the 17th century, authorship is unclear, but it might have been compiled by European traders. According to de Lespinay (1997) the language has most similarities to the now moribund Northern varieties, spoken in Gambia, Yassin, and Boudhié.

‘Balant’) and Kriolu (the local name for ‘Casamance Creole Portuguese’, I do not distinguish the Casamance variety of Kriolu from its very close relative spoken in Guinea-Bissau).

Table (5) *Bak (Joola languages and Manjaku cluster) names as used in text and literature, immediately adjacent contact languages of Gubëeher in bold face*

	Variety	Alternative names	Place	Relevant literature
Joola languages	<b>Kujireray</b>	<i>Kulunay, Hulon</i>	<i>Brin</i>	Rachel Watson (in progress)
	<b>Eegimaa</b>	<i>Banjal, Gusilay</i>	<i>Royaume Mof Ávvi</i>	(Sagna 2008), (Bassène 2006), (Tendeng 2007)
	Buluf	<i>Gusilay</i>	<i>Affiniam, Thionk Essil</i>	/
	Kuwaatay	<i>Kwatay</i>	<i>Diembereng</i>	(Coly 2010), (Payne 1992)
	Karon	<i>Mlomp</i>	<i>Islands north of river Casamance, Kafountine</i>	/
	Fogny	<i>Foñi, Kujamutay</i>	<i>Bignona, Fogny area, Gambia</i>	(Sapir and Goudjabi 1993), (Sapir 1965), (Hopkins 1995)
	Kaasa (with subvarieties)		<i>Lower Casamance south of river, around Oussouye</i>	(Sambou 1979)
	Flup		<i>Youtou, Guinea-Bissau</i>	?
	Kerak		<i>Kabrousse, Guine</i>	Stéphane Robert and Guillaume Segerer (in progress)
	<b>Bayot Kuhinge</b>		<i>Dioher</i>	/
	<b>Bayot Kugere</b>		<i>Nyassia</i>	{Diagne 2009}
	Arame		<i>Senegal/Guinea-Bissau borderland</i>	/
Manjaku cluster	Manjaku (with many dialectal varieties)	<i>Man(d)jak, Manjaque</i>		(Kihm 2000), (Buis 1990) (Karlik 1972), Guillaume Segerer (in progress)
	Mancagne	<i>Mankanha, Mankanya</i>		(Trifković 1969)
	Papel	<i>Pepel</i>		<i>Ndao (forthcoming)</i>

My research on Bainouk Gubëher is part of a larger interdisciplinary documentation project funded by DoBeS with the name “Pots, plants and peoples – a documentation of Bainouk knowledge systems” which unites researchers from the fields of linguistics, ethno-archaeology and botany. The project is based at SOAS/London and headed by Dr. Friederike Lüpke, (SOAS/departement of linguistics) who works on the linguistic documentation of Gujaher, assisted by me working on Gubëher. Prof. Moustapha Sall, head of department of the Department of Archaeology at IFAN/Dakar is conducting research on contemporary pottery practices and excavated ancient specimen in both areas. He is assisted by Amadou Kane Beye, who is focussing on material culture and social structure mainly in Djibonker, as a Master student in 2011/2012 and as a ELDP grantee in 2012/2013. Prof. Mathieu Gueye, ethno-botanist and head of department of the department of botany at IFAN/Dakar compiles an inventory of plants and plant names in the researched Bainouk communities involving the collection of specimen for storage in the IFAN herbarium. He is assisted by Cheikh Daouda Diatta who is writing a PhD thesis on ethno-medicine in Bainouk cultures. The various usages of plants for consumption, religious purposes, healing, construction etc. are identified through interviews with specialists from the language communities. The field trips of the team members are planned so that a botanist or historian works together with each of the linguists. The outcomes are regularly discussed in group meetings. All audio and video recordings be they related to culture, plant knowledge or pottery, are stored in the archives of DoBeS hosted at the Max Planck Institute/Nijmegen.

### 1.2.3 History of the Casamance

During the last 500 years, successive invasions and concomitant shifts of power have heavily influenced the linguistic landscape of Casamance, which is why a concise historical overview is necessary for a better understanding of the present-day situation.

Oral tradition has it that the Bainounk<sup>8</sup> were the autochthonous inhabitants of the area, dominating a kingdom of traders, which must have been still powerful, but already declining, at the time of arrival of the Portuguese in the late 16th century, and which finally dissolved completely in the 19th century (Bühnen 1994, Roche 2000). Centuries of conquests, slave trade, population movements and wars led to the breakdown of these structures. Sources from 17th century historical data and etymological research (Bühnen 1994; Bühnen 1992; D’Avezac 1845; de Lespinay 1997a) confirm that language(s) closely related to present-day Bainounk varieties were in use between the River Gambia and the Rio Cacheu, i.e. between modern Gambia and the northern part of Guinea Bissau, at some point in time. As a consequence of their political decline, the Bainounk identity, together with language and culture, has today been reduced to marginal remnants in an environment dominated by Mandinka and Joola groups.

The inclusion of ‘Bainounk’<sup>9</sup> in a multilingual dictionary from the 17th century (D’Avezac 1845) featuring among others a Joola variety called Feloupe and the languages Wolof and Saracole is a sign of the importance of Bainounk as a trading language in the area. Joola groups had probably already entered the area before the

---

<sup>8</sup> No judgement on continuity is intended here, since it is unclear what the cultural identity of the people designated Bainounk was based on. It is unclear in what relationship this (ethnic?) group stands to the people who nowadays call themselves Bainounk or are considered as such because of either linguistic or cultural behaviour.

<sup>9</sup> Here, the name Bagnon is used. It is unclear which Bainounk variety the dictionary features.

15th century (Bühnen 1994), first occupying the coastal areas and then moving east into the interior. The Portuguese presence in Casamance and Guinea goes back to the late 16th century, both Ziguinchor and Cacheu (Guinea Bissau) having been founded in 1645 by Portuguese traders. Ziguinchor itself was established on the site of a Bãinounk village and, according to Roche (1976 and 2000), the mixed Portuguese-African Creole speaking population descends from original Bãinounk dwellers, captives and the Portuguese *lançados* (traders who had permanently settled among the populations of the area). Although the physical presence and political power of the Portuguese was never very strong – Ziguinchor had 1,500 inhabitants as late as 1842 (Roche 1976; 2000) – their disruptive influence through slave raids and the resulting conflicts among the local groups was nevertheless marked. The population loss among the Bãinounk to the slave trade was substantial (Rodney 1969), and many died in wars with the Joolas and Balantas. In addition to that, the expansion of the Islamic Mandinka kingdom of Gaabu from the east, compounded by the Balanta pushing up north from present day Guinea Bissau into Bãinounk territory probably also contributed to the collapse of Bãinounk hegemony and political structures. The last episode in this history of conquest and shifting power was marked by the growing influence of the French in the region, starting at the beginning of the 19th century and culminating in the taking of Ziguinchor from the Portuguese in 1886. As a result of these historical events, Mandinka, Peul, Joola Fogany, French, and Portuguese Creole (Kriolu) are still important *linguae francae* in Casamance, while Balanta, Manjaku, and smaller Joola languages also serve as *linguae francae*, though on a smaller scale. In addition to these languages of wider distribution, minority languages such as the varieties of the Bãinounk cluster, Bayot etc. are spoken, but not used as vehicular languages. Since the country's

independence in 1960, Wolof is spreading rapidly as the de facto national language of Senegal (Dreyfus and Juillard 2004; Mc Laughlin 2009). Traces of this changing history can be found through borrowings in the Bainouk lexicon. Among the various loans in Gubëeher we find: from Joola *maregen* ‘correct’ and *bu-yinum* ‘mind’; from Portuguese *loosa* (Kriolu *losa*) ‘shop’ and *kaleroy* (Kriolu *kaleron*) ‘pot’; from Mandinka *koloŋ* ‘well’ and *saho* ‘sheep’; and from French *tabl* ‘table’ and *buwer* (French *verre*) ‘glass’.

The on-going battles in the interests of, simplistically put, colonial power (Portuguese, French), land (Balanta, Joola) and religion (Mandinka, Peul) have caused massive shifts in linguistic and ethnic identities. As shown by Bühnen’s (1992) research, many place names found today in Gambia, Casamance and northern Guinea have Bainouk etymologies. The name-giving Bainouk population has in many cases either been assimilated by the newcomers or driven off their lands (de Lespinay 1987; 1996). In the course of this process, various aspects of Bainouk culture such as dances, clan names, trading practices, initiation rites and linguistic traits have very probably found their way into the cultures of the incomers and vice versa (see de Lespinay 1997; Mark 1992; Linares 1992; Bühnen 1994 for an overview of the convergent cultural features of the area).

#### **1.2.4 Introduction to the cultural context**

A consideration of anthropological data in an analysis of the semantics of noun classes is indispensable. As Foley (1997), who devotes a whole chapter of his textbook on anthropological linguistics to ‘classification’, makes clear, the semantic parameters of classification are to some extent culture-specific and reflect cultural concepts of the social and religious spheres of the speakers. Foley (1997:237)

discusses the example of Burmese, where the conception of the world as ordered along “concentring circles, with the Buddha in the centre” as opposed to the hierarchical worldview prevalent in western societies, heavily impacts the semantic extension of certain numeral classifiers. In his doctoral dissertation on the semantics of noun class markers in Gujjolay Eegimaa, Sagna (2008) assumes a chained network of semantically and conceptually related areas, some of which are grouped around highly cultural specific practices. To give an example (from Sagna 2010a:258f), the items in noun class *ñV-* can only be understood as linked by semantic connections when considering aspects of social organisation: class *ñu-/ñi-* contains items related to *ñā-tiñ* ‘pain’, shameful and painful sickness (*ñā-rum* ‘gonorrhoea’) and vulnerable body parts (*ñā-gir* ‘back of the knee’), physical pain is linked to emotional pain (*ñu-xul* ‘mourning/funeral’). The three nouns *ñā-mbaf* ‘cheap selling of rice plots’, *ñu-xul* ‘funeral’ and *ñi-xin* ‘rice plot’ are

related to social organization through a process of chaining. It is during funerals and ends of mourning ceremonies that most exchanges of plots of rice fields for domestic animals are generally made. Mourning takes place with the involvement of the whole community and requires sacrifices of animals as pointed out above. During these occasions, it is often the case that one is compelled to exchange a piece of property (e.g. a plot of rice field) in order to acquire a required animal to honor the sacrifices to a deceased relative (Sagna 2008:258f).

As for Gubëeher, the classification of plants and parts of plants in noun class paradigms that reflect folk taxonomies and aspects of their usefulness and cultural salience, attest to the impact of the cultural sphere on the organisation of the linguistic sphere. The classification of events (encoded in verbal nouns) through noun class markers partly rests on cultural traits, giving special status to events from the central subsistence domains like fishing and agriculture, especially wet rice

cultivation. Before providing a short account of some areas of Baïnouk culture<sup>10</sup> as lived and practised in Djibonker, I will discuss some issues surrounding the notion of homeland and diaspora in connection to ‘Gubëeher language and culture’.

Identifying Djibonker as the locus of Baïnouk Gubëeher language and culture – despite the localist language name – is of course a simplification, for two reasons. Firstly, people speaking Gubëeher and referring to themselves as Baïnouk can be found in various villages in Casamance and also in most cities of Senegal, and secondly we have to consider that not everyone in Djibonker does speak Gubëeher or has a “Baïnouk” ethnic identity. The simplification – as long as it is understood as such – makes sense nevertheless considering that according to oral tradition Djibonker was founded by Baïnouk, who still represent the largest and culturally most influential part of the population of Djibonker<sup>11</sup>. Non-Baïnouk are considered “strangers” or “newcomers” (*udëëka* (sg.)/*ñandëëka* (pl.))” who have been given land for cultivation in the outskirts of Djibonker by the Baïnouk population, conforming to the “landlords and strangers” hospitality pattern described by Brooks (1993). The differentiation between old wards (“quartiers”) and annexed residential areas, where most non-Baïnouk live, does reflect this practice. Many Gubëeher speakers living in Dakar, even if they have been born there, still consider Djibonker their home village and make sure they keep contacts with relatives in the village, attend important cultural events and send their children there in the holidays or through volunteering in the cultural association BOREPAB (*Bureau d’Organisation*,

---

<sup>10</sup> There is definitely more literature on Baïnouk culture and history than on the Baïnouk languages. The most detailed historical account of Baïnouk history including ethnographic data on traditions, mythology and some aspects of material culture, is certainly Bühnen’s (1994) “Geschichte der Bainunk und Kasanga” complemented by an etymological analysis of Casamance place names (Bühnen 1992). De Lespinay (1996; 1997 & 1987a) treats political and historical questions in connection with Baïnouk land rights and autochthony. Teixeira (1990) gives an account of some aspects of the culture of the Baïnouk of Djibonker in her MA-thesis.

<sup>11</sup> It has to be considered that the integration of inmarried women and the effect this has on their ethnicity and the ethnicity of their children is not yet clear.

*de Recherche, et d'Etude du Patrimoine Bainounk*). The cultural association has been founded in 1981 by activists from all major Bainounk populations with the goal of promoting culture and language(s) of “the Bainounk”. Involvement in the ADD (Agence du Developpement de Djibonker), whose members are both inhabitants of Djibonker and Bainounk of the “diaspora” is another institutionalised way for city-dwellers to be involved in village matters. While the Gubëeher-speaking population of Djibonker predominantly lives a peasant lifestyle consisting of rice-farming, gardening, cultivation of fruits and animal husbandry (though some commute to Ziguinchor for paid work), the city-dwellers<sup>12</sup> live an urban lifestyle, and count an important number of high school and university graduates. The incursion of Christian faith and colonial administration on a large scale into Djibonker is rather recent. Ziguinchor and its hinterland have long remained more or less unaffected by direct interference of colonial power. The Portuguese showed little interest in the city and power was de-facto in the hands of the Creole population of Ziguinchor until the French took the city in 1885. The geographic conditions, mangrove swamps and thick forests, and the resistance of the local populations made it difficult for the French to establish colonial structures. As late as the 1920/30s the French had no effective control over the areas southwest of Ziguinchor (see Roche 2000); the first convert to Catholicism in Djibonker date back to the middle of the 20th century.

I will limit the description of cultural practices to those found in Djibonker, for various reasons:

---

<sup>12</sup> From my own experience I can only speak about the Bainounk communities in Dakar, which is the most numerous Bainounk diaspora community in Senegal, numbering about 400 (Emmanuel Sagna (p.c.), coordinator of ADD in Dakar).

- 1) Djibonker is accepted by all participants as the focal point of Gubëeher language and culture, therefore the authority in matters of all sorts of traditional knowledge and “pure<sup>13</sup>” language resides there;
- 2) linguistic research for this thesis has been conducted exclusively in the village;
- 3) ”traditional” rural as opposed to “modern” urban culture is more likely to have preserved traits that have influenced structures in the language, e.g. the categories relevant for nominal classification.

Bainounk identity is largely tied to wet rice cultivation and palm wine tapping as the basic subsistence activities. Other important activities include fishing, hunting, production of charcoal, extraction of salt, gardening, fruit cultivation, and basket weaving. Historically, honey and beeswax production and cloth weaving have been closely linked with Bainounk trading empires. Bühnen (1994) reports that the Bainounk traders were famous for trading in dyed indigo cloth – which is part of the traditional attire in Djibonker – and apicultural products. Myths about an army of bees as protectors of the village are a topos in many Bainounk historical narratives (see Bühnen 1994), and tools for cotton processing can still be found in Djibonker, though there are now no active dyers or weavers in the village.

The family is organised along patrilinear and patriarchal lines; after the marriage the woman leaves her family and is integrated into her husband’s family. The father is head of the family and the children bear his name and clan membership, though women keep their own name. Some sources explicitly comment on the relatively

---

<sup>13</sup> Considerations of purity are not shared by the author but widespread ideologies among the language community. See also section 1.2.9 on linguistic variation within Gubëeher.

large autonomy and influence of Bainouk women (Leprince 1905). Indeed, the marriage arrangements grant women autonomy over their dowry as well as the possibility of divorce, i.e. the return to their own family in case of maltreatment in the husband's household where they have moved after the marriage. Wife and husband would traditionally have separate provisions of rice, which are used to nourish the family during different seasons, but which are strictly kept apart.

Traditional funerals follow elaborate scripts, with strictly observed stages and rituals in order to ensure the passage of the soul to the other world, where it would live among the family members who have passed away, awaiting rebirth. Only after the proper execution of the post-funerary rites is the deceased admitted into the circle of relatives who are already established in the other world. Evil persons risk being condemned to haunt their former house after death in the form of *ambiroŋ* (sg. *ambiro*), frightening and dangerous undead creatures forced to roam around craving for heat to warm their lifeless bodies. The ancestors are an important factor in Bainouk religion as practised in Djibonker: they are highly esteemed and their help and advice is sought in times of trouble. In ancient times the deceased were buried right under their family's house or in very close vicinity and whenever alcoholic beverages are consumed, some is poured on the ground as libation for the dead ancestors (*utuuta* (sg.)/*ñantuuta* (pl.)). The *afuga* 'soul of the dead', once it possesses a person, can be consulted in order to investigate the cause of death especially when doubts about the timeliness of the death arise. Dealings with the supernatural world are left to *ñanniig* (sg. *uniig*), persons with supernatural perceptive abilities.

Older sources (Leprince 1905; Girard 1965) report that the Bainouk religion is dualistic, i.e. has two major opposing deities representing the forces of good (order)

and bad (chaos and anomie) competing for power. In Djibonker this could not be confirmed, but there are many secrecy restrictions and taboos posed on relating detailed cultural information, which is why only a superficial account can be given here. From what has been observed, followers of the “path of the forebears” pray to an almighty invisible god at holy sites (or ‘shrines’), usually referred to as *fétiche* ‘fetish’ in French and *si-run* (sg.)/*mu’-run* (pl.) in Gubëeher. *Murun* of varying scope and power – some are specialised in fertility, rain, certain stages of the initiation etc. or restricted to women or inhabitants of a certain fraction of Djibonker only – are dispersed throughout the village, usually in forests and wetlands. The central and most important point of a *sirun* is often a tree, which is reflected in nominal classification: *si-* (sg.)/*mun-* (pl.) is the most frequent noun class paradigm for trees in Gubëeher. Often, very tall and old trees are considered holy or inhabited by spirits. Sacred groves – places where nature is not interfered with in its growth – are reserved for special occasions, such as various stages of the initiation ceremonies (*ësin* (sg.)/*ësin-eŋ* (pl.) ‘pre-initiation’; *rëŋ-kub* ‘main initiation’). The main initiation is one of the most important events in the village and held only about every 30 years. To be initiated is necessary for a man in order to be considered a full member of society and have access to secret knowledge concerning spiritual matters, which can under no circumstances be related to uninitiated males. Initiation transcends language boundaries in that the Bāïnouk-speaking village of Djibonker and the Joola-speaking village of Brin hold their initiations together. The formal similarities between the Bāïnouk *rëŋkub* and the Joola equivalent *bukut* lead Roche (2000) to speculate about a convergence and reinterpretation of older practices, presumably as a cohesion-strengthening ritual in reaction to a struggle against the colonial powers in the 19th century.

Rice and palm wine play a major role in religious rituals. Various categories of mostly malignant ghosts, tree-dwelling spirits and undead creatures are also part of the pantheon. A belief in witchcraft is widespread, believed to be practised by profoundly evil individuals who draw their powers from supernatural forces.

The ritual calendar is based on a six-day week, with five days of work and one day of rest. The calendar is nowadays not used for everyday purposes but has to be observed when it comes to planning religious events, since certain days of the week are reserved for ritual purposes. The first day of the week, which is also the day of rest, is *bideŋ*, followed by *bigurin*, *bikota*, *bijalom*, *birin* and *bixand*. The calendar is important to determine suitable days for performing religious rites which have to happen on specific weekdays, usually one of the three days *bideŋ*, *bikota* and *birin*, depending on the occasion. The year is divided into two main seasons: *buun* ‘dry season’ and *fasat* ‘rainy season’ with the intermediate cool season (*tirux*) in the months around December. Large festivities taking place at the beginning and the end of the rainy season are linked to the stages of cultivation of rice like planting and harvest. The masked dances, important tokens of Baïnouk identity elsewhere, have not been practised in Djibonker for decades. Elder people remember that the Kumpo, a particularly popular masked dance in the area, has been danced up to the 1960s, it was reported to me in a telephone conversation however that the Kumpo has been performed in summer 2012 in Djibonker. The Kumpo as one of the acknowledged and presumably emblematic symbols of “Baïnouk” culture might thus see a revival or rather resurrection in the wake of cementing a reinforced and unified Baïnouk identity. Despite its appropriation by Baïnouk *acteurs*, the ‘ethnic origins’ of the masked dances is less than clear – provided that ‘ethnic origins’ and even ‘ethnic groups’ are valid and meaningful concepts that can be applied to

historic constellations in Casamance at all, which is less than a safe assumption itself. Girard (1965) and Mark (1992) consider the Kumpo as originally Bãinounk, Linares (1992) proposes a Joola origin whereas De Jong (1999) argues in favour of a trans-ethnic origin independent of any specific group. Many other cultural practices mentioned above are not exclusively Bãinounk either, but can also be found among the surrounding populations. As for the Bãinounk of Djibonker, cultural ties are most tightly knit with the neighbouring Joola of Mof Ávvi, a small kingdom to the west of Djibonker, where Joola Eegimaa is spoken, and with the Joola Kujireray-speaking population of Brin, directly adjacent to Djibonker on the north-eastern side of the village. Since the Bãinounk are generally believed to be the autochthones of the Lower Casamance, and substantial parts of present-day Joola communities might have Bãinounk ancestry, it is almost impossible to tell which cultural traits originated where and were passed on to whom. In most cases the issue is controversial, especially when dealing with centuries-old institution and traditions claimed by several groups, such as initiation rites, religion and agricultural practices. Although often believed to have greater access to mythical and supernatural forces and superior medicinal knowledge by members of other populations, the Bãinounk of Djibonker are to some extent under the cultural hegemony of Mof Ávvi. The domain of music is largely dominated by Mof Ávvi, home of the acknowledged master musicians and composers. Song repertoires of older people are entirely in Eegimaa, the practice of singing in Gubëeher being a recent innovation of the last few decades. The influence of the priest king of Mof Ávvi also reaches into Djibonker: many *murun* have Joola names or are directly subordinate to the rain king of Mof Ávvi. Not surprisingly the religious vocabulary of Gubëeher comprises many loan words from Joola languages.

Generally, way of life and material culture in Djibonker and Mof Ávvi are so similar that an illustrated ethnographic volume on Mof Ávvi (Vanden Bergen and Manga 1999) dealing with subjects ranging from architecture, sports, games, plant use, family structure, religion, funeral rites etc. could be used without any problem in Djibonker for the elicitation of cultural vocabulary of Gubëeher. The majority of items mentioned in the monograph were part of the cultural universe of Djibonker as well, the consultant (AB) would only occasionally mention that a certain detail does not apply to Djibonker. The constellation does raise doubts about the grounding of essentialist attitudes and ideologies. It has to be kept in mind that it is very controversial to ascribe ethnic labels to linguistic groups or cultural practices throughout Africa. Even if we assume that in the past, populations of the area have spoken languages related to varieties today labelled as Baïnouk, it cannot be inferred what their ethnic identity was. Vice versa, populations speaking non-related languages may have defined themselves, or were defined by others as Baïnouk. Cultural traits may well have their origin not in one specific ethnic group but “transcend ethnic boundaries” (De Jong 1999:55)<sup>14</sup>, when cohabitating communities have shaped cultural practice together and in this way created something new, which sets them apart from the inherited patterns of other areas:

The peoples of Lower Casamance and the northeastern Casamance have a long common history; their relations range from migration and intermarriage to commerce, which included the slave trade. Centuries of contact have led to extensive cultural interaction and borrowings. Consequently, many cultural traits have not remained confined to specific areas (Mark 1992:113).

---

<sup>14</sup> Cf. De Jong (1999:55): “The construction of ethnic boundaries is a perpetually shifting process that renders the attribution of cultural traits to any particular ethnic group an anachronistic enterprise. [...] many cultural traits are attributed to some ethnic group, which is nothing but an act of boundary-construction within the contemporary ethnic discourse. Such utterances are in line with the myth of bounded, self-contained tribes, each with a distinct culture. It is not useful to ask to which ethnic group a particular cultural trait should be attributed. This question only reinforces the conception of Africa as a continent of a-historical, distinct ethnic groups”.

Issues surrounding ethnic identity and linguistic impact of this situation are further discussed in sections 1.2.5 and 1.2.10.

### 1.2.5 Multilingualism and ethnic identity

Multilingualism is so deeply rooted into Bainounk culture – as encountered in the villages of Djibonker, Niamone (see Lüpke 2010) and Agnack (Lüpke and Storch 2013) – that it has become an important part of Bainounk ethnic identity to make oneself understood in as many languages as possible, but at the same time not to be understood by outsiders when speaking the in-group language. In Djibonker, but also elsewhere among Bainounk speakers (see Lüpke 2010 for data on Niamone), it is normal for children to master four languages, and a repertoire of six to ten languages is nothing unusual for an adult person. The most frequently mastered languages by Gubëeher speaking inhabitants of Djibonker are in descending order: Gubëeher, Joola Kujireray, Joola Eegimaa, Wolof, French, other Joola languages (Fogny, Kaasa), Bayot, Kriolu, and possibly Mandinka, Peul, Manjak, Balanta and English, depending on the migration history of a person. There is a clear split in language repertoire between older and younger speakers. Older people are much more likely to speak Kriolu, the traditional *lingua franca* of Ziguinchor – now on the retreat – whereas younger speakers are in general more versed in Wolof and French.

Table (6) *Repertoires in Djibonker*

Repertoire	Languages
basic repertoire (child)	Gubëeher, Eegimaa, Kujireray, (Wolof)
extended repertoire (old)	Gubëeher, Joola Eegimaa, Joola Kujireray, Other Joola (Joola Fogny, Joola Kaasa), Bayot, Kriolu,
extended repertoire (young)	Gubëeher, Joola Eegimaa, Joola Kujireray, Other Joola (Joola Fogny, Joola Kaasa) French, Wolof

Wolof is spreading rapidly among the youth due to association with urban culture and the popular hip hop and *mbalax* musical styles and French through school education, which older people, especially women, are more likely not to have enjoyed than younger people. I have not met or heard of anyone being monolingual in Gubëeher. The number of languages spoken per capita in Djibonker is very high with around 5 in average. Joola (Eegimaa and Kujireray), and nowadays Wolof, are so omnipresent that most children grow up as multilinguals and add languages throughout their life. In a deeply multilingual society like this, the concept of “mother tongue” – part of the demographic information asked from consultants – was completely unsuitable and the question was finally dropped. Asking for a ranking of competence instead was more adapted to the situation, where more often than not several languages occupy the top rank. Due to the pervasiveness of multilingualism in the speech community and the large proportion of cultural, agricultural and religious practices shared with surrounding populations, ethnic identity is – at least in the eyes of a western observer – quite fluid. Mark (1985:50) goes as far as saying that: “In an historical context it is difficult as well as misleading to speak of the two groups [Baïnounk/Joola] as if they have always been completely distinct and clearly differentiated entities”. As a result of the close cultural and linguistic contact between Djibonker/Gubëeher and the Joola of Brin and Mof Ávvi/Eegimaa through family ties and shared cultural events it becomes even difficult to determine how ethnic identity is determined at all, and it is unclear how important it is in the first place to have a fixed and unequivocal ethnic identity. Several factors play a role: language, religion, ethnicity of the parents<sup>15</sup>, clan name,

---

<sup>15</sup> The ethnicity of the father and the one of the mother can of course be different and they have different influences on the ethnic identity of the child. It is my experience that people often specify both their parents ethnic membership where it differs when asked about their own ethnicity. To give an

situational factors (who is asking and why!). De Lespinay (1997) contends that an identity change from Bāinounk to Joola could take place within few generations (cf. also Bühnen 1994:642 on identity change), as has happened in the Fogny area. Oral sources recall that it is frequent for converted and assimilated Bāinounk to change their clan name to a Mandinka one and abandon the Bāinounk language (as happened in the middle Casamance around Sedhiou). On the other hand, Balanta conquerors are said to have adopted their Bāinounk victims' clan names when taking over their villages (Bühnen 1994:160 & 343); in this process aspects of Bāinounk culture and language may have stayed alive within a Balanta environment. Indeed, typically Bāinounk clan names such as Manga, Sagna, Mane and Biagui are found among Joola, Mandinka, and Balanta all over the region. A recent example of identity change is found in the village of Brin (locally referred to as *Jirer*), whose inhabitants remember that their great-grandparents still used to speak Bāinounk. Their Bāinounk ancestry is corroborated by the fact that most villagers bear Bāinounk clan names such as Diandy and Biagui. Although now Joola-speaking, some consider themselves Bāinounk and maintain family ties to other still Bāinounk-speaking villages, mainly Jegui in Guinea-Bissau. The heavy influence of Bāinounk on this Joola variety (known as Kujireray, Joola Hulon or Kuluunaay) at the lexical and grammatical level bears witness to the Bāinounk past of the inhabitants of Brin. This kind of deep intertwinement between ethnic groups is observable for all Bāinounk communities (Bāinounk Guñaamolo/Joola Fogny/Mandinka; Bāinounk Gujaher/Mandinka/Kriolu) and seems to be the norm in

---

example, in the family I lived with one of the women has children with a Seerer man, consequently the children are referred to as “the little Seerer”, though they grow up with their Bāinounk mother in a Bāinounk village with Gubëeher and Wolof as first languages, which means that they are not at all exposed to Seerer language or culture. In general ethnicity seems to be considered as inherited from the father's side along with the family name, though the mother's origin is more likely to have an impact on the linguistic repertoire of the child because it is the mothers or other female relatives who generally take care of the children and consequently pass on their language to the children.

Casamance in general. The ensuing contact-induced cultural interaction entails deeply rooted patterns of linguistic contact between the speakers of the Casamance languages.

### 1.2.6 Endangerment

The inadequacy of the generally used scales and parameters (e.g. the UNESCO criteria) for the assessment of language endangerment, when applied to African languages, has been pointed out by Lüpke (2009; 2013), citing Bainouk Guñaamolo and Gujaher as case studies, among others. Her major points of criticism of the predominant and largely eurocentric ideologies concerning language endangerment are an overestimation of the impact of literacy, and a negative attitude towards multilingualism, which is generally considered as detrimental to the survival of minority languages. Like in most other African contexts, the colonial language – in the case of Senegal it is French – is used almost exclusively for all kinds of written communication, so that little room is left for literacy in national languages, besides the fact that alphabetisation and formal education in local languages of wider communication, even those spoken by millions, is still poorly implemented. The use of Gubëeher as medium of in-group communication is well established, although especially younger speakers tend to code-switch between Gubëeher, Wolof and French. The phenomenon of the function of Wolof as a youth language has been observed throughout Senegal by Mc Laughlin (2009) and Dreyfus and Juillard (2004). This language is generally regularly used by members of all generations. But, multilingualism is deeply rooted within the community and a stable equilibrium between various regional *linguae francae* and Gubëeher has been maintained since generations so that the ‘threat’ posed by other languages should

not be overrated. Lüpke (2009:15) identifies socioeconomic, political and climatic factors, as major threats for the survival of African minority language; a reassessment in (Lüpke 2013b; Lüpke and Storch 2013) shifts the focus away from socioeconomic parameters such as urbanisation and rural exodus and towards parameters in relation to stability of language ecology and attitudes towards the language ecology. With approximately 1,000 speakers, Bainouk Gubëeher is certainly vulnerable to these external factors:

- Due to a secessionist conflict that has started in the early 1980s and is still smouldering, the political situation in Casamance is still unstable and Bainouk villages in the Gujaher area, where fighting between the rebels and the state forces was particularly fierce, have been completely abandoned – a fate that cannot be excluded for Djibonker. In case of a further deterioration of the socioeconomic, climatic or political situation the very existence of Djibonker as a village is at stake if the inhabitants were forced to migrate to cities in order to escape hunger, poverty or violence.
- The trend towards urban migration in search of education, better living standards and job opportunities is already draining the region of its youth and young adults. Due to the lack of institutions of further higher education above secondary level in Djibonker, many pupils and all university students spend the school year or university term away from the village in environments where Bainouk might not be spoken, and visit Djibonker only in the holidays. Others have moved to cities in order to find work.

- More slowly but not less destructive are climatic changes with the consequences of shorter dry seasons with less rain, a process which might in the long run destroy the climatic conditions necessary for rice farming, inevitably robbing the farming communities of their means of subsistence..

Any of these factors might lead to the abandonment of Djibonker and consequently threaten the survival of Gubëeher. As can be observed with the diaspora communities in Dakar, other languages, mainly Wolof, French or Joola tend to replace Bainounk as a medium of communication within and outside of the family for those living in largely non-Bainounk environments, with the result that such a scenario could well lead to the extinction of Gubëeher within few generations. On the other hand, the transmission of minority languages and specifically Gubëeher in urban settings is not necessarily detrimental to language survival.

Despite the potentially threatening circumstances enumerated above an imminent threat to the language cannot be noticed and seems rather unlikely given that the village community as a locus of transmission and usage of Gubëeher stays intact. The overall positive attitudes towards the language and the strong will to maintain it – within a stable multilingual setting involving several locally and nationally diffused languages – encountered in the village, contribute to maintaining the undoubtedly high vitality of Gubëeher and increase the chances that it will continue to be spoken for generations. Yet, it has to be kept in mind that the dynamics of language maintenance are still not very well researched and understood in the African context, so that any prognostics regarding the survival of Gubëeher remain tentative. After all, concerned announcements of imminent doom of Bainounk languages and culture continually uttered by western observers over the decades

have luckily proved insubstantial so far, considering the present day situation of Gubëeher and other Bainounk varieties:

Les Baniounks [sic !] [...] décimés par un demi-siècle de pillage, en sont réduits de nos jours à une population qui se monte à peine à 2,000 individus vivant misérablement sans commerce et sans industrie (Leprince 1905:591)<sup>16</sup>.

En définitive, je suis pessimiste quant à a survie de l'identité ethnique et de la culture baynunk. Leur disparition à plus ou moins long terme paraît irréversible (Teixeira 1990:89).<sup>17</sup>

### 1.2.7 Areal considerations

As early as 1971, in an article about the classification of African languages Dalby (1971:20) remarks that “[i]f we are to take a more comprehensive view of linguistic relationships, embracing accretion as well as retention, and convergence as well as divergence, then we need a framework of reference which avoids prejudging the wider historical relationships involved”. The relevance of areal factors for the languages of Africa have only come to the focus of linguists’ attention in recent years (see Heine and Nurse 2008), and although overall theoretical interest in this issue seems to be on the rise, there are still very few detailed studies of language contact at the micro-level available, and for many Africanists, genealogical affiliation is still far more important than relatedness through language contact (see Lüpke 2010b for a discussion). The situation in Casamance, where languages of different genetic stock, but spoken in direct vicinity of each other, share an astonishing number of vocabulary, parallel syntactic structures – including

---

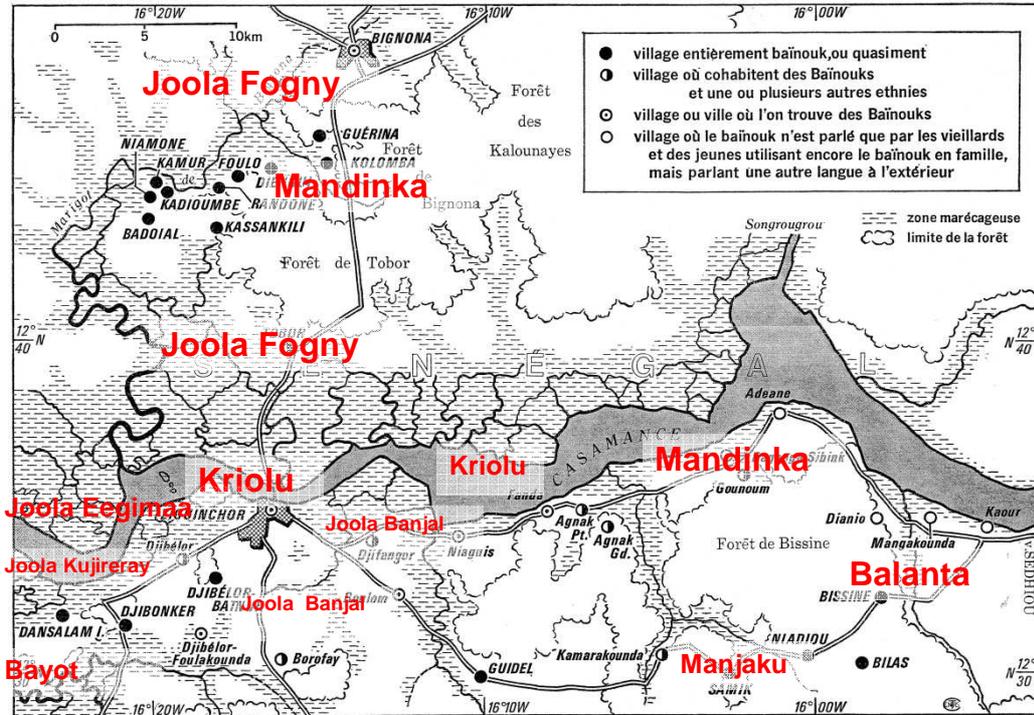
<sup>16</sup> The Bainounk, depleted by half a century of pillage are as of today reduced to a number of not even 2,000, living miserably without trade and occupation. [translation AC]

<sup>17</sup> All in all, I am pessimistic regarding the survival of the ethnic identity and Bainounk cultural. Their disappearance, sooner or later, seems irreversible [translation AC]

morphological material – and features of nominal classification, which can hardly be explained by chance development, invites a different conclusion. In the multicultural and multilingual environment of which the Bainounk are part, which is far from unique in Africa, it quickly becomes obvious that language contact seems to be one of the driving forces of language evolution and change. I would go so far as to say that language contact is so pervasive in this area that a description of Bainounk would not be complete without taking into account its sociolinguistic setting and areal considerations, including the historical and cultural background.

The turbulent history of this small region has profoundly shaped the linguistic situation in Casamance, producing a patchworked linguistic landscape characterised by high levels of language diversity and dialectal variation, five *linguae francae* and a very high degree of multilingualism. French and Wolof are increasingly spoken and understood everywhere in Senegal, including in Casamance, but the local and regional *linguae francae* are less evenly distributed. Fortunately for the linguist interested in contact-induced change, the different Bainounk communities have little contact with each other and also use different sets of contact languages (see figure 1). This could allow the researcher to retrace differences in vocabulary, grammar and phonology to the influence of one or more specific contact languages.

Figure (3) *Bainouk speaking villages in Lower Casamance with contact languages added (Sauvageot 1973)*



Although the conditions in Lower Casamance are close to ideal for conducting areal linguistic investigations, and first results are very promising, there are various problems to be countered when conducting areal research in southern Senegal. First, many languages, their varieties, and even complete language groupings remain almost or completely undescribed until today, and even when there are data available, they are in many cases not sufficient for deeper comparative work. Second, even for the larger, national and regional languages (Wolof, Kriolu, Peul, Mandinka) and much more so for the minority languages of Casamance, detailed dictionaries are the exception, etymological research being only at a starting point (see Rougé 2004 for an etymological approach to Kriolu). Third, due to little scientific research having been undertaken, the detailed history of the region,

including migrational movements and provenance of populations, is still hardly known. All these factors make it hard to identify loan words in the first place and even harder to establish the direction of borrowing. These general problems are also encountered in the context of Gubéeher: two of the three main contact-languages spoken by the inhabitants of Djibonker are themselves only poorly described minority languages: Joola Kujireray (Watson, work in progress) and Bayot (Diagne 2009); only Joola Eegimaa has considerable description (Sagna 2008; Tendeng 2007; Bassène 2006). Family ties, cultural parallels and physical vicinity strongly connect the people of Djibonker to the Joola of Mof Ávvi to the west, and the inhabitants of the neighbouring village Brin, where Kujireray is spoken. Similar but less intense connections exist with the Bayot to the south of Djibonker, around Nyassia and Dioher. Since the Bāinounk languages presumably were the autochthonous languages of Casamance, and large-scale ethnic shifts from Bāinounk to Joola, Balanta and Mandinka took place (cf. Bühnen 1992) it is probable that in the past the Bāinounk languages had a substratum influence on the newcomer languages (see de Lespinay 1997a), but also that they received material from surrounding languages later in their history, after Bāinounk languages had ceased to be dominant in Casamance. Influences from and on other languages spoken in the region extend to all areas of grammar. Speculations on the role of contact influence in shaping the very complex noun class system of Bāinounk have sparked a theoretical debate on the peculiarities of this system (Sauvageot 1967; Dobrin 1995 and 1998; Dimitriadis 1997).

As a consequence of the changing status as either donor or recipient of cultural and linguistic traits, it is yet too early to determine the direction of borrowing or calquing in many cases in Bāinounk. Nevertheless, it has become fairly obvious

already at this early stage of investigation that Bāinounk Gubēeher does share vocabulary and important syntactic traits with Joola Kujireray, Joola Eegimaa and to a lesser extent with varieties of Bayot. Equally, Bāinounk Guñaamolo shares vocabulary and grammatical traits with Joola Fogy and Mandinka, both important *linguae francae* in the area where Guñaamolo is spoken.

In order to illustrate lexical borrowing, in Table (7)<sup>18</sup> I give some examples of form-meaning correspondences which can be shown to have been borrowed or retained by Kujireray from Bāinounk Gubēeher. The stems of ‘wind’, ‘wing’ and ‘ashes’, are identified by Doneux (1990) as cognates in Kobiana and Bāinounk and are therefore assumed to be part of the inherited vocabulary. Kujireray shares this vocabulary with the Nyun languages, while the equivalents in Joola Eegimaa, the closest relative of Kujireray, are different. The Kujireray stem *-nəʃ* for the verb ‘wash (clothes)’ is also attested in Bāinounk Gubelor, Gujaher, and Guñaamolo; again, Joola Eegimaa uses a different stem. Speakers of Gubēeher are aware of the lexical parallels between their language and Joola Kujireray; some even go so far as to say that the latter is a “mix” of Joola Eegimaa, Joola of Affiniam and Bāinounk Gubēeher.

Table (7) *Cognates shared by Gubēeher and Joola Kujireray, and Joola Eegimaa*

Gloss	Gubēeher (fieldnotes)	Joola Kujireray (fieldnotes)	Joola Eegimaa (Seleki, fieldnotes)
‘wind’	<i>ba-wuc</i>	<i>ba-wuc</i>	<i>ərus</i>
‘wing’	<i>gu-bə:r</i>	<i>kə-bə:r</i>	<i>ga-bes</i>
‘ashes’	<i>bu-rɔt</i>	<i>bu-rɔtɔŋ</i>	<i>bu-kugai</i>
‘door’	<i>gu-məŋgə:t</i>	<i>ka-məŋgə:t</i>	<i>ga-negen</i>
‘wash clothes’	<i>bə-nəʃ</i>	<i>bə-nəʃ</i>	<i>ba-ps</i>

<sup>18</sup> Being regularly exposed to Kujireray and Eegimaa during the fieldtrips, I soon started to note down items that struck me as phonologically very similar to Gubēeher items in order to evaluate whether they might be cognates, through comparison with other Bāinounk and Joola languages.

Close collaboration with colleagues working on verbal nouns and other NC related issues in Joola Kujireray (Rachel Watson) and Joola Eegimaa (Serge Sagna) has already made clear that language contact and areal features are decisive factors for an analysis of semantic and syntactic properties of classification, both regarding the classification of entities as well as events. Before embarking on a comparative study with areal considerations, detailed descriptions of the individual NC systems and the area of VNs must first be generated. Where possible, areal considerations will be flagged, but more in-depth analyses of these issues will have to be the topic of future collaboration and research in order to clarify issues that cannot be accounted for language-internally (see section 5.3 ‘future research’).

### **1.2.8 Language policy of Senegal**

Like in most African states, the former colonial language – French in the case of Senegal – is the official and dominant language in formal and public domains like education, media, publishing and administration. After independence there have been initiatives to decrease the influence of the official language French in favour of the national languages<sup>19</sup>, but due to the lack of resources and language planning, in practice things have not changed very much since the 1960s (Ndiaye 2006:4). French still is the medium of instruction in all state education. Twelve of the 36 Senegalese languages<sup>20</sup> have been declared national languages in the constitution<sup>21</sup> and could in theory be used in education: the original list of six languages (Wolof,

---

<sup>19</sup> “Since 1976, there have been clear signs of a stronger desire to manage the process of transcribing national languages with a view to integrating them into the Senegalese educational system at the primary and tertiary levels (Ndiaye 2006).”

<sup>20</sup> The figure is from [www.ethnologue.org](http://www.ethnologue.org)

<sup>21</sup> “*La langue officielle de la République du Sénégal est le Français. Les langues nationales sont le Diola, le Malinké, le Pular, le Sérère, le Soninké, le Wolof et toute autre langue nationale qui sera codifiée* (1. article of the constitution, 7.1. 2001)”.

Serer, Fula, Mandinka, Joola and Soninke) has been extended to include Balanta, Hassaniyya, Mandjaku, Mancagne, Noon and “Bainounk”. The list of officially recognised national languages is open to all codified languages spoken in Senegal, other languages are still awaiting codification. Bainounk has been promoted to the status of national language in 2005 on the initiative of the lobby group BOREPAB. An orthography based on the official orthography adopted for most Senegalese languages has been devised and officially recognised, but in the absence of teaching materials and dictionaries no further progress towards establishing a culture of writing any of the Bainounk languages has been made since.

#### **1.2.9 On variation**

Within Gubëeher two types of variation seem to coexist. The first type consists of slight dialectal differences, which are explained by the speakers through distance to the main road. Thus, people living further away from the road, surrounded by forest, are generally said to speak a more conservative variety, which is usually considered as more “pure” by most speakers, and people living along the main road speaking a less conservative variety, with more loanwords from Wolof and other languages. Gubëeher is not standardised, so that judgments about what is correct or incorrect depend to some extent on personal taste and speech style. Even a single speaker might use varying forms. Speakers regarded as equally competent within the community thus differ in grammaticality judgments or accept several forms as correct. It might be that on closer inspection the inter-speaker variation can be explained in terms of more or less conservative or formal registers. Differences attributable to location within the village, age and conservatism are possibly interdependent, in that more conservative families, who are more attached to

traditional ways of life (regarding religion, traditions, lifestyle, agriculture) tend to live in the interior and are more exposed to Bainounk in their everyday life and that older people as guardians of tradition and knowledge tend to be more conservative. These linguistic patterns may correlate with social networks, which do not only have the potential to strengthen certain features through conventionalisation, but also determine exposure to varying sets of contact languages within the network. Patterns of differences in language usage retrievable to social networks have been observed by Friederike Lüpke in the Bainounk Gujaher speaking villages of Agnack Grand and Agnack Petit, situated about 20km east of Ziguinchor. The roadside village of Agnack Petit is ethnically and linguistically more mixed, with Bainounk in a weak position, whereas the culturally and linguistically more conservative Bainounk population in Agnack Grand, further removed from the road is much less exposed to Mandinka. As a consequence, some patterns of variation, e.g. in the treatment of animacy in agreement, are more or less frequent in certain networks depending on the number of social contacts to either Agnack Grand or Agnack Petit (Friederike Lüpke, p.c.; Lüpke and Storch 2013). I will document variation wherever it occurs and integrate it into the analysis.

#### **1.2.10 Attitudes and ideologies of participants**

All in all, the attitudes toward Gubëeher prevalent among the speakers are very positive, which is reflected in the high interest in the documentation project as well as in its tangible results (museum, dictionary) manifested by the majority of community members. During official speeches held in Djibonker in order to introduce the project to the community and inform them about its progress, speakers repeatedly stressed how important orthography development and documentation of

language and culture is for them and unconditional support to facilitate this task has been offered from the first day. This endorsement of codification and alphabetisation in and of local languages is clearly motivated by exposure to “graphocentric ideologies” (Blommaert 2004) and has more of a symbolic than a practical value. The usage of Gubëeher as a written language plays a fairly small role in everyday life, even for people who have been trained in the officially accepted orthography. It is true that the Bāinounk have a very low profile even in Casamance and many outsiders are not or only vaguely aware of the existence of such a population. The most widely-circulated piece of information about the Bāinounk is the image-damaging account of a curse that has been thrown on all Bāinounk by the mythical king Bana Sira Ganna, condemning the Bāinounk to cultural and political decline<sup>22</sup>. This curse is said to affect any men who marries a Bāinounk woman and will lead to loss of money and good luck for those who do so. Needless to say that such negative publicity is unfit to boost ethnic pride and has possibly caused some Bāinounk to be rather discreet about their ethnic affiliation (see Teixeira 1990:89), an easy task considering that most Bāinounk are perfectly fluent in one or the other Joola language, Mandinka, or Kriolu. This tendency has apparently been partly reversed and now word is out of a ‘Bāinounk renaissance’, spearheaded by BOREPAB. This indicates that ‘the Bāinounk’ are currently experiencing a process of ethnic consolidation or “ethnogenesis” that ‘the Joola’ have already undergone in the 19th century (De Jong 1995). It is unclear whether phenomena such as BOREPAB are actually a symptom or a cause of this development. A major success has been the official codification of Bāinounk as one of the official languages of Senegal in 2005. BOREPAB represents a rather institutionalised essentialist

---

<sup>22</sup> The myth exists in many versions, not only among the Bāinounk populations but also among others, e.g. the Balanta, for a detailed analysis see Bühnen (1994).

ideology, with a focus on major differentiation and appropriation of all that they see as Bainouk from languages and cultures of surrounding populations. This is not to say that all BOREPAB members share the same essentialist viewpoints, but as an organisation it certainly does favour and promote these ideologies, explicitly in its statutes, and implicitly through choice of terminology and annexation of cultural practices such as the masked dances, notably the Kumpo as discussed in section 1.2.4. Ideologies of language purity are not rare, especially among elder, male, more conservative villagers – even those who are not politically active – although this stands in sharp contrast to general – and often also their own – speech practice. These persons are often worried about “language decay” in the form of improper Gubëeher spoken by the younger generations, referring mainly to the practices of code-switching and borrowing to and from Wolof and French. Despite most Gubëeher speakers’ essentialist ideologies, their actual behaviour reflects a pragmatic and rather flexible stance towards language and ethnicity, a lived multiculturalism and multilingualism which acknowledges “mixture” resulting from contact with other populations as a fact of life.

In the wake of cultural/political activism and newfound ethnic pride, the last decades have seen the establishment of traditional dance and theatre troupes in Djibonker, with performances at regional and national shows and carnivals, to the satisfaction of those who felt that their privileged status as autochthones of the Casamance stood in mismatch to the poor representation of their culture at official events. The consensus now is rather that the Bainouk and their languages have too long remained hidden and downtrodden and it is high time to proudly open up to the public. Especially the aspects of further codification and orthography development raise much interest in the community and first attempts at teaching the orthography

to community members have been met with delight at the prospect of being able to write in their own languages. This reflects the high esteem the Gubëeher speakers and other Baïnouk have for their languages and culture and the importance they accord to their survival, which some feel might be at stake. It has to be kept in mind though that writing in Gubëeher is highly emblematic and valued for reasons of prestige and less for reasons of practical necessities. The codification efforts of BOREPAB for example have not been accompanied by practice. As in other African contexts, the colonial language – in this case French – is monopolising all written genres, leaving little room for literacy in national languages (cf. Lüpke 2009a; Lüpke 2010b).

### 1.3 Previous research on infinitives in noun class languages

Although non-finite forms occurring with more than one NC marker are common in the Nyun languages and other languages of the Casamance, this topic has not been dealt with in much detail in most languages involved. The most detailed account of the phenomenon so far is Sagna (2008) on infinitives in Joola Eegimaa. The possibility of forming infinitives with more than one NC marker is mentioned in most descriptions of Joola and Manjaku (see Table (8) for a summary and relevant sources), and even in grammatical descriptions where it is not explicitly mentioned, the existence of multiple infinitives becomes obvious from the examples and wordlists provided. Although Nyun and Bak are known not to be closely related, at least in genetic terms,<sup>23</sup> the formal and functional properties of these forms show some striking parallels. The structural resemblances between Bainouk, Joola and

---

<sup>23</sup> Bak and East-Senegal Guinea languages, the superordinate of the Nyun grouping, are two separate branches of Northern Atlantic, i.e. even according to traditional genealogical accounts very distant.

Manjaku give valuable directions for the formulation of a hypothesis concerning non-finites and nominalisations in Gubëeher. The languages discussed in this section have in common that in addition to the use of more than one class marker, there is also an opposition of one or two main infinitivising noun class prefixes, which are used for the majority of verb stems and a larger number of class markers being used rather marginally in comparison (Table (8)).

Table (8) *Main infinitivising prefixes in Casamance languages*

<b>Language</b>	<b>Source</b>	<b>Main noun class prefixes with infinitives</b>
Gubëeher and other Bāinounk languages	Cf. Bühnen (1988); de Lespinay (1992)	<i>bu-, gu-</i>
Kobiana	Doneux (1990)	<i>bu-/ba-/be-, gu-</i> (action nouns)
Joola Fogny	Hopkins (1995); Sapir (1965)	<i>e-, ka-</i>
Joola Eegimaa	Sagna (2010)	<i>e-, ga-</i>
Joola Kuwaatay	Coly (2010); Payne (1992)	<i>ka-, bV-</i>
Manjaku	Kihm (2000)	<i>pě- ka-</i> (action nouns)

Some of the authors working on these languages invoke an opposition between several categories of nominalisations such as infinitive versus action nouns to explain the differences in noun class marking, especially for nominalisations which share the same stem. As the Bantu languages of East and Central Africa are usually given as typical examples of African noun class languages in the typological literature, I will first assess the data on infinitives and derivational processes in that branch of the Niger-Congo family, before taking a closer look at other Casamance languages.

### 1.3.1 Bantu languages

Bantu noun class systems are in general much more thoroughly researched than their Atlantic counterparts, including the formation and syntactic properties of infinitives. Infinitivisation in Bantu involves an NC prefix and a vowel suffix according to the following schema:

„The process [of forming infinitives] involves two parts: the derivation of a nominal stem from a verbal base B by the addition of a final suffix F, and the assignment of the derived nominal stem to a nominal class (gender) (Schadeberg 2003: 79).”

The vowel suffix of infinitives is historically *-a*, and infinitives are found mainly in either class 15<sup>24</sup> (reconstructed as *ku-*) and/or class 5 (reconstructed as *i-*) throughout Bantu (Schadeberg 2003:81). Class 15 is in general the noun class reserved for infinitives, though some Bantu languages have a few other nouns in this class, mostly body parts and vocabulary related to seasons (Maho 1999:194). The geographic distribution of the class markers attested in infinitive formation is as follows: Class 5 prefixes for infinitives are mainly found in the northern zones of Bantu, whereas the rest usually have class 15 (Forges 1983:260). Some languages in the northern zones are reported to employ other classes for that purpose as well (Schadeberg 2003:80; Forges 1983:260; Hadermann 1999; Maho 1999:211ff; see Table 9).

---

<sup>24</sup> The Bantu noun classes are conventionally numbered on the basis of their reconstructed form in Proto-Bantu.

Table (9) *Infinitives in Bantu languages (all examples from Forges 1983:259f)*

<b>Class</b>	<b>Language</b>	<b>Infinitive</b>	<b>Gloss</b>
15	Kongo-Ntandu	<i>ku-soola</i>	'leave'
	Kwezo	<i>gu-gwela</i>	'doter'
	Kete	<i>okw-í:bul</i>	'fall'
	Nyanja	<i>ku-enda</i>	'travel'
	Shona	<i>ku-tora</i>	'take'
5	Lundu	<i>di-linga</i>	'love'
	Tsogo	<i>e-ota</i>	'pass'
	Caga	<i>i-lola</i>	'see'
	Nande	<i>e-ríhóla</i>	'die'
	Kela	<i>di-kádanga</i>	'roast'
9	Tetela	<i>mbɔsá</i>	'take'
11	Libinza	<i>lopá</i>	'give'
14	Ngombe	<i>bokwa</i>	'fall'

Possibly because the formation of verbal nouns in Bantu is treated as quite straightforward in the Bantuist literature, the topic has not attracted too much interest in Africanist circles and the complex situation found in some Casamance languages including Bainounk has gone rather unnoticed. But the phenomenon of multiple infinitives derived with different classes is known from Bantu too, which invites to think that non-finite forms may be underresearched in Bantu as well. Forges (1983:260) gives examples for several coexisting infinitive classes from Bemba, Nyanga and Nyilamba, which all have infinitives in class 15 and in class 5 too. The examples provided show that this includes two infinitives can be derived from one stem (see examples (2) and (3)). In Bemba, the two forms are in free variation according to Forges (1983:261).

- |  |  |
|--|--|
| <p>(2) <i>i-khenga</i><br/>Cl.5-support/undergo<br/>‘to support/to undergo’<br/><br/>Nilyamba, Forges 1983:260</p> | <p>(3) <i>ku-khenga</i><br/>Cl.15-support/undergo<br/>‘to support/to undergo’<br/><br/>Nilyamba, Forges 1983:260</p> |
|--|--|

Hadermann (1999:437) cites 11 languages where class 5 infinitives coexist with class 15 infinitives, some in free variation, some due to dialectal variation. In Nyanga the distribution of the noun class markers on infinitives is attributed to whether or not the verb carries a reflexive affix, in which case the infinitive is in class 15 (example (5)) as opposed to non-reflexives which are in class 5 (example (4)).

- |  |  |
|--|--|
| <p>(4) <i>etéma rasómá</i><br/>‘to dig is difficult’<br/><br/>Nyanga, Hadermann 1999:438</p> | <p>(5) <i>kwinama kwasómá</i><br/>‘to bow down is difficult’<br/><br/>Nyanga, Hadermann 1999:438</p> |
|--|--|

Hadermann (1999) traces the two widely attested infinitive class prefixes 5 and 15 back to Proto-Bantu and suspects semantic differences between class 5 and class 15 infinitives. He suggests that the former might have expressed a component of accomplishment whereas the latter would have referred to an ongoing process.

“Pour interpréter cette différence [in metatony, AC] nous serions tentés de partir de l’hypothèse que les formes des classes 5 et 15, d’un point de vue sémantique, n’étaient probablement pas synonymes. La forme de classe 15 aurait plutôt référé au procès en accomplissement, supposant éventuellement un actant-object non spécifique, alors que la forme de classe 5 aurait désigné le procès accompli (Hadermann 1999:461)<sup>25</sup>.”

---

<sup>25</sup> In order to interpret this difference [in metatony] one would be tempted to hypothesise that the forms in class 5 and 15 were, semantically speaking, probably not synonymous [in Proto-Bantu]. The class 15-infinitive would have rather referred to a process in the course of accomplishment, possibly

Both observations, although not yet fully proven and formulated extremely cautiously by Hadermann himself, are important clues in view of the data from Gubëeher, where reflexive derivation and semantic properties of the object NP are relevant for the choice of infinitivising noun class markers.

A detailed study of the syntactic properties of a Bantu infinitive is provided by Visser (1988) for Xhosa. Her major points are to prove 1) that there is a difference between “clausal infinitives” and “nominal infinitives”, 2) that infinitives have nominal and verbal properties and 3) that infinitives are not class 15 nouns of which there are very few – these are not derived from a verb and do not have the clausal and verbal properties of infinitives (Table (10)).

Table (10) *Non-infinitival Class 15 nouns in Xhosa*

<b>Xhosa</b>	<b>Gloss</b>
<i>ukukhanya</i>	‘light’
<i>ukutya</i>	‘food’
<i>ukwindla</i>	‘autumn’
<i>ukunene</i>	‘right side’
<i>ukhohlo</i>	‘left side’

The *ku*-derivations (infinitives) of Xhosa can all be used either in a clausal construction (clausal infinitive) or in a nominal construction (nominal infinitive); the latter is translated by Visser as a gerund in English and its semantic and syntactic properties liken it to the category labelled ‘action noun’ elsewhere.

---

involving a non-specific object participant, whereas the class 5-infinitive would have referred to an accomplished process [translation AC].

Table (11) *Infinitives in Xhosa, (Visser 1989:157)*

<b>Xhosa</b>	<b>Clausal</b>	<b>Nominal</b>
<i>uku-thand-a</i>	'to love'	'the loving'
<i>uku-balek-a</i>	'to run'	'the running'
<i>uku-lim-a</i>	'to plough'	'the ploughing'
<i>uku-dlal-a</i>	'to learn'	'learning'

Table (12) summarises the different categories and their properties as described by Visser (1989).

Table (12) *Types of class 15 items*

<b>Category</b>		<b>Properties</b>
infinitive	a) clausal complement, derived from verb	few nominal properties, verbal properties
	b) nominal infinitive, derived from verb	nominal properties, verbal properties
class 15 noun noun, not derived from verb stem		nominal properties

The distinction of clausal and nominal infinitives in Xhosa and in Bantu goes back to Du Plessis (1982) and can be proven on syntactic grounds (Visser 1989:157ff). Syntactic tests confirm that infinitives of the clausal type have verbal properties and do not underlie restrictions valid for nouns whereas nominal infinitives have the properties of other NPs as shown in Table (13).

Table (13) *Nominal and verbal properties of infinitives in Bantu (Visser 1989)*

Verbal properties	Nominal properties
Is inflected for negative	Exhibits gender
Is inflected for tense/aspect	Appears in NP positions (subject/object)
Has verbal suffixes	Has agreement elements, S/O agreement, adjectival agreement
Can have object and object concord	Is qualified by nominal modifiers
Is modified by adverbs	

Example (6) shows a nominal infinitive with nominal properties, (7) a clausal infinitive with verbal properties.

- (6) *Umqeshi*      *u-jonga*      *uku -sebenza*      *oku-hle*  
 CL.1:employer    3SG-watch      CL.15-work      AGR.15-good  
 ‘The employer watches the good working.’

Xhosa, Visser 1988:158. Glosses added [AC]

- (7) *Umlimi*      *u-thanda*      *kakhulu*      *uku -lima*      *intsimi*  
 CL.1:Farmer    3SG-like      much      CL.15-plough    field  
 ‘The farmer likes much to plough the field.’

Xhosa, Visser 1988:159. Glosses added [AC]

*Ukulima* ‘ploughing’ is analysed as a clausal complement with verbal properties, as opposed to a class 15 noun, on the grounds that adverbs cannot occur before a NP object but before the infinitival complement of a verb. Another example of clausal infinitive with verbal properties is provided in example (8), where the inflected verb form *ba-ya-funa* ‘they want’ stands in the so-called ‘long form’ (marked with the affix *-ya*) which only occurs when the verb is not followed by an object and would therefore be disallowed if *ukusebenza* ‘work’ was a noun in object position.:

- (8) *abafazi bayafuna ukusebenza*  
 ‘The women want to work’  
 (Visser 1989:158)

Visser concludes from this that the infinitive in a construction like in (8) is clausal and does not have NP status. Other abstract nouns can be productively derived with class 11 and the suffix *-o* (Table (14)). It does not become entirely clear why Visser does not consider the class 15 derivations as nouns but accepts other derived abstract nouns as such. After all class 15 nominal infinitives can be used as action nouns and have nominal properties. Mufwene (1980) treats action nominalisations, manner nouns, infinitives, state nouns all as derived nouns occurring in derivational series and acknowledges that “the boundary between derivation and inflection may be quite fluid” (Mufwene 1980:254).

Table (14) *Nominal infinitives and class 11 derivations, (Visser 1989:171)*

Stem	Gloss	Class 11 noun	Gloss	Infinitive	Gloss
<i>gxek</i>	‘criticise’	<i>u-gxek-o</i>	‘criticism’	<i>uku-gxek-a</i>	‘criticising’
<i>cel</i>	‘ask’	<i>u-cel-o</i>	‘request’	<i>uku-cel-a</i>	‘asking’
<i>thand</i>	‘love’	<i>u-thand-o</i>	‘love’	<i>uku-thand-a</i>	‘loving’
<i>thamb</i>	‘travel’	<i>u-thamb-o</i>	‘travel’	<i>uku-thamb-a</i>	‘travelling’
<i>nyul</i>	‘elect’	<i>u-nyul-o</i>	‘election’	<i>uku-nyul-a</i>	‘electing’

As will become clear in the following sections, the derivation of infinitives/action nouns in Bāinounk and other Casamance languages is even more complex, since it involves a large number of noun class markers.

### 1.3.2 Kobiana

The language Kobia is the closest relative of Bāinounk for which data is available. Doneux' (1990) analysis of infinitives and nominalised verbs in Kobia seems at

first straightforwardly based on morphological criteria, although at a later point in the thesis he proposes a second model which puts various types of deverbal nouns into relation and considers the full paradigm of verbal nouns formed from a root. It has to be kept in mind that Doneux' analysis of Kobiaana is based on a diachronic, historical framework focussing on the genetic integration of Kobiaana within Atlantic and therefore leaves little space for syntactic and morphological detail. I will first present Doneux' morphological analysis and then comment on the alternative model proposed by the same author, which does fit nicely with the Bainouk data as well.

The following morphological criteria are described as having an impact on the selection of verbal nouns in Kobiaana by Doneux: 1) diathesis status (active or passive) and 2) the dichotomy derived/underived. Verbs in Kobiaana appear with a large number of verbal extensions, among which passive voice, middle voice, inersive, causative, applicative, instrumental, comitative, and adessive (to do sth. in the direction of the discourse); these morphemes can also be combined with each other. According to Doneux (1990:18,24,66f), active verbs are infinitivised with the noun class prefix *ba-*, passive/reflexive/middle verbs are infinitivised with the noun class marker *bu-* and other derived verbs are nominalised using the noun class marker *be-*. (Doneux 1990:67) also establishes a second category of verbal nouns labelled action nouns (glossed with “le fait de VERBE”), whose formation is described as usually involving class markers *bu-* and *gu-*, but other noun class markers can also derive action nouns.

Table (15) *Kobiana verbal nouns (Doneux 1990) [Glosses added, AC]*

Infinitive	Active underived (Class <i>ba-</i> ):	Active derived (Class <i>be-</i> ):	Passive/Reflexive/Middle (Class <i>bu-</i> ):
	<i>ba-gid</i> CL.ba-close 'to close'	<i>be-yid-ih</i> CL.be-close-REV 'to open'	<i>bu-θaan-a</i> CL.bu-dress-REFL 'enter'
Action nouns (Class <i>bu-/gu-</i> or others)	<i>bu-luuh</i> CL.bu-work 'fact of working'	<i>gu-θiuh</i> CL.gu-cough 'fact of coughing'	

The model as presented in Table (15) is problematic insofar as it involves conflicting statements. Doneux does for example not comment on the fact that he treats *bu-* both as an infinitiviser for passive/reflexive/middle verbs (1990:67), as an infinitiviser for simple active verbs (1990:18) and a derivational noun class marker for action nouns (1990:67).

At a later point in the text Doneux (1990:66) concedes that the categorisation of verbal nouns cannot be made on morphological grounds alone and he presents a second model. According to this other model, up to three nominals (nouns or verbal nouns) can be derived from one root with different noun class markers – without any additional derivational morphology – to perform one of the following functions: 1. full noun; 2. action noun (“fact of X”); 3. infinitive. The exact function of each single form depends on which other forms are available or, as Doneux (1990:66) puts it: “lorsqu’ un nom existe, c’est le nom d’action qui fait office d’infinitif” [If a noun exists the action noun performs the function of the infinitive. [AC]]. As shown in Table (16), the existence of the full noun *sikeem* ‘sleep’ is assumed to cause the use of the action noun *biheem* ‘sleeping’ as an infinitive.

Table (16) *Distribution of verbal nouns in Kobiana, (Doneux 1990:66)*

<b>Verb</b>	<b>Noun</b>	<b>Action noun</b>	<b>Infinitive</b>
'sleep'	<i>sikeem</i>	<i>biheem</i>	/
'cough'	/	<i>guβiih</i>	<i>bábiih</i>

From this description follows that the categories 'noun', 'action noun' and 'infinitive' are here considered syntactic categories, although the same labels have been used elsewhere in the text (cf. Table (15) as labels for formal categories, defined on the basis of the noun class prefixes used to derive them. Since form and function are shown by the author himself to not match, the question arises on which basis the formal categories in Table (15) have been established in the first place.

A comparison to the situation in Xhosa (1.3.1) might be instructive, whose categories 'class 15 noun'/'nominal infinitive' and 'causal infinitive' established by Visser (1989) correspond roughly to Doneux' labels full noun/action noun/infinitive. In Xhosa the class 15 derivations always have the functions 'infinitive' and 'action noun'. Manner-, state- and other nominalisations are derived with other noun classes. In Kobiana (and Gubëeher) this does not seem to be the case. As Doneux portrays it, a certain root might have only one polysemous form which is used as action noun, full noun (state, result, manner) and infinitive, whereas another root might have three distinct forms, one for each function.

### 1.3.3 **Manjaku, Mancagne, Papel**

In the Bak language Manjaku and the closely related languages Mancagne and Papel<sup>26</sup>, all spoken in Guinea-Bissau (and Manjaku also in Southern Senegal), the

<sup>26</sup> I will refer to these languages as the 'Manjaku cluster'.

noun class marker *pě-* is most commonly used for the purpose of deriving infinitive-like items.

Such a collection of properties suggests that noun class 9 items [pě-] derived from verbal roots (or rather roots used in a verbal capacity – see below) constitute a mixed category of nominalized verbs, sharing features with English infinitives and gerunds (Kihm 2005:9).

Verbal nouns in Manjaku function as complements (9), form periphrastic progressives with a locative construction (10), can take syntactic positions (cf. (11) with a VN in Subject position) and also with adverbial function, introducing subordinate clauses (12).

- (9) *na-kiěj a ngal pě-fām pě-lěman*  
CL.1-thief PRO want CL.9-break CL.9-door

‘The thief wants to break the door.’

Manjaku, Kihm 2000:8 [ex.10]

- (10) *A ci tsi pě-ji*  
PRO be in CL.9-laugh

‘S/he is laughing.’

Manjaku, Kihm 2000:8 [ex.11]

- (11) *Pě-fām pě-lěman wara-ts*  
CL.9-break CL.9-door be.nice-NEG

‘Breaking the door is not nice.’

Manjaku, Kihm 2000:9 [ex.12]

- (12) *U-bandi inji*  
 CL.3-arrive 1SG  
 ‘On my arrival...’

Manjaku, Kihm 2000: footnote 36

Apart from the class 9 *pě*-infinitives, there seems to exist a second category of more nominal action nouns, formed with the class 7 marker *ka-* :

An important function of noun class 7 [*ka-*] in all Manjaku languages is thus highlighted, which consists in building “action nouns” comparable to Arabic *maSdar*’s (e.g., *cilm* ‘fact of knowing, knowledge’ on the root *clm*), whose semantic (and syntactic) difference from /*pě-*/ infinitive-like formations, although certainly real, is not easy to assess (Kihm 2005:10).

Kihm (2000:9) also quotes some examples from Mancagne showing that class 9 is not the only noun class marker being able to form infinitive-like items, quoting examples where NC markers 3 *u-*, 4 *ngě-* and 7 *ka-* are used. Examples (13) and (14) show that the same clause with the regular infinitive marker *pě-* instead of class 3 marker *u-* denotes the same event type.

- (13) *u-ñiing wo tsi u-pay*  
 CL3-hyena be in CL3-climb

‘The hyena is climbing.’

Mancagne, Kihm 2000:9

- (14) *u-ñiing wo tsi pě-pay*  
 CL3-hyena be in CL9-climb

‘The hyena is climbing.’

Mancagne, Kihm 2000:9

As far as the available data allows to conclude the properties and distribution of verbal nouns in Manjaku show similarities to the ones in Gubëeher and also Kobiaana, especially when considering that the languages are not genetically close.

#### 1.3.4 Joola (Kuwaatay and Fogny)

The nominalisation of verbal stems through prefixing a noun class marker is documented for a number of the better described Joola languages. As in Gubëeher, different class markers are employed with different verbs, as well as one stem being combinable with several class markers. Unfortunately the phenomenon has not received much attention, limiting the discussion to short lists of infinitives and few remarks. For Diola Kuwaatay, Payne (1992:66f) reports infinitives in *ka-* and, less frequently, in *bV-*. According to his research, the VNs of reflexive verbs (suffixed with *-o*) are prefixed with NC marker *bV-* (15) d and e), whereas VNs of other verbs take class marker *ka-* (15) a and b). There is another morphological difference between derived and underived verbs, the former being suffixed with *-u*, which the underived verbs do not have. An exception to this pattern is shown in (15) e), where a monosyllabic verb ending in *-u* has a VN prefixed with *bi-* instead of the expected *ka-*.

(15) *Diola Kwatay, (Payne 1992:66)*

a) <i>ka-baj-u</i>	‘have’
b) <i>ka-tifjen</i>	‘draw water’
c) <i>bi-sir-o</i>	‘climb’
d) <i>bu-ñoofo-o</i>	‘eat’
e) <i>bi-yeet-u</i>	‘go to one’s home’

Coly (2010:95ff) offers similar data, but provides the reader with the additional information that some stative verbs have the pattern “*ka-stem-i*”. He also features

some examples that show that not only middles derived with *-o* but also reflexives derived with *-ooro/-oolo* (Coly 2010: 99 & 102) have infinitives prefixed with the in noun class markers *bi-* or *bu-*. Compare the underived verb nominalised with *ka-* in (16) in contrast to the reflexive derivation of the same stem nominalised with *bi-* (17) and the examples in Table (17).

- |  |  |
|--|--|
| <p>(16) <i>ka-baŋinan</i><br/>CL.ka-remind<br/><br/>'remind'<br/><br/>Joola Kuwaatay, Coly 2010:99</p> | <p>(17) <i>bi-baŋinan-ooro</i><br/>CL.bi-remind-REFL<br/><br/>'remember'<br/><br/>Joola Kuwaatay, Coly 2010:99</p> |
|--|--|

Table (17) *Middle and reflexives with infinitives in bi-* (Coly 2010:99&102)

Infinitive underived stem	Gloss	Infinitive reflexive (-ooro/-oolo) or middle (-o)	Gloss
<i>ká-tati</i>	'be small'	<i>bi-tatian-ooro</i>	'make oneself small'
<i>ka-yool-u</i>	'kill'	<i>bu-yool-oolo</i>	'kill oneself'
<i>ka-jam-u</i>	'hear'	<i>bi-jam-o</i>	'have reputation'
<i>ka-jeh-u</i>	'split (tr.)'	<i>bi-jeh-o</i>	'split (itr.)'
<i>ka-seey-u</i>	'burn'	<i>bi-seey-o</i>	'burn oneself'
<i>ka-hok-u</i>	'extinguish (tr.)'	<i>bi-hok-o</i>	extinguish (itr.)

Coly (2010:95f) also provides a pair of verbal nouns where the same stem is shown with different NC markers; his glossing indicates that the difference is considered to be between an action noun prefixed with *ba-* and an infinitive prefixed with *ka-*: *ba-tuuriat* 'fact of fetching straw' *ka-tuuriat* 'to fetch straw'.

For Joola Kujamaat or Fogany, (Sapir 1965:77) proposes the rule that monosyllabic verbs enter class 3 *e-* when nominalised and polysyllabic verbs class 9 *ka-*. This observation is largely confirmed by Hopkins (1995:35f), who gives the examples *e-jaw* 'to go' *ka-sancen* 'speak'. Hopkins nevertheless remarks that there

are exceptions to that rule in that some verb stems take class markers 7 *fu-* as in *fu-ri* ‘eat’, class 5 *bV-* as in *ba-raan* ‘drink’ and class 10 *mV-* as in *mu-suur* ‘urinate’. Sapir (1965:77) himself reports a certain amount of variation and several ‘exceptions’ (18)e and f).

(18) *Joola Fogany*, (Sapir 1965:77)

a) <i>ε-ga</i>	‘to throw’
b) <i>ε-is</i>	‘to show’
c) <i>ka-jjiren</i>	‘to cause disorder’
d) <i>kə-tikər</i>	‘to be without’
e) <i>fu-ri</i>	‘to eat’
f) <i>ka-bək</i>	‘to grow taller’
g) <i>ε-bək</i>	‘to be tall’

### 1.3.5 Joola Eegimaa

Joola Eegimaa or Banjal, a Joola language spoken in the immediate vicinity of Bainouk Gubéeher and one of its main contact languages also allows many different noun class markers for the derivation of verbal nouns: “Ten of the fifteen noun class markers [...] appear with verb stems to form action nouns, deverbal nouns and the infinitive forms of the verb” (Sagna 2008:310). Sagna rejects the formal assignment rule based on the number of syllables of the verb for Joola Fogany as well as for Joola Eegimaa for which he proposes semantic motivations. The usage of verb stems with noun class markers is in his account labelled ‘overt verb classification’.

The three categories ‘infinitive’, ‘action noun’ and ‘proper nouns’ seem to be conflated in Eegimaa since according to Sagna (2008:310) for many verbs one derivation often serves as both proper noun and action noun or as both action noun and infinitive, which reminds of Doneux’ (1990:66) classification of deverbal nouns

in Kobia into nouns, action nouns and infinitives as well as Visser's (1989) categories 'class 15 nouns', 'clausal infinitives' and 'nominal infinitives' concerning the different functions of Xhosa infinitives (c.f. 1.3.1). Kihm (2000) also stipulates that verbal nouns in Manjaku are used as complements of verbs, action nouns and as full nouns.

Bassène (2006) provides an account of the syntactic distribution and properties of non-finite forms in Eegimaa, here labelled infinitives (19) and gerunds (20), though in his description the use of different noun class markers to derive multiple infinitives is not mentioned so that the need to further differentiated various kinds of non-finite forms did not arise.

- (19) *Atejo na-mam-maŋ bu-rokk*  
 Atejo 3SGSUBJ-want-want CL5-work  
 'Atejo wants to work.'  
 Joola Eegimaa, Bassène 2006:246 [ex.425a]

- (20) *na-tey-e a-kkop ba-jug-er-om*  
 3SGSUBJ-run-TAM 3SGSUBJ-hide CL5-see-GER-1SGOBJ  
 'Seeing me he ran hiding himself.'  
 Joola Eegimaa, Bassène 2006:252 [ex.437a]

Bassène defines infinitives as hybrid forms displaying nominal and verbal characteristics, the nominal ones being the ability to combine with possessive affixes and assume subject/object/complement status and the verbal properties consisting in the compatibility with the negative marker *-ut* and the object affixes (21)<sup>27</sup>.

<sup>27</sup> Bassène does not explain how he distinguishes object suffixes from possessive suffixes, which seems necessary considering that there seems to be no formal distinction between the two. *e-jug-il*, translated by Bassène (2006 :244) as 'les voir ('to see them')' might therefore just as well be translated with a possessive reading as 'their seeing (in the meaning of 'seeing them')'.

- (21) *e-kkay-ut-ol*                      *ni*      *bi-it*                      *gu-lób-e*  
 CL3-leave-NEG-3SG POSS      in      CL5-rice.plot      3PLSUBJ-talk-TAM
- m-ala*              *yo*  
 CL10-CON      CL3:PRO

‘That he does not leave for the rice fields is talked about.’

Joola Eegimaa, Bassène 2006:246 [ex.422]

In Joola Eegimaa nominalised verbs are used as 1) complements, in (19) with the verb ‘want’, 2) in predications without a finite verb, shown in (22), 3) in periphrastic constructions, with a present progressive encoded as a locative construction, shown in (23), 4) as nominal subject, object or complement as in (24), 5) as clausal complement (21).

- (22) *Gáleto*      *e-mbal*      *su-ol*  
 Galeto      CL3-fish      CL4-fish

‘Galeto is fishing fish.’

Joola Eegimaa, Bassène 2006:247 [ex.429]

- (23) *na-ttog-om*                      *ínje*      *ni*      *fi-tijn*  
 3SGSUBJ-find-3SGOBJ      1SG      in      CL7-eat

‘He came when I was eating (litt: ‘He found me in the eating.’)

Joola Eegimaa, Bassène 2006:248 [ex.430]

- (24) *e-wwu*              *a-nyil*              *nifux*      *e-arat*  
 CL3-wash      CL1-child      night      CL3-be.good:NEG

‘It is not good to wash a child at night.’

Joola Eegimaa, Bassène 2006:245 [ex.419]

Sagna (2008:312ff) addresses the issue of multiple infinitives (here called: overt verb classification, i.e. the overt classification of verbs according to semantic

criteria) explicitly and proposes semantic motivations for the choice of a specific noun class marker. The parameters singled out so far are ‘pluractionality’ and ‘contact & force’, and other parameters such as transitivity are probably relevant, too, for the choice of an infinitive (Serge Sagna, p.c.).

Table (18) *Infinitives in Joola Eegimaa (all examples from Sagna 2008:312ff)*

Marker	Semantic field	Example	Gloss
cl. 4 <i>su-</i> (plural)	pluractionality	<i>sú-jumor</i> <i>su-roren</i>	‘to be forgetful’ ‘to bother with many questions’
cl 10b <i>ma-</i>	bodily functions	<i>má-jju</i> <i>ma-sur</i>	‘to blow one's nose’ ‘to urinate’
cl. 11b <i>ja-</i>	contact and force	<i>ja-baloŋ</i> <i>ja-ppaŋ</i>	‘play ball’ ‘fish with a trap’

Concerning the plurality of participants and actions the use of plural NC marker 4 *su-* for iterative or multiply occurring actions is shown (Sagna 2008:312). In some cases NCM 4 *su-* and the correspondent Singular NCM *e-* form pairs, with the plural marker denoting pluractionality (Sagna 2008:312): *é-jumor* ‘to forget’ vs. *sú-jumor* ‘to be/being forgetful’ *e-roren* ‘to ask’ vs. *su-roren* ‘to question/questioning/bothering with many questions’. Similarly, the NCM 10b *ma-* seems to be associated with verbs of bodily functions (Sagna 2008:313), usually emissions from the body: *má-jju* ‘to blow one's nose’ *ma-sur* ‘to urinate’ *ma-boy* ‘to defecate’ etc. The NCM *ja-* 11b is associated with actions that involve actions involving manipulation and transformation from the domains of games, fishing and hunting (Sagna 2008:313f). The author subsumes these actions under the label “contact and force”.

### 1.3.6 Summary of previous research concerning infinitives

The preceding chapters have shown that verbal nouns in languages as diverse as Bāinounk, Kobiana, Manjaku/Mancagne and various Joola languages share some traits which seem to be restricted to the Casamance/Northern Guinea area (see Table (19) for a summary of the data presented in the previous sections).

Table (19) *Factors proposed in the literature underlying the choice of multiple infinitives in chosen noun class languages*

Language	Explanation for multiple infinitives
Bantu languages	<ul style="list-style-type: none"> <li>• Syntactic: possibly object properties</li> <li>• Reflexivity</li> </ul>
Kobiana	<ul style="list-style-type: none"> <li>• Morphological: derived/non derived</li> <li>• Reflexivity</li> <li>• Category of verbal noun (infinitive/action noun)</li> </ul>
Joola Kuwaatay	<ul style="list-style-type: none"> <li>• Reflexivity</li> <li>• Category of verbal noun (infinitive/action noun)</li> </ul>
Joola Fogny	<ul style="list-style-type: none"> <li>• Phonological: number of syllables</li> <li>• Unexplained “exceptions”</li> </ul>
Manjaku	<ul style="list-style-type: none"> <li>• Category of verbal noun (infinitive/action noun)</li> </ul>
Joola Eegimaa	<ul style="list-style-type: none"> <li>• Semantic fields, object properties</li> <li>• Category of verbal noun (infinitive/action noun)</li> </ul>

The areal connection seems to be even more plausible when considering that the genetic relationship of Joola, Manjaku and Bāinounk is uncertain. The languages of Casamance have been in extremely close contact for centuries, and in some cases (especially Manjaku/Kobiana or Eegimaa/Gubëeher/Kujireray) the proximity allows for an permeation of linguistic features into all areas of grammar and a hybridity of cultural practices, including religion, material culture etc., to an extent which makes it almost impossible to determine the direction of loaned items and structures or to ascribe the origin of cultural traits with reflexes in language to one or the other population. It is very plausible that the similarities in verbal noun formation –

among others syntactic features – are due to this intense contact between Bǎinounk /Nyun, Joola and other Bak. They are summarised once more below:

- A large proportion of the available NC markers can be used for formation of verbal nouns.
- There is one productive infinitivising noun class marker compatible with almost all verb stems.
- There are several categories of verbal nouns, usually labelled action nouns and infinitives. The categories affect choice of noun class marker for verbal noun formation
- The verbal nouns used as infinitives are often polysemous and can also be used with other functions (action noun, manner noun, result noun etc.).
- Reflexivity and properties of the verb or the object are mentioned as potentially or demonstrably relevant for the choice of infinitival noun class marker in several of the involved languages.

#### 1.4 Theoretical frameworks

The main contribution of this thesis is empirical rather than theoretical. Therefore, not one single theoretical framework has been chosen to explain data or be tested on data. Instead, the thesis draws on a number of typologically-functionalist frameworks, among them Cognitive Grammar and Prototype Theory, because they seem particularly suited to capture central properties of Bǎinounk nominal classification. I use the term cognitive model/framework as referring specifically to the family of non-modular theories of language that are based on the following two assumptions (Evans, Bergen, and Zinken 2007): The ‘generalization commitment’ states that the components of language (phonology, morphology, syntax) do not constitute separate models and should thus be explained in a uniform way by the same rules and mechanisms. The ‘cognitive commitment’ states that language is one of the cognitive faculties of humans and therefore functions according to the same basic principles. Results from other cognitive sciences (psychology, neuroscience,

artificial intelligence, philosophy) should be considered and integrated into theory building by linguists.

Cognitive semantics does not distinguish between linguistic and encyclopaedic knowledge. The latter term refers to the nature of the knowledge a speaker has about the semantics of a linguistic item. Encyclopaedic knowledge can be paraphrased as ‘world knowledge’, i.e. “relevant background information for the characterization of word meanings as a network of shared, conventionalized, to some extent perhaps idealized knowledge, embedded in a pattern of cultural beliefs and practices” (Taylor 1995:83). Whereas modular frameworks that assume a fundamental separation of the linguistic faculty from all other cognitive processes distinguish between the levels of encyclopaedic knowledge and linguistic knowledge (stored in the dictionary component), whereby only the linguistic knowledge is relevant for word meaning, cognitive theories of language assume only one level of knowledge, whose components can be accessed for the processing of language (For a discussion see Haiman (1980)). As the analyses in chapter 3 and 4 will show the noun class system of Gubëeher is indeed a tool for the classification of concepts in Gubëeher depending to some extent on cultural conceptions and taxonomies. Frameworks which conceive of semantics as encyclopaedic and emphasise the interrelation between cultural and linguistic practices are therefore given preference for the analysis of noun class semantics in Gubëeher over frameworks with a purely formal approach.

## 1.4.1 Categorisation

Categorisation is at the heart of Cognitive Linguistics, whose emergence was causally interrelated with the insights gained into the prototypical nature of categories.

### 1.4.1.1 *Prototypes and Aristotelian categories*

Prototype theory of categorisation, as opposed to the so-called ‘classical’ or ‘Aristotelian’ model, has had a major impact on the emergence of cognitive approaches to linguistic analysis in general and the treatment of noun class semantics in particular. The Aristotelian criteria, based on criteria defined by Aristoteles in his *Metaphysics*, have been seriously challenged and finally toppled from their position of sole and uncontested truth by an intellectual current instigated by the experiments and publications of Eleanor Rosch starting in the 1970s in the field of cognitive psychology.

The classical theory has dominated the assumptions about classification from antiquity until the 20th century to such an extent, that it has rather been treated as an empirical fact than as a theory. The following criteria (cf. Taylor 1995:23ff) define category in the classical sense:

- a. Categories are defined by a combination of sufficient and necessary features<sup>28</sup>.
- b. Features are binary, a feature is either present or absent.
- c. Categories are defined by boundaries, there are no unclear cases.
- d. All category members are equally relevant, there are no degrees or internal structure and no better or worse members.

---

<sup>28</sup> I follow Taylor (1995) in using 'feature' in the sense of abstract binary semantic feature of the classic/Aristotelian approach and attribute as understood in the sense of non-classical approaches of categorisation.

The Aristotelian categories have been used and are still used in the linguistic sciences, with major success in phonology. The whole system of discrete phonemes defined by binary features (e.g.  $\pm$  voiced for consonants) is purely defined according to the classical theory of categories. In the study of semantics, the most rigid and most prominent attempt to analyse word meaning in terms of Aristotelian categories has been undertaken by Katz and Fodor (1963), who tried to define meaning through decomposition into abstract semantic primitives. Labov's (1973) experiment on categorisation provided major counterarguments to this hypothesis by making clear that categorisation of an item as a cup or a bowl by the participants is not based on binary features with rigid boundaries but is instead gradual and depending on 'functional, cultural and interactional attributes' (Taylor 1995:41).

The central concept of the new paradigm is the 'prototype', whose flexibility and fuzziness stands in direct opposition to the rigid Aristotelian categories. The earlier empirical research of prototypical categories has been inspired to the by now classical experiments on colour terms (Berlin and Kay 1969, Heider [Rosch's maiden name] 1972), where it has been shown that the colour spectrum is not arbitrarily divided into discrete colours by purely linguistic convention but that it is based on physiological givens and organised along prototypical criteria, meaning mainly that colours have better or worse examples and the boundaries between colours are fluid. The main body of the research undertaken by Rosch and her colleagues (Rosch et al. 1976; Rosch 1978; Mervis and Rosch 1981; Rosch and Mervis 1975; Rosch 1973; Heider 1972) have empirically proven the following four basic characteristics of categories from a prototype perspective<sup>29</sup>.

---

<sup>29</sup> Though Geeraerts (2006) makes it clear that prototypicality is itself a prototypical category, i.e. not all of its members have to fulfil all of the criteria mentioned.

- a. “Prototypical categories cannot be defined by means of a single set of criterial (necessary and sufficient) attributes (Geeraerts 2006:146).”
- b. “Prototypical categories exhibit a family resemblance structure, or more generally, their semantic structure takes the form of a radial set of clustered and overlapping meanings (Geeraerts 2006:46).”
- c. “Prototypical categories exhibit degrees of category membership; not every member is equally representative for a category (Geeraerts 2006:146).”
- d. “Prototypical categories are blurred at the edges (Geeraerts 2006:146).”

The concept of *Familienähnlichkeit* (whose translation ‘family resemblance’ is now widely used as a technical term in the scientific literature) is elaborated on in Rosch and Mervis (1975), in order to account for the multipolarity of categories drawing on reflections brought forth by the philosopher Ludwig Wittgenstein (c.f. the famous passage on the network structure of the different senses of the word ‘game’ in his work *Philosophische Untersuchungen* first published in 1953). The concept of family resemblance is taken up as ‘radial sets’ by Lakoff (1990). The point is that members of one category are viewed as linked by common features, though it might be the case that there is not one single feature shared by all members. It is enough to share some attributes with some members of the category which in turn might share different attributes with still other members of that category. The image is that of a chain, where all members are connected, but by different links. These new insights into the principles behind the ways humans classify their environment have had a major impact on the academic landscape of the 1970s and on the paradigms of many disciplines – philosophy, linguistics, neurosciences, Artificial Intelligence and psychology (Geeraerts 2006:145). In linguistics, where the concept of classification and categorisation is one of the most fundamental issues, these developments have led to the establishment of theoretical frameworks subsumed under the label ‘Cognitive Linguistics’, though Geeraerts (2006) stresses the point that Cognitive Linguistics is not a unified framework and its different strands show significant

differences. The assumption at the core of these theories is that linguistic behaviour is directly connected to sensor-motoric processes (this has been empirically proven by Rosch et al. 1976) and other cognitive faculties which exist independently of language. This is a serious challenge of the assumption that language as an independent module of the human mind (see Langacker 1991).

Models of classification and categorisation which have emerged from cognitive approaches to linguistics have challenged the classical conceptions of discrete categories defined by necessary and sufficient criteria and had a profound impact on the treatment of noun classes. Prototype theory has been applied to the analysis of the classification systems of Bantu languages as well as Atlantic languages (see 1.4.1.3) and is well applicable to classification in Gubëeher, although the identification of prototype-based networks is not a central issue in this thesis.

#### *1.4.1.2 Classical approaches to noun class systems*

Aristotelian tendencies can be detected both in the treatment of single noun class systems as well as the typology of classificatory systems. Applying Aristotelian criteria to the typology of classification systems (such as numeral classifiers, possessive classifiers, noun class systems etc.) implies the necessity to define each type by necessary and sufficient conditions, not allowing fuzzy boundaries and mixed types and by rejecting the notion of more or less typical members of a noun class. The greater availability of data on noun class languages shows that there are many languages whose systems defy the strict conditions set by adherents of more classically influenced typologies (cf. Grinevald and Seifart 2004).

In accounts of noun class semantics based on classically defined categories, classes are either denied semantic bases because of the absence of one or more features valid for all members of the class (Richardson 1967), or because the systems are seen as primarily or exclusively fulfilling morphosyntactic purposes (Maho 1999; Katamba 2003; Idiata 2005). As Dingemanse (2003) points out, the often misquoted Richardson (1967) does not actually deny the existence of a semantic basis of noun classes *per se*; in fact his data shows that semantic considerations do indeed play a role in the ad-hoc assignment of English loans to ChiBemba noun classes. What Richardson heavily doubts though, is that noun class membership correlates with semantic criteria based on sets of Aristotelian conditions with necessary and sufficient criteria that are valid for all members of a noun class (not only regarding one language but covering all Bantu languages). He is also sceptical towards the attempt to apply semantic criteria to all aspects of a noun class system, since potentially non-semantic influences as e.g. loan integration or the creation of new classes and the disappearance of existing classes have to be considered, too. The historical studies conducted by Williamson (1989) on Proto-Niger-Congo and by Denny and Creider (1986) on Proto-Bantu have reconstructed the semantic content of noun classes to an idealised earlier stage of the language where noun classes are supposedly definable by single abstract criteria.

What Contini-Morava (1994) labels the ‘middle-of-the-road position on the semantics of the noun classes’ is the attempt to treat some noun classes which have purely derivational functions (such as diminutive and augmentative) as having a semantic basis and all others as purely formal devices (cf. Heine's (1982) ‘free’ vs. ‘fixed’ genders, Givón's (1972) derivational vs. inherent noun classes). At least in

the case of Gubëeher this division is of doubtful usefulness considering that virtually all class markers can be used for derivational purposes.

#### *1.4.1.3 Prototype based approaches to noun class systems*

Since Lakoff's (1986) application of prototype theory to the noun class system of Dyirbal – an Australian language described by Dixon (1982) – numerous studies on noun class semantics have applied a prototype-based approach<sup>30</sup>, either in terms of Lakoff's (1986; 1987) 'radial structures' or using Langacker's (1991:266ff) related concept of the 'network model'. Both conceptions stipulate that members of a category are linked through categorising relationships of various kinds and are based on 'family resemblance', which presupposes that no single criterion is required to be common to all members of a category; as long as every item is connected to at least one other item semantically, the network is considered valid. Lakoff (1986:17f) particularly stresses the importance of cultural conceptions underlying the definition of 'fields of experience' relevant for categorisation and of mythologically conditioned groupings of items in one category.

The prototype studies cited above start from the assumption of each noun class being organised as a network of semantically interconnected subdomains, linked through metaphorical and metonymic relationships based on the principle of family-resemblance. Metaphor is used in the sense of "a linguistic expression [...] that is the surface realization of [...] a cross-domain mapping (Lakoff 2006:186)". Metonymy allows one concept to stand for another within the same domain as part-

---

<sup>30</sup> Cf. Sagna (2008; 2010) on Joola Eegimaa, Moxley (1998) on Swahili, Palmer and Woodman (2000) on Shona, Hendriks (2001) on Southern Bantu languages, Selvik (2001) on Setswana, Breedveld (1995a; 1995b) on Fulfulde, Contini-Morava (1994; 1996; 1997; 2000) on Swahili and Spitulnik (1988) on ChiBemba. From a specifically acquisitional perspective Demuth, Faraclas, and Marchese (1986;1985) and Demuth (2000) write on acquisition and loanwords in Sesotho and Zawada and Ngcobo (2008) on the mechanisms of noun class acquisition in Zulu.

whole relationship or any other experiential relationship. The important difference between metaphor and metonymy is that “while metonymy is the conceptual relation ‘X stands for Y’, metaphor is the conceptual relation ‘X understood in terms of Y’” (Evans et al. 2006:17). A variety of methodologies is employed in establishing the semantic networks of noun classes. Some include psycholinguistic tests, like Sagna (2008) and Selvik (2001) who both employ novel-word naming tasks, to demonstrate that invented words are assigned to specific noun classes on the basis of meaning components. Contini-Morava (1997) and Palmer and Woodman (2000) use database material from dictionaries, and Zawada and Ngcobo (2008) and Demuth (2000) base their analysis on acquisitional data complemented by database material. The semantic domains established for these network models of noun classes are defined on the basis of various attributes including physical properties (e.g. dimension, size, shape), cultural concepts (e.g. maternity, fertility, death, power), taxonomical domains (e.g. botanical and zoological taxonomies), configurational criteria (e.g. part-whole, assemblage) and functional criteria (e.g. usefulness, edibility).

#### ***1.4.1.4 The limits of semantic networks***

The existence of semantic networks linking the semantic subdomains of a noun class provide evidence that noun class systems are not semantically arbitrary and that a large number of noun classification systems are deeply rooted in the cultures of their speakers. These effects could not be explained resorting to the classical theory of categorisation, and prototype effects between semantic subdomains of noun class markers caused by metaphoric or metonymic effects are observable in Gubëeher as well. However, I would like to address two problematic issues raised by

Dingemanse (2003) concerning the semantic network approach<sup>31</sup>. The first problematic issue touches upon the validity of the networks, put in doubt by the partly introspective nature of establishing them, which makes it difficult to judge whether the networks actually represent cultural knowledge of the speakers or rather a construct of the linguist. The second issue is of theoretical nature and relates to the question of what exactly the theoretical value of such a network is: a model mirroring representation of categories in the mind or simply a collection of partly active and partly inactive semantic aspects of noun class semantics. Concerning this problem I think it is important to heed the objections of Rosch (1978) and Lakoff (1987) regarding the fact that the empirical experiments proving prototype effects, do indeed only show the *effects* of how knowledge is represented in the mind, but they should not be equated with the principles themselves underlying the ‘cognitive representation’ (Rosch 1978:261) of categories in the mind<sup>32</sup>. Therefore, I explicitly want to avoid the impression that I am equating cognitive mechanisms with radial semantic networks and of salient members of noun classes with prototypes, since the detection of prototypicality effects and family resemblance structure behind principles of the semantic organisation of noun class systems is not necessarily evidence for a cognitive representation of these systems in the mind.

A related question is to what extent the semantic links are active. If we conceive of noun class systems as shaped by the usage and adaptation by generations of speakers over a long time it is unclear what exactly an analysis of the semantic networks of such a system reveals about cognitive mechanisms on a synchronic level. Since a linguistic system presumably changes slower than the cultural

---

<sup>31</sup> His criticism is specifically geared towards the studies by Palmer and Woodman (2000) and Selvik (2001) but applies to networks in general.

<sup>32</sup> See Laurence and Margolis (1999) on problems of prototypes as a theory to explain the representation of categories in the mind.

practices of its speakers, the underlying shared attributes of the supposed network may be only partly transparent on a synchronic level even to native speakers themselves, because the semantic organisation of the noun classes are to some extent based on now obscure or obsolete underlying concepts that were relevant in an earlier stage of the language and are not active any more due to semantically or cognitively unmotivated processes, like for example system change through language contact, convergence of noun classes for syntactic or phonological reasons, archaisms and idiosyncrasies<sup>33</sup>. Of course it has to be considered that these mechanisms that lead to language change can also have underlying cognitive motivations and there is the possibility that a system is reanalysed and reshaped on the basis of *current* belief systems and cultural practices through language change that restores semantic coherence or restructures the semantic criteria for noun class membership<sup>34</sup>.

#### 1.4.2 Typologies of systems of nominal classification

In the following section, I will present a typological classification of classificatory systems. Noun classification systems can be divided into several types depending on semantic, syntactic and morphological criteria. I will use Grinevald's (2000) terminology for the types of morphosyntactically defined classificatory systems. The

---

<sup>33</sup> Dingemans (2003:19) proposes to oppose arbitrariness not to coherence (logical structure from a synchronic perspective), but rather to motivatedness in the sense that every decision has been made *for a reason at some point in time* even though these reasons might not be comprehensible any more.

<sup>34</sup> In his analysis of the noun class system of Dyrbal, Lakoff (1986) shows how the mythologically based system of semantic categorisation of Dyrbal is substituted in the course of few generations by a reanalysed version more accessible to younger speakers who lack detailed mythological knowledge. See also Breedveld's (1995a) discussion of the *nge* class in Maasina Fulfulde which has been reduced from a larger set of nouns to cows and light-emitting entities like the sun and fire, excluding items whose membership in the class was not culturally appropriate (cf. Mbamba 2012 for a discussion). For examples of the impact of semantic parameters on noun class restructuring in Gubäher see chapter 4.

fundamental distinction made in her approach is that between syntactic gender/noun class systems and more semantic/pragmatically oriented classifier systems.

#### *1.4.2.1 Aristotelian and prototypical typologies*

Accounts of nominal classification which conceive of the types of classificatory systems in terms of Aristotelian (or classic) criteria (as e.g. Heine (1982) or Dixon (1982; 1986)) resort to lists of necessary and sufficient criteria for the distinction of the various types of classification systems. Table (20) shows such a list, with the main division being between grammatical systems (i.e. noun class systems) to more semantic-pragmatically oriented systems (numeral classifiers systems), based on formal and functional criteria. Typologies based on classic criteria do not allow hybrid types or better or worse exemplars of a type. A system either belongs or not to a certain type of classification systems.

Table (20) *Summary of Dixon's (1986:106f) criteria for types of nominal classification*

<b>Criterion</b>	<b>Noun class systems</b>	<b>Classifiers systems</b>
Realisation	prefix, suffix, article	separate morpheme
Size	small set	large set
Scope	agreement outside the noun phrase	no agreement outside the NP
Other	obligatory and closed morphological system, no stylistic variation	potentially open systems, context dependent use of classifiers

Since the 1980s, when the topic of nominal classification started to gain more attention by typologists, linguists working on classification systems started to question the prevailing narrow assumptions on types, function, dynamics and semantic load of these systems, with the intention of painting a more dynamic picture of noun classification systems. Influential in this respect is the theoretical

framework of the Kölner Universalienprojekt (Seiler and Lehmann 1982; Seiler and Stachowiak 1982; Seiler 1986) with a multi-faceted and hierarchical approach to classification, investigating links between cognitive and syntactic aspects of a large array of grammatical structures. Grammaticalisation as relevant for the development of noun classifying systems and as an important factor relating different types of classification (classifiers and noun classes) is built into the framework (Serzisko 1982:113ff). Other linguists also utter doubts regarding the rigid boundaries separating classifier systems from noun class systems. Payne (1986:129f), Aikhenvald (2000), Grinevald (2000), and Grinevald and Seifart (2004) draw attention to the existence of hybrid types in Western Amazonian languages which have characteristics of noun class systems as well as of classifier systems and which thus do not fit in the traditional conception of noun classification systems and are problematic for a typology of classification systems based on an Aristotelian approach. Elaborating on the grammaticalisation factor and conceiving of noun classification systems as forming a continuum, Grinevald acknowledges that classification systems are often hybrid, i.e. situated in between prototypes, and have characteristics of several types. Some languages were found to employ several distinct systems of classification alongside each other (see Zavala 2000 on classification in Akatec Mayan and Craig (1986) on Jacaltec Mayan).

#### ***1.4.2.2 The derivational and semantic properties of noun classification systems***

Another point of criticism of the classically based typologies of noun classification systems concerns the functions of these classificatory systems, whose hitherto largely ignored derivational and word forming properties are now reconsidered. Concerning classifiers, Adams (1986) criticises Greenberg (1972) for claiming that

“one major difference between classifiers and quantifiers (measure terms) that occur in the same syntactic position is that classifiers add no information or have no meaning other than 'unit' in a numeral phrase” (Adams 1986:241). Instead, she defends the view that in many language nouns are compatible with several classifiers for the reason that “the noun as a symbol is imprecise and its physical referents can have different enough characteristics that different classifiers are appropriate for them (Adams 1986:242).” Discussing some examples from Fijian concerning the use of different possessive classifiers with the noun *yaqona* ‘kava’, Broschart notes that “one typically finds different alternatives for referring to essentially the same entity [...] (Broschart 2000:242). When talking about the kava plant the plant-classifier *no* is used, when talking about the kava drink, the drink-classifier *me* is used. Another instance of different classifiers specifying a stem/root is provided from Tongan (Broschart 2000:246): *i he fo'i molí* (LOC ART round orange:DEF) ‘at the orange fruit’, *i he fu'u molí* (LOC ART big orange:DEF) ‘at the orange tree’. This of course implies that the semantic of the classifier is relevant in specifying the semantics of the noun from which follows that classifiers are more than purely quantificational devices. In Gubëeher the derivational use of one root with several paradigms in order to convey semantic differences is very common (cf. *si-óg* ‘baobab tree’/*bu-óg* ‘baobab fruit’) and the description of these functions is one of the main interests of this thesis.

The semantic properties of classification systems are comparably well researched with numerous studies on the topic, in the last 30 decades under the increasing influence of Rosch’s prototype approach and of cognitive semantics and semantic network approaches. Some important prototype-based studies on noun class systems are cited in chapter 1.

### *1.4.2.3 The analytical bias of ‘normalised systems’*

Grinevald (2000) does not only promote the view of noun class systems as being situated on a continuum, with hybrid types occupying the middle ground between the different poles, she also points out the important fact that traditional accounts of nominal classification are in the majority biased in favour of a few well-researched classification systems in which ‘newcomers’ such as the Amazonian languages get treated as exotic specimen, only because they do not conform to the established order. Grinevald and Seifart (2004) propose that the Amazonian and other languages are not as “exotic” when examined within a more encompassing and revised model whose basic tenets are built on a more representative choice of phenomena from a larger typological and regional range of languages. They also demand that concerning the mainstream view of the noun class systems of the Bantu languages,

“the need was felt to reconsider in more detail the relatively stable and overall wholesome picture of the African systems that is projected in the general linguistic literature and to expose their actual irregularities and variations. (Grinevald and Seifart 2004:244).”

This view is echoed by Lüpke and Storch (2013). Regarding noun class systems in African languages, I agree that both issues raised by these authors are relevant for a discussion of the noun class system of Gubëeher: the reliance on well-researched paradigm cases and the suppression of variation and irregularity. The treatment of African noun class systems relies disproportionately on the ‘normalised’ representation of the noun class system of Bantu, specifically standard Swahili, whose properties are then assumed to represent fairly well all other noun class systems found in Africa. Even more detrimental is the dismissal of systems or some of their functions, which diverge from the prototype-by-definition, as peripheral or

exotic. Especially when it comes to the issues of variation, derivational functions of noun class marker and noun class semantics, there appear large gaps even in otherwise thoroughly researched languages. A reason for this might be that – despite the fact that many African languages are still not at all or not enough described – many Africanist theoreticians have been more preoccupied with historical reconstruction of noun class systems than with synchronic variation and semantic issues<sup>35</sup>. In addition, Grinevald and Seifart (2004:245) attribute the high degree of ‘normalization’ and standardisation of descriptions of African languages and their noun class systems to the historically conditioned strong tradition of prescriptive models of grammar writing for the sake of orthography development and bible translations. These normalised grammars still serve as blueprints for fieldworkers and are often the only sources available to typologists and language theoreticians.

#### ***1.4.2.4 The types of classificatory systems***

The several types of classification systems distinguished by Grinevald (2000) are considered as prototypes situated along a continuum which runs from lexical to grammaticalised. Gender/noun class systems are the most grammaticalised and syntactically integrated type, measure terms and class terms the least grammaticalised exponents and the various systems grouped together under the label ‘classifiers’ occupy the middle ground (Table (21)).

---

<sup>35</sup> This is definitely the case for the ones working on noun class on Atlantic languages (cf. Doneux 1975; Pozdniakov 1993). A lot of effort has gone into the comparison and reconstruction of Proto-Bantu/Proto-Niger-Congo noun classes (De Wolf 1971; Stewart 2007)

Table (21) *Types of classification systems (terminology by Grinevald 2000)*

	Type	Subtype	Prototype
more grammaticalised/ ↓ less lexical	measure terms	/	widespread
	class terms	/	widespread
	classifiers	numeral classifiers	South-East Asia: Thai or Burmese
		noun classifiers	Mesoamerica: Kanjobal Mayan
		genitive classifiers	Micronesia
		verbal classifiers	North-America: Cayuga, Australia
	noun class	Noun class	Africa: Bantu
		Gender	Europe: Latin

Each type is represented by “prototypical systems, which are taken to be those that show the most contrastive characteristics to the other types of systems” (Grinevald 2000:80). These types are established on the basis of morphosyntactic criteria and named after the locus the class marker primarily attaches to. As to the semantic value of the different types, Grinevald (2000:71f) suggest the following correspondences between Allan's (1977) semantic categories<sup>36</sup> and her own morphosyntactic types of classifiers: numeral classifiers tend to encode physical categories such as size, dimension etc. Genitive classifiers tend to encode functional categories, i.e. are classified according to their usage; and noun classifiers tend to encode material or essence. Based on these parameters, I will give a short summary of the major types of nominal classification systems, based on Grinevald (2000). For a detailed account of classification phenomena from a typological perspective see also Aikhenvald (2003).

<sup>36</sup> Allan (1977:297) has identified the following semantic parameters relevant for class membership in classifier systems: (i) material, (ii) shape, (iii) consistency, (iv) size, (v) location, (vi) arrangement, and (vii) quanta.

#### 1.4.2.4.1 Measure nouns and class terms

Measure nouns, the least grammaticalised of the classification devices on the lexical side of the scale, are used for word formation through composition and derivation respectively. Measure nouns are independent nouns used for quantificational purposes as shown in (25) and (26).

(25) *a glass of water*

English, Grinevald 2000:58

(26) *a pile of books*

English, Grinevald 2000:58

Class terms can be independent nouns or affixes which classify entities according to semantic characteristics like *-berry* in (27). Unlike noun classifiers, which they resemble (this section, see below), they do not have any anaphoric or other morphosyntactic functions but occur only on the noun-word. In Thai, class terms are used alongside classifiers and Delancey (1986) hypothesises that class terms are the source from which classifiers developed through grammaticalisation. Example (28) shows the item *lûuk* in both categories: as word forming class term preposed to the noun *taa* ‘eye’ and as numeral classifier with the modifying number word *săam* ‘three’.

(27) *straw-berry, blue-berry, rasp-berry*

English, Grinevald 2000:59

(28) *lûuk-taa      sĂam      lûuk*  
ball-eye      three      CLASS

‘three eyeballs’

Thai, Delancey 1986:442

#### 1.4.2.4.2 Numeral classifiers

Numeral classifiers, frequently found in East Asian, South-East Asian and Oceanic languages are mainly used with numerals, for counting, as shown in examples (29) and (30). Numeral classifiers can be affixed, cliticised or occur as free morphemes. Greenberg (1972) has identified quantification as the main function of numeral classifiers. These systems can have very large class marking inventories. Broschart (2000:245) distinguishes sortal ('one individual Y'), mensural ('one portion Y') and collective classifiers ('one collection Y') within numeral classification systems.

- (29) *budou*    *o*        *hito-tsubu*    *tabe-ta*  
grape    OBJ    one-NUM.CL    eat-PAST

'I ate one (piece of) grape.'

Japanese, Inoue 2000:225 [glosses by AC]

- (30) *budou*    *o*        *hyaku-fusa*    *tabe-ta*  
grape    OBJ    hundred-NUM.CL    eat-PAST

'I ate 100 (bunches of) grapes.'

Japanese, Inoue 2000:225 [glosses by AC]

#### 1.4.2.4.3 Noun classifiers

Noun classifiers, realised as free morphemes, are a rare type of nominal classification systems with limited distribution in Mesoamerica (Zavala 2000 on Akatek; Craig 1986 on Jacaltec) and Papua New Guinea/Australia (Dixon 1982 on Yidiny). In the Mayan languages which have noun classifiers, these occur alongside numeral classifiers and differ in function and morphosyntactic properties from those. Rather than for quantification they are mainly used anaphorically (31) or as

determiners (32). Noun classifiers in Mexican languages are generally more grammaticalised than their Australian counterparts (cf. Wilkins 2000 on Arrernte).

- (31) *xil naj no7*  
saw CL(man) CL(animal)  
'He (man non-kin) saw it (animal).'  
Jacaltec, Craig 1986:264

- (32) *xil naj xuwan no7 lab'a*  
Saw CL(man) John CL(animal) snake  
'(man) John saw the (animal) snake.'  
Jacaltec, Craig 1986:264

#### 1.4.2.4.4 Genitive classifiers

Genitive classifiers (also known alternatively under the label possessive classifiers) can be found in Micronesian and other Austroasiatic languages. They appear mainly in possessive constructions (33) and (34).

- (33) *kene-i mwenge*  
CL (edible)-GEN/1 food  
'my food'  
Ponapean, Rehg 1981:184 [in Grinevald 2000:66]

- (34) *were-i pwoht*  
CL (transport)-GEN/1 boat  
'my boat'  
Ponapean, Rehg 1981:184 [in Grinevald 2000:66]

#### 1.4.2.4.5 Verbal classifiers

Verbal classifiers are a typologically very rare phenomenon. Some instances are reported for North-American and Australian languages. Here, morphemes incorporated into the verb classify nominal arguments of that verb according to semantic criteria of the argument (35) and (36).

- (35) *Skitú*     *ake'-trəht-áɛ'*  
skidoo     I-vehicle-have

'I have a skidoo'

Cayuga, Mithun 1986:388

- (36) *So:wá:s*     *akh-náhskw-aɛ'*  
dog             I-domestic animal-have

'I have a dog.'

Cayuga, Mithun 1986:387

#### 1.4.2.4.6 Gender/Noun class

The terms 'noun class' and 'gender' are often used synonymously<sup>37</sup>, though the term gender is traditionally associated with small systems where sex-based distinctions are relevant for nominal classification, with the Indoeuropean masculine/feminine/neuter style systems as prototypical representation. In contrast, noun class is rather used for 'nature-based' (Heine 1982:190) systems with a large noun class inventory often associated with the noun classification systems of the Bantu languages. In this thesis I use the term 'noun class'. It is generally held that in a gender or noun class language every noun has to belong to a gender or noun class. The nouns themselves do not always have overt noun class markers – in these cases

---

<sup>37</sup> Aikhenvald (2003) uses 'noun class' throughout, (Corbett 1991) uses 'gender' throughout.

gender is a covert category – but always trigger agreement on verbs, adjectives, numerals, pronouns, genitive or possessive particles or whatever the agreeing categories of a language are.

In Corbett's (1991:150ff) terminology 'target gender' (agreement markers) refers to the agreement class of the dependent item, as opposed to the 'controller gender', which refers to the class marking on the noun. Noun class markers and agreement markers can be identical (or 'alliterative') or differ formally (in this case they are 'non-alliterative'). Often, gender or noun class is defined as a primarily syntactical phenomenon of feature matching manifest through agreement markers on dependent elements. Noun class systems are essentially treated as somehow larger specimen of the European type gender systems, with number and agreement as major functions, and defined on the basis of the better-researched Bantu systems. As a result the derivational functions and to some extent the semantic content of noun class markers tend to be either denied or downplayed to traces or exceptions.

### **1.4.3 Of roots and paradigms**

The area of noun class semantics is an important component of this thesis, though my analysis differs in two fundamental points from the approaches based on the establishment of semantic networks of single noun classes cited above. My central assumption is that noun class, number and syntactic category are not only manifested but assigned by noun class morphology, which presupposes that in cases where this applies these features are expressed compositionally by the root and noun class morphology. Most importantly, my level of analysis is the noun class paradigm, i.e. the clusters of nouns made up by single units, pairs or triads which

define the number values (singular, count plural, unlimited plural) and other related configurational properties of a noun (boundedness, dividedness)<sup>38</sup>. The single noun class prefixes are certainly the building blocks of a noun class system but I have reason to believe that in Gubëeher, and possibly in other languages too, the basic unit which carries semantic information is the paradigm. The paradigm approach is built on these conceptions and shares the underlying theoretical conceptions, but introduces another level of analysis, which is believed to be more inclusive and to have greater explanatory power (1.4.3). Just as atoms are the building blocks of matter, bonding in various fashions to form complex molecules, the noun class prefixes combine to form paradigms. Stretching the metaphor a little further, it is of little explanatory value if one tries to explain the properties of matter, to know that a substance contains for example hydrogen and carbon atoms – an information that pertains to thousands of substances with widely differing properties – without knowing which kind of bonds and molecules are formed by these atoms. Likewise, the paradigm has much more explanatory power than the isolate noun class prefixes concerning the semantic properties of the nouns and verbal nouns derived with noun class morphology.

This approach is fundamentally constructional, which means that singular-plural paradigms are considered as morphological frames with some amount of semantic autonomy into which roots can be inserted. Noun class is not understood as morphological manifestation of lexical features of the noun, which can then be arranged into number-paradigms. Rather, nouns are conceived of as the outcome of

---

<sup>38</sup> The terminology pertaining to configurational properties of entities is based on Croft (1990). The concepts expressed by these terms and their relation to noun class paradigms and number marking in Gubëeher are explained in section 1.4.3.3 and its subsections.

the insertion of root into paradigms and their meaning is composed partly of semantics of the root and partly of semantics of the paradigm.

From a paradigm perspective, whether the Gubëeher noun class prefixes *ba-* in (37) are ‘the same’ or related and highly polysemous noun class markers, which mark very distinct items such as tubers small thing, properties, plants and whether they are singular or a plural prefixes or not is simply a non-issue when it comes to determining the semantic load of a noun class system, since the noun class marker is not the appropriate level of analysis. The question whether roots and prefixes are better characterised as polysemous, vague or ambiguous<sup>39</sup> is an altogether different issue which can ultimately only be solved empirically through psycholinguistic experiments (cf. 1.4.3.4).

- (37) a) *ba-taata* ‘sweet potatoes (unlimited plural)’  
b) *ba-xon* ‘ronier palm (singular)’  
c) *ba-goori* ‘cowrie shells (unlimited plural)’  
d) *ba-rahi* ‘black (property)’

A consideration of the paradigms reveals that the prefix *ba-* in the above examples is part of four different paradigms, whose semantic predictability is much higher than that of the prefix. The paradigm *bu-/i-/ba-*<sup>40</sup> which the noun *ba-taata* of example (37) belongs to, is clearly associated with tubers and within it, the prefix *ba-* denotes the unlimited plural. The noun *ba-xon* of (37) has the corresponding plural *ba-xon-onj*; *ba-* is here part of a paradigm where the noun class prefix does encode a singular-plural distinction and which does not seem to be semantically coherent. The noun *ba-goori* of (37) is part of the *gu-/ha-/ba-* paradigm which contains many nouns for grains, kernels and other organic bits, here to the prefix *ba-* marks the unlimited

---

<sup>39</sup>Following Tuggy's (2006) model, I assume that polysemy is a prototypical notion occupying the middle grounds of a cline at whose endpoints are situated vagueness and ambiguity.

<sup>40</sup>The prefixes of a paradigm are ordered as follows: singular/count plural/plural for triadic paradigms and singular/plural for paired paradigms.

plural. The *ba-* of *ba-rahi* in (37) is an example of a one-class paradigm which is regularly used to derive property nouns from roots denoting states.

In Rosch's terms, the paradigms have a higher 'cue validity (Rosch and Mervis 1975)<sup>41</sup> than the isolated noun classes. The 'cue validity' applied to a category measures the probability that an item with certain attributes belongs to a specific category. Since the noun class paradigm includes the level of single noun class marker – which the paradigms are composed of – much can be gained from choosing the more inclusive level, i.e. the paradigm as the analytic basis in order to incorporate the mechanisms of semantic classification it conveys.

Neither the constructional perspective on noun class systems, entailing the autonomy of noun class morphology and the unspecificity of roots, nor the focus on the paradigm is new. It has repeatedly been remarked in the literature on noun class languages that aspects of the systems are better analysed from a paradigmatic point of view and that some aspects of semantics conveyed by the noun class systems lie outside the scope of the single prefixes but on the level of the paradigm. This being said, I know of no analysis of a noun class system which combines the two approaches and strictly pursues a paradigmatic approach, consequently locating semantic and derivational properties of noun class morphology to paradigms instead of to isolated noun class prefixes.

Pozdniakov (2009) fully embraces a paradigmatic perspective, not only in order to make it a priority to first describe the system as exactly as possible avoiding to establish or apply strong theoretical convictions or conventions from specific research traditions, which can be neither proven nor disproven at this point.

---

<sup>41</sup> Cue validity is highest the more homogenous the class is and the more distinct it is from other categories in terms of its members attributes. If e.g. in a noun class language all fruits belong to only one class and this class contains only nouns denoting fruit it would have maximum cue validity.

L'élaboration d'une typologie des classes nominales peut s'appuyer dans un premier temps sur une description de chaque paradigme lié à la classification nominale, un inventaire de ces paradigmes, puis la mise en évidence d'une échelle allant des paradigmes les plus liés entre eux aux paradigmes les moins liés entre eux. On comprend que c'est le seul moyen pour dépasser les divergences d'approches dans la description des classes/genres, alors réduites à de simples problèmes terminologiques, et pour se concentrer sur la nature des paramètres essentiels pour une classification typologique<sup>42</sup>(Pozdniakov 2009:95).

Once stable paradigms are established they provide an additional dimension according to which a root can be classified, and allow for categorisation according to multiple criteria in the case of 'crossed paradigms'. Pozdniakov (2009) gives the example of the noun for 'old person' in the language Temne, which is marked in the singular by a noun class morpheme belonging to a paradigm with the meaning PERSON and in the plural by a noun class morpheme belonging to a paradigm with a strong semantic connotation of COLLECTIVE in the plural. According to Pozdniakov (2009) the paradigm-based approach should be accompanied by an attitude towards avoiding a fixation on syntactic properties such as considering agreement the only or most important criterion for noun class status, and also towards avoiding the postulation of 'exceptions'. The concept of exception presupposes an idealised original condition of the system 'reconstructed' on the basis of artificially established necessary and sufficient criteria.

Mufwene (1980) raises awareness of the derivational functions of the noun class systems of Bantu languages and speculates openly whether noun classes are

---

<sup>42</sup> The elaboration of a noun class typology could be based initially on a description of each paradigm used for nominal classification, an inventory of these paradigms, further an elaboration of a scale going from the paradigms which are most interconnected to those that are less. It is understandable that this is the only way to avoid the conflicting approaches in the description of classes/genders, although reduced to the level of simple terminological problems, in order to concentrate on the parameters which are essential for a typological classification [translation AC].

autonomous devices with constant meanings, which serve to ‘actualise’ a noun (cf. Mufwene (1980:250ff)) i.e. provide an unspecified stem with its specific meaning. In the same vein, but applied to syntactic categories, Kihm (2000) and Ferrari-Bridgers (2008) both conceive of noun class markers in Manjaku and Luganda respectively as nominalisers of semantically and categorially unspecified roots. Discussing data from Southern Bantu languages, Hendrikse (2001) locates several semantic properties from the domain of number and configuration at the paradigm level.

In the following sections data and hypotheses regarding the assumed unspecificity of roots in the areas of semantics, syntactic category and number will be presented, followed by a summary including a comment on the polysemous vs. vague status of roots in Gubëeher and the limitations of the approach pursued in this thesis regarding inferences on the psychological reality of paradigms and paradigmatic networks.

#### ***1.4.3.1 Semantic aspects of unspecificity***

In a scenario where each root only appears with one noun class paradigm, the separation of root semantics and paradigm semantics would of course remain an abstract endeavour and there would be little reason to pursue a constructional approach. In the case of Gubëeher though, many roots appear in more than one paradigm, forming paradigmatic networks, and even in different syntactic frames. In both cases, no additional derivational morphology is involved and the resulting nouns in the various paradigms differ only in terms of the noun class prefixes they carry. This phenomenon has been described under various labels for other noun class languages: Mufwene (1980) uses the term ‘derivation’, Crisma, Marten, and

Sybesma (2011) speak of ‘class shift’ and Hendrikse (2001) of ‘class mobility’. These instances of multiply assigned roots allow the recognition of systematic correspondences between specific paradigms and specific semantic components of the nouns they derive from a root. It is this systematic usage of paradigms which shall serve to discern the semantic basis of noun class paradigms. In Table (22), the semantic network of a root from the botanical domain, where paradigms are used in a highly systematic way is provided as an example. The data shows how the meaning of the nouns derived from the root *moot* is compositionally achieved: the root *moot* itself, which is shared by all of the nouns derived from it and therefore is best regarded as semantically less specified than the nouns it forms in combination with the noun class paradigms, refers to the species ‘cotton tree’. The semantic components STRING/TREE/ORGANIC MATERIAL are specified by the noun class paradigms.

Table (22) *The root ‘moot’ and its paradigmatic network*

NC paradigm	Prefix	Root	Semantic contribution of noun class marker	Meaning of noun
<i>si-/mun-</i>	<i>si-</i>	<i>moot</i>	TREE:SG.	‘cotton tree’
	<i>mum-</i>		TREE:PL.	‘cotton trees’
<i>sin-/ñan-</i>	<i>sim-</i>		STRING:SG.	‘cotton thread’
	<i>ñam-</i>		STRING:PL.	‘cotton thread’
<i>ja-</i>	<i>ja-</i>		ORGANIC MATERIAL :COLL	‘cotton’

These semantic contributions of the noun class paradigms to the meaning of the resulting nouns must be transparent for the speakers of the language, since these paradigms are, among others, systematically used in the botanical domain for the derivation of plants and plant parts (see 3.1.7.1). Of course, the degree of flexibility

to appear in various paradigm of a root can differ greatly from root to root. For a discussion of the psychological reality of these paradigms see section 1.4.3.4.

#### **1.4.3.2 Syntactic unspecification of roots in Gubëeher**

In the following section I will discuss the option that noun classification can be understood as derivational or even compositional not only in a semantic but also in a syntactic sense. As has been remarked by several authors (Mufwene 1980; Grinevald and Seifart 2004; Pozdniakov 2009), the derivational properties of noun class systems are, in view of the large amount of research that has been conducted on Bantu languages and their noun class system, poorly represented in the literature. One of the most detailed monographs on nominal classification systems (Aikhenvald 2003) does not mention the derivational function of noun class systems at all, which shows that the phenomenon is often considered as marginal or even irrelevant for noun class languages as claimed by Dixon (1982). The absence of category-changing derivational morphology, i.e. of morphemes which derive verbs from nouns, nouns from verbs or adjectives, is conspicuous in Gubëeher. Neither of the forms in Table (23) is marked by specifically derivational morphology in respect to the others, which makes it difficult if not impossible to determine a direction of derivation e.g. from noun to verb or vice versa. Unless proven otherwise, it is therefore justified to consider them all as unmarked and derived from a root which is not specified for category, at least for those roots exhibiting this kind of category-flexibility. The root *ceen* in Table (23) for example can be derived with the noun class marker *ba-* to a property/colour term, it can be inserted into a verbal frame acquiring a stative or state-changing meaning, or it can be used adjectively, prefixed with an agreement marker modifying a noun phrase.

Table (23) *The root ceen in different syntactic frames (Agreement establishing morphology in bold face)*

Root	Category	Gloss	Example
<i>ceen</i>	(Property) noun	'redness/ colour red'	<i>ba-ceen</i> <b>CL.ba-red</b> 'redness'
	Infinitive	'redden'	<i>bu-ceen g-a-raad-i</i> <b>CL.bu-red FOCOBJ-3-AUX-PERF</b> 'It is reddening.'
	Verb	'be red'	<i>a-ceen-i</i> <b>3-red-PERF</b> 'It is red/it has become red'
	Adjective	'red'	<i>gu-sol gu-ceen</i> <b>CL.gu-shirt AGR.gu-red</b> 'red shirt'

#### 1.4.3.2.1 The conversion discussion

I will briefly sum up the discussion surrounding the categoriality of roots in connection to the common practise of conversion in English, which has, as I will then show, parallels to Gubëeher, before discussing data from Gubëeher and hypotheses concerning unspecified roots in other noun class languages. Marantz (1997); Barner and Bale (2002) and Farrell (2001) advocate an underspecification<sup>43</sup> approach for English noun/verb conversions<sup>44</sup>, i.e. the assumption that categories such as noun and verb are not specified in the lexicon and that conversion is essentially the insertion of unspecified roots into different syntactic frames rather than zero-marked derivation of items of one category into another. Accordingly, the lexicon is not considered as differentiated from syntax, and meaning is the result of the insertion of roots into syntax, which happens in the same way as phrases are

<sup>43</sup> I do not adopt the term **underspecification** as it implies that something is supposed to be specified at all. I will either use the more neutral term 'unspecified' or when it cannot be avoided (for example in the label 'underspecification hypothesis') put it in scare quotes.

<sup>44</sup> The strategy of conversion is extremely productive in English, Clark and Clark have compiled a database of 1300 noun-verb conversions.

inserted into syntax (Barner and Bale 2002). This is directly opposed to a lexicalist view (cf. Don 2004; Kiparsky 1982) which states that roots are indeed specified for category and that conversion is an instance of category-changing derivation. The lexicon is treated as different from the syntax and principles of word formation are seen as different from syntactic processes. The fact that not every root can *ad libitum* be inserted into every kind of syntactic frame is refuted as a counter-argument to ‘underspecification’ by Barner and Bale (2002) on the grounds that this is not a problem of grammar, since certain forms might be unacceptable but not necessarily ungrammatical – acceptability depends largely on context and stylistic conventions. They also remark that the problem cannot be solved with a lexicalist theoretical framework either, since no constraints on conversion could be provided so far. E. V. Clark and Clark (1979) agree that as long as an appropriate context is provided, conversion can be used very creatively and the resulting forms will be understood. Štekauer (2006) goes even further in proving that even ‘context-free novel converted units’ have some degree of semantic predictability.

#### 1.4.3.2.2 Conversion in noun class languages

If the high productivity of conversion between noun and verbs incites theoretical disputes in the case of English, probably the best described language of the world, which still has a fair amount of category-changing derivational morphology, I hope it is understandable that I will not even try to make any final statements concerning categoriality in Gubëeher. A major aggravating circumstance is that Gubëeher and all closely related languages, are not at all or only rudimentarily described, especially when it comes to syntactic issues. The Bak languages (including the Joola and the Manjaku clusters) have similar derivational characteristics, but description

of these languages, though well under way by now, still has gaps and the description of derivational features of the noun class system is clearly one of those.

To say that conversion in Gubëeher is productive is an understatement: considering the scarcity of derivation-specific morphology whatsoever, derivation is handled almost *exclusively* by insertion into category specific syntactic frames, such as noun class and agreement paradigms and verb morphology. In this context, I will discuss two approaches that consider roots as acategorical and noun class morphology as category establishing, i.e. deriving nouns from categorially unspecified roots. Ferrari-Bridgers' (2008) analysis of the Luganda noun class system and Kihm's (2000) account of nominal classification in Manjaku are built on these premises. Kihm's (2000) analysis of the Bak-language Manjaku is framed in the terminology of Distributed Morphology (DM)<sup>45</sup> and focuses on the derivational properties of noun class markers. In her account of the Bantu language Luganda, Ferrari-Bridgers (2008) also builds on the derivational properties of noun class markers to argue that noun classes are not only classifying nouns but deriving nouns. Both authors assume that noun class markers are 'nominaliser heads' with semantic content which derive nouns from nominal or verbal stems (Ferrari-Bridgers 2008) or from unspecified roots (Kihm 2000).

Kihm stipulates that noun class markers in Manjaku are roots themselves, so called "proto-nouns" whose prime function is noun formation. Noun class assignment of a root is hereby regarded as an instance of composition. The root *lik* he gives as an example (see Table (24)) is described as expressing a general notion

---

<sup>45</sup> "As already indicated, one of the basic tenets of DM is that the lexicon consists in roots which lack category as well as a phonological form, and that may be semantically underspecified to varying degrees (see, e.g., Marantz 1997). Roots acquire a category by being inserted in particular syntactic configurations, thus becoming morphemes; morphemes are associated with phonological features in the vocabulary component of morphology, and may then be called "exponents" [...] (Kihm 2000:11)."

of ‘something to do with water’ which can be inserted into different NC-frames with different specific meanings. It follows that “there can be little doubt that *pë-* is the only element uniquely associated with the meaning ‘well’ in *pë-lik* as compared to *m-lik* ‘water’ and *ka-lik* ‘fruit juice’ [...]. Therefore, *pë-* does not lack descriptive content, and it is a root, as are *m-*, *ka-*, etc. (Kihm 2000:14) ”.

Table (24) *The Manjaku root lik, (Kihm 2000:14)*

NC paradigm	Root	Gloss
<i>pë-/i-</i>	<i>lik</i>	‘well/wells’
<i>m-</i>		‘water’
<i>ka-</i>		‘fruit juice’
/		‘draw water from a well’

The noun class system of Gubëeher is quite similar to the one of Manjaku regarding the derivational and noun-forming properties described by Kihm (2000). The ‘unspecified-root-hypothesis’ is attractive for a treatment of Gubëeher for several reasons. Like English and Manjaku, it is a defining characteristic of Gubëeher that many roots are category-flexible. I do however not claim that all roots of Gubëeher exhibit paradigmatic or category related flexibility. Some roots seem to have a wider scope than others, i.e. they are compatible with a large number of noun class markers and syntactic patterns and are thus more undetermined on the root level, whereas other roots seem to have a rather narrow scope, i.e. are only compatible with few or only one paradigm or syntactic category. A large proportion of roots are compatible with more than one syntactic frame: all verbally used roots can be derived to form verbal nouns by attaching a noun class marker and Kihm’s analysis of noun classification as category-establishing conforms to observations made about the derivational properties of the noun class system of Gubëeher and the status of

roots<sup>46</sup>. The examples from Gubëeher in Table (25) show that the root *lód*, associated with building, is compatible with a large number of noun class prefixes and the meaning of the noun is determined partly by the root and partly by the noun class paradigm. It seems more justified to consider the classification system of Gubëeher a ‘root classification system’ rather than a system that classifies nouns. Nouns are the *result* of the classification and not the target.

Table (25) *The derivational network of the root lód ‘build’*

NC paradigm	Root	Category	Gloss
<i>u-/ñan-</i>	<i>lód</i>	noun	‘potter/builder’
<i>si-/mu’-</i>		noun	‘wall’
<i>a-/a-/bi-</i>		noun	‘potter wasp’
<i>gu-</i>		verbal noun	‘to build (Inf.)’
<i>bu-</i>		verbal noun	‘to build (Inf.)’
<i>(does not apply)</i>		verb stem	‘build’

Despite the non-specificity at the root level, nouns, verbs, and modifiers can be distinguished through syntactic criteria (see 2.3 for a discussion of nominal properties, 2.3.4 for a discussion of adjectival properties and 2.4 for a discussion of verbal properties) A detailed account of the categoriality of verbal nouns in Gubëeher can be found in chapter 4.4.3.

### 1.4.3.3 *The status of number marking*

The issues approached in this section circle around two fundamental questions. First, is number a derivational or an inflectional category? Secondly, what is the semantic relationship between the nouns in a number paradigm? These questions are

<sup>46</sup> However, by ascribing a “poor ability of classification” to the Manjaku noun class system due to its many “inconsistencies”, due to the impossibility of establishing necessary and sufficient criteria which define noun class semantic, Kihm (2000:7) reasons in terms of the classic model of categorisation, which I do not consider as compatible with the properties of the noun class system of Gubëeher.

discussed for Swahili and other Bantu languages by Schadeberg (2001), Crisma, Marten, and Sybesma (2011), and Hendrikse (2001), who have all questioned the inflectional status of number in various Bantu languages. Compare Crisma, Marten, and Sybesma (2011:8) on number in Swahili:

As noted earlier, some classes appear as singular-plural pairs. However, this can be explained as a grammatical-inflectional relationship involving the grammatical category of number, or, alternatively, as a lexical-derivational relationship involving semantic notions of individuals and groups, while in terms of grammatical category, class, rather than number, is the relevant feature.

The authors of the paper therefore question the assumption that number values can be attributed to specific class markers, constituting allomorphs of singular/plural inflection combined with noun class morphology in a portmanteau way which form regular paradigms. The existence of numerous one-class nouns prefixed with noun class markers which mark singular and plural forms respectively with paired nouns, is problematic in this context, since one-class nouns do not distinguish number and an analysis of the prefixes as being specified for singular or plural in these cases is questionable. Taking into account data which exhibits discrepancies between noun class and agreement marking of animates and number marking, Schadeberg (2001) comes to the conclusion that number marking in Swahili is epiphenomenal in relation to noun class marking and can therefore not be considered an inflectional feature. Schadeberg (2001) and Hendrikse (2001) point out another problematic issue conflicting with an analysis of number in Bantu noun class languages as inflectional which is the existence of singular/plural relationships as in example (38), which are considered ‘irregular’ i.e. ‘deviating’ from the singular plural pairings defined as the ‘normal’ paradigms.

- (38) a) *nku* ‘sheep’  
 b) *linku* (sheep)  
 c) *manku* ‘flocks of sheep’

Sotho, Hendrikse 2001:206

Examples like (38) show that the noun class morphology encodes parameters “which are far more complex than a simple singular-plural dichotomy” (Hendrikse 2001:205) and which can be shown to be encoded on the level of the paradigm and not of the single noun class prefix, which again contradicts an analysis of number in terms of inflectional category conveyed by isolated noun class prefixes. All of the addressed issues causing problems for an inflectional analysis of number in Bantu languages, are also relevant for Gubëeher, even more so considering that Gubëeher has two mechanisms of plural marking (prefixing and suffixing) as opposed to one in Bantu languages and has a productive three way number distinction as opposed to the (at least traditionally assumed) two way distinction of Bantu. It is obvious that in Gubëeher the number value a prefix assigns to a root depends on the type of paradigm it is part of and its place within the paradigm. Compare also Kihm (2000:8) on the use of class prefixes in the count/non-count opposition in Manjaku:

Take ‘fingers’, for instance: if the plural refers to a discrete number of fingers that does not usually exceed ten, i.e. the normal number a human being is endowed with, then it is expressed in noun class 10 (e.g., *kë-konj kë-wants* ‘three fingers’) if it refers to an unknown and/or indefinite number, generic interpretation (fingers in general) included, it is expressed in noun class 8 (*i-konj* ‘fingers’). This shows, at the very least, how inadequate it is to consider 8 as simply being “the plural” of 7. Not only can it be paired with other noun classes (9 and also 5 – see *bë-rëk / i-rëk* ‘river(s)’), but its precise meaning depends on the root it is merged with, since *i-to*, for instance, in contrast with *i-konj*, refers to any plurality of houses.

The existence of one-class paradigms, number distinctions beyond simple singular-plural dichotomies, including configurational features such as mass, collectivity, boundedness etc. make an inflectional account of number marking problematic for Gubëeher and suggest a paradigmatic approach towards number. Before proceeding to a theoretical discussion of the status of number drawing on the elaborations of Hendrikse (2001:205) in section 1.4.3.3.2, an overview of number marking in Gubëeher is provided in section 1.4.3.3.1.

#### 1.4.3.3.1 Number marking in Gubëeher

Gubëeher employs two strategies of number marking: For those nouns which are purely prefixed, i.e. prefixed in singular and plural, number is encoded by way of the prefixes, though not independently of noun class as in (39) and (40).

- |      |               |      |                |
|------|---------------|------|----------------|
| (39) | <i>si-lód</i> | (40) | <i>mu'-lód</i> |
|      | CL.si-wall    |      | CL.mun-wall    |
|      | 'wall'        |      | 'walls'        |

Apart from the singular/plural pairs, countable entities do also occur in triads with up to two plural forms, especially in the domains of plants, fruits, animals and among those all insects, as well as some other small items which often occur in large numbers, as shown in examples (41) – (43).

- (41) a) *gu-fudd* 'grain of maize' (singular)  
 b) *ha-fudd* 'grains of maize' (count plural)  
 c) *ba-fudd* 'maize' (substance/unlimited plural)
- (42) a) *gu-lihan* 'stick' (singular)  
 b) *ha-lihan* 'sticks (count plural)  
 c) *ja-lihan* 'wood (substance)/sticks (unlimited plural)'

- (43) a) *bu-maŋgu* ‘mango’ (singular)  
 b) *i-maŋgu* ‘mangos (count plural)’  
 c) *di-maŋgu* ‘mangos (unlimited plural)’

The count vs. unlimited plural distinction clearly requires further research, as the analysis of the exact function of these forms is so far only in its beginnings. The ‘count’ plural has got its name from the fact that it is the form mainly used when counting items, though it has not been determined whether there is a quantitative limit up to which number the count plural can or has to be used. In elicitation, numbers lower than five have always been used. These count-plural forms however do indeed express a ‘limited’ plural, when not modified by a numeral, the interpretation in this case is that of ‘some items of X’. Examples (44) and (45), both featuring count plurals, were obtained as translations of the French clauses ‘donne-moi quelques mangues’ et ‘donne-moi quelques bâtons’ respectively.

- (44) *u-ně'-t-ëm*                      *i-maŋgu*  
 2-give-VEN-1SGOBJ              CL.i-mango  
 ‘Give me some mangos’  
 KC, field notes

- (45) *u-ně'-t-ëm*                      *ha-lihan*  
 2-give-VEN-1SGOBJ              CL.ha-stick  
 ‘Give me some sticks.’  
 KC, field notes

The co-members of paradigms are unmarked in relation to each other, which makes it impossible to assume any one member of a pair or triad as basic and the others as derived on purely formal grounds. Instead it seems more adequate to consider them all as equipollent for lack of evidence or, possibly, resort to semantic criteria like

markedness in terms of frequency of usage and representability (which form is provided as citation form) in order to make this distinction in Gubëeher. This approach would require an exact and specific methodology, which is why it cannot be accomplished with the data at hand, as it cannot be excluded that ‘citation forms’ provided by consultants for Gubëeher are not to some extent translation equivalents of forms with similar extensions in French.

For those nouns which are not purely prefixed, but express plurality through suffixation of the morpheme - *Vŋ* as shown in (46) the singular is unmarked relative to the plural – if any prefixed class marker is present, it is the same for singular and plural stems and does therefore not make any number distinctions.

- |      |    |               |    |                  |
|------|----|---------------|----|------------------|
| (46) | a) | <i>ba-xon</i> | b) | <i>ba-xon-oŋ</i> |
|      |    | CL.ba-ronier  |    | CL.ba-ronier-Pl  |
|      |    | ‘ronier’      |    | ‘roniers’        |

The main function of the plural suffix is number marking, i.e. it is independent of class and agreement marking. Nouns with plural suffixes constitute about a fifth of the nouns in Gubëeher. The presence of a morpheme purely marking number outside of the noun class system makes the inflectional character of number marking through noun class prefixes even more doubtful than in Bantu.

The plural suffix, besides its function as a default plural for prefixless loans, also has semantic connotations. It occurs frequently with animate nouns and preliminary evidence points to a collective semantic (see this section below concerning human collectives, section 3.1.7.2.2 for associatives and Table (148) in section 3.1.7.1 for its use for collectives of trees). This transpires when a closer look at the various ways of forming plurals from human nouns is taken.

A large proportion of nouns pluralised via suffixation are animate, including humans, animals and supernatural beings. This is shown in the lists of suffixed paradigms in sections 3.1.3 – 3.1.5, and in section 4.3.1.1 on the derivation of human nouns with the *ji*-paradigm and suffixed plural. More than half of the nouns with a plural suffix in the dictionary are animate (110/203), whereas the overall proportion of animate nouns is only about a fifth (213/1100). The proportion of animate nouns in the suffixed paradigms is therefore much higher than the overall distribution leads to expect.

The pluralisation of some human nouns, all prefixed with *u-* in the singular, exhibits some particularities in pluralisation which point to further quantity distinctions (Table (26). Two items (*wol* ‘child’, and *uraaf* ‘person’) have suppletive plurals, whereas the noun *u-lamba* ‘boy’ pluralises by prefixing *e-*, which is not attested elsewhere on countable nouns, but on some roots referring to ethnic categories (Table (158). The remainder have doubly marked plurals, by prefix and suffix.

Table (26) *Multiply marked plurals and alternative paradigm with human terms*

Gloss	Singular	Prefix plural	Prefix and suffixed plural	Suppletive Plurals
'different sex sibling'	<i>u-lina</i>	?	<i>a-lina-ŋ</i>	
'same sex sibling'	<i>u-dëën</i>	?	<i>in-dëën-eŋ</i>	
'friend'	<i>u-diin</i>	?	<i>in-diin-eŋ</i>	
'friend'	<i>u-ñam</i>	<i>ñan-ñam</i>	<i>in-ñam-aŋ</i>	
'woman'	<i>u-dikaam</i> ( <i>bu-dikaam</i> )	<i>in-dikaam</i>	<i>in-dikaam-aŋ</i>	
'child'	<i>wol</i>			<i>jaraax</i>
'person'	<i>u-raaf</i>			<i>jamaaŋ</i> <sup>47</sup>
'boy'	<i>u-lamba</i>	<i>e-lamba</i>		

At least for the plurals of *udikaam* 'woman/wife', the context the forms occur in suggest that the prefixed plural *in-dikaam* is used as a count plural (47) and the double-marked plural *in-dikaam-aŋ* as a collective plural (48), designating a **group** of women or wives. In the folk tale in which these forms have been encountered these are the wives of the rabbit and the wives of the hyena (48).

- (47) *a-mu-t-ot*            *u-diigén*    *u-ruk*            *a-jax-ot*            *in-dikaam*            *in-naak*  
 3-exist-VEN-INACT    CL.u-man    AGR.u-some    3-take-INACT    CL.in-woman    AGR.in-two

'(Once upon a time) there was a man, he had married two women.'

BS, DJI101010AC2

- (48) *in-dikaam-aŋ*            *ka*            *ko-bor*            *a-yen*    *i*            *mundum*  
 CL.in-woman-PL    CONN    CL.ko-rabbit    3-say    AGR.in:CONN    hyena

'The wives of rabbit say to the ones of hyena...'

LM, DJI240211AC2

<sup>47</sup> This is probably a Mandinka loan – *jámáa* 'crowd' (Creissels, ms.).

Comparable data is not available for the other items in question, but double marking has been encountered on other animate nouns too, cf. the ‘bird’ triad *bu-puul/i-puul/ja-puul* whose unlimited plural bearing the prefix *ja-* can be further suffixed with the plural morpheme to yield the form *ja-puul-oŋ*. The semantic difference between *ja-puul* and *ja-puul-oŋ* has not been conclusively discerned yet, but consultants point out that these items are not synonymous. The preliminary hypothesis points towards a sortal (e.g. types of birds) or collective (e.g. flocks of birds) semantics of the double-marked form *ja-puul-oŋ*. Some speakers would occasionally use the plural prefix on a plural diminutive (51), although the more canonical plural form is only prefixed (50). Since these double-marked examples are marginal and not accepted as grammatical by most speakers, not much in detail can be said about these double pluralised forms. Whether a collective reading, like ‘groups of little goats’ can be applied to (51) has to be determined.

(49)	<i>ko-feebi</i>	(50)	<i>ño-feebi</i>	(51)	<i>ño-feebi-eŋ</i>
	CL.ko-goat		CL.ño-goat		CL.ño-goat-PL
	‘little goat’		‘little goats’		‘little goats’

The functions of the suffixed plurals need to be further researched, as well as its relationship to the prefixed number marking.

A large number of non-countable nouns occur as ‘one-class nouns’ i.e. abstract nouns, mass nouns or verbal nouns all of which do not distinguish number. Almost all noun class markers can occur in one-class paradigms. A noun like *gu-leñ* ‘blood’ is neither singular nor plural, so referring to *gu-* as a singular class marker makes only sense for items that occur in paired paradigms which actually express a number distinction in the first place.

#### 1.4.3.3.2 The role of the paradigm in number marking

The analysis of noun class markers in Southern Bantu by Hendrikse (2001) acknowledges the importance of a systemic perspective on noun class systems, by considering noun class markers as multidimensional, polysemous categories. ‘Systemically polysemous’ relates to the observation that some of the functions of the noun class system are partly lying outside the scope of the single noun class markers and have to be located on the level of the complete classification system they are part of and the paradigmatic relationships between noun class markers (Hendrikse 2001:197).

A set of dimensional parameters and a set of configurational parameters are claimed to be systematical i.e. conveyed by cluster of noun class markers (Hendrikse 2001:199). The four dimensional parameters, arranged along a continuum from concrete to abstract, are: concreteness, size/form, location in three-dimensional space, and abstraction. The two configurational parameters adopted from Talmy (1988; 2000) are “boundedness” and “dividedness”. Boundedness, with the two values bounded or unbounded, specifies in relation to nouns whether the entity is construed as having boundaries limiting it in its extension in which case it is bounded, or whether its extension is not limited by boundaries. As examples for boundedness Talmy (2000:51) provides the bounded noun ‘sea’, contrasting with the unbounded noun ‘water’. Dividedness is defined by “a quantity’s internal segmentation. A quantity is composite or (internally) discrete if it is conceptualized as having breaks, or interruptions, [...]. Otherwise the quantity is conceptualized as (internally) continuous” (Talmy 2000:55). As examples for dividedness, ‘timber’ or ‘furniture’ are given as composite, and again ‘water’ as continuous. The one-versus-many or basic singular/plural distinction is labelled “plexity” by Talmy (2000:48),

singular items being “uniplex” and plural items “multiplex”. Hendrikse's (2001) central hypothesis is that noun class markers do not only classify nouns with respect to semantic domains but also with respect to these dimensional/configurational parameters. These however are not conveyed by single class markers but by clusters of several noun class markers, which all convey e.g. the notion of ‘large size’ or ‘boundedness’.

The systematic aspect of the noun class system is exemplified with an item undergoing ‘class mobility’, i.e the use of one ‘noun’ with several noun classes or class pairs (in my terminology root and paradigm), engendering a change of meaning (52). It is intended to show how the noun class prefixes not only contribute their individual semantic contribution ‘thing’, ‘person’ etc. but also the more abstract notions concreteness through classes *mu-* and *ci-* in (52) respectively, location through classes *pa-* and *ku-* in (52) respectively, and abstractness through class *hu-* in (52).

- (52) a) *mu-nhu* ‘person’  
b) *ci-nhu* ‘thing’  
c) *pa-nhu* ‘at a place’  
d) *ku-nhu* ‘round a place [sic]’  
e) *hu-nhu* ‘humanness’

Shona, Hendrikse 2001:203

This stance coincides in several ways with my assumptions of noun class in Gubëeher as described in section 1.4.3.3.1. As I will proceed to demonstrate below, the noun class paradigms of Gubëeher not only assign values for plexity, but can also characterise entities according to the parameters boundedness and dividedness encoded either in paradigm or in the type of paradigm (triadic/paired/one-class) – the systemic aspect of noun classification evoked by Hendrikse (2001). The role of

the paradigm in assigning configurational information is obvious: One class paradigms characterise a noun as non-countable, such as an abstract notion, a substance or a mass. Paired paradigms identify a noun as countable and triads as countable and usually occurring in large amounts, which warrants a distinction between a count plural used for limited numbers and an unlimited plural. Example (42), here repeated for convenience as (53) shows how the noun class paradigm not only derives nouns specified for values of plexity, but that it can also convey configurational parameters. The form *ja-lihan* in (53) is part of a triad denoting the unlimited plural ‘sticks’ of *gu-lihan/ha-lihan*, but it can also be read as it would as substance denoting meaning ‘wood’, which clearly has a different semantic relationship to the singular and count plural forms *gulihan* and *halihan*, assumed to form a paradigm with *jalihan*, than its unlimited reading.

- (53) a) *gu-lihan* ‘stick’ (singular)  
 b) *ha-lihan* ‘sticks (count plural)’  
 c) *ja-lihan* ‘wood (substance)/sticks (unlimited plural)’

Even more instructive for a demonstration of the correlations between paradigm type (one-class, paired or triadic, with the additional parameter of the suffixed plural) and configuration- and number-relevant semantics is the paradigmatic network of *rac* ‘mangrove’ in Table (27). When referring to countable instances of single plants a paired paradigm is employed (*si-/mun-*), when referring to the fruits, which are small and usually occur in large numbers, a triad (*gu-/ha-/ba-*) is used, a mangrove bush which is a spatially bounded collection of several single mangrove plants is in the one-class paradigm *bu-* and the unbounded types of ‘mangrove groves’ are conveyed by one-class paradigms with suffixed plurals. The *ja-*form is ambiguous between a substance reading ‘mangrove wood’ and the unlimited plural

of the *gu-/ha-/ja*-paradigm which systematically refers to organic bits such as leaves, sticks or roots of plants additional to the information about the semantic domain. It can hardly be denied that the type of paradigm conveys the information about the configuration of the entity.

Table (27) *The paradigmatic network of the root rac*

NC paradigm	Root	Plural suffix	Meaning
<i>si-/ mu'-</i>	<i>rac</i>	/	'mangrove plant'
<i>gu-/ ha-/ ba-</i>			'mangrove fruit'
<i>bu-</i>			'mangrove bush'
<i>ja-</i>			'(sticks of) mangrove wood'
<i>ba-</i>		-aŋ	'mangrove grove'
<i>ja-</i>		-aŋ	'grove of little mangrove trees'

The assignment to a specific paradigm can thus contribute to the construal of an entity as discrete, bounded, mass or substance. This means that the root is in these cases unspecified for these properties, and that it can be construed in different ways by way of choice of a paradigm type. To give another example, the noun *kuul* which in its standard use refers to the unbounded element 'fire' can also be construed as the bounded concept of 'instance of fire' which is countable and has a suffixed plural *kuul-oŋ* (54) (as in 'two fires are burning behind the house').

- (54) *kuul-oŋ*      *kun-naak-aŋ*  
 fire-PL      AGR.kun-two-PL  
 'two fires'  
 LM, telephone

Likewise the unbounded element *ba-rux* 'water' can also be construed as referring to countable portions of water by suffixing the plural suffix (55).

(55) *u-babb-ēlahiin*      *ba-rux-oŋ*  
 2-be.same-DER      CL.ba-water-PL

‘You mix the (portions of) water.’

LM, field notes

The one-class paradigm *ho-* is in fact specialised in construing continuous and unbounded entities as bounded by deriving nouns referring to portions or limited amounts of a substance: Cf. *mind* ‘milk’ and *ho-mind* ‘some milk’; *barux* ‘water’ and *ho-rux* ‘some water’; *ba-geec* ‘hibiscus sauce’ and *ho-geec* ‘a portion of/some hibiscus sauce’ (see also Table (163) in section 3.1.7.4).

The fundamental difference between Hendrikse’s and my approach is that he does not consider the number paradigms as the analytical basic unit. Although he calls for a focus on the noun class paradigm, Hendrikse does not question the normative character of either the established, normalised singular-plural paradigms here referred to as “basic category” (Hendrikse 2001:203). They are, as common in Bantuist studies, taken for granted. All other stem-paradigm combinations are considered as being derived from it, perceived as irregular.

#### **1.4.3.4 *The status of unspecification, polysemy and vagueness***

The description of some roots of Gubēeher as ‘unspecified’ for noun class paradigm, category or number concerns those which are compatible with multiple frames and reflects the fact that in cases where roots are compatible with multiple paradigms or syntactic frames, the meaning or category of the resulting noun is compositionally achieved by combining semantic properties of the root and the properties of the noun class paradigm or syntactic frame. Neither a specific meaning, or syntactic category nor quantity type can be attributed to these roots since these features are

partly conveyed by the construction they appear in. The term unspecification as used here is therefore not intended to reflect a view about how these items are stored in the lexicon nor is it intended as a judgment as to how they are stored in the mental lexicon. It is rather a descriptive label arisen through the empirical necessity to describe the system. The question as to whether Gubëeher roots in general are ambiguous, vague or polysemous is a different, though related, one. I do not claim that roots in Gubëeher are any more or less polysemous than for example English roots, which can also be inserted into a variety of contexts and frames with widely differing functions and meanings, whereby the capacity to form polysemous networks and the size of the network are characteristics of the root, depending to some extent on encyclopaedic knowledge and cultural conceptions but also reflect various historical stages. Compare the semantic network of the root ‘paint’ in Tuggy (2006:177) or the different senses of ‘mother’ in Lakoff (1987:74f).

The difference between Gubëeher and the European gender languages is the role of morphological strategies used in relation to the networks formed by schemas and their elaborations. In European languages gender is conceived of as a lexical feature specified for each noun – the distinction of related elaborations of a schema is left to context or specialised morphology, the distinction of syntactic category is left to derivational morphology and the distinction of number is left to specific number morphology, which in some cases interact (cf. the discussion of gender, category and number in Romance by Ferrari-Bridgers (2008) and Crisma, Marten, and Sybesma (2011)), but can be analysed independently. As has been discussed in sections 1.4.3.1 – 1.4.3.3, in a language like Gubëeher, the noun class system, with the basic unit of the paradigm, is not only a tool for assigning gender, but fulfils other functions including specification for number, assigning of category and

distinction of polysemous elaborations of a common scheme represented by a common root- which in European type gender languages tend to be assumed by specialised morphology. Treating noun class as purely lexical feature of nouns as done by Carstens (2008; 1993) eclipses important aspects of nominal classification in noun class languages.

An assessment of the psychological reality of the paradigms, their semantic content and the type of relationships between the paradigms in such a network in terms of homonymy, polysemy, vagueness and the like can only be determined through psycholinguistic tests (Brisard, Van Rillaert, and Sandra 1997; Tuggy 2006), the implementation of which would ideally constitute the next step in research on the noun class system of Gubëeher.

Until then, it can only be speculated which of the paradigmatic networks that have been isolated from a systemic perspective actually form actively used networks in the minds of the speakers they are conscious of, and which ones are merely conventionalised remnants of long inactive diachronic processes. From my experience with the language and the way the speakers use it, I have no doubt that especially some of the systematically used paradigms with very clear semantic connotations are consciously used and manipulated by the speakers and even allow some degree of variation and creativity (most notably in the botanical domain, cf. section 3.1.7.1.1). Ad-hoc formations of nouns, overgeneralisations and the like, which have been observed in actual language use, bear witness to that. Also, from a learner's perspective I have made the observation that despite the formal complexity of the noun class system it is much easier to learn it than to describe it and that experience with the paradigms and the ways they add meaning to roots provides real

clues and aide-memoires, some of which have actually been pointed out to me by speakers themselves.

## 1.5 Methodology

### 1.5.1 Fieldsite and community links

In total I have spent little less than a full year in Djibonker, divided into three field stays. The first fieldtrip took place from October 2009 to February 2010, the second trip from October 2010 to March 2011 and the third trip in February/March 2012. The first approach of the speech community has been made on arrival in Dakar in October 2009 through members of the cultural association of the Bainouk, BOREPAB. Contact with BOREPAB had been established by Friederike Lüpke in the previous year on the occasion of a preliminary field stay in Niamone, collecting data on the Bainouk language Guñaamolo. BOREPAB understood the linguistic research which was to be conducted on Gubëeher as a support of their own codification endeavours, for which they as a non-profit organisation are lacking money and resources. Mr. Emmanuel Sagna, a native of Djibonker, made arrangements in the village with Mr. Edouard Sagna, a politically active retired schoolteacher, who offered me accommodation in his family house during this first and the two subsequent field trips. For the duration of all three fieldtrips I lived exclusively in Djibonker, which I considered necessary for learning the language, as guest of the family Edouard Sagna, establishing personal relationships with the community members and gaining insights into everyday and cultural life in the village. Working in a village where social ties are extremely important (literally everybody knows everybody) made it an issue of prime importance to get and stay

on good terms with the community. This task was greatly facilitated by the people I lived and worked with and who eventually became friends. On my first arrival, an official meet and greet with key members of the community was organised, accompanied by some folkloric and ritual activities, and I had the chance of addressing them in a speech, asking for permission and support for my research in Djibonker. The address of the community on arrival and prior to departure has since become a custom. When the DoBeS project was launched in autumn 2010 five members of each Baïnouk community covered by the DoBeS project (Gubëeher, Guñaamolo, Gujaher) were invited to attend a 2-day seminar on the project goals and the community involvement (including the cultural association BOREPAB), with the mission to pass on the issues discussed during the seminar to their respective village communities. Keeping transparency and community involvement as high as possible has proved very advantageous in avoiding potential conflicts and mistrust. In Djibonker, Edouard Sagna helped me identifying and contacting consultants, some selected for linguistic reasons, some for tactical reasons in order to respect power relations within the community and not to anger generally recognised authorities on language and culture. I could feel that research and learning was perceived as a positive value and the attitude towards me and my project was overwhelmingly benevolent and friendly. At least in my presence, I was rather referred to with affectionate terms, such as *ubëkkënit* ‘our son’ or *ulamba* ‘boy’ rather than *udëëka* ‘stranger/guest’. In order to keep the community interested in my work I have created and diffused some items of cultural relevance, including two calendars (for 2011 and 2012) with the day-names in the Gubëeher 6-days-week and photos of the village and the population which was printed and sold by community members. The calendar was very popular, as the traditional week has a

high cultural significance and it is used to calculate the appropriate days for specific festivities. Furthermore I have used material filmed during the second trip, in February 2011 to cut a medium length film of about 45 minutes of a dance performance by the dance troupe 'Buronken Jasulor' which has been made available for diffusion to the members of the troupe. In March 2012 a friend from Germany, Benjamin Riehm who is a film student from Berlin has accompanied me on a small grant with the goal of producing a short documentary about village life in Djibonker and my linguistic fieldwork, which will be presented to the community after completion. The main interest from the side of the Gubëeher speaking community is definitely the development of orthographic standards and literacy materials. Although this is neither scope of my PhD project nor of the DoBeS project, these expectations can be met to some extent. The rough outlines of the orthography (the script and very basic phoneme-grapheme correspondences) have already been officially codified so that this could be taken as a basis for the development of a working orthography used within the project. An orthography workshop with members of the three Bainounk-language communities has been organised by members of the 3P project, including me, in order to test the practicability of the refined orthography and consult the speakers themselves about their preferences in unclear cases.

### **1.5.2 Data collection**

Language learning mostly happened with members of the Sagna family (and some of their friends and neighbours), who shared their house and meals with me and who constituted my primary social contacts, especially during the first months. The learning process was not formal, but took place in an almost casual way, in the form

of conversations, question and answer sessions and informal elicitation sessions with whoever had time and patience to endure my investigations. Hortense Sagna proved to be endowed with unlimited patience and I consider her as one of my main teachers throughout the whole duration of the project. Again, everybody was aware of the fact that I endeavoured to learn the language and was most helpful assisting me as best as they could. Other consultants were contacted to record wordlists and deliver small historical or anthropological texts in more formal circumstances. I mainly left the choice of topics to the consultants, I would not risk appearing overly curious or inadvertently touching upon delicate matters, and concentrated less on content but more on understanding the grammatical system and gaining communicational competence as soon as possible, for the sake of my own comfort<sup>48</sup> and also for the sake of getting access to Gubëeher speakers who do not understand and speak French. Starting from towards the end of the first trip I made an effort to balance the corpus in terms of age and gender of consultant, genres (conversation, monologues, interviews, speeches, songs) and types of data collection (elicitation, observed and staged communicative events (see Lüpke 2008) and was able to identify adequate and relevant topics based on my increasing cultural experience. During the second field stay in Djibonker (Oct 2010-March 2011) I added detailed elicitation sessions on verbs/verbal nouns, and while keeping the range of consultants and topics as broad as possible, I most regularly worked with Laurent Manga (LM) on transcription and elicitation, in the course of which I introduced him to the officially codified orthography. He would later on transcribe audio recordings on his own using an MP3 player provided with DoBeS project funds. LM

---

<sup>48</sup> I certainly felt that high expectations and scepticism were directed towards my being able to learn the language quickly, which for some members of the speech community constituted a proof of my seriousness and competence as a researcher.

is generally regarded a competent speaker of Gubëeher and an involved community member leading a local music and dance troupe. With the assistance of LM I singled out interested and knowledgeable speakers with whom I would regularly collaborate, most notably Jean Marie Sagna (elicitations) and Joseph Sagna (culturally relevant texts). All transcriptions and translations have been made together with native speakers. The material for the dictionary and many phrases consists to a large proportion of non-recorded field notes during informal sessions or overheard from conversations, or is extracted from recorded texts and formal elicitations. The third trip has served to gather additional data on verbal nouns in order to fill gaps in the analysis. I elicited detailed information about the noun class of the infinitives of reflexives, about the syntactic behaviour of modifiers and their derived property nouns and on verbs which use more than one noun class for the derivation of infinitives. Elicitations have been recorded on audio (using a H4N recorder and mainly a pair of stereo microphones), interviews and narratives mostly on audio, but also on video (a semi-professional video camera was available a part of the 3P-project equipment during the second fieldstay, during the third trip I have not recorded anything else than elicitations). A list of the transcribed sessions I have used for this thesis is available in section 1.5.6, Table (29).

### **1.5.3 Interdisciplinarity and collaboration with other researchers**

My participation in the DoBeS project 3P has introduced an important interdisciplinary component into my research. As the linguist ‘in charge’ of Bâinounk Gubëeher I closely collaborated with the researchers of the archaeological and the botanical branch of the project which included joint field-trips, workshops devised for the exchange of techniques and results and informal exchange about

topics regarding the project goals. This exchange in all its various forms has considerably enriched my ability to tackle my linguistic research questions, especially the expert knowledge on plant taxonomy and the large amount of lexical material from the botanical domain which was compiled and made available to me by the botanist colleagues Mathieu Guèye and Cheikh Daouda Diatta. Botanical taxonomy is a central aspect of classification via noun class prefixes in Gubëeher both in term of productivity as in terms of richness of paradigms and relevant aspects of this central domain would have undoubtedly gone unnoticed by me as I simply lack the necessary specialist knowledge.

A different kind of very inspiring collaboration involves my fellow PhD student Rachel Watson (SOAS) who is conducting research in the neighbouring village of Brin on the classification of verbal nouns in Joola Kujireray. In order to benefit mutually from each other's experience, in the field as well as with theoretical and practical questions, we have established a close cooperative work relationship on the field site and during the period spent in London. Our collaboration extended to formal workshops conducted in London under the stewardship of our supervisor Friederike Lüpke and the integration of Serge Sagna, who is working on classification and verbal nouns in Joola Eegimaa. I have perceived this collaboration as extremely beneficial and as a great opportunity to share my knowledge with the persons who are most acquainted with the cultural facts and the linguistic details surrounding the phenomenon. We all felt that it would be fruitful to maintain comparability of data considering the amount of cultural and linguistic contact that prevails between the three genetically very distinct languages in order to allow for the possibility of future research on the areal components of classification which we felt are very relevant aspects of the analysis having a large impact on the noun class

system of the involved languages. This includes harmonising the dictionaries, data generation and processing routines and data exchange. A video stimulus has been devised and produced in joint venture by Rachel and me and applied to our respective languages.

#### **1.5.4 Procedure for collecting verbal nouns**

I will briefly elaborate on the methods I have used for the elicitation of VN, since they are at the core of this thesis. The first elicitation sessions on infinitives were based on material accumulated in my field notes and the recorded texts. Some of this data is only of limited use, due to lack of context and poor documentation of how the data was obtained (translation, grammaticality judgment...), which is crucial for the analysis. Nevertheless this data has helped in the development of hypotheses, along with informal queries about certain verbs with multiple VNs that were conducted at all stages with various consultants and which could then be tested through more reliable methods. Non-recorded data as overheard in conversations was also crucial for hypothesis building. The “Leipzig Questionnaire on Nominalizations and mixed categories” (Malchukov, Koptjevskaja-Tamm, and Cole 2008) was used as orientation. The questionnaire is designed to obtain information about the compatibility of VNs with syntactic contexts as well as encoding of arguments and verbal and nominal properties of VNs. One of the first steps was the elicitation/translation of infinitives from a 100 item list with verbs from different semantic domains and a variety of syntactosemantic and argument structure classes. Once I established that transitivity and certain derivational suffixes were a relevant parameter in infinitive formation, I conducted a detailed relational database questionnaire containing 100 verbs (courtesy of Martin Haspelmath’s “Leipzig

valency classes project [Max Planck Institut/Leipzig]), which provided abundant data on verb alternations, derived verbs and transitivity. At a point where enough instances of multiple infinitives (ca. 130 verbs) were accumulated in the dictionary I proceeded to test the acceptance of the recorded forms with four consultants. It was first confirmed if the information from the dictionary was judged correct, thus ruling out some wrongly translated forms. In case only a non-default infinitive was attested in the dictionary the consultant was demanded a grammaticality judgment of the equivalent *bu*-forms too. I would further ask for typical contexts for each VN and explicitly ask if the speaker perceives them as having a different meaning in order to further hypothesis building. These 130 verbs were also elicited in non-finite and finite frames and in mono- and bivalent constructions with objects that differed in specificity since the parameters transitivity and specificity were hypothesised to have an impact on the choice of the infinitive. Due to the necessity of obtaining material on verbal nouns from controlled and unambiguous contexts, the absence of which has been identified after sighting the data obtained during the second fieldtrip, the focus of data collection for the third trip was on working with more context-sensitive visual stimuli. For this sake a series of 10 short videos, showing two or more persons in a casual conversation in French, have been produced in collaboration with Rachel Watson as a translation task to be used with speakers of Gubëeher and Kujireray (for a detailed description and a transcript of one of the videos see chapter 4). The consultants were asked to translate the French dialogues from the videos into the target language and then provide a free summary of the events seen in the video to allow the consultants to express themselves more naturally without the direct influence of the formulations used in the French templates. The use of a visual medium was judged more effective in comparison to

the initial plan to use stories as basis for a translation task in that it could provide a greater unambiguity of context. The translation would not exclusively depend on the French formulations used, but gestual clues would contribute to the disambiguation of subtle semantic differences, e.g. the discursive and the deictic use of demonstratives (This tree that I have mentioned before/This specific tree standing over there). The dialogue contained constructions which were expected to trigger infinitives in the target languages especially in a variety of mono- and bivalent frames with generic and specific objects (see section 4.7.2.2.3 featuring one of the transcribed video task sessions). This task was expected to diminish list-effects associated with elicitation of lists that have been encountered and deliver more natural data. It is also a way to avoid grammaticality judgments which are notoriously difficult to assess. Also, during the third trip gaps concerning information on infinitives of reflexive/middle derivations, nominalised properties and the syntactic properties of those verbal nouns which also have infinitival use were identified and filled. The data obtained through elicitation, tasks and questionnaires is triangulated with recorded data including tales, interviews and narratives.

### **1.5.5 Problematic issues**

I can say without hesitation that I have not encountered any substantial obstacles or difficulties during my three fieldtrips and that the amount of hospitality and helpfulness I was greeted with have exceeded my most optimistic expectations. The problematic issues I would like to address are more of a theoretical or empirical nature and partly inherent to the configuration of the circumstances or problematic due to cultural settings.

#### *1.5.5.1 Ethical issues: property rights*

Knowledge in the Gubëeher society is a privilege which is owned and guarded against competitors and intruders. Keeping this in mind, I had to take care from the start to avoid appearing too interested or curious in certain cultural aspects or even push consultants to reveal information they were hesitant in sharing with me. Teaching me the language has not been a problematic issue at all – although Gubëeher is strictly an in-group language in that hardly anybody who does not live in Djibonker or has close ties to the village or to speakers of Gubëeher through parentage, adoption or marriage, knows the language. On the contrary, after an initial period of scepticism regarding the question whether I was actually *able* to learn the language (perceived difficulty of a language is strongly correlated throughout Senegal to the number of speakers it has, which is why Wolof is considered very easy, because everybody speaks it, and Gubëeher excruciatingly difficult, because virtually no outsider speaks it) people were reacting very positively, with a mixture of pride and joy, to my gradual progresses in speaking and understanding the language. Still, possibly due to their status as first inhabitants and the smallness of the population, the Bāinounk of Djibonker (and also that of other Bāinounk villages) are considered as possessing somewhat ‘deeper’ knowledge in mysterious and supernatural affairs as well as in medicinal plant usage than other populations of the Casamance. In fact, traditional belief systems and ceremonies are widely practiced in Djibonker, from regular libations at holy sites and public events and festivities to the highly secretive initiation ceremonies which are fraught with serious taboo. Revealing taboos of the sacred forest (those tied to the big initiation) is believed to have dire consequences for the revealer and infractions of the taboo will inevitably be punished by the angered supernatural forces themselves through

illness, misfortune or death. I recall one situation where my main consultant LM during the transcription of a recording about funerary rites grew visibly nervous and demanded to interrupt the session, skip a part of the recording and finally to delete the concerned part because it contained information that was classified and only available to initiates.

Another area where it became obvious that information is ‘given’ or confided to someone – an action that requires a certain amount of trust – concerns songs and botanical knowledge. Songs literally belong to its composers, until the moment they are known and spread by others and their diffusion cannot be stopped or reverted. The ‘release’ of a song is an important decision which is carefully timed and that also applies to other kind of information. From what I have glimpsed, there even exist common ‘strategies’ to lure elders or composers to impart their wisdom or their songs which involve intoxication through palm-wine, exploitation of felicitous circumstances when the keeper of the information is off-guard or patient tenacity in establishing a trusting relationship. Consultants repeatedly expressed concern that certain kind of material (mostly songs and other cultural performances and plant knowledge) might be exploited for the sake of making money if it got into the wrong hands. Certainly this is a somehow legitimate concern considering known cases of bio-piracy and theft of intellectual property in the music business. The only way for me to deal with these issues was to take care to be very transparent in explaining my goals and aims to the population of Djibonker and not to appear ‘pushy’ and overly eager for information, especially when cultural knowledge was involved, and to build enough trust with the people I work with, so that any possible concerns do not surface in the first place.

#### *1.5.5.2 Methodological problems*

I will start with the most general problems which are probably unavoidable but have to be taken into account. This includes the chains of translation involved in the process of transcribing (cf. the remarks on that subject made by Stüwe Thanassoula, forthcoming). It surely must have a warping effect that I as a German with German as mother tongue conduct interviews and elicitations in French, which I speak fluently but not with native speaker proficiency and intuition, with people who speak a different variety of French, namely a version of Senegalese French, which differs syntactically and semantically from metropolitan French. In addition, French is not their native language either, which further distorts the translation. In a further step I translate my field notes, containing mainly translations from Bainouk into French and German, into English, which is not my native language. Considering that the interpretation of verbal nouns requires a subtlety of detail which is hard to provide even in one's native language, the use of translation equivalents which have passed successively through at least four languages may not seem to be the best of all departure points for sophisticated semantic analyses. Learning and using the language in its natural milieu and constantly being exposed to spoken Gubëher while in the field has hopefully mitigated this problem. Unfortunately, the frequency of the required forms in all relevant contexts is not sufficient to allow for a purely corpus-based analysis. Elicitation is problematic though, for the reason of introducing a bias by providing a construction in the source language which can have effects on the output in the target language. Another problem connected to elicitation is the lack of context. It cannot be ruled out that consultants refuse a form because they do not spontaneously recall the context that warrants the use of that form. The dullness of going through parallel constructions of dozens of verbs further

aggravates the problem. This is known as list-effect: the consultants grow tired with the repetition and fall into patterns or cease to check for viable contexts. This leaves us with the dilemma that data obtained through elicitation is necessary but potentially skewed. What I have tried in order to decrease these disturbing effects, is to elicit lists with several consultants, and re-ask controversial items. I also have asked for example sentences as much as possible, either as translation from French or preferably as free formations provided by the consultant. In cases where I had intuitions or wanted to test hypotheses I provided contexts or asked grammaticality judgments of sentences formed by myself. I am aware of the fact that grammaticality judgments come with their own problems (cf. Lüpke 2009b), such as the difficulty of graded judgments which requires highly trained consultants. The video-translation task was designed to avoid some of these effects for a discussion of the video task see section 1.5.4.

### ***1.5.5.3 Prescriptive attitudes***

I have noticed that some consultants<sup>49</sup> have quite prescriptive ideas about language in general and their language in particular which included narrow judgments of what was to be accepted, and produced, as ‘good Gubëeher’ and what was not, even if these prescriptions were contrary to their own language use and that of everybody around them. This affected the use and acceptance of loanwords, which highly prescriptive speakers would adamantly reject, no matter how frequently those are used (possibly even by themselves), and the acceptance of variation. Thus, the recording situation could at times favour the usage of an unnatural style – though it is questionable in general how natural a monolingual Gubëeher style is in the first

---

<sup>49</sup> I am sure that I myself have certain prescriptive attitudes about languages which manifests in the choice of purely monolingual genres for documentation and judgments about language competence.

place, considering that code-switching is rather the norm than the exception. Some consultants would rather relativise (“What I know is...”) others would declare outrightly that something is plainly wrong. Prescriptive attitude sometimes led to ‘conscious list effects’ with certain consultants, in that they would decide that a certain pattern was correct after they have used it several times and insist on carrying it through the whole list. This effect was also sometimes conditioned by more or less correctly remembered concepts of school-grammar as learnt for French (in the style of: “this cannot be right/must be right because it is an adjective/infinitive etc...”). In general I felt that men would be more prone to prescriptive and rigid statements than women. Unfortunately again, women were both more inhibited speaking French (fearing the ridicule for making mistakes which for some reason they were more exposed to than men) as well as very self-conscious being recorded as authorities on language. Even women whom I knew well and who had provided me with lots of data on unrecorded, informal occasions would be very reluctant to be recorded. Since information is valued and valuable there are institutionalised experts for the divulgation of cultural lore, and verbal expertise in this domain is mainly a monopoly of old age and masculinity, which is why younger informants and women had to be careful not to ‘step out of line’ in order not to anger the ‘legitimate authorities’. Only once I had established my own social networks and I got more independent (and my actions less scrutinised, once the novelty effect of my being in the village wore off) was it easier to access a more varied sample in terms of gender and age and avoid being mostly delegated to old men. The limited access to women was more an ideological/hierarchical issue and not due to any gender taboos or gender segregation, as women and men in Djibonker are interacting freely.

### 1.5.6 Data management

The modalities of data management, including metadata conventions and choice of software for processing of linguistic data are largely determined by the requirements of the DoBeS project I am part of. File naming is designed to provide a unique signature to each media file, details concerning participants, genre, associated files etc. are provided in a word document and information about the consultants in a separate document prior to the creation of metadata in the IMDI format for the online corpus. The file names have to be read as follows: the first three letters are a signature for the location where the document was recorded/created, the following six digits specify the date of creation in the format DDMMYY, followed by the initials of the person who has created the document. In case more than one document has been created on one day, the documents receive a final number reflecting the order of their succession. The file DJI070211AC2.wav for example is an audio file created in Djibonker the 07 February 2011 by me [AC] and was the second session recorded that day. Whenever I provide examples in this thesis which are taken from recordings, I indicate the signature of the session and the abbreviation of the person who has made the utterance.

Most texts have been transcribed by hand with the help of a consultant who was asked to listen to a small chunk of text and repeat it slowly so that I could note it down in IPA and later on directly in orthographic transcription. The handwritten transcription was typed and inserted into the relational linguistic software FLEX, word forms into the dictionary component and texts into the text component where annotation and analysis could be conducted. Annotated texts would then be exported into ELAN for time alignment.

Table (28) *List of recorded texts used in the thesis (staged events, narratives, tales)*

<b>File name</b>	<b>Content</b>	<b>Participants</b>
DJI291110AC	Video stimulus description: "Staged events" (Van Staden et al. 2001)	LM
DJI271009AC1-6; DJI110110AC1-6	Video description: "Die Sendung mit der Maus" [cartoon]	ES
DJI240211AC2	Folktale "Hyena and rabbit"	LM
DJI221009AC	Greeting and elicitation of temporal phrases	JC
DJI211110AC	Interview: About marriage	JHS, LM
DJI101210AC	Interview: About funerary rites	JHS, LM
DJI101210AC3	Interview: About funerary rites/2	JHS, LM
DJI121109AC2	Tale: "The woman and the chair"	AB
DJI121109AC3	Narrative: The parts of the ronier palm	AB
DJI121109AC	Narrative: The history of the Bainouk	AB
DJI101010AC2	Tale: "The girl and the spoon"	BS
DJI101010AC1	Tale: "The dancing girl"	BS
DJI070211AC2	Narrative: About the stars	CS
DJI020311AC8	Songs and their explanations	FC, MB
DJI230111AC3	Narrative: About wrestling	LM, EC, AS
DJI230111AC	Narrative "The chase of the hippopotamus"	LM, EC, AS

Table (29) *List of elicitations used in the thesis*

<b>Name</b>	<b>Files</b>	<b>Consultant</b>
Agricultural vocabulary	DJI051109AC	CS
Cultural vocabulary	DJI070110AC	AB
Infinitive list	field notes	KC,GS
Infinitive list	DJI020211AC, DJI020211AC2, DJI020211AC3	LM
Infinitive list	field notes	JMS
Infinitive list frames	DJI150211AC, DJI150211AC2, DJI150211AC3, DJI150211AC4	JMS
Infinitives 2012	DJI080312AC, DJI080312AC2, DJI090312AC16a, DJI090312AC17, DJI180312AC, DJI180312AC2	LM
Reflexive list	DJI290212AC, DJI290212AC2, DJI290212AC3	LM
Stative verb list	DJI170212AC, DJI170212AC2, DJI170212AC3, DJI180212AC, DJI180212AC2, DJI180212AC3, DJI200212AC, DJI200212AC2, DJI240212AC5	LM
Valency database [database of the “Leipzig valency classes project”/Max Planck Leipzig]	[field notes and database]	LM
Nasal-prefixes and agreement	DJI160212AC2, DJI160212AC3, DJI160212AC4, DJI170212AC, DJI220312AC	LM
Passives and Reflexives	DJI280212AC7	LM

## 2 Sketch grammar

This grammatical sketch is not intended to be a comprehensive description of all aspects of Gubëeher grammar. It is first of all an overview of the structures relevant for the topic of this thesis, i.e. the classification of nouns and verbal nouns. Furthermore, some other phenomena which are not directly related to this area but necessary for the reader to know in order to understand the glosses are introduced.

In this chapter I will provide, after giving a brief account of the phonological inventory and some related issues (orthography, morphophonemic mechanisms), an overview of the basics of nominal and verbal morphology, including the morphological mechanisms of noun classification and TAM morphology, and some key syntactic structures. The bulk of issues surrounding the semantic and derivational functions of nominal classification and the semantic and syntactic issues in relation to nominal classification which are relevant for the treatment of verbal nouns and their integration into the noun class system will be covered in chapters 3 and 4.

### 2.1 Basic typological characteristics

The most salient feature of Baïnouk Gubëeher is its complex noun class system. The noun class system is unusual for its large number of noun class prefixes (around 30) and agreement patterns. Verbal morphology is also very rich with an abundance of affixes marking person and number, tense, aspect and mood (henceforth TAM), and more than a dozen verbal extensions, which interact phonologically in various ways. Gubëeher also distinguishes inclusive and exclusive for the first person plural.

The unmarked word order is SVO. If anything else than the subject stands before the verb, the verb is marked with focus morphology. Most roots are very flexible, word classes are not distinguished at the root level, and there is virtually no specialised category changing derivational morphology. The only indication of word class status is provided by the syntactic context it appears in. Gubëeher has prepositions and head-dependent order in the noun phrase (N + Determiner, N + Numeral, N + Adjective).

In Gubëeher, word classes can be distinguished by applying formal criteria. The overall constructional character of Gubëeher is reflected in the fact that many roots are not limited to a specific word class but often can be inserted into several morphological or syntactic frames. I consider word classes as prototypical categories which have a semantic basis. Prototypical nouns are time-stable, spatially bounded entities. Verbs prototypically denote events and adjectives denote properties.

Table (30) *Prototypical properties of the main word classes* (Croft 1990:248)

<b>Category</b>	<b>Semantic function</b>	<b>Syntactic function</b>
Nouns	object	referring
Verbs	action	predicating
Adjective	property	modifying

As Croft (1990) argues, core nouns, verbs and adjectives, in their prototypical use, combine with category specific morphological and syntactic frames. The prototypical approach is convenient to explain the verbal and nominal properties of some classes of verbal nouns, which are conceived of as hybrid or mixed categories (see 4.4.3).

### 2.1.1 Syntactic relations

Syntactic relations are not marked by case in Gubëeher. While it is possible to distinguish the subject from objects, the three criteria for distinguishing arguments from adjuncts<sup>50</sup> given below do not provide evidence in favour of a clear-cut distinction between oblique objects and adjuncts and even those and core objects in Gubëeher:

1. Arguments are required by the verb, adjuncts are optional.
2. Arguments can undergo certain syntactic operations (relativisation or passivisation), but not adjuncts.
3. Arguments tend to be marked by case, adjuncts tend to be realised in adpositional phrases.

The first criterion is inapplicable for Gubëeher given that even all inanimate objects can be ellipsed and that many verbs undergo the unexpressed object deletion, so that very few participants – if any – seem to be obligatory. As to the second criterion, relativisation is available for all complements, prepositional or not. This is also the case for focus marking and encoding in nonfinite constructions with possessive morphology. Passivisation is a good candidate for an argument (core and oblique)/adjunct distinction, as all objects and some prepositional phrases can be passivised. As to criterion number 3, morphological case marking is non-existent in Gubëeher, and structural case – i.e. whether an argument is in subject or object position or in an adpositional phrase is problematic, due to problems in distinguishing oblique objects from adpositionally marked adjuncts.

---

<sup>50</sup>The criteria are commonly assumed argumenthood criteria compiled by Lüpke (2005:79), who shows that they are problematic when applied to Jalonke.

The unmarked word order is Subject-Verb-Object-adjuncts (56). Gubëeher is a pro-drop language, i.e. an overt subject NP is not required. Subject agreement prefixed to the verb is obligatory though, regardless of the presence of a subject NP.

(56)

<i>Subject</i>	<i>Verb</i>	<i>Object</i>	<i>Adjunct 1</i>	<i>Adjunct2</i>
<i>elefa</i>	<i>a-yéd</i>	<i>gu-no-honom</i>	<i>ninni</i>	<i>a bi-raf</i>
elephant	3-lift	CL.gu-thing-3SGPOSS	like.this	PREP CL.bi-up

‘The elphant lifts his thing [nose] up like that.’

ES, DJI271009AC5

### 2.1.2 Subject/ Non-subject distinction

Subject and non-subjects are distinguished through word order. The Subject NP precedes the verb, objects and adjuncts stand after the verb (57).

(57)

<i>u-dikaam</i>	<i>ummo</i>	<i>a-lef</i>	<i>tabl</i>
CL.u-woman	AGR.u:DEM.DIST	3-spread	table

‘The woman lays the table.’

LM, DJI291110AC

Only the subject triggers obligatory person/number agreement on the verb. If the object is encoded through affixes on the verb, the same order applies as with NPs: Subject agreement is pre-verbal (prefixed) and object pronouns are post-verbal (suffixes). Encoding of objects by way of suffixes is only an option for animate objects.

- (58) *a-n-ñax-eenen*                      *na*  
 3-Pl-find-3PLOBJ.PERF      there

‘They found them there.’

AB, DJI121109AC

The main function of the passive is agent elision. Gubëeher also allows the formation of impersonal passives from intransitive verbs, hence promotion of a patient to subject status can hardly be the defining feature of the passive. The demoted subject of the active clause is always deleted i.e., cannot be expressed by a prepositional phrase or any other means. The object of the active clause moves to subject position in the passive clause (59) and (60).

- (59) *i-yaax-i-min*                      *a-har*                      *mes*  
 1-eat-PERF-1PL.EXCL      CL.a-meat                      already

‘We’ve already eaten the meat.’

- (60) *a-har*                      *a-yaax-a*                      *mes*  
 CL.a-meat                      3-eat-PASS                      already

‘The meat has already been eaten.’

Different morphemes are used to focus subject-NPs on the one hand and object- and adjunct-NPs on the other hand. Object NPs are focussed with the prefix *g-* on the verb (61), subject NPs are focussed with the prefix *in-* (62).

- (61) *a-har*                      *g-i-yaax-i*  
 CL.a-meat                      FOC.OBJ-1-eat-PERF

‘It is meat I ate.’

- (62) *m’*                      *in-yaax-i*                      *a-har*  
 1SG                      FOC.SUBJ-eat-PERF                      CL.a-meat

‘It is me who ate the meat.’

### 2.1.3 Marked word order

Object arguments and adjuncts stand post-verbally in the unmarked clause, if they are fronted into preverbal position, the deviant word order has to be marked on the verb with the focus marker *g-*. These clauses are marked not only syntactically and morphologically but also pragmatically. Compare the unmarked (63), without an overt subject NP, but person agreement on the verb, with example (64), where *mum-mer* ‘salt’, the object of the verb *ñoŋ* ‘take’ is fronted and the verb is *g-*marked. Using a construction like the one in (64) the speaker makes a point that she is taking the salt and not something else. It would also be the answer to the question “What did you take?”.

- (63) *a-dëët-i*            *a-ñoŋ*    *ómlet*    *a-han*    *a*    *gu-palat*  
 3-go:VEN-PERF    3-take    omelette    3-put    PREP    CL.gu-plate  
 ‘He came, took the omelette and put it on the plate.’  
 ES, DJI110110AC

- (64) *mum-mér*            *g-i-dëëk-ot*                    *bu-ñoŋ*  
 CL.mun-salt    FOC.OBJ-1-go-INACT    CL.bu-take  
 ‘It was the salt I was going to take.’  
 HS, field notes

More examples illustrating focus marking with fronted object NPs (65), interrogative pronouns (66), temporal (67) and locative (68) adjuncts illustrate how the prefix *g-* is used for focussing.

- (65) *beñoar-aŋ a-lal-aŋ g-i-duf-i*  
 basin-PL AGR.a-three-PL FOC.OBJ-1-draw-PERF

‘I drew three basin-fulls [of water from the well].’

HS, field notes

- (66) *ho g-u-ñon-t-i*  
 what FOC.OBJ-2-take-VEN-PERF

‘What did you take?’

HS, field notes

- (67) *gu-tuma na g-ë-tij-i*  
 CL.gu-tale there FOC.OBJ-3-end-PERF

‘That’s where the story ends.’

BS, DJI101010AC2

- (68) *a-huy-a ba-xon mataha a ba-xon g-a-lik-a-i*  
 3-call-PASS CL.ba-ronier because PREP CL.ba-ronier FOC.OBJ-3-stand-REFL-PERF

‘It [holy shrine] is called ‘baxon’ because it stands at a ronier palm.’

AB, DJI121109AC

#### 2.1.4 Thematic roles

The criteria on which basis thematic roles can be established are word order and prepositions. The semantic distinction of participants is largely left to verb semantics and verb morphology, and much less indicated morphologically or syntactically. Gubëeher has a large number of verbal extensions which specify which semantic role the post-verbal participant has.

In terms of word order, one participant can stand before the verb, in unmarked word order in an active clause this is the agent participant. Several participants can

stand after the verb. Participants undergoing change of state are not distinguished from participants undergoing change of location, so both will be referred to as ‘theme’, cf. *bu-niin* ‘egg’ in (69) and *bidonj* ‘container’ in (70).

- (69) *a-bajul bu-niin bu-naak-iin*  
 3-break CL.bu-egg CL.bu-two-ORD  
 ‘She breaks the second egg.’  
 BS, DJI101010AC2

- (70) *i-lukumbiin-i bidonj*  
 1-roll-Perf container  
 ‘I rolled the container.’  
 LM, valency database

Participants experiencing perceptual or psychological stimuli are encoded as agents in most cases with verbs such as see, hear, like/love, smell/taste etc. (71); in a construction with the verb *lax* ‘grasp’ they are encoded as themes to express certain sensations and bodily functions among which *kuug* ‘hunger’ *gu-hosox* ‘cough’, *da-wul* ‘heat’, *ba-rux* ‘water (here ‘thirst’)', *gu-loot* ‘vomit’ etc. (72).

- (71) *u-yéég-i jiddi-ey n’ a-naŋa-ne gëëgën*  
 2-hear-PERF gun-PL as 3-sound-SUB yesterday  
 ‘Did you hear how the guns resounded yesterday?’  
 HS, observed communication

- (72) *ti-rux a-lax-em*  
 CL.ti-cold 3-grasp-1SGOBJ.PERF  
 ‘I feel cold [lit.: cold has me]’

Some verbs like *duug* ‘steal’, *naax* ‘tell’ or *nëër* ‘give’ can have a theme and a recipient (including beneficiary or “male”-ficiary). Usually, the recipient is encoded

as a suffix on the verb and the theme as noun phrase (73), on the basis of the rare occurrences of two post-verbal NPs, it seems that the animate one, which is the recipient, stands directly after the verb and is followed by the theme (74).

- (73) *a-duug-em*                      *dërëm-ëŋ*  
 3-steal-3SGOBJ.PERF      money-PL  
 ‘He stole him money.’  
 GS, valency questionnaire

- (74) *a-duug-i*            *bëëx-um*            *dërëm-ëŋ*  
 3-steal-PERF      father-1SGPOSS      money-PL  
 ‘He stole my father money’  
 GS, valency questionnaire

In case both are animate the order in which they appear seems to be free, the context in examples (75) and (76) makes clear that the child is given to the mother, not vice versa, no matter in which order they appear.

- (75) *a-nëër-i*            *Valerie*            *Kinegond*  
 3-give-PERF      Valerie            Kinegond  
 ‘He gave Valerie [child] to Kinegond [mother].’  
 KC, field notes

- (76) *a-nëër-i*            *Kinegond*            *Valerie*  
 3-giv-PERF      Kinegond            Valerie  
 ‘He gave Valerie [child] to Kinegond [mother].’  
 KC, field notes

The thematic roles referring to location are usually introduced by the preposition *a*, which has a very broad meaning including location (on/in/at) (77), source (from)

(78), goal (to) (79), etc. but also non-locative meanings equivalent to ‘about’ (80), ‘among’ (81) etc. Again, verb semantics or verb extensions specify the semantic relationship of the prepositional phrase to the event, for example the venitive extension *-t* in example (79) indicates that the window is the source of the movement indicated by the verb *fūr* ‘come out’.

(77) *bi-ciir a-jiiba-hara a bu-koo’kanaan*  
 CL.bi-death 3-plenty-FUT PREP CL.u-village-2PLPOSS  
 ‘There will be a many cases of death in your village.’

CS, DJI070211AC2

(78) *a-n-dëek a gu-han*  
 3-PL-go PREP CL.gu-riverside  
 ‘They go down to the river.’

CS, DJI070211AC2

(79) *a-fu’-t-i a janeela*  
 3-go.out-VEN-PERF PREP window  
 ‘She came out of the window.’

LM, DJI291110AC

(80) *ho-n i-yit-i a bi-riib hó-mër iŋ-gu-ne*  
 AGR.ho-REL 1-know-PERF PREP CL.bi-funeral AGR.ho-PRO FOC.SUBJ-be-SUB  
 ‘What I know about funerals, there it is.’

JHS, DJI101210AC

(81) *a mundum-oŋ amu-t-oot mundum ë-ruk si-ji'-henem*  
 PREP hyena-PL 3-exist-VEN-INACT hyena AGR.a-some CL.si-eye-3SGPOSS

*si-sënduk*  
 AGR.si-one

‘Among the hyenas, there was one, he had one eye only.’

BS, DJI101010AC1

The causal preposition *mata/mataha* ‘because of/for’ (82) also occurs in Joola (Kujireray and Eegimaa *mata*). The preposition *anga* introduces instruments (84) and comitative participants (83), like its English translational equivalent ‘with’.

(82) *i-hof-i u-bë'-kum mataha dërëm-ëŋ*  
 1-kill CL.u-child-1SGPOSS because.of money-PL

‘I killed my child because of money.’

BS, DJI101010AC2

(83) *g-u-dél-i u-dëëk u-lób anga bëëb-ëm*  
 COND-arrive-PERF 2-go 2-speak with father-3SGPOSS

‘when you arrive you go and speak to her father.’

JMS, DJI211110AC

(84) *anga gu-ri g-a-jopp-i a-xaan a bu-ru'-konom*  
 with CL.gu-spoon FOC.OBJ-3-take-PERF 3-put PERF CL.bu-mouth-3SGPOSS

‘She took it with a spoon and put it in her mouth.’

LM, DJI291110AC

## 2.2 Phonology

The description given here of the phonology of Gubëeher can only be approximate, since no acoustic measurements or more sophisticated analysis other than finding minimal pairs have been undertaken.

### 2.2.1 Consonants

The consonant phonemes of Gubëeher are given in Table (31).

Table (31) *Consonant phonemes Gubëeher*

	<b>Bilabial</b>	<b>Labio-dental</b>	<b>Alveolar</b>	<b>Palatal</b>	<b>Velar</b>	<b>Glottal</b>
<b>Plosive</b>	<i>p b</i>		<i>t d</i>	<i>c ʃ</i>	<i>k g</i>	
<b>Nasal</b>	<i>m</i>		<i>n</i>	<i>ɲ</i>	<i>ŋ</i>	
<b>Flap</b>			<i>r</i>			
<b>Fricative</b>		<i>f</i>	<i>s</i>		<i>x</i>	<i>h</i>
<b>Approximant</b>	<i>w</i>			<i>j</i>		
<b>Lateral</b>			<i>l</i>			

The status of consonant gemination is unclear. It is stipulated for Bāinounk Guñaamolo (NTM; Sokhna Bao-Diop, p.c.) and is audible on few items in Gubëeher; however, no minimal pairs have been found so far in Gubëeher, so that its phonemic status is not certain. The phoneme /r/ is sometimes realised as voiceless trill [ʀ] at the word end by some speakers.

### 2.2.2 Vowels

The vowel phonemes of Gubëeher are given in Table (32).

Table (32) *Vowel morpheme of Gubëeher*

Front	Central	Back	
i/i:		u/u:	high ↓
ɪ/ɪ:		ʊ/ʊ:	
e/e:	ə/ə:	o/o:	mid ↓
ɛ/ɛ:		ɔ/ɔ:	
	a/a:		low

The feature length is phonemic for all vowels. The opposition [o]/[ɔ], [e]/[ɛ], [u]/[ʊ], [i]/[ɪ] and [a]/[ə] has been attributed to the feature  $\pm$ ATR for Guñaamolo and most Joola languages, but I hesitate to adopt this claim. ATR (advanced tongue root) is a minor vowel feature dependent on the position of the tongue root, different from height and backness which differentiates series of vowels often involved in patterns of vowel harmony in some West African languages, such as Akan, Igbo and Yoruba. The three possible analytical oppositions tense/lax, advanced/retracted tongue root and a description of vowels with the features backness, height and roundedness is discussed by Ladefoged and Maddieson (1996:300ff), who discard the feature tenseness as being explainable entirely by the features height and backness. Based on X-rays of the vocal tract, ATR is confirmed as an independent feature for the classification of vowels. In some, but not all languages, ATR is correlated to vowel height and backness. As for Gubëeher, comparable data on articulatory positions are not available so that the question cannot be ultimately settled, but the voice quality typical for ATR vowels has not been perceived. Since the Gubëeher vowels are clearly differentiable in terms of height and backness, the assumption of ATR as an additional feature is not necessary. Especially the difference between the members of the pairs [i]/[ɪ] and [u]/[ʊ] is hard to perceive and minimal pairs are rare for the

contrast [u]/[ʊ], (85) and (86) and [i]/[ɪ] (see Table (34)). The rules of vowel harmony are laid out in section 2.2.3.1. My transcription is phonetic, i.e. vowels are transcribed as they are perceived.

(85) *ə-wu:lin-i*      *raŋ-kolox*  
 3-heat-PERF      CL.ran-rooster  
 ‘S/he heated a rooster [in order to deplume it].’

(86) *a-wu:lin-i*      *nu:n-ɔm*      *a-cɛ:n-i*  
 3-think-PERF      mother-3SGPOSS      AGR.a-old-i  
 ‘S/he thought about her/his grandmother.’

### 2.2.3 Assimilation processes

In terms of phonological processes Gubëeher features a system of vowel harmony and a variety of assimilation processes, most of which serve the purpose of avoiding consonant clusters. With the exception of homorganic *n*-assimilation, which spans word boundaries, these processes are limited to morpheme boundaries between affixes and roots.

#### 2.2.3.1 Vowel harmony

The vowels of Gubëeher can be divided into two series. The series are relevant for affixation in that the vowel of the affix tends to be of the same series as the vowel of the stem. Especially in inflected forms with several affixes, the rules of vowel harmony can be very complex and have not yet been fully established. The rules of vowel harmony are not strictly applied, especially in fast speech, and there is considerable intra- and inter-speaker variation.

Table (33) *Vowel series*

Series I	Series II
a	ə
ɛ	e
ɪ	i
ɔ	o
ʊ	u

Some examples involving vowel harmony of the third person singular subject agreement prefix of with the stem-vowel are presented in Table (34). The realisation of the prefix as either *a-* or *ə-* depends on the vowel of the stem. If the stem vowel is of the first series, the prefix is *a-*, if the stem vowel is of the second series the prefix is realised as *ə-*. The same distribution has been noted with other prefixes such as the noun class marker *ha-* with the allomorph *hə-* whose vowel matches the vowel of the verb stem in terms of which series it belongs to.

Table (34) *Prefix root harmony on the example of a- '3.Sg'*

Vowel of stem	Vowel of prefix realised as	Example	Gloss
series I	[a]	<i>a-la:r</i>	's/he claps'
		<i>a-ʃeg</i>	's/he turns the head'
		<i>a-yin</i>	's/he does on purpose'
		<i>a-ho:t</i>	'it sticks'
		<i>a-rʊ:x</i>	'she drinks'
series II	[ə]	<i>ə-la:r</i>	'to go'
		<i>ə-ʃeg</i>	's/he steps'
		<i>ə-yin</i>	's/he sings'
		<i>ə-ho:t</i>	'it smokes'
		<i>ə-ru:x</i>	'it [chicken] is sick'

With some affixes, the vowel of the affix is not only harmonising with the stem vowel in terms of the two vowel series but also in terms of vowel height. These

include the future marker *-hVrVx/ -kVrVx*, the plural marker *-Vŋ* and the third person singular possessive suffix *-hVnVm* (see Table (35) and also the suffix of the second person plural possessive *-hV:nVŋ*. The vowels of these suffixes are dependent on the height and series of the last consonant of the verb stem they are attached to.

Table (35) *Vowel harmony*

Last vowel of stem	Vowel of possessive suffix	Example 3SgPoss	Example FUT
<i>a</i>	<i>a</i>	<i>-hanam,</i>	<i>-harax</i>
<i>ə</i>	<i>ə</i>	<i>-hənəm</i>	<i>-hərəx</i>
<i>ɔ, ʊ</i>	<i>ɔ</i>	<i>-hɔnɔm</i>	<i>-hɔrɔx</i>
<i>o, u</i>	<i>o</i>	<i>-honom</i>	<i>-horox</i>
<i>ɛ, ɪ</i>	<i>ɛ</i>	<i>-hɛnɛm</i>	<i>-hɛrɛx</i>
<i>e, i</i>	<i>e</i>	<i>-henem</i>	<i>-herex</i>

(87) *a-jaː-xarax*  
 3-eat-FUT  
 ‘S/he will eat’

(88) *a-ŋɔŋ-kɔrɔx*  
 3-take-FUT  
 ‘S/he will take’

### 2.2.3.2 *Nasal assimilation*

Homorganic nasal assimilation operates at morpheme boundaries as well as on word boundaries, especially in fast speech. Example (89) shows the auxiliary verb *xan*, which is pronounced *xam* before a labial onset of the following word.

- (89) *i-xam bu-la' ka kó-mër*  
 1-AUX CL.bu-grasp CONN AGR.ko-PRO  
 'I am holding it.'  
 JS, DJI101210AC

The word- or prefix-final nasal is assimilated to the place of articulation of the following segment (see Table (36)).

Table (36) *Nasal assimilation involving the third person plural prefix an-*

Stem onset	Nasal realised as	Example	Gloss
alveolar	[n]	<i>an-den</i>	'they put'
palatal	[ɲ]	<i>aɲ-ɲɔɲ</i>	'they take'
velar	[ŋ]	<i>aŋ-ŋaf</i>	'they climb'
		<i>aŋ-kəb</i>	'they chew'
glide, fricative, liquid	zero	<i>a-waxa</i>	'they play'
labial	[m]	<i>am-bux</i>	'they insult'

The deletion of morpheme-final nasals before glides, fricatives and liquids is relevant for noun class prefixes and agreement prefixes and will be considered in more detail. Prefixes with final nasals include the following morphemes:

Table (37) *Morphemes with final nasals*

Function	Form
Third person plural agreement	<i>an-</i>
Subject Focus	<i>in-</i>
First person plural inclusive subject agreement	<i>in-</i>
Noun class and agreement markers	<i>mun-, kun-, fan-, sin-</i> etc.

In example (90) the [n] of the plural prefix, which is part of the third person plural, is deleted before the verb *hangul* 'can' which has an initial [h], but is present before

the instances of the verb *dëək* ‘go’ in the same phrase, the reference is clearly the same third person plural in all three cases.

- (90) *a-'hanɣul*    *a-n-dëək*    *a*    *gu-han*    *ani*    *a-n-dëək-ëx*    *të-biir*  
 3-PL-can    3-PL-go    PREP    CL.gu-river    and    3-PL-go-HAB    CL.ta-close
- ‘They can go to the river and fish with a barrier.’

CS, DJI070211AC2

More examples of nasal deletion are discussed in the context of nasal noun class prefixes in section 2.3.1.2.

### 2.2.3.3 *Lenition*

Free variation, within and across speakers, between plosives and affricates and their fricative homorganic counterparts has been observed, notably in word final position. In the transcription and orthography the variant with the plosive is chosen, due to the rarity of the fricativised variants.

Table (38)                    *Lenition of plosives*

+ Lenition variant	- Lenition variant	Gloss
<i>i-jey</i>	<i>i-jeg</i>	‘I hear’
<i>bu-jinduɸ</i>	<i>bu-jindup</i>	‘part of plant’
<i>a-fir-i</i>	<i>a-cir-i</i>	‘s/he jumped’

### 2.2.3.4 *Consonant deletion*

When a consonantal suffix is attached to a consonant-final root, the final consonant is often deleted, especially in fast speech. Elision is indicated by an inverted comma in transcriptions.

- |   |   |  |  |                              |
|---|---|--|--|------------------------------|
| <p>(91) /wɔl-hum/<br/>wɔ-hum<br/>[wɔː-hum]<br/>child(CL.u)-1SGPOSS<br/>‘my child’</p> | <p>Input<br/>1. deletion<br/>2. vowel lengthening</p>                             | <p>(92) /rɔx-lin/<br/>[rɔ-lin]<br/>cry-Caus<br/>‘make cry’</p> | <p>(93) /ɟa:k-lin/<br/>[ɟa-lin]<br/>burn(itr.)-Caus<br/>‘burn (tr.)’</p> | <p>Input<br/>1. Deletion</p> |
| <p>(94) /a-bəg-t-i/<br/>[a-bə-t-i]<br/>3-stay-VEN-PERF<br/>‘s/he stayed there’</p>    | <p>(95) /a-fur-t-i/<br/>[a-fu-t-i]<br/>3- go.out-VEN-PERF<br/>‘s/he came out’</p> | <p>Input<br/>1. Deletion</p>                                   |  |                              |

### 2.2.3.5 R-assimilation

The initial consonant of a suffix beginning with or consisting of /r/ is realised as [d] when it is suffixed to a stem with final /n/ or /r/.

- |   |   |  |  |
|---|---|--|--|
| <p>(96) li-r-εη<br/>be.nice-NEG.PERF-3SGSUBJ<br/>‘it is not nice’</p> | <p>(97) /bun-r-ɔη/<br/>[bun-d-ɔη]<br/>n.a.<br/>be.beautiful-NEG.PERF-3SGSUBJ<br/>‘S/he/it is not beautiful’</p> | <p>/mir-r-εη/<br/>mir-d-εη<br/>[mi-d-εη]<br/>resemble-NEG.PERF-3SGSUBJ<br/>‘S/he/it does not resemble’</p> | <p>Input<br/>1. r-assimilation<br/>2. deletion</p> |
|---|---|--|--|



distinctions [u]/[ʊ] and [ɪ]/[i] are neither made in the official nor in my orthography used for transcription. The two vowels are phonemic, but since only very few minimal pairs have been found, and their articulation is so similar to the point that they are very hard to distinguish from each other, the distinction will not be considered in this thesis. Since the wealth of phonological analysis is still in progress, the version of the orthography used in this text is generally kept rather close to the phonetic form. Consonant deletion is marked with an apostrophe in the place of the deleted sound.

Table (39) Orthography as used in this thesis (as presented and discussed with key community members at the orthographic workshop in Ziguinchor/October 2010)

Grapheme	Phonetic value	Example	Gloss	Pronunciation example
<a>	[a]	<i>gr<u>in</u></i>	'body'	[arɪn]
<aa>	[a:]	<i>bus<u>aa</u>t</i>	'pass'	[busa:t]
<b>	[b]	<i><u>b</u>axon</i>	'ronier palm'	[baxɔn]
<c>	[c]	<i><u>ç</u>aabi ixee<u>ç</u>i</i>	'key' 'I wrote'	[ca:bi] [ixɛ:ci]
<d>	[d]	<i><u>d</u>andahaan</i>	'day before yesterday'	[dandaha:n]
<é>	[e]	<i>ad<u>é</u>li</i>	'it is enough'	[adelɪ]
<e>	[ɛ]	<i>m<u>e</u></i>	'I'	[mɛ]
<ée>	[e:]	<i>al<u>é</u>ri</i>	'it is difficult'	[ale:ri]
<ee>	[ɛ:]	<i>abe<u>ee</u>mi</i>	'it is boring'	[abɛ:mi]
<ë>	[ə]	<i>ba<u>kë</u>r</i>	'chicken'	[bəkər]
<ëë>	[ə:]	<i>un<u>ë</u>erem</i>	'give me'	[unə:rem]
<f>	[f]	<i><u>f</u>asat</i>	'rainy season'	[fasat]
<g>	[g]	<i><u>g</u>uub</i>	'today'	[gu:b]
<h>	[h]	<i><u>h</u>aalax</i>	'ten'	[ha:lax]
<i>	[i] [ɪ]	<i>ë<u>t</u>iji m<u>i</u>nd</i>	'it ends' 'milk'	[ɛtɪji] [mɪnd]
<ii>	[i:], [ɪ:]	<i>ë<u>ii</u>ri bum<u>ii</u>g</i>	's/he opened' 'be tight'	[əbi:ri] [bɔmɪ:g]
<j>	[ʃ]	<i><u>j</u>axat</i>	'fish'	[ʃaxat]
<k>	[k]	<i><u>k</u>urut</i>	'crocodile'	[kurut]
<l>	[l]	<i>l<u>o</u>sa</i>	'shop'	[lɔsa]
<m>	[m]	<i><u>m</u>ino</i>	'we'	[mɪnɔ]
<n>	[n]	<i>b<u>ë</u>y<u>i</u>n</i>	'sing'	[bəjin]
<ŋ>/<ng>	[ŋ]	<i>i<u>ŋ</u>eeti</i>	'I returned'	[iŋɛ:ti]
<ñ>	[ɲ]	<i>a<u>ñ</u>ani</i>	's/he danced'	[aɲaɲi]
<ó>	[o]	<i>bun<u>ó</u>bun</i>	'to attach'	[bunobun]
<o>	[ɔ]	<i>ad<u>o</u>xi</i>	's/he carried'	[adɔxi]
<óó>	[o:]	<i>bug<u>ó</u>ób</i>	'scratch'	[bugo:b]
<oo>	[ɔ:]	<i>bag<u>oo</u>ri</i>	'cowry shells'	[bago:ri]
<p>	[p]	<i><u>p</u>itaari</i>	'tobacco'	[pita:ri]
<r>	[r]	<i><u>r</u>aaf</i>	'above'	[ra:f]
<s>	[s]	<i><u>s</u>incind</i>	'thread'	[sɪncɪnd]
<t>	[t]	<i><u>t</u>ëbën</i>	'cloth'	[təbən]
<u>	[u]	<i>ë<u>u</u>bun</i>	'it is good'	[ɛbun]

Grapheme	Phonetic value	Example	Gloss	Pronunciation example
	[ɔ]	<i>u<u>r</u>aagof</i>	'person'	[ɔra:gɔf]
<uu>	[u:] [ɔ:]	<i>ku<u>u</u>r</i> <i>bi<u>u</u>un</i>	'mortar' 'back'	[ku:r] [bihɔ:n]
<w>	[w]	<i>w<u>o</u>l</i>	'child'	[wɔl]
<x>	[x]	<i>u<u>l</u>a<u>x</u></i>	'take!'	[ɔlax]
<y>	[j]	<i>b<u>y</u>éég</i>	'hear'	[buje:g]

### 2.3 The noun phrase and nominal morphology

A noun phrase in Gubëeher consists minimally of a noun or a pronoun and can be enlarged by postposed demonstratives, adjectives numerals and other modifiers. There is no definite article or other definiteness marker and apart from the noun class affixes there is little nominal morphology, only the possessive suffixes (2.3.2), and a few derivational suffixes (2.3.3). The inactual marker, frequent with verbs, can be suffixed to possessed nouns (2.4.3.3) but these constructions are rather marginal. Nominal morphology includes the noun class prefixes, the plural marker -*Vŋ* (2.3.1) and a set of affixed possessive pronouns (2.3.2.1). Syntactically, nouns are heads of noun phrases, minimally consisting of a (pro)noun, and are modifiable by adjectives, demonstratives, numerals and quantifiers on which they trigger agreement (2.3.4.1). The following characteristics define nouns in Gubëeher:

- noun class, overt or covert
- possessive morphology affixed
- modifiable by demonstratives, adjectives etc.
- stand in argument position

Example (100) shows a composite NP in adjunct position, introduced by the preposition *anga* 'with' which consists of two conjoined modified nouns each suffixed with possessive morphology. The noun *u-dikaam* 'woman' is suffixed with

the third person singular possessive marker *-kanam*, and prefixed with the class marker *u-*, which triggers agreement in the modifier *dinem* ‘other’. The noun *jaraax* ‘children’ is suffixed with the same third person singular possessive marker, but does not have an overt noun class prefix and triggers plural human agreement *i-* on the modifying numeral *naak* ‘two’.

- (100) *a-besin na anga u-dikaan-kanam u-dinem anga*  
 3-leave there with CL.u-woman-3SGPOSS CL.u-other with  
*jaraa' -kanam i-naak*  
 children-3SGPOSS AGR.i-two

‘And he leaves (her) there with his other wife and her two children’.

BS, DJI101010AC2

### 2.3.1 The noun class system of Gubëeher

In this chapter, I provide only a brief overview of the morphological aspects of the noun class system of Gubëeher. Since the detailed semantic analysis of the NC system is crucial for a consideration of verbal nouns, the whole of chapter 3 is dedicated to the semantic aspects of classification.

The noun class system of Gubëeher, as of other Nyun languages, is very large and complex, even in comparison with the intricate systems of the surrounding Bak languages. If, as commonly accepted (see Corbett 1991), the number of agreement markers is used as a defining criterion of a noun class, Bainounk Gubëeher would count around 30 noun classes. The majority of nouns in Bainounk Gubëeher have noun class prefixes forming paired singular/plural paradigms or triadic singular/count plural/plural paradigms.

- (101) a) *bu-rul*                      b) *i-rul*  
           CL.bu-mouth                      CL.i-mouth  
           ‘mouth’                              ‘mouths’

- (102) a) *bu-puul*                      b) *i-puul*                      c) *ja-puul*  
           CL.bu-bird                      CL.i-bird                      CL.ja-bird  
           ‘bird (singular)’                      ‘birds (countable)’                      ‘birds (unlimited)’

Almost all of the noun class markers which occur in these number marking paradigms can also occur on one-class nouns which are lacking a number distinction (103) such as mass nouns, substances, abstract nouns etc.

- (103) *bu-di*  
           CL.bu-fog  
           ‘fog’

A large group of nouns does not show any prefixed class markers neither in the singular nor in the plural but marks pluralisation with suffixes (105). A less numerous group combines the two strategies, using both prefixes and suffixes (104). Singular and plural forms carry the same prefix as in (104), or neither is prefixed as in (105). It is the suffix which marks plural number.

- (104) a) *ba-xon*                      b) *ba-xon-oŋ*  
           CL.ba-ronier.palm                      CL.ba-ronier.palm-PL  
           ‘ronier palm’                              ‘ronier palms’

- (105) a) *kuurut*                      b) *kuurut-oŋ*  
           crocodile                              crocodile-PL  
           ‘crocodile’                              ‘crocodiles’

An overview of agreement classes and agreeing targets is provided in section 2.3.1.1, the controversial issues of nasal-final noun class and agreement markers and the criteria for segmentability and prefix status, each of which causes some analytic problems are discussed in sections 2.3.1.2 and 2.3.1.3 respectively, followed by a presentation of the Gubëeher noun class system in terms of agreement types in section 2.3.1.4. The analysis of the noun class system based on number paradigms addressing semantic components of the paradigms and their role in forming paradigmatic networks is topic of chapter 3.

#### **2.3.1.1 Agreement classes and agreement marking**

In Gubëeher only some modifiers and pronouns agree with the noun. This includes numerals from one to four and adjectives, as well as the interrogative pronouns AGR-*ŋ* ‘which’ and AGR-*luhi* ‘how many’, the relative pronoun AGR-*n(i)/-guni*, all of which prefix the agreement marker to the stem of the agreeing target. The demonstrative pronouns and the locative copula deviate from this pattern in that the locative copula suffixes the agreement marker to the base *in-* and the demonstratives involve patterns of reduplication (the segmentation and formation of demonstratives is summarised in Table (41) below and described in section 2.3.4.4). The targets agree with the noun class prefixes as well as additionally with the plural suffix, for those nouns which use plural suffixes. Table (40) shows the agreement classes attested so far in Gubëeher with selected targets (prefix on adjectives, numerals etc./the proximal and distal demonstratives/the locative copula/the relative pronoun).

Table (40) Agreement classes, prefixes and agreeing targets in Gubëeher

Agreement Class	NC Prefix	Agreement Prefix	DEM.PROX	DEM.DIST	DEM.DIST	LOC	REL
A	<i>a-</i>	<i>a-</i>	<i>amu</i> <sup>51</sup>	<i>amooŋ</i>	<i>aŋoon</i>	<i>innu</i>	<i>ë-(gë)ni</i>
	<i>ji-</i>						
	<i>ja-</i>						
	/						
BA	<i>ba-</i>	<i>ba-</i>	<i>bamba</i>	<i>bambaanŋ</i>	<i>baŋaan</i>	<i>imba</i>	<i>bë-(gë)ni</i>
BI	<i>bi-</i>	<i>bi-</i>	<i>bimbi</i>	<i>bimbeenŋ</i>	<i>biŋeen</i>	<i>imbi</i>	<i>bi-(gi)ni</i>
BU	<i>bu-</i>	<i>bu-</i>	<i>bumbu</i>	<i>bumboonŋ</i>	<i>buŋoon</i>	<i>imbu</i>	<i>bu-(gu)ni</i>
DA	<i>da-</i>	<i>da-</i>	<i>danda</i>	<i>dandaanŋ</i>	<i>daŋaan</i>	<i>inda</i>	<i>dë-(gë)ni</i>
DI	<i>di-</i>	<i>di-</i>	<i>dindi</i>	<i>dindeenŋ</i>	<i>diŋeen</i>	<i>indi</i>	<i>di-(gi)ni</i>
DIN	<i>din-</i>	<i>din-</i>	<i>dindi</i>	<i>dindeenŋ</i>	<i>diŋeen</i>	<i>indi</i>	<i>di-(gi)ni</i>
FA	<i>fa-</i>	<i>fa-</i>	<i>fafa</i>	<i>fafaanŋ</i>	<i>faŋaan</i>	<i>ifa</i>	<i>fë-(gë)ni</i>
FUN	<i>fun-</i>	<i>fun-</i>	<i>fufu</i>	<i>fufoonŋ</i>	<i>fuŋoon</i>	<i>ifu</i>	<i>fu-g(u)ni</i>
GU	<i>gu-</i>	<i>gu-</i>	<i>gunŋu</i>	<i>gunŋoonŋ</i>	<i>gunŋoon</i>	<i>iŋgu</i>	<i>gu-guni</i>
HA	<i>ha-</i>	<i>ha-</i>	<i>haha</i>	<i>hahaanŋ</i>	<i>haŋaan</i>	<i>iha</i>	<i>hë-(gë)ni</i>
HO	<i>ho-</i>	<i>ho-</i>	<i>hoho</i>	<i>hohoonŋ</i>	<i>hoŋoon</i>	<i>iho</i>	<i>ho-(gu)ni</i>
HU	<i>hu-</i>	<i>hu-</i>	<i>huhu</i>	<i>huhoonŋ</i>	<i>huŋoon</i>	<i>ihu</i>	<i>hu-(gu)ni</i>
I	<i>i-</i>	<i>i-</i>	<i>imi</i>	<i>imeenŋ</i>	<i>iŋeen</i>	<i>inni</i>	<i>i-(gi)ni</i>
IN	<i>in-</i>	<i>in-</i>	<i>imi</i>	<i>imeenŋ</i>	<i>iŋeen</i>	<i>inni</i>	<i>i-(gi)ni</i>
	<i>ñan</i> <sup>52</sup>						
	<i>e-</i>						
JA	<i>ja-</i>	<i>ja-</i>	<i>janja</i>	<i>janjaanŋ</i>	<i>jaŋaan</i>	<i>inja</i>	<i>jë-(gë)ni</i>
JI	<i>ji-</i>	<i>ji-</i>	<i>jinji</i>	<i>jinjeenŋ</i>	<i>jiŋeen</i>	<i>inji</i>	<i>ji-(gi)ni</i>
KA	<i>ka-</i>	<i>ka-</i>	<i>kaka</i>	<i>kakaanŋ</i>	<i>kaŋaan</i>	<i>iŋka</i>	<i>kë-(gë)ni</i>
KAN	<i>kan-</i>	<i>kan-</i>	<i>kaka</i>	<i>kakaanŋ</i>	<i>kaŋaan</i>	<i>iŋka</i>	<i>kë-(gë)ni</i>
KO	<i>ko-</i>	<i>ko-</i>	<i>koko</i>	<i>kokoanŋ</i>	<i>koŋoon</i>	<i>iŋko</i>	<i>ko-(gu)ni</i>
KUN	<i>kun-</i>	<i>kun-</i>	<i>kuku</i>	<i>kukoonŋ</i>	<i>kuŋoon</i>	<i>iŋku</i>	<i>ku-(gu)ni</i>
MUN	<i>mun-</i>	<i>mun-</i>	<i>mumu</i>	<i>mumoonŋ</i>	<i>muŋoon</i>	<i>immu</i>	<i>mu-(gu)ni</i>
ÑAN	<i>ñan-</i>	<i>ñan-</i>	<i>ñañã</i>	<i>ñañãanŋ</i>	<i>ñañãan</i>	<i>iññã</i>	<i>ñë-(gë)ni</i>
ÑO	<i>ño-</i>	<i>ño-</i>	<i>ñoño</i>	<i>ñoñoanŋ</i>	<i>ñoñoan</i>	<i>iñño</i>	<i>ño-(gu)ni</i>
PI	<i>pi-</i>	<i>pi-</i>	<i>pipi</i>	<i>pipeenŋ</i>	<i>piŋeen</i>	<i>impi</i>	<i>pi-(gi)ni</i>
RAN	<i>ran-</i>	<i>ran-</i>	<i>rara</i>	<i>raraanŋ</i>	<i>raŋaan</i>	<i>ira</i>	<i>rë-(gë)ni</i>
SI	<i>si-/sin-</i>	<i>si-</i>	<i>sisi</i>	<i>siseenŋ</i>	<i>siŋeen</i>	<i>isi</i>	<i>si-(gi)ni</i>
SIN	<i>sin-/si-</i>	<i>sin-</i>	<i>sisi</i>	<i>siseenŋ</i>	<i>siŋeen</i>	<i>isi</i>	<i>si-(gi)ni</i>

<sup>51</sup> The vocalic class *a-*, deviates from the reduplication pattern observed in the formation of demonstratives and the locative copula of the other noun classes in that it has *u* as final vowel and not as expected *a*.

<sup>52</sup> This concerns terms denoting human with *ñan-* as plural noun class prefix on the noun which have animacy agreement in that they agree with the human plural noun class *in-* (see section 3.1.1.6).

TA	<i>ta</i>	<i>ta-</i>	<i>tata</i>	<i>tataaŋ</i>	<i>taŋaan</i>	<i>inta</i>	<i>tě-(gě)ni</i>
TIN	<i>tin-</i>	<i>tin-</i>	<i>titi</i>	<i>titeeŋ</i>	<i>tiŋeen</i>	<i>inti</i>	<i>ti-(gi)ni</i>
U	<i>u-</i>	<i>u-</i>	<i>umu</i>	<i>umooŋ</i>	<i>uŋoon</i>	<i>innu</i>	<i>u-(gu)ni</i>

An overview of all types of agreeing targets in Gubëeher on the example of the noun *ha-sol* ‘shirts’ in agreement class *ha-* is provided in Table (41).

Table (41) *Agreeing targets*

Target	Combination	Schema	Example with class <i>ha-</i>	Gloss
Adjectives	prefixed	AGR-‘stem’	<i>ha-sol hě-de</i>	‘big shirts’
Numerals (one – four)	prefixed, involving reduplication for ‘one’	AGR-stem’	<i>(gu-sol gugoonduk)</i> <i>ha-sol ha-naak</i> <i>ha-sol ha-lal</i> <i>ha-sol ha-rendek</i>	‘one shirt’ ‘two shirts’ ‘three shirts’ ‘four shirts’
Relative pronoun	prefixed	AGR-( <i>gV</i> )ni	<i>ha-sol hě-(gě)ni</i>	the shirts which
Interrogative pronoun ‘which’	prefixed	AGR-ŋ	<i>ha-sol ha-ŋ</i>	‘which shirts’
Interrogative pronoun ‘how many’	prefixed	AGR-luh	<i>ha-sol ha-luh</i>	‘how many shirts’
Locative	suffixed	<i>in</i> -AGR <i>in</i> -AGR-ŋ	<i>ha-sol i’-ha</i> <i>ha-sol i’-ha-ŋ</i>	‘there are the shirts’ ‘where are the shirts?’/ ‘the shirts are here’
Demonstrative	reduplicated	AGR-( <i>n</i> )-AGR	<i>ha-sol ha-ha</i> <i>ha-sol ha-ha-aŋ</i>	‘these shirts’ ‘those shirs’
Demonstrative distal	prefixed	AGR-ŋVVn	<i>ha-sol ha-ŋaan</i>	‘those shirts’
independent possessive	prefixed	AGR-POSS	<i>ha-naam</i>	‘mine’
Attributive particle	stand-alone	AGR	<i>gu-sol gu buxaana</i> <sup>53</sup>	‘a shirt for wearing’

For those nouns which form their plural with the plural suffix *-Vŋ*, this is reflected in agreement. A plural suffix *-Vŋ* is also suffixed to the agreeing target.

<sup>53</sup> The form in agreement class *ha-* is homophonous to the connective morpheme *ha*, which is why an example with class *gu-* is more illustrative.

- (106) *bě-kër-ěŋ*                      *bě-gěni*                      *a'-fila-ne*                      *biŋeen*                      *ba-naam-aŋ*  
 CL.ba-chicken-PL    AGR.ba-REL    3.PL-eat-SUB    there                      AGR.ba-1SGPOSS-PL

‘The chicken which eat over there are mine.’

HS, field notes

- (107) *fěébi-eŋ*                      *fafa-aŋ*                      *fa-naam-aŋ*  
 goat(CL.fa)-PL    AGR.fa:DEM.PROX-PL    AGR.fa-1SGPOSS-PL

‘These goats are mine’

HS, field notes

- (108) *ta-fer-eŋ*                      *ta-ŋ-aŋ*                      *i'-lum-i*                      *bě-jóló*  
 CL.ta-type.bird-PL    AGR.ta-which-PL    FOC.SUBJ-surpass-PERF    CL.ba-large

‘Which of the birds are the largest.’

HS, field notes

### 2.3.1.2 Nasal-final noun class and agreement prefixes

The noun class and agreement prefixes can either have a vocalic or consonantal onset and a vocalic or a nasal coda, leaving four possible forms: V, VN, CV, and CVN (Table (42)).

Table (42) *The form of noun class prefixes in Gubëeher*

Structure	Example
V	<i>u-raaf</i> ‘person’
VN	<i>in-dikaam</i> ‘women’
CV	<i>ja-luf</i> ‘leaves’
CVN	<i>mun-déén</i> ‘kapok trees’

The final nasal also appears on agreeing adjectives. For phonological contexts where the final nasal of the prefix is deleted see Table (43) in this section below.



consultant who has made the distinction between *si-* and *sin-* in the agreement in examples (114) and (115), has deviated from this rule in another session (116), which confirms the instable nature of these agreement classes. A possible explanation for this phenomenon is presented and discussed in section 3.1.7.1.3.

(114)	<i>sin-cind</i>	<i>sin-dé</i>	(115)	<i>si-lód</i>	<i>si-dé</i>
	CL.sin-cord	AGR.sin-big		CL.si-wall	AGR.si-big
	‘big cord’			‘big wall’	
	LM, DJI160212A2			LM, DJI160212A2	

(116)	<i>si-lód</i>	<i>sin-ceen</i>
	CL.si-wall	AGR.sin-red
	‘red wall’	
	LM, stative verb list	

When they are prefixed to a stem, CVN prefixes can lose the final nasal due to assimilation processes in Gubéeher affecting morpheme final nasals (see 2.2.3.2). This concerns roots with the initial consonants [l],[r],[w],[y],[h],[f] and [s], on which the final nasal of the prefix is deleted (Table (43)).

Table (43) *Examples illustrating the deletion of the final nasal on noun class prefixes*

Prefix	Noun with deleted nasal prefix	Gloss	Noun with full nasal prefix	Gloss
<i>mun-</i>	<i>mu'-lód</i>	‘walls’	<i>mun-jil</i>	‘tears’
	<i>mu'-fokund</i>	‘Neocarya macrophylla [tree]’	<i>mun-taat</i>	‘annona trees’
	<i>mu'-han</i>	‘medicines’	<i>mun-deex</i>	‘wooden plates’
<i>ñan-</i>	<i>ña'-saw</i>	‘hunters’	<i>ñan-ciil</i>	‘laugh’
	<i>ña'-raafa</i>	‘bottles’	<i>ñañ-kuur</i>	‘mortars’
	<i>ña'-wal</i>	‘dam in rice field’	<i>ñan-tuuta</i>	‘ancestors’

The same applies to prefixes on agreeing targets (Table (44))

Table (44) Agreement prefixes in full form (with final nasal) and with deleted nasal

Noun	Agreeing adjective	Gloss	Type
<i>ram-basa</i> CL.ran-mat	<i>ram-bun</i> AGR.ran-beautiful	'beautiful mat'	agreeing target with full nasal prefix
	<i>rën-dé</i> AGR.ran-big	'big mat'	
	<i>ra'-rahi</i> AGR.ran-black	'black mat'	agreeing target with deleted nasal prefix
	<i>ra'-way</i> AGR.ran-wide	'large mat'	

Where two noun class prefixes differ formally from one another only in that one of them has a final nasal and the other one not, these assimilation processes can create ambiguities. Concerning paired and triadic nouns, the potentially ambiguous prefixes belong to semantically very clearly defined paradigms so that ambiguity between an interpretation as either nasal-final or vowel-final is virtually excluded. The disambiguation of ambiguous prefixes differing only in the final nasal can however become problematic in the case of nouns belonging to one-class paradigms in contexts where deletion of the nasal occurs, given that the paradigm cannot serve to disambiguate in these cases and agreement information with the potential to disambiguate is not always available for these items. There are only few cases where the only formal difference between two prefixes is the presence or absence of the final nasal. In paired and triadic paradigms this is the case for the prefixes *si-* and *sin-*, *i-* and *in-*, and *di-* and *din-*, all other prefixes being always either (C)V- or (C)VN- irrespective of which paradigm they occur in. Among infinitives *ka-* and *kan-*, *ja-* and *jan-*, *ji-* and *jín-*, and *si-* and *sin-* are distinguished.

### 2.3.1.3 Prefixation and segmentability in Gubëeher

A noun is considered NC-prefixed when either of the two criteria is fulfilled: Substitutability or alliterative agreement. Substitutability is guaranteed when the stem without the presumed noun class prefix is attested with other noun class prefixes in the same or different paradigm. The noun *bu-dëën* ‘pond’ for example has the plural form *i-dëën* ‘ponds’, as can be seen the two components stem and prefix are autonomous and the prefix can be substituted by an other prefix, which proves that it is not part of the stem. In case the paradigm does not provide this information, the formation of the diminutive or augmentative, whose prefixes are compatible with most nouns, can be used to test substitutability. This is the case for nouns with suffixed plurals whose prefix is the same for singular and plural: the examples in (117) show that *ji-* is not inherent part of the stem since it is substitutable by the diminutive prefix *ko-*

(117) a)	<i>ji-hut</i>	b)	<i>ji-hut-oy</i>	c)	<i>ko-hut</i>
	CL.ji-mouse		CL.ji-mouse-PL		CL.ko-mouse
	‘mouse’		‘mice’		‘little mouse’

Formal identity between the agreement marker and the first syllable of the noun (alliterative agreement) is also considered as evidence that the noun is prefixed. Nouns where the agreement prefix and the class prefix on the noun are not completely identical and/or not substitutable by other prefixes such as diminutive or others are considered as having fused prefixes.

Table (45) *Prefix status*

Type		Substitutable	Alliterative agreement
Prefixed	Segmentable	Yes	Yes
		Yes	No
	Fused	No	Yes
Un-prefixed		No	No

None of the examples in Table (46) can substitute part of its stem as shows the substitution test with the diminutive singular prefix *ko-* (in the case of *mind* ‘milk’ the mass diminutive *ho-* is used) and agreement is not entirely alliterative.

Table (46) *Nouns with fused prefixes*

Noun stem	Gloss	Agreement class	Substitution test
<i>féébi</i>	‘goat’	<i>fa-</i>	<i>ko-féébi</i> ‘small goat’
<i>fécir</i>	‘monkey’	<i>fa-</i>	<i>ko-fécir</i> ‘small monkey’
<i>fuun</i>	‘type fish’	<i>fun-</i>	<i>ko-fuun</i> ‘small fuun [fish]’
<i>mind</i>	‘milk’	<i>mun-</i>	<i>ho-mind</i> ‘some milk’
<i>honj</i>	‘thing’	<i>ho-</i>	<i>ko-honj</i> ‘little stick’
<i>kuug</i>	‘hunger’	<i>kun-</i>	not possible
<i>kuur</i>	‘mortar’	<i>kun-</i>	<i>ko-xuur</i> ‘small mortar’

The nouns in Table (47) and some more nouns in the *ja*-paradigm with suffixed plurals (see Table (145)) might at first sight be mistaken for nouns with nasal-final prefixes. The substitution test establishes that they are more suitably analysed as nouns with pre-nasalised roots. The problem with assuming nasal-final prefixes is that none of the morphology attested with these nouns in substitution tests

(including the *gu-/ha-*paradigm, the diminutive *ko-/ño-*paradigm, the singular prefix *u-* of the human paradigm *u-/ñan-*, the singular augmentative prefix *da-*, as well as the verbal morphology prefixed to *mbaal* when it is used predicatively with the meaning ‘fish with a net’) is attested anywhere else with a final nasal. If, for example, a diminutive prefix *kon-*, as opposed to *ko-*, or a prefix *gun-* as opposed to *gu-*, existed in Gubëeher, its distribution should not be limited to nouns which appear with the nasal in all known prefix stem combinations. In other words, it is highly implausible that all of these otherwise completely unattested nasal-final versions of the noun class prefixes in question should occur exactly with the same set of nouns (those in Table (47) in all the paradigms these are compatible with, furthermore without a reflex of the nasal on the prefix agreement in any case. The conclusion that these stems are pre-nasalised is therefore preferable.

Table (47) Prenalised stems

Noun	Gloss	Agreement	Substitution test
<i>a-mbiro/a-mbiro-ŋ</i>	'zombie'	<i>a-/a-(-ŋ)</i>	<i>ko-mbiro</i> 'small zombie' Cl.ko-zombie
<i>ja-mbaal/ja-mbaal-aŋ</i>	'fishnet'	<i>a-/a-(-ŋ)</i>	<i>u-mbaal</i> 'fisherman' Cl.u-catch.fish <i>a-mbaal-i</i> 's/he fishes' 3-catch.fish-PERF <i>ko-mbaal</i> 'small fishnet' Cl.ko-catch.fish <i>da-mbaal</i> 'large fishnet' Cl.da-catch.fish
<i>ja-mpeet/ja-mpeet-eŋ</i>	'type snake'	<i>a-/a-(-ŋ)</i>	<i>ko-mpeet</i> 'small <i>jampeet</i> ' Cl.ko-type.snake
<i>gu-ndoof/ha-ndoof</i>	'back of the knee'	<i>gu-/ha-</i>	<i>no data</i>
<i>gu-ndëëb/hë-ndëëb/ jë-ndëëb</i>	'root'	<i>gu-/ha-/ja-</i>	<i>ko-ndëëb</i> 'little root' Cl.ko-root <i>ño-ndëëb</i> 'little roots' Cl.ño-root
<i>gu-njamb/ha-njamb</i>	'fishnet'	<i>gu-/ha-/ja-</i>	<i>ko-njamb</i> 'small fishnet' Cl.ko-fishnet

For at least two of the items in Table (47) a borrowed origin is possible, which might explain the rare peculiarity of having a pre-nasalised stem. The phonetically similar stem *mbaal* 'catch fish' occurs also in Joola Eegimaa, and is there too segmented with a pre-nasalised stem: cf. *gu-mbala* 'fishermen' and *e-mbal* 'to fish' (Bassène 2006:107). *A-mbiro* 'zombie' has a phonetically related equivalent in Joola Kujireray *e-mbilo* 'zombie', also with a pre-nasalised stem.

#### 2.3.1.4 Agreement types

Based on the features alliterative/non-alliterative and prefixed/suffixed plural the following agreement classes have been established (Table (48)). Each type will be

discussed separately in sections 2.3.1.4.1 – 2.3.1.4.4 and examples for each type are provided in the respective section.

Table (48) *Agreement types*

Nr.	Subtype	Properties	Label
1	a)	purely prefixed alliterative agreement	'prefixed-agreement'
	b)	purely prefixed non-alliterative agreement	'human agreement'
2	a)	prefixed alliterative agreement with suffixed plurals	/
	b)	non-alliterative agreement with suffixed plurals	'a-agreement'
	c)	prefixed alliterative agreement, with suffixed plurals. Singular and plural prefix are non-identical	'mixed agreement'
Other/mixed types		other	/

#### 2.3.1.4.1 Agreement type 1

The majority of nouns in Gubëcher are in agreement type 1, i.e. prefixed both in the singular and in the plural, with different noun class markers for the singular and for the plural. From this follows that for nouns in agreement type 1, the noun class prefix encodes number, as well as class membership. For nouns in subpattern 1a) agreement is alliterative as in (118) – (120).

(118) *rëŋ<sup>54</sup>-guux*      *rën-dé*  
 CL.ran-crab      AGR.ran-big  
 'big crab (singular)'

(119) *ñëŋ-guux*      *ñën-dé*  
 CL. ñan-crab      AGR. ñan-big  
 'big crabs (count plural)'

<sup>54</sup> The reader is reminded at this point that the vowel of the prefix is subject to vowel harmony with the stem and the final nasal undergoes assimilation processes depending on the initial segment of the root.

- (120) *jë-guux*      *jë-dé*  
 CL. ja-crab    AGR.ja-big  
 ‘big crabs (unlimited plural)’

The nouns in subpattern 1b) denoting humans which are in paradigm *u-/ñan-* differ from those in pattern 1a) in that agreement is purely prefixed, like those in pattern 1a), but not alliterative in the plural, since they share the agreement of the human paradigm *u- /in-*.

- |  |   |
|--|---|
| <p>(121) <i>u-nam</i>      <i>u-munduk</i><br/>         CL.u-king    AGR.u~one<br/>         ‘one king’</p> | <p>(122) <i>ñan-nam</i>      <i>in-naak</i><br/>         CL.ñan-king    AGR.in-two<br/>         ‘two kings’</p> |
|--|---|

Human nouns in the *ji-*paradigm with suffixed plurals are attested both with purely prefixed *u-/in-*agreement, as well as with *a-*agreement like all other nouns in that paradigm denoting non-humans.

- (123) *ji-def*      *u-munduk/ë-munduk*  
 CL.ji-old    AGR.u-one/ AGR.a-one  
 ‘one old man’
- (124) *ji-def-erj*      *in-naak/a-naak-arj*  
 CL.ji-old-PL    AGR.in-two/ AGR.a-two-PL  
 ‘two old men’

#### 2.3.1.4.2 Agreement type 2a

Pattern 2a includes prefixed and prefixless nouns, which form plurals by suffixing the nasal suffix *-Vŋ*. They may or may not have a prefix, but either way the prefix cannot make number distinctions since it is the same for singular and plural.

Agreement is both prefixed and suffixed and alliterative, the agreeing target is prefixed in both singular and plural and suffixed in the plural with the suffix *-Vɲ*.

In examples (125) and (126) we see the agreement behaviour of a prefixed 2a noun, in examples (127) and (128) the agreement behaviour of a noun whose prefix has fused with the stem.

(125)	<i>bë-kër</i>	<i>bamba</i>	(126)	<i>bë-kër-ërɲ</i>	<i>ba-naak-aɲ</i>
	CL.ba-chicken	AGR.ba:DEM.PROX		CL.ba-chicken-PL	AGR.ba-two-PL
	‘this chicken’			‘two chickens’	
(127)	<i>féébi</i>	<i>fa-dikaam</i>	(128)	<i>féébi-erɲ</i>	<i>fa-naak-aɲ</i>
	goat(CL.fa)	AGR.fa-female		goat(CL.fa)-PL	AGR.fa-two-PL
	‘female goat’			‘two goats’	

Nouns with 2a agreement type have been analysed as prefixless with the first syllable copied onto agreement targets by Sauvageot (1987, 1967) for Bâinounk Guñaamolo, which has raised a debate about the theoretical implications of LAC (literal alliterative copying) as it was dubbed by Dobrin (1995). This approach is not compatible with my data on Gubëeher and doubts remain as to its applicability to Bâinounk Guñaamolo. For an alternative account see also Cobbinah (2010) and Cobbinah and Lüpke (in preparation).

#### 2.3.1.4.3 Agreement type 2b

The second largest agreement class includes mostly prefixless nouns, which form plurals by suffixing *-Vɲ*, the vowel of the suffix being determined by rules of vowel harmony. Agreement is non-alliterative: in the singular these nouns have the prefix *a-* and in the plural the prefix *a-* and the plural suffix *-Vɲ*. Examples are provided

for prefixless 2b nouns in (129) and (130) and for prefixed 2b) nouns in (131) and (132).

(129)	<i>koona</i>	<i>ë-dé</i>	(130)	<i>koona-ŋ</i>	<i>ë-dé-eŋ</i>
	house	AGR.a-big		house-PL	AGR.a-big-PL
	‘big house’			‘big houses’	

(131)	<i>ji-fek</i>	<i>ë-dé</i>	(132)	<i>ji-fek-eŋ</i>	<i>ë-dé-eŋ</i>
	CL.ji-pig	AGR.a-big		CL.ji-pig-PL	AGR.a-big-PL
	‘big pig’			‘big pigs’	

These nouns make up a significant part of the noun inventory of Gubëeher (333 of 1191 nouns in the dictionary which make a singular/plural distinction or a bit less than one forth). The same holds true for Guñaamolo: Sauvageot (1967:229) reports their ratio as 200 out of 800, and 400 out of 1,200 in a more recent paper (Sauvageot 1987:21).

The nouns in this group are the Gubëeher equivalent of the nouns that Sauvageot (1967, 1987) calls prefixless for Guñaamolo, but the substitution test indicates that some nouns demanding default agreement do actually have prefixes in Gubëeher. This is often the case with nouns in *jí-*, which can be substituted by the diminutive or augmentative (ex. (133), (134) and (135)), evidence for the fact that it is not part of the noun stem but a segmentable affix.

(133)	<i>ji-fek</i>	(134)	<i>ji-fek-eŋ</i>	(135)	<i>ko-fek</i>
	CL.ji-pig		CL.ji-pig-PL		CL.ko-pig
	‘pig’		‘pigs’		‘little pig’

The proportion of loanwords among the nouns of this agreement type is very high, since loans from classless languages (French, Wolof, Kriolu, Mandinka) are

synchronously not assigned to the prefixed noun classes but remain prefixless and trigger 2b-agreement.

#### 2.3.1.4.4 Agreement type 2c

Examples (136) and (137) show a noun where agreement is alliterative and suffixed in the plural, with the difference to the 2a) nouns that the prefix used in the singular differs from the one used in the plural. For these nouns the plural is doubly marked, by prefix and by suffix. All nouns with *bi-* in the singular have this as an alternative pattern *bi-/a-(-ŋ)*, both on the noun and as agreement (136) and (137)<sup>55</sup>. The augmentative *da-/din-(-ŋ)* and some family terms with *u-/in-(-ŋ)* and *u-/a-(-ŋ)* are also among the nouns with this pattern. Double prefixation as an alternative to purely prefixed pattern 1 behaviour has also been noted occasionally with diminutive plurals of animals (for examples see section 2.3.1.4.5).

(136)	<i>bi-han</i>	<i>bi-dé</i>	(137)	<i>a-han-aŋ</i>	<i>ë-dé-eŋ</i>
	CL.bi-pot	AGR.bi-big		CL.a-pot-PL	AGR.a-big-PL
	‘big pot’			‘big pots’	
(138)	<i>da-gof</i>	<i>dë-dënduk</i>	(139)	<i>din-gof-oŋ</i>	<i>din-naak-aŋ</i>
	CL.da-head	AGR.da-one		CL.din-head-PL	AGR.din-two-PL
	‘one big head’			‘two big heads’	
(140)	<i>u-lina</i>	<i>u-munduk</i>	(141)	<i>a-lina-eŋ</i>	<i>a-naak-aŋ</i>
	CL.u-sibling	AGR.u-one		CL.a-sibling-PL	AGR.a-two-PL
	‘one different-sex sibling’			‘two different-sex siblings’	

<sup>55</sup> The *bi*-nouns also have a variant of agreement marking in type 1: *bi*-(sg.)/*i*-(pl.): *bi-han* (sg.)/*i-han* (pl.)

- |       |                 |              |       |                 |                  |
|-------|-----------------|--------------|-------|-----------------|------------------|
| (142) | <i>dë-nég</i>   | <i>dë-dé</i> | (143) | <i>a-nég-eŋ</i> | <i>a-naak-aŋ</i> |
|       | CL.da-day       | AGR.da-big   |       | CL.a-day-PL     | AGR.a-two-PL     |
|       | ‘important day’ |              |       | ‘two days’      |                  |

#### 2.3.1.4.5 Variation in noun class prefixation and agreement

Some amount of variation in connection with noun class/agreement affixes and agreement types has been pointed out already: The human nouns in class *ji-* can have 2b agreement, as the other nouns in class *ji-*, or have 1b human agreement in *u-/i-*. Examples (123) and (124) are repeated here for convenience as examples (144) and (145). Both versions are common, though some speakers comment that the use of human agreement with these nouns is more polite.

- |       |                  |                           |
|-------|------------------|---------------------------|
| (144) | <i>jidef</i>     | <i>u-munduk/ ë-munduk</i> |
|       | CL.ji-old        | AGR.u-one/ AGR.a-one      |
|       | ‘one old man’    |                           |
| (145) | <i>ji-def-eŋ</i> | <i>in-naak/ a-naak-aŋ</i> |
|       | CL.ji-old-PL     | AGR.in-two/ AGR.a-two-PL  |
|       | ‘two old men’    |                           |

The nouns with the singular prefix *bi-*, both on the noun and on the agreeing target, often allow two possibilities of plural formation, one with the prefix *i-* and *i-* agreement (147) and an alternative plural with the prefix *a-* and the plural suffix and *a-* agreement (148).

- |       |                      |       |                    |       |                          |
|-------|----------------------|-------|--------------------|-------|--------------------------|
| (146) | <i>bi-han bi-dé</i>  | (147) | <i>i-han i-dé</i>  | (148) | <i>a-han-aŋ ë-dé-eŋ</i>  |
|       | CL.bi-pot AGR.bi-big |       | CL.i-pot AGR.i-big |       | CL.a-pot-PL AGR.a-big-PL |
|       | ‘big pot’            |       | ‘big pots’         |       | ‘big pots’               |

Some speakers use only one or the other of the two alternatives but accept the other as grammatical, while some speakers use both alternatives in free variation. This shows well that here, two of the mechanisms are in competition.

A few nouns with a singular in NC *bu-* show the same variation: *bu-koor* ‘village/country’ has the regular plural *i-koor* and the alternative plural *a-koor-oŋ*, both with alliterative agreement. The alternative form *a-gof-oŋ* of *bu-gof* ‘head’ (regular plural: *i-gof* ‘heads’) has been encountered in a metaphorical expression (149).

- |       |  |                 |
|-------|--|-----------------|
| (149) | <i>a-'ratli</i>                                  | <i>a-gof-oŋ</i> |
|       | 3-PL-hard  | CL.a-head-PL    |
|       | ‘They are stubborn (lit: ‘their heads are hard’) |                 |

The noun *gu-cind* ‘nose’ has two alternative plural forms: *ha-cind* and *ñan-cind* ‘noses’.

A different instance of variation in agreement concerns the classes *si-* and *sin-*. Some speakers distinguish *si-* and *sin-* in the agreement while others do not and use either agreement prefix *si-* or *sin-* on all targets no matter what the form of the noun class prefix (for examples see section 2.3.1.2).

Some instances of double plural marking have been overheard, though they were considered doubtful by other speakers and even by the speaker who has uttered them, so that their status is unclear. In (152), the plural is marked by a noun class prefix (the diminutive plural prefix *ño-*) and additionally with the plural suffix.

(150) <i>ko-feebi</i>	(151) <i>ño-feebi</i>	(152) <i>ño-feebi-eŋ</i>
CL.ko-goat	CL.ño-goat	CL.ño-goat-PL
‘little goat’	‘little goats’	‘little goats(?)’

This has also been observed with unlimited plurals (153) – (156) but these double-marked forms were not accepted as grammatical by most speakers, even though they would occasionally use them themselves. It is not yet clear whether there is a semantic difference between (151) and (152) and between (155) and (156) and in what it might consist.

(153) <i>bu-puul</i>	(154) <i>i-puul</i>	(155) <i>ja-puul</i>	(156) <i>ja-puul-oŋ</i>
CL.bu-bird	CL.i-bird	CL.ja-bird	CL.ja-bird-PL
‘bird (sg.)’	‘birds (count)’	‘birds (mass)’	‘birds (?)’

The noun *u-ñam* ‘friend’ has two alternate plurals, a ‘regular’ plural (158) which follows the human-paradigm *u-/ñan-* and a double marked plural with both a plural prefix and an additional plural suffix (159).

(157) <i>u-ñam</i>	(158) <i>ñan-ñam</i>	(159) <i>in-ñam-aŋ</i>
CL.u-friend	CL.ñan-friend	CL.in-friend-PL
‘friend’	‘friends’	‘friends’

### 2.3.2 Possession

Possession is expressed verbally with the verb *cooc* ‘have/be in possession of’ or *henj* ‘have/ carry’. The latter implies that the possessor is carrying the possessee with him at the time of speaking, whereas *cooc* refers to abstract possession.

### 2.3.2.1 Nominal and pronominal possession

For the expression of physical possession (160), or part/whole relationships (161) involving two NPs, these are connected through the invariable connective morpheme *ha/ka*, according to the scheme ‘Possessee CONN Possessor’.

(160) *koona ha u-ñaaŋ-kum*  
 house CONN CL-friend-1SGPOSS  
 ‘my friend’s house’

(161) *jamaaŋ ka bu-koor*  
 people CONN CL.bu-village  
 ‘inhabitants [people] of the village’

If the possessor is pronominal, a possessive affix, specified for person/number is suffixed to the stem of the possessee noun (Table (49)). The initial consonant of the suffix can be realised /k/ when it is attached to stems with the following final consonants: /t/, /f/, /x/, /n/, /m/, /ŋ/, /p/, as /h/ in all other cases.

Table (49) Bound possessive affixes

Person	Number	Affix	Example <i>koona</i> ‘house’	Example <i>bukoor</i> ‘town’
1	Sg	-/h/um	<i>koona-hum</i>	<i>bukoo-kum</i>
2	Sg	-/h/en	<i>koona-hen</i>	<i>bukoo-ken</i>
3	Sg	-/h/VnVm	<i>koona-hanam</i>	<i>bukoo-konom</i>
1	Pl.in	-/h/ënito	<i>koona-hënit</i>	<i>bukoo-kënit</i>
	Pl.ex	-/h/ënit	<i>koona-hënit</i>	<i>bukoo-kënit</i>
2	Pl	-/h/VnVn	<i>koona-hanan</i>	<i>bukoo-kanan</i>
3	Pl	-/h/eneen	<i>koona-heneen</i>	<i>bukoo-keneen</i>



- (166) *bë-kër-ëŋ-kum-oŋ*  
 CL.ba-chicken-PL-1SGPOSS-PL  
 ‘my chickens’
- (167) *sapta-ŋ-kum-oŋ*  
 shoe-PL-1SGPOSS-PL  
 ‘my shoes’
- (168) *u-lina*  
 CL.u- different.sex.sibling  
 ‘different-sex sibling’
- (169) *u-lina-hum*  
 CL.u- different.sex.sibling-1SGPOSS  
 ‘my different-sex sibling’
- (170) *a-lina-ŋ-kum-oŋ*  
 CL.a- different.sex.sibling-PL-1SGPOSS-PL  
 ‘my different-sex siblings’

With the nouns *bëëb* ‘father’, *nuun* ‘mother’, and *u-bër* ‘offspring’ the shorter allomorph of the third person singular possessive suffix *-Vm* is used instead of the usual form *-hVnVm*:

- |                      |                      |                       |
|----------------------|----------------------|-----------------------|
| (171) <i>bëëb-ëm</i> | (172) <i>nuun-om</i> | (173) <i>u-bër-ëm</i> |
| father-3SGPOSS       | mother-3SGPOSS       | CL.u-child-3SGPOSS    |
| ‘his/her father’     | ‘his/her mother’     | ‘his/her child’       |

The third person singular possessive suffix can be attached to the temporal adverb *jicum* ‘tomorrow’ and yields the form *jicum-konom* ‘the day after’.

### 2.3.2.2 Possessee ellipsis

The possessee can be ellipsed, when it is inferrable from the context, in which case a particle agreeing with the noun class of the ellipsed possessee is preposed to the possessor noun phrase with the meaning ‘the one of X’ (174).

- (174) *gu Leonard*  
 AGR.gu Leonard  
 ‘The one of Leonard [*gu-in* ‘song’, *gu-agreement*])’  
 FC, DJI020311AC8

In case the possessor is pronominal (‘mine, yours, his etc.’), a pronominal base is employed which agrees with the ellided possessee (175).

- (175) *ko-bor a-fun-ot a-naanam*  
 CL.ko-rabbit 3-take.out-VEN AGR.a-POSS.3SG  
 ‘Rabbit takes out his one [*jih*i ‘dog’, *a-agreement*])’  
 LM, DJI240211AC2

The forms of the pronominal bases are provided in Table (51).

Table (51) *Independent possessive pronouns*

Person	Number	Affix
1	SG	<i>-naam</i>
2	SG	<i>-nanken</i>
3	SG	<i>-naanam</i>
1	PL.INCL	<i>-ninito</i>
	PL.EXCL	<i>-ninit</i>
2	PL	<i>-neeneŋ</i>
3	PL	<i>-naanaŋ</i>

### 2.3.3 Nominalising derivational morphology

Gubëeher has only few category-changing derivational morphemes (Table (52)), derivation is largely a function of noun class prefixes. The most productive of the derivational morphemes used on nouns is *-um*, which is used to derive mainly instruments and locations from eventive stems or roots (see sections 4.3.2. and 4.3.2.1). It is also used to derive applicative verbs. The suffix *-um* is very widespread in all Joola languages (cf. Joola Eegimaa: Tendeng 2007:63f) with the same functions as in Gubëeher namely the derivation of instruments and applicative verb stems. The suffix *-en* is not very productive but attested on some nominalisations. The suffix *-er* derives gerunds (see for data from Gubëeher in section 4.3.5) and manner nouns from eventive stems, the suffix *-er* is also attested in Joola Eegimaa with the same functions as in Gubëeher (for data from Joola Eegimaa see Tendeng 2007:62f). The suffix *-a* has been found on only one item so far (Table (52)). This might be coined after Joola Eegimaa *a-jaor-a* (CL.a-go-DER) ‘visitor’, where *-a* is used productively to derive actor nouns (Bassène 2006:107).

Table (52) *Derivational affixes on nouns*

Morpheme	Derived noun	Gloss derived	Verbal stem	Gloss verbal stem
<i>-um</i>	<i>gu-lan̄k-um</i> CL.gu-row-INST	‘oar’	<i>lan̄k</i>	‘row’
<i>-en</i>	<i>mu'-sel-en</i> CL.mun-urinate-DER <i>ja-feex-en</i> CL.ja-screen-DER	‘urine’ ‘rice husks’	<i>sel</i> <i>feex</i>	‘urinate’ ‘to screen rice’
<i>-a</i>	<i>u-dëëk-a</i> CL.u-go-DER	‘visitor’	<i>dëëk</i>	‘go’
<i>-er</i>	<i>bë-dëëk-er</i> CL.ba-go-GER	‘manner of going/procedure’	<i>dëëk</i>	‘go’

### 2.3.4 Modifiers

Nouns can be modified by agreeing items (adjectives), non-agreeing items (quantifiers), numerals, demonstratives and prepositional phrases. Gubëeher has very little morphology that singles out adjectives, apart from agreement marking. Many roots which denote states when occurring with verbal morphology can be used attributively to modify noun phrases without any purely derivational morphology, though agreement with the noun class of the modified noun is mandatory. There are, however some roots that can only be used as attributive modifiers. Some adjectives are suffixed with *-i*, others not; neither function nor a possible motivation for the distribution could be determined so far. The passive suffix *-a* and negation morphology has been occasionally encountered on adjectival modifiers. For examples see section 2.3.4.1.

#### 2.3.4.1 *Agreeing attributive modifiers (adjectives)*

Modifiers in Gubëeher agree in noun class and number with the head noun they modify. Like all modifiers in Gubëeher, they stand after the noun. There are no derivational affixes that derive adjectives from roots and distinguish predicatively used stems from attributively used stems. The only indicators of the modifying function are the post-nominal position and the agreement morphology. The roots of many attributive adjectives can be used predicatively with verbal morphology. Adjectives in Gubëeher encode colour, size, dimension, and quality. Compare the root *rahi* in example (176) as attributive adjective ‘black’ and in example (177) in a verbal frame ‘be black’. The same root can also form a property noun by prefixing a marker *ba-rahi* ‘blackness/colour black’.

(176) *si-lód*            *si-rahi*  
 CL.si-wall      AGR.si-black  
 ‘black wall’

(177) *si-lód*            *a-rahi-i*  
 CL.si-wall      3-black-PERF  
 ‘The wall is black.’

Most roots from the domain of properties behave like *rahi* in that they are compatible with predicative and attributive frames and can be regularly nominalised with the prefixes *ba-* or *si-* to form property nouns (4.3.4). There are, however, some roots (see Table (53), which are only attested as in attributive position, but never used predicatively with verbal morphology denoting states.

Table (53) *Roots which are used as modifiers but not in verbal frames*

Gubëeher	Gloss
<i>tiini</i>	‘small’
<i>dééni</i>	‘big’
<i>dé</i>	‘big’
<i>diigen</i>	‘male’
<i>dikaam</i>	‘female’
<i>haam</i>	‘new’
<i>may</i>	‘left’
<i>yaax</i>	‘right’
<i>dinem</i>	‘other’
<i>laat</i>	‘-ever’
<i>ruk</i>	‘some’
<i>lindin</i>	‘whole’

Adjectives, i.e. modifiers which agree with their head noun, can occur with or without a suffixed *-i*. The function and distribution of the *-i* suffix are not yet understood, as there is considerable variation in the occurrence of the suffix, some speakers preferring or accepting only one or the other, others accepting both

versions as equally grammatical. Most adjectives are suffixed with *-i* when used in an attributive frame like *ceep* ‘slim/narrow’ and *déj* ‘tall’ in examples (178) and (179).

(178) *bë-jid*            *ba-ceep-i*  
 CL.ba-girl    AGR.ba-slim-i  
 ‘slim girl’

(179) *bë-jid*            *ba-déj-i*  
 CL.ba-girl    AGR.ba-tall-i  
 ‘tall girl’

Apart from the items in Table (53), the following roots have been attested without the *-i*: *bun* ‘good’, *fer* ‘white’, *fuun* ‘blue’, *tilit* ‘small’, *run* ‘full’, *ceen* ‘red’, *dëën* ‘sweet/little’, *rahi* ‘black’, *dihel* ‘grown up’, *duhun* ‘hot’, *ḡaarin* ‘cold’. Some of these adjectives have also been encountered with the *-i* suffixes in conversation or in the corpus. Examples for *dëën* ‘sweet’ and *ceen* ‘red’ are provided in (180) and (181).

(180) *kun-no*                    *kun-dëën*  
 CL.kun-palm wine    AGR.kun-mild  
 ‘sweet palm wine’

(181) *gu-sol*                  *gu-ceen*  
 CL.gu-shirt    AGR.gu-red  
 ‘red shirt’

Occasionally attributive items occur with what seems to be verbal morphology, including the middle/reflexive or passive suffix *-a* (182) and (183), or negation morphology (184) and (185).

(182) *pi-taari*            *pi-lub-a*  
 tobacco(CL.pi)    AGR.pi-grind-PASS  
 ‘ground tobacco’

(183) *bu-nin*            *bu-bajil-a*  
 CL.bu-egg        AGR.bu-break-PASS  
 ‘broken egg’

(184) *bë-jid*            *ba-jo’-d-oŋ*  
 CL.ba-girl    AGR.ba-clever-NEG.PERF-3SGSUBJ  
 ‘stupid girl’

(185) *gu-sol*            *gu-jón-d-oŋ*  
 CL.gu-shirt    AGR.gu-good-NEG.PERF-3SGSUBJ  
 ‘bad shirt’

#### 2.3.4.2 *Modifying noun phrase*

For nominal or adverbial modifiers e.g. a location (186), a temporal adverb (187), or a relationship indicating purpose, expressed with a nominalised verb (188), a particle agreeing with the head noun is used. It is alliterative with the NC prefix and has the form (C)V.

(186) *in-diin-eŋ-kum*            *i*            *Gubaabo*  
 CL.in-friend-PL-1SGPOSS    AGR.i:CONN    Ziguinchor  
 ‘My friends of Ziguinchor’

(187) *ba-rux*            *ba*            *faaro*  
 CL.ba-water    AGR.ba:CONN    last.year  
 ‘last year’s water’

- (188) *ba-rux*            *ba*                    *bu-rux*  
 CL.ba-water      AGR.ba:CONN    CL.bu-drink  
 ‘drinking water [= water for drinking]’

**2.3.4.3 Quantifiers**

Some quantifiers (Table (54)) do not agree with the head noun they modify, they are particles which stand after the noun.

Table (54) *Non-agreeing quantifiers*

Gubëeher	Gloss
<i>(nu)num</i>	‘too/as well’
<i>pe</i>	‘all/the whole’
<i>tu</i>	‘all/the whole’
<i>bare</i>	‘only’

**2.3.4.4 Demonstrative pronouns**

Gubëeher has three sets of demonstratives susceptible to local (and discourse-) proximity: one is proximal, two are clearly distal, although the exact parameters determining the choice of the two distal demonstratives are based (proximity, visibility, in relation to speaker or hearer...) have not yet been researched in detail.

The formation of these demonstratives involves reduplication of agreement markers for the proximal and medial demonstrative. The distal one is formed with the base *-ŋV:n*. All of the demonstratives can be used as modifiers of a NP or anaphorically. Another pronoun, used as pronoun of the third person, is formed with the base *-mër*, which can be shortened to *-m* (Table (55)). It cannot modify an NP. For an absolute use of demonstratives (i.e. without antecedent) for adverbial purposes see chapter 3.

Table (55) *Examples of demonstratives in different agreement classes*

Label	Scheme	Example <i>ba-</i> agreement	Example <i>si-/sin</i> agreement	Example <i>gu-</i> agreement
proximal	AGR-(N)-AGR	<i>bamba</i>	<i>sisi</i>	<i>gungu</i>
distal	AGR-(N)-AGR-V:ŋ	<i>bambaan</i>	<i>siseen</i>	<i>gungoon</i>
distal	AGR-ŋV:n	<i>baŋaan</i>	<i>siŋeen</i>	<i>gunoon</i>
anaphoric	AGR-mër	<i>bëmër</i>	<i>simër</i>	<i>gumër</i>
anaphoric short	AGR-m	<i>bam</i>	<i>sim</i>	<i>gum</i>

The forms of the demonstratives agreeing with the vocalic noun class prefixes *i-/u-* and *a-* deviate from this pattern. Their forms are presented in Table (56).

Table (56) *Demonstratives of the vocalic classes*

Label	Example <i>a-</i> agreement	Example <i>i-</i> agreement	Example <i>u-</i> agreement
proximal	<i>amu</i>	<i>imi</i>	<i>umu</i>
medial	<i>amoon</i>	<i>imeen</i>	<i>umoon</i>
distal	<i>aŋoon</i>	<i>iŋeen</i>	<i>uŋoon</i>
anaphoric	<i>ëmër</i>	<i>imër</i>	<i>umër</i>
anaphoric short	<i>am</i>	<i>im</i>	<i>um</i>

An alternative way of expressing demonstrative semantics consists in reduplication of the noun class prefix (189) and (190).

- (189) *a-jég*    *a*    *bu-bu-no*    *rek*    *bu-bu-no*    *ë-fi'*    *bahan*  
 3-step    PREP    CL.bu-CL.bu-OMN    only    CL.bu-CL.bu-OMN    3-fly    until
- raaf*    *a-nen-et*    *a-baj-il-a*  
 up    3-fall-VEN    3-break-REV-REFL

'As soon as he steps on that fruit, the fruit flies up, falls down and breaks.'

ES, DJI110110AC6

- (190) *si-si-déén*                      *a-jin-ëm-a*  
 CL.si-CL.si-kapok.tree    3-live-APPL-PASS  
 ‘This kapok tree is inhabited by spirits.’  
 JMS, field notes

All of the demonstrative pronouns combine exophoric (191), anaphoric (192) – (194) and discourse deictic or endophoric (195) functions and agree with the nouns they refer to.

- (191) *u-na'-t-am*                      *bamba*                      *ba-duhun*  
 2-give-VEN-1SGOBJ    CL.ba.DEM.PROX    AGR.ba-hot  
 ‘Give me that hot (CL.ba) one [= *ba-rux* ‘water’]’  
 JMS, field notes

- (192) *ë-dëëk*    *a-lax-at*                      *guŋgu*                      *gu-ni*                      *ë-gu*    *bi*                      *raaf*  
 3-go    3-grasp-VEN    CL.gu:DEM.PROX    AGR.gu-REL    3-be    PREP                      up  
 ‘He takes the one that is on top.’  
 JHS, DJI101210AC

- (193) *g-i-raad-i*                      *gu-likin-a*                      *i-nooh*    *a*                      *gu-mër*  
 COND-1-AUX-PERF    CL.gu-cook-REFL    1-sit    PREP    AGR.gu-PRO  
 ‘When I prepare food I sit on it [*gumëngëët* ‘chair’].’  
 AB, DJI121109AC2

- (194) *gu-binda*                      *gu-m*                      *rëm-biix*                      *ha*                      *bi-nég*                      *g-a-fu-tt-ox*  
 CL.gu-venus    AGR.gu-PRO    CL.ran-dawn    CONN    CL.bi-sun    HAB-3-leave-VEN-HAB  
 ‘As for *gubinda* [venus as morning star], it comes out during sunrise.’  
 CS, DJI070211AC2

(195) *g-a-n-tijin-i*                      *g-a-wan-in-i*                      *a*                      *raŋ-koot*                      *a-hub-un*  
COND-3-PL-finish-PERF    COND-3-lie-CAUS-PERF    PREP    CL.ran-mat    3-dig-CAUS

*gu-jund*                      *guŋgooŋ*  
CL.gu-hole                      AGR.gu:DEM.DIST

‘After putting it on the mat, they fill in that hole.’

JHS, DJI101210AC

The form *na*, which does not agree, is used as demonstrative without antecedent (196).

(196) *na*                      *ho*  
DEM                      what

‘What is that?’

When the anaphoric pronoun refers to a predication instead of a concrete entity it can be used as ‘abstract object discourse anaphora’ (Zulaica Hernandez 2007). In these cases agreement is with *ko-/ño-* (197) or *ba-* (198). The constructions *bam imali/ñom imali* ‘that’s why [lit. ‘that beats...’]’ are formed in analogy to the question word *ho imali* ‘why [lit.: ‘what beats...’]’.

(197) *ño-mer*                      *tuu*  
AGR.ño-PRO                      all

‘all of that’<sup>56</sup>

EC, DJI230111AC3

---

<sup>56</sup> The consultant AKS was prompted by the other consultant EC to remember everything having to do with wrestling, the topic of the interview.

(198) *g-u-cooc-i*                      *dërëŋ-kén*                      *u-dëëk*    *u-jıla*    *ja-mbaal*<sup>57</sup>                      *an*  
COND-2-have-PERF    money-2SgPOSS    2-go    2-buy    CL.ja-catch.fish    and  
  
*u-lik-a*                      *an*                      *u-mbaal*                      *ba-m*                      *i-mal-ine*                      *ñimeni*  
2-stand-REFL    and    2-catch.fish    AGR.ba-PRO    FOC.SUBJ-beat-PERF    now  
  
*gu-r-oŋ*  
be-NEG.PERF-3SGSUBJ

‘If you have some money you go and buy a fishnet and you go fishing. That’s why there aren’t any [fishing traps] now.’

CS, DJI070211AC2

#### 2.3.4.5 Numerals

Numerals in Gubëeher always stand after the noun like all other modifiers. Numerals from ‘one’ to ‘four’ and all numbers whose last digit is ‘1’, ‘2’, ‘3’ or ‘4’, agree with the class of the noun they modify. The agreement for the number ‘one’ is special in that it involves some sort of reduplication of the agreement marker, reminiscent of the demonstrative pronouns: we find *si-së-nduk* (class *si-*, demonstrative *sisi*), *kë-kë-nduk* (class *kan-*, demonstrative *kaka*), *gu-go-nduk* (class *gu*, demonstrative *gunḡu*), and *ë-mu-nduk* (class *a-*, demonstrative *amu*) and *u-mu-nduk* (class *u-*, demonstrative *umu*). For counting, the agreement prefix *gu-* is used with the number one and the prefix *ha-* (the plural of *ha-* for count nouns) is used for all other agreeing numerals. The numerals prefixed with *gu-* and *ha-* but used without a NP can also have the alternative reading ‘X times’, e.g. *ha-naak* ‘two/twice’.

The counting system of Bāinounk Gubëeher is quinary, its base of 5 adopting a body part model up to 20. From 20 to 99 it is vigesimal. Accordingly, up to ‘five’

<sup>57</sup> The exact gloss of the root *mbaal* is ‘catch fish with a net’, the nominalised form *ja-mbaal* denotes both the ‘fishnet’, as well as the infinitive ‘to catch fish with a net’. Other techniques of fishing include *gu-dóólia* ‘to fish with a rod’, *bi-maap* ‘to fish with a basket’, *të-biir* ‘fish with a dam’ and *ta-yah* ‘to fish with arrows’.

we find simplex numbers, while higher numerals up to ‘ten’ are construed as ‘five and X’, e.g. *ci-lax anga ha-naak* ‘seven [lit.: five and two]’. The numbers ‘five’, ‘ten’ and ‘fifteen’ are body part analogies: compare *cilax* ‘five’ and *si-lax* ‘hand’, *haalax* ‘ten’ and *ha-lax* ‘hands’, and *halaa’sidiix* ‘fifteen’ (*halax + sidiix* ‘hands foot’). For the number ‘20’ the word *u-nam* (plural: *ñan-nam*) for ‘king’ is used: this occurs also in other languages spoken in the same region – Bayot and Joola Kaasa use [ə-ʒi] for both ‘twenty’ and ‘king’, Joola Kujireray and Joola Eegimaa have [ə-vi]. The fact that the plural *ñan-nam* triggers agreement of the human agreement class *i-*, and not *ñan*-agreement further corroborates the connection to the noun for ‘king’. According to Sokhna Bawo Diop (p.c.) the Guñaamolo term for the number ‘twenty’ *buru-hur* (composite of the two nouns *buru* ‘price/equivalent’ and *wur* ‘person’) literally means ‘equivalent of a person’ and the “fingers and toes explanation” was offered her by her informant. Indeed, the template ‘hand – two hands – foot – person’ is common for counting systems (Heine 1997:21); in such systems the use of ‘person’ for the number ‘twenty’, is due to the fact that a person has 20 fingers and toes: 10 on the hand and 10 on the feet. ‘King’ as numeral ‘twenty’ in Gubëeher and other Casamance languages can thus be considered a variant of ‘person’<sup>58</sup>. From 20 to 99 the system of Gubëeher is vigesimal, i.e. based on multiples of *u-nam* ‘20’. The number ‘60’ for example is expressed as *ñannamillal* literally ‘three twenties’, 77 is *ñannamillal anga haalaasidiix anga hanaak* ‘three twenties and fifteen and two’. The numbers *teemer* ‘hundred’ (pl. *teemer-erj*) and *wuli* ‘thousand’ (pl. *wuli-erj*) are loans from Wolof and Mandinka respectively.

---

<sup>58</sup> Sagna (2008:130) suggests a connection to the 20 years reigning interval of the king of Mof Ávvi, where Eegimaa is spoken.

Ordinal numbers are formed with the suffix *-in* for numbers from ‘two’ to ‘four’, higher ones with the construction *-han ka* <number> though ordinal numbers higher than ‘five’ are hard to elicit and rarely used. The main field of application for Gubëeher numbers, especially higher ones, is in counting money. The smallest unit of money is the 5 CFA coin *dërëm* (from Arabic *dirham*), which is used as the unit for counting money. The amount of *(dërëmëŋ) cilax* ‘five dërëm’ are CFA 25, *ñannamillal* ‘sixty’ amount to CFA 300 and *wuli* ‘thousand’ to CFA 5000. This system of counting in fivers is found all over West-Africa wherever the Franc CFA is in use.

Table (57) *Ordinal and cardinal numbers from one to ten,*

<b>Nr.</b>	<b>Cardinal number</b>	<b>As modifier</b>	<b>Ordinal number</b>
1	<i>gugondúk</i>	<i>(Red.)-ndúk</i>	<i>-jaŋ, liix</i>
2	<i>ha-naak</i>	<i>-naak</i>	<i>-naakin</i>
3	<i>ha-lal</i>	<i>-lal</i>	<i>-laalin</i>
4	<i>ha-rendek</i>	<i>-rendek</i>	<i>-reenin</i>
5	<i>cilax</i>	<i>cilax</i>	<i>-han ka cilax</i>
6	<i>cilax aŋga gugonduk</i>	<i>cilax aŋga -duk</i>	<i>-han ka cilax aŋga -nduk</i>
7	<i>cilax aŋga hanaak</i>	<i>cilax aŋga -naak</i>	
8	<i>cilax aŋga hallal</i>	<i>cilax aŋga -llal</i>	
9	<i>cilax aŋga harendek</i>	<i>cilax aŋga -rendek</i>	
10	<i>haalax</i>	<i>haalax</i>	

Table (58) Cardinal numbers higher than ten,

Nr.	Cardinal number	Nr.	Cardinal number
11	<i>haalax aŋga gugɔnduk</i>	70	<i>ɲannamillal aŋga haalax</i>
12	<i>haalax aŋga hana:k</i>	71	<i>ñannamillal aŋga haalax aŋga gugɔnduk</i>
15	<i>halaasidiix</i>	80	<i>ñannamirendek</i>
16	<i>halaasidiix aŋga gugɔnduk</i>	90	<i>ñannamirendek aŋga haalax</i>
20	<i>unam</i>	100	<i>téémer</i>
30	<i>unam aŋga haalax</i>	200	<i>téémereŋ anaakaŋ</i>
40	<i>ñannaminak</i>	1000	<i>wuli</i>
50	<i>ñannaminak aŋga haalax</i>	2000	<i>wulieŋ anaakaŋ</i>
60	<i>ñannamillal</i>		

### 2.3.5 Interrogative pronouns

The interrogative pronouns used in Gubéeher are given in Table (59). There are simplex non-agreeing question words, simplex agreeing question words – agreement is with the item asked for – and composite question words: *burukkane* ‘how much’ (litt: ‘mouth of how’<sup>59</sup>) is used to ask for the price of something, *mata ha ho* ‘why’ (litt: ‘the reason of what’) and *ho imali* ‘why’ (litt: ‘what hit’).

<sup>59</sup> The Eegimaa question word *butumbu* ‘how much (price)?’ is broken down into *butum* ‘mouth’ + *bu* ‘how’ by Sagna (2008:125). The construction *burukkane* ‘how much (price)?’ in Gubéeher is parallel: *burul* ‘mouth’ + *ha* ‘Conn’ + *ne* ‘how’ (in accordance with the morphophonemic rules of Gubéeher). Puzzlingly, *burukkane* ‘how much’, a Bainounk expression, is also used in Joola Fogny and Buluf (field notes), possibly a remnant of the once influential trading empire of the Bainounk.

Table (59) *Interrogative pronouns*

Gubëeher	Gloss
<i>ho</i>	'what'
<i>han</i> (pl. <i>ibee</i> )	'who'
<i>bee</i>	'where'
<i>kén</i>	where'
<i>ne</i>	'how'
<i>da</i>	'when'
(AGR)- <i>ŋ</i>	'which'
(AGR)- <i>luhi</i>	'how many'
<i>burukkane</i>	'how much'
<i>mata ha ho</i>	'why'
<i>ho imali</i>	'why'

Polarity questions and indirect questions are often introduced with *kati* which in other contexts means 'if/whether' or 'maybe'.

- (199) *kati*      *mino*      *in-cooc-t-o*      *u-nam*  
 whether    1PL.INCL    FOC.SUBJ-have-INACT-1PL.INCL    CL.u-king  
 'Did we [the Bāinounk] have a king?'  
 AS, DJI121109AC

The interrogative pronouns usually stand sentence-initially and the verb is marked for focus.

- (200) *han*      *im-mu*      *tā*      *ñimeni*      *a*      *bu-liin*      *ka*      *si-sook*  
 who      FOC.SUBJ-be.there      time      now      PREP      CL.bu-weave      CONN      CL.si-trap  
 'Who nowadays has the time to weave fish traps?'  
 CS, DJI070211AC2

- (201) *ne*      *g-u-huy-a*  
 how      FOC.OBJ-2-call-PASS  
 'What is your name?'

(202) *ijkaan bu-rus-hanan bee*  
 2PL CL.bu-trash.heap-2PLPoss where  
 ‘Where is your trash heap?’  
 DJI240211AC2

(203) *bu-koo'-ken kén*  
 CL.bu-village-2SGPOSS where  
 ‘Where is your village/country?’

### 2.3.6 Adverbials

Some local, causal, temporal and manner adverbials are given in Table (60).

Table (60) *Simplex adverbials*

Gubëeher	Gloss	Gubëeher	Gloss
<i>naaj</i>	‘here’	<i>cab</i>	‘quickly’
<i>nah</i>	‘here’	<i>ñimeni</i>	‘now’
<i>naŋkaa</i>	‘there’	<i>guug/guub</i>	‘today’
<i>muŋkona(u)m</i>	‘inside’	<i>gucum/jicum</i>	‘tomorrow’
<i>tiaŋ</i>	‘outside’	<i>gëëgën</i>	‘yesterday’
<i>raaf</i>	‘up’	<i>dahan</i>	‘day after tomorrow’
<i>rééŋ</i>	‘down’	<i>dandahan</i>	‘day before yesterday’

The short forms *na* ‘here’ *bim* ‘over there’ and *ambi* ‘towards here’ and *ambeeŋ* ‘towards there’, stand frequently after verbs as in (204) – (206).

(204) *g-u-dëët-i g-u-wur-on na u-yit buyeŋka a-fur-i*  
 COND-2-come-PERF COND-2-see-3SGOBJ there 2-know COMPL 3-go.out-PERF  
 ‘If you come and you don’t see him there, you know that he’s gone out.’  
 AB, DJI121109AC2

(205) *g-i-ñooc-ax*            *i-brose*            *bim*    *bu-ru'-kum*  
 COND-1-wash-REFL    1-brush.teeth    there    CL.bu-mouth-1SGPOSS

‘After washing, I’ll brush my teeth over there.’

HS, field notes

(206) *m'*    *in-doh*            *hu-nam*            *i-dëëk-ur*    *ambej*    *f'*    *in-dox*  
 1SG    FOC.SUBJ-carry    AGR.hu-POSS1SG    1-go-BEN    there    2SG    FOC.SUBJ-carry

*hu-naŋken*            *u-dëëk-ur-et*            *ambi*    *a-bun*    *mataha*    *këm-bë'*    *ka*  
 AGR.hu-POSS2SG    1-go-BEN-VEN    there    3-good    for            CL.kan-life    CONN

*u-raaf*

CL.u-person

‘I take what is mine [knowledge] and bring it there and you take what is yours and bring it here, this is very good for the life of a person.’

JC, DJI221009AC

Gubëeher also has ideophones for the expression of manner or intensity. Consultants have stated that ideophones are the same as used in Joola Eegimaa. I have not yet had the opportunity to confirm this information though.

Table (61) *Ideophones (selection)*

Gubëeher	Modifies
<i>fes</i>	<i>ren</i> ‘clean’
<i>kaŋkaŋ/kok</i>	<i>yir</i> ‘dry’
<i>tem</i>	<i>rahi</i> ‘black’
<i>pës</i>	<i>cen</i> ‘red’
<i>pal</i>	<i>fer</i> ‘white’

(207) *ha-ya-hen*                            *a-ren-i*            *fes*  
 CL.ha-clothing-2SGPOSS    3-clean-PERF    IDEO

‘Your clothes are now perfectly clean!’

Louise Marie Biagui, observed communication

### 2.3.7 Complex adpositions

The use of the simplex prepositions *a*, *mata* and *anga* is discussed in section 2.1.4.

The other, more specific, local prepositions are composite with a lexical base which can stand independently (208) and postposed to a noun with the connective *ka* (209), which is also used for possessive constructions.

(208) *innuŋ*            *muŋkoonam*  
 AGR.u:LOC    inside  
 ‘S/he is inside.’

(209) *innuŋ*            *muŋkoonam*    *ka*    *fujku*  
 AGR.u:LOC    inside            CONN    room  
 ‘S/he is in the room.’

Table (62) *Prepositions*

Gubëeher	Source nominal base	Gloss
<i>(a)bi</i>	n.a.	‘at/next to’
<i>anga</i>	n.a.	‘with’
<i>a</i>	n.a.	‘at, on, to, in’, general location or direction
<i>mata/mata-ha</i>	(loan from Joola)	‘because of’
<i>muŋkoonam ka</i>	inside	‘in’
<i>riéŋ ka</i>	ground	‘under/below’
<i>bihuun ka</i>	back	‘behind’
<i>raaf ka [raa’ka]</i>	upper	‘over/above’
<i>jegenen ka</i>	middle	‘in the middle of’
<i>kantik ka [kanti’ka]</i>	place	‘next to’
<i>bijiir ka [bijii’ka]</i>	face	‘in front of’
<i>tiaŋ ka</i>	(loan from Joola)	‘outside of’

## 2.4 The verb phrase and verbal morphology

Gubëeher is very rich in verbal morphology, including a large inventory of affixes mark tense, aspect or mood and affixed subject agreement and object pronouns. Most verbs are compatible with several of a choice of verbal extensions (see 2.4.4) whose main function is to decrease or increase transitivity. The following properties define verbs in Gubëeher:

- affixed TAM morphology
- affixed focus marking
- affixed person/number morphology
- affixed verbal extensions
- has arguments

Example (210) shows the root *reŋk* ‘repair’ with the suffix *-huruŋ*, an allomorph of the future tense marker, the benefactive extension *-ur*, the person prefix *u-*, which together with the suffixed plural morpheme *-ŋ* indicates the second person plural and the first person object allomorph *-um*. The verb has three participants, the actor (second person plural) and the beneficiary (first person singular) encoded as affixes and the undergoer (bike) as NP.

- (210) *u-reŋk-ur-huruŋ-um-ŋ*            *beekan*  
2-repair-BEN-FUT-1SGOBJ-PL    bike  
‘You will repair the bike for me.’  
HS, field notes

### 2.4.1 Valency and transitivity in Gubëeher

Considering the high flexibility of Gubëeher verbs to occur in mono- and bivalent constructions by undergoing valency changing alternations, a constructional approach to transitivity is considered the best option. This fits well with the overall

‘constructional character’ of Gubëeher regarding specification of roots for noun class, number and syntactic category. The term valency is used to classify constructions, monovalent constructions with one argument, bivalent constructions with two arguments and trivalent constructions with three arguments. Verbs are characterised by the maximal number of arguments. Verbs that have one argument are labeled as intransitive, those that can have maximally two arguments as transitive, some ditransitive verbs with three arguments are also attested.

#### *2.4.1.1 The encoding of arguments in Gubëeher*

The single argument of intransitive verbs stands before the verb and triggers subject agreement on the verb. Of the two arguments of transitive verbs, the subject argument precedes the verb and the object argument stands after the verb. Ditransitive verbs in trivalent constructions have a subject before the verb and two objects after the verb. The two objects of ditransitive verbs are distinguished by word order, but encoded on the verb with the same set of object markers (see 2.1.4 for examples). All instances of three-place verbs in the corpus had one pronominal and one Object-NP. Ditransitive verbs with two NP objects have only occurred in elicitation. Two pronominal objects on one verb are an even rarer constellation, since only animate objects are usually expressed pronominally.

The subject argument can be encoded as a NP or free pronoun, which precedes the verb, or by a pronominal affix on the verb. Most TAM paradigms have pronominal prefixes, only with the negative perfective morphology, subject pronouns are suffixed. Gubëeher is a subject pro-drop language, hence the presence of a NP or free pronoun is not necessary, though a pronominal affix is obligatory. The object can be either encoded as an object NP or a free pronoun standing after

the verb, or as an object suffix if the object is animate. Inanimate objects cannot be encoded with object suffixes in finite phrases – they occur either as NPs or they are ellided. There is also a number of verbs which can undergo the unexpressed object alternation, where the verb receives an atelic or habitual reading. The following Table (63) gives an overview of monovalent and bivalent constructions.

Table (63) *Mono- bi- and trivalent constructions*

<b>Monovalent constructions</b>	<b>Bivalent construction</b>		
<b>NP/Pronominal</b>	<b>NP</b>	<b>Pronominal</b>	
<i>Alex a-ceem-i</i> Alex 3-sleep-PERF ‘Alex sleeps/slept’	<b>animate objects</b>	<i>Alex a-wuul-i Asaña</i> Alex 3-see-PERF Asaña ‘Alex saw Asaña.’	<i>a-wuul-em</i> 3-see-3SGOBJ.PERF <sub>ANIM</sub> ‘He saw her.’
	<b>inanimate objects</b>	<i>Alex a-wuul-i koloŋ</i> Alex 3-see-PERF well ‘Alex saw the well.’	<i>a-wuul-i</i> 3-see-PERF ‘He saw it.’
<b>Trivalent constructions</b>			
<b>NP</b>	<b>Pronominal</b>		
<i>i-nëër-o dërëm-ëŋ</i> 1-give-2SGOBJ money-PL ‘I give you money.’	<i>‘inëër-em-em’</i> 1-give-3SGOBJ-3SGOBJ ‘I gave her to her.’		

#### 2.4.1.2 *Ellipsis and unexpressed objects*

The phenomenon of verbs that occur in monovalent as well as in bivalent constructions, is a relevant issue in the analysis of transitivity in Gubëeher and ultimately for the choice of non-finite forms. This concerns the alternation classified as ‘unspecified object alternation’ by Levin (1993), which is part of a number of alternations with unexpressed objects. The alternation is typologically very frequent

with the verb ‘eat’, which is often given as an example of an unexpressed object alternation (211).

- (211) a) *Mike ate the cake*  
b) *Mike ate (= Mike ate a meal or something one typically eats)*  
Levin (1993:330)

In this thesis the term ‘unexpressed object alternation’ will be used to refer to this kind of alternation. Greatly varying analyses for this phenomenon abound, unexpressed object alternations have been discussed in the linguistic literature due to the problems it poses for an analysis of transitivity. The controversy touches upon the question why certain verbs allow this kind of transitivity alternation and whether the explanation can be found in the lexical entry itself or is conditioned by pragmatic/clausal features.

From a constructivist viewpoint the monovalent and bivalent variants of verbs undergoing unexpressed object alternations have only one lexical entry, and clausal features rather than lexically determined features such as details in the lexical semantic representation as supposed by Rappaport-Hovav and Levin (1998a) determine whether the verb can be used in which frame. Goldberg (1995) identifies various instances of grammatically acceptable unexpressed object constructions which would be ungrammatical when no context is provided but which are perfectly natural in an appropriate context.

- (212) a) *‘The chef-in-training chopped and diced all afternoon.’*  
b) *‘Tigers only kill at night.’*  
c) *‘These revolutionary new brooms sweep cleaner than ever.’*  
Goldberg (2001:506)

In Gubëeher, as long as an appropriate context for its interpretation is given, it seems as though any transitive verb can occur without an object. Construal of an event as iterative or habitual is such a context.

In Gubëeher it is important to distinguish two types of object alternations. The kinds of unexpressed object alternation exemplified in (211), where a specific object cannot be inferred from the context are “context-independent” (Næss 2003:46). They have to be distinguished from “context-dependent unexpressed object alternations”, where the object has been omitted because it has been mentioned previously in discourse or is recoverable from the context. In (213) it is clear from the context that the lion attacked one or all of the participants the previously introduced as ‘we’, even though the object is not explicitly mentioned and the clause ‘attack’ appears in its monovalent.

(213) *We were watching the lion from a distance when suddenly it attacked*

Næss (2003:46)

Both types of unexpressed object alternation are frequent in Gubëeher, I will henceforth refer to context-independent unexpressed object alternation simply as ‘unexpressed object alternation’ and to context-dependent unexpressed object alternation as ‘argument ellipsis’. Example (214) shows an instance of an unexpressed object and example (216) as answer to the question in (215) an instance of ellipsis, both with finite constructions, examples of both with non-finite constructions are provided in section 4.7.2.

(214) *i-yaax-i            mes*  
1-eat-PERF    already  
‘I’ve eaten already (= a meal).’

(215) *han i'-yaax-i di-luur dindeen*  
 who FOC.SUBJ-eat-PERF CL.di-cooked.rice AGR.di:DEM.DIST

'Who has eaten that rice?'

JMS, field notes

(216) *m' i'-yaax-i*  
 1SG FOC.SUBJ-eat-PERF

'I have eaten it.'

JMS, field notes

The distinction between ellipsis and unexpressed objects is relevant for the choice of infinitive, an issue that is discussed in section 4.7.2.

#### 2.4.2 Personal pronouns and agreement

The free pronouns can be used in isolation, in subject position before the verb or in object position, after the verb. Gubëeher is a pro-drop language, so the use of a free pronoun is not obligatory. Person and number are encoded in the pronominal agreement affixes, which are obligatory.

Table (64) *Free subject and object pronouns*

	Singular	Plural	
1.	<i>me</i>	incl.	<i>mino</i>
		excl.	<i>min</i>
2.	<i>fi</i>	<i>ijkaan</i>	
3.	<i>umër (human), AGR-mër</i>	<i>imeren, immeen, immi, AGR-mër</i>	

The bound personal pronouns are prefixed for the singular and prefixed and suffixed for the plural persons for all TAM paradigms (Table (65)), except for the negative

perfect, where the person/number morphology is purely suffixed for all persons (see Table (72)).

Table (65) *Bound subject affixes*

	Singular	Plural	
1.	<i>i-</i>	incl.	<i>i-N- -o</i>
		excl.	<i>i- -min</i>
2.	<i>u-</i>	<i>u- -Vŋ</i>	
3.	<i>a-</i>	<i>a-N-</i>	

The vowel of the second person plural suffix *-Vŋ* is determined through vowel harmony with the last vowel of the inflected verb it is attached to.

In order to focus the subject NP the verb is prefixed with the morpheme *in-* (217), which is often used with free subject pronouns (218) and question words (219). The prefix *in-* substitutes any of the pronominal subject prefixes on the verb stem.

- (217) *é-riin*                      *in-coc-i*                      *u-nam*                      *aŋga*                      *husuy*  
 CL.e-Mof.Ávvi    FOC.SUBJ-have-PERF    CL.u-king                      and                      Oussouye  
 ‘It is Mof Ávvi that has a king, and Oussouye [but not the Baïnouk].’

AB, DJI121109AC

- (218) *u-ñoŋ*                      *m'*                      *in-nah-en*  
 2-take                      1SG    FOC.SUBJ-give-2SGPOSS

‘Take [it], it’s me who gives [it to] you!’

JHS, DJI211110AC

(219) *han im-maŋ-en*  
 who FOC.SUBJ-want-2SGOBJ.PERF  
 ‘Who loves you?’  
 KC, field notes

The version with the focus marker *in-* (220) indicates that the speaker wants to make a point or explain something with his utterance, whereas the same phrase with the third person singular prefix *a-* is a semantically neutral statement (221).

(220) *ti-ruh i'-lax-em*  
 CL.ti-cold FOC.SUBJ-grab-1SGOBJ.PERF  
 ‘[It’s that] I feel cold!’  
 GS, field notes

(221) *ti-ruh a-lax-em*  
 CL.ti-cold 3-grab-1SGOBJ.PERF  
 ‘I feel cold.’  
 GS, field notes

Since the verb does not agree with the noun class of the subject, the third person subject prefixes are used for all subjects regardless of which noun class they are in. Examples (222) – (224) show NPs which all trigger person agreement in *a-*, despite their being in different noun classes.

(222) *bu-bu-no bu-ni a-lik-a-ne*  
 CL.bu-CL.bu-thing AGR.bu-REL 3-stand-REFL-SUB  
 ‘[...]that thing that stands there’  
 LM, DJI291110AC

(223) *ka<sup>ʔ</sup>-lerɔŋ*            *a-run*  
 CL.kan-cauldron    3-full

‘The cauldron is full.’

BS, DJI101010AC2

(224) *u-mër*    *a-nooh*    *a*            *bu-diiʔ*            *ha*            *kuur*  
 3-PRO    3-sit            PREP    CL.bu-stem    CONN    mortar(CL.ku)

‘He sits on the base of the mortar.’

JHS, DJI101210AC

The object pronouns are suffixed to the verb as shown in Table (66).

Table (66) *Bound object affixes*

	Singular	Plural	
1.	-Vm	incl.	-mino
		excl.	-min
2.	-o	-V:nug	
3.	-Vm	-eeneŋ	

The first and third person singular and the second person plural are subject to vowel harmony (see 2.2.3.1); their vowel is assimilated to the last vowel of the inflected verb form it is suffixed to. This might be the last vowel of the stem (225), or suffixed TAM morphology, e.g. the perfect suffix *-i* in (226).

(225) /a-wuul-Vm/ [a-wuul-om]	(226) /a-wuul-i-Vm/ a-wuul-i-em [a-wuul-em]	Input
3-see-1SGOBJ	3-see-PERF-1SGOBJ	1. Vowel harmony 2. Elision
'He may see me'	'He saw me'	

The second person singular object suffix has a suppletive form when occurring with verbs which are conjugated for the perfect (227) and (228).

(227) a-wuul-en 3-see-2SGOBJ.PERF	(228) a-wuul-o 3-see-2SGOBJ
'He saw you'	'He may see you'

Table (67) shows the object suffixes for a perfect inflected verb.

Table (67) Object pronouns affixes in the perfect aspect

		Object						
		1.Sg	2.Sg.	3.Sg	1.Pl.incl	1.Pl.excl	2.Pl	3.Pl
Subject	1.Sg	/	-en	-em	/	/	-oonuŋ	-eeneŋ
	2.Sg	-em	/	-em	/	-min	-oonuŋ	-eeneŋ
	3.Sg	-em	-en	-em	-mino	-min	-oonuŋ	-eeneŋ
	1.Pl.incl	/		-em-e	/	/	-oonuŋ	-eeneŋ
	1.Pl.excl	/	-en-min	-em-min	/	/	-oonuŋ-min	-eenem-min
	2.Pl	-emu	/	-emeŋ		-eŋ-min	/	-eeneŋ
	3.Pl	-em	-en	-em	-mino	-min	-oonuŋ	-eeneŋ

The object suffixes are used only for animate objects (230); inanimate ones are either ellipsed (231) or, when reference is unclear, expressed with the anaphoric pronoun AGR-*mër*. In example (232) the object (*bu-nana* 'banana') is first introduced as a full NP, then referred to with the anaphoric pronoun, and then ellipsed.

(229) *ë-lóðin-i*            *u-dikaam*            *umooy*  
 3-greet-PERF            CL.u-woman            CL.u:DEM.DIST

‘He greeted the woman.’

LM, DJI291110AC

(230) *a-lóðin-em*            *umu*            *a-wala*  
 3-greet-3SGOBJ            CL.u:DEM.PROX            3-answer

‘She greets her, she answers.’

BS, DJI101010AC2

(231) *ang’*            *a-dëëk*            *a-lóðin*  
 and            3-go            3-greet

‘...and she goes and greets (it)[a kettle that is cooking itself (in a fairy-tale)]’

BS, DJI101010AC2

(232) *a-henji*            *bu-nana*            *a*            *pos-honom*            *a-dëët-i*  
 3-have-PERF            CL.bu-banana            PREP            pocket-3SGPOSS            3-go:VEN-PERF

*a-fun-ot*            *bu-mër*            *a-keeful*  
 3-tak.out-VEN            AGR.bu-PRO            3-peel

‘He has a banana in his pocket. He came and takes it out, he peels (it).’

ES, DJI110110AC5

### 2.4.3 TAM overview

Gubëeher has many inflectional TAM paradigms, some prefixed and some suffixed, as well as periphrastic constructions, mainly for progressives and near future. Particles, frequent in Joola languages, are almost absent from Gubëeher; the only morpheme that could be analysed as a particle is the negative imperative morpheme *sam*. The free subject pronouns are optional and only used for emphasis.

The main opposition in the TAM system is the one between an unmarked TAM, and perfective inflection carrying the suffix *-i*.

Gubëeher has four ways of expressing negation, suffixal with *-r* for the perfective negative, prefixal *b-* for negation of the subjunctive, and prefixal in *d-* for negation of the future and the habitual, and with two particles in free variation for negative imperatives (overview in Table (69)).

Table (68) *TAM markers in the affirmative*

Morpheme	Function	Gloss
/	unmarked TAM	/
<i>-i</i>	perfect	PERF
<i>-ot</i>	inactual	INACT
<i>-hVrVh</i>	future	FUT
<i>-Vx</i>	habitual	HAB
<i>-mboone</i>	irreal	IRR
<i>-Vti</i>	imperative	IMP
<i>-t</i>	venitive	VEN
<i>gV</i>	modal	MOD

Table (69) *TAM markers in the negative*

Morpheme	Function	Gloss
<i>-r</i>	negation of perfect, irrealis	NEG.PERF
<i>d-</i>	negation of future, habitual	NEG.FUT
<i>b-</i>	negation of subjunctive	NEG.SUBJ
<i>sam/buruk</i>	negation of imperative	NEG.IMP

#### 2.4.3.1 *Unmarked TAM*

In Gubëeher, the most basic tense/aspect paradigm is the unmarked TAM which shows only person/number inflection. The unmarked TAM has modal semantics: It is obligatorily used in subordinate clauses such as phrasal finite complements of

verbs like ‘like’, ‘want’, ‘can’, ‘dare’ etc. (233) or clauses introduced by subordinating conjunctions; the conjunction *bu(ru)m* (*an/anangu*) roughly translatable as ‘so that/in order to’ expresses obligation or intention and always triggers use of the unmarked subjunctive (234).

(233) *fī*      *u-haŋgul-i*      *u-fur-ot*      *aŋg'*      *u-ŋuñ*  
 2SG      2-can-PERF      2- go.out-VEN      and      2-return

‘You can come out [of under the bed] and leave.’

BS, DJI101010AC2

(234) *a-dëëg-ët*      *bum*      *anangu*      *a-ŋan*      *jegeney*      *ka*      *teren*  
 3-come-VEN      so.that      and      3-enter      middle      CONN      field

‘He comes with the intention of getting to the middle of the soccer field.’

LM, DJI291110AC

In main clauses unmarked TAM is used for the expression of wishes (235) and with obligative semantics when asking for and granting permission (236).

(235) *ba-uc*      *ba-ŋaarin*      *a-ŋeebin-o*  
 CL.ba-wind      AGR.ba-cold      3-accompany-2SGOBJ

‘May a cool wind accompany you.’

LM, Formulaic expression

(236) *i-dëëk*      *gu-jīla*      *ha*      *poŋ*  
 1-go      CL.gu-buy      CONN      bread

‘Should I go buy bread?’

HS, observed communication

The second persons singular and plural and the first person singular of the neutral paradigm are frequently used in imperatives (237) – (239).

(237)	<i>u-yaax!</i>	(238)	<i>u-yaax-aj</i>	(239)	<i>i-n-yaax-o</i>
	2-eat		2-eat-PL		1-PL-eat-1PL.INCL
	'eat!'		'eat (2PL.)!'		'Let's eat!'

In discourse, unmarked TAM can be used in independent clauses as a neutral narrative form. In example (240) the consultant relates how the Baïnouk spread from their homeland and settled in certain places. The unmarked TAM is used as narrative tense. Example (241) is taken from an interview about funerary rituals, therefore not referring to any concrete event neither in the future nor in the past, but offering a generic statement in a procedural text. Again the unmarked TAM is used. A similar constellation of unmarked tense used as narrative and in subordinate clauses and a marked perfective tense is also found in Wolof (termed 'neutral' vs. 'perfective' by Diouf and Yaguello 1991) and Joola Eegimaa (termed *narratif* vs. *accompli* by Bassène 2006).

(240)	<i>a-wuul</i>	<i>gu-ar</i>	<i>gunoon</i>	<i>mu'-wuc</i>	<i>aj</i>	<i>gu-han</i>
	3-see	Cl.gu-wetland	CL.gu:DEM.DIST	CL.mun-oil.palm	and	CL.gu-wetland
	<i>a-n-noo'</i>	<i>na</i>				
	3-PL-sit	there				

'They saw the marshland with oil palms and wetlands and they stayed there.'

AB, DJI121109AC

(241)	<i>guguñuun</i>	<i>nur-kanaan</i>	<i>a-likun</i>	<i>an</i>	<i>u-yaax-aj</i>
	evening	mother-2PLPOSS	3-cook	and	2-eat-PL

'In the evening, your mothers cook (it?) and you eat.'

JHS, DJI211110AC

The prefixed morpheme *b-* is the negative of the unmarked TAM, it is often used in constructions with the verb *fan* ‘not yet’ (242) but also as narrative negation (243) or in dependent clauses.

Table (70) *Paradigm of the negative subjunctive*

Singular				Plural					
Person	TAM	Person prefix		Person	TAM	Person prefix	Plural		Person suffix
1	<i>b-</i>	<i>i-</i>	[stem]	1. incl.	<i>b-</i>	<i>i-</i>	<i>n-</i>	[stem]	<i>-o</i>
				1. excl.			/		<i>-min</i>
2		<i>u-</i>		2		<i>u-</i>	/		<i>-Vŋ</i>
3		<i>a-</i>		3		<i>a-</i>	<i>n-</i>		/

(242) *ijkaan fan-d-oŋ b-u-cir-eŋ bahan ñimeni ne*  
 2PL not.yet.do-NEG.PERF-2PL.SUBJ NEG.SBJV-2-die-PL until now as

*u-def-eŋ nini*  
 2-old-PL like.that

‘You (pl.) still haven’t died, old as you are’

BS, DJI101010AC2

(243) *u-ñamon d-a-lób b-a-gat gu-mandiŋ*  
 CL.u-Niamone NEG.FUT-3-speak NEG.SBJV-mix CL.gu-Mandinka

‘A person from Niamone doesn’t speak [Baïnouk] without mixing in some Mandinka.’

AB, DJI121109AC

#### 2.4.3.2 *Perfect*

The perfect is marked with the suffix *-i*. The first person plural inclusive in this aspect has the suppletive suffix *-e* in the perfect as opposed to the suffix *-o* in the unmarked TAM.

Table (71) *Perfect paradigm*

Singular				Plural				
Person	Person prefix		TAM suffix	Person	Person prefix	Plural		Person:TAM suffix
1	<i>i-</i>	[stem]	<i>-i</i>	1. incl.	<i>i-</i>	<i>n-</i>	[stem]	<i>-e</i>
				1. excl.	<i>i-</i>	/		<i>-imin</i>
2	<i>u-</i>	[stem]	<i>-i</i>	2	<i>u-</i>		[stem]	<i>-eŋ</i>
3	<i>a-</i>		<i>-i</i>	3	<i>a-</i>	<i>n-</i>		<i>-i</i>

Some verbs have a past interpretation with the perfective (244), and some verbs have a stative or change-of-state reading (especially when used in a progressive construction) with the perfective marker (245).

(244) *a-ruuh-i*

3-drink-PERF

‘S/he has drunk’

(245) *a-ceen-i*

3-red-PERF

‘It is red/it has become red’

Lüpke (2005:158ff) offers the hypothesis for the stative/inchoative-alternating verbs in Jalonke, which show a similar behaviour, that the source of the state reading is possibly the result state of the change-of-state reading: If something has become red, then it is red. In Jalonke, these verbs are compatible with both perfective and imperfective morphology, in Gubëeher with perfective and unmarked paradigms, though no semantic difference between the perfective and the unmarked instances has become obvious. As a rule of thumb most verbs denoting properties and whose stems can be used attributively are among the second group. The modal verbs and some verbs denoting states which cannot be used attributively (*yit* ‘know’, *yéég* ‘understand’, *ceem* ‘sleep’, *teet* ‘make noise’ *fään* ‘smell (itr.)’), do also have a

stative reading with the perfective suffix (246). Further research is needed to establish the nature of these verb classes.

- (246) *a-ceem-i*  
 3-sleep-PERF  
 ‘S/he sleeps/has slept’

The phenomenon of past versus non-past reading of verbs in the perfective paradigm is widespread in West African languages. It is reported for other languages spoken in the area too: Wolof (Diouf and Yaguello 1991:42), Manjaku (Buis 1990:61) Kriolu (Kihm 1994:85; Quint 2003:23), Balanta (Intumbo 2007:58), Joola Eegimaa (Sagna 2008; Bassène 2006). The following examples show that in Wolof the non-stative verb *dem* ‘go’ has a past reading in the perfective *na*-paradigm (247), whereas the stative verb *dégg* ‘understand’, conjugated in the same paradigm, has a non-past reading (248).

- (247) *dem nañu*  
 go PERF:1PL  
 ‘We went.’

Wolof, Diouf and Yaguello 1991:42

- (248) *dégg nañu*  
 hear PERF:1PL  
 ‘We understand.’

Wolof, Diouf and Yaguello 1991:42

The suffixed *-r* is the negative equivalent of the affirmative perfective suffix *-i*. In the negative perfect paradigm, person marking is suffixed for all persons.

Table (72) *Paradigm of the perfective negative*

Singular				Plural			
Person		TAM	Person suffix	Person		TAM	Person suffix
1	[stem]	-r	-i	1 incl.	[stem]	-r	-e
				1 excl.			-imin
2		-r	-o	2		-r	-oŋ
3		-r	-Vŋ	3		-r	-VŋVŋ

(249) *umu*                      *lób-ur-oŋ*                      *honj*  
 AGR.u:DEM.PROX    speak-NEG.PERF-3SGSUBJ    thing(CL.ho)

‘She didn’t say anything.’

JHS, DJI101010AC2

### 2.4.3.3 *Inactual*

The inactual suffix *-ot* is used to express that events have occurred in the past and are not relevant for the present. This results either in a pluperfect reading, i.e. something has happened before the past referred to in discourse (cf. *dëëk* ‘go’ in example (251), or for those verbs which have a stative reading with the perfective suffix *-i*, it is used to express a state in the past which is not relevant at the time of speaking as *yit* ‘know’ in example (250).

(250) *u-bëëhër*                      *yit-r-eŋ-ot*                      *hë-bëŋgëët*                      *haha*  
 CL.u-Bainounk    know-NEG.PERF-3SGSUBJ-INACT    CL.ha-stool    CL.ha:DEM.PROX

*taburé-éŋ*                      *bimbeeŋ*  
 stool-Pl                      over.there

‘The Bainounk didn’t know these stools, little benches there.’

AB, DJI121109AC2

(251) *i-ciŋ-kenen*            *a-nu*    *n'*    *a-yit-ne*    *buyeŋka*    *imééréŋ*    *in-dëëk-ot*  
 CL.i-liver-3PLPOSS    3-hurt    as    3-know-SUB    COMP    3PL    FOC-go-INACT

*bu-yaas*            *aŋga*                    *u-digéén-i*  
 CL.bu-trip            with                    CL.u-man-POSS

‘They were upset because they knew that they had gone together on the trip, [him] with their husband.’

LM, DJI240211AC2

The inactual suffix *-ot*, can also be used for nonverbal predications. It can be suffixed to the nonverbal locative copula (252) and to nouns with a possessive suffix (253) and (254). On possessive nouns the possessive relationship is marked as belonging to the past, not relevant any more. This use of the inactual marker, which is a typologically common phenomenon (Nordlinger and Sadler 2000), is also attested, though only for alienably possessed nouns, in Joola Eegimaa (Sagna 2008:109).

(252) *Eko*    *innuŋ-ot*  
 Eko    AGR.u:LOC-INACT

‘Where was Eko [name]?’

KC, field notes

(253) *bë-jid-hum-ot*  
 CL.ba-girl-1SGPOSS-INACT

‘She used to be my girlfriend.’

GS, observed communication

(254) *Na*    *koona-hum-ot*  
 DEM    house-1SGPOSS-INACT

‘That used to be my house’

GS, field notes

#### 2.4.3.4 Future

The suffix *-/h/VrV/h/* is used for future reference. Its vowels harmonise with the last vowel of the stem it is attached to. The /h/ phoneme can be pronounced as [k] when suffixed to a stem with a final nasal, [f] or [r]; in all other cases it is pronounced as [h] or [x] in free variation. The first person inclusive suffix can be shortened to *-xuxo/-huho*.

Table (73) Future tense paradigm

Singular				Plural					
Person	Person prefix		TAM	Person	Person prefix	Plural prefix		TAM	Person suffix
1	<i>i-</i>	[stem]	<i>-hVrVh</i>	1 incl.	<i>i-</i>	<i>n-</i>	[stem]	<i>-hu(ru)h</i>	<i>-o</i>
				1 excl.	<i>i-</i>			<i>-hVrVh</i>	<i>-min</i>
2	<i>u-</i>				<i>-huru</i>	<i>-oŋ</i>			
3	<i>a-</i>			<i>n-</i>	<i>-hVrVh</i>				

The future suffix can be used when referring to very concrete prognostics or intentions as in (255) or often with modal overtones, expressing expectations of the speaker.

(255) *jicum*      *i-dëë'-hërëx*      *bi*      *Assagna*  
tomorrow    1-go-FUT      to      Assagna

‘Tomorrow I will go to Assagna.’

In example (256) the consultant describes the evolution of a palm tree and how at some point the fruit ‘will fall down’, which is expected by the speaker, but not referring to a specific situation in the future. In example (257) too, the future suffix is used to describe a general, unspecific situation.

(256) *bu-xun*                      *bumboŋ*                      *a-nen-e'-kerex*  
 CL.bu-palm.fruit      AGR.bu:DEM.DIST      3-fall-VEN-FUT

'That palm fruit will fall down.'

AB, DJI121109AC3

(257) *u-noo-xorox-oŋ*    *an*      *u-lóŋ-óŋ*      *mataha*      *gu-wo'-konom*  
 2-sit-FUT-PL      and      2-speak-PL      because.of      CL.gu-sacrifice-3SGPOSS

'You are going to sit down and talk about his sacrificial rituals.'

JHS, DJI101210AC

The future suffix can be attached to the question word *ne* 'how' with a modal reading.

(258) *ne-hereh*      *g-a-huy-a*  
 how-FUT      FOC-3-be.called.PASS

'What's it called again... [lit.: how will it be that it is called.]'

HS, observed communication

The prefix *d-* is used to negate the future.

Table (74) *Future negative paradigm*

Singular				Plural					
Person	TAM	Person prefix			TAM	Person prefix	Plural		Person suffix
1	<i>d-</i>	<i>i-</i>	[stem]	1 incl.	<i>d-</i>	<i>i-</i>	<i>n-</i>	[stem]	<i>-o</i>
				1 excl.					<i>/</i>
2		<i>u-</i>		2		<i>u-</i>	<i>/</i>		<i>-Vŋ</i>
3		<i>a-</i>		3		<i>a-</i>	<i>n-</i>		<i>/</i>

(259) *me*      *d-i-nap*                      *gu-hese*                      *gu-gonduk*      *bare*  
 1SG      NEG.FUT-1-pound      CL.gu-peeled.rice      AGR.gu-one      only

'I won't pound only one single grain of rice!'

BS, DJI101010AC2

### 2.4.3.5 Imperatives

The morphological imperative in *-Vti* (sg.) and *-Vteŋ* (pl.), the common imperative morpheme in Guñaamolo and Gujaher, is marginal in Gubëeher, where the subjunctive forms are generally used for imperatives as well. However, it has been encountered with a few verbs like *dëëk* ‘go’ (260), *noox* ‘sit’ (261) and *ñoŋ* ‘take’ (262), though exclusively in the speech of one consultant. These forms are possibly conventionalised.

- (260) *aŋgu n’ u-yen-i kó-mér bare g-u-cooc-i burum*  
 and as 2-say-PERF AGR.ko-PRO only FOC.OBJ-2-have-PERF so.that
- an u-fili kó-mér dëëk-ëti u-fili*  
 and 2-break AGR.ko-PRO go-IMP 2-break

‘So, since you say that you have only that one [little egg], you should break it, go break it.’

JHS, DJI101210AC,130:1

- (261) *a-yen-o man nox-ot-eŋ an i’-rux-o*  
 3-say-2SGOBJ but sit-IMP-PL and 1-PL-drink-1PL.INCL

‘He tells you: ‘but sit down and we drink.’’

JHS, DJI101210AC,205:1

- (262) *n’ u-yen-eŋ u-mukunah-eŋ mes man aŋgu ñoŋ-ot-eŋ*  
 As 2-say-PL 2-hold.ceremony-PL already but and take-IMP-PL
- anaŋgu u-xéég-am-aŋ bu-koor*  
 and 2-lean-DER-PL CL.bu-village

As you said that you have already poured libations, well then take [it = the palm wine] and bolster the village.

JMS, DJI101210AC

There are suppletive imperatives for some very frequently used commands: *so* ‘come!’, *indan* ‘go!’ and *ĩ* ‘take’.

The negative imperative is expressed with the particles *sam* or *bu(ru)k*, occasionally the two together *sam buruk*, which are preposed to the affirmative imperative form. The morphemes are in free variation and no semantic difference has been detected.

(263) *sam u-niig*  
 NEG.IMP 2-watch  
 ‘Don’t watch!’

(264) *bu(ru)k u-niig*  
 NEG.IMP 2-watch  
 ‘Don’t watch!’

#### 2.4.3.6 *Irreal*

The irreal is used for hypothetical statements in conditional clauses.

(265) *g-ë-gu an min a-ñon-mboone gu-lihan a-yëd-mbone bu-mañ*  
 COND-3-be like 1PL.EXCL 3-take-IRR CL.gu-wood 3-lift-IRR CL.bu-iron  
*anaŋ a-dég a-xuc-un*  
 and 3-hit 3-descend-CAUS

‘If she was [someone] like us, she’d take a stick, lift up a metal and hit it in with it.’

AB, DJI121109AC2

(266) *g-i-cooc-ëmboone gu-ru i-nëër-o*  
 COND-1-have-IRR CL.gu-cola 1-give-2SGOBJ

‘If I had cola nuts I would give you [some].’

HS, field notes

The irreal is also compatible with the inactual suffix *-ot*.

- (267) *g-ë-gu-mbo-ot*      *a-har*      *ka*      *ji-fek*      *i-yaax-imb-r-i*  
COND-3-be-IRR-INACT    CL.a-meat    CONN    CL.ji-pig    1-eat-IRR-NEG.PERF-1SGSUBJ

‘If it had been pork meat, I wouldn’t have eaten it.’

AS, field notes

#### 2.4.3.7 *Habitual*

Habituals are formed with the morpheme *gV*, either on its own (268) and (269) or together with the suffix *-Vx* in a doubly marked construction (270), which may involve reduplication of the verb (271).

- (268) *go*      *u-wuul*      *jacet*  
MOD      2-see      night

‘Do you see at night?’

BS, field notes

- (269) *ge*      *i-yaax-intin-min*  
MOD      1-eat-ANTC-1PL.EXCL

‘We usually eat early.’

JM, field notes

- (270) *a-mu*      *gu-juuñ*      *g'-a-fu'-tt-ox*      *bi-nég*      *g'-a-seor-ox*  
3-exist      CL.gu-star      MOD-3-come.out-VEN-HAB      CL.bi-sun      MOD-3-sunrise-HAB

‘There is a star, when it comes out, the sun comes out too.’

CS, DJI070211AC2

(271) *fi g' u-rux-ox gu-rux xolo*  
 2SG MOD 2-drink-HAB CL.gu-drink much

‘You drink a lot [of alcohol].’

GS, field notes

On its own the suffix *-Vx* can also have a durative meaning.

(272) *me g-u-cil-ex indan bi-na'-hen d-ë-bun*  
 1SG FOC.OBJ-2-laugh-HAB go:IMP CL.bi-way-2SGPOSS NEG.FUT-3-good

‘You are laughing about me? Go, your journey will not be successful.’

BS, DJI101010AC2

The negative habitual is formed with the suffix *-Vx* and the prefix *d-* (273).

(273) *d-i-ceem-ex bëërix*  
 NEG.FUT-1-sleep-HAB noon

‘I usually don’t sleep during the day.’

HS, field notes

#### 2.4.3.8 ‘Already’

The suffix *-aar* is used to express that one has already done something, in the sense that the experience is not new (274). In the negated form it translates as ‘never going to do something’ when used with the negative of the future/habitual (275) or as ‘never having done something’, when used with the negative perfect (276).

(274) *i-dëëk-aar-i Karabane*  
 1-go-ALREADY-PERF Karabane

‘I have already had the occasion to go to Karabane.’

GS, field notes

(275) *me d-i-cooc-aar dërëm-ëŋ*  
 1SG NEG.FUT -1-have-ALREADY money-PL

‘I will never have money.’

BS, observed communication

(276) *si-mangu ë-hëb di-mangu-honom me wul-aa-d-i [=wul-aar-r-i]*  
 CL.si-mango 3-eat CL.di-mango-3SGPOSS 1SG see-ALREADY-NEG.PERF-1SGSUBJ

‘A mango tree eats his mangoes, I have never seen that!’

BS, DJI101010AC2

#### 2.4.3.9 Venitive

The suffix -*Vt* (the vowel is determined by vowel harmony with the last vowel of the stem) indicates movement towards the speaker or towards the space where the speaker is located. Its rather inflectional than derivational character is reflected by the fact that verbs bearing the venitive suffix cannot be nominalised. Forms such as *bu-fur-ot* ‘to come out’ are regarded as ungrammatical by most speakers and I have witnessed speakers producing those forms getting corrected or ridiculed by others. More derivational extensions, such as causatives, reciprocals etc. can be infinitivised (cf. *sin-wuul-ay* ‘to see each other’).

Table (75) *Examples of venitives*

Stem	Gloss	Derived stem	Gloss
<i>xuc</i>	‘descend’	<i>xuc-ot</i>	‘descend towards speaker’
<i>nen</i>	‘fall’	<i>nen-et</i>	‘fall down (if speaker is down)’
<i>fur</i>	‘leave’	<i>fur-ot</i>	‘come out (if speaker is outside)’
<i>ŋan</i>	‘enter’	<i>ŋan-at</i>	‘come in (if speaker is inside)’

When the venitive is followed by the perfect suffix, it has the form *-t-i* (> *-Vt + -i*) (277) and especially in fast speech the final consonant of the root gets deleted if it is a [r], [l], [x] or [b] as shown in (278).

(277) *bu-xun*                      *bumbooŋ*                      *a-nen-et-kerex*      *g-a-nen-t-i*  
 CL.bu-palm.fruit    AGR.bu:DEM.DIST    3-fall-VEN-FUT    COND-3-fall-VEN-PERF

*u-hangul-i*      *u-ñoŋ*      *u-jin*  
 2-can-PERF      2-take      2-cook

‘The palm fruit will fall down, when it has fallen down you can take it and cook it [...].’

AB, DJI121109AC3

(278) *a-fu'-t-i[a-fur-ot-i]*      *a*      *janeela*      *a-xuc-ot*      *riéŋ*  
 3- go.out-VEN-PERF    PREP    window    3-descend-VEN    down

‘She comes out through the window and comes down to the ground.’

LM, DJI291110AC

Like its equivalent in Joola Eegimaa, the venitive suffix *-t* in Gubëeher is mainly used to express movement towards the speaker in space (compare examples (277), (278) and Table (75). In both languages the venitive suffix *-t* is also used to express movement in time (279) and transition from one state to another with inchoative semantics (280), or that an event took place somewhere else but is relevant for the speaker or the discourse (281) and (282). I adopt Sagna's (2008) analysis, who considers the aspectual functions of the venitive morpheme in Eegimaa as result of grammaticalisation from originally denoting movement in space.

(279) *i-lenta-t-i*                      *fa-lix-hum*  
 1-remember-VEN-PERF    CL.fa-first-1SGPOSS

‘I have remembered my youth.’

MB, field notes

(280) *i-rahi-t-i*  
 1-black-VEN-PERF  
 ‘I became black.’  
 LM, field notes

(281) *a-ci'-t-i*            *a*            *Gubaabo*  
 3-die-VEN-PERF    PREP    Ziguinchor  
 ‘He died in Ziguinchor (away from home).’  
 LM, valency questionnaire

(282) *a-dón-t-i*                    *ja-bón*  
 3-swallow-VEN-PERF    CL.ja-rice.flour  
 ‘He ate some rice cakes there.’  
 LM, field notes

#### 2.4.3.10 *Progressives with auxiliary constructions*

The purely auxiliary verbs *raad* (283) and *kan* (284), and the verb *gu* ‘to be’ are used as auxiliary verbs in periphrastic constructions denoting progressive aspect.

(283) *ho*            *g-u-raad-i*                    *bu-ye*  
 what    FOC.OBJ-2-AUX-PERF    CL.bu-do  
 ‘What are you doing?’  
 MaB, DJI090312AC16

(284) *n'*            *a-tuc-o-ne*                    *bu-luk*            *bumbooŋ*            *nineeŋ*            *num*  
 as    3-throw-VEN-SUB    CL.bu-shaft    AGR.bu:DEM.DIST    like.that    too  
  
***g-a-ŋ-kan***                    *num*            ***bu-laar***  
 FOC.OBJ-3-PL-AUX    too            CL.bu-clap  
 ‘According to how he throws the kajandu shaft, they clap their hands, too.’  
 JHS, DJI101210AC

The periphrastic constructions formed with an auxiliary are compatible with the inactual (285), and the venitive (304).

(285) *u-lamba ummu sin-cem g-a-raad-ot a-jufula-t-i*  
 CL.u-boy AGR.u:DEM.PROX CL.sin-sleep FOC.OBJ-3-AUX-INACT 3-wake.up-VEN-PERF

*ñimeni*

now

‘The boy was sleeping, now he has just woken up.’

LM, DJI291110AC

(286) *bumbu g-i-gu-t-i bu-bajul*  
 AGR.bu:DEM.PROX FOC.OBJ-1-be-VEN-PERF CL.bu-break

‘That is the one [*bu-nin* ‘egg’] I am going to break.’

BS, DJI101010AC2

#### 2.4.3.11 *Progressives with a locative template*

The non-verbal locative predication ‘be at’ followed by the verbal noun is occasionally used with progressive semantics (287).

(287) *ineej bē-lób*  
 CL.i:LOC CL.ba-speak

‘They are having a conversation.’

JMS, field notes

#### 2.4.4 Verbal extensions

Gubëeher has a very productive inventory of verbal extensions. I hesitate to use the term derivation since the status of some of the forms is not entirely clear. This holds for the passive and the adverbial extensions *-intiin* and *-aar*. Some extensions decrease or increase valency, some are aspectual/adverbial. A stem can take more

than one suffix, though the meaning of the resultant combined suffix may not be the sum of the semantics of each suffix that is involved. Verbal extensions are widespread among the Atlantic languages; actually they are one of the few areas of grammar where common structures are obvious, even enough so as to attempt reconstruction (cf. Becher 2000). Most extensions are sensitive to lexical semantics, valency or other semantic features of the verb. To give an example: The suffix *-un* derives causatives from most verbs but with verbs of bodily excretion it has applicative semantic ‘to excrete on’. Most of the data presented here has been collected using the valency questionnaire developed for Martin Haspelmath’s “Leipzig valency classes project” at Max Planck Institute Leipzig. For glossing I have identified the most productive function, though many extensions have several functions and conventionalised or idiosyncratic usages.

The reflexive/middle extension *-a(h)* will be discussed in more detail chapter 4 as its patterns of deriving infinitives involve several noun class markers.

Table (76) *Verbal extensions*

<b>Form</b>	<b>Functions</b>	<b>Gloss</b>
<i>-a(h)</i>	passive	PASS
<i>-a(h)</i>	reflexive/middle	REFL
<i>-ay</i>	reciprocal, comitative	REC
<i>-ëla</i>	distributive	DISTR
<i>-un</i>	causative, applicative	CAUS
<i>-liin</i>	causative	CAUS
<i>-ul</i>	reversive, repetitive,	REV
<i>-intiin</i>	anticipatory	ANTC
<i>-um</i>	applicative	APPL
<i>-ur</i>	benefactive	BEN
<i>-ahiin</i>	pluractional (repeated action on one or several objects)	DER

#### 2.4.4.1 *Passivisation*

The passive suffix *-a* is very productive in Gubëeher, all transitive verbs can be passivised (289) in order to demote the subject of the corresponding active clause (288). The demoted subject cannot be expressed in a passive clause, neither as adjunct nor otherwise, but it is always deleted.

- (288) *a-naax-em*                      *gu-tuma*  
3-tell-1SGOBJ.PERF      CL.gu-story

‘S/he told me a story.’

LM, valency questionnaire

- (289) *gu-tuma*                      *a-naax-a*  
CL.gu-story      3-tell-PASS

‘The/a story has been told.’

LM, valency questionnaire

- (290) *a*            *koona-heeneŋ*      *a-marŋ-a*            *xolo*  
PREP    house-POSS3PL    3-want-PASS      much

‘S/he is much liked at home.’

LM valency questionnaire

- (291) *xomali*      *g-u-lób-a-haŋ*                      *b-u-yéég-eŋ*  
why            COND-2-speak-PASS-PL      NEG.SBJV-2-hear-PL

‘Why don’t you listen when you have been told [something]?’

GS, observed communication

A passive habitual in *-uux* (292) is attested.



reflexive is visible in the negated forms: The negation suffix *-r* precedes the passive morpheme *-a* (296), but follows the reflexive morpheme *-a* (298).

(295) *gu-bol*            *a-ñooc-a*  
CL.gu-bowl      3-wash-PASS  
‘The bowl has been washed’  
LM, DJI280212AC8

(296) *gu-bol*            *ñooc-ër-a*  
CL.gu-bowl      wash-NEG-PASS  
‘The bowl has not been washed’  
LM, DJI280212AC8

(297) *a-ñooc-a-i*  
3-wash-REFL-PERF  
‘S/he has washed[his/her body].’  
\*S/he was washed.’  
LM, DJI280212AC8

(298) *ñooc-a-r-aŋ*  
wash-REFL-NEG-3SGSUBJ  
‘S/he has not washed his/her body’  
\*S/he has not been washed.  
LM, DJI280212AC8

Another verb which is compatible with both passive and reflexive morphology is *taatul* ‘tear’ (and a number of other causative/inchoative alternating cut-and-break verbs like *muutul* ‘break’ *tooxul* ‘cut’ *bajul* ‘destroy’ etc.). The inchoative derived with the reflexive is formally identical with the passivised causative, but the difference lies in TAM marking and the form of the negation. The reflexive occurs

in the perfect (299) and stands before the negation marker (300). The passive only occurs in the plain form (301) and stands after the negation marker (302).

(299) *të-bën*            *a-taatl-a-i*  
CL.ta-cloth    3-tear-REFL-PERF  
‘The cloth is torn.’  
\*The cloth has been torn.  
LM, DJI280212AC8

(300) *të-bën*            *taatul-a-r-aj*  
CL.ta-cloth    tear-REFL- NEG.PERF-3SGSUBJ  
‘The cloth is not torn’  
\*The cloth has not been torn.  
LM, DJI280212AC8

(301) *të-bën*            *a-taatul-a*  
CL.ta-cloth    3-tear-PASS  
‘The cloth has been torn.’  
LM, DJI280212AC8

(302) *të-bën*            *taatu’-r-aa*  
CL.ta-cloth    tear - NEG.PERF-PASS  
‘The cloth has not been torn.’  
LM, DJI280212AC8

Lüpke's (2005:71) passive test, used to distinguish passive from inchoative (Lüpke 2005:227) readings in a language that like Gubëeher does not allow the syntactic expression of the agent in a by-phrase can be applied to the reflexive/middle and passive forms of Gubëeher. Compatibility with the phrase ‘by itself’ (in Gubëeher *AGR-mër marakanam*) shows that an agent is semantically not entailed, although this

is expected for a passive reading (Lüpke 2005:227/295). This is the case in Gubëeher: the reflexive form with the inchoative ‘to tear’ is additionally compatible with the clause ‘by itself’(303), whereas the passive is not (304).

(303) *të-bën*            *a-taatul-a-i*            *të-mër*            *mara-kanam*  
 CL.ta-cloth    3-tear-REFL-PERF    AGR.ta-PRO    self-3SGPOSS

‘The shirt tore on its own.’

LM, DJI280212AC8

(304) *\*të-bën*            *a-taatul-a*            *të-mër*            *mara-kanam*  
 CL.ta-cloth    3-tear-PASS    AGR.ta-PRO    self-3SGPOSS

intended: ‘The shirt tore on its own.’

LM, DJI280212AC8

#### 2.4.4.3 *The reciprocal extension (-ay)*

The suffix *-ay* forms reciprocals with transitive base verbs and comitatives with intransitive base verbs. Syntactically reciprocals are monovalent, only the subject slot is occupied. Semantically they are transitive, which is why these derivations only occur with plural subjects.

Table (77) *The reciprocal extension*

Stem	Gloss	Derived stem	Gloss
<i>wuul</i>	‘see’	<i>wuul-ay</i>	‘see each other/meet’
<i>hof</i>	‘kill’	<i>hof-ay</i>	‘kill each other’
<i>niig</i>	‘look at’	<i>niig-ay</i>	‘look at each other’

Of course for intransitive verbs a reciprocal reading is inadmissible, they can have a comitative reading with the suffix *-ay*. Again, the subject has to be a plural pronoun

or NP and the event is construed as being performed together or at the same time by the several participants.

Table (78) *The comitative function of -ay*

Stem	Gloss	Derived stem	Gloss
<i>dëëk</i>	'go'	<i>dëëk-ay</i>	'go together'
<i>jaak</i>	'burn (itr.)'	<i>jaak-ay</i>	'burn at the same time'
<i>cir</i>	'jump/fly'	<i>cir-ay</i>	'jump together'

#### 2.4.4.4 *The distributive extension (-ëla)*

The suffix *-ëla*, a combination of the two verbal extensions *-ul* and *-ah*, has distributive semantics with a connotation of doing something aimlessly/carelessly, playfully or randomly 'here and there'.

Table (79) *The distributive extension*

Stem	Gloss	Derived stem	Gloss
<i>dég</i>	'hit'	<i>dég-ëla</i>	'hit around'
<i>naax</i>	'tell'	<i>naax-ëla</i>	'snitch on'
<i>dëëk</i>	'go'	<i>dëëk-ëla</i>	'stroll around'
<i>ñooc</i>	'wash'	<i>ñooc-ëla</i>	'wash listlessly'

#### 2.4.4.5 *The causative extensions (-un/-liin)*

Gubëeher has two causative extensions, *-un* and *-liin/-riin*. There are no verbs which are compatible with both extensions. It is not clear what the difference between the two causativising suffixes is.

Table (80) *The –liin causative*

Stem	Gloss	Derived stem	Gloss
<i>rox</i>	‘cry’	<i>ro-liin</i>	‘cause to cry’
<i>ñaŋ</i>	‘dance’	<i>ñaŋ-liin</i>	‘make dance’
<i>lik</i>	‘stand’	<i>lik-riin</i>	‘put in upright position’
<i>bëŋk</i>	‘be afraid’	<i>bëŋk-liin</i>	‘frighten’

Table (81) *The –un causative*

Stem	Gloss	Derived stem	Gloss
<i>yaax</i>	‘eat’	<i>yaax-un</i>	‘make eat’
<i>ŋaf</i>	‘go up’	<i>ŋaf-un</i>	‘raise’
<i>xuc</i>	‘descend’	<i>xuc-un</i>	‘bring down’
<i>run</i>	‘be full’	<i>run-un</i>	‘fill’

For verbs of excretion, however, *-un* derivations form applicatives: the derivation introduces a locative object denoting the ground the excretion takes place on, like shown in Table (82).

Table (82) *The extension -un with an applicative function*

Stem	Gloss	Derived stem	Gloss
<i>sel</i>	‘urinate’	<i>sel-un</i>	‘urinate on’
<i>rëěj</i>	‘defecate’	<i>rëěj-un</i>	‘defecate on’
<i>loot</i>	‘spit/vomit’	<i>loot-un</i>	‘spit/vomit on’

#### 2.4.4.6 *The applicative extension (-um)*

The applicative extension *-um* increases valency by introducing an object argument or prepositional phrase (headed by *aŋga* ‘with’, *mata* ‘because of’ or *a* ‘at’) which denotes a cause, location or an instrument. In elicitation, the applicative suffix was accepted for almost every verb it was asked for, but its frequency in discourse is rather low.

Table (83) *The applicative extension*

Stem	Gloss	Derived stem	Gloss
<i>fur</i>	'leave'	<i>fur-um</i>	'go out from'
<i>yaax</i>	'eat'	<i>yaax-um</i>	a) 'eat with (instrument) b) 'eat with (side dish)'
<i>noox</i>	'sit'	<i>noox-um</i>	'sit on'/'appropriate'
<i>lód</i>	'build'	<i>lód-um</i>	'build with (material)'

#### 2.4.4.7 *The reversive extension (-ul)*

The extension *-ul* occurs often with a reversive function, i.e. undoing something. It stands often in contrast with the suffix *-un*.

Table (84) *The reversative extension*

Stem	Gloss	Derived stem	Gloss
<i>fóób</i>	'cover (blanket)'	<i>fóób-ul</i>	'uncover'
<i>rax-un</i>	'lock'	<i>rax-ul</i>	'unlock'
<i>biir</i>	'close'	<i>biir-ul</i>	'open'
<i>xudd-un</i>	'cover (lid)'	<i>xudd-ul</i>	'uncover (lid)'

With some stems the derivations convey repetitive semantics.

Table (85) *The extension -ul with repetitive function*

Stem	Gloss	Derived stem	Gloss
<i>ñooc</i>	'wash'	<i>ñooc-ul</i>	'wash again'
<i>taak</i>	'cut'	<i>taak-ul</i>	'cut again'

#### 2.4.4.8 *The benefactive extension (-ur)*

The productive alternation *-ur* derives benefactives with a semantic of 'doing something for someone, or in the place of someone'. Valence is increased by one,

resulting in double object constructions, where the beneficiary occupies the object slot and the object of the underived verb the second object slot.

Table (86) *The benefactive extension*

Stem	Gloss	Derived stem	Gloss
<i>lód</i>	'build'	<i>lód-ur</i>	'build for'
<i>tib</i>	'search'	<i>tib-ur</i>	'search for'
<i>taak</i>	'cut'	<i>taak-ur</i>	'cut for'
<i>reŋk</i>	'repair'	<i>reŋk-ur</i>	'repair for'

Two intransitive verbs, both verbs of movement have been found with the suffix *-ur* with causative or comitative reading.

Table (87) *The extension -ur with verbs of movement*

Stem	Gloss	Derived stem	Gloss
<i>dëëk</i>	'go'	<i>dëëk-ur</i>	'accompany'
<i>jir</i>	'run'	<i>jir-dur</i>	'conduct a vehicle'

#### 2.4.4.9 *The anticipatory extension (-intiin)*

The very productive suffix *-intiin* conveys that an event takes place early or earlier than expected. The terminology is adopted from Sagna (2008:154), who describes an extension with similar semantics for Joola Eegimaa.

Table (88) *The anticipatory extension*

Stem	Gloss	Derived stem	Gloss
<i>ceŋ</i>	'get up'	<i>ceŋ-intiin</i>	'get up early'
<i>yaax</i>	'eat'	<i>yaax-intiin</i>	'eat early'
<i>dëëk</i>	'go'	<i>dëëk-intiin</i>	'go early'

#### 2.4.4.10 Composite extensions

Some extensions are combined from two or more simple extensions. The combined suffix *-ahiin* (reflexive *-a* and causative *-iin*) has a very strong component of pluractionality as can be seen from Table (89) which shows examples where the derivation indicates that either the same action is repeatedly performed on the same entity or subsequently on several entities, or several entities at the same time. For verbs of cutting and breaking this derivation is productive and results in verbs which denote that something is cut or broken into many small pieces.

Table (89) Composite extension *-ahiin*

Stem	Gloss	Derived stem	Gloss
<i>taak</i>	'cut'	<i>taak-ël-ahiin</i>	'cut at (several places)'
<i>baat</i>	'bark'/'chide'	<i>baat-ahiin</i>	'chide several people'
		<i>baat-ël-ahiin</i>	'chide often'
<i>toox-ul</i>	'cut'	<i>toox-ël-ahiin</i>	'cut into pieces'
<i>babb</i>	'be same'	<i>babb-ël-ahiin</i>	'mix together'
<i>maap-un</i>	'touch'	<i>maap-ën-ahiin</i>	'beat together'
<i>jim-un</i>	'submerge'	<i>jim-ën-ahiin</i>	'drown several times'

The derivations in *-una/-ina* are quite idiosyncratic.

Table (90) Composite extension *-una/ina*

Stem	Gloss	Derived stem	Gloss
<i>ñoŋ</i>	'take'	<i>ñoŋ-una</i>	'save money'
<i>dén</i>	'put'	<i>dén-ina</i>	'build a trap'
<i>fób</i>	'cover'	<i>fób-una</i>	'cover up'
<i>ñoc</i>	'wash'	<i>ñoc-ina</i>	'wash dishes'

Verbs derived with *-indina* are intransitive. The combined suffix *-indina* occurs with some verbs of bodily excretion, with the meaning that the act of excretion has occurred on the subject participant him/herself.

Table (91) *Composite extension -indina*

Stem	Gloss	Derived stem	Gloss
<i>rëäj</i>	'defecate'	<i>rëäj-indina</i>	'defecate on oneself'
<i>sel</i>	'urinate'	<i>sel-indina</i>	'urinate on oneself'
?		<i>yaal-indina</i>	'drool'

## 2.5 Clause and predication types

In this section I will introduce some basic features of Gubëeher syntax, especially those that are relevant for the discussion of noun class marking of verbal nouns. The syntactic properties of verbal nouns are discussed throughout chapter 4.

### 2.5.1 Verbless predication

Some predicative constructions in Gubëeher do not involve verbs. Equation and class-inclusion can be verbless in the present affirmative, locatives employ a non-verbal locative copula and non-finite forms can figure as head of a predicate (these constructions will be presented in 4.5.1.3).

#### 2.5.1.1 Equation and class-inclusion

Equation and class-inclusion (305) and (306) is conveyed by juxtaposition of two NPs. For past or future reference the verb *gu* 'to be' with the inactual or future suffix respectively has to be employed (307).

(305) *na a-har ka féébi*  
 that CL.a-meat CONN goat(CL.fa)

‘That is goat meat.’

(306) *me u-saw*  
 1Sg CL.u-hunt

‘I’m a hunter.’

(307) *i-gu-horox u-saw*  
 1-be-FUT CL.u-hunt

‘I will be a hunter.’

### 2.5.1.2 Location

Location can be expressed in a predication with a nonverbal copula which agrees with the noun class of its head noun. The locative copula is construed with a prefix *iN-* and the agreement marker of the noun which is located (308). In case a locative complement follows ‘It is in/on/at...’ or it occurs in a question ‘Where is...’, the copula also receives a final nasal consonant (309) (see Table (92)). Nouns with *a*-agreement and nouns with *u*-agreement share the locative copula of the form *innu(ŋ)*.

(308) *ba-pusun imba*  
 CL.ba-press AGR.ba:LOC

‘There’s the lemon juice!’

HS, field notes

(309) *ba-pusun imbaŋ a ko-raafa ko-gini a-gu-ne-na*  
 CL.ba-press AGR.ba:LOC PREP CL.ko-bottle AGR.ko-REL 3-be-SUB-there

*abi hə-dii-xen*  
 PREP CL.ha-foot-2SGPOSS

‘The lemon juice is in the little bottle which is there at your feet.’

HS, field notes

Table (92) *The locative copulas*

	Schema	Example class <i>u-</i> and <i>a-</i>	Example class <i>gu-</i>	Example class <i>si-</i>
<b>Presentative</b>	<i>iN-Agr</i>	<i>innu</i>	<i>iŋgu</i>	<i>insi</i>
<b>Locative</b>	<i>iN-Agr-ŋ</i>	<i>innuŋ</i>	<i>iŋgoonŋ</i>	<i>inseenŋ</i>

The copula also agrees with the plural suffix (310).

(310) *bě-kër-ëŋ imbaŋ-aŋ*  
 CL.ba-chicken-PL AGR.ba:LOC-PL

‘Where are the chickens?’

HS, field notes

A distal form with the suffix *-oon* has been overheard in conversation in one case (311), reminiscent of distal demonstratives. In elicitation, suffixation of the inactual suffix *-ot* was judged grammatical but is apparently quite rarely used since it has not been encountered in other circumstances.

(311) *innuŋ-oon*  
 AGR.u:LOC-DIST

‘He is over there.’

KC, field notes

- (312) *innuŋ-ot*  
 AGR.u:LOC-INACT  
 ‘S/he was there.’  
 KC, field notes

## 2.5.2 Phrase structure

### 2.5.2.1 Complementation

Complementation is here understood as “the syntactic situation that arises when a notional sentence or predication is an argument of a predicate” (Noonan 2007). Gubëeher has a complementiser *buyeŋka*, which can be segmented into the infinitive of the verb ‘say’ *bu-yen* and the connective *ha*. It occurs in the corpus mainly with the verbs *yit* ‘know’ (313) and *na* ‘know’ (314) occasionally also with the verbs *lób* ‘say/speak’ and *yen* ‘say’. The French complementiser *que* is also frequently used.

- (313) *wurówur kén g-a-noox-i a-yit-i bueŋka a-lódin-i*  
 everyone where FOC.OBJ-3-sit-PERF 3-know-PERF COMP 3-greet-PERF  
 ‘Everybody, wherever he is, knows that he has greeted [the deceased].’  
 JHS, DJI101210AC

- (314) *a-na-i buyeŋka u-bër-ëm ë-ciir-i*  
 3-know-PERF COMP CL.u-offspring-3SGPOSS 3-die-PERF  
 ‘She knows that her child has died.’  
 BS, DJI101010AC2

The verb *yen* ‘say’ is frequently used for the rendition of direct speech without complementiser.

(315) *nun-oŋ a -yen-em bala u-saat ifok u-lin-du-min pe*  
 mother-PL 3-say-3SGOBJ before 2-pass must 2-weave-BEN-1PL.EXCL all

‘The old women told her: “Before you pass you have to braid us all.”’

BS, DJI101010AC2

For indirect questions the complementiser *kati* ‘if/whether’ is used.

(316) *i-miix-o kati u-yéég-i jiddi-eŋ a-n a-naŋa-ne*  
 1-ask-2SGOBJ whether 2-hear-PERF gun-PL AGR.a-REL 3-resound-SUB

*gëgëŋ*

yesterday

I ask you whether you heard the guns that were resounding yesterday

HS, field notes

Some complement-taking verbs are only compatible with either finite or non-finite complements, some with both. In Gubëeher finite complements of complement taking verbs are only inflected for person, but not for TAM, whereas infinitives are not inflected at all, these are nominalised forms prefixed with noun class markers.

(317) a) *a-haañin-i a-rux*                      b) *a-haañin-i bu-rux*  
 3-dare-PERF 3-drink                              3-dare-PERF CL.bu-drink

‘He dares to drink.’

‘He dares to drink’

JMS, field notes

JMS, field notes

(318) a) *i-maŋ-i i-ceem*                      b) *i-maŋ-i sin-ceem*  
 1-want-PERF 1-sleep                              1-want-PERF CL.sin-sleep

‘I want to sleep.’

‘I want to sleep’

JMS, field notes

JMS, field notes

Gubëeher ‘infinitives’ are nominalisations formed by the prefixation of noun class markers, whose nominal and verbal properties are explained in detail in chapter 4.

Among the complement-taking verbs are verbs of knowledge, of fearing, modals and phasal verbs. Table (93) lists complement taking verbs in Gubëeher and the type of the complement: finite complements standing in the unmarked TAM, non-finite complements in the infinitive, some are introduced by a complementiser *buyenka*.

Table (93) *Some complement taking verbs in Gubëeher*

Verb	Gloss	Complement type
<i>hangul</i>	'can'	<i>finite/non-finite</i>
<i>min</i>	'be knowledgeable in'	<i>non-finite</i>
<i>maŋ</i>	'want'	<i>finite/non-finite</i>
<i>bëŋk</i>	'be afraid of'	<i>non-finite</i>
<i>haañun</i>	'dare'	<i>finite/non-finite</i>
<i>jas(un)</i>	'do sth. quickly'	<i>non-finite</i>
<i>komãse</i>	'begin'	<i>finite/non-finite</i>
<i>mukun</i>	'end'	<i>finite/non-finite</i>
<i>yit</i>	'know'	<i>complementiser</i>
<i>na</i>	'know'	<i>complementiser</i>

### 2.5.2.2 *Relative clauses*

Relative clauses are formed with a relative pronoun *-(gV)ni*, agreeing with the noun class of the noun it modifies. Often, the verb of the subordinate clause is marked with *-ne* additionally. Subjects (319), objects (320) and complements (see (321) for a local complement and (322) and (323) for comitative complements) can be relativised.

- (319) *Na u-diigen u-mooŋ u-guni a-gu-ne bu-dëë' ha*  
 DEM CL.u-man AGR.u-DEM.DIST AGR.u-REL 3-be-SUB CL.bu-go CONN  
*abi Gubaabo*  
 PREP Ziguinchor

'That is the man who wants to go to Ziguinchor.'

HS, field notes

- (320) *ba-ruux*      *bë-gini*      *u-ruh-ne*      *a-ɲaarin-ot*  
 CL.ba-water    AGR.ba-REL    2-drink-SUB    3-cold-INACT

‘The water you drank was cold.’

HS, field notes

- (321) *fujku*    *ë-gini*      *i-ceem-ex-ne*      *ë-jóló-i*  
 room    AGR.a-REL    1-sleep-HAB-SUB    3-wide-PERF

‘The room I sleep in is spacious.’

HS, field notes

- (322) *wol*      *u-mooŋ*      *u-guni*      *i-waxa-min-ne*      *a-laj-i*  
 Child(CL.u)    AGR.u-DEM.DIST    AGR.u-REL    1-play-1PL.EXCL-SUB    3-evil-PERF

*gu-laj*

CL.gu-evil

‘The kid I played with is very evil.’

HS, field notes

- (323) *wol*      *u-mooŋ*      *u-guni*      *i-waxa-ne*      *aŋga*      *u-mër*  
 Child(CL.u)    AGR.u-DEM.DIST    AGR.u-REL    1-play-SUB    with    CL.u-PRO

*a-laj-i*      *gu-laj*

3-evil-PERF    CL.gu-evil

‘The kid I played with is very evil.’

HS, field notes

Relative pronouns can also agree with adverbially used noun classes. The resulting locative or causal relatives can introduce temporal, causal subordinate phrases: *fë(gë)ni* ‘when; at the time when’, *kë(gë)ni*, *bi(gi)ni* ‘at the location where’ *dë(gë)ni* ‘on the day that’ *hó(gu)ni* ‘that which’. For more examples and a discussion of this use of noun class prefixes see section 3.3.

(324) *fë-gëni*      *u-raad-ot*      *bi-ñooc-a*      *fa-m*      *g-i-raad-ot*  
 AGR.fa-REL    2-AUX-INACT    CL.bi-wash-REFL    AGR.fa-PRO    FOC.OBJ-1-AUX-INACT

*gu-yaax-la*  
 CL.gu-eat-DISTR

‘When/while you were washing yourself, I was eating.’

GS, field notes

### 2.5.2.3 Conditional clauses *g-*

Temporal or conditional adverbial clauses are formed with the prefix *g-*. The conjugated verb takes perfective morphology, reflecting the fact that the verb which states the condition or the temporally preceding event is complete. The prefix *g-* is also used for non-subject focus, but it is not clear at this point whether there is a connection between conditionals and focus constructions or whether this is a case of homonymy. The event denoted by the verb which does not have the conditional *g-* morpheme is always the causal or temporal consequence of the *g-*inflected verb.

(325) *g-a-cuc-i*                      *barum*    *a-hundul*                      *omlet*    *a-nen*    *riéj*  
 COND-3-throw-PERF    so.that    3-turn.around    omlette    3-fall    down

‘When he throws the omlette in order to flip it around, it falls to the ground.’

ES, DJI110110AC

(326) *g-u-waha-haŋ*                      *aŋga*    *ñam-manding*                      *u-ló’-kóró*                      *gu-naŋken*  
 COND-2-play-PL    with    CL.ña-Mandinka    2-speak-FUT    AGR.gu-POSS2SG

*u-gaata-hara*  
 2-mix-FUT

‘If you play with the Mandinka and then you speak your language, you will mix it up.’

AB, DJI121109AC

When the if-clause refers to an action that will be completed at some point in the future the verb is suffixed with *-réét* (allomorph *-déét*) (327).

- (327) *jicum g-u-niig-én-déét anga bi-nég u-jeet-ej*  
 tomorrow COND-2-look-PL-? with CL.bi-sun 2-return-PL  
 ‘The next day after having checked with the sun [what time it is]  
 you go back home.’  
 JHS, DJI101210AC

#### 2.5.2.4 Conjoined clauses

Some of the conjunctions involved in clause conjoining cited in Table (94) are borrowed, for instance *bare*, *mata(ha)*, *bala* from Joola.

Table (94) Conjunctions

Conjunction	Gloss
<i>bare</i>	‘but’
<i>barum/burum</i>	‘so that’ / ‘in order to’
<i>anangu</i>	‘and’
<i>mata(ha)</i>	‘because of’
<i>ne</i>	‘since’ / ‘as’
<i>mati</i>	‘even’
<i>kati</i>	‘whether’
<i>bala</i>	‘before’
<i>an</i>	‘as’
<i>wala</i>	‘or’

- (328) *asiet-henem a-nen-et bare bajil-a-r-aj*  
 plate-3SGPOSS 3-fall-VEN but break-REFL-NEG.PERF-3SGSUBJ  
 ‘Her plate falls down but it doesn’t break.’  
 LM, DJI291110AC

(329) *ba-ru'-konom*            *ba-ni*            *a-lurine-ne*    *burum*    *anang'*    *a-ñoc-a*  
 CL.ba-water-3SGPOSS    AGR.ba-REL    3-boil-SUB    so.that    and    3-wash-REFL

*anga*            *bë-mër*  
 with            AGR.ba-PRO

‘Her water, which she boils so that she can wash her body with it.’

JHS, DJI101210AC

(330) *i-yaax-i*            *bala*            *i-dëë'*            *i-waan-a*  
 1-eat-PERF    before    1-go    1-lie-REFL

‘I have eaten before going to bed.’

HS, field notes

(331) *ë-bën*            *ë-gini*            *a-xan-a*            *bu-hof*            *kati*            *a-gu-horox*  
 CL.a-animal    AGR.a-REL    3-AUX-PASS    CL.bu-kill    whether    3-be-FUT

*ji-fek*            *kati*            *a-gu-horox*            *féébi*  
 CL.ji-pig            whether    3-be-FUT            goat(CL.fa)

‘The animal that will be killed, it might be a pig or it might be a goat.’

JHS, DJI101210AC

### **3 The noun class paradigms and their semantics**

The bulk of this chapter is dedicated to the semantic properties of the noun class system of Bainounk Gubëeher. For an introduction to the theoretical assumptions on classification and the typology of classification systems and detailed accounts of the paradigm-approach pursued, including the functions of Gubëeher noun class morphology with respect to the derivation of nouns from unspecified roots and the status of number distinction see the subchapters of section 1.4. For information on the conventions underlying the segmentation of nouns into stem and prefix, the status of nasal-final prefixes and a treatment of agreement classes see section 2.3.1.

This chapter starts with a presentation of all attested noun class paradigms of Gubëeher in section 3.1, which I believe are the fundamental units for semantic analysis of noun classes in Gubëeher. The account is presented from a semasiological perspective, based on the form of the class markers involved and the type of the paradigm. This ranges from paradigms consisting of only one category, i.e. nouns which do not distinguish number, such as mass nouns, substances or abstract nouns, over noun class pairs with a simple singular-plural distinction to nouns which allow for a three-way distinction between singular, count plural and an unlimited plural. The following sections are organised according to a more function-oriented principle. The ‘derivational’ functions, i.e. the formation of paradigmatic networks with paradigm-flexible roots, showing systematic semantic relationships between paradigms and noun semantics, are investigated in section 3.1.7. This section is sorted thematically with an emphasis on the botanical domain where derivation is very productive in terms of the large number of paradigms involved

and the large number of roots eligible for derivation, but also touches upon the derivation of properties, locations, human nouns, animals and size-based derivations (diminutive and augmentative). The section is completed by an account of the extended paradigmatic network of the omniclass root *no* and some reflections on ‘crossed paradigms’.

Ellided constructions, where the head noun of a ‘noun-modifier’ construction is omitted, leaving the modifier prefixed by an agreement marker (as in the comparable English construction ‘the red one’), are presented in section 3.2. These are possible source constructions for the creation of new nouns once the ellided construction is grammaticalised and the former agreement-bearing modifier is reanalysed as a noun prefixed by a noun class marker. Issues of recoverability of noun class semantics and the high degree to which noun class semantics contributes to the meaning of the resulting noun in these constructions are relevant for a discussion of the semantic content of nouns.

The ‘absolute use’ of noun class markers is discussed in section 3.3. In these cases a noun class marker is prefixed to different types of pronouns (demonstrative, relative etc.) without the presence of a head noun, where the noun class prefix conveys a locative, temporal or causal sense. These cases give additional clues about the meaning of the involved noun class markers. Finally, evidence from loan integration for an understanding of noun class semantics is considered in section 3.4.

Although more in-depth research is needed before a more complete account of the semantic organisation of the Gubëeher noun class system can be provided, I hope that I will be able to convince the reader that such a task is actually possible, that noun classification in Gubëeher is (at least to a significant part) based on semantic categories and that these categories are relevant for derivation. The

derivation of verbal nouns and among those specifically infinitives is discussed in chapter 4.

### 3.1 The noun class paradigms of Gubëeher

In the following sections I will discuss each of the noun class paradigms attested in Gubëeher in turn, sorted according to number of members (one-class nouns, pairs, and triads) and type of affixation (prefixed, suffixed or both) and provide examples and comment on their derivational properties and semantic characteristics wherever anything is to be said. As for notation, I label paradigms according to the noun class prefixes they consist of. Number is not specified in the notation since it is obvious from the type of paradigm: one-class nouns do not distinguish number; in pairs the first noun class is the singular noun class and the second the plural noun class; in triads the first one is the singular noun class, the second is the class of the count plural noun class and the third is the unlimited plural as shown in Table (95).

Table (95) *The notation of noun class paradigms*

Notation	Example	Read as
NC-	<i>mun</i> -paradigm	<i>mun</i> - paradigm (one-class: substance, abstracta, properties etc.)
NC1-/NC2-	<i>si-/mun</i> -paradigm	<i>si</i> -(sg.)/ <i>mun</i> -(pl.)-paradigm
NC1-/NC2-/NC3-	<i>bu-/i-/di</i> -paradigm	<i>bu</i> -(sg.)/ <i>i</i> -(count pl.)/ <i>di</i> -(unlimited pl.)

The glossing of the classes is based on the form of the noun class marker. Vowel harmony is not distinguished, (the allomorphs *ba-* and *bë-* for example are both glossed as CL.ba), neither is assimilation of the final nasal of a noun class (*ram-/ra-/ran-/raŋ-* as well as *rëm-/rë-* etc. are all glossed as CL.ran). Agreement markers are glossed in the same way but with AGR instead of with CL. In cases were agreement

is non-alliterative (e.g. in cases of human agreement, see 3.1.1.6) I gloss agreement according to the form of the agreement marker. In order to determine the semantic contribution of both systems, noun class marking and agreement marking – which do not necessarily coincide in the features they pick out – it is considered useful to keep them separate in analysis and glossing. The advantage of this system to numbering, practised by most Bantuists and also some Atlanticists, is the absence of commitment to pre-set conceptions about the number of noun classes, e.g. whether to interpret *ja-* as one or three noun classes given that it occurs in various paradigms as a count plural prefix, as a unlimited plural prefix and on one-class nouns.

Table (96) provides an overview of the types of paradigms in the order of their appearance in the text, each with frequency of occurrence in the lexicon. ‘Prefixed’ indicates that the nouns in this paradigm bear a noun class prefix in singular and plural(s). ‘Suffixed’ indicates that the paradigm contains a plural formed with the suffixed plural morpheme *-Vŋ*. The frequency count is approximate as not all nouns provided as examples have been entered into the lexicon yet, and for some items the complete paradigm is not available or unclear. Of the ca. 1000 entries tagged as nouns, about three quarters so far provide complete and reliable enough information to be taken into account to establish the paradigms.

Table (96) *Paradigm types and frequency in the lexicon (n = 735)*

<b>Paradigm type</b>	<b>Type Frequency</b>
Prefixed pairs	302
Prefixed triads	94
Prefixed pairs with suffixed plurals (agreement type 2b)	90
Prefixless pairs with suffixed plurals (agreement type 2a)	57
Prefixed triads with suffixed count plurals	32
One-class nouns	160

It has to be considered that the lexicon is not semantically balanced. Certain paradigms are over- or underrepresented due to the research goals of the project in which data were collected, and to methodological factors. The botanical domain, with a large number of prefixed pairs and triads is clearly overrepresented, as a result of the botanical focus of the DoBeS project, whereas many of my consultant's general avoidance of loans in my presence, especially in front of any recording device, for ideological reasons of language purity, leads to a severe underrepresentation of the prefixless nouns with suffixed plural, as this is a paradigm which accommodates many recent loans from French and Wolof.

### 3.1.1 Noun class pairs

The paradigms consisting of a pair of prefixed noun class markers, a singular and a plural prefix, are summarised in Table (97). Some of the pairings are quite marginal, in that they include only few roots (*si-/i-* is only attested with one noun: *si-jil/i-jil* 'eye'). Other paradigms have a high type frequency, such as *bu-/i-* and *gu-/ha-* which make up the bulk of prefixed nouns in Gubëeher. Agreement for these nouns is prefixed and alliterative, with the exception of the human paradigm *u-/ñan-*,

whose non-alliterative plural agreement prefix is *in-*. The semantic domain(s) proposed as relevant for the paradigms are mentioned for the sake of providing a quick overview. It is not intended to imply that the indicated domains are prototypes or other cognitive concepts, or that they encompass all nouns of the respective paradigm. Likewise, the entry ‘misc.’ for miscellaneous is not intended to imply that such a prototype does not exist, a statement that cannot be made since no psycholinguistic experiments have been undertaken for Gubëeher.

Table (97) *Paradigms with at least two prefixed noun class markers (n= 302)*<sup>60</sup>

Paradigm		Agreement prefixes		Selected domains salient within paradigm	Type Frequency
Sg.	Pl.	Sg.	Pl.		
<i>gu-</i>	<i>ha-</i>	<i>gu-</i>	<i>ha-</i>	LONG BODY PARTS	87
<i>bu-</i>	<i>i-</i>	<i>bu-</i>	<i>i-</i>	ROUND OBJECTS/BODY PARTS	74
<i>bi-</i>	<i>i-</i>	<i>bi-</i>	<i>i-</i>	ROUND OBJECTS	9
<i>si-</i>	<i>mun-</i>	<i>si-</i>	<i>mun-</i>	TREES,WOOD	70
<i>sin-</i>	<i>ñan-</i>	<i>sin-/si-</i>	<i>ñan-</i>	STRING, LONG THINGS	15
<i>u-</i>	<i>ñan-</i>	<i>u-</i>	<i>in-</i>	HUMAN	21
<i>u-</i>	<i>in-</i>	<i>u-</i>	<i>in-</i>	HUMAN	3
<i>ko-</i>	<i>ño-</i>	<i>ko-</i>	<i>ño-</i>	DIMINUTIVE	14
<i>ran-</i>	<i>ñan-</i>	<i>ran-</i>	<i>ñan-</i>	misc.	9
<i>kan-</i>	<i>ñan-</i>	<i>kan-</i>	<i>ñan-</i>	misc.	4
<i>ta-</i>	<i>ja-</i>	<i>ta-</i>	<i>ja-</i>	CLOTH	3
<i>si-</i>	<i>ha-</i>	<i>si-</i>	<i>ha-</i>	LIMBS	3
<i>ran-</i>	<i>mun-</i>	<i>ran-</i>	<i>mun-</i>	PALM TREE	2
<i>si-</i>	<i>i-</i>	<i>si-</i>	<i>i-</i>	EYE	1

### 3.1.1.1 *The gu-/ha-paradigm*

The *gu-/ha*-paradigm (87 nouns) is one of the most represented in my lexicon and like the *bu-/i*-paradigm semantically quite diverse. Without having conducted any

<sup>60</sup> The order in which the paradigms are presented is based on frequency, the paradigms *bu-/i-* and *bi-/i-* as well as *si-/mun-* and *sin-/ñan-* have been left together because of semantic similarities between them, the same holds for two human paradigms *u-/in-* and *u-/ñan-* which are discussed in one section.

psycholinguistic tests it is not possible to say anything conclusive about the semantic basis of this paradigm or establish a semantic network. The derivational uses of this paradigm and the semantic associations it has with certain domains give clues. With body parts *gu-/ha-* tends to denote long organs (Table (98)) in contrast to the roundish organs in paradigm *bu-/i-* (Table (101)). *Gu-bil* ‘lip’ falls out of this pattern, though it might be conceived of as long.

Table (98) *The gu-/ha-paradigm and long body parts*

Singular	Plural	Gloss
<i>gu-xunum</i>	<i>ha-xunum</i>	‘finger’
<i>gu-huur</i>	<i>ha-huur</i>	‘elbow’
<i>gu-meeñ</i>	<i>ha-meeñ</i>	‘hand’
<i>gu-teep</i>	<i>ha-teep</i>	‘foot’
<i>gu-ndoof</i>	<i>ha-ndoof</i>	‘back of the knee’
<i>gu-huun</i>	<i>ha-huun</i>	‘bone’
<i>gu-bil</i>	<i>ha-bil</i>	‘lip’
<i>gu-ril</i>	<i>ha-ril</i>	‘tooth’
<i>gu-cind</i>	<i>ha-cind</i> (also: <i>ñan-cind</i> )	‘nose’

The semantic connection between this paradigm and long and hard items is further corroborated by the use of *gu-/ha-* in the paradigmatic network of *mañ* ‘iron/metal’ shown in Table (99), where the *gu-/ha-*-derived noun refers to iron posts, as exemplified in (332).

Table (99) *The paradigmatic network of the root mañ ‘iron’*

NC Paradigm	Root	Meaning of derived noun
<i>bu-</i>	<i>mañ</i>	‘iron (substance)’
<i>sim-/ñam-</i>		‘iron thread’
<i>gu-/ha-</i>		‘iron rod’

(332) *a-wuul*    *ha-maĩ*    *ha-naak*    *a-lik-riin-a*  
 3-see        CL.ha-iron    AGR.ha-two    3-stand-CAUS-PASS

‘It sees two iron rods have been put up there’

ES, DJI271009AC6, Maus Original 4

In derivation, *gu-/ha-* is used for language names (cf. Table (156) and for the derivation of instruments 4.3.2. Note that Selvik (2001:174f) considers instruments and languages as closely related domains directly connected by conceptual ties in her semantic network of Setswana. *Gu-/ha-* as part of some triadic paradigms is discussed below in 3.1.2.

### 3.1.1.2 *The bu-/i-paradigm*

The paradigm *bu-/i-* (74 nouns) is one of the largest and also one of the semantically most diverse paradigms. It contains nouns denoting animals (mostly birds, fish and snakes, also some domestic animals), baskets, pots, and locations. The *bu-*paradigm is heavily associated with round objects, like baskets and pots which are inherently round and round body parts. Even some round loans are found in paradigm *bu-/i-*: *bu-baloŋ* ‘ball’, *bu-sambraer* ‘air chamber of bike tyre’ and the derivation *bu-kufun-um* ‘balloon’ from *kufun* ‘inflate’ with the applicative suffix *-um*.

Table (100) *Round items in the bu-/i- paradigm (selection)*

<b>Singular</b>	<b>Plural</b>	<b>Gloss</b>
<i>bu-hai</i>	<i>i-hai</i>	'circle'
<i>bu-niin</i>	<i>i-niin</i>	'egg'
<i>bu-gang</i>	<i>i-gang</i>	'tyre'
<i>bu-luulu</i>	<i>i-luulu</i>	'crown'
<i>bu-baloŋ</i>	<i>i-baloŋ</i>	'ball'
<i>bu-bong</i>	<i>i-bong</i>	'thigh'
<i>bu-xëër</i>	<i>i-xëër</i>	'surrounding fence (Fr. clôture)'
<i>bu-luut</i>	<i>i-luut</i>	'termite hill'
<i>bu-sambraer</i>	<i>i-sambraer</i>	'air chamber'
<i>bu-kufunum</i>	<i>i-kufunum</i>	'balloon'
<i>bu-meleŋgut</i>	<i>i-meleŋgut</i>	'type pot'
<i>bu-luxun</i>	<i>i-luxun</i>	'type pot'
<i>bu-tóón</i>	<i>i-tóón</i>	'type pot'
<i>bu-duux</i>	<i>i-duux</i>	'type pot'
<i>bu-roboloŋ</i>	<i>i-roboloŋ</i>	'type vessel/flask'
<i>bu-er</i>	<i>i-er</i>	'glass'
<i>bu-dem</i>	<i>i-dem</i>	'palm wine drinking vessel'
<i>bu-poom</i>	<i>i-poom</i>	'basket'

Conforming to the classification of other nouns, round body parts, or those with a round diameter, are mainly found in paradigms *bu-/i-* (Table (101) or *bi-/i-* (Table (103):

Table (101) *The bu-/i- paradigm and round body parts*

Singular	Plural	Gloss
<i>bu-lax</i>	<i>i-lax</i>	‘ear’
<i>bu-laax</i>	<i>i-laax</i>	‘buttock’
<i>bu-ciñ</i>	<i>i-ciñ</i>	‘liver’
<i>bu-gof</i>	<i>i-gof</i>	‘head’
<i>bu-fil</i>	<i>i-fil</i>	‘penis’
<i>bu-dëëb</i>	<i>i-dëëb</i>	‘neck’
<i>bu-boŋk</i>	<i>i-boŋk</i>	‘thigh’
<i>bu-mind</i>	<i>i-mind</i>	‘breast’ (< <i>mind</i> ‘milk’)
<i>bu-guux</i>	<i>i-guux</i>	‘knee’
<i>bu-rul</i>	<i>i-rul</i>	‘mouth’

Body parts in other paradigms other than *bu-/i-* and *gu-/ha-* and whose semantic connection to the noun class marker cannot be explained at this point are: *rëŋ-kéëbul/ñëŋ-kéëbul* ‘hip’ *kunduŋ* ‘back of the neck’ and *ji-fand/ji-fand-aŋ* ‘shoulder’. The body parts ‘eye’, ‘hand’ and ‘foot’ with their rare paradigms are discussed in section 3.1.8 from a perspective of how items can be multiply classified with ‘crossed paradigms’.

The *bu-/i-*paradigm also includes nouns referring to locations (Table (102)), consistent with the use of the prefix *bu-* as one-class paradigms deriving locations (see 4.3.2.1) and the use of *bu-* (and *bi-*) with locative semantics in the absolute use (3.3).

Table (102) *Locations in the bu-/i-paradigm*

Singular	Plural	Gloss
<i>bu-gur</i>	<i>i-gur</i>	‘rice storeroom’
<i>bu-xubb</i>	<i>i-xubb</i>	‘chamber/hut’
<i>bu-xaŋgen</i>	<i>i-xaŋgen</i>	‘garden’
<i>bu-jof</i>	<i>i-jof</i>	‘forest’
<i>bu-nég</i>	<i>i-nég</i>	‘forest’

### 3.1.1.3 The *bi-/i-* paradigm

The rarer paradigm *bi-/i-* (9 nouns) seems to be related to the *bu-/i-* paradigm: not only do the two paradigms share the *b*-onset of the singular marker, but also the plural class *i-* and the semantic association with round objects. Both *bu-* and *bi-* have some items with an alternative plural prefixed with *a-* and carrying the plural suffix *-ɲ*. The plural of *bi-han* ‘pot’ is *a-han-aɲ* ‘pots’ or alternatively *i-han* ‘pots’; the plural of *bu-koor* ‘village’ is *a-koor-oɲ* ‘villages’ or alternatively *i-koor* ‘villages’. Some nouns occur only in the paradigm *bi-/a-* with suffixed plurals (see 3.1.3.5) without the alternative plural in *i-*. Across different Bainounk languages it can be noted that some roots have their singular in noun class *bu-* in one Bainounk language and in noun class *bi-* in another: *bu-gof* ‘head’ in Gubëeher and *bi-gof* ‘head’ in Guñaamolo. Gujaher has even conflated *bu-* and *bi-* to one noun class *bu-* for most speakers, while there is some amount of variation in using the two forms for others (Friederike Lüpke, p.c.).

Table (103) *Nouns of the bi-/i- paradigm*

Singular	Plural	Gloss
<i>bi-laap</i>	<i>i-laap</i>	‘head ring for carrying goods’
<i>bi-ɲoc</i>	<i>i-ɲoc</i>	‘round hat’
<i>bi-nég</i> <sup>61</sup>	?	‘sun’
<i>bi-han</i>	<i>i-han</i>	‘type pot’
<i>bi-jeej</i>	<i>i-jeej</i>	‘rice storage rack’
<i>bi-difel</i>	<i>i-difel</i>	‘type pot’
<i>bi-jiir</i>	<i>i-jiir</i>	‘face’
<i>bi-juuñ</i>	<i>i-juuñ</i>	‘front (body part)’
<i>bi-huun</i>	<i>i-huun</i>	‘back (body part)’

<sup>61</sup> Consultants refused forming a plural of *binég* ‘sun’ with the justification that there is only one sun. The plural form *a-neg-eɲ* means ‘days’.

### 3.1.1.4 The *si-/mun-* paradigm

The paradigm *si-/mun-* is strongly associated with trees (see 3.1.7.1). The 8 items in Table (104) are the only nouns out of 70 *si-/mun-* nouns in the dictionary which do not designate trees. All of the other nouns in this paradigm either denote trees or objects made of wood: *si-deex*, the traditional plate is carved from wood, shrines (*si-run*, *sim-běn*) are built around trees and include wooden parts, many types of medicine (*si-han*) are made from parts of trees (root, bark, leaves), and animal traps for hunting (*si-let*) are built with sticks. The pirogue (*si-déén*) is not only made of tree trunk, it literally carries the name of the tree it is made of: the kapok tree which is also called *si-déén* (plural: *mun-déén*) which explains the pirogue's place in the tree paradigm *si-/mun-*. Ironically, Sauvageot (1987) cited by Aikhenvald (2003), chooses exactly this item, probably the most transparent and undeniable case of noun class semantics Baniounk languages have in offer, to demonstrate that the noun class system of Guñaamolo is semantically opaque.

Table (104) *The si-/mun- paradigm (except trees)*

Singular	Plural	Gloss	Tree connection
<i>si-deex</i>	<i>mun-deex</i>	'wooden plate'	made of wood
<i>si-run</i>	<i>mu'-run</i>	'shrine'	created around tree
<i>sim-(?)běn</i>	<i>mum-běn</i>	'house shrine'	analogy to <i>si-run</i>
<i>si-lód</i>	<i>mu'-lód</i>	'wall'	?
<i>si-let</i>	<i>mu'-let</i>	'trap'	made of wood
<i>si-sook</i>	<i>mu'-sook</i>	'fish trap'	made of wood
<i>si-déén</i>	<i>mun-déén</i>	'boat'	made of wood, polysem 'kapok tree'
<i>si-han</i>	<i>mu'-han</i>	'medicine'	made of trees and plants

The noun *sim-běn* is divergent in that the pairing *sin-/mun-* is unusual, *sin-* being clearly associated with string-like structures. It might alternatively be the case that

the root is *-mbën* (see section 2.3.1.3 for a discussion of pre-nasalised stems). As for *si-let* ‘trap’ I have also encountered the alternative plural *ñá’-let*. The item *si-lód* poses some questions: wood is used for building houses, but walls are usually made of clay nowadays. The noun is derived from the root *lód* ‘build’ and the only derivational function of gender *si-/mun-* is in the botanical domain deriving names of trees. Possibly in an earlier architectural style, walls were wooden or had wooden beams in them.

#### ***3.1.1.5 The sin-/ñan paradigm***

The *sin-/ñan*-paradigm contains predominantly nouns for strings and string-like objects (e.g. non-hairy animal tails), but also some long non-stringy structures (the rows and ditches in the rice fields), the perineum (the region between the anus and the sexual organs) and one plausible metaphoric extension of ‘string’: voice as a continuous string of sound.

Table (105) *The sin-/ñan- paradigm (complete)*

Singular	Plural	Gloss	String relation
<i>sin-cind</i>	<i>ñan-cind</i>	'cord'	string
<i>sin-tilo</i>	<i>ñan-tillo</i>	'string of <i>tillo</i> tree'	string (> <i>tillo</i> 'tree species')
<i>sin-jukum</i>	<i>ñëŋ-jukum</i>	'string of <i>jukum</i> tree'	string
<i>siŋ-kaŋ</i>	<i>ñañ-kaŋ</i>	'palm fibre'	string
<i>sim-mañ</i>	<i>ñam-mañ</i>	'iron thread'	string (> <i>mañ</i> 'iron')
<i>si'-liin</i>	<i>ña'-liin</i>	'spider web'	string (> <i>liin</i> 'weave')
<i>sim-mot</i>	<i>ñam-moot</i>	'cotton thread'	string (> <i>moot</i> 'cotton')
<i>sin-tëër</i>	<i>ñën-tëër</i>	'strip of cloth'	string-like
<i>si'-wal</i>	<i>ña'-wal</i>	'dam in rice field'	long and extended
<i>si'-wund</i>	<i>ña'-wund</i>	'trench in rice field'	long and extended
<i>sin-jid</i>	<i>ñan-jid</i>	'voice'	metaphoric, voice as a string of sounds
<i>sim-piir</i>	<i>ñam-piir</i>	'perineum'	string-like
<i>sin-cin</i>	<i>ñan-cin</i>	'submerged rice plot'	?
<i>siŋ-kal</i>	<i>ñañ-kal</i>	'tail'	long and string-like
<i>sin-diina-um</i> [CL.sin-draw-DER]	<i>ñan-diinaum</i>	'rope of the well'	string (> <i>diina</i> 'draw water')

### 3.1.1.6 *The u-/ñan- and u-/in- paradigms*

The paradigm *u-/ñan-* is closely associated with the domain of persons. The alternative human paradigm *u-/in-* is rarer but also exclusively a human paradigm and the provider of the human agreement *u-/in-* which is also triggered by *u-/ñan-* nouns. As Kihm (2000:9) notes for Manjaku, the semantics of the 'human class' derivations is actually broader than 'agentive', which is the case in Gubëeher too, which is why he proposes the label "person involved in the event or state implied in the meaning of the root". In Gubëeher we find examples of temporarily instable groups<sup>62</sup>, occupational groups and stable groups among the human nouns. For the

<sup>62</sup> The palm wine pourer (*uhup*) of the example is designated shortly before the ceremony begins and adherence to that group ends when the ceremony ends. Thus, it is not an inherent group like the ethnic terms in paradigm *u-/ñan-*.

derivational productivity of this paradigm see section 4.3.1.1 and for its use with loans see section (3.4).

Table (106) *Nouns in the u-/ñan and u-/in-paradigms*

Singular	Plural	Gloss
<i>u-soog</i>	<i>ñá'-soog</i>	'slave'
<i>u-hup</i>	<i>ñá'-hup</i>	'pourer'
<i>u-tuuta</i>	<i>ñan-tuuta</i>	'ancestor'
<i>u-niig</i>	<i>ñan-niig</i>	'healer/clairvoyant'
<i>u-jéébun</i>	<i>ñan-jéébun</i>	'maternal cousin'
<i>u-nam</i>	<i>ñan-nam</i>	'king'
<i>u-cér</i>	<i>ñan-cér</i>	'witch'
<i>u-dihel</i>	<i>in-dihel</i>	'adult'
<i>u-diigén</i>	<i>in-diigén</i>	'man'
<i>u-dikaam</i>	<i>in-dikaam</i>	'woman'

The human gender *u-/ñan-* is also used in connection with roots referring to ethnic distinctions (see 3.1.7.2).

### 3.1.1.7 *The ko-/ño-paradigm*

The diminutive paradigm *ko-/ño-* is purely derivational, and therefore discussed in section 3.1.7.4.

### 3.1.1.8 *The ran-/ñan-paradigm*

This paradigm is one of the smaller ones with only 9 nouns. A semantic motivation is not apparent.

Table (107) *The ran-/ñan-paradigm (complete)*

Singular	Plural	Gloss
<i>rën-nób</i>	<i>ñën-nób</i>	‘bundle’
<i>rëŋ-kébul</i>	<i>ñëŋ-kébul</i>	‘hip’
<i>rën-dimb</i>	<i>ñën-dimb</i>	‘veranda’
<i>raŋ-kot</i>	<i>ñäŋ-kot</i>	‘woven mat’
<i>ram-basa</i>	<i>ñam-basa</i>	‘mat’
<i>ran-danĵ</i>	<i>ñan-danĵ</i>	‘large palm tree’
<i>ran-no</i>	<i>ñan-no</i>	‘bad person’
<i>raŋ-kulux</i>	<i>ñan-kulux</i>	‘rooster’
<i>rë'-liim</i>	<i>ñë'-liim</i>	‘type water bird’

### 3.1.1.9 *The kan-/ñan-paradigm*

The *kan-/ñan*-paradigm with its only four items, two of which phonologically integrated loans from Kriolu (*ka'-raafa* and *ka'-leron*) does not offer much in terms of semantic analyses. The other two items are both tools for subsistence, a fishnet and a belt for climbing palm trees in order to harvest palm wine.

Table (108) *The kan-/ñan-paradigm (complete)*

Singular	Plural	Gloss
<i>kë'-liib</i>	<i>ñë'-liib</i>	‘climbing belt’
<i>këm-bëër</i>	<i>ñëm-bëër</i>	‘type fishnet’
<i>ka'-raafa</i>	<i>ña'-raafa</i>	‘bottle’
<i>ka'-leron</i>	<i>ña'-leron</i>	‘cauldron’

### 3.1.1.10 *The ta-/ja- paradigm*

The rare paradigm *ta-/ja-* consists of only three nouns, all from the domain of cloth. *Ja-luf* and *ja-liin* are derivations from the roots *luf* ‘sow’ and *liin* ‘weave’ respectively, possibly formed by way of a head noun ellipsis construction (described in 3.2).



### 3.1.2 Noun class triads

Nouns which distinguish two plurals, a count plural and an unlimited plural, occur in triads. Among the triadic nouns are many appellations of plants/parts of plants, animals and small objects which tend to occur in large numbers. Agreement of these paradigms is alliterative, i.e. agreement prefixes are identical with the noun class prefixes. With triadic nouns, the citation form is often the unlimited plural, especially for items that usually occur in large quantities.

Table (111) *Triadic noun class paradigms (n=94)*

Paradigm			Domain	Type frequency
Singular	Count plural	Unlimited plural		
<i>bu-</i>	<i>i-</i>	<i>di-</i>	FRUITS	26
<i>gu-</i>	<i>ha-</i>	<i>ja-</i>	GRASSY PLANTS, PLANT PARTS, BODY PARTS	26
<i>gu-</i>	<i>ha-</i>	<i>ba-</i>	SMALL FRUITS, SMALL OBJECTS	19
<i>bu-</i>	<i>i-</i>	<i>ja-</i>	ANIMALS	12
<i>bu-</i>	<i>i-</i>	<i>ba-</i>	TUBERS/GROUND GROWING PLANTS	6
<i>ran-</i>	<i>ñan-</i>	<i>ja-</i>	AMPHIBIANS	5

#### 3.1.2.1 *The bu-/i-/di- paradigm*

The *bu-/i-/di-*paradigm (26 items) is a purely botanical paradigm and contains exclusively names of edible fruits which grow on trees or vines. Aspects of the botanical paradigms are discussed in sections 3.1.7.1 and 3.1.8.

Table (112) *The bu-/i-/di-paradigm (selection)*

<b>Singular</b>	<b>Count plural</b>	<b>Unlimited plural</b>	<b>Gloss</b>
<i>bu-haaral</i>	<i>i-haaral</i>	<i>di-haaral</i>	'type fruit'
<i>bu-óóg</i>	<i>i-óóg</i>	<i>di-óóg</i>	'baobab fruit'
<i>bu-fand</i>	<i>i-fand</i>	<i>di-fand</i>	'fruit of the ronier palm'
<i>bu-limo</i>	<i>i-limo</i>	<i>di-limo</i>	'orange fruit'
<i>bu-femb</i>	<i>i-femb</i>	<i>di-femb</i>	'fruit of <i>Landolphia heudelotii</i> [tree]'
<i>bu-mukat</i>	<i>i-mukat</i>	<i>di-mukat</i>	'fruit of <i>Detarium senegalensis</i> [tree] (also known as <i>ditax</i> in Senegal)'

### 3.1.2.2 *The gu-/ha-/ja-paradigm*

*Gu-/ha-/ja-* (26 items) is a paradigm including small grassy plants and parts of plants – especially of the palm tree (18/26), parts of human and animal bodies (6/26) and two tools for palm wine harvest, both made from palm wood or fibre.

Table (113) *The gu-/ha-/ja-paradigm*

Singular	Count plural	Unlimited plural	Gloss
<i>gu-rude</i>	<i>ha-rude</i>	<i>ja-rude</i>	'vine'
<i>gu-lihan</i>	<i>ha-lihan</i>	<i>ja-lihan</i>	'stick/wood'
<i>gu-luf</i>	<i>ha-luf</i>	<i>ja-luf</i>	'leaf'
<i>gu-ndëb</i>	<i>hë-ndëb</i>	<i>jë-ndëb</i>	'root'
<i>gu-fos</i>	<i>ha-fos</i>	<i>ja-fos</i>	'grass'
<i>gu-ritay</i>	<i>hë-ritay</i>	<i>jë-ritay</i>	'thatching grass'
<i>gu-lookulook</i>	<i>ha-lookulook</i>	<i>ja-lookulok</i>	' <i>Ipomea carnea</i> Jack. [vine]'
<i>gu-xëbël</i>	<i>hë-xëbël</i>	<i>jë-xëbël</i>	' <i>Lemna aequinoctalis</i> [water plant]'
<i>gu-muutut</i>	<i>ha-muutut</i>	<i>ja-muutut</i>	' <i>Utricularia stellaris</i> [water plant]'
<i>gu-gëb</i>	<i>hë-gëb</i>	<i>jë-gëb</i>	'water lily'
<i>gu-foon</i>	<i>ha-foon</i>	<i>ja-foon</i>	'wild basil'
<i>gu-lëër</i>	<i>hë-lëër</i>	<i>jë-lëër</i>	'stem of ronier leaf'
<i>gu-rac</i>	<i>ha-rac</i>	<i>ja-rac</i>	'mangrove wood'
<i>gu-xoota</i>	<i>ha-xoota</i>	<i>ja-xoota</i>	'wooden beam made of ronier wood'
<i>gu-ñéér</i>	<i>hë-ñéér</i>	<i>jë-ñéér</i>	'ronier leaf'
<i>gu-huñur</i>	<i>ha-huñur</i>	<i>ja-huñur</i>	'ronier leaflets'
<i>gu-reja</i>	<i>ha-reja</i>	<i>ja-reja</i>	'lower part of stem of ronier palm'
<i>gu-ciix</i>	<i>ha-ciix</i>	<i>ja-ciix</i>	'stem of ronier palm'
<i>gu-er</i>	<i>ha-er</i>	<i>ja-er</i>	'fish scale'
<i>gu-ndunḡ</i>	<i>ha-ndunḡ</i>	<i>ja-ndunḡ</i>	'blood vessel'
<i>gu-huun</i>	<i>ha-huun</i>	<i>ja-huun</i>	'bone'
<i>gu-duḡ</i>	<i>hë-duḡ</i>	<i>jë-duḡ</i>	'grey hair'
<i>gu-jid</i>	<i>hë-jid</i>	<i>jë-jid</i>	'feather'
<i>gu-jënd</i>	<i>hë-jënd</i>	<i>jë-jënd</i>	'hair'
<i>gu-ñaaak</i>	<i>ha-ñaaak</i>	<i>ja-ñaaak</i>	'funnel/plug for palm wine harvest'
<i>gu-let</i>	<i>ha-let</i>	<i>ja-let</i>	'nail for palm wine harvest'
<i>gu-xon</i>	<i>ha-xon</i>	<i>ja-xon</i>	'seedling of ronier'

### 3.1.2.3 *The gu-/ha-/ba- paradigm*

Most items in this paradigm are from the botanic domain. 12 out of 19 nouns designate kernels or small fruits, the 7 remaining items other smallish, compact items, like jewellery, which is often also made of kernels of specific plants, e.g. the hard fruits of the *si-pew* '*Conocarpus erectus* L. [bush]': *gu-pew/ha-pew/ba-pew*.

Some low plants appear also in this paradigm (manioc, hibiscus, tomato). Ambiguities between the plant and the fruits in the unlimited plural may result in cases where the plant is in the *gu-/ha-/ba*-paradigm and the fruit in the *bu-/i-/ba*-paradigm. The noun *ba-joŋko* for example refers to the unlimited plural of the manioc tuber as well as the manioc plant.

Table (114) *The gu-/ha-/ba- paradigm (selection)*

Singular	Count plural	Unlimited plural	Gloss
<i>gu-goori</i>	<i>ha-goori</i>	<i>ba-goori</i>	'cowry'
<i>gu-bano</i>	<i>ha-bano</i>	<i>ba-bano</i>	'pearl'
<i>gu-silo</i>	<i>ha-silo</i>	<i>ba-silo</i>	'earring'
<i>gu-bër</i>	<i>hë-bër</i>	<i>bë-bër</i>	'kernel'
<i>gu-simand</i>	<i>ha-simand</i>	<i>ba-simand</i>	'rock'
<i>gu-tingilen</i>	<i>ha-tingilen</i>	<i>ba-tingilen</i>	'cheek'
<i>gu-juxut</i>	<i>ha-juxut</i>	<i>bë-juxut</i>	'mussel'
<i>gu-risend</i>	<i>ha-risend</i>	<i>ba-risend</i>	'palm kernel'
<i>gu-fas</i>	<i>ha-fas</i>	<i>ba-fas</i>	'hibiscus bud'
<i>gu-fifihan</i>	<i>ha-fifihan</i>	<i>ba-fifihan</i>	'grain of boiled rice'
<i>gu-fudd</i>	<i>ha-fudd</i>	<i>ba-fudd</i>	'maize (grain)'
<i>gu-melmec</i>	<i>ha-melmec</i>	<i>ba-melmec</i>	'chilli pepper (fruit and plant[?])'
<i>gu-siid</i>	<i>ha-siid</i>	<i>ba-siid</i>	'millet (grain)'
<i>gu-xu</i>	<i>ha-xu</i>	<i>ba-xu</i>	'type of peanut (Kriolu: <i>mankara di bijogo</i> )'
<i>gu-pew</i>	<i>ha-pew</i>	<i>ba-pew</i>	'fruit of <i>Conocarpus erectus</i> L. [bush]'
<i>gu-xiliŋkoot</i>	<i>ha-xiliŋkoot</i>	<i>ba-xiliŋkoot</i>	'fruit of <i>Azelia africana</i> Sm. ex Pers [tree].'
<i>gu-xesxes</i>	<i>ha-xesxes</i>	<i>ba-xesxes</i>	'fruit of <i>Crotalaria retusa</i> L. [grass]'
<i>gu-geec</i>	<i>ha-geec</i>	<i>ba-geec</i>	'hibiscus plant/leaf'
<i>gu-solen</i>	<i>ha-solen</i>	<i>ba-solen</i>	'fruit of <i>Sorindeia juglandifolia</i> (A.Rich.) [tree]'
<i>gu-joŋko</i>	<i>ha-joŋko</i>	<i>ba-joŋko</i>	'manioc plant'
<i>gu-menten</i>	<i>ha-menten</i>	<i>ba-menten</i>	'tomato plant'

### 3.1.2.4 The *bu-/i-/ja-* paradigm

The *bu-/i-/ja-* paradigm contains mainly animals (10 out of 12). This paradigm might be larger due to nouns having been listed under *bu-/i-* whose unlimited plural was unknown at the time of creating the dictionary entry.

Table (115) The *bu-/i-/ja-* paradigm

Singular	Count plural	Unlimited plural	Gloss
<i>bu-suulut</i>	<i>i-suulut</i>	<i>ja-suulut</i>	'snake'
<i>bu-sobot</i>	<i>i-sobot</i>	<i>ja-sobot</i>	'bird'
<i>bu-satta</i>	<i>i-satta</i>	<i>ja-satta</i>	'type of shrimp'
<i>bu-ñoos</i>	<i>i-ñoos</i>	<i>ja-ñoos</i>	'type of shrimp'
<i>bu-gundufel</i>	<i>i-gundufel</i>	<i>ja-gundufel</i>	'baby fish'
<i>bu-sos</i>	<i>i-sos</i>	<i>ja-sos</i>	'chick'
<i>bu-pan</i>	<i>i-pan</i>	<i>ja-pan</i>	'buzzard'
<i>bu-pól</i>	<i>i-pól</i>	<i>ja-pól</i>	'bird'
<i>bu-rukand</i>	<i>i-rukand</i>	<i>ja-rukand</i>	'palm rat'
<i>bu-bór</i>	<i>i-bór</i>	<i>ja-bór</i>	'rabbit'
<i>bu-liit</i>	<i>i-liit</i>	<i>jë-liit</i>	'piece of cloth'
<i>bu-góm</i>	<i>i-góm</i>	<i>ja-góm</i>	'ronier stem'

### 3.1.2.5 The *bu-/i-/ba-* paradigm

The *bu-/i-/ba-* paradigm presented in Table (116) is a purely botanical paradigm and contains exclusively names of edible fruits (tomato) and tubers which grow from small bushes or on the ground (7 items). Aspects of the botanical paradigms are discussed in sections 3.1.7.1 and 3.1.8.

Table (116) *The bu-/i-/ba-paradigm*

Singular	Count plural	Unlimited plural	Gloss
<i>bu-taata</i>	<i>i-taata</i>	<i>ba-taata</i>	‘sweet potato’
<i>bu-joŋko</i>	<i>i-joŋko</i>	<i>ba-joŋko</i>	‘manioc’
<i>bu-yapat</i>	<i>i-yapat</i>	<i>ba-yapat</i>	‘taro’
<i>bu-jaxata</i>	<i>i-jaxata</i>	<i>ba-jaxata</i>	‘bitter aubergine’
<i>bu-gót</i>	<i>i-gót</i>	<i>bě-gót</i>	‘ocra’
<i>bu-tuk</i>	<i>i-tuk</i>	<i>ba-tuk</i>	‘pumpkin’
<i>bu-mentenɛ</i>	<i>i-mentenɛ</i>	<i>ba-mentenɛ</i>	‘tomato’

### 3.1.2.6 *The ran-/ñan-/ja-paradigm*

The *ran-/ñan-/ja-* triad contains only five nouns, all of which are denoting amphibian animals, four species of crabs and the term for ‘frog’:

Table (117) *The ran-/ñan-/ja-paradigm*

Singular	Count plural	Unlimited plural	Gloss
<i>rən-jém</i>	<i>ñən-jém</i>	<i>jě-jém</i>	‘frog’
<i>ram-maasix</i>	<i>ñam-maasix</i>	<i>ja-maasix</i>	‘crab with two claws’
<i>rěŋ-kókól</i>	<i>ñěŋ-kókól</i>	<i>jě-xókól</i>	‘type crab’
<i>rěŋ-guux</i>	<i>ñěŋ-guux</i>	<i>jě-guux</i>	‘crab with one claw’
<i>rě'-siŋ</i>	<i>ñě-'siŋ</i>	<i>jě-siŋ</i>	‘type crab’

### 3.1.3 Pairs with suffixed plural

The nouns presented in this section occur in pairs, though the noun class marker does not distinguish singular from plural; the plural of these nouns is instead marked by the plural suffix *-Vŋ*. With a few exceptions (cf. Table (118)) the agreement prefixes are alliterative for the majority of these paradigms, the same plural morpheme (*-Vŋ*) is also suffixed to agreeing targets. The status of the prefix is not always clear: some have fused with the stem (cf. ‘goat’ *fěébi* with *fā*-agreement) and

are not substitutable, which is why agreement marking has been considered in establishing these noun classes. Most of the paradigms involving alliterative agreement and suffixed plurals (labeled agreement pattern number 2a in section 2.3.1.4) are not very large. Semantically a large proportion of animate nouns in all of these paradigms is apparent. All paradigms are provided with all instances recorded in the dictionary.

Table (118) *The paradigms with suffixed plural (n= 65)*

<b>Noun class prefix singular</b>	<b>Noun class prefix plural</b>	<b>Agreement prefix singular</b>	<b>Agreement prefix plural</b>	<b>Type frequency</b>
<i>ji-</i>	<i>ji-</i>	<i>a-</i>	<i>a-</i>	19
<i>ba-</i>	<i>ba-</i>	<i>ba-</i>	<i>ba-</i>	15
<i>a-</i>	<i>a-</i>	<i>a-</i>	<i>a-</i>	15
<i>ja-</i>	<i>ja-</i>	<i>a-</i>	<i>a-</i>	9
<i>bi-</i>	<i>a-</i>	<i>bi-</i>	<i>a-</i>	6
<i>kan-</i>	<i>kan-</i>	<i>kan-</i>	<i>kan-</i>	5
<i>fa-</i>	<i>fa-</i>	<i>fa-</i>	<i>fa-</i>	5
<i>ja-</i>	<i>ja-</i>	<i>ja-</i>	<i>ja-</i>	5
<i>ta-</i>	<i>ta-</i>	<i>ta-</i>	<i>ta-</i>	4
<i>fun-</i>	<i>fun-</i>	<i>fun-</i>	<i>fun-</i>	4
<i>hu-</i>	<i>hu-</i>	<i>hu-</i>	<i>hu-</i>	2
<i>ho-</i>	<i>ho-</i>	<i>ho-</i>	<i>ho-</i>	1

### **3.1.3.1** *The ji-paradigm with suffixed plurals*

The *ji*-paradigm with suffixed plurals and *a*-agreement is attested with 9 nouns denoting humans which are derived from eventive roots and discussed in section 4.3.1.1. 11 nouns in this paradigm denote animals and 8 are inanimate. Due to the absence of alliterative agreement as a criterion for prefixhood, the substitutability test, here demonstrated with the diminutive singular form, whose prefix *ko-* substitutes *ji-* in all cases establishes it as a prefix. The substitution test has not been

made systematically with all nouns of the suffixed paradigms whose alliterative agreement qualifies them as noun class marked. See 2.3.1.3 for criteria of prefixation and segmentability.

Table (119) *Nouns in the ji-paradigm with suffixed plural*

Singular	Plural	Gloss	Substitution test with diminutive singular
<i>ji-xoox</i>	<i>ji-xoox-oy</i>	'palm rat'	<i>ko-xoox</i>
<i>ji-hudi</i>	<i>ji-hudi-ey</i>	'vulture'	<i>ko-hudi</i>
<i>ji-hut</i>	<i>ji-hut-oy</i>	'mouse'	<i>ko-hut</i>
<i>ji-booñ</i>	<i>ji-booñ-oy</i>	'horse'	<i>ko-booñ</i>
<i>ji-fek</i>	<i>ji-fek-ey</i>	'pig'	<i>ko-fek</i>
<i>ji-hala</i>	<i>ji-hala-ey</i>	'lizard'	<i>ko-hala</i>
<i>ji-gaj</i>	<i>ji-gaj-ay</i>	'panther'	<i>ko-gaaj</i>
<i>ji-ger</i>	<i>ji-ger-ey</i>	'type rodent'	<i>ko-ger</i>
<i>ji-muxoor</i>	<i>ji-muxoor-oy</i>	'lion'	<i>ko-muxoor</i>
<i>ji-feen</i>	<i>ji-feen-ey</i>	'squirrel'	<i>ko-feen</i>
<i>ji-xaam</i>	<i>ji-xaam-ay</i>	'chacal'	<i>ko-xaam</i>
<i>ji-mëër</i>	<i>ji-mëër-ëy</i>	'arrow'	<i>ko-mëër</i>
<i>ji-fand</i>	<i>ji-fand-ay</i>	'shoulder'	<i>ko-fand</i>
<i>ji-laami</i>	<i>ji-laami-ey</i>	'machete'	<i>ko-laami</i>
<i>ji-bóóg</i>	<i>ji-bóóg-oy</i>	'calabash flask'	<i>ko-bóóg</i>
<i>ji-fip</i>	<i>ji-fip-ey</i>	'inundated rice field'	<i>ko-fip</i>
<i>ji-ηoc</i>	<i>ji-ηoc-oy</i>	'hat'	<i>ko-ηoc</i>
<i>ji-rin</i>	<i>ji-rin-ey</i>	'filter'	<i>ko-rin</i>
<i>ji-xuux</i>	<i>ji-xuux-oy</i>	'drain for rice field'	<i>ko-xuux</i>

### 3.1.3.2 *The ba-paradigm with suffixed plurals*

The *ba*-paradigm with suffixed plurals is one of the largest of this type, though a semantic motivation is not apparent. 8 of 15 nouns of the *ba*-paradigm are animate.

Table (120) *Ba- paradigm with suffixed plural*

Singular	Plural	Gloss
<i>bě-kěr</i>	<i>bě-kěr-ěŋ</i>	‘chicken’
<i>bě-jid</i>	<i>bě-jid-eŋ</i>	‘girl’
<i>ba-naana</i>	<i>ba-naana-ŋ</i>	‘banana tree’
<i>ba-raanda</i>	<i>ba-raand-aŋ</i>	‘ladder’
<i>ba-xon</i>	<i>ba-xon-oŋ</i>	‘ronier palm’
<i>ba-xumbaar</i>	<i>ba-xumbaar-aŋ</i>	‘slingshot’
<i>ba-baxun</i>	<i>ba-baxun-oŋ</i>	‘domestic pigeon’
<i>ba-lap</i>	<i>ba-lap-aŋ</i>	‘wild pigeon’
<i>ba-sengut</i>	<i>ba-sengut-oŋ</i>	‘guinea fowl’
<i>bě-tójen</i>	<i>bě-tójen-eŋ</i>	‘termite hill suspended in tree’
<i>ba-liirai</i>	<i>ba-liirai-eŋ</i>	‘manatee’
<i>ba-saam</i>	<i>ba-saam-aŋ</i>	‘domestic animal’
<i>bě-jij</i>	<i>bě-jij-eŋ</i>	‘beehive’
<i>ba-xaac</i>	<i>ba-xaac-aŋ</i>	‘burnt plot of land’
<i>ba-riin</i>	<i>ba-riin-eŋ</i>	‘laboured plot of land’

### 3.1.3.3 *The a-paradigm with suffixed plural*

The nouns of the *a*-paradigm also required verification of their prefix status of *a*- since alliterative agreement is in this case identical to the agreement of prefixless nouns which is also in *a*-.

This paradigm with suffixed plural contains mainly animate nouns. 2 out of 15 nouns in this paradigm denote humans, animals or supernatural entities, and a minority denote plant names (3/15).

Table (121) *Nouns of the a-paradigm with suffixed plural*

Singular	Plural	Gloss	Substitution test with diminutive singular
<i>a-som</i>	<i>a-som-oŋ</i>	'aunt'	<i>ko-som</i>
<i>a-sum</i>	<i>a-sum-oŋ</i>	'donkey'	<i>ko-sum</i>
<i>a-luŋay</i>	<i>a-luŋay-eŋ</i>	'pelican'	<i>ko-luŋay</i>
<i>a-daŋka</i>	<i>a-daŋk-aŋ</i>	'red monkey'	<i>ko-daŋka</i>
<i>a-bēm</i>	<i>a-bēm-ēŋ</i>	'wild cat'	<i>ko-bēm</i>
<i>a-coronko</i>	<i>a-coronk-oŋ</i>	'stork'	<i>ko-coronko</i>
<i>a-suul</i>	<i>a-suul-oŋ</i>	'antelope'	<i>ko-suul</i>
<i>ë-yir</i>	<i>ë-yir-eŋ</i>	'cow'	<i>ko-yir</i>
<i>ë-bën</i>	<i>ë-bën-ēŋ</i>	'non-domestic animal'	<i>ko-bën</i>
<i>a-mbiro</i>	<i>a-mbiro-ŋ</i>	'zombie'	<i>ko-mbiro</i>
<i>a-pika</i>	<i>a-pika-ŋ</i>	'malevolent mythical creature'	<i>ko-pika</i>
<i>a-fuga</i>	<i>a-fuga-ŋ</i> <sup>63</sup>	'spirit of a deceased'	?
<i>a-reerere</i>	<i>a-reerer-eŋ</i>	'inflorescence of <i>parkia biglobosa</i> [tree]'	<i>ko-reerere</i>
<i>a-hay</i>	<i>a-hay-eŋ</i>	'type wild yam'	?
<i>ë-dëëna</i>	<i>ë-dëëna-ŋ</i>	' <i>Strophanthus sarmentosus</i> [vine]'	?

### 3.1.3.4 *The ja-paradigm with suffixed plurals*

The nouns of the *ja*-paradigm with suffixed plurals have two peculiarities. Firstly, they belong to two different agreement classes, those with *ja*-agreement in Table (122) and those with *a*-agreement in Table (123).

<sup>63</sup> The plural *ñä*'-fuga has also been recorded.

Table (122) *The ja-paradigm with suffixed plurals and ja-agreement*

Singular	Plural	Gloss
<i>jě-ningaj</i>	<i>jě-ningaj-aŋ</i>	'bier' <sup>64</sup>
<i>ja-rax</i>	<i>ja-rax-aŋ</i>	'rice field'
<i>ja-mul (v)</i>	<i>ja-mul-oŋ</i>	'harvest'
<i>jě-rug (v)</i>	<i>jě-rug-oŋ</i>	'planting of the fields'
<i>ja-rifun (v)</i>	<i>ja-rifun-oŋ</i>	'planting the seedlings'

Secondly, the stems of many of the *ja*-nouns in Table (123) with *a*-agreement are best analysed as prenasalised. For a discussion of the criteria according to which these nouns have been segmented see section 2.3.1.3

Table (123) *The ja-paradigm with suffixed plurals and a-agreement*

Singular	Plural	Gloss	Substitution test with diminutive singular
<i>ja-mpeet</i>	<i>ja-mpeet-eŋ</i>	'type snake'	<i>ko-mpeet</i>
<i>ja-ŋgitan</i>	<i>ja-ŋgitan-aŋ</i>	'tweezers'	<i>ko-ŋgitan</i>
<i>ja-ŋkaŋ</i>	<i>ja-ŋkaŋ-aŋ</i>	'large bat'	<i>ko-ŋkan</i>
<i>ja-ntenor</i>	<i>ja-ntenor-oŋ</i>	'cicada'	<i>ko-ntenor</i>
<i>ja-ntëəd</i>	<i>ja-ntëəd-ëŋ</i>	'yarnwinder'	<i>ko-ntëəd</i>
<i>ja-liixan</i>	<i>ja-liixan-aŋ</i>	'type snake'	<i>ko-liixan</i>
<i>ja-teŋ</i>	<i>ja-teŋ-eŋ</i>	'fishing trap'	<i>ko-teŋ</i>
<i>ja-kaam</i>	<i>ja-kaam-aŋ</i>	'river'	<i>ko-kaam</i>
<i>ja-kuun</i>	<i>ja-kuun-oŋ</i>	'type drum'	<i>ko-kuun</i>

### 3.1.3.5 *The bi-/a-paradigm bu-/a- and da-/a- paradigms with suffixed plurals*

Some nouns of the paired prefixed *bi-/i-* and *bu-/i-*paradigms have plural forms prefixed with *a-* and with the plural suffix as alternative forms to plurals in class *i-* (cf. Table (124), for the ones in Table (125) *bi-/a-(-ŋ)* is the only attested paradigm.

These nouns are peculiar in that they have plural suffixes, but unlike most other

<sup>64</sup> At a funeral the dead body is tied to a bier made of bamboo poles on which it is carried to the grave after having been presented to the visitors accompanied by the performance of specific funerary dances.

paired paradigms with plural suffixes have different prefixes in the singular and in the plural.

Table (124) *Nouns with bu- or bi- in the singular and alternative plurals in i- and a-(-ŋ)*

Singular	Plural a-	Plural i-	Gloss
<i>bu-koor</i>	<i>a-koor-oŋ</i>	<i>i-koor</i>	'week'
<i>bu-gof</i>	<i>a-gof-oŋ</i>	<i>i-gof</i>	'funeral'
<i>bi-han</i>	<i>a-han-aŋ</i>	<i>i-han</i>	'pot'
<i>bi-difel</i>	<i>a-difel-eŋ</i>	<i>i-difel</i>	'pot'

Table (125) *The bi-/a-paradigm with suffixed plurals*

Singular	Plural	Gloss
<i>bi-nóm</i>	<i>a-nóm-oŋ</i>	'week'
<i>bi-riib</i>	<i>a-riib-eŋ</i>	'funeral' <sup>65</sup>
<i>bi-hum</i>	<i>a-hum-oŋ</i>	'dyke/street'
<i>bi-naal</i>	<i>a-naal-aŋ</i>	'path'
<i>bi-lid</i>	<i>a-lid-eŋ</i>	'concession'
<i>bi-nég</i>	<i>a-nég-eŋ</i>	'sun'

The noun *dě-nég* 'day' is the only noun with a prefix *da-* in the singular of a paired paradigm, its plural is also prefixed with *a-* and suffixed with the plural morpheme.

Table (126) *The noun dē-neg 'day'*

Singular	Plural	Gloss
<i>de-nég</i>	<i>a-nég-eŋ</i>	'day'

<sup>65</sup> The semantic relation between *birib* and *ariibeŋ* is not simply one of singular and plural, as the two words refer to different ceremonies. *birib* is a 'funeral' and *ariibeŋ* is the first anniversary of the funeral, usually fixed for all deaths of the preceding year that have occurred in the village, though keeping different dates for men and women. This celebration involves animal sacrifices and is important for the deceased to fully enter the other world of the dead ancestors.

### 3.1.3.6 *The kan-paradigm with suffixed plurals*

The nouns in the *kan-* paradigm with suffixed plural in Table (127) are either locations (*ka'-lak* 'field', *kan-tig* 'place') or fish species. The locative use of *kan-* is described in sections 3.3 and 4.3.2.1.

Table (127) *Nouns of the kan-paradigm with suffixed plural*

Singular	Plural	Gloss
<i>ka'-lak</i>	<i>ka'-lak-aŋ</i>	'field'
<i>kan-tig</i>	<i>kan-tig-eŋ</i>	'place'
<i>ka'-ras</i>	<i>ka'-ras-aŋ</i>	'sawshark'
<i>kam-pit</i>	<i>kam-pit-eŋ</i>	'type fish'
<i>ka'-soñop</i>	<i>ka'-soñop-oŋ</i>	'type fish'

### 3.1.3.7 *The fa-paradigm with suffixed plurals*

The small *fā-*paradigm contains a variety of nouns denoting animate beings.

Table (128) *Nouns of the fa-paradigm with suffixed plural*

Singular	Plural	Gloss
<i>féébi</i>	<i>féébi-eŋ</i>	'goat'
<i>fë-gux</i>	<i>fë-gux-oŋ</i>	'evil spirt'
<i>fëcir</i>	<i>fëcir-eŋ</i>	'monkey'
<i>fa-siin</i>	<i>fa-siin-eŋ</i>	'water chevrotain'

### 3.1.3.8 *The ta-paradigm with suffixed plurals*

The smallish *ta-*paradigm, with only four nouns attested so far, contains some nouns denoting animate beings.

Table (129) *Nouns of the ta-paradigm with suffixed plural*

Singular	Plural	Gloss
<i>ta-lup</i>	<i>ta-lup-on</i>	'ghost'
<i>ta-fer</i>	<i>ta-fer-en</i>	'type bird'
<i>ta-wuc</i>	<i>ta-wuc-on</i>	'type bird'
<i>ta-xox</i>	<i>ta-xox-on</i>	'crow'

### 3.1.3.9 *The fun-paradigm with suffixed plurals*

Most of the few nouns in the *fun*-paradigm with suffixed plural are sea animals. A semantic connection to *fun-kop* 'ball' is not obvious.

Table (130) *Nouns of the fun-paradigm with suffixed plural*

Singular	Count plural	Gloss
<i>fu'-lac</i>	<i>fu'-lac-on</i>	'shark'
<i>fuun</i>	<i>fuun-on</i>	'type fish'
<i>feen</i>	<i>feen-en</i>	'sea turtle'
<i>fun-kop</i>	<i>fun-kop-on</i>	'rubber ball'

### 3.1.3.10 *The ho- and hu-paradigm with suffixed plurals*

Two other paradigms, each containing less than three nouns, are presented in Table (131)

Table (131) *Other paradigms with suffixed plurals*

Singular	Plural	Agreement	Gloss
<i>honj</i>	<i>honj-on</i>	<i>ho-</i>	'thing'
<i>hu-njaan</i>	<i>hu-njaan-on</i>	<i>hu-</i>	'thing'

#### 3.1.4 Prefixless nouns with suffixed plurals

A number of nouns in Gubëeher are prefixless. Their plural is formed with the plural suffix and agreement is non-alliterative in *a-* (classified as agreement type 2a in chapter 2). A large proportion of prefixless nouns (21/60) are suspected to be loans (Table (132)). The label ‘regional’ is used for items which are widespread in the region but which cannot be assumed to be of Bainounk origin and are therefore treated as loans, even though a specific donor language is not known. The proportion might be even larger due to potentially undetected loans from other languages. As mentioned before, my dictionary certainly underrepresents more recent loans from Wolof and French, which usually get assigned to the prefixless paradigm, due to avoidance of loans in elicitation for ideological reasons on the part of the consultants and negligence on my part. The difficulties in distinguishing code-switching from borrowing further complicate the matter.

Table (132) *List of loans words in the prefixless paradigm*

<b>Singular</b>	<b>Plural</b>	<b>Donor language</b>	<b>Gloss</b>
<i>dërëm</i>	<i>dërëm-ēj</i>	Arabic/Regional West-Africa	'money'
<i>sondel</i>	<i>sondel-ej</i>	French	'candle'
<i>beekan</i>	<i>beekan-aŋ</i>	French	'bicycle'
<i>asiet</i>	<i>asiet-ej</i>	French	'plate'
<i>kasuloor</i>	<i>kasuloor-oŋ</i>	French	'kettle'
<i>kandia</i>	<i>kandia-ŋ</i>	Kriolu	'candle'
<i>funku</i>	<i>funko-ŋ</i>	Kriolu	'room'
<i>loosa</i>	<i>loosa-ŋ</i>	Kriolu	'shop'
<i>janeela</i>	<i>janeela-ŋ</i>	Kriolu	'window'
<i>caabi</i>	<i>caabi-ej</i>	Kriolu	'key'
<i>lampai</i>	<i>lampai-ej</i>	Kriolu/French	'lamp'
<i>sobooli</i>	<i>sobooli-ej</i>	Kriolu/Wolof	'onion'
<i>saaho</i>	<i>saaho-ŋ</i>	Mandinka	'sheep'
<i>koloŋ</i>	<i>koloŋ-oŋ</i>	Mandinka	'well'
<i>kontiŋ</i>	<i>kontiŋ-ej</i>	Mandinka	'guitar'
<i>cakwaal</i>	<i>cakwaal-aŋ</i>	Regional Casamance	'underpants/shorts'

As is the case for suffixed paradigms in general, the prefixless nouns contain a large proportion of animate nouns (26/60) as displayed in Table (133).

Table (133) *List of animate nouns in the prefixless paradigm*

<b>Singular</b>	<b>Plural</b>	<b>Gloss</b>
<i>bëëb</i>	<i>bëëb-ëŋ</i>	'father'
<i>nun</i>	<i>nun-oŋ</i>	'mother'
<i>siibo</i>	<i>siibo-ŋ</i>	'cat'
<i>ñaatat</i>	<i>ñaatat-aŋ</i>	'chamaeleon'
<i>paata</i>	<i>paata-ŋ</i>	'duck'
<i>saaho</i>	<i>saaho-ŋ</i>	'sheep'
<i>mundum</i>	<i>mundum-oŋ</i>	'hyena'
<i>pudux</i>	<i>pudux-oŋ</i>	'black viper'
<i>tukund</i>	<i>tukund-oŋ</i>	'turtle'
<i>jogo</i>	<i>jogo-ŋ</i>	'hippopotamus'
<i>jihī</i>	<i>jihī-eŋ</i>	'dog'
<i>cobbo</i>	<i>cobbo-ŋ</i>	'type bird'
<i>pocolox</i>	<i>pocolox-oŋ</i>	'type bird'
<i>caac</i>	<i>caac-aŋ</i>	'parrot'
<i>kettux</i>	<i>kettux-oŋ</i>	'type bird'
<i>lutut</i>	<i>lutut-oŋ</i>	'type bird'
<i>ciipia</i>	<i>ciipia-ŋ</i>	'type bird'
<i>kiliŋkot</i>	<i>kiliŋkot-oŋ</i>	'type bird'
<i>kurut</i>	<i>kurut-oŋ</i>	'crocodile'
<i>kokur</i>	<i>kokur-oŋ</i>	'type fish'

For the role of the prefixless paradigm in the derivation of associative plurals see section 3.1.7.2.2.

### 3.1.5 Mixed triads with noun class prefixes and suffixed plurals

Two mixed paradigms are triadic, i.e. the nouns in it distinguish a count plural and an unlimited plural, the first of which is marked by a suffix and the second by a prefix. These paradigms are semantically very coherent, each grouping animals of specific species. One can be loosely described as the paradigm for insects and small crawling animals, and the other contains fish.

Table (134) *Mixed triadic paradigms*

Singular	Count plural	Unlimited plural	Domain	Type frequency
<i>a-</i>	<i>a- (+Suff)</i>	<i>bi-</i>	INSECTS	20
<i>fa-</i>	<i>fa- (+Suff)</i>	<i>ja-</i>	FISH	12

### 3.1.5.1 *The a-/a(-ŋ)/bi- triad with suffixed count plural*

The paradigm *a-/a(-ŋ)/bi-* is uniquely associated with small crawling animals like insects and worms (20 items). Whereas the *a-/a(-ŋ)*-paradigm includes animals from other species (*ë-yir/ë-yir-eŋ* ‘cow’), *bi-* as a plural noun class is reserved for small crawling animals.

Table (135) *The a-/a(-ŋ)/bi-paradigm (selection)*

Singular	Count plural	Unlimited plural	Gloss
<i>a-yum</i>	<i>a-yum-oŋ</i>	<i>bi-yum</i>	‘bee’
<i>a-dig</i>	<i>a-dig-eŋ</i>	<i>bi-dig</i>	‘type ant’
<i>a-bembelut</i>	<i>a-bembelut-oŋ</i>	<i>bi-bembelut</i>	‘butterfly’
<i>a-wux</i>	<i>a-wux-oŋ</i>	<i>bi-yux</i>	‘mosquito’
<i>a-xeeret</i>	<i>a-xeeret-eŋ</i>	<i>bi-xeeret</i>	‘cricket’
<i>a-meh</i>	<i>a-meh-eŋ</i>	<i>bi-meh</i>	‘termite’
<i>a-ñakambuluut</i>	<i>a-ñakambuluut-oŋ</i>	<i>bi-ñakambuluut</i>	‘centipede’

### 3.1.5.2 *The fa-/fã(-ŋ)/ja- triad with suffixed count plural*

The triadic *fã*-paradigm is so far attested with 12 nouns, all denoting types of fish, (Table (136)). For some items not all of the forms could be found, as some consultants were reluctant in forming count plurals in this paradigm and would resort to the diminutive plural *ño-*.

Table (136) *The fa-/fa(-ŋ)/ja- triad with suffixed plurals (selection)*

<b>Singular</b>	<b>Count plural</b>	<b>Unlimited plural</b>	<b>Gloss</b>
<i>fa-xat</i>	?	<i>ja-xat</i>	‘fish’
<i>fa-susugen</i>	<i>fa-susugen-eŋ</i>	<i>ja-susugen</i>	‘type fish’
<i>fa-xambalaat</i>	<i>fa-xambalat-aŋ</i>	<i>ja-xambalaat</i>	‘type fish’
<i>fë-lóg</i>	<i>fë-lóg-oŋ</i>	<i>jë-lóg</i>	‘type fish’
<i>fa-ŋaja</i>	<i>fa-ŋaja-ŋ</i>	<i>ja-ŋaja</i>	‘type fish’
<i>fë-rój</i>	<i>fë-rój-oŋ</i>	<i>jë-rój</i>	‘type fish’

Examples for the derivational use of this paradigm are provided in section 3.1.7.3.

### 3.1.6 One-class nouns

A quite large number of nouns in Gubëeher are so called one-class nouns, which means that they are in a paradigm which consists of only one prefix. Appearing in only one class, it necessarily follows that the nouns of the one-class paradigms do not make any number distinctions and can thus not be counted. This is not to say that the referents are per se uncountable but that they are construed as non-countable in the language. In cognitive theories of linguistics, countability is closely tied to the parameters concrete vs. abstract, bounded vs. unbounded, and to the notion of prototypical nouns. Prototypical nouns denote concrete, countable entities, bound in the spatial domain; less prototypical nouns are bounded in less tangible domains or not at all. From this follows that nouns construed as not having a number distinction and thus not being countable are less prototypical nouns than those which are and belong to the set of abstract nouns. In Gubëeher the one-class nouns contain mass nouns, properties, collectives, substances, locations, and various classes of verbal nouns (action nouns, infinitives, manner nominalisations, result nouns, and state nominalisations). Those nouns derived from an eventive root and nominalised

regularly with specific paradigms and those which can be used as non-finite complements, as a special case of one-class nouns, will be discussed in chapter 4. Other, fully nominal derivations which share the root with a verbal form are included in the lists in this chapter. Most of the attested prefixes in Gubëeher accommodate one-class nouns but to differing extents. Including verbal nouns in the count, the classes *bu-*, *gu-*, *ba-*, *ja-*, *si-* and *sin-* have the largest proportion of one-class members, followed by the classes *bi-*, *di-* and *ji-*. The classes *i-*, *in-*, *u-*, *ño-*, *e-* are not attested at all so far with one-class nouns, and *jan-*, *ñan-*, *a-*, *mun-*, *ti-*, *hap-i-*, *fun-*, *kun-*, *ta-*, *da-*, *din-*, *ko-* only marginally. *Ho-* is productive in the derivation of diminutives from mass nouns (3.1.7.4). *Ba-*, *si-*, and *ja-* derive properties from roots denoting states (4.3.2).

The identification of one-class nouns poses several methodological problems. Due to the dictionary being in constant progress, it contains many entries which are yet incomplete and are lacking plural forms or agreement information. In the absence of a standard, there also is variation that may not have been recorded yet. As a consequence not all nouns represented with only one prefix in the dictionary are necessarily one-class nouns, which complicates an exact count. Secondly, since quantity values are all unmarked in relation to each other, or rather equally marked by a noun class prefix, and widespread polysemy or ambiguity, in some cases it is impossible to determine with certainty what one is dealing with exactly. The noun *ba-fudd* for example designates ‘maize’ as a substance, the unlimited plural of ‘grains of maize’ and the unlimited plural of ‘maize plants’. The reader who is interested in one-class nouns is therefore invited to also consult the chapters of section 3.1.2, which are dealing with triadic paradigms and the use of unlimited plurals therein.

The *ti*-paradigm is exclusively used as a one-class paradigm and has only few nouns, some terms for the sap/resin of trees, derived from the root designating the tree whose sap is denoted, and also ‘wax’, which is traditionally beeswax, an important trading good of the old Bainounk kingdoms (Brooks 1993).

Table (137) *The one-class nouns in the ti-paradigm*

Noun	Gloss
<i>ti'-rux</i>	‘cold period/ chill’
<i>ti'-loom</i>	‘wax’
<i>ti'-femb</i>	‘sap of <i>Landolphia heudelotii</i> [tree]’
<i>tin-dooma</i>	‘sap of <i>Saba senegalensis</i> [vine]’
<i>tim-bumbuluut</i>	‘sap of type tree’

The prefix *di-*, otherwise also appearing in the triadic *bu-/i-/di*-paradigm which contains edible fruits from trees, occurs as one-class paradigm, containing some mass nouns, mostly denoting viscous or sticky matter such as earth and several bodily fluids (Table (138)). The last three items seem to carry a suffix *-en(d)*, compare *ñiil* ‘blow one’s nose’ and *loot* ‘spit/vomit’.

Table (138) *The one-class nouns in the di-paradigm*

Noun	Gloss
<i>di-raax</i>	‘earth’
<i>di-kiñaan</i>	‘sand’
<i>di-ŋaam</i>	‘pus’
<i>di-dib</i>	‘mud’
<i>di-luur</i>	‘cooked rice’
<i>di-bérénd</i>	‘faeces’
<i>di-ñiil-en (v.)</i>	‘snot’
<i>di-loot-end (v.)</i>	‘saliva’

The semantic connotation of the one-class *mun*-paradigm with liquids is more obvious in other Bāinounk varieties and also in other Atlantic languages (cf. Sagna 2008:571, Doneux 1975, Kihm 2000), but still noticeable in Gubëeher (see Table (139). Salt is gained from evaporated salt water, available in abundance from the numerous tidal rivers carrying seawater criss-crossing the lower Casamance – hence the presence of salt in a paradigm largely associated with liquids. The only non-liquid item in the one-class *mun*-paradigm in Gubëeher is *mun-toop* ‘spinal marrow’.

Table (139) *The one-class nouns in the mun-paradigm and their connection to liquids across Bāinounk languages*

Gloss	Gubëeher	Guñaamolo [Sokhna Bao Diop, p.c.]	Other Bāinounk
water	<i>ba-rux</i>	<i>ba:-ru</i>	<i>mu:ndu</i> [Gujaher; Friederike Lüpke, p.c.] <i>modo</i> [Jasin, Lespinay 1992]
milk	<i>mind</i>	<i>mund</i>	
tears	<i>mun-jil</i>	<i>mɔn-kɔl</i>	<i>mun-jil</i> [Gujaher; Friederike Lüpke, p.c.]
blood	<i>gu-leñ</i>	<i>mɔ-hɛ:n</i>	<i>mu-leñ</i> [Gubelor; Lespinay 1992]
urinate/ ejaculate	<i>mu'-sel</i>	<i>mu-sa:l</i>	<i>mu-sa:l</i> [Gujaher; Doneux fieldnotes]
urine/ sperm	<i>mu'-sel-en</i>	<i>mu-sa:l-aŋ</i>	
defecate	<i>gu-rëej</i>	<i>mun-kum</i>	
salt	<i>mum-mér</i>	<i>mu-m:e:r</i>	<i>mu-méér</i> [Gujaher; Friederike Lüpke, p.c.]

Two of the nouns from the domain of liquids that occur with noun class marker *mun-* have roots that also occur with other noun classes (Table (140) and Table (141), which shows that *mun*-nouns stand in a paradigmatic relationship to other paradigms.

Table (140) *Derivational network of jil 'eye'*

NC paradigm	Root	Gloss
<i>si- /i-</i>	<i>jil</i>	'eye'
<i>gu-</i>		'cavity in ronier fruit' [translated into French as <i>oeil</i> 'eye' !]
<i>mun-</i>		'tears'

Table (141) *Derivational network of mér 'salt'*

NC paradigm	Root	Gloss
<i>gu-</i>	<i>mér</i>	'salt plain'
<i>mum-</i>		'salt' [extracted from salt water]
<i>bu-</i>		'to salt a dish'

The largest one-class paradigm, and the one which shows strong tendencies towards a semantic grouping, is the *ba*-paradigm (Table (142)). It is used mainly in the botanic domain (see the triadic nouns with the unlimited plural in *ba-* in sections 3.1.2.5 and 3.1.2.3, many of these unlimited plurals are presumably polysemous with a substance reading) and has been extended to include prepared food from plants. It also has a cluster of nouns from the domain of illness and bodily conditions. The productively derived property nouns in paradigm *ba-* are discussed in section 4.3.2; the infinitives and related verbal nouns in *ba-* in chapter 4.

Table (142) *The one-class nouns in the ba-paradigm*

<b>Noun</b>	<b>Gloss</b>	<b>Domain</b>
<i>ba-cakuren</i>	'boiled rice (too hard)'	FOOD, RICE
<i>ba-pic</i>	'rice husks'	
<i>ba-hiigit</i>	'broken rice'	
<i>ba-buf</i>	'rice'	
<i>ba-daaj</i>	'rice porridge'	
<i>ba-geec</i>	'hibiscus sauce'	
<i>ba-melmec</i>	'pepper sauce'	
<i>ba-tamahin</i>	'type food'	
<i>bë-gëla</i>	'peanut sauce'	
<i>ba-hool</i>	'netettou paste <sup>66</sup> '	
<i>ba-hupun</i>	'sauce'	
<i>ba-pes</i>	'eye infection'	BODILY CONDITIONS
<i>ba-didigen</i>	'tremor'	
<i>ba-yotoŋ</i>	'incontinence'	
<i>ba-poc</i>	'itchy illness'	
<i>bë-budd</i>	'measles'	
<i>ba-susugen</i>	'skin infection'	
<i>ba-jjix</i>	'caries/rotting teeth'	
<i>ba-harhar</i>	'furry feeling on teeth'	
<i>bë-fëtlén</i>	'missing teeth'	
<i>bë-néér</i>	'illness'	
<i>ba-dëënay</i>	'sibling relation (same sex)'	RELATIONS
<i>ba-liinay</i>	'sibling relation (different sex)'	
<i>ba-ñaam</i>	'friendship'	
<i>ba-rux</i>	'water'	ELEMENTS?
<i>ba-wuc</i>	'wind'	
<i>ba-jaŋ</i>	'light'	
<i>ba-mundini</i>	'shadow'	
<i>ba-kuni</i>	'shadow'	
<i>ba-mej</i>	'embers'	
<i>ba-teg</i>	'contribution (Fr. cotisation)'	OTHERS
<i>bë-fung</i>	'mould'	
<i>ba-lëndooruŋ</i>	'junction'	
<i>ba-curux (v)</i>	'sth. provoking itch'	
<i>ba-xana (v)</i>	'lotion'	

<sup>66</sup> Netettou is a thick paste used for seasoning made of oysters.

The *gu*-paradigm is quite large in terms of nouns which appear in it, though the semantic connections between the nouns in it seem to be less obvious than in other one-class paradigms. *Gu-* is also productive in the formation of infinitives (see chapter 4).

Table (143) *The one-class nouns in the gu-paradigm*

Noun	Gloss	Domain
<i>gu-ras</i>	'east'	location
<i>gu-fuga</i>	'land of the dead' [cf. <i>u-fuga</i> 'ancestor']	
<i>gu-baabo</i>	'Ziguinchor [town] <sup>67</sup> ,	
<i>gu-rax</i>	'rice fields'	
<i>gu-mér</i>	'salt plain' [cf. <i>mum-mér</i> 'salt']	
<i>gu-sur</i>	'diarrhoea'	excrement/body fluid
<i>gu-faas</i>	'silent fart'	
<i>gu-pirit</i>	'dry excrement/constipation'	
<i>gu-dil (v)</i>	'fart'	
<i>gu-xaax (v)</i>	'mucus'	
<i>gu-leñ (v)</i>	'blood'	
<i>gu-jumbulanjen</i>	'fasting period'	Other
<i>gu-juŋ</i>	'celebration <sup>68</sup> ,	
<i>gu-dib</i>	'sediment (in liquids)'	
<i>gu-fundin</i>	'vapor'	
<i>gu-sup</i>	'foam'	
<i>gu-bën</i>	'dust'	
<i>gu-duxund</i>	'rice crust'	
<i>gu-xudd</i>	'crust'	
<i>gu-oc (v)</i>	'change (money)'	
<i>gu-fillsa (v)</i>	'nourishment'	
<i>gu-fitta (v)</i>	'nourishment'	
<i>gu-buñ (v)</i>	'commission'	
<i>gu-lëpic (v)</i>	'hiccup'	
<i>gu-duxun (v)</i>	'heat'	
<i>gu-ŋaarin (v)</i>	'cold'	

<sup>67</sup> The root *baab(o)* for foreigners is used in other languages too cf. *Tubaab* '(white) foreigner' in Sahel West-Africa. In Gubëeher, it refers to the Portuguese or mixed European-African Creoles, *ha-baabo* is the Gubëeher term for the Kriolu language, and *Gu-baabo* 'Ziguinchor' was ruled by Creole traders until the French took over power in the end of the 19th century.

<sup>68</sup> The term specifically designates a seasonal celebration that marks the beginning of the rainy season but seems to be used in a general sense of 'festivity'.

The *bu*-paradigm is the default paradigm for infinitives and is also productive in the derivation of locatives from eventive roots (4.3.2.1). The few additional nouns found in this one-class paradigm are presented in Table (144).

Table (144) *The one-class nouns in the bu-paradigm*

Noun	Gloss
<i>bu-di</i>	'fog/dew'
<i>bu-lex</i>	'misfortune'
<i>bu-mañ</i>	'iron'
<i>bu-raax</i>	'war'
<i>bu-laŋ</i>	'assembly place'
<i>bu-laxor</i>	'nudity'
<i>bu-yuutin</i>	'plant nursery' <sup>69</sup>
<i>bu-kaabil</i>	'bamboo grove'

What has been written above concerning the unspecificity of *ba*-nouns between unlimited semantics in a triad and substance reading also applies to the *ja*-nouns (see (53) discussed in section 1.4.3.3.2). The one class *ja*-paradigm also contains a number of infinitives/action nouns, further discussed in chapter 4.

Table (145) *The one-class nouns in the ja-paradigm*

Noun	Gloss
<i>ja-moot</i>	'cotton'
<i>jë-booñ</i>	'flour'
<i>ja-raat</i>	'fat'
<i>ja-fat</i>	'fat'
<i>ja-wuulin (v)</i>	'worries'

One-class nouns with other class markers are listed in Table (146).

<sup>69</sup> Before they are transplanted to the fields in the wetlands, the rice plants are grown in a special plant nursery close to the house.

Table (146) Other one-class paradigms

Paradigm	Noun	Gloss
<i>da-</i>	<i>da-wul</i>	'heat'
	<i>dë-bën</i>	'dust'
<i>pi-</i>	<i>pi-ttaari</i>	'tobacco'
<i>bi-</i>	<i>bi-hoor</i>	'smoke'
	<i>bi-ŋaam</i>	'war'
	<i>bi-déŋ</i>	'first day of the week'
	<i>bi-gurin</i>	'second day of the week'
	<i>bi-kota</i>	'third day of the week'
	<i>bi-jalom</i>	'fourth day of the week'
	<i>bi-rin</i>	'fifth day of the week'
	<i>bi-xand</i>	'sixth day of the week'
<i>kan-</i>	<i>ka'-yinen (v)</i>	'belief'
	<i>këm-muk (v)</i>	'end'
	<i>këm-mëëg (v)</i>	'funerary dance'
<i>ko-</i>	<i>ko-mej</i>	'brandy' (<little spark)
<i>da-</i>	<i>da-wul</i>	'heat'
	<i>dë-bën</i>	'dust'
<i>din-(-ŋ)</i>	<i>din-numul-oŋ (v)</i>	'snoring' ( <i>numul</i> 'breathe')
<i>kun-</i>	<i>kuul</i>	'fire'
	<i>kun-no</i>	'palm wine'
	<i>kuug</i>	'hunger'
	<i>kun-diigen</i>	'male power'
	<i>kun-dikaam</i>	'female power'
<i>ta-</i>	<i>ta-feeŋ</i>	'midday (heat)'
<i>sin-</i>	<i>sim-boot</i>	'relationship between co-wives'
	<i>sin-ñam</i>	'friendship (between two people)'
	<i>sim-bes</i>	'love relationship'
	<i>sin-dëëk (v)</i>	'journey'
<i>ran-</i>	<i>ra'-fuus</i>	'malaria/illness'
	<i>rën-ciir (v)</i>	'epidemy'
	<i>raŋ-komb (v)</i>	'collective hunt'
	<i>ra'-yub (v)</i>	'type dance'
	<i>rëŋ-kuub</i>	'initiation'
<i>ji-</i>	<i>ji-bas</i>	'type dance'
	<i>ji-lep</i>	'type dance'
<i>a-</i>	<i>a-pampam</i>	'type rice'
	<i>a-jomb</i>	'type rice'

prefixless	<i>wurus</i>	'gold'
	<i>kurs</i>	'rust'
	<i>kese</i>	'boiled rice'
	<i>maano</i>	'paddy rice'
	<i>duulin</i>	'oil'
	<i>beer</i>	'beer'
	<i>biiñu</i>	'wine'
	<i>diin</i>	'rain/sky'

### 3.1.7 Discussion of selected paradigmatic networks

An important function of the noun class paradigms is their use in deriving several sets of nouns from a single root, a process is referred to as 'class shift' by Crisma, Marten, and Sybesma (2011). Some of the paradigms are very productive in that they derive nouns from a large number of roots with regular form-meaning relations between the noun class markers involved and the semantics of the derived noun. The flexibility of a large number of roots to be compatible with several noun class paradigms has led me to conceive of Gubëeher roots as unspecified in terms of noun class membership, specific semantic content and also category. This is a rather practical than a theoretical decision as it is simply impossible to determine the direction and the source of derivation. At least for the roots appearing in more than one paradigm, none of the resulting nouns is formally marked in respect to the others as the source of derivation so that it is most convenient to consider them equipollent and the root as largely unspecified. The diminutive and augmentative paradigms are always in a paradigmatic relationship with other noun class paradigms and compatible with a large number of roots/stems. Another productive domain in terms of derivational paradigms is the botanical domain (3.1.7.1). Its potential relevance as matrix for other semantic extensions (through metaphor,

analogy or other semantic ties) is discussed in section 3.1.7.1.2. The paradigmatic network of the omniclass root *no* (see section 3.1.7.5) is highly instructive as almost all noun class prefixes can derive nouns from it and thus allows isolating the semantic contribution of the semantics of the noun class marker.

### 3.1.7.1 *Paradigmatic networks of the botanical realm*

Many of the semantically productive paradigms belong to the botanic domain, where most roots occur in several paradigms in order to denote different parts of plants. The root denotes the species and the noun class paradigm specifies which part of the plant is referred to. A complete list of botanic paradigms is given in Table (147), but most roots only make use of a subset of available paradigms according to the existence or usefulness of the various parts of the plant.

Table (147) *Paradigms of the botanical domain*

Domain(s)	Singular prefix	Count plural prefix	Unlimited/ mass plural prefix
edible fruits from trees	<i>bu-</i>	<i>i-</i>	<i>di-</i>
tubers/ground growing fruits	<i>bu-</i>	<i>i-</i>	<i>ba-</i>
kernels, hard inedible fruits, low plants	<i>gu-</i>	<i>ha-</i>	<i>ba-</i>
small plants, grasses	<i>gu-</i>	<i>ha-</i>	<i>ja-</i>
tree	<i>si-</i>	<i>mun-</i>	<i>(ja-)</i>
fibre	<i>sin-</i>	<i>ñan-</i>	/
resin			<i>ti-</i>
leaves/roots/wood			<i>ja-</i>
group of trees			<i>ba-/ja- (+plural suffix)</i>

The collective for some species of trees is derived from the root designating the species with the prefix *ba-* (the prefix *ja-* seems to refer to a group of small specimen) in addition to the plural suffix, as shown in Table (148).

Table (148) *Collective terms for trees*

<b>Botanic root</b>	<b>Derivation</b>	<b>Gloss</b>
<i>taat</i>	<i>ba-taat-aŋ</i>	'group of annona trees'
<i>mangu</i>	<i>ja-mangu-oŋ</i>	group of small mango trees'
<i>rac</i>	<i>ba-rac-aŋ</i>	'extension of mangrove bushes'
	<i>ja-rac-aŋ</i>	'extension of small mangrove bushes'
<i>fokund</i>	<i>ba-fokund-oŋ</i>	'group of Neocarya macrophylla [tree]'
<i>sankil</i>	<i>ba-saŋkil-eŋ</i>	'group of kinkeliba trees'

Encyclopaedic knowledge about plants and the specific context in which a referent is used can be significant in the production and interpretation of these paradigms. First of all, only those parts of plants which are useful for humans, be it for consumption, construction, medical use or cultural/religious significance receive a specific name. Thus, for example, fruits which play a less central role in terms of usability do not have a specific name but are just called *bë-dimen ka xyz* 'fruit of the xyz-tree'. I also found on comparing botanic vocabulary produced by different speakers that there were differences in how the paradigms were applied, especially for items which were less common, and the differences in noun class marking reflected different criteria according to which the plants or their parts were classified. Different levels of plant knowledge and experience with plants are certainly a factor in applying the paradigms. The exact meaning of the *ja-*derivations is particularly dependent on which parts of the plant are culturally relevant, since it can be used to refer to all kinds of 'organic small bits' such as leaves, wood, roots

etc. Thus, the leaves of the annona tree which are used for medical purposes are referred to with a derivation in class *ja-* (Table (150)). For other trees, where the roots are relevant for the production of medicine, the *ja-* derivation will be rather used to refer to the roots. The mangrove is highly valued in construction because its wood does not rot, therefore the *ja-*derivation is used for mangrove wood. The interpretation of the *ja-*derivation for botanical items can also in some cases be ambiguous and ultimately context-dependent. These facts suggest that at least in the botanic domain, the speakers often classify referents and not grammatical items (nouns). In the following subsections I will present the paradigms and the paradigmatic relationships of the roots from this domain and discuss the relevance of the botanic domain for the evolution and maintenance of the noun class system.

#### 3.1.7.1.1 Paradigms of the botanic domain

In the following tables (Table (149) – Table (154)) it is shown how the paradigms of the botanic domain are applied to roots of different plant species. The species denoted by the roots *dóóma* ‘*Saba senegalensis* (A.DC.) Pichon [vine]’ (Table (149)) and *taat* ‘*Annona senegalensis* Pers.[tree]’ (Table (150)) have edible fruits classified in the *bu-/i-/di/-*paradigm, which derives edible fruits growing on trees or vines. As can be expected, only parts that are of use are derived, thus we find the *tí-*derivation only for trees (e.g. the ‘kaba tree’ *si-dóóma*) whose sap is used for the production of rubber balls (*fuy-kop* (sg.)) for a traditional ball game (*fëŋ-këd*). Some botanical roots, especially those denoting plantation species that are grown in plantations or naturally occur clustered in colonies, are also attested with a suffixed plural which indicates a group of trees/bushes. The group plural is available for the

annona tree: *ba-taat-aŋ* ‘group of annona trees’ and the mango tree (*si-maŋgu/mum-maŋgu*): *ja-maŋgu-oŋ*.

Table (149) *Paradigmatic network of the root dóóma ‘Saba senegalensis (A.DC.) Pichon [a.k.a. ‘kaba’]’*

NC paradigm	Root	Gloss
<i>si-/mun-</i>	<i>dóóma</i>	‘kaba tree’
<i>bu-/i-/di-</i>		‘kaba fruit’
<i>tin-</i>		‘sap of kaba tree’
<i>ja-</i>		‘leaves of kaba tree’

Table (150) *Paradigmatic network of the root taat ‘Annona senegalensis Pers.’*

NC paradigm	Root	Plural Suffix	Gloss
<i>si-/mun-</i>	<i>taat</i>	/	‘annona tree’
<i>bu-/i-/di-</i>			‘annona fruit’
<i>ja-</i>			‘leaves of annona tree’ <sup>70</sup>
<i>ba-</i>		<i>-aŋ</i>	‘group of annona trees’

The mangrove plant (cf. Table (27)), here repeated for convenience as Table (151) is a very frequent species in the swampy environment where Gubëeher is spoken. It is also used for various purposes, above all house construction, but parts of the plant also have medicinal applications. The stable and rot-resistant mangrove wood, is of considerable advantage in the humid rainy season and makes it the most sought after material for wooden ceilings. The fruits of the mangrove are classified with *gu-/ha-/ba*<sup>71</sup>, a paradigm which contains many small, hard and inedible fruits. In order to account for the specific type of growth of mangrove bushes, several derivations accounting for clusters and bushes of mangroves are available: *bu-rac* is a bush

<sup>70</sup> The leaves of the tree *si-taat* are used as a medication against cough.

<sup>71</sup> Edible/non-edible might not be the major motivation for this classification though. The fruits are hard and small like kernels (which are consistently in gender *gu-/ha-*) and used as beads for necklaces. Beads (*gu-/ha-/ba-bano*) and cowries (*gu-/ha-/ba-goori*) are also in that gender.

consisting of several single plants, *ba-rac-aŋ* is a whole extension of mangrove grove and *ja-rac-aŋ* an extension of small mangrove plants.

Table (151) *Paradigmatic network of the root rac*

NC paradigm	Root	Plural suffix	Gloss
<i>si-/mu'-</i>	<i>rac</i>	/	'mangrove plant'
<i>gu-/ha-/ba-</i>			'mangrove fruit'
<i>bu-</i>			'mangrove bush'
<i>ja-</i>			'sticks of mangrove wood'
<i>ba-</i>		<i>-aŋ</i>	'mangrove grove'
<i>ja-</i>		<i>-aŋ</i>	'grove of little mangrove trees'

The fibres of the bark of the tillo tree are known to be strong and used for hunting tools, such as crocodile harpoons, and the ropes made of these fibres appear in the *sin-/ñan-* paradigm as shown in Table (152)

Table (152) *Paradigms of the root tillo*

NC paradigm	Root	Gloss
<i>si-/mun-</i>	<i>tillo</i>	'tillo tree'
<i>sin-/ñan-</i>		'cord made of bark of tillo tree'

Edible fruits of creepers or low bushy plants are, like the edible fruits of trees, classified by class markers *bu-* and *i-* for the singular and the count plural respectively, with the difference that their unlimited plural is not in class *di-* as the one of the tree fruits but in class *ba-* as the plural of grains and kernels in the *gu-/ha-/ba-* paradigm: *bu-taata/i-taata/ba-taata* 'sweet potato', *bu-mentej/i-mentej/ba-mentej* 'tomato' *bu-yapat/i-yapat/ba-yapat* 'taro'. The corresponding plant is in the *gu-/ha-/ba-* paradigm, the *ba-* form is thus ambiguous between the plant reading and

the fruit reading. The manioc, scientifically classified as a type of grass, is also one of the plants with this repertoire of paradigms (Table (153)).

Table (153) *The paradigms of the root jonko 'manioc'*

NC paradigm	Root	Gloss
<i>gu-/ha-/ba-</i>	<i>jonko</i>	'manioc plant'
<i>bu-/i-/ba-</i>		'manioc tuber'

Four tree-like plants in the wider sense diverge from the *si-mun-* pattern: *ra<sup>2</sup>-wuc/mu'-wuc* 'oil palm', *ba-hon/ba-hon-oŋ* 'ronier palm', *ba-naana/ba-naana-ŋ* 'banana tree' and *si-mol/ñam-mol* 'tali tree'. The hypothesis that functionally marked items are also more likely to be marked in terms of noun classification by falling out of the pattern (Dixon 1982) applies here. The two palms and the banana tree indeed differ from other trees morphologically. Additionally, the two palm trees are among the most important sources of all kinds of building and weaving material and also for consumption and have the most detailed terminology of single parts. The tali tree is exceptional because of his highly poisonous bark which has been used as a truth finding tool in witch trials, the excessive practice of which in the beginning of the 20th century in Casamance has amounted to what Roche (2000) calls 'collective suicide'. Those persons of both sexes accused of being witches<sup>72</sup> were forced to drink a highly poisonous concoction whose main ingredient is the bark of the tali tree. Innocence was proven by surviving the procedure (Roche 2000).

<sup>72</sup> In regional folklore witches (in Gubëeher *u-cér/ñan-cér*) are malevolent human beings operating in secret societies, who are believed to have concluded a pact with evil forces which gives them special occult powers sealed by the collective consumption of human flesh together with other witches. They supposedly harm persons within the circle of their maternal family by 'eating' their spiritual body or part of it. There seems to be confusion over whether they actually engage in cannibalism or whether the act of 'eating' is taking place in a dimension which is not accessible for ordinary people (Baum 2004). Illness, spells of bad luck, epidemics among domestic animals and unexplained deaths were often, and are still by some, attributed to the activity of witches.

Table (154) *Derivations of the root wuc 'oil palm'*

NC paradigm	Root	Gloss
<i>ra'-/mu'-</i>	<b>WUC</b>	'oil palm'
<i>gu-/ha-</i>		'palm kernel'

3.1.7.1.2 The botanic domain as matrix for other classes

Adams (1986) and Adams and Conklin (1973) propose for South-East Asian languages with classifier systems that the classifiers which classify the botanical realm serve as “metaphors of basic shape” (Adams 1986:246). The evidence that lead to this conclusion is presented as follows (Adams 1986:246):

1. Classification on the basis of the general feature ‘plant’ is rare.
2. Plants are often presented as typical exponents of a class by speakers, which indicates that they are central to class semantics
3. Objects are classed in the same class as the plants they are made from
4. Classifiers denoting shape often go back etymologically to plant parts (e.g. nouns for ‘trunk’, ‘stalk’ as the source for classifiers classifying long objects)

In his paper on the growth of ‘ethnobotanical nomenclature’, Berlin (1977) hypothesises that principles which are valid for the extension of botanical taxonomy are also relevant for other lexical domains (specifically the domain of zoology but also vocabulary in general). This supports Adam’s model since she stipulates that categories from the domain of plants get applied to other semantic domains of the lexicon. It becomes clear throughout Berlin’s paper that only populations with sophisticated agricultural and horticultural methods are likely to arrive at fine-

grained distinctions of nomenclature in their language. From this angle, the plant-classification-as-metaphor hypothesis fits well with the data from Gubëeher. The people of Djibonker are very skilful farmers who use sophisticated methods of wet rice cultivation and, as I have noted during the elicitation of plant names, many people are extremely knowledgeable (from my plant -impoverished urban European point of view that is) when it comes to plant taxonomy or knowledge about the usage of parts of plants. Plants have very important functions in many areas of the society and subsistence. Culture revolves around agriculture, especially the growing of rice and other crops (peanuts, tubers, corn), gardening, fruit cultivation and palm wine tapping. Parts of plants are used as material for construction of dwellings, building of instruments, household equipment (mats, baskets, fans, eating utensils, playing balls, jewellery and decorations...), for medical appliance (the Bâinounk are reputed in the whole region to have very sophisticated knowledge of medical properties of plants) and for consumption. It is not surprising that the prominent role of the botanical realm for the speakers of Gubëeher is reflected in the high importance plant classification holds in the system nominal classification. Following Adams, I will present some preliminary findings which allow establishing semantic relationships between plant parts and other nouns based on shape or material in Gubëeher (Table (155)). A lexical example of such a metaphoric extension is the use of the noun *gu-bër* 'grain' for 'child/offspring'. Other instances of tree as body metaphor include *gu-risend/ha-risend/ba-risend* with the meaning '(palm) kernel' the botanic domain and *gu-risend/ha-risend* 'kidney' as body part, likewise the use of *bu-dil* as 'regime' (French for 'bunch of fruit [e.g. bananas, palm kernels]') in the botanic domain and 'penis' as body part. The semantic ties between the botanic and

other domains in Table (155) include shape (long, round), material and quantity parameters (collective).

Table (155) *Semantic extensions of the botanical paradigms*

NC Singular	NC count Plural	NC unlimited Plural	With botanical root	Semantic extension to other domains
<i>bu-</i>	<i>i-</i>	<i>[di-/ba-]</i>	fruits	round objects
<i>si-</i>	<i>mun-</i>		tree	wooden objects
<i>sin-</i>	<i>ñan-</i>		plant fibre, strings	strings, long objects, metaphoric extension of string
<i>gu-</i>	<i>ha-</i>	<i>ba-</i>	kernels, hard small fruits,	single object(s) which otherwise occur in large quantity (shells, beads);
<i>gu-</i>	<i>ha-</i>	<i>ja-</i>	small parts of plants (sticks/twigs/leaves)	parts of human or animal bodies (feathers, hair),

### 3.1.7.1.3 The botanic domain as actively involved in shaping the system

On the basis of data from Gubëeher, evaluated in comparison with data from Baïnouk Gujaher it is hypothesised that a paradigm which is more productive and well integrated into the derivational cluster of a domain is more stable in its agreement behaviour than a paradigm that is more at the margin of the system. In Gubëeher, the *sin-/ñan*-paradigm is semantically associated with strings and string-like structures (3.1.1.5) and has a minor role in the botanic domain for the derivation of plant fibres or ropes made from plant fibres. The singular prefix of this paradigm, *sin-* is formally similar to the prefix *si-*, which also occurs in the botanical domain and is part of the *si-/mun*-paradigm which contains mostly trees and wooden objects (3.1.1.4). The observation has been made [Friederike Lüpke, p.c.] that the differentiation of the formally similar prefixes *si-* and *sin-* in the agreement is much more stable in Gujaher than in Gubëeher, where the two classes are often either

conflated to either *si-* or *sin-*, or used interchangeably with significant degrees of variation (see 2.3.1.2). In Gujaher on the other hand, agreement is regularly *ci-* for nouns bearing the noun class prefix *ci-* (334) and *cin-* for nouns with the prefix *cin-* (335).

<p>(334) <i>ci-tak ci-duka</i>          CL.ci-banana AGR.ci-one          ‘one banana tree’          Gujaher, Friederike Lüpke (p.c.)</p>	<p>(335) <i>cin-cind cin-duka</i>          CL.cin-cord AGR.cin-one          ‘one cord’          Gujaher, Friederike Lüpke (p.c.)</p>
--	--

But, whereas in Gubëeher the *sin-/ñan-* paradigm has only marginal significance in the botanical domain, deriving strings and fibres from some roots, the equivalent paradigm *cin-/ñan-* in Gujaher is much more productive. *Cin-/ñan-* in Gujaher is a paradigm with a large number of nouns in which bushes, vines and shrubs appear (Friederike Lüpke, p.c.). In both languages, phonological factors facilitate the conflation of agreement marking of *sin-* and *si-*: the nasal consonant of noun class and agreement markers is deleted or assimilated to the root when the marker is prefixed to roots beginning with certain segments (glides, liquids and fricatives; discussed in 2.3.1.2), so that the formal difference between the prefixes on the noun and on agreeing targets is leveled in a large number of cases. It is hypothesised that the paradigm’s higher productivity and relevance for paradigmatic networks in the semantic domain in Gujaher has protected *cin-*agreement from conflation with the formally similar *ci-*agreement.

The association of *sin-* with bushes and vines is to some extent reflected in agreement behaviour but **not** in the noun class marking in Gubëeher. One consultant in particular used both *sin-* and *si-*agreement for nouns in the *si-/mun-* paradigm denoting trees and bushes, but the distribution is not random. Of 24 items in the *si-*

*/mun*-paradigm categorised as trees by the botanists in our research project only 2 are given with *sin*-agreement in the singular (the rest with *si*-agreement), whereas 7 of 14 items categorised as *arbuste* ‘bush’ by the same botanists are given with *sin*-agreement by the same speaker. The same proportion applies to the items classified as ‘vines’<sup>73</sup> in the *si-/mun*-paradigm: 5/5 are given with *sin*-agreement. This observation suggests that a restructuring has reduced the semantic repertoire of the *sin-/ñan*-paradigm in Gubëeher by omitting bushes from it. This is more plausible than assuming that the *cin-/ñan*-paradigm in Gujaher has acquired the semantic domain of bushes, since the reflexes of *sin*-agreement in Gubëeher with bushes and vines would be unmotivated and unaccountable. This reduction of the semantic repertoire might in its wake have weakened the autonomy of the *sin*-agreement in Gubëeher, already rendered vulnerable by the processes leading to phonological levelling with *si*-agreement.

The point I wanted to make with this example is the connectedness of form and function, of semantic and syntactic properties of the noun class prefixes. It seems plausible that semantic restructuring of noun classes can have repercussions on agreement behaviour and the convergence in agreement marking can potentially lead to a convergence of prefixes originally in different paradigms<sup>74</sup>.

---

<sup>73</sup> In the domain of vines much variation and insecurity especially concerning the existence and form of count plurals, was detected. This is probably due to the growthpattern of vines in entangled clusters where single plants are hard to isolate and the necessity to do so possibly does seldom arise.

<sup>74</sup> In the case of *si*- and *sin*- in Gubëeher it is imaginable that their differentiation is a result of divergence in the first place, the formal similarity and the semantic parallels. *Si*- as singular of the paradigm *si-/mun*- which contains in the majority names of trees and treelike plants and *sin*- as singular of the *sin-/ñan*-paradigm which contains mainly strings and string-like entities could both be accommodated under a common ‘class schema’ LONG, which is exactly what Selvik (2001:165) postulates for the Setswana noun class marker of class 3. In Gujaher the root for ‘thread’ *cin* is identical to the prefix *cin*-

### 3.1.7.2 The derivation of human nouns

The human paradigm *u-/ñan-* is used to regularly derive ‘ethnic’ labels standing in a paradigmatic relationship with language names and locations derived from the same root (3.1.7.2.1). A productive use of morphology for the derivation of associatives is suffixation with the plural morpheme (3.1.7.2.2).

Nouns denoting human participants derived from eventive roots using the human paradigms *u-/ñan-* and the *ji-*paradigm with suffixed plurals (those with a connotation of negative behaviour or disability) are discussed in section 4.3.1.1.

For an explanation of nouns like *i(-)koona* ‘household members’ which is here analysed as resulting from ellipsis of the phrase *jamaaj i koona* ‘the people of the house’, see section 3.2.

#### 3.1.7.2.1 The derivation of human nouns with the *u-/ñan-*paradigm

A number of paradigms which often co-occur with the same root are associated with group membership, language and location of a group (Table (156)).

Table (156) *The ‘language and culture’ paradigms*

NC Sg.	NC Pl.	Agr. Sg	Agr. Pl.		Meaning
<i>u-</i>	<i>ñan-</i>	<i>u-</i>	<i>i-</i>	root	‘member of community’
<i>(e-)</i>	/	/	/		‘community collective/location’
<i>gu-</i>	<i>ha-</i>	<i>gu-(?)</i>	<i>ha-(?)</i>		‘language’

Other terms that derive language, persons and areas, as shown in Table (157) are *malina* ‘Manjaku’, *faranse* ‘French’, *wolof* ‘Wolof’ etc.

Table (157) *Semantic network of the root -bëëher*<sup>75</sup>

NC paradigm	Root	Gloss
<i>u-/ñam-</i>	<i>bëëher</i>	‘[Bainounk] person of Djibonker’
<i>gu-/hë-</i>		‘[Bainounk] language of Djibonker’
<i>ji-</i>		‘Djibonker’

There seems to be a semantic difference between the language designation in *gu-* and the one in *ha-*; consultants have explained that the *ha-* version is used when the language is referred to as spoken by many people and the one in *gu-* as languages spoken individually or language as a social, abstract phenomenon (‘langue’) and language as spoken (‘parole’). Note that *gu-/ha-* is a very frequently occurring paradigm with countable nouns though.

With two roots the ethnic paradigm works slightly different, the two neighbouring populations, *riin* ‘Joola Eegimaa’ and *ñuun* ‘Bayot’. The collective population is derived with the prefix *e-*<sup>76</sup>, I am not entirely sure if the count plural for members of these groups (Eegimaa and Bayot) are derived with *e-* or with *ñan-*.

Table (158) *Semantic network of the root -riin ‘Joola Eegimaa’*

NC paradigm	Root	Gloss
<i>u-/e-</i>	<i>riin</i>	‘Joola of Mof Ávvi [person]’
<i>gu-/ha-</i>		‘Joola Eegimaa [language]’
<i>e-</i>		‘Joola of Mof Ávvi [collective]/Mof Ávvi [area]’

<sup>75</sup> The glossing of this root is problematic, it seems to refer to ethnicity as most of the nouns derived from it are related to ‘Bainounk from Djibonker’, I will gloss it as Bainounk.

<sup>76</sup> The prefix *e-* is probably borrowed from a Joola language, where *e-* is a very frequently occurring prefix. The only other noun in Gubëeher encountered so far prefixed with *e-* is the plural of *u-lamba* ‘boy’: *e-lamba* ‘boys’ which has human *i*-agreement: *e-lamba i-naak* ‘two boys’. The item has been flagged as a loan from Joola by consultants; cf. *a-lamba* ‘boy’ in Joola Kujireray.

### 3.1.7.2.2 The derivation of associative plurals from personal names

The prefixless paradigm is productively used for personal names to derive associative plurals which denote a clan when used with a clan name, or a group of people when used with a first name. The group might refer to a family, group of friends, or make reference to other attributes of the persons (age, character...) relevant for the definition of the group.

Table (159) *Personal names and the prefixless paradigm*

Name	Gloss	Associative plural	Gloss
<i>Biagui</i>	'Biagui (family name)'	<i>Biagui-eŋ</i>	'the Biaguis'
<i>Sagna</i>	'Sagna (family name)'	<i>Sagna-ŋ</i>	'the Sagnas'
<i>George</i>	'George (first name)'	<i>Georg-oŋ</i>	'George and his crowd'
<i>Eko</i>	'Eko (first name)'	<i>Eko-ŋ</i>	'Eko and his crowd'

*Eko-ŋ* from Table (159) was used in a context to group together Eko, a boy from the family I was living with, and the other children within the family which have approximately the same age. In another context it might as well mean 'Eko and his friends' or 'Eko and his family'. The suffixed plural lends itself to the derivation of these associatives, since most names are French and do not have noun class markers, and neither do the clan names. From a semantic point of view, this usage fits well with the observation that nouns which pluralise using the suffix *-Vŋ* contain a high proportion of animate nouns (cf. section 1.4.3.3.1).

### 3.1.7.3 *Animal names derived from eventive roots*

A few instances of animal names derived from eventive roots have been detected so far, two water birds and two types of insects, referring to habitual behaviours or external aspects of the animals. The association of paradigms *ran-/ñan-* and the

prefixed paradigm *ta-* with water birds is partly reflected in the omniclass derivation *ta-no/ñā-no* ‘(water-)bird’ (3.1.7.5).

Table (160) *Derived animal names*

Singular	Plural	Root	Gloss
<i>rë'-liim</i>	<i>ñë'-liim</i>	> <i>liim</i> ‘dive’	‘kingfisher’
<i>ta-fer</i>	<i>ta-fer-eŋ</i>	> <i>fer</i> ‘white’	‘heron’

The nouns of the insect paradigm, (the triad *a-/a(-ŋ)/bi-* with suffixed count plural, presented in section 3.1.5.1) do not predominantly take part in paradigmatic networks but some cases of derivation from eventive roots could be identified and some loans from Joola languages have been integrated into it on semantic grounds<sup>77</sup>, which shows how stable the form-meaning association of this paradigm is. The names for the ‘potter wasp’ as well as for ‘spider’ are derived from eventive roots which refer to typical activities of the insect. *Ē-lód* ‘potter wasp’ is derived from the root *lód* ‘build’, see Table (25), here repeated for convenience as Table (161). It is remarkable that the potter/builder metaphor naming this species of wasps is used in Gubëeher, English (‘mason wasp’) and French (‘guêpe maçonne’). *A-liin* ‘spider’ is derived from *liin* ‘weave’, see Table (2), here repeated for convenience as Table (162).

<sup>77</sup> The nouns *ë-rús* ‘jigger’ and *a-ñaal* ‘worm’ both discussed in the context of loan integration in section 3.4 and presented with full paradigms in Table (170).

Table (161) *The paradigmatic network of lód 'build'*

NC paradigm	Root	Gloss
<i>u-/ñan-</i>	<i>lód</i>	'potter/mason'
<i>si-/mu'-</i>		'wall'
<i>a-/a-(-ŋ)/bi-</i>		'potter wasp'
<i>gu-</i>		'to build (Inf.)'
<i>bu-</i>		'to build (Inf.)'

Table (162) *The paradigmatic network of liin 'weave'*

NC paradigm	Root	Gloss
<i>u-/ñan-</i>	<i>liin</i>	'weaver'
<i>si'-/ñá'-</i>		'spiderweb'
<i>a-/a-(-ŋ)/bi-</i>		'spider'
<i>ra'</i>		'to weave cloth (Inf.)'
<i>bu-</i>		'to weave (Inf.)'
<i>ta-/ja-</i>		'cloth (plain white)'

#### 3.1.7.4 *Diminutive and augmentative*

Gubëcher is equipped with two purely derivational paradigms, the diminutive *ko-/ño-*paradigm and the augmentative *da-/din-(-ŋ)*-paradigm, whose plural is additionally marked by the plural suffix. No other paradigms are attested with these functions and no nouns occur exclusively in these paradigms. Although some nouns are generally used with prefixes from the diminutive paradigm, they also have an underived form, which the diminutive is derived from.

The diminutive indicates that the noun derived by it is small in size (336) and (337). It substitutes the prefix of the underived noun (336) or is prefixed to the stem in case the noun does not have a prefix (337).

(336) *ko-ron/ño-ron* ‘small creek/small creeks’ < *gu-ron/ha-ron* ‘river’

(337) *ko-tabl/ño-table* ‘small table/small tables’ < *tabl/tablaŋ* ‘table (from French *table*)’

Other meanings such as endearing or pejorative connotations have not been noted so far, except when referring to people.

The diminutive paradigm is purely prefixed, and triggers alliterative paired agreement of type 1, even though the underived nouns can belong to other agreement types. The 2b noun *bë-kër* for example, which is suffixed in the plural on the noun and in agreement (338) and (339), has purely prefixed diminutive forms in both singular and plural (340) and (341).

(338) *bë-kër bë-jóló-i*  
CL.ba-chicken AGR.ba-large-i  
‘large chicken’

(339) *bë-kër-ëŋ ba-naak-aŋ*  
CL.ba-chicken-Pl AGR.ba-two-Pl  
‘two chickens’

(340) *ko-kër koko*  
CL.ko-chicken AGR.ko:DEM.PROX  
‘this small chicken’

(341) *ño-kër ñoño*  
CL.ko-chicken AGR.ño:DEM.PROX  
‘these small chickens’

The augmentative classes *da-* (sg.) and *din-* -*Vŋ* (pl.) express large size. A noun derived with the augmentative is conceived of as bigger than other specimen of its kind.

(342) *da-gof/din-gof-oŋ* ‘large head/large heads’ < *bu-gof/i-gof* ‘head/heads’

(343) *da-lihan/din-lihan-aŋ* ‘large stick/large sticks’ < *gu-lihan/ha-lihan* ‘stick/sticks’

Agreement is prefixed in both singular and plural and additionally suffixed in the plural (344) – (345).

(344) *da-sol dē-dënduk*  
 CL.da-shirt AGR.da-one  
 ‘one big shirt’

(345) *diŋ-kaat-aŋ din-naak-aŋ*  
 CL.din-fish-PL AGR.din-two-PL  
 ‘two big fish’

The one-class *ho*-paradigm, also purely derivational, is used as a diminutive of mass nouns in the sense of ‘a bit of/a small portion of X’, with mensural function as well.

Table (163) *Derived mass diminutives in the ho-paradigm*

Noun	Gloss	ho-derivation	Gloss
<i>ba-rux</i>	‘water’	<i>ho-rux</i>	‘some water’
<i>ba-geec</i>	‘hibiscus sauce’	<i>ho-geec</i>	‘some hibiscus sauce’
<i>ku-no</i>	‘palm wine’	<i>ho-xuno</i>	‘some palm wine’
<i>gu-fila</i>	‘food’	<i>ho-fila</i>	‘some food’
<i>di-luur</i>	‘rice’	<i>ho-luur</i>	‘some rice’

### 3.1.7.5 *The omniclass root ‘no’*

Omniclass items, i.e. roots that can be combined with most or all available noun class markers, are the most extreme examples of semantic unspecification<sup>78</sup>. In Gubëeher, the root *no*, as shown in Table (164), combines with at least eight different noun class paradigms. In this case the root is semantically bleached to such an extent that it is little more than a base to which the noun class marker can attach. The meaning of the classified root is completely determined by the noun class marker.

<sup>78</sup> Other languages spoken in the area also have omniclass roots, Doneux (1990:112) mentions *ko* for Manjaku and *do* for Kobiana, which combine with a variety of paradigms similar to *no* in Gubëeher.

Table (164) *The omniclass root 'no'*

NC paradigm	Root	Gloss
<i>bu-/i-/di-</i>	<i>no</i>	'fruit'
<i>si-/mun-</i>		'tree'
<i>a-/bi-</i>		'insect'
<i>ran-/ñan-</i>		'bad person'
<i>ta-/ñan-</i>		'bird'
<i>kun-</i>		'palm wine'
<i>gu-</i>		'thing'
<i>ja-</i>		'grass/organic material'

Some of the omniclass derivations reflect the semantic content which has been established for noun class paradigms, which can give valuable clues as to what the core semantics of that noun class paradigm might be. They have a general meaning and are often used as hyperonyms. In some cases the derived omniclass nouns are ambiguous between competing meanings and the context has to be considered for disambiguation.

*Ano/bino* is used as a hyperonym for insects which relates directly to the insect paradigm *a-/a-(-ŋ)/bi-*. It is used when the exact species of the insect is irrelevant or unknown, as in example (346), from a real-life context. Most certainly HS could not identify the little insect that flew against her eye; also the exact species was not as relevant as the fact that the insect was bothering her.

(346) *a-no*            *a-fiʔ-t-i*            *a-dég-em*            *a*            *si-jil*  
 CL.a-OMN    3-fly-VEN-PERF    3-hit-1SGOBJ.PERF    PREP    CL.si-eye

'The insect flew against my eye [lit.:The insect flew it hit me on the eye.]

HS, field notes

As demonstrated above in 3.1.2.1 the paradigm *bu-/i-/di-* is productively used for the derivation of fruits. The omniclass derivations in that paradigm *bu-no/i-no/di-no*

are likewise referring to fruits, used when the name of the fruit is unknown or irrelevant. The speaker of the utterances in examples (347) and (348) was describing a video stimulus with cartoons from a German TV show for children (“Die Sendung mit der Maus”) where a mouse tries to reach some fruits hanging on a tree. The consultant knew neither what kind of fruit that was, nor the type of tree they were hanging on since both do not exist in Casamance, so he referred to the chestnuts as ‘*buno*’ and ‘*dino*’, (translated as fruit/fruits by another consultant doing the translation with me) and the tree as ‘*sino*’ (347). The use of the omniclass derivations *si-no/mun-no* as generic reference to ‘tree/trees’ also corresponds to the association of the *si-/mun*-paradigm with trees (3.1.7.1). The other word for ‘tree’ *si-nunuhen*, with cognates in Joola Eegimaa (*bu-nunuh* ‘tree’) and Joola Kujireray (*bu-nunuhen* ‘tree’) is rather used with reference to a specific tree, although the two nouns can be used interchangeably in some cases.

(347) *a-wuu’*    *bu-no*            *bu-ruk*            *a-nen-et*    *a*    *si-no*  
 3-see        CL.bu-OMN    AGR.bu-other    3-fall-VEN    PREP    CL.si-OMN

‘It sees some fruit fall down from the tree.’

ES, DJI110110AC6

(348) *a-ɲaf*            *na*            *a-tun-ot*            *di-no*            *dindéérj*            *ë-hëëb*  
 3-mount        there        3-pluck-VEN    CL.di-OMN    CL.di:DEM    3-eat(hard)

‘It goes up there and plucks the fruits and eats (them).’

ES, DJI271009AC

The noun *ja-no* is used for reference to all kinds of bits of organic material and grass: in example (349) as a term for organic waste in general and in (350) referring to a banana skin as a specific kind of organic material. When asked for a translation, consultants would give the French *herbe* ‘grass’. *Ja-no* was often used in the place

of *ja-fos* ‘grass’, which designates a specific species of grass and is used as well as a cover term for all different kind of grass species. In connection with roots from the botanical domain *ja-* covers the semantic area of small parts of a plant like leaves, roots or twigs and species of grass.

(349) *a-dëëk*    *a-tuc-ot*            *a*            *bu-ruus*                            *bi-ni*            *u-tuc-ëhoŋ*  
 3-go        3-throw-VEN    PREP    CL.bu-rubbish.heap    AGR.bi-REL    2-throw-PL

*ja-no*  
 CL.ja-OMN

‘He goes and throws it on the rubbish heap, where you throw the waste<sup>79</sup>.’

JS, DJI101210AC

(350) *a-rant*            *a-cuc*            *ja-no*            *ha*            *bu-nana*            *bumbooŋ*            *a*  
 3-do.again    3-throw    CL.ja-OMN    CONN    CL.bu-banana    AGR.bu:DEM.DIST    PREP

*gu-ceec*  
 CL.gu-basket

‘It [the mouse] throws the banana skins in the basket again.’

ES, DJI110110AC5, Maus Kita 5

The omniclass derivation *gu-no* is a noun with very general meaning, roughly translatable as ‘thing’, for any entity whose exact name is unknown. In example (351) it is used by the consultant to refer to the snout of the elephant in the animated film, which was shown as stimulus. *Gu-no* is also used as avoidance term for *gu-sis* ‘vagina’, which is as well in class *gu-* (information from JMS).

<sup>79</sup> This would be organic waste, like branches, leaves and the like after cutting back trees or eradicating weeds. Even household waste in Djibonker is in the majority organic, food rests, fruit skins etc.

(351) *elefā*      *a-yéd*      *gu-no-honom*      *ninni*      *a*      *bi-raaf*  
 elephant      3-raise      CL.gu-OMN-3SGPOSS      like.that      PREP      Cl.bi-up

‘The elephant raises his thing [trunk] like that upwards.’

ES, DJI271009AC5, Maus Kita 5

The noun *kun-no* ‘palm wine/alcoholic drink’ might also be derived from the omniclass root, but no semantic connection to the other few items in class *kun-* has been found so far. The forms *ran-no* ‘bad person’, *ñan-no* ‘birds/bad persons’ and *ta-no* ‘bird’ were obtained through an acceptance-test elicitation with the consultant JMS and confirmed with other consultants. An obvious semantic relationship to other nouns in these paradigms could not be established, which makes their interpretation with the omniclass root more intriguing. As for the *ran-/ñan-*paradigm, a correlation with old/dysfunctional things has been made by Lüpke (p.c) in Gujāher, cf. *ram-basa* ‘old mat’.

The root *han* has been proposed tentatively by Doneux (1990:113) as a candidate for a multiclass item with reflexes in various Atlantic languages. In Gubēeher we find *bi-han* ‘pot’ with the plural forms *i-han* and *a-han-aŋ*, also *si-han* ‘medicine’ (with the plural *mu'-han*) and *gu-han* ‘wetlands, river, rice field’. The semantic connection between *bi-han* ‘pot’ and *si-han* ‘medicine’ is that pots of that kind are used to prepare and store medicine from plants or parts of plants.

### 3.1.8 At the ‘crossing of paradigms’

Certain class markers are confined to specific paradigms, so they are paired with the other markers in the paradigm in ‘expected’ ways according to the same semantic criteria. Other paradigms are crossed, that is, they combine markers that are

members of different paradigms for the majority of nouns, thus using different semantic criteria in different numbers. The existence of these very rare and unproductive paradigms which are clearly marked in terms of type frequency is a way of creatively exploiting the fact that class markers are associated with specific paradigms with more or less specific meanings. Pozdniakov (2009) has observed that in the noun class systems of several West-African languages, such crossed paradigms, where one singular marker is compatible with plural markers from different paradigms or vice versa, exist. I would like to add that these crossed paradigms single out items as either highly salient or less typical and therefore marked by a partly deviating paradigm, which has a singular or plural as expected for an item of its semantic class, but the other number form(s) from a different paradigm. Of course this presupposes the existence of stable paradigms with quite clear semantic connotations which can then be crossed. I will now present some examples for what are candidates for crossed paradigms in Gubëeher.

The three body parts ‘eye’, ‘hand/arm’ and ‘foot/leg’ have very unusual singular/plural patterns as shown in Table (165).

Table (165) *Body parts with hybrid genders*

NC Sg.	NC Pl.	Root	Gloss
<i>si-</i>	<i>ha-</i>	<i>diix</i>	‘foot/leg’
<i>si-</i>	<i>ha-</i>	<i>lax</i>	‘hand/arm’
<i>si-</i>	<i>i-</i>	<i>jil</i>	‘eye’

The ‘regular’ plural of class *si-* with paired items is class *mun-* and the three body parts cited above, are almost the only deviations from this rule: The paradigm *si-/i-* is unique to the noun ‘eye’ and the only other noun in paradigm *si-/ha-* apart from the two body part nouns *si-diix* ‘leg’ and *si-lax* ‘arm’ is *si-ram* ‘last name’ with the

plural *ha-ram*; the root *ram* is also used verbally with the meaning ‘greet’. For all of the three body part nouns with irregular paradigms the plural conforms to the semantic connections established for other body parts as shown in Table (101) and Table (103): ‘eye’ as a round body part has a plural in *i-* just like the other round body parts (Table (101) and *si-diix* ‘leg’ and *si-lax* ‘arm’ have their plural in noun class *ha-* just like the other long and rigid body parts with joints (Table (98)). As for *jil* ‘eye’, a plural in *mun-*, the ‘regular’ plural of singulars in *si-*, is possibly blocked by the item *mun-jil* ‘tears’, where *mun-* is used as one-class paradigm denoting liquids. It is unclear which semantic component the singular in *si-* adds, or whether these body parts are just singled out for their relevance. As part of a pair with the plural *mun-*, *si-* has a strong semantic connotation of wood and trees, as classifier of one-class nouns it is attested with properties of humans derived from roots which can also be used as verbs with a state semantic. A common property of the three body parts in question is their pairedness, but this semantic attribute is rather associated with class *sin-* and not with *si-*: Compare the reciprocal derivations (e.g. *sim-bën-ay* ‘to leave each other’ < *bën* ‘leave’) and paired relationships like *si(n?)-ñaaam* ‘friendship between two persons’ *sim-boot* ‘relationship between co-wives’. The relationship between *si-* and *sin-* has not yet been fully understood, especially since the conflation of their distinct agreement markers, *si-* and *sin-* respectively is an on-going process which causes considerable inter- and intra-speaker variation (see 2.3.1.2). The related semantics of the main paradigms they occur in allow the hypothesis that the two prefixes have evolved from a common source: *si-/mun-* as the tree paradigm, whose source function for longness is attested (cf. Adams 1986 and the discussion in section 3.1.7.1.2) and *sin-/ñan-*, the paradigm of strings and long structures.

The ‘fish trap’ *fun-teŋ/mun-teŋ*<sup>80</sup> can also be tentatively analysed as having a ‘crossed’ gender under influence of language contact. The consultant LM has identified *fun-teŋ* as “borrowed from Joola” and prefers the form *ja-teŋ*. As part of a paired paradigm with suffixed plural, the prefix *fun-* though contains sea animals in Gubëeher<sup>81</sup>, which relates to the function of the fish trap. In case the prefix is indeed borrowed, its retention by some speakers might thus be due to semantic reasons. The prefix *mun-* in the plural, which as part of the paired *si-/mun-* paradigm classifies items as trees or made from trees, refers to the material the trap is made of. Another kind of trap is ambiguous between two paradigms due to a phonological process: for the noun *si-let*, a fish trap woven from palm leaves, it is not immediately obvious whether it is in class *si-* or in class *sin-* since nasals in prefixes are regularly deleted when combining with a root that starts in [l]. Some speakers consider it a class *si-* noun and form the plural accordingly in *mun-*, which puts it in the *si-/mun-* paradigm, strongly associated with trees and wooden objects, reflecting the material the *si-let* is made of. Other speakers provide the plural *ñā’-let*, putting it in the *sin-/ñān-* paradigm which has strong associations with strings and string-like items.

The noun *gu-ceneŋ/ha-ceneŋ/fun-ceneŋ* ‘oyster’<sup>82</sup> also exhibits a paradigm which can be interpreted as crossed. Just like other kinds of molluscs, which are in regular triadic paradigms (*gu-juxut/ha-juxut/bë-juxut* ‘type mussle’, *gu-goori/ha-goori/ba-goori* ‘cowrie shell’, *gu-riñen/ha-riñen/ja-riñen* ‘*tympantonus fuscatus radula*’) the

---

<sup>80</sup> According to my consultant the alternative form *fun-teŋ/fun-teŋ-eŋ* with 2a agreement is also acceptable.

<sup>81</sup> The *fun-* paradigm with suffixed plurals (cf. Table (130)) contains only very few nouns, the least one of which, *fu’-lac* ‘shark’, has a phonologically similar form in Joola (see Table (214)).

<sup>82</sup> The agreement behaviour of *fun-ceneŋ* is still unclear as it was used differently by different consultants. By some as count plural (*fun-ceneŋ fu’-lalaŋ* ‘three oysters’) while others used *gu-/ha-* for counting (*ha-ceneŋ ha-lal* ‘three oysters’).

oyster forms the plural and count plural in *gu-* and *ha-* but it is the only noun in my dictionary with an unlimited plural in *fun-*. Again, the association of prefixes in *f-* with fishes and sea animals (cf. the triadic *fâ-/fâ-(ŋ)/ja-* paradigm in section 3.1.5.2 and the *fun-/fun-(ŋ)-* paradigm in section 3.1.3.9) could explain this plural form with the oyster.

Another noun with a crossed paradigm is *ra'-wuc/mu'-wuc* 'oil palm' and the name for an old and tall specimen of an oil palm *ran-daŋk/mun-daŋk* [also attested as *ran-daŋk/ñan-daŋk*]. Whereas the plural is the regular plural of the tree paradigm (*si-/mun-*) the singular in *ran-* makes the item unusual, since it is the only one recorded with this paradigm. The oil palm is one of the most exploited plants in the environment where the speakers of Gubëeher mostly live. It provides palm wine, fibres and leaves for weaving of various household items, wood for construction, kernels for palm oil etc. The unusual paradigm its name appears in also singles the oil palm linguistically out. The prefix *ran-* is also found on the names of woven mats (*ram-basa* 'mat', *raŋ-kot* 'grass mat') and on the verbal noun *ra'-liin* 'to weave mats or cloth' (*liin* with verbal morphology means 'weave/braid').

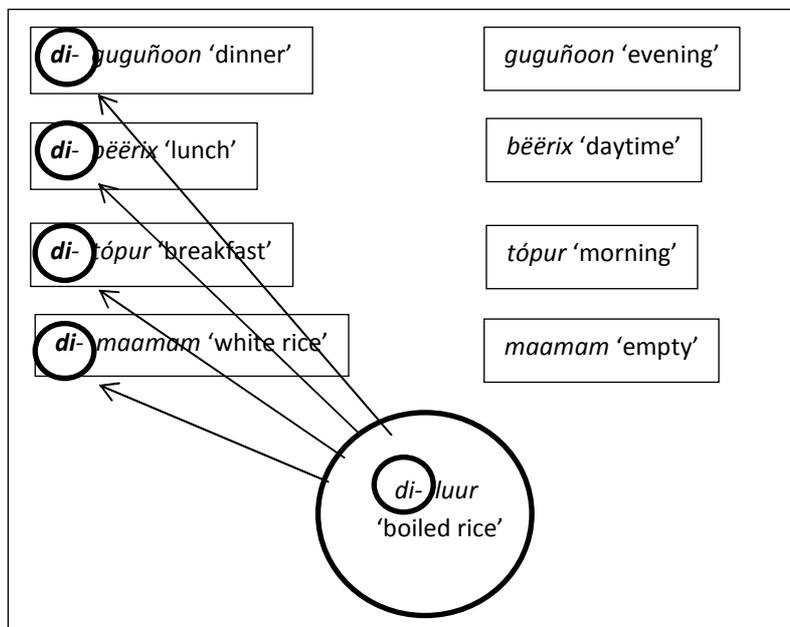
The paradigms *bu-/i-/di-* and *bu-/i-/ba-* differ in the form of the unlimited plural but share the singular and the count plural form *bu-/i-* which in turn contains many round items (see 3.1.1.1). The two triadic paradigms could thus be located semantically at the overlap of two paradigms: the *bu-/i-* component specifying shape and the unlimited plural specifying the type of entity, namely edible fruits from trees for *di-* and edible tubers and fruits growing near the ground for *ba-*.

### 3.2 (Grammaticalised) Ellipsis of the head noun

A quite productive way of word formation involves ellipsis of head nouns in noun-modifier constructions or in NC-marked possessive construction. Once these constructions are grammaticalised it is awkward to consider them as ellided, considering that they never occur with the former head noun, trigger agreement with modifiers though it might be obvious for speakers ‘where the class marker comes from’. I will present some examples, where speakers themselves made me aware of the phenomenon, and some I consider as highly probable candidates for grammaticalised ellipsis.

Consider the data in Figure (4), which shows that all major meals appear in noun class *di-*. A speaker (GS) commented on this saying “that comes from *di-luur* ‘rice’” which is the main staple and exactly what every meal consists of.

Figure (4) Lexicalised ellipsis on the example of the designation for different meals



The most likely candidate for a plausible source construction of lexicalised ellipsis is a NC-marked modifier construction as in (352), presented in 2.3.4.2, which is used when the modifier is a temporal or local adverb or a verbal noun. Example (353) shows the source construction, (354) the reconstructed stage of ellipsis<sup>83</sup> and (355) the lexicalised item *di-guguñuun* ‘dinner’ with *di-* reanalysed as regular noun class marker. As the example shows, the resulting noun can be modified itself and triggers class *di-* agreement.

(352) *ba-rux*            *ba*            *faaro*  
 CL.ba-water    AGR.ba:CONN    last.year  
 ‘last year’s water<sup>84</sup>’

(353) *di-luur*            *di*            *guguñuun*  
 CL.di-boilt.rice    AGR.di:CONN    evening  
 ‘the rice of the evening’

(354) *di*            *guguñuun*  
 CL.di:CONN    evening  
 ‘the one of the evening (CL.di)’

(355) *di-guguñuun*    *dindeen*  
 CL.DI-evening    CL.DI:DEM  
 ‘that dinner’

The grammaticalisation path for *di-maamam* ‘white rice (without sauce nor fish)’ is similar; here the source construction is an adjectival NP (356) – (358).

<sup>83</sup> The difference between the ellipsed construction and the grammaticalised prefixed noun is of course only noticeable in a relevant context, which is not provided here; see 2.3.4.2 for examples.

<sup>84</sup> On the islands without access to salt free ground water, rain water is stored for consumption until the inception of another rainy season.

(356) *di-luur*                      *di-maamam*  
 CL.di-cooked.rice      AGR.di-empty  
 ‘empty rice’

(357) *di-maamam*                      (358) *di-maamam*              *dindeej*  
 CL.di-empty                      CL.di-empty              CL.DI:DEM  
 ‘the empty one (Cl.di)’              ‘that white rice’

The assumption that the *di-* in terms for meals goes back to the NC-marker of the noun *di-luur* ‘cooked rice’ is strengthened by a parallel construction in Joola for ‘white rice’. In (359) we see that it is also composed of a stem *rakkel* ‘empty’ and a class marker *si-* which corresponds to the noun class marker of the noun for ‘cooked rice’ (360).

(359) *si-rakkel*                      (360) *si-nnaŋ*  
 CL.si-empty                      CL.si-boilt.rice  
 ‘white rice’                      ‘boilt rice’  
 Joola Eegimaa, Bassène 2006:342              Joola Eegimaa, Bassène 2006:375

Ellipsis of the head noun and the use of anaphoric pronouns is widely practised, either when the antecedent has been mentioned before or when the noun class marker is semantically strongly associated with certain nouns (if there are only few items in that paradigm or it contains a noun that is typical for a certain context) or the noun class markers refer unequivocally to a group of referents, as is the case with the human paradigm *u-/in-* of example (361).

(361) *inni na fuŋ-kəd a-n-dët-i na baloŋ in-naak*  
 AGR.i:LOC there CL.fun-play.ball 3-PL-kick-PERF there ball CL.in-two

*a-n-fakkën-ay-i anga bu<sup>85</sup>-mër*  
 3-PL-stumble-REC-PERF with AGR.bu-PRO

‘There they are playing soccer, they kick the ball, the two [players] shove each other for it.’

LM, DJI291110AC

The semantic association of the agreement marker *in-* on the numeral *in-naak* ‘two’ and of the locative *inn-i* ‘there [CL.in] are’, with humans is so strong that given the context of a soccer match it is entirely clear that the speaker refers to persons playing soccer. It cannot be interpreted differently than ‘two [people]’ and ‘There they [people] are’, even though a noun such as ‘people’ or ‘players’ is not explicitly mentioned.

In the same text, describing a video stimulus which shows a soccer match, the human agreement prefixes *u-* (sg.)/*in-* (pl.) are used again for an instance of more ad-hoc ellipsis. (In the transcription, example (362) follows right after (361)).

---

<sup>85</sup> The agreement is with the noun class *bu-* of *bu-baloŋ* ‘ball’, although the consultant clearly pronounces *balon*.

(362) *an-dëëk bum u gu-sol gu-ceen a-saat u*  
 3-PL-go so.that AGR.u:CONN CL.gu-shirt AGR.gu-red 3-pass AGR.u:CONN  
*gu-sol gu-fuun a-lay anang' a-n-fabb-ay fuŋ-kop*  
 CL.gu-shirt AGR.gu-blue 3-refuse and 3-PL-push-REC CL.fun-ball  
*ë-fur u gu-sol gu-fuun innu litadda*  
 3-leave AGR.u:CONN CL.gu-shirt AGR.gu-blue AGR.u:LOC unhappy:NEG  
*a-yen-i u gu-sol gu-ceen in-lax-i*  
 3-say-PERF AGR.u:CONN CL.gu-shirt AGR.gu-red FOC.SUBJ-grasp-PERF

*gu-so'-xonom*

CL.gu-shirt-3SGPOSS

'They go, the one with the red shirt tries to pass by, the one in the blue shirt refuses [passage] and they shove each other, the ball escapes. There's the one with the blue shirt, he is unhappy and says that the one with the red shirt has held onto his shirt.'

LM, DJI291110AC

*U gu-sol gu-fuun* 'the [one with the] blue shirt' is hardly a conventionalised expression in Gubëeher. So this is what I consider as intermediate step between the modified source construction and the lexicalised ellipsis. Note that the ellided construction (*u gu-sol gu-fuun*) is subject of the inflected verb *litadda* 'does not like' and triggers *u*-agreement with the demonstrative (*inn-u*). Note also that the ellided head noun occurs nowhere in the text. The conventionalised expressions *i-habaŋ* 'soldiers' and *i-buneg* 'rebels', used as code words for the too easily understood French words *soldat* 'soldier' and *rebelle* 'rebel', are also cases of conventionalised ellipsis. The term for 'soldier' consists of the noun *ha-baŋ* 'animal skins/leather (CL.ha)', referring to the leather boots the military are wearing and describing them as '[people] of the leather boots'. The term for rebel derives from the noun *bu-neg* 'forest (CL.bu)' and comments on the fact that the rebels usually have their camps hidden in the woods, describing them as '[people] of the forest'.

Other candidates for lexicalised ellipsis of possessives are the names of offerings during bride search<sup>86</sup>: and *bi-jacet* ‘second offering’ *bi-guras* ‘third offering’. The *bi-* alludes to the noun *bi-difèl* ‘pot’, the container in which the offered palm wine is kept, and is prefixed to the nouns *gu-ras* ‘east/sunrise’ and *jacet* ‘night’. *Bi-guras* would then translate as ‘the (CL.bi) of the morning’ and *bi-jacet* as ‘the (CL.bi) of the night’. Indeed, matching the bases of the nouns, the second offering is brought at night and the third one in the first hours of the morning. The noun *gu-ras* itself is in Class *gu-*, so that *bi-gu-ras*, just like the terms introduced in the previous paragraph, is actually a case of double prefixation.

- (363) *après*      *bu-luxun*              *u-xan-am-aŋ*              *bi-guras*  
 after      CL.bu-type.pot      2-do-3SGOBJ-PL      CL.bi-early.morning  
 ‘After giving the first offering, you give the second offering.’  
 JHS, DJI211110AC

These instances of grammaticalised ellipsis show that the noun class markers in Gubëeher are autonomous enough semantically speaking, to provide a part of the meaning even without the root they are attached to. Of course once the constructions are completely grammaticalised and the agreement markers of these ellipsed constructions are reanalysed as noun class markers, the origin of the item might become opaque.

An intriguing piece of evidence demonstrating the semantic autonomy of noun class markers revolves around the name for ‘goat’ in Bâinounk Guñaamolo and Bâinounk Gubëeher. As the following examples will show, in both languages the noun class *fâ-* is tenaciously associated with goats.

---

<sup>86</sup> Tradition wants it that the man visits the family of his chosen one three times with offerings of certain quantities of palm wine for negotiations about the permission to marry the woman and fix date and circumstances of the wedding. The first offering, *buluxun* (the name of a type of pot), includes the transfer of rice plots to the family of the woman.

In Bãinounk Guñaamolo the original noun *fabe* ‘goat’ (364), still remembered by elder people but not actively used (Friederike Lüpke, p.c.), has been replaced by a loan from Joola Fogny (*ejamen* ‘goat’). Surprisingly, only the stem *jamen* ‘goat’ was borrowed from Fogny, the noun class marker *fâ-* was retained from the former designation *fabe*, which results in the hybrid result *fâ-jamen* ‘goat’ (365). The *fâ-* apparently conveys so much goat-semantics that it was even attached to a borrowed stem.

(364) <i>fabe</i> <i>infa</i> CL.fa:goat AGR.fa:DEM	(365) <i>fa-jamen-o</i> <i>infa</i> CL.fa-goat-DET AGR.fa:DEM ( < Joola Fogny: $\epsilon$ - <i>jamen</i> )
‘this goat’	‘this goat’
Guñaamolo, Friederike Lüpke (p.c.)	Guñaamolo, fieldnotes

There is more to it though. In elicitation the Guñaamolo equivalent of ‘female goat’ was given as *fâ-dikaam* (Friederike Lüpke, p.c., see (366)), again prefixed with the ‘goaty’ noun class marker *fâ-* prefixed to the root *dikaam* ‘female’. Lexicalised ellipsis is a good candidate for the genesis of this noun if we assume a noun-modifier source construction *fâ-jamen fâ-dikaam* ‘female goat’ (366) and subsequent ellipsis of the head noun *fajamen* (or possibly *fabe* for that matter) and reanalysis of the agreement marker *fâ-* as the new noun class marker. If we compare the noun *u-dikaam* ‘woman, in the human class *u-*, it becomes clear that the noun class marker *fâ-* is indeed the only semantic clue that the referent belongs to the species of goats.

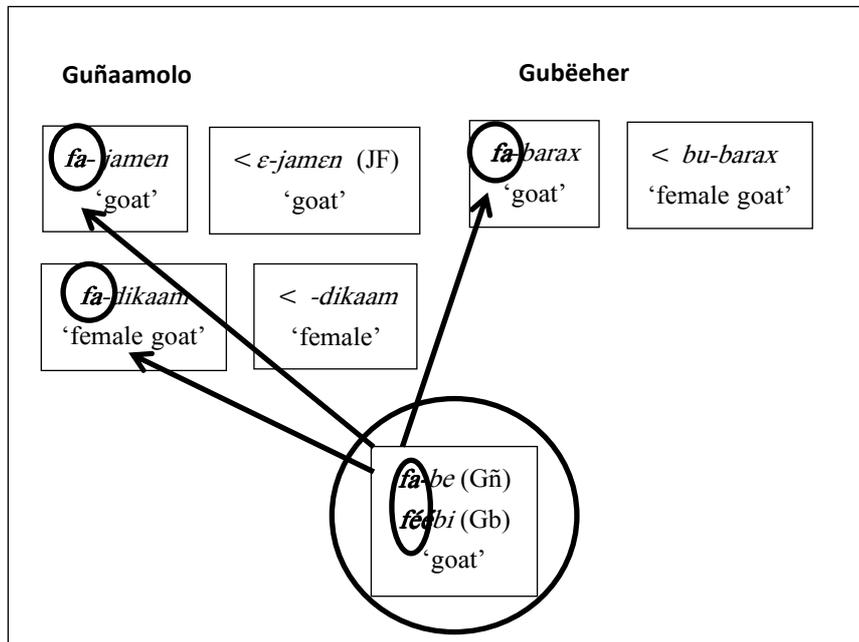
(366)	a)	<i>fa-jamen</i>	<i>fa-dikaam</i>	b)	<i>fa-dikaam</i>
		CL.fa-goat	AGR.fa-female		CL.fa-female
		‘female goat’			‘female goat’
		Guñaamolo, Friederike Lüpke (p.c.)			Guñaamolo, Friederike Lüpke (p.c.)

In Gubëher the goat story goes differently. One of my consultants gave me the form *fâ-barax* ‘female goat’ (368), again carrying the *fâ-* over from *feebi* ‘goat’ (367) to another noun which has to do with goats. *fâ-barax* though was dismissed as ‘wrong’ by another consultant who insisted that the ‘proper’ name was *bu-barax* (368). Now there are two possibilities, which both lead to the same conclusion: If indeed the form *fâ-barax* is a slip of the tongue on the part of the first consultant, it is revealing because it well shows the strong association of *fâ-* with goats. If we imagine however that the second consultant just happened not to have ever come across the perfectly fine (or possibly rare?) alternative form of the noun, which is *fâ-barax*, this would not weaken the semantic connection either.

(367)	<i>féebi</i>	<i>fa-fa</i>
	goat(CL.fa)	AGR.fa:DEM.PROX
	‘this goat’	

(368)	a)	<i>bu-barax</i>	b)	<i>fa-barax</i>
		CL.bu-female.goat		CL.fa-female goat
		‘female goat’		‘female goat’
		CS, DJI051109AC		HS, field notes

Figure (5) *Ellipsis involving the noun class fa- in Gubëeher (Gb) and Guñaamolo (Gñ)*  
 [JF=Joola Fogny]



As the examples presented in this section show, ellipsed head noun constructions are one way of word formation in Gubëeher, through reanalysis of agreement-marked modifiers as the new head noun. Although this is different from derivation, understood as shift of a root from one noun class to another, once the ellipsed constructions are grammaticalised it becomes impossible to distinguish them from derived nouns. If salient nouns serve as ellipsed head in many of these constructions, the number of nouns bearing their class markers increases, and with it the impact of the domain for noun class semantics. It can be speculated that these mechanisms can result in a reorganisation of the semantic network of a noun class by increasing the saliency of single semantic domains within the network through the multiplication of items in that domain.

### 3.3 Absolute use of noun classes

Another area where the semantic content of noun classes becomes apparent and is used for derivational purposes is the so called “absolute use of modifiers”, thus labelled by Grinevald (2000:255) discussing some examples from Setswana. A noun class prefix is attached to a pronominal base conveying temporal, local or circumstantial meaning in absence of a head noun which might have triggered the respective agreement – considering that pronouns usually carry agreement markers in concord with the class of the head noun they modify.

It is remarkable that the noun classes which have a productive absolute use formally resemble some of the question words from the same domain (location, time etc.) as can be seen in Table (166).

Table (166) *The absolute use of noun class markers*

<b>Absolutely used noun class</b>	<b>NC semantics in absolute use</b>	<b>Related question word</b>	<b>Gloss</b>
<i>ho-</i>	thing	<i>ho</i>	‘what’
<i>bi-</i>	locative	<i>bee</i>	‘where’
<i>kan-</i>	locative	<i>ken</i>	‘where’
<i>ni-/nu-</i>	causal	<i>ne</i>	‘how’
<i>da-</i>	temporal	<i>da</i>	‘when’
<i>fa-</i>	temporal	/	/

The base for these absolutely used noun classes can be demonstratives, the relative pronoun but also the numeral ‘one’ and some indefinite modifiers. The following Table (167) shows those adverbials which are constructed with a demonstrative base and a noun class marker in the absolute use. These are formed exactly like

demonstratives, in fact *bimbi* is polysemous between the proximal demonstrative of class *bi-* (*binaal bimbi* ‘this path’) and the locative adverb ‘here’.

Table (167) *Absolute use of noun class prefixes with demonstrative base*

Prefix	Proximal demonstrative	Distal demonstrative	Referential	Short
<i>bi-</i>	<i>bimbi</i> ‘here’	<i>bimbeej</i> ‘there’	<i>biheen</i> ‘over there’	<i>bim</i> ‘here’
<i>ni-</i>	<i>ninni</i> ‘like this’	<i>nineej</i> ‘like that’	<i>nigeen</i> ‘like that’	<i>num</i> ‘like that’
<i>fa-</i>	/	/	/	<i>fam</i> ‘then’
<i>da-</i>	/	/	/	<i>dam</i> ‘then/that day’

Table (168) shows the noun class prefixes attested with an absolute use, in combination with the pronominal base of the relative pronoun, as well as with the indefinite modifiers *ruk* ‘some/a certain’ and *laat* ‘-ever’, and with the base of the number ‘one’. The semantic associations between noun class marker and meaning in all examples where noun class markers are used absolutely are quite stable and correspond to the semantic value as summarised Table (166) and established for the absolute use with demonstrative bases as shown in Table (167). One plausible origin of these pronouns is an ellipsed construction, as presented in section 3.2, e.g. the shortening of *dë-nég dë-rúk* ‘another day’ through ellipsis of *dë-nég* ‘day’ to *dë-rúk* ‘another day’, which resulted in a class marked pronoun whose temporal, locative etc. semantics are entirely provided by the class marker, which has thus acquired a derivational value. Possible source nouns for an ellipsed construction are included in Table (168).

Table (168) *Absolute use of prefixes with pronominal bases*

Prefix	On relative pronoun	On indefinite <i>rúk</i> 'some'	On indefinite <i>laat</i> 'any'	On numeral 'one'	Possible source noun
<b>bi-</b>	<i>bi-(gi)ni</i> 'there where'	/	<i>bi-la</i> 'wherever'	/	<i>bi-tix</i> 'place'
<b>ni-</b>	<i>ni-gini</i> 'the way in which'	<i>nin-dúk</i> 'otherwise'	<i>ni-la</i> 'however'	/	
<b>fa-</b>	<i>fě-(gi)ni</i> 'then, when'	/	<i>fa-la</i>	<i>a fě-fěnduk</i> 'together'	
<b>da-</b>	<i>dě-(gi)ni</i> 'then, when'	<i>dě-rúk</i> 'some day'	<i>da-la</i> 'whenever'	/	<i>dě-něg</i> 'day'
<b>ho-</b>	<i>hó-(gi)ni</i> 'that, which'	<i>hó-rúk</i> 'something'	<i>ho-la</i> 'whatever'	/	<i>honj</i> 'thing'
<b>kan-</b>	<i>kě-(gi)ni</i> 'there, where'	<i>kěn-dúk</i> 'somewhere'	<i>ka'-la</i> 'wherever'	<i>a kě-kěnduk</i> 'together'	<i>kan-tix</i> 'place'

The examples (369) – (373) illustrate the use of the items presented in Table (167) and Table (168).

- (369) *i-naax-i*      *koona*      ***hě-gěni***      *i-yéég-et*      *a*      *bu-koor*  
 1-tell-PERF      house      CL.ha-REL      1-hear-VEN      PREP      CL.bu-village

'I told at home what I had heard in the village.'

JMS, field notes

- (370) *en ce moment*      *gu-r-oŋ*           *di-fand*      ***fě-gini***      *u-haŋgul*  
 then      be- NEG.PERF-3SGSUBJ      CL.di-ronier.fruit      CL.fa-REL      2-can

*u-dóm*      *a-yen-a*      *di-fand*<sup>87</sup>  
 2-swallow      3-say-PASS      CL.di-ronier.fruit

'At that point, it is not a ronier fruit. When you can eat it and it is soft it's a ronier fruit.'

AB, DJI121109AC3

<sup>87</sup> The translation of this example is made awkward by the fact that in Gubëeher the verb *dóm* that is used for 'eat' has no equivalent in English. It is used when fruits or soft things are eaten, so by using *dóm* the speaker refers to the state of the fruit as when it is soft. Once the flesh hardens it is not called *bufand* any more and its consumption has to be referred to as *xěb* 'eating hard things'.

(371) *dě-ni u-xan-aŋ bu-hup ha gu-ren-in-kenem da-m*  
 AGR.da-REL 2-AUX-PL CL.bu-pour CONN CL.gu-four-ORD-3SGPOSS CL.da-PRO

*a in-dikaam iŋ-kan bu-wux*  
 PREP CL.in-woman FOC.SUBJ-AUX CL.bu-straight

‘The day that you pour libations for the fourth times, the one [day] of the women will be fixed.’

JHS, DJI101210AC

(372) *a-wor na pe a ko-jund kokoŋ kě-ni*  
 3-throw there all PREP CL.ko-hole AGR.ko:DEM.DIST AGR.ka'-REL

*hu-ŋaan huhoŋ ě-gu-ne*  
 CL.hu-thing AGR.hu:DEM.DIST 3-be-SUB

‘He throws [the throats of th sacrificed animals] all there in the small hole, where the thingummy is.’<sup>88</sup>

JHS, DJI101210AC

(373) *g-u-fu-tt-eŋ tēpur cinq heures u-wuu'-xurux-oŋ bimbi*  
 COND-2-leave-VEN-PL morning five o'clock 2-see-FUT-PL there

*bi-ni gu-raas a-fur-un-t-ox*  
 AGR.bi-REL CL.gu-east 3- go.out-APPL-VEN-HAB

‘If you (pl.) get up at 5 o'clock in the morning you will see [it, i.e. a certain star] there where the sun comes out.’

CS, DJI070211AC2

The noun class *ho-* also derives two manner adverbs from stative bases: *ho-tliit* ‘a bit’ and *hó-bún* ‘well’. The numeral base *-liix* ‘first’ is used with the NC marker *gu-* to form the temporal adverb *gu-liix* ‘in the past’ and the noun *fa-liix* ‘past’ (see in example (374) with a possessive suffix).

<sup>88</sup> The context is the sacrificial slaughtering of animals whose throats are thrown in a hole. JHS describes in this phrase how he throws the rest of the throats in the hole where the others already are.

(374) *i-lenta-t-i*                      *fa-lix-hum*  
1-remember-VEN-PERF    CL.fa-first-1SGPOSS

‘I have remembered my youth.’

MB, field notes

### 3.4 Loan integration

The integration of loan words into a noun class system can give further evidence regarding the relevance of semantic parameters and help singling out which semantic ties are synchronically active as done by Demuth (2000) who uses evidence from productive derivational patterns, locative classes, loan integration and data from acquisition studies in her study on Sesotho noun class semantics. From a diachronic point of view an analysis of mechanisms of loan integration might be a way to date the time of borrowing provided that specific strategies can be attributed to periods in time.

The majority of loan words in Gubëeher identified so far, especially those from non-NC languages, are integrated into agreement type 2b nouns, i.e. non-prefixed nouns with plural suffixes and *a*-agreement, which makes loans in Gubëeher somewhat less exciting for studies of the semantic content of noun class markers than in languages where most nouns are assigned to a paired prefixed class. The size and productivity of the default class may be a result of the presence of numerous loanwords from non-noun class languages which have been incorporated into Bāinounk Gubëeher. Apart from integrating loanwords to the class of prefixless 2b nouns, which is the default option (see Table (169)), there are also instances of

assignment into the prefixed classes according to semantic or phonological criteria and into the most common prefixed classes<sup>89</sup>.

Table (169) *Some loans from Kriolu and Mandinka*

Gubëeher 2b-agreement nouns	Gloss	Source
<i>loosa</i>	'shop'	Kriolu: <i>losa</i>
<i>féera</i>	'market'	Kriolu: <i>fera</i>
<i>peregu</i>	'nail'	Kriolu: <i>pregu</i>
<i>fuŋku</i>	'room'	Kriolu: <i>funku</i>
<i>wuli</i>	'thousand'	Mandinka: <i>wuli</i>
<i>koloŋ</i>	'well'	Mandinka: <i>koloŋ</i>

Loans entering Gubëeher can be integrated into the noun class system according to the semantic field they belong to. Whereas semantic patterns could not yet be identified for all of the noun classes, the semantic association of noun class paradigm *bu-/i-* with fruits and vegetables and of the corresponding trees with the paradigm *si-/mun-* is very robust. Accordingly we find borrowed fruit designations and the trees that carry them assigned to these noun classes:

(375) *-limo* 'orange' (from Kriolu: *limon* 'orange')

- a) *bu-limo* 'orange'
- b) *i-limo* 'oranges (count)'
- c) *di-limo* 'oranges'
- c) *si-limo* 'orange tree'
- d) *mu'-limo* 'orange trees.'

Human nouns entering Gubëeher, which enter the human paradigm *u-/ñan-* are also instances of semantic assignment. The human class incorporating borrowed nouns

<sup>89</sup> Of course, for loans from languages with noun class prefixes there is the further option to borrow these nouns together with their class marker. Some examples of probable candidates for loans to or from Joola languages are presented in the section further research in chapter 5.

denoting humans is also attested in Joola Eegimaa (Sagna 2008) and the only occasion for semantic loan assignment in Sesotho (Demuth 2000).

(376) *u-zwe/ñan-zwe* ‘player’ < fr. *jouer or joueur* ‘player’

(377) *u-lekon/ ñan-lekon* ‘pupil’ < *lekon* ‘school’ (from French ‘école’)

(378) *u-/ñan-lulum* ‘white person’ < *lulum* ‘white person (Joola)’

A revealing case of semantic integration comes from Bãinounk Guñaamolo where *sin-fil/ñan-fil* ‘electric cable’ borrowed from French *fil* ‘thread/cable’ is assigned to the *sin-/ñan-*paradigm, which is heavily associated with strings in Gubëeher and apparently also in Guñaamolo (cf. *sin-kind/ñan-kind* ‘thread’ in Guñaamolo ).

In rare cases the first syllable of a loanword gets reanalysed as an existing noun class marker<sup>90</sup> and integrated into the class of paired, prefixed nouns. Since *ka-/kan-* is attested in Gubëeher as a noun class marker, the initial CV-sequence *ka-* has in (379) and (380) been reanalysed as a noun class marker and separated from the rest of the noun stem. Kriolu is not a noun class language and the first syllable *ka-* is therefore definitely part of the stem in the source language. This strategy is not productive at all synchronically, judging from the data obtained so far.

(379) *ka'-leron/ña'-leronj* ‘cauldron’ < Kriolu *kaleron* ‘cauldron’

(380) *ka'-raafa/ña'-raafa* ‘bottle’ < Kriolu *karafa* ‘bottle’

(381) *si-sapta/sapta-ŋ* ‘shoe’ < Kriolu *sapata* ‘shoe’

Both nouns are in the paradigm *kan-/ñan-* with alliterative agreement. There are some other nouns with the same prefix/agreement paradigm and the pattern *kV-/ñV-* is attested for the diminutive paradigm *ko-/ño-*. The integration of the nouns *ba-*

---

<sup>90</sup> Doneux (1990:28) mentions a degree of productivity for Kobiana but does not provide percentages and gives only one example: Kriolu ‘*kamisa*’ > *kamisa kaa* ‘this shirt’. The strategy is quite productive in other noun class languages though, see e.g. Demuth (2000) on Sesotho and Buis (1990:22) on Manjaku.

*naana* ‘banana plant’ and *ba-taata* ‘sweet potatoes’ are also examples of phonetic loan integration. In the case of ‘banana’ the first syllable of the source noun, *ba-*, has been reanalysed as the prefix and *naana* as the stem. Whereas the noun referring to the fruit has been integrated in the fruit paradigm *bu-/i-*, the source noun ‘banana’ is used for the plant and treated as type 2a noun with alliterative agreement and suffixed plural (382). It cannot be excluded though that *banana* has entered Gubëeher via another NC-language and not directly from Kriolu, in which case the reanalysis might as well have taken place in the intermediary language and not in Gubëeher.

(382) *bu-naana/i-naana* ‘banana’ and *ba-naana/ba-naana-ŋ* ‘banana tree’ < Kriolu *banana*

As for the sweet potato, the first syllable of the source noun *batata* ‘sweet potato’ from Kriolu has been reanalysed as the unlimited plural of the *bu-/i-/ba-* paradigm which contains other fruits and tubers growing on the ground and not on trees (383) (cf. 3.1.2.5 for a presentation of the paradigm).

(383) *bu-taata/i-taata/ba-taata* ‘sweet potato’ < Kriolu *batata* ‘sweet potato’

The most frequent noun class paradigms *bu-/i-* and *gu-/ha-* also accommodate some loanwords. It cannot be determined yet whether semantic criteria also play a role or whether *bu-* and *gu-* are default classes for borrowed items – or have been at some point before integration into the classless nouns became the default.

- (384) *bu-wer/ i-yer* ‘glass’ < fr. *verre* ‘glass’  
 (385) *bu-darap/i-darap* ‘bedsheet’ < fr. *drap* ‘bedsheet’  
 (386) *gu-furset/ha-furset* ‘fork’ < fr. *fourchette* ‘fork’  
 (387) *gu-sigaret/ha-sigaret* ‘cigarette’ < fr. *cigarette* ‘cigarette’

The treatment of loans from Joola or other Bak languages into Bāinounk is a promising topic for future research. Detailed knowledge about what happens when not only two languages but two noun class systems interact, has the potential of increasing our knowledge about noun class systems in language contact situation. The two nouns *ë-rús* ‘jigger’ and *a-ñaal* ‘worm’ are most probably loans from Joola (see Table (170)). Both roots are not in class *a-* in the source language (*a-* is the human class in Joola) but have been assigned to the Gubëeher noun class paradigm *a-/a(-ŋ)/bi-* which contains all insects/worms (see section 3.1.5.1) on semantic grounds.

Table (170) *The ‘insect paradigm’ with loans*

Singular	Count plural	Plural	Gloss	Source
<i>ë-rús</i>	<i>ë-rús-aŋ</i>	<i>bi-rús</i>	‘jigger’	Joola Eegimaa <i>e-rúsu</i> ‘jigger’
<i>a-ñaal</i>	<i>a-ñaal-aŋ</i>	<i>bi-ñaal</i>	‘worm’	Joola Eegimaa <i>fu-ñal</i> ‘worm’ Joola Kaasa <i>hu-ñal</i> ‘worm’

### 3.5 Conclusion

The detailed description of the paradigms attested in Gubëeher, constituted by the noun class prefixes and the plural suffix and their alignment in plural singular paired, triadic and one-class units, has revealed the semantic and organisational principles underlying nominal classification in Gubëeher. The semantic validity of the paradigms is further supported by the patterns observable in the paradigmatic networks, through which the various nouns are derived from a single root. There,

the semantic contribution of each paradigm to the meaning of the derived noun becomes easily understandable, most notably but not exclusively in the botanic domain, where paradigms regularly derive specific types and parts of plants from unspecified roots. The common practice of ellipsis in modifier-noun constructions attests to the semantic autonomy of the noun classes, given that the stable form-meaning association observed in noun classes/noun class paradigms ensures the recuperability of the ellipsed head noun. The absolute use of noun class markers imbues various pronouns with a variety of adverbial semantics expressing temporal, location, circumstantial relations or reference to things and persons, again in the absence of a head noun, which leaves the semantic burden with the noun class morphology. The following chapter, which treats the role of noun class morphology in deriving nouns and verbal nouns from eventive and stative roots, will further confirm the systemic functions of nominal classification. This role establishes the noun class system as more than simply a purely syntactic phenomenon regulating agreement and makes clear that its functions include the extension of vocabulary through the building of paradigmatic networks, including an extensive derivational capacity as well as culturally relevant taxonomic aspects.

## 4 Verbal nouns

The main issue of this chapter is a description of the formation, properties and distribution of verbal nouns, a cover term used here for various types of abstract nouns derived from eventive stems. These items are comparable formally and functionally with what is usually understood as ‘nominalised verbs’. ‘Nominalisation’ in a cognitive sense implies reification, i.e. construal of an eventive root as time stable, which is a prototypical characteristic of entities. As the label suggests, verbal nouns combine characteristics regarded as typical for verbs and nouns. Due to the difficulties in determining the category of roots and consequently the direction of derivation in Gubëeher, I do not claim that verbal nouns are actually derived from verbs or verbal roots, but rather from roots denoting events or states in contrast to nouns derived from roots exclusively denoting entities. The derivation of nouns from unspecified roots is the main function of noun class prefixes in Gubëeher, as has been established in 1.4.3, so that in Gubëeher a distinction between derived and non-derived nouns is not viable. Nominalisations in Gubëeher have predominantly NP features and are lexical rather than clausal, i.e. they are not used to form adverbial subordinate clauses in the fashion of non-finite converbs (Koptjevskaja-Tamm 1993). It is problematic to decide whether nominalisations should be considered as comparable with instances of morphologically marked nominalisation or conversion (or zero nominalisation) in other languages. The prefixation with a class marker implies that verbal nouns are morphologically marked, but so are all nouns, which means that the phenomenon could be understood as conversion, in the sense that they are equipped “with nothing to distinguish a nominalized construction from a non-derived nominal”

(Yap et al. 2011:13). Gubëcher nominalisations are probably best compared with what Yap et al. (2011) label as ‘substantivised’ nominalisations. These nominalisations are marked with morphology which fulfils other functions as well, including classification, determination, plural marking, possession, etc. The focus here is on the paradigmatic relationships of verbal nouns derived from one root. Rather than considering the various infinitives derived from one root as equivalent to paired paradigms as established with count nouns in chapter 3, (section 3.1.1), I rather use the term ‘infinitival paradigms’, since the relationship of infinitives within an infinitival paradigm is of a different kind than the number relations of the members of a paired paradigm. The role of the noun class prefixes in the formation of these items, the syntactic and semantic differences between different types of verbal nouns and multiple infinitives and a comparison of noun class semantics classifying eventive and stative roots and entities are all of interest in this context. In section 4.3 I will present the more nominal participant nominalisations derived from eventive and stative roots, including instruments, event participants and locations. The remainder of the chapter is dedicated to the syntactic, formal and distributional properties of infinitives, i.e. verbal nouns one of whose functions is that they can be used as complements. This mixed category status, which means that they have nominal and verbal properties is topic of section 4.4.3, their morphological and syntactic properties are presented in section 4.4.4 and an overview of the constructions these forms are used in is given in section 4.5. A register of infinitives sorted by the noun class prefixes they are derived with and notes on semantic correlations between the prefixes and the meaning of the infinitives is given in section 4.6. The subchapters of sections 4.7 cover the issue of multiple infinitives,

i.e. the distribution of infinitives derived from the same root by different noun class markers, which will be shown to be sensitive to transitivity-related parameters.

#### 4.1 Cognitive views on syntactic categories

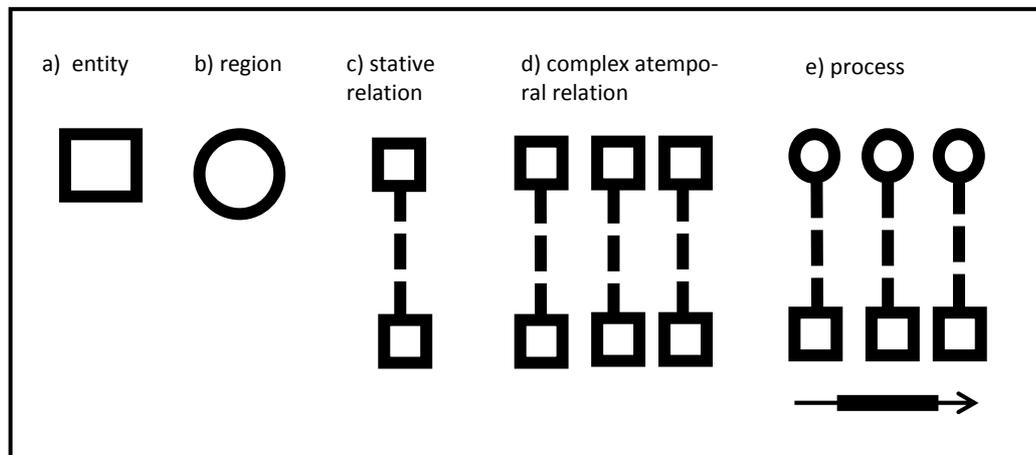
Langacker's (1987b; 1987a; 1991) semantic account of word classes based on the prototype model which attributes the difference between word classes to a difference in 'construal', by means of 'profiling' is adopted to account for the hybrid character of verbal nouns as having nominal and verbal properties. In this framework, semantic structures (or 'predications' (Langacker 1991:3)) can be 'nominal' or 'relational'. The highly schematic definition of 'noun' involves the notion of 'region within a domain' (Langacker 1991:63) which can be bounded for count nouns, or unbounded for mass nouns (Langacker 1991:69):

- a. "A 'count noun' designates a region that is bounded within the scope of predication in its primary domain."
- b. "A 'mass noun' designates a region that is NOT specifically bounded within the scope of predication in its primary domain."

Bounding can relate to a delimitation in any domain, be it basic (time, space, pitch) or abstract (months in the calendar, paragraphs in a written work etc.).

'Relational predications' can be further "divided into those that profile 'processes [verbs]', and those that designate 'atemporal relations [prepositions, adjectives, adverbs, infinitives and participles]' (Langacker 1991:78)". Diagrams representing the main predication types are shown in Figure (6):

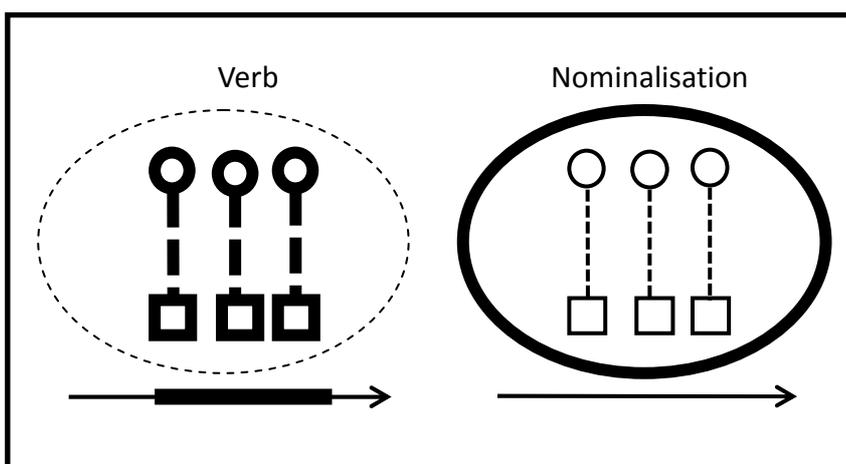
Figure (6) Main predication types (Langacker 1987b:74)



‘Entity’ and ‘region’ as the “maximally inclusive notion” (Langacker 1991:81) represent nouns (as defined above). An example of a ‘stative relation’ is the preposition *above* with a fixed configuration of trajector and landmark (these terms designate the entities that are put in relation to each other). An example of a ‘complex atemporal relation’ is the preposition *across* as in “A hiker waded across the river” (Langacker 1991:22) where the preposition describes the stages of the trajector’s (the hiker) path in relation to the landmark (the river). The crucial differences between verbs and atemporal relations lies in the way they are ‘profiled’ in relation to their ‘base’: “A process contrasts with the corresponding atemporal relation by having a TEMPORAL PROFILE, defined as the span of conceived time through which the profiled relationship is scanned sequentially” (Langacker 1987b:74). Similar to the concept of the ‘domain’, the ‘base’ provides the background or context, part of which is ‘profiled’ by a lexical item. In Langacker’s diction: “The base for a grammatical predication is its necessary context, which may be a conceptualization of any degree of complexity. The profile of a predication is that substructure within the base that the predication designates” (Langacker 1983:188). In Figure (7) Langacker (1991:98f) schematises the difference between a

verb and its nominalisation – e.g. explode and explosion – as a difference in construal which is conveyed through differences in profiling. The diagram for the verb represents a process: the subevents and their temporal progression are profiled. As for the nominalisation, the subevents are profiled like an entity, in their totality, without focussing on their temporal succession. The different conceptualisation of the same base is expressed by the terms ‘sequential scanning’ i.e. consecutive perception of subevents along a timeline, which is characteristic for verbs, and summary scanning, i.e. conceptualisation as a whole, which is characteristic for all other ‘complex relations’ (Langacker 1991:152f).

Figure (7) Profiling (Langacker 1991:99)



Applied to Gubëher, an unspecified root with an eventive or stative schema can be conceptualised sequentially by inserting it into a verbal construction or summarily by applying nominal morphology to it in the form of noun class morphology. The assumption that word classes are different conceptualisations of otherwise identical structures allows an identification of the categorially unspecified root with the ‘essential conceptual content’ (Langacker 1991:75), i.e. the components the two structures in Figure (7) share, without any conceptualisation or profiling having

occurred. The task of profiling is left to the syntactic frame and the noun class paradigm the root is inserted in. Different morphological environments profile different components of the base, the result being verbs, nouns or verbal nouns with varying degrees of process/entity character.

## 4.2 Types of verbal nouns in Gubëeher

The derivation of verbal nouns from eventive and stative roots is very productive in Gubëeher, and several types of verbal nouns can be distinguished on semantic as well as on syntactic grounds. The most basic distinctions between categories of verbal nouns adopted in this thesis is the one between participant nominalisations and event nominalisations.

Table (171) *Types of verbal nouns and their syntactic properties*

<b>Nominalisation type</b>	<b>Category</b>	<b>Syntactic position</b>
event nominalisations	infinitive	complement position
	action/state noun	argument position
	manner noun	
	result noun	
	property	
participant nominalisations	instrument	
	locative	
	agentive	

Participant nominalisations are understood as “nominal constituents that function as arguments with referential status within a clause” (Yap et al. 2011:3) such as agents, instruments and locations. Event nominalisations described by Malchukov (1994:26) as “nominalizations with an actional propositional meaning” and by Yap et al.

(2011:3) as “second order ontological entities” (first order nominalisations are participant nominalisations), including action nouns (‘the act of doing X’), infinitives, fact-of-nouns and manner and result nouns. These event nominalisations exhibit patterns of polysemy, usually between a more verbal use as complement of auxiliaries, modals and other complement taking verbs (labelled infinitives) and some of the other types of event nominalisations with more nominal properties such as manner nouns and action nouns. I will use the label infinitive for those verbal nouns which fulfil the minimum requirement of being used as such, no matter which other senses they additionally have. I interpret the category ‘action noun’ more narrowly than Comrie and Thompson (1985), who do not distinguish between nominalisations with more verbal characteristics like gerunds and more nominal items like English *creation* and *arrival*, which I would rather consider as result nouns. Table (172) is a summary of the various types of verbal nouns with examples of the paradigms which derive them systematically from eventive roots so far attested in Gubëeher.

Table (172) *Nouns derived from eventive roots in Gubëeher*

Type of verbal noun	Paradigm	Example	Related verb stem
Agent noun	<i>u-/ñan-</i> <i>u-/ñan-</i> <i>ji-/ji-(-ŋ)</i>	<i>u-mbaal</i> ‘fisherman’ <i>u-dëëk-a</i> ‘stranger’ <i>ji-def</i> ‘old person’	<i>mbaal</i> ‘fish’ <i>dëëk</i> ‘go’ <i>def</i> ‘be old’
Instrument noun	<i>gu-/ha-</i>	<i>gu-ñiis-um</i> ‘sickle’	<i>ñiis</i> ‘cut grass’
Location noun	<i>bu-</i> <i>kan-</i> <i>bu-</i>	<i>bu-noox</i> ‘sitting room’ <i>kan-noox</i> ‘seat’ <i>bu-likina-um</i> ‘kitchen’	<i>noox</i> ‘sit’ <i>noox</i> ‘sit’ <i>likina</i> ‘cook a meal’
Property noun	<i>ba-</i> <i>si-</i>	<i>ba-sóog</i> ‘ugliness/taboo’ <i>si-riin</i> ‘laziness’	<i>sóog</i> ‘be ugly’ <i>riina</i> ‘be lazy’
Manner noun	? ?	<i>man-dëëk-an</i> ‘manner of going’ <i>ma-lób-an</i> ‘manner of speaking’	<i>dëëk</i> ‘go’ <i>lób</i> ‘speak’
Action noun/infinitive	<i>bu-</i>	<i>bu-ñoŋ</i> ‘to take/taking’	<i>ñoŋ</i> ‘take’
Gerund	<i>ba-</i>	<i>be-dëëk-er</i> ‘having gone’	<i>dëëk</i> ‘go’

### 4.3 Regularly derived non-infinitival verbal nouns

#### 4.3.1.1 *The derivation of human nouns from eventive roots*

The paradigm *u-/ñan-* is very productive in deriving human nouns from eventive roots. The alternative human paradigm *u-/in-* is not attested in derivational use.

(388) *u-hup/ñan-hup* ‘pourer[of palm wine during ceremonies]’ < *hup* ‘pour’

(389) *u-saw/ñá-saw* ‘hunter’ < *saw* ‘hunt’

(390) *u-mbaal/ñá-mbaal* ‘fisherman’ < *mbaal* ‘fish (v.)/fishnet’

(391) *u-ñofax/ñan-nofax* ‘adoptive child’ < *ñofax* ‘adopt’

(392) *u-kuj/ñan-kuj* ‘wrestler’ < *kuj* ‘wrestle’

(393) *u-rahi/ñá-rahi* ‘black person/African’ < *rahi* ‘black’

The suffixed *ji-*paradigm is used to derive human nouns from roots denoting mostly unpleasant or derogative properties of people (Table (173)). The *ji-*paradigm contains

mostly animals otherwise (cf. Table (119), which might explain the degrading effect of classifying humans in this paradigm.

Table (173) *Human derivations in the ji- paradigm with suffixed plural*

Human noun Singular	Human noun Plural	Gloss	Meaning of the root in a verbal fame
<i>ji-def</i>	<i>ji-def-eŋ</i>	'old person'	'be old'
<i>ji-pal</i>	<i>ji-pal-aŋ</i>	'jerk'	'be clumsy'
<i>ji-tuun</i>	<i>ji-tuun-oŋ</i>	'greedy person'	'be greedy/egoistic'
<i>ji-bëën</i>	<i>ji-bëën-ëŋ</i>	'pussy'	'be shy/anxious'
<i>ji-riin</i>	<i>ji-riin-eŋ</i>	'lazybones'	'be lazy'
<i>ji-paab</i>	<i>ji-paab-aŋ</i>	'glutton'	'be greedy'
<i>ji-puul</i>	<i>ji-puul-oŋ</i>	'goof'	'be incapable'
<i>ji-piim</i>	<i>ji-piim-eŋ</i>	'blind person'	'be blind'
<i>ji-rux/ju-rux</i>	<i>ji-rux-oŋ/ju-rux-oŋ</i>	'drunkard'	'drink'
<i>ji-teet</i>	<i>ji-teet-eŋ</i>	'deaf person'	'be deaf'
<i>ji-xaj</i>	<i>ji-xaj-aŋ</i>	'handicapped person'	'be handicapped'
<i>jaŋ-gaar</i>	<i>jaŋ-gaar-aŋ</i>	'dimwit'	'be stupid'

The roots which derive humans with *ji-* are deviant from other properties in that most of them have a verbal stem ending in *-a*, the middle/reflexive derivational suffix, and form property nouns with the noun class prefix *si-* and not with *ba-* as most other roots (the derivation of property nouns is discussed in 4.3.2). The agreement behaviour of the human nouns in the *ji-* paradigm with suffixed plural is subject to variation: some speakers tend to use human *u-/in-* agreement (394) as they would with the nouns in the human paradigms *u-/in-* and *u-/ñan* others would use the *a-* agreement (395), as they would with the inanimate nouns in the *ji-* paradigm with suffixed plurals.

(394) *ji-def-eŋ*      *i-naak*  
 CL.ji-old-PL    CL.i-two  
 ‘two old people’

(395) *ji-def-eŋ*      *a-naak-aŋ*  
 CL.ji-old-PL    AGR.a-two-PL  
 ‘two old people’

#### 4.3.2 The derivation of instruments from eventive and stative roots

The paradigm *gu-/ha-* in combination with the applicative suffix *-um* (see 2.4.4.6 for the derivation of applicative verbs with *-um*) is productive in deriving instruments from roots that are used with verbal morphology, although other prefixes are also attested (see examples (396) – (400) below). The derived instruments are used to perform the action denoted by the verb. The suffix *-um* is also attested in the derivation of locations (see 4.3.2.1).

Table (174) *Instruments derived with the gu-/ha-paradigm and the applicative extension -um*

Singular	Plural	Gloss	Related verb stem	Gloss verb
<i>gu-laŋk-um</i>	<i>ha-laŋk-um</i>	‘oar’	<i>laŋk</i>	‘row’
<i>gu-laar-um</i>	<i>ha-laar-um</i>	‘percussion instrument’	<i>laar</i>	‘hit/clap’
<i>gu-ŋiis-um</i>	<i>ha-ŋiis-um</i>	‘sickle’	<i>ŋiis</i>	‘mow’
<i>gu-góbul-um</i>	<i>ha-góbul-um</i>	‘tool for harvesting palm wine’	<i>góbul</i>	‘harvest palm wine’
<i>gu-lax-um</i>	<i>ha-lax-um</i>	‘handle’	<i>lax</i>	‘grasp’
<i>gu-way-um</i>	<i>ha-way-um</i>	‘fin’	<i>way</i>	‘swim’
<i>gu-rëëj-um</i>	<i>ha-rëëj-um</i>	‘anus’	<i>rëëj</i>	‘defecate’
<i>gu-bif-um</i>	<i>ha-bif-um</i>	‘fan’	<i>bif</i>	‘fan air’
<i>gu-huddiin-um</i>	<i>ha-huddiin-um</i>	‘cover’	<i>huddiin</i>	‘cover’

Some instruments, also involving the applicative suffix *-um*, appear in other noun class paradigms. The two derivations in *ja-*, (396) and (397), are clearly semantically motivated, since the referents are made of organic material, whose association with the prefix *ja-* as an unlimited plural marker is very stable (3.1.7.1). The use of paradigm *sin-/ñan-* for the derivation of the rope used to descend the bucket into the well (398) is also semantically transparent, considering that the *sin-/ñan-* paradigm is indisputably made up of strings and string-like items (3.1.1.5). The use of the prefix *a-* in this context in (399) and (400) cannot be explained.

(396) *ja-nób-um* ‘fibres to attach parts of the kajandou<sup>91</sup> to the stick’ < *nób* ‘attach’

(397) *ja-jaalina-um* ‘dry wood chips used to light fire’ < *jaalin* ‘ignite’

(398) *sin-diina-um/ñan-diina-um* ‘well rope’ < *diin* ‘well/‘draw water’

(399) *a-xeec-um* ‘pen’ < *xeec* ‘write’

(400) *a-jaŋ-um* ‘lamp’ < *jaŋ* ‘shine’

#### 4.3.2.1 *The derivation of locations from eventive roots*

*Bu-* is also somewhat productive deriving places where an event takes place, some with the derivational suffix *-um* (see 2.4.4.6 for the derivation of applicative verbs with *-um*). The *bu-*locatives all refer to closed places which have an inside, or are clearly spatially delimited as in the derivations from the botanical domain (404) and (405). The two derivations with the noun class prefix *bi-* and the two suffixes *-um* and *-én*, (410) and (411), also denote locations with a possible reference to inside space. A ceiling is the upper limit of a room and the projectile is supposed to enter the target spot at the bull’s eye.

---

<sup>91</sup> The *gu-bic* is the most important agricultural instrument for the cultivation of rice. It consists of a wooden pole, approximately as tall as a man to which a metal blade is attached.

- (401) *bu-noox* ‘palm wine shack<sup>92</sup>’ < *noox* ‘sit’
- (402) *bu-waan* ‘bedroom’ < *waan* ‘lie’
- (403) *bu-rëej* ‘toilet’ < *rëej* ‘defecate’
- (404) *bu-ɲiis* ‘grass field<sup>93</sup>’ < *ɲiis* ‘mow grass’
- (405) *bu-gób* ‘palm grove’ < *gób* ‘harvest palm wine’
- (406) *bu-likinah-um* ‘kitchen’ < *likinah* ‘prepare food’
- (407) *bu-ɲan-um* ‘entrance’ < *ɲan* ‘enter’
- (408) *bu-fur-um* ‘exit’ < *fur* ‘go out’
- (409) *bu-hëej-um* ‘hook’ < *hëej* ‘hang’
- (410) *bi-nér-ëm-én* ‘ceiling’ < *nér* ‘put a ceiling’
- (411) *bi-yah-ëm-én* ‘hit mark (of a shot)’ < *yah* ‘hit’

Locative derivations in *kan-* seem to refer to less extended places, as a comparison between (401) and (412) and between (402) and (413) shows. A distinction between ‘immediate surroundings’ and ‘wider surroundings’ also seems to distinguish the general terms for ‘place’ *bi-tix* and *kan-tix* and the other locative pairs with *bi-* and *kan-*.

- (412) *kan-noox* ‘seat’ < *noox* ‘sit’
- (413) *ka’waan* ‘bed, sleeping place’ < *waan* ‘lie’
- (414) *kan-naax* ‘judgment place’ < *naax* ‘tell’ [cf. *bi-naax* ‘to present sth. in court’]
- (415) *kan-jula-um* ‘selling place’ < *jula* ‘buy, sell, trade’
- (416) *kan-kof-um* ‘slaughtering place’ < *hof* ‘kill’

One location, specifically a sacrifice site connected to the funerary rites where animal sacrifice takes place in honour of the deceased, is derived with *ran-*.

---

<sup>92</sup> The noun *bu-noox* is translated into French as ‘cabaret’ and denotes a shack made of palm leaves where palm wine is stored and where men retire to with their friends for conversation and consumption of palm wine.

<sup>93</sup> This refers to grass that is used for thatching houses called *jë-ritay*.

(417) *ra'-wox-um* 'sacrifice place' > *wox* 'sacrifice'

### 4.3.3 Manner nouns

An apparently productive way – the pattern has not been tested systematically – of deriving manner nouns consists in the prefixation of *man-* and the suffixation of *-an*.

These affixes have not been encountered anywhere else and a noun class *ma-* or *man-* is completely unattested in Gubëeher.

(418) *ma'-lób-an* 'way of speaking' < *lób* 'speak'

(419) *man-dëëk-an* 'way of walking' < *dëëk* 'go'

(420) *ma'-luf-an* 'way of sewing' < *luf* 'sew'

The form in (421) has been encountered in elicitation.

(421) *bi-xeec-ëm-én* 'writing style' < *keec* 'write'

Gerunds (4.3.5) are regularly used with a manner reading. Infinitives are often polysemous between an infinitival reading and a manner reading as shown in (422) and (423).

(422) *bë-yin*

CL.ba-sing

a) 'to sing'

b) 'manner of singing'

LM, infinitives 2012

- (423) *ji-kuj*  
 CL.ji-wrestle  
 a) 'to wrestle'  
 b) 'wrestling match'  
 c) 'manner of wrestling'  
 LM, infinitives 2012

#### 4.3.4 The derivation of properties from eventive roots

The use of noun class prefixes in one-class paradigms for the derivation of properties from roots which can be used predicatively, attributionally or both is to some extent regular. Most properties are derived with the prefix *ba-* (Table (175)).

Table (175) *Properties derived with the prefix ba- (selection)*

Property	Gloss	Root with verbal inflection (3-root-PERF)	Gloss
<i>ba-gog</i>	'tightness'	<i>a-gog-i</i>	'It is tight'
<i>ba-lox</i>	'abundance'	<i>a-lox-i</i>	'It is a lot'
<i>ba-tliit</i>	'smallness'	<i>a-tliit-i</i>	'S/he/it is small'
<i>ba-ɲamar</i>	'farness'	<i>a-ɲamar-i</i>	'S/he/it is far'
<i>ba-laaj</i>	'evilness'	<i>a-laaj-i</i>	'S/he/it is evil'
<i>ba-ceen</i>	'red'	<i>a-ceen-i</i>	'S/he/it is red/ripe'
<i>ba-fer</i>	'white'	<i>a-fer-i</i>	'S/he/it is white'
<i>bë-bun</i>	'something nice'	<i>ë-bun</i>	'S/he/it is nice'
<i>ba-rahi</i>	'black'	<i>a-rahi-i</i>	'S/he/it is black'
<i>ba-jas</i>	'quickness'	<i>a-jas-i</i>	'S/he/it is quick'
<i>bë-jóló</i>	'largeness'	<i>ë-jóló-i</i>	'S/he/it is large'
<i>ba-jor</i>	'intelligence'	<i>a-jor-i</i>	'S/he/it is intelligent'

Almost all of the roots of *ba*-properties can also be used with verbal morphology as head of a predication. They belong to the groups of verb which have a stative

reading with perfective morphology (see 2.4.3.2). A large number of these roots also occur as modifiers of nouns, bearing agreement marking.

Derivations in the *ba*-paradigm are used for complements of the verbs *lum* ‘surpass’ and *kut* ‘to do too much’. The *kut*-construction (424) expresses that something is done excessively. The *lum*-construction (425) – (427) is a comparative/superlative of what Heine (1997) labels the ‘action schema’ (‘X surpasses Z at Y-ness’), the dominant schema for comparative constructions in African and Middle eastern languages (Heine 1997:128). Even verbs which usually combine with other noun class prefixes for the formation of verbal nouns and have not been detected with *ba*-elsewhere require nominalisation with the prefix *ba*- in these constructions: *yaax* ‘eat’ in (424) has the infinitive *bu-yaax*, *li* ‘good’ in (425) is attested with the infinitive *bu-li* and the property noun *ba-li* ‘goodness’ which is here employed, *jir* ‘run’ in (426) has the infinitival verbal noun *hë-jir* and marginally *bu-jir*. Even *gaar* ‘stupid’ (427), with has a property noun prefixed with *si-*, *si-gaar* ‘stupidity’, is here prefixed with *ba*-, which makes the use of *ba*- almost inflectional in these cases.

(424) *a-kut-i*                      *ba-yaax*  
 3-too.much-PERF      CL.ba-eat  
 ‘S/he eats too much.’

(425) *a-lum-i*                      *ba-li*  
 3-surpass-PERF      CL.ba-good  
 ‘It is better’

(426) *a-lum-em*                      *ba-jir*  
 3-surpass-3SGOBJ.PERF      CL.ba-run  
 ‘S/he runs faster than him/her’



denoting people who have the property in question. The correlation between the *ji*-human nouns, *si*-properties and state verbs with a final *-a* is high, nine of the roots having *si*-properties also have a human noun in the *ji*-paradigm. Those are marked with an asterisk in Table (177). For a complete list of human nouns in the *ji*-paradigm with suffixed plurals see Table (173).

Table (177) *Properties derived with the si- paradigm (complete)*

Property noun	Gloss	Verbal stem	Gloss verb	Human noun in <i>ji</i> -paradigm
<i>si-dihel</i>	'adulthood'	<i>dihel</i>	'be grown-up'	
<i>si-pal</i>	'clumsiness'	<i>pal</i>	'be clumsy'	*
<i>si-tuun</i>	'greed'	<i>tuun/tuun-a</i> <sup>94</sup>	'be greedy/egoistic'	*
<i>si-bëen</i>	'fearfulness'	<i>bëen-a</i>	'be shy/anxious'	*
<i>si-riin</i>	'laziness'	<i>riin-a</i>	'be lazy'	*
<i>si-paab</i>	'gluttony'	<i>paab-a</i>	'be greedy'	*
<i>si-puul</i>	'incapability'	<i>puul-a</i>	'be incapable'	*
<i>si-piim</i>	'blindness'	<i>piim/piim-a</i>	'be blind'	*
<i>si-teet</i>	'deafness'	<i>teet-a</i>	'be deaf'	*
<i>si-xaj</i>	'handicap'	<i>xaj</i>	'be handicapped'	*
<i>si-gaar</i>	'stupidity'	<i>gaar-a</i>	'be stupid'	*
<i>si-lamlam</i>	'mental disability'	<i>lamlam</i>	'be mentally disadvantaged'	
<i>si-dox</i>	'shortness'	<i>dox</i>	'be short'	

All verbal nouns derived from roots which denote kinds of smell are all compatible with verbal morphology, are also derived with the prefix *si-* (Table (178)).

<sup>94</sup> This item refers to the habit of taking the best pieces of food for oneself during a collective meal.

Table (178) *Property nouns of items denoting smells<sup>95</sup> derived with the prefix si-*

Property noun	Gloss	With verbal morphology (3-stem-PERF)	Gloss
<i>si-suul</i>	'fishy smell'	<i>a-suul-i</i>	'smell of fish'
<i>si-fooŋ</i>	'pungent smell'	<i>a-fooŋo-i</i>	'smell pungent'
<i>si-jem</i>	'smell'	<i>a-jema-i</i>	'smell'
<i>si-faan</i>	'good smell'	<i>a-faan-i</i>	'smell good'
<i>si-koon</i>	'bad smell'	<i>a-koon-i</i>	'stink'

Some property nouns are also attested with other one-class paradigms as shown in Table (179).

Table (179) *Properties derived with other paradigms*

Paradigm	Property	Gloss	Root
<i>ja-</i>	<i>ja-box</i>	'tiredness'	<i>box</i>
	<i>jë-bun</i>	'beauty'	<i>bun</i>
	<i>ja-su</i>	'shame'	<i>su</i>
<i>bi-</i>	<i>bi-dëën</i>	'childhood'	<i>dëën</i>
<i>sin-</i>	<i>siŋ-kani</i>	'drunkenness'	<i>kani</i>
<i>fu-</i>	<i>fu-kaaror</i>	'vanity'	<i>kaaror</i>
	<i>fu-kiiñum</i>	'egotism'	<i>kkiiñ</i>

The items prefixed with *fî-* stand out in that *fî-* is not attested elsewhere in the noun class system of Gubëeher. Both have been identified, or rather dismissed, as loans from “Joola” (probably Kujireray or Eegimaa) by some consultants. This seems plausible given that *fî-* is a very common noun class prefix in Joola noun class systems.

<sup>95</sup> *Suul* is used for fishy smells emanated by seafood as well as the smell of raw snake meat, *fooŋ* classifies rather rancid smells such as sweat, urine and goats, *jem* is a neutral term, *faan* is used for pleasant smells such as food and flowers, *koon* for unpleasant smells such as fecies or rotten substances.

### 4.3.5 The gerund

Apart from infinitives and action nominals there seems to be a third category of verbal nouns, prefixed with the noun class marker *ba-* and suffixed with *-er*. This pattern is productive and has been detected with different stems, though the form is not very frequent in the corpus. One of its uses is an adverbial function expressing the simultaneous (430) or consecutive (431) occurrence of two actions. The “gerund”<sup>96</sup> can also form manner nouns (432).

- (430) *u-mër*      *bë-dëëk-er*      *ka*      *abim*      *g-a-gal-un-i*  
CL.u-PRO      CL.ba-go-GER      CONN      there      FOC.OBJ-3-spoil-CAUS-PERF  
‘Passing by he broke/spoilt it.’

LM, field notes

- (431) *a-dëëk-i*      *bi*      *kari*      *ba-yaax-er*      *mes*  
3-go-PERF      PREP      someone      CL.ba-eat-GER      already  
‘Having eaten he went to someone’s place.’

LM, field notes

- (432) *bë-dëëk-er*  
CL.ba-go-GER  
a) ‘having gone’  
b) ‘manner of going/pocedure’

The Gerund can be suffixed with possessive pronouns (433):

---

<sup>96</sup> I adopt Bassène’s (2006) analysis of similar forms in Eegimaa as gerunds for Gubëeher, which seems justified considering the formal and functional similarity of the construction in the two languages.

(433) *min ba-saat-e'-kenem a bi-naal bala i-tollo-min*  
 1Pl.EXCL CL.ba-pass-GER-3SGPOSS PREP CL.bi-path before 1-notice-1Pl.EXCL

'After passing him by on the road we noticed [that it was him].'

LM, field notes

A morphologically and functionally identical form, prefixed with *ba-* and suffixed with *-er* called Gerund by Bassène (2006:252, cf. (434)) exists in Joola Banjal and is used for manner nominalisations and adverbial complements. It can be suffixed with possessive pronouns and – differently in Gubëeher – is compatible with a past aspect morpheme and the negation affix. This gerund or 'participle' is found in other Joola languages too (Sambou 1979; Hopkins 1995), but also in Bâïnouk Gujaher, which makes its origin inconclusive.

(434) *na-tey-e a-kkop b-a-jug-er-om*  
 s3s-courir-TAM s3s-se.cacher CL5-POST-voir-GER-o1s

'Il a couru se cacher en me voyant. [Seeing me, he ran into hiding]'

Joola Eegimaa, Bassène 2006:252

(435) *b-a-rem-er*  
 CL5-POST-drink-GER

a) 'having drunk

b) 'manner of drinking'

Joola Eegimaa, Bassène 2006:249

#### 4.3.6 Other irregularly formed nominalisations from eventive and stative roots

The nouns in Table (180) are derived from eventive and stative roots, but not by the systematic processes identified in section 4.3 above, nor can they be used as

infinitival complements. Some of the listed nouns have been mentioned in chapter 3, in the respective paradigm they occur in.

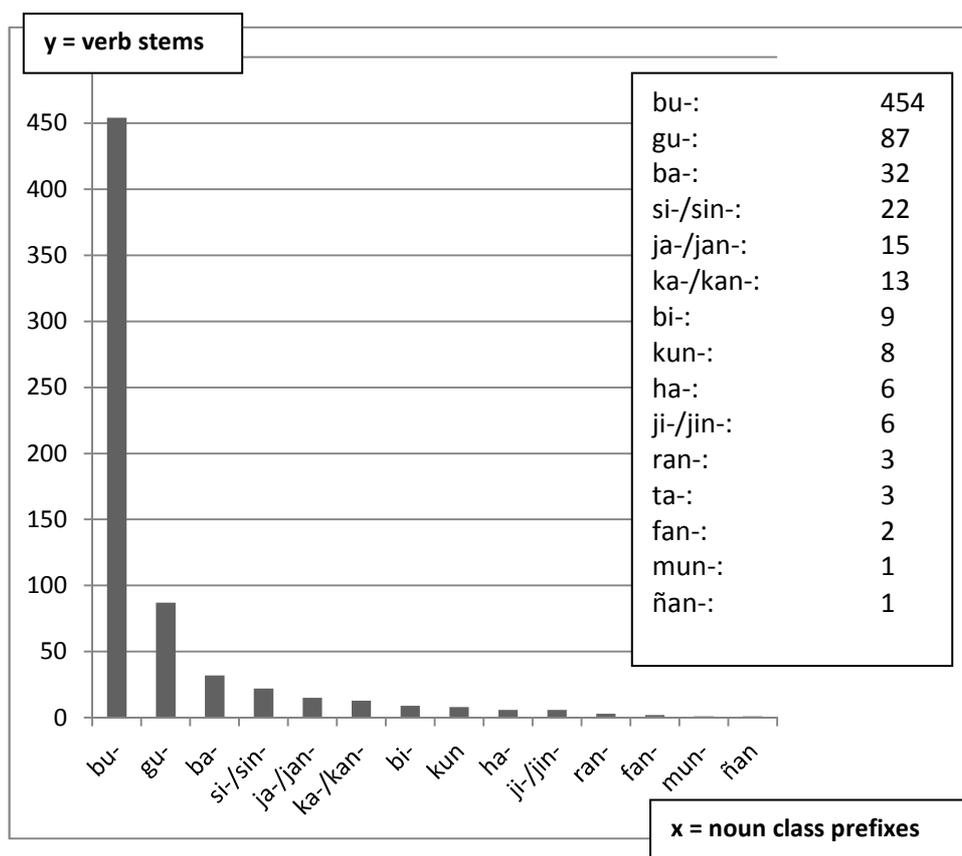
Table (180) *Nouns derived from eventive roots*

<b>Noun</b>	<b>Gloss</b>	<b>Meaning of stem when used verbally</b>
<i>ba-cooc</i>	'possessions'	'have'
<i>ba-curux</i>	'sth. provoking an itch'	'itch'
<i>ba-fur</i>	'assembly location'	'go out'
<i>ba-xana</i>	'lotion'	'cream oneself'
<i>gu-buñ</i>	'commission'	'send'
<i>gu-dil</i>	'fart'	'fart'
<i>gu-duxun</i>	'heat'	'(be) hot'
<i>gu-filla</i>	'nourishment'	'eat'
<i>gu-huy/ha-huy</i>	'name'	'call'
<i>gu-leñ</i>	'blood'	'bleed'
<i>gu-lëpic</i>	'hiccup'	'have hiccup'
<i>gu-moy/ha-moy</i>	'eyelash'	'blink (eyes)'
<i>gu-ñaarin</i>	'cold'	'(be) cold'
<i>gu-ñal-én</i>	'bite'	'bite' [ <i>ñal</i> ]
<i>gu-oc</i>	'small change (money)'	'change'
<i>gu-wëëb</i>	'hollow space'	'(be) hollow'
<i>gu-xaax</i>	'mucus'	'clear throat' [ <i>xaaxla</i> ]
<i>gu-yin/hë-yin</i>	'song'	'sing'
<i>ja-wuulin</i>	'worries'	'think of'
<i>ji-rin/ji-rineŋ</i>	'filter'	'filter'
<i>ñën-ciig</i>	'dream'	'dream' [ <i>ciigia</i> ]
<i>ra'-yub</i>	'type dance'	'dance a type of dance'
<i>raŋ-komb</i>	'collective hunt'	'encircle'
<i>ra'-seor</i>	'sunset'	'set (sun)'
<i>rëm-biix</i>	'sunrise'	'rise (sun)'
<i>rën-ciir</i>	'epidemy'	'die'
<i>rën-nób/ñën-nób</i>	'bundle'	'bind'
<i>si-ram/ha-ram</i>	'family name'	'greet'

#### 4.4 The noun class marking of infinitives

The by far most common prefix for the formation of infinitives/action nouns is *bu-*; all but 14 roots out of 695 infinitives are compatible with *bu-* for the derivation of infinitives (cf. Table (201)). These infinitives/action nouns either have one only infinitive in *bu-* or in case they have more than one, a *bu-* form and additionally a second or even third verbal noun derived with a different noun class prefix. The following table in Figure (8) shows how many infinitives are attested in the lexicon with each noun class prefix on the x axis, including multiple infinitives.

Figure (8) *The distribution of prefixes with infinitives (n= 659)*



The distinction between prefixes with a final nasal consonant and without one has not been made in the table, not because it is not relevant but rather because the

distinction cannot unequivocally be made due to assimilation processes eliminating the nasal before continuants and due to the lack of (or difficulty in obtaining) agreement data which could disambiguate between the two options. Where possible, the section dealing with the respective paradigms will provide more sophisticated information. Some of the prefixes used for the derivation of infinitives/action nouns are not attested on nouns: *jín-*, *ka-* and *jan-*. The verbal nouns also exhibit unusual agreement behaviour in comparison with that of other nouns. Non-infinitival nouns prefixed with *ji-* and *ja-* have agreement in *a-*, which is also the agreement of the prefixless nouns. The action nouns derived with *ji-/jín-* have *ji-* agreement and those derived with *ja-/jan-* have *ja-* agreement. Unfortunately, the difference between agreement of a marker with and without final nasal manifests only with adjectives which start with a plosive, but not with reduplicating forms like demonstratives or the locative, and neither with other pronouns (see Table (40)). For action nouns, agreement with anything other than demonstratives has not been encountered in texts. Looking at the noun class prefixes which are not attested on verbal nouns, there are some peculiarities singling them out from the others: The purely derivational classes of diminutive (sg. *ko-*/pl. *ño-*/Mass. *ho-*) and augmentative (sg. *da-*/pl. *din-* -*ŋ*) can assign the parameter ‘size’ only to entities as neither have been attested characterising an event. Extremely rare noun classes (*pi-*, *hu-*), each attested with only with one noun so far are not attested with eventive roots either, i.e. they do not derive infinitives. These nouns are possibly idiosyncrasies and not deeply integrated into the noun class system: *pittari* ‘tobacco’ is the single noun in class *pi-*, *hu-* is only used with the noun *hujaan* a placeholder noun like ‘thingummy’.

#### 4.4.1 Polysemy and infinitives

In contrast to the derivation of the various types of participant nominalisations, which are more predictable in terms of noun class prefixation (see chapter 3) and meaning, those characterised as ‘event nominalisations’ by Yap et al. (2011) e.g. manner nouns, result nouns, and action/state nominalisations exhibit a less stable semantic relationship between the noun class marker used for its formation and the component of the conceptual base which is profiled. Whereas e.g. derived instruments can be regularly found in the *gu-/ha*-paradigm and nominalisations denoting human participants in the *u-/ñan*-paradigm these kinds of stable correlations are not attested with event nominalisations, where the form- meaning relation is more idiosyncratic. Furthermore, it is often the case that one derivation has the function of the infinitive as well as one or more of the other types of event nominalisations.

A comparison with verbal noun derivation in Bantu whose formation commonly is presented as being much less complex than in Gubëeher (on the example of Xhosa see chapter 1, and Visser 1989 and Du Plessis 1982) might be instructive, given that more in-depth analyses for this phenomenon exist for Bantu languages. In Bantu languages the contrast is mainly between infinitives with more verb-like characteristics, which are productively derived with noun class prefix 15 (*ku-* in Xhosa and the corresponding noun class prefix in most other Bantu languages), and other verbal nouns with more nominal characteristics. The class 15 items are considered as polysemous between an infinitival use (clausal infinitive) as complement of certain verbs and auxiliaries and a use as action noun (nominal infinitive), which can stand in argument position and take modifiers and possessive marking (cf. 1.3.1). Other types of verbal nouns can be derived with other noun

class markers (Mufwene 1980). Compare the class 15 infinitive *uku-tand-a* ‘to love/loving’ which functions as clausal infinitive as well as an action noun with more nominal properties with the class 11 noun *u-thand-o* ‘love’ (Visser 1989:171, see also Table (11)).

In Gubëeher the mapping of form and function of verbal nouns is much less congruent and varies considerably between roots so that a variety of polysemy patterns are attested. It can be seen in Table (181) that neither the form of the prefixes used for the formation of the verbal nouns nor the semantic extension of the resulting verbal nouns seems to be predictable.

Table (181) *Infinitives and verbal nouns in Gubëeher*

Root	Default infinitive	Non-default infinitive
<i>dëëk</i> ‘go’	<i>bu-dëëk</i> ‘to go’	<i>hë-dëëk</i> ‘going’
<i>naax</i> ‘tell’	<i>bu-naax</i> ‘to tell’	<i>bi-naax</i> ‘telling’/‘court hearing’
<i>waxa</i> ‘play’	/	<i>ku-waxa</i> ‘to play/playing’
<i>ciir</i> ‘die’	<i>bu-ciir</i> ‘to die’	<i>bi-ciir</i> ‘dying’/‘death’
<i>naaf</i> ‘cultivate’	<i>bu-naaf</i> ‘to cultivate’	<i>ja-naaf</i> ‘cultivation’/‘culture’
<i>ñon</i> ‘take’	<i>bu-ñon</i> ‘to take/taking’	/

#### 4.4.2 Single and multiple infinitives

A phenomenon in the domain of verbal nouns in Gubëeher which demands an explanation is the existence of multiple infinitives, i.e. roots which can derive more than one infinitive with several noun class markers. The most common prefix for the derivation of infinitives in Gubëeher is *bu-*, and accordingly the *bu-*infinitives will be referred to as ‘default infinitives’. Almost every root that can be used with verbal

morphology has at least an infinitive in *bu-*, and for many verbs it is the only noun class prefix admissible for this function and for the vast majority accepted as an alternative to a form with a marker other than *bu-*. So far, only 14 verb stems have been detected for which no informant has accepted the *bu-* variant as grammatical (see section 4.7.2.2.3 for a list), although for some verbs the *bu-* infinitive might be marginal and not uniformly accepted by all speakers. 120 of the roots occurring with verbal morphology have a second infinitive derived with almost any of the other noun class prefixes. These will be referred to as non-default infinitives. Establishing these two groups is not only justified in terms of productivity, but also in terms of function, as default and non-default infinitives constitute two types of infinitives which are functionally contrasting.

The multiple infinitives of transitive verbs provided in Table (182) occur in syntactically different environments. The default infinitives are preferred in (and in some cases restricted to) constructions with a direct object or any other complement; the non-default infinitives can occur more freely but are preferred in constructions with deleted object. Some strictly intransitive verbs have only a non-default infinitive. The patterns of distribution of multiple infinitives are discussed in section 4.7.2.

Table (182) *Examples of single and multiple infinitives*<sup>97</sup>

	<b>Default infinitive</b>	<b>Non-default infinitives</b>		<b>Finite form</b>
<b>Single infinitive</b>	<i>bu-děën</i> Cl.bu-put 'to put/putting'			<i>i-děën-i</i> 1-put-PERF 'I have put'
		<i>gu-saw</i> Cl.gu-hunt 'to hunt'		<i>i-saw-i</i> 1-hunt-Perf 'I have hunted'
<b>Multiple infinitives</b>	<i>bu-naaf</i> Cl.bu-cultivate 'to cultivate'	<i>ja- naaf</i> Cl.ja-cultivate 'to cultivate/cultivation'		<i>i-naaf-i</i> 1-cultivate-PERF 'I have cultivated'
	<i>bu-rox</i> Cl.bu-cry 'to cry'	<i>ha- rox</i> Cl.bu-cry 'to cry/crying'		<i>i-rox-i</i> 1-cry-PERF 'I have cried'
	<i>bu- bēex</i> Cl.bu-pull 'to pull'	<i>gu- bēex</i> Cl.gu-pull 'to pull/pulling/smoke'	<i>jēm- bēex</i> Cl.jam-pull 'pull in (e.g. a boat)'	<i>i-bēëx-i</i> 1-pull-PERF 'I have pulled (it)'

The formal and semantic regularity of the default infinitives might justify considering them as an inflectional category. Almost any root used with verbal inflection has an infinitive in *bu-*, which is used for complement clauses and also as action nouns for those that are not in a paired infinitival paradigm, i.e. in contrast with a non-default infinitive. The non-default infinitives on the other hand are much more idiosyncratic in the sense that the choice of noun class prefixes, their distribution and their polysemy patterns are unpredictable. A large number of noun class prefixes are used to form them, only a smallish proportion of verbs have non-default infinitives, and these forms are all polysemous with other types of verbal nouns, i.e. result nouns, state nouns, manner nouns etc. Some of the non-default forms are restricted to specific semantic contexts. It is imaginable that the non-default infinitives are grammaticalisations of verbal nouns with originally more

<sup>97</sup> The order of non-default infinitives in the table does not reflect any assumptions about any kind of ranking.

nominal properties, which have come to assume functions as complements of verbs. Lacking historical data from Gubëeher this hypothesis remains speculation, but similar processes are attested for other languages. Haspelmath (1989) shows for example that the infinitives of Indo-European have developed from inflected verbal nouns, with an originally purposive function, which have increasingly gained verbal properties. Malchukov (1994:120) states that “historically they [infinitives] often derive from deverbal nouns and therefore could be claimed to involve an increase of verbal properties on the part of deverbal noun [sic] that is integrated into the verbal paradigm.” Ylikoski (2003:218ff) also mentions the frequent development of action nouns with more nominal properties into highly grammaticalised complements (infinitives) with a rather vague semantic content, partly determined by the semantics of the main verb, and which are often homonymous with other semantically defined categories of more nominal-type verbal nouns. The existence of multiple infinitives, which have partly overlapping functions has been noted for Finnish and Sami by the same author (Ylikoski 2003:217).

In Gubëeher, no derivational morphology specific to neither the derivation of verbal nouns nor to the derivation of specific types of verbal nouns is attested so that formally, the difference between nouns derived from entities and those derived from eventive and stative roots and between the multiple infinitives in an infinitival paradigm lies solely in the choice of the class prefix. That means that whatever the difference in function between these forms, is uniquely attributable to the noun class marker which is therefore involved in the classification of events and states.

The verbal nouns derived from the root *naaf* ‘cultivate’ shall illustrate how the various functional categories are instantiated in Gubëeher and correlated with the prefixes used for their formation. The infinitive *bu-naaf* ‘to cultivate’ for example is

used exclusively in complement position (and only in bivalent constructions), and has reduced nominal properties in that it is not compatible with possessive morphology and cannot be modified. The form *ja-naaf* can be used in both complement and argument position, it has full nominal properties in the latter case, and is even pluralisable, with a meaning of ‘(instance of) cultivation’.

- |       |                      |  |                    |       |                      |  |                    |
|-------|----------------------|--|--------------------|-------|----------------------|--|--------------------|
| (436) | <i>ja-naaf</i>       |  | <i>g-i-raad-i</i>  | (437) | <i>*bu-naaf</i>      |  | <i>g-i-raad-i</i>  |
|       | CL.ja-cultivate      |  | FOC.OBJ-1-AUX-PERF |       | CL.bu-cultivate      |  | FOC.OBJ-1-AUX-PERF |
|       | ‘I cultivate.’       |  |                    |       | ‘I cultivate.’       |  |                    |
|       | JMS, infinitive list |  |                    |       | JMS, infinitive list |  |                    |

- |       |                        |  |           |  |                 |  |                    |
|-------|------------------------|--|-----------|--|-----------------|--|--------------------|
| (438) | <i>ja-naaf</i>         |  | <i>ha</i> |  | <i>mankaara</i> |  | <i>g-i-raad-i</i>  |
|       | CL.ja-cultivate        |  | CONN      |  | peanut          |  | FOC.OBJ-1-AUX-PERF |
|       | ‘I cultivate peanuts.’ |  |           |  |                 |  |                    |
|       | JMS, infinitive list   |  |           |  |                 |  |                    |

- |       |                             |  |           |  |                    |
|-------|-----------------------------|--|-----------|--|--------------------|
| (439) | <i>bu-naaf</i>              |  | <i>ha</i> |  | <i>ba-taata</i>    |
|       | CL.bu-cultivate             |  | CONN      |  | CL.ba-sweet.potato |
|       | ‘to cultivate sweet potato’ |  |           |  |                    |
|       | LM, infinitive list         |  |           |  |                    |

- |       |                                    |  |                 |  |                  |
|-------|------------------------------------|--|-----------------|--|------------------|
| (440) | <i>ja-naaf</i>                     |  | <i>janja</i>    |  | <i>a-lээр-i</i>  |
|       | CL.ja-cultivate                    |  | AGR.ja:DEM.PROX |  | 3-difficult-PERF |
|       | ‘(This) cultivating is difficult.’ |  |                 |  |                  |
|       | LM, infinitives 2012               |  |                 |  |                  |

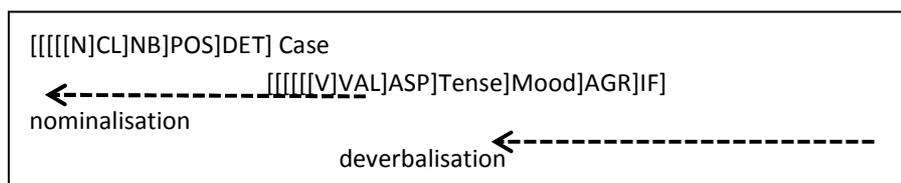
- |       |                       |  |                 |
|-------|-----------------------|--|-----------------|
| (441) | <i>bu-naaf</i>        |  | <i>bumbu</i>    |
|       | CL.bu-cultivate       |  | AGR.bu:DEM.PROX |
|       | ‘(This) cultivating.’ |  |                 |
|       | LM, infinitives 2012  |  |                 |

(442) *ja-naaf-aŋ*                      *janjaaŋ*                      *a-deh-in-aam-i*  
 CL.ja-cultivate-Pl                      AGR.ja:DEM.PROX    3-tire-CAUS-APPL-PERF  
 ‘These cultures are annoying.’  
 LM, infinitives 2012

#### 4.4.3 Nominal and verbal properties of verbal nouns

The process of nominalisation has been decomposed by Malchukov (1994) into the two simultaneously occurring processes of deverbalisation and substantivisation affecting a verbal root which is assumed to be the basis of nominalisation. Even though an ascription of categorial status to Gubëeher roots is considered impracticable, acknowledging that the basis of derivation has process/event character allows an application of this model. ‘Deverbalisation’ is accordingly understood as the reduction of process character by derivation, accompanied by a reduction in compatibility with morphology that is associated with processes/events and states. ‘Denominalisation’ is the decreasing of entity character accompanied by a decrease in compatibility with morphology that is associated with nouns. In Malchukov's (1994) model both co-occurring processes are composed of a number of morphologically encoded features arranged along a hierarchy. Accordingly, typologically speaking, the loss of ‘verbal’ morphology and the gain of ‘nominal’ morphology are expected to occur in a fixed order, which is ultimately based on the relative relevance of the features for the category they are typical for.

Figure (9) *The generalised scale model (GSM), (Malchukov 1994:57)*



The key to the abbreviations and the realisation of the features in Gubëeher are provided in Table (183).

Table (183) *Nominal and verbal properties after Malchukov (1994) and their relevance for Gubëeher*

Feature	Gloss	Applied to Gubëeher
CL	classifiers	noun class prefixes
NB	number marking	number marking through prefixes or plural suffix
POS	subject/object encoded through morphology possessive	connective preposition <i>ha</i> or possessive suffixes
DET	determiner	demonstratives
Case	case marking	does not apply
VAL	valence determining morphology	various verbal extensions among which passive, causative, reflexive, reciprocal etc.
ASP	aspectual morphology	various aspectual affixes
Tense	tense morphology	various tense affixes
Mood	modal morphology	various modal affixes
AGR	subject/object marked through sentential encoding	prefixed and suffixed subject agreement and suffixed object marking
IF	illocutionary Force	does not apply

The verbal nouns derived from the root *mul* ‘harvest’ presented in Table (184) will serve as example of which nominal and verbal features can be attributed to which types of nominalisations (highlighted in bold face). ‘Case’ and ‘illocutionary force (IF)’ are not considered as these parameters are not morphologically encoded in

Gubëeher. Tense, aspect, and mood, neither of which is marked on verbal nouns in Gubëeher in any form, is subsumed under TAM.

Table (184) *Malchukov's (1994) GSM model applied to verbal nouns in Gubëeher (highlighted in bold face where applies)*

Category	Example <i>mul</i> 'harvest'	Malchukov's criteria
Infinitive	<i>bu-mul</i> 'to harvest'	<b>CL-NB-POS-DET //VAL-TAM-AGR</b>
	<i>ja-mul</i> 'to harvest'	<b>CL-NB-POS-DET //VAL-TAM-AGR</b>
Action nominalisation	<i>ja-mul</i> 'harvesting'	<b>CL-NB-POS-DET //VAL-TAM-AGR</b>
other event nominalisation	<i>ja-mul/ja-mul-oŋ</i> 'harvest (season)'	<b>CL-NB-POS-DET //VAL-TAM-AGR</b>

As Table (184) shows, verbal nouns in Gubëeher are more on the nominal side when morphological marking is considered. It also shows that verbal nouns in complement position (infinitives) have the least nominal and the most verbal properties (examples are provided in the subsections of 4.4.4). They are used as infinitival complements of verbs and also integrated into the tense/aspect system by virtue of their function as part of periphrastic constructions, cannot be modified and use possessive morphology to encode participants (objects or any other post-verbal constituents). The intermediate category (here labeled 'action noun') stands in argument position and can be modified but refer to the event as a whole and can encode object or oblique participants with possessive morphology. Participant nominalisations such as instruments, locations etc. can have full nominal properties including singular/plural distinction.

#### 4.4.4 The morphological and syntactic properties of verbal nouns in Gubëeher

In the following subsections I will present each of the morphological and syntactic properties of verbal nouns, on the basis of which types of verbal nouns have been

established in section 4.4.3. The criteria possessive (4.4.4.2) and ability to be modified (4.4.4.3) will be relevant for the functional distinction of default and non-default infinitives in section 4.7.2.

#### 4.4.4.1 *Position and Verbal nouns*

As stated before, verbal nouns occur in complement position with certain verbs such as modals (443) and auxiliaries (444), and in argument position (445).

(443) *Fi u-min bu-xeec ha Gu-bëëher*  
 2SG 2-able CL.bu-write CONN CL.gu-Bainounk

‘Do you know how to write Gubëeher?’

LM, DJI280212AC2

(444) *Ba-keec ha ño-lób ño-tliit ño ha-jóola*  
 CL.ba-write CONN CL.ño-speak AGR.ño-little AGR.ño CL.ha-jóola

*g-i-raad-i*  
 FOC.OBJ-1-AUX-PERF

‘I am writing some words in Joola.’

HS, DJI110312AC4

(445) *bë-ñëëj a-li-m-en*  
 CL.ba-wash 3-good-APPL-2SGOBJ.PERF

‘Do you like washing?’

JMS, DJI070312AC3

#### 4.4.4.2 *Possessive morphology and verbal nouns*

Objects and Adjunct NPs of a verb can be expressed on a nominalised verb by a postposed phrase with the connective morpheme *ka/ha*, which is also used in

possessive constructions on nouns. Alternatively, the possessive suffix can be employed for this function (see Table (185) for examples).

Table (185) *The encoding of object and possessive NPs*

	<b>Finite</b>	<b>Non-finite</b>	<b>On noun</b>
<b>NP</b>	<i>a-lódin-i A.</i> 3-greet-PERF A. 'S/he greeted A.'	<i>bu-lódin ka A.</i> CL.bu-greet CONN A. 'greeting A.'	<i>koona ha u-nam</i> house CONN CL.u-king 'The house of the king.'
<b>Pronominal</b>	<i>a-lódin-em</i> 3-greet-3SGOBJ 'S/he greets him/her'	<i>bu-lódin-kenem</i> CL.bu-greet-3SGPOSS 'greeting him/her'	<i>koona-hanam</i> house-3SGPOSS 'his/her house'

Not only objects but also adjuncts are encoded as *ka*-phrases, some introduced by a preposition (446), others not (447).

- (446) *ku-waxa*      *ha*      *anjga*      *di-raax*  
 CL.kun-play      CONN      with      CL.di-sand  
 'playing with sand'  
 KC, field notes

- (447) *bu-ceem*      *ka*      *fujku*  
 CL.bu-sleep      CONN      room  
 'sleeping in a room'  
 LM. infinitives 2012

In cases where the nominalised verb is the complement of an auxiliary or another complement-taking verb, the object can be either expressed with possessive morphology suffixed to the verbal noun (448) or in form of suffixed object pronouns on the inflected main verb (449).

(448) *a-maŋ-i*                    *bu-lódin-kenem*  
 3-want-PERF                    CL.bu-greet-3SGPOSS

‘S/he wants to greet him/her

(449) *a-maŋ-em*                    *bu-lódin*  
 3-want-3SGOBJ.PERF            CL.bu-greet

‘S/he wants to greet him/her

The possessive morphology used with verbal nouns always encodes the object of transitive verbs when the verbal noun functions as an infinitival complement. In example (450), the possessive suffix of the third person singular refers to the theme participant of the transitive verb *lódin* ‘greet’, i.e. the one who is being greeted, not the one who performs the greeting. The verbal noun can also be interpreted as a manner nominalisation as shown in example (450) where the verbal noun *bulódin* can be read as ‘fact of greeting’ as well as ‘manner of greeting’.

(450) *bu-lódin-kenem*                    *li-rum*  
 CL.bu-greet-3SGPOSS            nice-NEG.PERF-Ben:1SGOBJ

a) ‘To greet him/her displeases me.’

b) ‘His/her way of greeting displeases me.’

c) \*‘That he/she greets me displeases me’

LM, infinitives 2012

With verbal nouns of intransitive verbs the possessive morphology can refer to the subject participant.

(451) *a bu-fu'-konom muŋkoonam a-fur-ot tiyaŋ bĕjĕmĕŋgĕĕrĕŋ*  
 PREP CL.bu-go.out-3SGPOSS inside 3-go.out-VEN outside backwards

*g-ĕ-gu-tt-i bu-dĕĕk*  
 FOC.OBJ-3-be-VEN-PERF CL.bu-go

‘Coming out from inside – he comes out, and it is backwards that he is walking.’

JHS, DJI101210AC

(452) *gu-faanin-kenem i-mal-em an ĕ-nĕér*  
 CL.gu-smoke-3SGPOSS FOC.SUBJ-hit-3SGOBJ.PERF and 3-ill

He is ill because he smokes [= because of his smoking].’

LM, infinitives 2012

For verbal nouns, whose stems can be used in monovalent as well as in bivalent constructions, the interpretation of the possessive suffix is ambiguous between a reading as objective (453) or subjective (453) genitive.

(453) *ha-ro'-konom*  
 CL.ha-cry-3SGPOSS

a) ‘crying/mourning about him/her’

b) ‘his/her crying’

LM, infinitives 2012

Whether the verbal noun is interpreted as manner nominalisation (454) or as action nominalisation (455) depends on the verb semantics.

(454) *hĕ-dĕĕk-henem a-lĕér-i*  
 CL.ba-go-3SGPOSS 3-difficult-PERF

a) ‘He walks with difficulty [lit. his (way) of walking is difficult].’

b) \* ‘The fact that he goes is difficult.’

LM, infinitives 2012

- (455) *si'-liipi-henem*                      *a-lээр-i*  
 CL.sin-doze-3SGPOSS              3-difficult-PERF  
 a) The fact that he dozes off is annoying.'  
 b) \* The way in which he dozes off is annoying.  
 LM, infinitives 2012

#### 4.4.4.3 *Modifiers and verbal nouns*

Verbal nouns can be modified by adjectives and demonstratives when they stand in argument position, but not when they are used as complements. As with possessive marking this criterion serves to distinguish default from non-default verbal nouns. For those verbal nouns which have multiple infinitives, the non-default form prefixed with *gu-* was considered grammatical by the informant (456), whereas the default infinitive in the same construction was judged as ungrammatical in any context (456).

- (456) a) *gu-lód*              *guygu*                                      b) \* *bu-lód*              *bumbu*  
 CL.gu-build    AGR.gu:DEM.PROX                                      CL.bu-build    AGR.bu:DEM.PROX  
 'this construction'  
 LM, infinitives 2012

This is in line with the hypothesis that verbal nouns derived with *bu-*, whenever they stand in opposition to a non-default verbal noun prefixed by another class prefix, have more verbal properties and less nominal properties than the non-default form. Unfortunately the grammaticality of a modifier-verbal noun construction with an object (such as the equivalent of: *that building of a house*) has not been explicitly elicited and is not attested in the corpus, so that the ungrammaticality of (456) might be due to restrictions of using default infinitives in monovalent clauses. On the other

hand, the consultant has categorically denied the grammaticality of almost all *bu-* infinitives with modifiers and has never found a felicitous context for them, which he had done in other cases.

#### 4.4.4.4 *Number marking and verbal nouns*

The number paradigms established in chapter 3 are understood as purely nominal paradigms, so that items belonging to other categories such as infinitives and action nouns are analysed separately from those. Nevertheless, it is clear that paradigmatic relationships within infinitives, e.g. between a default and a non-default infinitive, exist, which might involve number or related notions such as boundedness. For infinitival paradigms, where one member has a prefix that is associated with plurality when classifying entities, like *bu-yin* and *bě-yin*, a component of pluractionality for *bě-yin* has been mentioned by some consultants. Although the two forms do not stand in a singular/plural relation, since they can be used interchangeably in some constructions. The pair *gu-yin/hě-yin* ‘song/songs’ in the nominal *gu-/ha-*paradigm, derived from the root *yin* as well, designates the singular and plural forms of the temporarily bounded item ‘song’, whereas the infinitives *bu-yin* and *bě-yin* designate an abstract notion translatable with ‘singing/to sing/the act of singing/the fact of singing/the manner of singing’.

For some verbal nouns standing in argument position a suffixed plural is attested, interpretable as repeated instances of the event or over an extended period of time.

- |       |    |                      |    |                           |
|-------|----|----------------------|----|---------------------------|
| (457) | a) | <i>ja-mul</i>        | b) | <i>ja-mul-oŋ</i>          |
|       |    | CL.ja-harvest        |    | CL.ja-harvest-PL          |
|       |    | ‘harvest/harvesting’ |    | ‘harvests/harvest period’ |
|       |    | LM, infinitives 2012 |    |                           |

(458) a) *ja-rifun*                      b) *ja-rifun-oy*  
           CL.ja-transplant                CL.ja-transplant-PL  
           ‘transplanting’                ‘transplanting period’  
           LM, infinitives 2012

(459) a) *ja-naaf*                      b) *ja-naaf-ay*  
           CL.ja-cultivate                CL.ja-cultivate-PL  
           ‘cultivating/agriculture’    ‘cultures [of crops]’  
           LM, infinitives 2012

(460) a) *jim-bux*                      b) *jim-bux-oy*  
           CL.jim-insult                 CL.jim-insult-PL  
           ‘insult’                         ‘insults’  
           JMS, observed communication

#### 4.4.4.5 *Verbal morphology and verbal nouns*

Of the large inventory of morphology that can be affixed to finite verbs, only the derivational suffixes (verb extensions) are compatible with verbal nouns. Tense, aspect, and mood morphology, subject- and object-encoding pronominal affixes, negation markers, focus morphology, etc. are not compatible with verbal nouns. Even the suffixation of verbal extensions is limited in that the passive extension is only grammatical in finite constructions (461). Passive infinitives are not grammatical (462) and not attested at all in the corpus, and verbal nouns with the venitive extension are controversial (463).

(461) *ba-geec*                      *a-ruux-a*  
           CL.ba-hibiscus    3-drink-PASS  
           ‘The hibiscus juice has been drunk’

- (462) *\*bu-ruux-a* / *\*gu-ruux-a*  
 CL.bu-drink-PASS CL.gu-drink-PASS  
 ‘to have been drunk’
- (463) ? *tomobil bu-fur-ot g-a-raad-i*  
 car CL.bu-go.out-VEN FOC.OBJ-3-AUX-PERF  
 ‘The car is coming out’
- GS, observed communication

As to the controversial status of infinitives suffixed with the venitive extension, I have witnessed that when such forms were produced by a speaker (s)he was often reproached for speaking wrongly by others present. I do not intend to judge either practice, but it is obvious that there clearly are different opinions on the issue. Example (463) is such a case, where an older speaker who was present immediately criticised the speaker, GS, for making a mistake and insisted that *bufur*, without the venitive suffix, would be correct in this case. Similar scenes have been witnessed repeatedly.

A possible explanation for the exclusion of the passive and the venitive derivation might be that both are so productive (the passive can be formed from every verb, even from intransitive verbs where it has impersonal semantics, the venitive is also highly compatible) that they are treated as part of the inflectional morphology of verbs and are thus excluded for the use on nominal forms.

#### 4.5 The constructional properties of verbal nouns

Verbal nouns are used frequently in discourse and are attested in a variety of constructions, foremost as complements of certain verbs such as modals. Periphrastic constructions involving verbal nouns in combination with either

auxiliaries or a locative, non-verbal construction are employed to express a variety of progressive tense/aspect distinctions. Verbal nouns can as well stand alone, i.e. as head of a predication, without being complement of a conjugated verb or auxiliary.

#### 4.5.1.1 *Infinitival complements*

Infinitives in Gubëeher are frequently employed in complement constructions, where they function as infinitival object complements of a set of complement taking verbs, among which auxiliaries, modal verbs and aspectual verbs (see 2.5.2.1).

- (464) *g-a-maj-i*                      *bu-dëë'*    *ha*            *hë-dëëk-iin*      *a-ñonj*    *ë-mër*  
 COND-3-want-PERF    CL.bu-go    CONN      CL.ha-go-DER    3-take    AGR.a-PRO
- an*      *ë-dëëk*    *a-fur-ot*                      *aŋga*      *ë-mër*  
 and      3-go      3-go.out-VEN                      with      AGR.a-PRO

‘When he wants to go for a walk he takes it (= *jigol* ‘walking stick’) and he goes out with it.’

JHS, DJI101210AC

Infinitives are also attested as subject complements of the verbs *bun* ‘be good’, *li* ‘be nice’, *léér* ‘be difficult’.

- (465) *bu-ñëëj*                      *ha*            *ha-ha-yah*                      *a-léér-i*  
 CL.bu-wash    CONN      CL.ha-CL.ha<sup>98</sup>-clothes    3-difficult-PERF

‘To wash these clothes is difficult.’

GS, field notes

<sup>98</sup> The reduplication of the noun class prefix has a deictic function.

(466) *bu-dóm ka di-maamam a-lээр-i*  
 CL.bu-swallow CONN CL.di-empty 3-difficult-PERF

‘To get down dry rice is difficult [unpleasant].’

GS, field notes

(467) *bu-noox ha a gu-mөngөөт гугу a-bun*  
 CL.bu-sit CONN PREP CL.gu-chair AGR.gu:DEM.PROX 3-good

‘To sit on this chair is good.’

GS, field notes

Raising constructions with these verbs are frequently encountered in Gubëeher. The object of the transitive verb is raised to subject of the complement-taking verb in (468) – (470).

(468) *angu ha-ha-yah a-lээр-i bu-нөөж*  
 and CL.ha-CL.ha-clothes 3-difficult-PERF CL.bu-wash

So, are these clothes difficult to wash?

KC, DJI110312AC3

(469) *(di-maamam) a-lээр-i bu-dóm*  
 CL.di-empty 3-difficult-PERF CL.bu-swallow

‘It [dry rice] is difficult to swallow.’

GS, observed communication

(470) *(gu-mөngөөт) a-bun bu-noox*  
 CL.gu-chair 3-good CL.bu-sit

‘It is good for sitting on [chair].’

AB, DJI121109AC2

#### 4.5.1.2 *Periphrastic constructions*

The most frequent employ for infinitives is in periphrastic constructions, which are used to express progressive aspect and future reference. In these constructions, the infinitive is a complement of one of the auxiliaries or the locative copula. The auxiliary is inflected for person/number and TAM and the main verb appears as non-inflected infinitive. Example (471) illustrates this with the most frequently used auxiliary *raad*.

- (471) *i-suulut*      *a-fur-ot*      *a-raad-am*      *bu-tepar*  
CL.i-snake    3-go.out-VEN    3-AUX-3SGOBJ    CL.bu-chase  
‘Snakes came out and chased her.’

BS, DJI101010AC2

For more examples involving other and variously inflected auxiliaries see 2.4.3.10.

#### 4.5.1.3 *Non-embedded infinitives*

Verbal nouns can be used bare, i.e. without any auxiliary or other verbal component, as head of a predication in several constructions. So-called ‘non-embedded or stand-alone nominalisations’ (Yap et al. 2011:8) are recorded as a feature of Tibeto-Burman but also other Asian language groups and seem to be a feature of several Casamance languages (at least all of the Bainouk languages and some Joola languages). In Asia these have mirative functions, whereas in Gubëeher non-embedded nominalisations are used to express a present progressive, commenting on what someone is doing or is about to do (472). The infinitive can stand without any subject NP if it is already clear from the context who performs the action; optionally a personal pronoun can precede the verbal noun as in example (474).

(472) *bu-heec ha hə-lób hə-ruk anga ha-jóóla*  
 CL.ba-write CONN CL.ha-speak AGR.ha-some with CL.ha-jóóla

‘I am writing some words in joola.’

KC, DJI090312AC4

(473) *bu-ru’ ka ba-rux*  
 CL.bu-drink CONN CL.ba-water

‘I am drinking water. (Answer to the question: What are you doing?)’

GS, observed communication

(474) *min hə-dëek*  
 1PL.EXCL CL.ha-go

‘We are going.’

observed communication

The two other verbless infinitival constructions attested in Gubëeher involve the juxtaposition of a noun phrase and an infinitive. Depending on which of the two precedes the other, a different meaning results. The sequence infinitive-NP has an explicative value, the action expressed by the infinitive is specified by the following NP, in the example given here (475) it is the instrument of the action ‘tying up’ which is specified.

(475) *bu-nobun bumboon jë-bën*  
 CL.bu-tie AGR.bu:DEM.DIST CL.ja-cloth

‘This tying up is done with pieces of cloth’

JHS, DJI101210AC

If the infinitive follows the noun phrase, the phrase has impersonal-obligative semantics, specifying what “should be done” with something, which gives it a modal semantics (476). The consultant JMS has given some examples of this

construction in elicitation when asked specifically for examples of a default infinitive of certain verbs.

- (476) *di-maŋgu*            *dindeeŋ*            *bu-toot*  
 CL.di-mango            AGR.di:DEM.DIST    CL.bu-pick.up  
 ‘These mangoes are to be picked up.’  
 JMS, infinitive list frames

- (477) *ja-ja-fos*            *bu-mat*  
 CL.ja-CL.ja-grass      CL.bu-clear  
 ‘These weeds are to be cut off.’  
 JMS, infinitive list frames

#### 4.5.1.4 Phrasal Complements

Verbal nouns can be employed as phrasal complements, with a purposive ‘in order to’-reading in (478).

- (478) *bu-dëë'*      *xa*      *jibëeher*      *bahan*    *a*      *Dakar*      *u-xaan-karah*      *taŋ-aŋ*  
 CL.bu-go      CONN    Djibonker    until    PREP    Dakar      2-put-FUT      time-PL  
*haalax*  
 ten  
 ‘To go from Djibonker to Dakar will take you 10 hours.’  
 Jules Coly, DJI221009AC222

Another type of phrasal non-finite construction only encountered once in elicitation consists of the preposition *a* followed by the infinitive. This construction has a temporal-adverbial value, denoting the simultaneous occurrence of two actions (479).

(479) *min a bu-saat i-wuu-min buyeŋka koona a-lód-a*  
 1PL.EXCL PREP CL.bu-pass 1-see-1PL.EXCL COMPL house 3-build-PASS

‘Passing by, we saw that the house had been built. [lit.: We at passing we saw that the house has been built.]’

LM, field notes

## 4.6 The prefixation of infinitives

Of the close to 30 noun class prefixes attested in Gubëeher so far, more than half are involved in the derivation of infinitives (see Figure (8)). For some infinitives, a semantic connection between root meaning and noun class semantics as established for nouns denoting entities can be noted (see Table (186)). In the following subsections each of the paradigms is presented with a complete list of all infinitivally used verbal nouns attested for the paradigm.

Table (186) *Overview of the semantic contribution of noun class prefixes on entities and infinitives*

NC	On entitive roots	On eventive/stative roots
<i>ba-</i>	collective plural	collective actions, plural arguments
<i>ja-</i>	collective plural grass and leaves	collective actions (agriculture)
<i>ta-</i>	mostly animals	related to fishing
<i>mun-</i>	liquids	‘urinate’
<i>ji-</i>	many humans, mammals	human/animate participants
<i>ran-</i>	kinds of woven mats	‘weave’
<i>sin-</i>	ropes, strings, reciprocal relations	reciprocals (strings between people or actions)

### 4.6.1 *Bu*-infinitives (default)

The *bu*-infinitives are the default form for infinitives. There are few verbally used roots which are not compatible with *bu*. For an account of how *bu*-infinitives

contrast with infinitives derived with other noun class prefixes from the same root see section 4.7.2, for a discussion of verb stems incompatible with the default prefix *bu-* see section 4.7.2.2.3 and 4.7.2.1.

#### 4.6.2 *Bi*-infinitives

The infinitival verbal nouns in the *bi*-paradigm are neither very numerous nor is any obvious semantic connection between the noun class prefix and any semantic characteristics of the events evident Table (187).

Table (187) *Bi*-infinitives

VN Gubëeher	Gloss infinitive	Other meaning
<i>bi-tem</i>	'to gossip'	
<i>bi-ŋaf</i>	'to mount (animal)'	
<i>bi-maap</i>	'to fish with hands'	
<i>bi-ciir</i>	'to die'	'case of death'/ 'cause of death'
<i>bi-naax</i>	'to tell'	'court hearing'
<i>bi-niig</i>	'to watch'	
<i>bi-tib</i>	'to search'	'research'
<i>bi-ñooc-a</i>	'to wash body'	
<i>bi-jeet-a</i>	'to warm oneself up'	

#### 4.6.3 *Ja*- infinitives

In the case of the prefix *ja-*, a clear association with a specific domain can be noted; nine out of eleven attested *ja*-infinitives are directly related to agricultural activities. Agriculture as a domain for verb classification is not surprising considering that agricultural activities, especially surrounding the cultivation of rice, is extremely salient in Bāinounk culture and the year is organised around certain key events related to farming. Rice and palm wine are core elements of traditional culture and are used on many occasions for ritual purposes. Also note that class *ja-* is the

unlimited plural of the *gu-/ha-/ja-*paradigm noun which contains leaves and types of grass-like plants, including the hyperonym *ja-fos* ‘grass’ and the derived *ja-no* ‘grass, undetermined mass of organic material’ from the omniclass root *no*, as well as rice field ‘*ja-rax*’. Noteworthy in this context is the verb for ‘harvesting palm wine’ *jë-gób* and *jë-góbul* (see Table (188)). Both *gób* and the derived stem *góbul* do mean ‘to scratch’, since the palm tree is ‘scratched’ with a metal tool, so that the liquid inside the palm can flow into a bottle which is attached to the trunk. In the original context though, i.e. with the literal meaning ‘to scratch’, the verbal noun is exclusively derived with the NC prefix *bu-*: *bu-gób/bu-góbul*. The infinitive prefixed with the marker *bu-* is thus covering the general meaning and the one with the prefix *ja-* refers specifically to agriculture, a domain heavily associated with this prefix.

Table (188) *Ja-infinitives*

<b>VN Gubëeher</b>	<b>Gloss infinitive</b>	<b>Other meaning</b>
<i>ja-naaf</i>	‘to cultivate’	‘culture’ (pl. <i>ja-naaf-an</i> )
<i>ja-rifun</i>	‘to replant seedlings’	‘replanting’ (pl. <i>ja-rifun-on</i> )
<i>ja-mul</i>	‘to harvest’	‘harvest’ (pl. <i>ja-mul-on</i> )
<i>jë-gób</i> cf. <i>bu-gób</i>	‘to harvest palm wine’ ‘to scratch’	
<i>jë-góbul</i>	‘to harvest palm wine’	
<i>jë-ruug</i> cf. <i>bu-ruug</i>	‘to plant rice’ ‘to plant (a tree)’	
<i>ja-ŋis</i>	‘to cut grass’	
<i>ja-ŋaf</i>	‘to ascend’ (often harvesting fruit or palm wine)	
<i>ja-ŋaf-ula</i>	‘to climb (distr.)’	
<i>jam-bok</i>	‘to climb’	
<i>ja-boom</i>	‘to be insubordinate/fool around’	
<i>ja-mbaal</i>	‘to fish with net’	‘fishnet’ (pl. <i>ja-mbaal-an</i> )
<i>jëm-bëëx</i>	‘to pull in (boat or fishnet)’	

Another infinitive whose non-default form has very specific semantic connotations is *jëm-bëëx*. The *jam-* infinitive refers specifically to the pulling in of a fishnet or boat, as opposed to the generally used default infinitive *bu-bëëx* ‘to pull’.

Remarkably the two uses of *ja-mbaal* as verbal noun meaning ‘fishing’ (480) and as an entity meaning ‘fishnet’ (480) differ also in agreement class.

(480)	a)	<i>ja-mbaal</i>		<i>janja</i>		b)	<i>ja-mbaal</i>		<i>amu</i>
		CL.ja-catch.fish		CL.ja-DEM.PROX			CL.ja-catch.fish		CL.a-DEM.PROX
		‘this fishing’					‘this fishnet’		

#### 4.6.4 *Gu-* infinitives

The *gu-* paradigm is the second largest paradigm for infinitives after the default infinitives in *bu-*. Apart from the underived nouns in Table (189) this paradigm also contains a large number verbal nouns from reflexives, reciprocals and some other intransitivising derivations ending in *-a* (see 4.7.2.3.2).

Table (189) *Gu-infinitives*

<b>VN Gubëeher</b>	<b>Gloss infinitive</b>	<b>Other meaning</b>
<i>gu-ɲuñ</i>	'to return'	
<i>gu-ɲan</i>	'to enter'	
<i>gu-bos</i>	'to have children (person)'/ 'to give birth (animal)'	'offspring'
<i>gu-bet</i>	'to survey'	
<i>gu-laŋk</i>	'to row'	
<i>gu-mantant</i>	'to be cross-eyed'	
<i>gu-faanin</i>	'to smell (to smoke)'	
<i>gu-bëëx</i>	'to pull (to smoke)'	
<i>gu-rux</i>	'to drink'	
<i>gu-wor</i>	'lay an egg (chicken)'	
<i>gu-yoot</i>	'to sieve'	
<i>gu-wóbun</i>	'to breastfeed'	
<i>gu-wób</i>	'to drink on breast'	
<i>gu-saw</i>	'to hunt'	
<i>gu-gusin</i>	'to rinse'	
<i>gu-xun</i>	'to adopt'	
<i>gu-lód</i>	'to build'	
<i>gu-liin</i>	'to braid hair/get braided'	
<i>gu-baat</i>	'to bark'	
<i>gu-way</i>	'to swim'	
<i>gu-feen</i>	'to marry'	
<i>gu-lëpic</i>	'to hiccup'	
<i>gu-xosox</i>	'to cough'	
<i>gu-tisya</i>	'to sneeze'	
<i>gu-rëëj</i>	'to defecate'	
<i>gu-loot</i>	'to vomit'	

#### 4.6.5 *Ba-* infinitives

The infinitives in class *ba-* are relatively numerous. With entities, class *ba-* contains many nouns for undetermined amounts of grains like *ba-fudd* 'maize' and *ba-siid* 'millet' and cooked food prepared from plants. The association of the prefix *ba-* with the feature 'pluractionality' is possibly relevant for some of the infinitives

derived with the prefix *ba-* too, as has been hypothesised for the agricultural infinitives derived with class *ja-* (section 4.6.3). A number of derived verbs in the agricultural domain also nominalise with *ba-* (these are further discussed in section 4.7.2.3.3).

Table (190) *Derived ba-infinitives from the agricultural domain*

<b>Ba-infinitives</b>	<b>Gloss</b>
<i>ba-far-la</i>	'untangle peanuts'
<i>bě-fēs-ěla</i>	'remove weeds'
<i>bě-buut-ěla</i>	'collect remains after harvest'
<i>ba-těnk-ěla</i>	'remove weeds'
<i>bě-jég-a</i>	'cut wood'
<i>bě-gób-ula</i>	'scratch wounds or spots'/'palm wine of the evening'
<i>ba-wuc-una</i>	'dig for erecting a wooden fence'

The fact that infinitives in classes *ja-* and *ba-* are both associated with agriculture is supported by their nominal use as unlimited plurals in triadic paradigms, especially in the botanic domain. The plural character of the prefixes might also relate to the collective character of agricultural activities. Other activities involving a multiplicity of participants or action (pluractionality) are found in class *ba-* as well. From the domain of collective entertainment class *ba-* contains the following infinitives: *bě-yin* 'to sing', *ba-ñañ* 'to dance', *bě-děeka* 'to play (game)'.

Table (191) *Ba-infinitives*

VN Gubëeher	Gloss infinitive	Other meaning
<i>ba-mat</i>	'to clear land'	
<i>ba-xaac</i>	'to clear land'	'patch of clear land' (pl. <i>ba-xaac-aŋ</i> )'
<i>ba-jip</i>	'to choose'	
<i>ba-kur</i>	'to thread [pearls on a string]'	
<i>ba-mal</i>	'to beat drums'	
<i>ba-malun</i>	'to build a dyke'	
<i>ba-jax</i>	'to marry (men)'	'marriage'
<i>ba-caam</i>	'to pay/payment/money'	'money'/'payment'/'things to pay'
<i>bë-lób</i>	'to speak'	'conversation'/'utterance'
<i>ba-laac</i>	'to shout'	
<i>ba-ñañ</i>	'to dance'	'dance event'
<i>ba-keec</i>	'to write'	
<i>bë-déba</i>	'to crack nuts'	
<i>bë-kélo</i>	'to cry (children)'	
<i>bë-ñub</i>	'to dye'	
<i>ba-luf</i>	'to sew'	'couture'
<i>bë-yin</i>	'to sing'	
<i>bë-buf</i>	'to sweep'	
<i>bë-téb</i>	'to count'	
<i>bë-lóbum</i>	'to spread news'	
<i>bë-tu</i>	'to wait'	
<i>bë-ñëëj</i>	'to wash laundry'	

Some consultants even have occasionally commented on the *ba-* forms of some verbs, as “the plural” of the alternative form with *bu-* and claimed that it is used when the agent or theme participant is a plural. The consultant LM e.g. has stated in an elicitation session that the infinitive *bu-xeec* ‘to write’ is used in the singular, when the action is performed by the speaker himself and on singular theme (481), whereas *ba-keec* is used for plural objects (e.g. letters) are written (482). Moreover the consultant made a point that *ba-keec* is a plural form: ‘*le pluriel de l’action*’.

(481) *bu-xeec ha leson g-i-raad-i*  
 CL.bu-write CONN lesson FOC.OBJ-1-AUX-PERF

‘I am writing a lesson.’

LM, Infinitive list

(482) *ba-keec ha letar-aŋ g-i-raad-i*  
 CL.ba-write CONN letter-PL FOC.OBJ-1-AUX-PERF

‘I am writing letters.’

LM, Infinitive list

In a different session the same consultant has related the use of the infinitives *bu-téb/bë-téb* ‘to count’ to plurality of the agent. Accordingly, *bu-téb* would be used with singular agents (483) and *bë-téb* with plural agents (484).

(483) *bu-téb ha di-maŋgu g-i-raad-i*  
 CL.bu-count CONN CL.di-mango FOC.OBJ-1-AUX-PERF

‘I am counting mangos.’

LM, infinitives 2012

(484) *bë-téb ha di-maŋgu g-i-raad-i-min*  
 CL.ba-write CONN CL.di-mango FOC.OBJ-1-AUX-PERF-1PL.EXCL

‘We are counting mangos.’

LM, infinitives 2012

Nevertheless, the correlation between certain markers and pluractionality, although plausible, cannot be confirmed with additional data and remains conjecture at this point.

#### 4.6.6 *Ta-* infinitives

Some activities relating to the domain of ‘fishing’ cluster in class *ta-* (see Table (192)).

Table (192) *Ta-infinitives*

VN Gubëeher	Gloss
<i>të-biir</i> cf. <i>bu-biir</i>	‘to fish with trap’ ‘to close’
<i>ta-yah</i> cf. <i>bu-yah</i>	‘to fish with arrows’ ‘to hit’
<i>ta-jin-a</i> cf. <i>bu-jin/gu-jin-a</i>	‘to grill fish’ ‘grill’

This involves only three verbal nouns. Still, the point is not marginal for two reasons: 1) These are the only items found so far in this function and this noun class, all in the domain of fishing 2) Each of the verbal nouns with *ta-* have equivalents nominalising with *bu-* with a much broader meaning, so we can conclude that the more specific expressions are brought about by nominalisation with the prefix *ta-*. The root *biir* ‘close’ when related to fishing refers to the practice of closing a body of water with a trap so that the fish get caught in it as soon as they get in. The root *yah* is used in all kinds of contexts for stinging or piercing movements and again in the fishing context for a specific technique using a spear. The third root *jin* is a general word for frying any kind of wood, whereas the VN with *ta-* implies specifically grilling fish. Since the only difference between the fishing related verbs and the more general ones is the noun class prefix which derives the verbal noun from the eventive root, it is safe to assume that the prefix *ta-* is semantically connected to the domain of fishing.

#### 4.6.7 *Mun*-infinitives

The only infinitive in the *mun*-paradigm is *mu'-sel* 'urinate', which coincides with the association of entities in the *mun*-paradigm with liquids (see chapter 3.1.6, Table (139)).

#### 4.6.8 *Ji-/jin-* infinitives

The prefix *jin-* is unique to verbal nouns in that it is no at all attested with other nouns. On the other hand the prefix *ji-* which is quite frequently encountered on other nouns is only represented with one verbal noun: *ji-kuj* 'to wrestle/wrestling match'.

Table (193) *Jin-* infinitives

VN Gubëeher	Gloss infinitive	Other meaning
<i>ji-kuuj</i>	'to fight'	'wrestling match'
<i>jin-deg</i>	'to hit'	
<i>jin-kof</i>	'to kill'	
<i>jin-ŋal</i>	'to bite'	
<i>jim-bux</i>	'to insult'	'insult' (pl. <i>jim-bux-on</i> )

It is questionable whether *jin-* and *ji-* as prefixed to verbal nouns can be equated with each other considering the formal difference, and also whether both can be compared to *ji-* prefixed to entity denoting nouns, considering the difference in paradigm type and agreement. The paired, *ji-*paradigm with suffixed plural contains many animate nouns including names for animals, especially mammals, and also derived terms referring to humans from roots denoting mainly character traits (see 4.3.1.1). These nouns all have *a*-agreement (485), whereas the verbal nouns in the *ji(n)*-paradigm are single noun paradigms with *ji*-agreement (486).

(485) *ji-bóóg*                    *amu*  
 CL.ji-calabash    CL.a:DEM.PROX  
 ‘this calabash’  
 ES, dictionary

(486) *ji-kuuj*                    *jijeerj*  
 CL.ji-wrestle    AGR.ji-DEM.DIST  
 ‘that wrestling’  
 LM, DJI230111AC3

The semantic contribution of the prefix *jin-* to the semantics of the derived verbal nouns is not entirely clear, although some evidence suggests that there is one. Apart from the fact that the verbs in class *jin-* denote aggressive behaviour, there might be a component of animacy which is relevant. For the verb *dég* ‘hit’ two consultants (LM, KC) have stated that the default *bu-* infinitive is used generally for all kinds of objects, whereas the *jin-* infinitive refers to the beating of persons or animals (487).

(487) *jin-dég*            *ha*            *féebi-erj*            *g-a-raad-i*  
 CL.jin-hit            CONN            goat-PL            FOC.OBJ-3-AUX-PERF  
 ‘S/he is hitting (the) goats.’  
 LM, infinitives list

Also for the verb *hof* ‘kill’ the consultant JMS has specified that the *jin-* infinitive is used if the object is a person and *bu-* if it is an animal and has given the pair (488) and (489) as examples.

(488) *a-raad-i*            *jiŋ-ko’*            *ka*            *jamaarj*  
 3-AUX-PERF    CL.jin-kill    CONN    people  
 ‘He kills people.’

- (489) *a-raad-i bu-ho' ka bē-kēr*  
 3-AUX-PERF CL.bu-kill CONN CL.ba-chicken  
 'He kills a chicken.'

#### 4.6.9 *Sin-* infinitives

The majority of verbal nouns bearing the prefix *sin-* are of reciprocals derived with the suffix *-ay* (see 4.7.2.3.1, Table (208)). A small number of underived *sin-* infinitives are attested as shown in Table (194).

Table (194) *Non-derived sin-infinitives*

VN Gubëeher	Gloss
<i>sin-ceem</i>	'to sleep'
<i>si'-liipi</i>	'to snooze'
<i>siŋ-këb</i>	'to eat (hard food)'

The verbal nouns prefixed with *si-* in Table (195) share the prefix and the semantic connotation of 'negative human characteristics' with the many property nouns in *si-* discussed in section 4.3.4 (see Table (177)).

Table (195) *Potential si-infinitives*

VN Gubëeher	Gloss
<i>si-kuubëla</i>	'to change character'
<i>si-gëng(ë)la</i>	'to be bow-legged'
<i>si-mongëla</i>	'to be cross-legged'

#### 4.6.10 *Ka-* infinitives

Loan verbs from French and Wolof are per default assigned to either class *bu-* or class *ka-* or both. It is noteworthy that in the Joola languages spoken in the vicinity of Djibonker and by most speakers of Gubëeher (Eegimaa, Kujireray, Fogny, Kaasa)

one of the most frequent NC prefixes and one of the default verbal noun prefixes is *ka-/ga-*. This would explain the use of *ka-* as a default for verbal nouns of loans in Gubëeher, considering that *ka-* is not attested with entities.

Table (196) *Ka- infinitives borrowed from French or Wolof*

VN Gubëeher	Source	Gloss
<i>ka-rose</i>	< French <i>arroser</i> 'water'	'to water'
<i>ka-raax</i>	< Wolof	'to polish a wall'
<i>ka-jan</i>	< Wolof <i>jang</i> 'read/learn'	'to learn'
<i>ka-lire</i>	< French <i>lire</i> 'read'	'to read'
<i>ka-zwé</i>	< French <i>jouer</i> 'play'	'to play'
<i>ka-peñe</i>	< French <i>peigner</i> 'comb'	'to comb'
<i>ka-pentire</i>	< French <i>peinturer</i> 'paint'	'to paint'

For the other verbal nouns prefixed with *ka-* (or possibly *ka'*- with an elided final nasal) it is not possible to determine whether these contain loans from other languages than Wolof or French, for the reason that not enough is known about some of the potential donor languages and due to the impossibility of determining the direction of borrowing even in cases where borrowing has taken place. Since both *ka-* and *kan-* are attested on infinitives, it is impossible to determine whether the roots in Table (197) with which assimilation of the final nasal of the prefix would apply are prefixed with *kan-* or *ka-*. For the infinitive of 'to clean palm tree' both *ka'-fëet*, prefixed with *kan-* with an elided *n*, as well as *ka-fëet* prefixed with *ka-* are possible.

Table (197) *Other ka(n)-infinitives*

VN Gubëeher	Gloss	Prefix
<i>kë-juk</i>	'to begin (construction)'	clearly <i>ka-</i>
<i>kam-baaf</i>	'to exploit'	clearly <i>kan</i>
<i>këm-bëg</i>	'to live'	
<i>ka-feet</i>	'to clean palm tree'	unclear whether the prefix is <i>ka-</i> or <i>kan-</i> , since nasal elision applies
<i>ka-lax</i>	'to forge'	
<i>ka-law</i>	'to pray'	
<i>ka-moot</i>	'to spin cotton'	
<i>ka-fil</i>	'to carve'	
<i>ka-lim</i>	'to rain'	
<i>kë-mëg</i>	'to dance funeral dance'	
<i>ka-furun</i>	'to present the/a corpse'	
<i>ka-lódin</i>	'to greet the corpse'	
<i>ka-mu</i>	'to owe' <sup>99</sup>	

The last four items in Table (197) indicate a semantic correlation between *ka*-verbal nouns and ritual events, specifically funerals. The suspicion that *ka*-verbal nouns are loans and the correlation between *ka*-verbal nouns and cultural domains might not be coincidental. The kingdom of Mof Ávvi exerts some amount of cultural hegemony on Djibonker and its language Joola Eegimaa has a status as language used for certain kinds of cultural and ritual expression in Djibonker. Some shrines of Djibonker are directly subordinate to the rain shrine of Mof Ávvi and rituals are conducted in Eegimaa, and other shrines and holy sites have Joola (Eegimaa or Fogny) names. Until very recently, song and music in Djibonker was completely dominated by Mof Ávvi, all songs used to be in Eegimaa, and the most skilful musicians were hailing from Mof Ávvi. The verbal nouns *ka-lódin* 'greeting (of the corpse)' as well as *ka-furun* 'taking out (of the corpse)' also have a default counterpart with a general meaning, not specifically related to funerals: *bu-lódin*

<sup>99</sup> The settling of debts of the deceased is an important part of the funerary rites and prerequisite to proceed with the sacrificial slaughtering of animals in the name of the deceased.

means ‘to greet’ and *bu-furun* ‘to take out’. Apparently, pairs of verbal nouns where the default version has a general meaning and the non-default a funeral-related meaning can be found in Eegimaa as well (Serge Sagna, p.c.). The involved non-default prefix is here *ga-*, cognate to *ka-* in other Joola languages.

#### 4.6.11 *Kun-* infinitives

The clustering of the three postural verbs ‘sit’ ‘lie’ and ‘stand’ in class *kun-* is conspicuous, but does not allow any further conclusions concerning the semantic contribution of *kun-*.

Table (198) *Kun-infinitives*

VN Gubëeher	Gloss
<i>ku'-waan</i>	‘to lie’
<i>kun-noox</i>	‘to sit’
<i>ku'-lik</i>	‘to stand’
<i>ku'-waxa</i>	‘to play’
<i>kum-pax</i>	‘to escape’
<i>kum-bul</i>	‘to stay overnight’
<i>kum-bënk</i>	‘to fear’

#### 4.6.12 Other infinitives

Some other prefix-base combinations for verbal nouns are rather marginal and do not offer much in terms of semantic relationship between prefix and root.

Table (199) *Other non-default infinitives*

VN Gubëeher	Gloss
<i>hë-dil</i>	'to fart'
<i>hë-duug</i>	'to steal'
<i>hë-dëëk</i>	'to go'
<i>hë-dëëkiin</i>	'to go for walk'
<i>ha-rox</i>	'to cry'
<i>fëŋ-këd/fuŋ-këd</i>	'to play ball'
<i>fën-cireŋ</i>	'to fly/jump'
<i>ñan-ciil</i>	'to laugh'

#### 4.7 The distribution of multiple infinitives and infinitival paradigms

Not only does the formation of infinitival verbal nouns involve a large number of noun class prefixes, a large number of stems have several infinitives differing only in the form of the noun class prefix. The phenomenon of multiple infinitives with partly overlapping functions, which seems to be an areal feature of Casamance languages (see 1.3), is also reported from other parts of the world. For Gubëeher, the following observations on the distribution of different prefixes can be made: The default infinitives prefixed with *bu-* can be regularly derived from all but 14 underived verb stems. This predictability in formation is mirrored by a semantic and functional predictability: default infinitives, when contrasted with non-default infinitives, are limited to complement position and have a rather general semantic content, denoting the action itself. As infinitives occurring exclusively in complement position they lack certain nominal properties, e.g. modifiability and pluralisation. Most importantly, *bu-*infinitives have argument structure. As a consequence the *bu-*infinitive of a transitive verb has to occur with an object

participant, which is encoded as a possessive. The absence of the object is either ungrammatical or the object has to be interpretable as ellipsed.

With the more idiosyncratic non-default infinitives with their unpredictable class prefix, this is not the case. They are ambiguous between several types of verbal nouns. They have an infinitival complement reading like the default infinitives, including the encoding of participants with possessive morphology and can be used in the same contexts as default infinitives. But, non-default verbal nouns can also be used as event nominalisations (manner nouns, result nouns etc.) with more nominal properties and in monovalent constructions, even though the corresponding finite verb is transitive. The use of non-default infinitives in monovalent constructions corresponds to the unexpressed object alternation.

Table (200) *Default vs. non-default infinitives*

<b>Default infinitives</b>	<b>Non-default infinitives</b>
-general meaning	-idiosyncratic meaning
-regular formation ( <i>bu-</i> )	-irregular formation
-limited to complement position	-ambiguous between complement and other eventive verbal nouns
-has argument structure. Infinitives of transitive verbs occur only in bivalent or ellipsed non-finite constructions	-can have argument structure but not necessarily. Can occur in bivalent as well as in monovalent constructions
-less nominal features (not modifiable)	-all nominal features

#### 4.7.1 Possessive suffixes with default and non-default infinitives

A distinguishing feature for different kinds of verbal nouns is the interpretation of possessive morphology. As established in section 4.4.4.2, the possessive can be either interpreted as encoding an object (usually animate) with complements, or as establishing a possessive relationship with verbal nouns that have more nominal

properties. With the *bu*-version of multiple infinitives, possessive morphology is per default interpreted as encoding the object participant, if the verb allows one (490). Non-default infinitives, which can be used as infinitival complements as well, also allow for the interpretation of possessive as encoding the object (491).

(490) *bu-caaŋ-kanam*      *g-i-gu-t-i*      *hě-děək*  
 CL.bu-pay-3SGPOSS    FOC.OBJ-1-be-VEN-PERF   CL.ha-go  
 ‘I came to pay him.’  
 LM, infinitives 2012

(491) *ba-caaŋ-kanam*      *g-i-gu-t-i*      *hě-děək*  
 CL.ba-pay-3SGPOSS    FOC.OBJ-1-be-VEN-PERF   CL.ha-go  
 ‘I came to pay him.’  
 LM, infinitives 2012

The interpretation as manner noun, action noun or result noun is only available for non-default infinitives, not for default ones. The possessive suffix with the verb *keec* ‘write’ is not suitable to encode an object, since the verb write only allows inanimate objects which are rarely encoded pronominally. An interpretation as action or manner noun is thus forced, which is compatible with the non-default infinitive *ba-keec* as demonstrated in example (492). This interpretation as manner noun is not available for the corresponding default infinitive *bu-xeec* though and the phrase in (493) is thus ungrammatical.

(492) *ba-keec-henem*      *a-nokk-i*  
 CL.ba-write-3SGPOSS    3-slow-PERF  
 ‘S/he writes slowly. [lit. His/her writing is slow.]’  
 LM, infinitives 2012

- (493) *\*bu-xeec-henem*                      *a-nokk-i*  
 CL.ba-write -3SGPOSS      3-slow-PERF  
 ‘S/he writes slowly. [lit. His/her writing is slow.]’  
 LM, infinitives 2012

From this follows that default infinitives of intransitive verbs are also incompatible with possessive morphology, since there is no object to encode and a reading as a manner-, or result-noun is not available for default infinitives. The verbal nouns of verb *laac* ‘shout’ are derived from an intransitive base so that, as explained above, possessive morphology can only be interpreted as a result or manner nominalisation. As expected of the two verbal nouns formed from the root *laac* (*ba-laac/bu-laac*) only *ba-laac* is grammatical with possessive morphology (494), because it functions both as infinitive and as result noun, whereas *bu-laac* is not. Since the verb it shares its root with is intransitive and thus does not have an object participant which could be encoded by the possessive, the form in (495) is ungrammatical.

- (494) *ba-laac-hanaan*                      *a-jiibah-i*  
 CL.ba-shout-2PLPOSS      3-much-PERF  
 ‘Your (pl.) shouting is too much.’  
 LM, infinitives 2012

- (495) *\*bu-laac-hanam*                      *a-jiibah-i*  
 CL.bu-shout-3SGPOSS      3-much-PERF  
 ‘his shouting’  
 LM, infinitives 2012

#### 4.7.2 Transitivity related parameters and infinitive choice in Gubëeher

The opposition default vs. non-default infinitives in Gubëeher is sensitive to transitivity related parameters, which will be discussed in this section. Three

observations are relevant in this context. Firstly, all of the verbs which are attested exclusively with non-default infinitives are intransitive verbs (4.7.2.1). Secondly, infinitives of transitive verbs which have more than one infinitive are distributed as follows: default infinitives are almost exclusively used in bivalent constructions, their occurrence in monovalent constructions is limited to cases where the object is ellipsed. Non-default infinitives are used predominantly in monovalent constructions with unexpressed objects, although they are also attested in bivalent constructions (4.7.2.2). Thirdly, derived intransitives such as reflexives/middles, reciprocals and distributives have a large proportion of non-default infinitives (4.7.2.3).

#### **4.7.2.1 *Infinitives of intransitive verbs***

Some intransitive verbs do not allow *bu-* as a nominaliser for the derivation of infinitives at all. Taking a look at the verbs for which a verbal noun in *bu-* is judged ungrammatical by all informants (Table (201)), there is a very strong bias for clearly intransitive verbs.

Table (201) *Non-default only infinitives*

<b>VN Gubëeher</b>	<b>Gloss</b>
<i>gu-dolia</i>	'to fish with a rod'
<i>gu-mamaxun</i>	'to stutter'
<i>gu-mantant</i>	'to be cross-eyed'
<i>hë-dil</i>	'to fart'
<i>gu-hosox</i>	'to cough'
<i>gu-saw</i>	'to hunt'
<i>gu-rëej</i>	'to defecate'
<i>gu-ŋuñ</i>	'to return'
<i>gu-cigia</i>	'to dream'
<i>gu-jëdda</i>	'to tell lies'
<i>ku-waan</i>	'to lie [position]'
<i>ku-waxa</i>	'to play'
<i>ka-lim</i>	'to rain'

For a number of verbs predominantly used in monovalent constructions both forms are admitted, but not by all consultants, and the default form is used only in specific circumstances. As for the verb *ceem* 'sleep' the common form of the infinitive is the non-default form *sin-ceem* 'to sleep', the default infinitive with *bu-* is judged grammatical by some speakers only. For speakers who accept both forms *sin-cem* and *bu-cem* are in complementary distribution, *sin-cem* only admissible in monovalent constructions and *bu-cem* only in complementised constructions in presence of a locative complement attached with the possessive morpheme *ka* (497). The preposition *a*, which is obligatory in the finite version of the phrase is omitted when nominalised. The locative complement is thus attached in exactly the same way as a core argument, and also triggers the choice of the *bu*-infinitive.

- (496) a) *i-dëë' sin-ceem*      b) *\*i-dëë' bu-ceem*  
 1-go CL.sin-sleep      1-go CL.bu-sleep  
 'I go to sleep'  
 LM, infinitive list

- (497) *bu-ceeŋ ka bu-dep g-u-maŋ-i*  
 CL.bu-sleep CONN CL.bu-bed FOC.OBJ-2-want-PERF  
 'You want to sleep in a/the bed'  
 LM, infinitive list

Another example for an intransitive verb exceptionally used in a bivalent construction is the metaphoric use of the verb *jir* 'run' in (498). While three of four consultants have rejected the *bu-* form, one informant has quoted it in an idiomatic expression, where it is used exceptionally with a complement.

- (498) *bu-ji' ka bë-lób*  
 CL.bu-run CONN CL.ba-speak  
 'to distrust (lit. 'to flee the words')  
 GS, field notes

#### 4.7.2.2 *Valency alternations and infinitive type*

As described in section 4.7.2.2.1, constructions with unexpressed objects can be either marked by the reflexive/middle or distributive extension or unmarked, in which case the two alternating phrases differ only in the presence or absence of the object. In case it is unmarked, the phrase with the deleted object is ambiguous between a construction with a deleted object and a case of object ellipsis. In non-finite phrases, disambiguation between ellipsed and deleted objects can occur through choice of infinitive: default or non-default.

#### 4.7.2.2.1 Unexpressed object alternation and infinitive type

The contrast is neatly manifested in example (499), which was provided as a translation for the French phrase in square brackets by the three female consultants doing the video task. Of the two male consultants, one has used the default form twice in that phrase and the other one the non-default form twice.

(499) *i-min*    ***ba-keec***    *bare*    *min-d-i*    ***bu-xeec***    *ha*  
 1-able    CL.ba-write    but    able-NEG.PERF-1SGSUBJ    CL.bu-write    CONN

*gu-bëeher*

CL.gu-Bainouk

‘I know how to write but I don’t know how to write Gubëeher.’

[Je sais écrire mais je ne sais pas écrire en Bainouk.]

MaB, DJI090312AC12

The morphological marking of constructions with unexpressed objects in non-finite contexts is mirrored by its finite counterparts. As described in section 4.7.2.2.1, reflexive/middle morphology is used with some verbs to mark that the object is unexpressed and not ellipsed in order to resolve the ambiguity between omission and ellipsis. In finite constructions this marking is frequent with household activities, which are often construed as focussing on the activities themselves, without explicit mentioning of any theme participants. In non-finite constructions the disambiguation is carried out by the choice of default vs. non-default type of the infinitive – derivational morphology can additionally be affixed to mark unexpressed object alternation.

This point shall be illustrated taking the example of the verb *ñëej* ‘wash clothes’. In Gubëeher, the non-default infinitive *bë-ñëej* ‘wash clothes’ is the one used in unexpressed object constructions (500), referring to the general act of ‘doing

laundry’. The default form *bu-ñěej* is grammatical only in a bivalent clause with a direct object (501).

(500) *bě-ñěej*      *g-i-raad-i*  
CL.ba-wash    FOC.OBJ-1-AUX-PERF  
‘I am doing laundry’  
LM, infinitive list

(501) *bu-ñěej*      *ha*      *ha-yah*  
CL.bu-wash    CONN    CL.ha-clothes  
‘washing clothes’  
LM, infinitive list

In elicitation, all consultants gave clauses with an object NP when asked for an example featuring the default infinitive. This difference between unexpressed object alternation construction and the bivalent clause with two participants, marked in the non-finite by choice of class prefix, is conveyed in the finite construction by the use of reflexive morphology for the unexpressed object alternation construction (502) which is absent in the bivalent clause clause (503).

(502) *a-ñěej-a-i*  
3-wash-REFL-PERF  
‘S/he washed clothes.’  
LM, DJI280212AC7

(503) *ifok*      *i-ñěej-min*      *ha-ha-yah*  
must    1-wash-1PL.EXCL    CL.ha-CL.ha-clothes  
‘We have to wash these clothes.’  
LM, DJI280212AC

Another example of a standard household activity, which is often conceptualised as generic, i.e. without mentioning the theme participant, is the verb *buf* ‘sweep’ with the non-default infinitive *bë-buf*, which is often used in an unexpressed object construction (504).

- (504) *bë-buf*                    *g-a-raad-i*  
 CL.ba-sweep    FOC.OBJ-3-AUX-PERF  
 ‘S/he is sweeping.’

The default form is only used, if ever, when an object argument is expressed (505).

- (505) *bu-buf*                *ha*    *fujku*  
 CL.bu-sweep    CONN    room  
 ‘sweeping the room’

Again, there is an analogy between the use of the non-default form in non-finite constructions and the reflexive/middle suffix *-a* in finite clauses: both trigger an atelic, imperfective interpretation. The reflexive morphology in (506) serves as a device of making clear that semantic and syntactic valency is reduced, i.e. the object is unexpressed and not only ellipsed.

- (506) *a-buf-a-i*  
 3-sweep-REFL-PERF  
 ‘S/he did sweeping.’

The underived finite form in a monovalent construction in (507) is ambiguous between an ellipsed reading (‘S/he swept it’) and an unexpressed object reading (‘S/he did sweeping.’).

(507) *a-buf-i*  
3-sweep-PERF  
'S/he swept (it).'

The interpretation of clauses with unexpressed objects, and the possibility of leaving it unexpressed in the first place, is thus strongly dependent on a plausible context. If such a context is culturally given or imaginable, the object can be deleted. The association of an infinitive with a certain prefix can become conventionalised in its association with a specific semantic domain, or point to the semantic type of the object that is deleted. The list in Table (202) shows pairs of infinitives where the default one has a general meaning and the non-default one, usually occurring in unexpressed object alternation constructions, refers to specific domains. Apart from forcing a habitual or generic meaning on constructions with deleted objects in Gubëeher, in these cases the semantic impact of unexpressed object alternation goes further: the infinitives in Table (202) show that the non-default verbal noun, usually used in a monovalent construction, relates to a more specific domain by implying a specific domain for the deleted object.

Table (202) *Semantic differences between default and non-default infinitives*

Non-default verbal noun	Gloss	Default verbal noun	Gloss
<i>ba-doox</i>	'to transport goods goods on head/rice from the field'	<i>bu-doox</i>	'to carry'
<i>ba-jax</i>	'to marry'	<i>bu-jax</i>	'to take/grab'
<i>ba-mal</i>	'to drum'	<i>bu-mal</i>	'to beat'
<i>ba-toot</i>	'to sort rice'	<i>bu-toot</i>	'to pick up'
<i>bi-ɲaf</i>	'to copulate (animals)'	<i>bu-ɲaf</i>	'to mount'
<i>fëŋ-këd/fuŋ-këd</i>	'to play ball'	<i>bu-xëd</i>	'to kick'
<i>gu-bëëx</i>	'to smoke'	<i>bu-bëëx</i>	'to pull'
<i>gu-faanin</i>	'to smoke cigarettes (habitual)'	<i>bu-faanin</i>	'to smell at'
<i>gu-ɲan</i>	'to enter bedroom/go to bed'	<i>bu-ɲan</i>	'to enter'
<i>gu-rux</i>	'to drink alcohol'	<i>bu-rux</i>	'to drink'
<i>gu-wor</i>	'to lay an egg (chicken)'	<i>bu-wor</i>	'to put to ground'
<i>gu-loot</i>	'to vomit'	<i>bu-loot</i>	'to spit'
<i>jë-gób</i>	'to harvest palm wine'	<i>bu-gób</i>	'to scratch'
<i>jë-góbul</i>	'to harvest palm wine'	<i>bu-góbul</i>	'to scratch'
<i>jëm-bëëx</i>	'to pull in a boat/fishnet'	<i>bu-bëëx</i>	'to pull'
<i>jë-ruug</i>	'to plant rice'	<i>bu-ruug</i>	'to plant a tree'
<i>ji-ɲal</i>	'to bite (habitual e.g. dogs, babies while breastfeeding)'	<i>bu-ɲal</i>	'bite'
<i>ka-furun</i>	'to present corpse'	<i>bu-furun</i>	'to take out'
<i>ka-lódin</i>	'to greet corpse'	<i>bu-lódin</i>	'to greet'
<i>ta-yah</i>	'to catch fish with spear'	<i>bu-yah</i>	'to hit'
<i>të-biir</i>	'to catch fish with barrage'	<i>bu-biir</i>	'to close'

A habitual interpretation is suggested for the verb *rux* 'drink' where the use of the non-default verbal noun *gu-rux* 'drinking' in a monovalent construction implies habitual drinking specifically of alcohol (508).

- (508) *u-mër*      *gu-rux*  
 CL.u-PRO    CL.gu-drink  
 'S/he drinks (understood: S/he regularly drinks alcohol)'

For the non-default verbal noun *ji-ŋal* of *ŋal* ‘bite’ in a monovalent frame, a plausible context provided by the consultant herself (KC) was of a dog that has the habit of biting, or it could be used for a baby which has the habit of biting the mother’s nipples while breastfeeding.

4.7.2.2.2 Ellipsis and infinitive type

Default and non-default infinitives also distinguish unexpressed objects from ellipsed objects. The bivalent frame in (509) is compatible with both the default and non-default infinitive. Used with a monovalent frame, the choice of infinitive reflects a semantic difference. Whereas example (510) with the non-default infinitive is interpreted as unexpressed object alternation with a habitual or generic interpretation, the default infinitive in the same monovalent frame (511) can only be understood as an ellipsed-object construction, where the ellipsed object has to be recoverable from the context.

(509) *bu-luf* /            *ba-luf*        *ha*            *ba-raabis*        *g-i-raad-i*  
          CL.bu-sew /        CL.ba-sew    CONN        CL.ba-trousers    FOC.OBJ-1-AUX-PERF

‘I am sewing trousers.’

LM, infinitive 2012

(510) *ba-luf*            *g-i-raad-i*  
          CL.ba-sew        FOC.OBJ-1-AUX-PERF

‘I am sewing (habitually/generic).’

LM, infinitive 2012

(511) *bu-luf*            *g-i-raad-i*  
CL.bu-sew    FOC.OBJ-1-AUX-PERF

‘I am sewing it.’

LM, infinitive 2012

The same was observed for the verb *keec* ‘write’ in elicitation. Asked about the difference between (512) and (513), the consultant JMS stated that in example (512) an unmentioned object is referred to, which has probably been mentioned before and which speaker and hearer are both conscious of, whereas (513) is a general statement about the type of activity the speaker is involved in.

(512) *bu-xeec*            *g-i-raad-i*  
CL.bu write    FOC.OBJ-1-AUX-PERF

‘I am writing **it** (that which you told me to)’

[‘Je suis en train de l’écrire (ce que tu m’as dit)’]

JMS, infinitive list

(513) *ba-keec*            *g-i-raad-i*  
CL.bu write    FOC.OBJ-1-AUX-PERF

‘I am writing.’

JMS, infinitive list

#### 4.7.2.2.3 Evaluation of the data obtained in the video task

In order to obtain data on multiple infinitives and confirm the hypotheses on the correlation of valency type (monovalent/bivalent) and infinitive type (default/non-default) with data from a more controlled setting for context, a series of short video stimuli (each about one or two minutes with 10-15 utterances) has been devised which was used with five consultants. The consultants were asked to first translate

the French dialogue performed in the video line by line into Gubëeher and then provide a summary of the whole video from memory. The summary was intended to mitigate translation effects which might possibly result from the consultants using unnatural constructions in Gubëeher literally translating from French and give the consultants the opportunity to use more idiomatic expressions describing the scenes. The seven verbs whose use was sought to be triggered by the dialogue and action in the video are known to occur in pairs of default and non-default infinitives (Table (203)).

Table (203) *Verbs and infinitives triggered in the video task*

Stem	Non-default infinitive	Default infinitive	Gloss
<i>këb</i>	<i>siŋ-këb</i>	<i>bu-xëb</i>	'eat (hard things)'
<i>ŋaf</i>	<i>ja-ŋaf</i>	<i>bu-ŋaf</i>	'mount'
<i>dég</i>	<i>jin-dég</i>	<i>bu-dég</i>	'hit'
<i>ñëëj</i>	<i>bë-ñëëj</i>	<i>bu-ñëëj</i>	'wash'
<i>keec</i> <sup>100</sup>	<i>ba-keec</i>	<i>bu-xeec</i>	'write'
<i>lód</i>	<i>gu-lód</i>	<i>bu-lód</i>	'build'
<i>liina</i>	<i>gu-liina</i>	<i>bu-liina</i>	'learn/read'

The data obtained from the video task (summarised in Table (204)) confirms that valency and infinitive type are clearly correlated, although some margin for interspeaker variation is detectable. This variation had already become obvious in elicitation. When asked whether the default and non-default infinitives of certain verbs were known and considered correct by them, some consultants have refused forms that were accepted by other speakers, or would use them interchangeably where others would require a specific context. The expectation that default infinitives are used predominantly when an object is expressed and the non-default

<sup>100</sup> The occurrence of *keec* with the *ba*-infinitive and *xeec* with the *bu*-infinitive cannot be explained. The same phonological distribution occurs with *ba-kur* and *bu-xur* 'to thread pearls on a string'.

infinitives occur both in contexts with and without object but with a clear preference for those without, is confirmed in the task.

Table (204) *The correlation between valency and infinitive-prefix type (n=313 infinitival constructions)*

Speaker	1) Default infinitive in bivalent frame	2) Non-default infinitive in monovalent frame	3) Default infinitive in monovalent frame		4) Non-default infinitive in bivalent frame	Total
			a) ellipsed	b) other		
HS	45	18	3		1	67
MaB	38	18	1		5	62
KC	30	21	3	1	8	63
LM	32	13		3	8	56
JMS	15	12	1		37	65
Sum	160	82	8	4	59	313

Table (204) shows that of the 313 non-finite phrases containing multiple infinitives used by all consultants in the translation and description of the video task, 172 are of the default form prefixed with *bu-*, and 141 of the non-default form, prefixed with other noun class prefixes. Of the 172 non-default forms, which are expected to be used exclusively in bivalent frames or ellipsed constructions, 160 are indeed used in bivalent constructions and only 12 in monovalent constructions. Of these 12 occurrences of default infinitives in monovalent frame, 8 clearly refer to ellipsed objects as is obvious from the context they are used in and also reflected in the translation template, which leaves us with only 4 unaccounted for usages. Of the 141 occurrences of the non-default infinitives, which are expected to occur with preference in monovalent frames, 82 are used in monovalent frames and 59 in bivalent frames. The high number of non-defaults in bivalent frames can be attributed to one consultant (JMS) using non-defaults in almost all constructions. His ratio of non-default infinitives vs. default infinitives was exceptionally high with

49:16, whereas all other consultants exhibit almost inverse ratios: 19:48 (HS), 23:39 (MaB), 29:34 (KC) and 21:35 (LM), using actually less non-default than default infinitives.

#### 4.7.2.2.4 Transcript and evaluation of one of the videos from video task

In order for the reader to see some data and how the constructions were used in context by the consultants, a transcription of HS' translations of one of the videos (triggering the use of non-finite forms of 'write') will be used to illustrate the use of infinitives on a concrete example. The infinitive types and valency constructions of the triggered verb *keec* 'write' used by HS are summed up in Table (205), the transcribed data is presented in Table (206)<sup>101</sup>.

Table (205) *Distribution of infinitive types over construction types for the data in Table (206)*

<b>Infinitive type and construction</b>	<b>Number of instances</b>	<b>Numbers of examples</b>
Default infinitive in a bivalent construction	6	(518) (516)(520)(521)(524)(525)
Default infinitive in an ellipsed construction	2	(519)(523)
Non-default infinitive in an unexpressed object construction	2	(515) (521)
Non-default infinitive in a bivalent construction	1	(517)

It can be seen that the expected patterns clearly emerge: The non-default infinitive occurs twice in a unexpressed object construction – 'writing' is here expressed as a generic activity. Default infinitives do not occur at all in unexpressed object constructions, and only once is the non-default form used in a bivalent construction.

<sup>101</sup> In the transcription the French text in brackets is the spoken text in the video, which the consultants were then demanded to translate into Gubëeher, the English gloss is the translation of the Gubëeher utterance.

The default infinitive is used by the consultant six times in bivalent constructions in the translation, in the two instances the default infinitive occurs in monovalent construction, the object is undoubtedly ellipsed, as is obvious from the translation basis and the context. Example (523) shows an ellipsed object construction. The utterance is the answer to the question if the addressee has written a letter for the person. The answer refers to a letter mentioned before and not the general activity of writing, consequently the default infinitive is used. Likewise, example (519) is making reference to an object phrase which is explicit in the question ‘Do you know how to write Joola Banjal?’ and ellipsed in the answer. An interpretation of (519) as instance of unexpressed object construction (I don’t know how to write) is contextually absurd, since the speaker of the utterance is seen writing something by the consultant describing the video.

Table (206) *File DJI110312AC4, stimulus: DJI260212AC2. Consultant HS*

(514) *ho g-u-raad-i bu-ye*  
 what FOC.OBJ-2-AUX-PERF CL.bu-do

‘What are you doing?’

[Qu’est-ce que tu fais?]

(515) *ba-keec g-i-raad-i*  
 CL.ba-write FOC.OBJ-1-AUX-PERF

‘I am writing.’

[Moi je suis en train d’écrire.]

(516) *ho g-u-raad-i bu-xeec*  
 what FOC.OBJ-2-AUX-PERF CL.bu-write

‘What do you write?’

[Ah, et qu’est-ce que tu écris?]

(517) *ba-keec ha ño-lóɓ ño-tliit ño ha-jóóla*  
 CL.ba-write CONN CL.ño-word AGR.ño-small AGR.ño CL.ha-Joola

*g-i-raad-i*

FOC.OBJ-1-AUX-PERF

‘I am writing small words of Joola.’

[J’écris quelques mots en Joola.]

(518) *u-min num bu-heec ha ho-tliit ha Jóóla ha Banjal*  
 2-able also CL.bu-write CONN AGR.ho-small CONN Joola CONN Banjal

‘Do you know as well writing in Joola Eegimaa (lit.; Joola of Banjal)?’

[Et, tu sais aussi écrire le Joola Eegimaa?]

(519) *a’a yit-ir-i/ min-d-i bu-heec*  
 No know-NEG.PERF-1SGSUBJ able-NEG.PERF-1SGSUBJ CL.bu-write

‘No, I can’t write [it].’

[Ah ah, je sais pas l’écrire.]

(520) *yo arɗu fi kati u-min bu-xeec ha Hë-bëëher*  
 OK and 2SG if 2-able CL.bu-write CONN CL.ha-Baïnouk

OK, and you, do you know how to write in Gubëeher?’

[Aaah d’accord. Et toi est-ce que tu sais écrire le Gubëeher?]

(521) *i-min bu-xeec [korr.] ba-keec bare min-d-i bu-heec*  
 1-able CL.bu-write CL.ba-write but able-NEG.PERF-1SGSUBJ CL.bu-write

*ha arɗa Gubëeher*

CONN with CL.gu-Baïnouk

‘I know how to write but I don’t know writing in Gubëeher.’

[Je sais écrire mais je ne sais pas écrire le Baïnouk.]

(522) *bam i-yen-ut-o u-xeec-er-em leetar kati u-heec-i*  
 but 1-say-VEN-2SGOBJ 2-write-BEN-1SGOBJ.PERF letter if 2-write-PERF

‘But I told you to write me a letter, did you write [it]?’

[Et aussi, je t’avais demandé de m’écrire une lettre, est-ce que tu l’as fait?]

(523) *bu-xeec g-i-raad-i ñïmeni*  
 CL.bu-write FOC.OBJ-1-AUX-PERF now

‘I am writing it now.’

[Je suis en train de l’écrire maintenant.]

(524) *bu-xeec ha ë-mër g-i-raad-i ñïmeni*  
 CL.bu-write CONN AGR.a-PRO FOC.OBJ-1-AUX-PERF now

‘I am writing it now.’

[Je suis en train de l’écrire maintenant.]

(525) *yoo u-bala bu-xeec ha ëmër ñïmeni anaŋ i-n-dëëk-o*  
 OK 2-let CL.bu-write CONN AGR.a-PRO now and 1-PL-go-1PL.INCL

*bijeen*

there

‘Well, stop writing it now and let’s go there.’

[OK, mais arrête d’écrire pour le moment et on va aller là-bas.]

#### 4.7.2.3 *Derived verbs in non-default paradigms*

As typical for an Atlantic language, Gubëeher has a broad range of verbal derivations. There are clear tendencies linking certain derivations with specific noun class markers. If the choice of a noun class marker was exclusively dependent on the form of the derivational suffix then this would be an instance of morphological assignment, as stated for Kobiana by Doneux (1990). In Kobiana, the criteria ‘derived’, ‘active’, and ‘passive’ are described to be relevant on a purely formal basis, i.e. depending only on the presence of certain derivational suffixes, without consideration whether the derivation is productive or lexicalised, or whether the passives are deponents without corresponding active forms. In Gubëeher, the relationship between noun class marking and derivational suffix is not purely formal, since not all verbal nouns derived from a certain set of derived stems are prefixed with the same noun class prefix. The most frequent non-default

nominalising prefix with derived verbs is *gu-*. Some verbal nouns from derived verbs are also found in classes *ba-*, *bi-* and marginally *ta-*. The extensions which potentially trigger the use of non-default prefixes to form verbal nouns in Table (207) are all valency-decreasing.

Table (207) *Extensions which trigger the nominalisation with a non-default prefix*

Extension	Label	Functions
<i>-ay</i>	REC	reciprocal, comitative
<i>-a</i>	REFL	reflexive/middle, unexpressed object alternation
<i>-ĕla</i>	DISTR	distributive, unexpressed object alternation
<i>-ina/-una</i>	DER	distributive, unexpressed object alternation

#### 4.7.2.3.1 Sin-Infinitives of the reciprocal extension

The correlation between derived verbs suffixed with the reciprocal extension *-ay* and the nominalisation of those derived verbs with *sin-* is almost 100 percent: all reciprocals nominalise with *sin-*, irrespective of the semantics of the *-ay*-derivation. Verbs which acquire a comitative reading and those that acquire a reciprocal reading with this derivation both nominalise with the prefix *sin-*. Even in cases where no underived base has been found, or where the derived semantics is metaphorical (e.g. *sinnóbay* literally ‘to tie each other up’ with the meaning ‘to bewitch each other’, or *sinciray* literally ‘to jump around each other’ with the metaphorical meaning ‘to make subterfuges’) the prefix *sin-* is used for the formation of the infinitive. Table (208) shows some examples of derived reciprocal infinitives prefixed with *sin-*, from stems whose underived intransitive base is infinitivised with the prefix *bu-*.

Table (208) *Infinitives in sin- from derived stems (reciprocals)*

Underived stem	Gloss	Derived infinitive	Gloss
<i>bu-cógun</i>	'assemble people'	<i>sin-cógun-ay</i>	'assemble'
<i>bu-wuul</i>	'see'	<i>sin-wuul-ay</i>	'see each other/meet'
<i>bu-fic</i>	'distribute'	<i>si'-fic-ay</i>	'disperse (people)'
<i>bu-hof/jiη-kof</i>	'kill'	<i>sin-kof-ay</i>	'kill each other'
<i>bu-pimba</i>	'stare at'	<i>sim-pimb-ay</i>	'stare at each other'
<i>bu-cir</i>	'jump/fly'	<i>sin-cir-ay</i>	'make subterfuges'
<i>bu-ηit</i>	'have sex with s.o.'	<i>siη-ηit-ay</i>	'have sex with each other'
?		<i>si'-raan-ay</i>	'meet'
<i>bu-nób</i>	'tie'	<i>sin-nób-ay</i>	'bewitch each other'

4.7.2.3.2 *Gu*-infinitives of the reflexive/middle and distributive forms

The nominalisation of derived intransitives using *gu-* from a transitive base nominalised with *bu-* is quite productive. Mainly concerned are middles/reflexives derived with *-a(h)* and derivations in *-ëla/-ina*, usually with distributive semantics but also used for object deletion. There is no complete correlation between infinitives in *gu-* and the above mentioned extensions, for some of these valency reducing derivations the verbal noun in *gu-* can be used alongside a variant in *bu-*, and some allow only the default verbal noun. Grammaticality judgements with *bu-* and *gu-* infinitives of all of the concerned derived stems have been conducted, though with only one consultant so far, which might not be enough to allow any conclusive analysis, due to suspected substantial levels of variation (surely inter-speaker variation, possibly some amount of free variation), whose patterns would have to be integrated into the analysis. Nevertheless, some patterns emerge which provide directions for further research.

Those derived intransitive infinitives where the derivational suffix has neither reflexive nor distributive semantics but is used to indicate that the direct object of the verb has been deleted do not allow nominalisation with *bu-* under any circumstances. *The infinitive gu-yaax-ëla* ‘have a meal’ (derived from *yaax* ‘eat (tr.)’) which does not have an alternative distributive meaning, cannot take a direct object and is not compatible with the prefix *bu-*. The same applies for *gu-ñooc-in-a* ‘wash dishes’ (c.f. the underived *ñooc* ‘to wash (tr.)’), which is also strictly intransitive and not compatible with *bu-*. The same applies to *gu-lik-in-a* ‘prepare a meal (itr.)’, derived from *bu-lik-un* ‘prepare/cook (tr.)’.

Table (209) *Derived unexpressed object alternation with gu-infinitives*

Underived stem (transitive)	Gloss	Derived unexpressed object alternation infinitive	Gloss
<i>lef</i>	'spread out'	<i>gu-lef-a</i>	'to make bed'
<i>lób</i>	'say'	<i>gu-lób-ëla</i>	'to converse'
<i>lub</i>	'pulverise'	<i>gu-lub-a</i>	'to pulverise'
<i>fób-un</i>	'cover'	<i>gu-fob-un-a</i>	'to cover up'
<i>cógun</i>	'assemble'	<i>gu-cogun-a</i>	'to assemble the village'
<i>dóm</i>	'eat/swallow'	<i>gu-dóm-ëla</i>	'to swallow saliva'
<i>fut</i>	'go out'	<i>gu-futt-a</i>	'to distribute food on the plate'
<i>naax</i>	'tell'	<i>gu-naax-ëla</i>	'to snatch'
<i>nuux</i>	'put on fire'	<i>gu-nuux-a</i>	'to put the kettle on the fire'
<i>wut</i>	'collect'	<i>gu-wutt-a</i>	'to collect garbage'
<i>xook</i>	'follow'	<i>gu-xook-a</i>	'to follow people around'
<i>yín</i>	'dry'	<i>gu-yinn-a</i>	'to dry clothes or crops'
<i>ñoc</i>	'wash'	<i>gu-ñoc-ina</i>	'to wash dishes'
<i>likun</i>	'prepare'	<i>gu-likin-a</i>	'to prepare food'
<i>yeep</i>	'eat' <sup>102</sup>	<i>gu-yeep-ula</i>	'to eat'
<i>yaax</i>	'eat'	<i>gu-yaax-ëla</i>	'to eat/have a meal'
<i>puusun</i>	'press'	<i>gu-puusun-a</i>	'to press fruits'
<i>tëd</i>	'cook'	<i>gu-tëdd-a</i>	'to cook salt'
<i>erul</i>	'remove scales'	<i>gu-erul-a</i>	'to remove fishscales'

Most of the grooming verbs, with the exception of *guppa* 'brush teeth' which allows both *bu-* and *gu-*, form their infinitive exclusively with *gu-* (Table (210)).

<sup>102</sup> The stem *yeep* refers to the eating of a specific dish prepared with palm kernels which is consumed during the wet season when the rice in the storage has finished and alternative dishes based on wild fruits have to complement the diet. *Yaax* refers to eating rice, and *dóm* to eating watery food like oranges and other fruits.

Table (210) *Derived grooming verbs with gu-infinitives*

Derived infinitive	Gloss
<i>gu-muumël-a</i>	'wipe oneself (after toilet)'
<i>gu-iñ-a</i>	'shave'
<i>gu-gupp-a/bu-gupp-a</i>	'brush teeth'
<i>gu-póóm-ëla</i>	'wash face'
<i>gu-liin-a</i>	'braid'
<i>gu-ceek-ëla</i>	'undo braids'

Posture verbs derived with the reflexive extension on the other hand have been found to have default infinitives only (Table (211)).

Table (211) *Derived posture verbs with bu-*

Derived infinitive	Gloss
<i>bu-waan-a</i>	'lie'
<i>bu-lik-a</i>	'stand'
<i>bu-rakk-a</i>	'hang'
<i>bu-xubb-a</i>	'lie flat'
<i>bu-fip-a</i>	'lie upside down'
<i>bu-xég-a</i>	'to lean'

#### 4.7.2.3.3 Other non-default infinitives of the reflexive/middle and distributive extensions

As shown in Table (190) – for convenience repeated here as Table (212) – the infinitives in class *ba-* include a cluster of some agriculture-related verbs among which two verbs which designate different ways of clearing land and also some derived verbs belonging to the domain of agriculture.

Table (212) *Derived ba- infinitives in the agricultural domain*

<b>Ba-infinitives</b>	<b>Gloss</b>
<i>ba-far-la</i>	'untangle peanuts'
<i>bë-fës-ëla</i>	'remove weeds'
<i>bë-buut-ëla</i>	'collect remains after harvest'
<i>ba-tënk-ëla</i>	'remove weeds'
<i>bë-jég-a</i>	'cut wood'
<i>bë-gób-ula</i>	'scratch wounds or spots'/'palm wine of the evening'
<i>ba-wuc-una</i>	'dig for erecting a wooden fence'

Usually, derivations in *-a* and *-ëla* would nominalise with the noun class prefix *gu-* (see section 4.7.2.3.2), but these derived agricultural verbs use *ba-* instead of *gu-* as a nominaliser, which points to a semantic motivation associating them to the other agricultural activities in this class. The reflexive form, which is used purely in monovalent constructions, is more common in comparison to the non-derived form due to the fact that the respective actions are usually conceptualised as intransitive and they admit only a narrow range of object NPs and there is therefore rarely a need to specify those.

The only two derived nouns in the *bi-* paradigm are *bi-jéét-a* and *bi-ñooc-a*. For the former an underived form *jéét* does not exist but a transitive stem *jéét-un* 'to heat something up' does, *ñooc* is the transitive verb stem 'wash'. Class *ta-* accomodates one derived verbal noun *ta-jin-a* 'grill fish', from *jin* 'grill'.

## 4.8 Conclusion

The derivational properties of the noun class system of Gubëeher delineated in chapter 3 as the capacity to build paradigmatic networks within the nominal sphere, i.e. with roots denoting entities, and the systematic relationships between form and meaning attributable to specific paradigms have been shown in this chapter to encompass derivation across syntactic categories. Prefixation with a noun class marker can systematically derive nouns or verbal nouns from roots denoting events and states, which are otherwise used with verbal morphology. These resulting verbal nouns exhibit a wide range of nominal and verbal properties. They include participant nominalisations with a decidedly nominal character such as locatives, instruments and human participants, as well as property nouns and action nouns and infinitives with both nominal and verbal properties used in complement position. Again, noun class morphology can be shown to create new vocabulary, without the additional application of any further derivational morphology, through the systematic insertion of roots into various noun class paradigms. The distribution of multiple infinitives, derived from the same eventive root, can be attributed to transitivity or valency -related parameters – at least in the case of infinitives of transitive verbs – and can be related to the characterisation of a construction as having either an unexpressed or ellipsed object. For some of the prefixes a connection between noun class semantics and root semantics is plausible. Apart from being used in monovalent constructions with unexpressed objects, the non-default infinitives are also frequently derived from derived intransitives such as reflexive/middles, reciprocals and distributives as well as from strictly intransitive verbs.

## 5 Conclusions and further research

In this chapter I provide a summary of the findings of this thesis and some directions for further research.

### 5.1 Summary of the thesis

This thesis is a contribution to the study of nominal classification in a previously undescribed language. In chapter 1 I discussed the theoretical literature on classification and categorisation and introduced the paradigm-based approach which I apply for the analysis of the noun class system of Bainouk Gubëeher. Previous research of the phenomenon of multiple infinitives conducted on several other Casamance languages was compared to what is known about the phenomenon in Bantu languages. Historical, geographical and cultural information about the area where Gubëeher is spoken as well as a section on methodological issues conclude the chapter. Chapter 2 presented a grammatical sketch of Gubëeher, which is not only relevant in the context of this thesis but also for typologists and historical linguists working on African languages since it is the first detailed account of aspects of Gubëeher grammar and also of a Bainouk language. In chapter 3 I presented all noun class paradigms I identified in Gubëeher and proceed to show how they form paradigmatic networks which are the result of the appearance of roots in several paradigms. The systematic semantic relations between noun meaning and meaning of the noun class paradigm are especially evident in the botanical domain, but the semantic contribution of noun class morphology to meaning is also evident in other domains. The role of noun class morphology in ellipsed constructions and their ‘absolute use’ with several types of pronouns

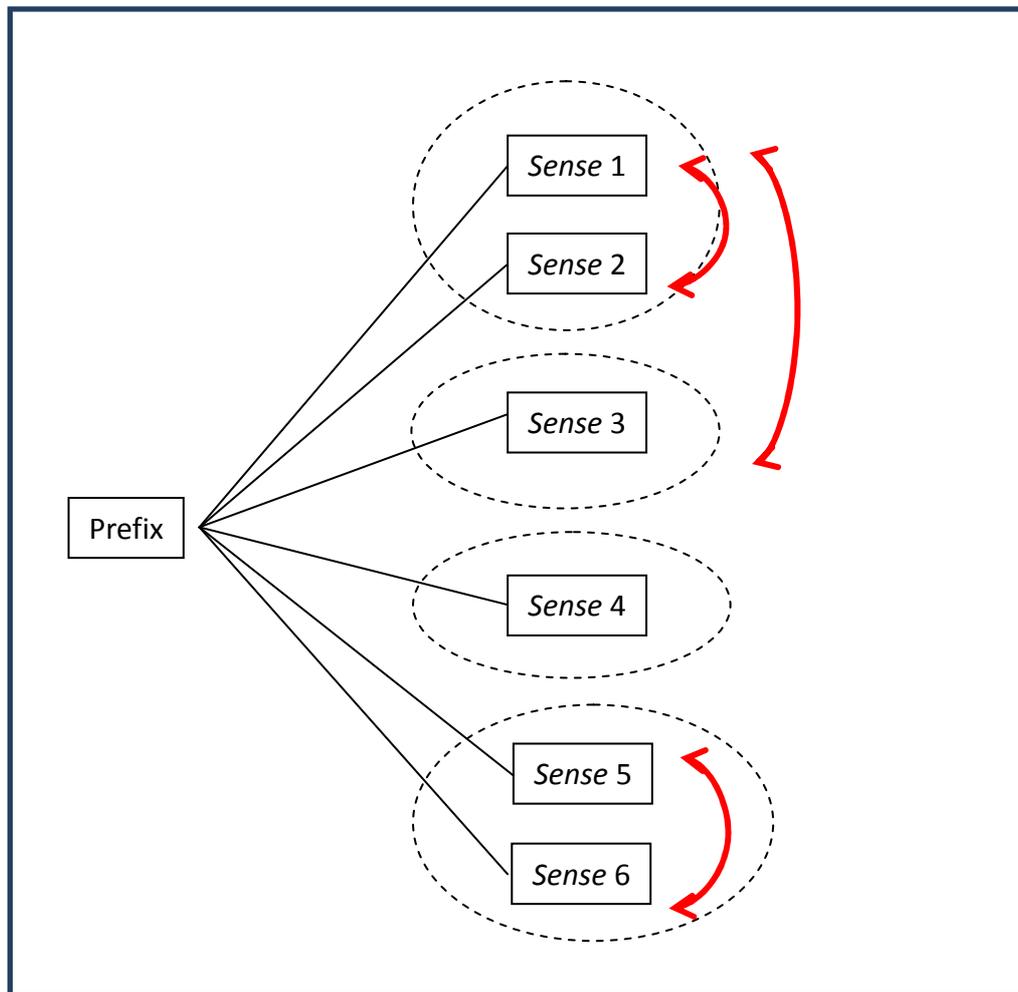
provides further clues to the semantic basis of noun classes and how the system can be employed to extend the vocabulary. While chapter 3 was mainly preoccupied with derivational processes within the nominal sphere, i.e. involving roots denoting entities, chapter 4 investigated systematic derivation of nouns and verbal nouns from eventive and stative roots. This includes location nominalisation, designations for human participants, properties, manner and result nouns and the domain of infinitives, which are verbal nouns used as complements of verbs. The description of the semantic and syntactic properties of infinitives led up to a discussion of parameters influencing the distribution of infinitives in cases where one verbal stem is attested with several infinitives. The two groups of default and non-default infinitives were established as major distinction, the former derived with the noun class prefix *bu-* the latter with any other of the prefixes attested for infinitivisation. It is shown that default infinitives of transitive verbs are limited to bivalent constructions whereas non-default infinitives occur in monovalent alternations of transitive verbs and with intransitive verbs and derived reflexives.

## 5.2 The paradigm approach to nominal classification

The paradigm-approach applied to Gubëeher on which this thesis was built, goes beyond analyses based on the semantic relations of single prefixes, which consider noun class markers as forming polysemous networks, arranged around one or more prototypical semantic cores/centres. The schema in Figure (10) shows how the relation between form and semantics is conceived of in a single-class approach. The several senses established for each noun class are generally believed to form networks, linked by metaphoric and metonymic relationships or motivated by cultural conceptions. A noun class marker is attributed a set of senses, which form a

network of relations or other cognitive concepts (represented by the arrows in Figure (10) below) and ideally containing one or several prototypes or schemas which subsume the various senses<sup>103</sup>. The dotted circles in the figure represent semantic domains that might group together closely related senses to wider domains, which might or might not be semantically related.

Figure (10) *The single-class approach*



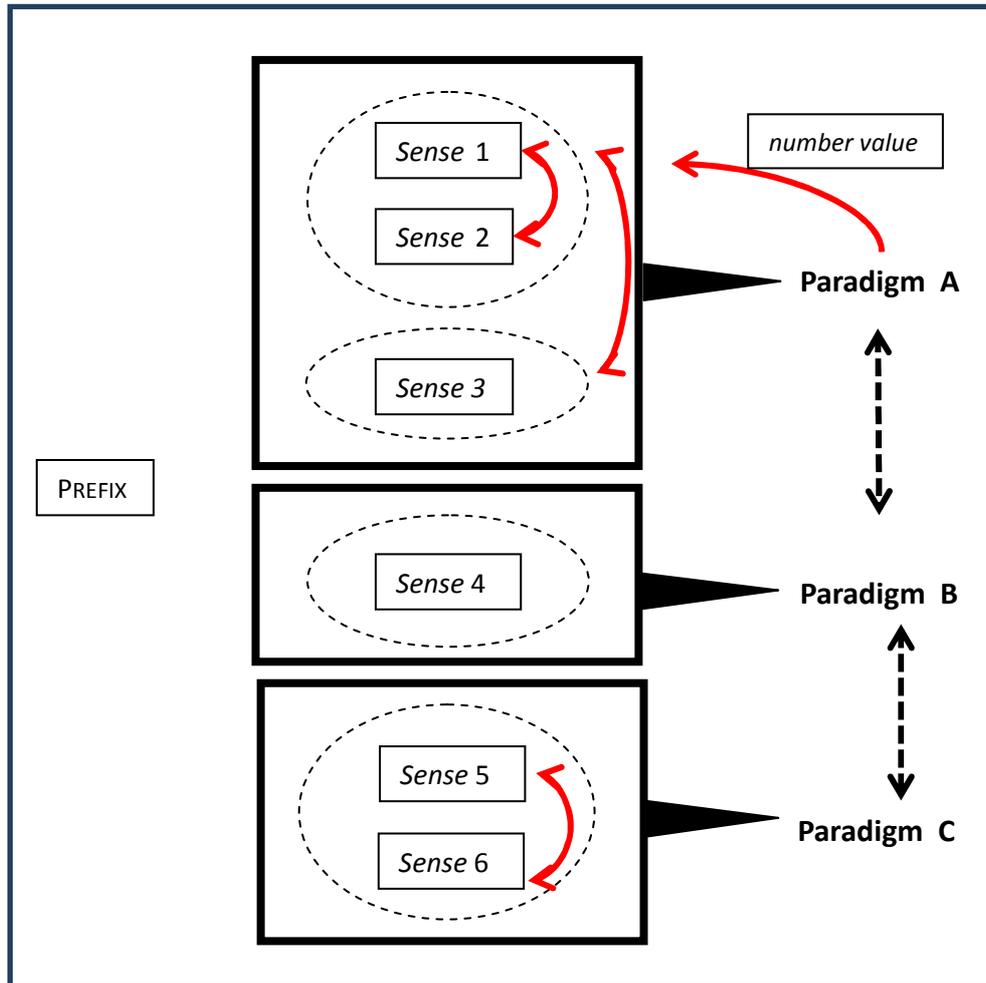
It was argued that accounts that are exclusively based on the single noun class marker encounter the following problems. 1) they have to provide an overarching

<sup>103</sup> Cf. Palmer and Woodman (2000) for a polycentric approach based on cultural schemas; and Sagna (2010a) and (Selvik (2001) for detailed network analyses of noun class systems based on psycholinguistic evidence.

schema or prototype which has to be broad enough to cover a large number of very disparate senses, which has led researchers to deny the possibility of singling out non-trivial semantic bases of noun classification systems (Richardson 1967). 2) The fact that ‘one prefix’ can encode e.g. singulars, plurals, and mass nouns without number distinction remains puzzling and is in risk of being judged as irregularity, just as the those singular/plural pairings deviating from what has been determined as the regular paradigm (Schadeberg 2001; Hendrikse 2001).

It was argued throughout this thesis that by locating the semantic contribution of noun class morphology at the level of the paradigm, the explanatory load of the single prefixes is greatly reduced and the problems mentioned above can be avoided. As shown in Figure (11) the paradigm a prefix occurs in is assumed to be the basic unit of analysis. For an example of how the schema is applied to a concrete prefix (in this case *ba-*) compare Figure (13).

Figure (11) *Model of noun class and paradigm*



Semantic commonalities are sought at the level of the paradigm. As a consequence semantically less general prototypes or schemas have to be identified since the number of senses covered by one paradigm is in general lower than the number of senses covered by a prefix or agreement class when disregarding its membership and function in a paradigm. The paradigm-based approach also resolves the ‘problem’ of trying to assign a number value to an isolated prefix. In Gubëeher at least, number values can be much more easily determined at the level of the paradigm. The number value of a prefix is determined by its place in the paradigm – it might occur as singular marker in one paradigm, as plural marker in another paradigm etc. The paradigm type (one-class, paired, triadic) provides clues as to the

semantic properties of the nouns in it, like for example ‘mass noun’/’substance’/’abstract noun’ for one-class nouns, countable discrete entities for pairs etc. (cf. 1.4.3.3.2). Another advantage of the paradigm approach is that paradigm and root can be understood as to some extent autonomous from each other, especially in cases where roots appear in multiple paradigms. In this process, paradigm semantics combines with root semantics in the formation of nouns or verbal nouns (1.4.3.2). The relationships between paradigm semantics and the domains of the derived items can be systematic, regular and transparent. This means that in these cases a paradigm *systematically* actualises elaborations of a root in a *specific semantic domain* – these systematic paradigmatic relationships are presented in the sections 3.1.7 and 4.3.

The exact nature of these semantic relationships, which are undoubtedly active in the noun class system of Gubëeher, were not a prime concern in this thesis and still need to be investigated using appropriate experimental methods. The search for semantic connections between senses or clusters of senses is a valid endeavor for future research and the identification of common semantic features of single prefixes/agreement classes as well as the relationships the paradigms have to each other might lead seem promising. The overview of the paradigms established in the thesis from the perspective of each single prefix provided in section 5.2.1 may provide some further indications.

### **5.2.1 Overview of prefixes and paradigms**

The tables and figures presented in this sections provide an overview of the noun class prefixes of Gubëeher and the paradigms they occur in. Figure (12) is a graphic

visualisation of the paradigms each prefix participates in and Table (213) is an overview sorted by prefix and specifies the type and kind of paradigms the prefixes can be part of, its number value therein and some preliminary semantic notions which have been identified as relevant for the paradigm. The abbreviation ‘abs.’ indicates the ‘absolute use’ of prefixes (with temporal, locational, etc. semantics, discussed in 3.3), ‘inf.’ indicates semantics of infinitives, ‘misc.’ stands for miscellaneous other items found in that paradigm. In cases where the paradigm has less than four nouns, these are listed individually marked by quotation marks as specific nouns (instead of referring to more abstract domains). The importance of paradigms and paradigmatic networks will be illustrated for two prefixes whose paradigm-spanning semantic contribution to noun meaning is considered particularly evident. These prefixes, *ba-* and *sin-*, are discussed in detail making use of the schema introduced in Figure (11) – the prefix *ba-* in Figure (13) and the prefix *sin-* in Figure (14).

Figure (12) Schematic overview of the noun class prefixes of Gubëeher and their paradigms  
 (superscript <sup>(n)</sup> indicates that the prefix is part of a paired paradigm with suffixed plural).

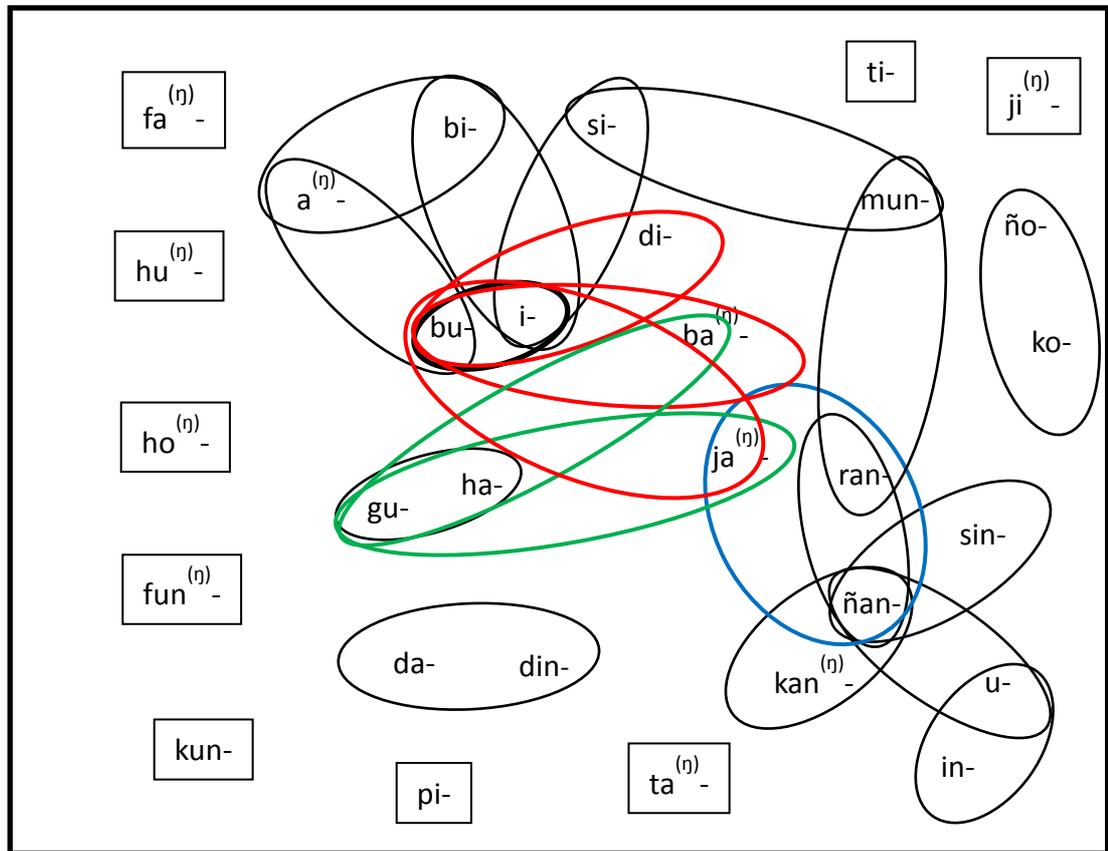


Table (213) Overview of the paradigms sorted by prefixes

Prefix	One-class paradigm and infinitives	In paired paradigm	Domains	In triadic paradigm	Domain
$\emptyset$ (no prefix)	substances	$\emptyset/\emptyset(-\eta)$	family members, animals, loans		
<i>a</i>	rice species, misc.	<i>a-/a(-\eta)</i>	animals	<i>a-/a(-\eta)/bi-</i>	insects
<i>ba</i>	inf.: agriculture	<i>ba-/ba(-\eta)</i>	animals, misc.	<i>bu-/i-/ba</i>	ground growing fruits/tubers
	illnesses, elements, food from plants, properties			<i>gu-/ha-/ba-</i>	kernels/hard fruits, small jewellery, low plants
	groups of trees				
<i>bi</i>	abs.: locatives	<i>bi-/i-</i>	round objects/ body parts	<i>a-/a(-\eta)/bi</i>	insects
	misc. infinitives	<i>bi-/a(-\eta)</i>	misc.		
<i>bu</i>	locatives	<i>bu-/i-</i>	round objects/ body parts	<i>bu-/i-/ba</i>	ground growing fruits/tubers
	default infinitives	<i>bu-/a(-\eta)</i>	misc.	<i>bu-/i-/ja-</i>	animals
				<i>bu-/i-/di</i>	fruits from trees
<i>da</i>	abs.: temporal	<i>da-/din(-\eta)</i>	aumentati ve	/	
	“dust”, “heat”	<i>da-/a(-\eta)</i>	“day”	/	
<i>di</i>	viscous substances,	/		<i>bu-/i-/di-</i>	fruits from trees
<i>din</i>	/	<i>da-/din(-\eta)</i>	augmentati ve	/	
<i>fa</i>	abs.: temporal, inf.: “jump”	<i>fa-/fa(-\eta)</i>	misc.	<i>fa-/fa(-\eta)/ja-</i>	fish
<i>fun</i>	inf.: “football”	<i>fun-/fun(-\eta)</i>	sea animals	<i>gu-/ha-/fun-</i>	“oyster”
<i>gu</i>	inf.: reflexives	<i>gu-/ha-</i>	long body parts, misc.	<i>gu-/ha-/ba-</i>	kernels/hard fruits, small jewellery, low plants
	excrement, misc.	<i>gu-/ñan-</i>	“nose”	<i>gu-/ha-/ja</i>	grass, organic bits (plant&body), waterplants
<i>ha</i>	misc. infinitives	<i>gu-/ha-</i>	long body parts, misc.	<i>gu-/ha-/ja</i>	grass, organic bits (plant&body), waterplants

Table (213) Overview of the paradigms sorted by prefixes

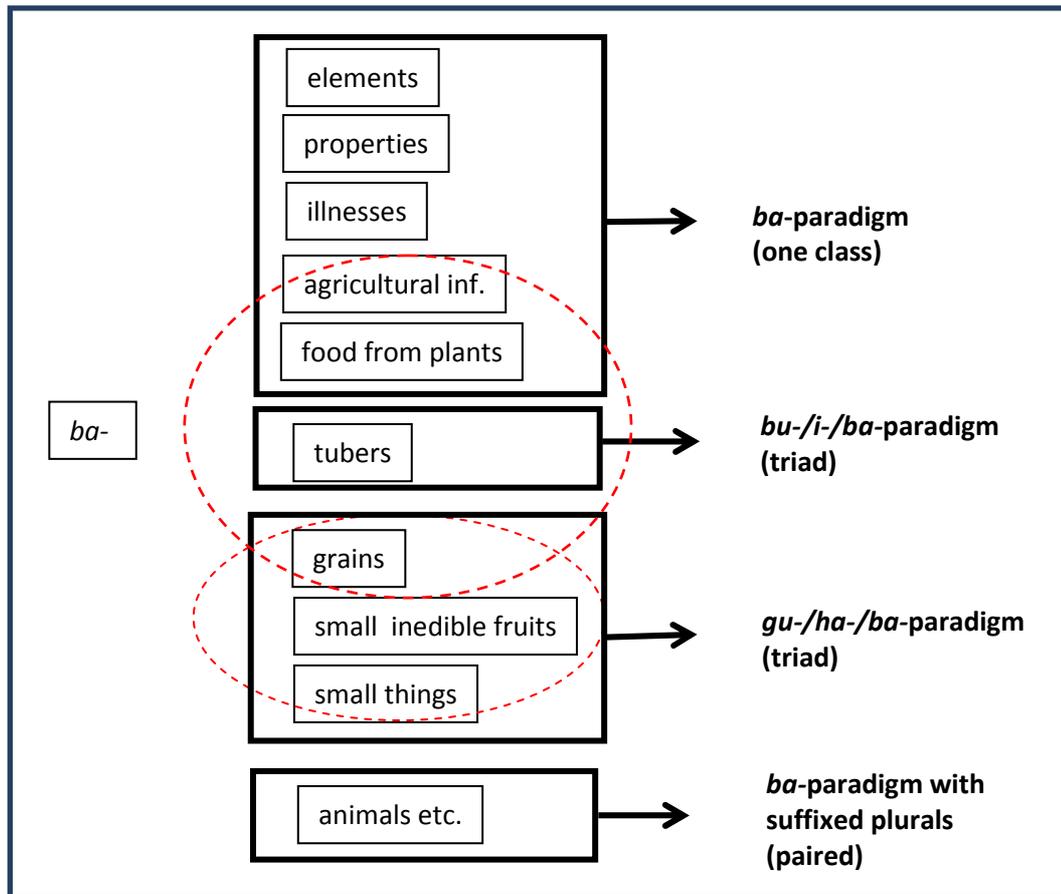
Prefix	One-class paradigm and infinitives	In paired paradigm	Domains	In triadic paradigm	Domain
				<i>gu-/ha-/ba</i>	kernels/hard fruits, small jewellery, low plants
<i>ho</i>	abs.: thing; diminutive of substance	<i>ho-/ho-(-ŋ)</i>	“thing”	/	
<i>hu</i>	/	<i>hu-/hu-(-ŋ)</i>	“thing”	/	
<i>i</i>	/	<i>bu-/i-</i>	round objects/body parts, misc.	<i>bu-/i-/di</i>	fruits
		<i>bi-/i-</i>	round objects/body parts	<i>bu-/i-/ja-</i>	animals
		<i>si-/i-</i>	“eye”	<i>bu-/i-/ba</i>	ground growing fruits, tubers
<i>in</i>	/	<i>u-/in-</i>	humans	<i>u-/in-/in-(-ŋ)</i>	humans (grouped?)
<i>ja</i>	inf.: agriculture	<i>ja-/ja-(-ŋ)</i>	animals, misc.	<i>gu-/ha-/ja</i>	grass, organic bits (plant & body), waterplants
	groups of trees substances	<i>ta-/ja-</i>	cloth	<i>ran-/ñan-/ja</i>	amphibians
<i>ji</i>	inf.: animate verbs	<i>ji-/ji-(-ŋ)</i>	people (derog.) misc., animals	/	
<i>ka</i>	inf.: loans	/		/	
<i>kan</i>	abs.: locatives, misc. infinitives	<i>kan-/ñan -</i>	misc.	/	
		<i>kan-/kan-(-ŋ)</i>	misc.		
<i>ko</i>	/	<i>ko-/ño-</i>	diminutive	/	
<i>kun</i>	“hunger”, “palm wine”	<i>kun-/ñan -</i>	“mortar”	/	
	inf.: posture verbs				
<i>mun</i>	liquids	<i>si-/mun-</i>	trees; wooden objects	/	
	inf.: “urinate”	<i>ran-/mun-</i>	palm tree		
<i>ñan</i>	inf.: “laugh”	<i>ran-/ñan-</i>	misc., mats	<i>ran-/ñan-/ja-</i>	amphibians
		<i>kan-/ñan -</i>	misc.		

Table (213) Overview of the paradigms sorted by prefixes

Prefix	One-class paradigm and infinitives	In paired paradigm	Domains	In triadic paradigm	Domain
		<i>sin-/ñan -</i>	strings, fibres, long things		
		<i>u-/ñan -</i>	humans		
<i>ño</i>	/	<i>ko-/ño-</i>	diminutive	/	
<i>pi</i>	"tobacco"			/	
<i>ran</i>	death, illness, sacrifice,	<i>ran-/ñan -</i>	misc., mats	<i>ran-/ñan-/ja-</i>	amphibians
	inf.: "weave"	<i>ran-/mun-</i>	palm tree		
<i>si</i>	human/negative properties	<i>si-/mun-</i>	trees; wooden objects, "medicine", shrines	/	
	smells	<i>si-/i-</i>	"eye"		
	inf.: "sleep"	<i>si-/ha</i>	arm, leg, last name		
<i>sin</i>	reciprocal infinitives, reciprocal relations	<i>sin-/ñan -</i>	strings, fibres, long things	/	
<i>ta</i>	"heat"	<i>ta-/ta-(ŋ)</i>	misc., birds?	/	
	inf.: fishing	<i>ta-/ja-</i>	cloth		
<i>ti</i>	sap, "cold", "wax",	/		/	
<i>u</i>	/	<i>u-/in-</i>	humans	<i>u-/in-/in-(ŋ)</i>	humans (grouped?)
		<i>u-/ñan -</i>	humans		

Let us consider the prefix *ba-*, whose paradigms and senses are schematised in Figure (13), in order to illustrate their importance. Ignoring the paradigms would require the identification of a prototype subsuming all of the ten listed senses and would pose the question how many prefixes *ba-* can be distinguished in Gubëher and whether it is a singular/plural or a mass denoting prefix.

Figure (13) Schema of the paradigms and senses of the prefix *ba-* in Gubëeher

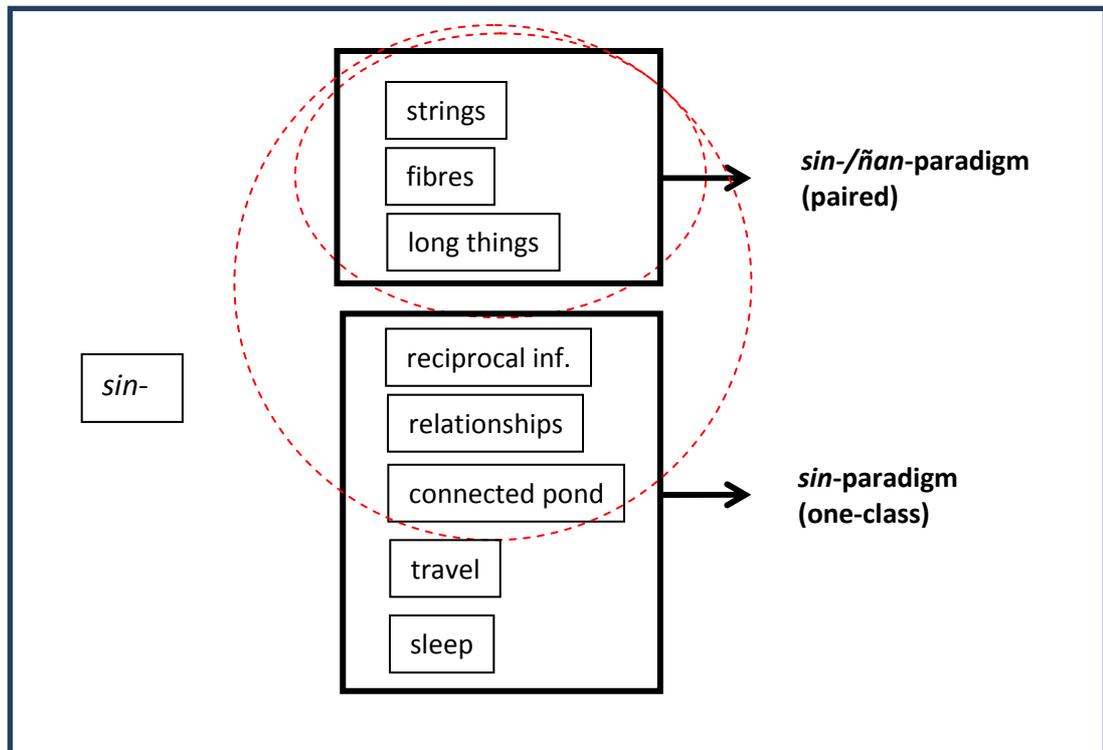


A consideration of the paradigm improves the situation considerably. *ba-* is attested in four paradigms, in each of which *ba-* has more or less clear semantic bases and an unambiguous number value. The identification of semantic cognitive, or cultural connections within and across paradigms and senses through psycholinguist experiments (symbolised by the arrows in Figure (11)) remains to be undertaken and in the case of *ba-* is of legitimate concern. The two triads whose unlimited plural is prefixed with *ba-* contain nouns denoting different kinds of fruits, tubers in the *bu-/i-/ba*-paradigm and grains and hard/inedible fruits from trees in the *gu-/ha-/ba*-paradigm. Within the later paradigm kernels, grains and fruits are represented alongside other small hard items that occur in large numbers such as cowries, pearls and other items used for jewellery, some of which are made from hard fruits of

trees. The one-class paradigm contains prepared foods from plants, which relates them to grains and tubers. The infinitives from the agricultural domain can also be related to fruits and food, as well as to the frequent use of *ba-* as unlimited plural, which relates to the collective character of agriculture and is reflected by the tendency of other non-agricultural infinitives to be used with a connotation of pluractionality.

The second prefix whose semantic contribution to the nouns it derives from roots shall be considered in detail is the prefix *sin-*. The schema in Figure (14) illustrates that the senses conveyed by this prefix, including entities, infinitives and a derived noun, can be plausibly related to one-another.

Figure (14) *Schema of the paradigms and senses of the prefix sin- in Gubëeher*



The three major senses of *sin-* in the paired *sin-/ñan*-paradigm, strings, long structures and plant fibres (including ditches in a field, stringlike body-parts and

voice as a metaphor of a string of sound), have been established as semantically related in sections 3.1.1.5 and 3.1.7.1, where it is also shown that the association of this paradigm with the string/fibre semantic is further strengthened through its occurrence in various paradigmatic networks from different domains ('iron string' vs. 'iron'; 'spiderweb' vs. 'spider'; 'cotton thread' vs. 'cotton tree' etc.). The use of the paradigm to derive the string-type instrument from an eventive root (*sin-diinaum/ñan-diinaum* 'rope for drawing water from a well' cf. (398)) and its use for incorporating a loan in Bainounk Guñaamolo (discussed in section 3.4) also attest to the stability of the semantic connotation, in the latter case even across Bainounk languages. The semantic notion of connectedness and reciprocity found with nouns in the one-class *sin*-paradigm can be metaphorically related to the string semantics of the *sin-/ñan*-pairs. This includes all infinitives of derived reciprocals (cf. 4.7.2.3.1), some reciprocal relationships (cf. Table (146) and the discussion in section 3.1.8) and the name of a specific pond in Djibonker *sin-diin*, standing in a paradigmatic network with the noun *bu-diin* 'pond', the prefixless noun *diin* 'rain' and the infinitive *bu-diin* 'to draw water from a well'. The mythical function of *sin-diin*, which is thought to be connected in mystical ways to a corresponding pond in the Bainounk village of Jegui in Guinea-Bissau, again refers to the notion of connection and reciprocity. Objects which are placed in one of the connecting ponds are believed to magically appear in the other one, thus enabling long distance communication between far-away villages to warn against danger or announce cases of death and upcoming funerals.

### 5.2.2 The classification of infinitives

A central topic of this thesis was the distribution of multiple infinitives – infinitives derived from the same root with several different noun class prefixes – which has been identified as a probably areal feature common to the languages of lower

Casamance, could be clearly related to transitivity-related parameters, although further research is required for the identification of more fine grained parameters and to cover some issues which have been left untreated. Concerning eventive and stative roots which form default versus non-default infinitives, the default infinitives, regularly derived with the prefix *bu-*, have been found to be restricted to occurring in complement position of bivalent constructions. The non-default infinitives, derived with any other noun class prefix, are more versatile in their distribution and functions. They often have, besides being used as infinitival complements the function of manner, result or action nominalisations with more nominal properties such as being modifiable by demonstratives. As complements they can occur in monovalent as well as in bivalent constructions, usually though a preference for constructions with unexpressed objects clearly emerges. For some eventive and stative roots, the non-default infinitives are reserved for a specific domain, which can to some extent be attributed to the semantics of the noun class prefix they bear. The use of non-default infinitives with derived intransitives confirms the observed predilection of this type of infinitive for monovalent constructions. All derived reciprocals occur with a non-default prefix, as do many verbs derived with the reflexive/middle suffix and with the distributive suffix. However, the reflexive/middle derivations show patterns of allowing default infinitives only, non-default infinitive only or both. Further research might reveal specific parameters governing this distribution. The role of infinitives of strictly intransitive verbs, some of which are allowed exclusively with non-default forms, being among the few eventive and stative roots which have no alternative default infinitive is also in need of further research. Both the treatment of intransitives as

well as a thorough analysis of reflexives requires a deeper understanding of argument structure and data on it which is currently not available.

### 5.3 Further research

Since this is the first account on any aspect of Baïnouk Gubëeher, there are a number of relevant topics for further research. Therefore I will limit myself here to pointing out some issues that are connected to the topics covered in this thesis, namely the classification of events and entities and the topic of multiple infinitives. Regarding the noun class system, the historical dimension of how this complex system has developed could not be tackled. The distribution of multiple infinitives, which is treated as sensitive to valency, may be attributable to more fine-grained or different argument structure and event structure parameters. This concerns especially the distribution of infinitives in bivalent constructions, where properties of the arguments such as boundedness, specificity and identifiability and clausal features such as telicity might be establishable as relevant factors. Also, the psychological reality of the paradigms and mechanisms established and described here remains uninvestigated. Psycholinguistic tests are needed in order to establish to what extent speakers of Gubëeher use the systems and its paradigms to actively classify their environment and what kind of relations exist between roots and nouns which are members of the same paradigmatic network. I believe that both issues, the historical and the psycholinguistic one, would benefit immensely from a consideration of areal factors and of patterns of multilingualism. The intensity is extraordinary, considering the amount of languages an individual masters and regularly uses, as well as the pervasive use of codeswitching, even within a single household.

The relevance of language contact for the analysis or explanation of various phenomena has been repeatedly remarked upon throughout this thesis. A detailed account of the impact of multilingualism on the languages in contact and the ways their speakers use them presupposes thorough research in areas on which at this point almost nothing is known in any language spoken in Casamance, aside from the fact that many of the involved languages are only rudimentarily described. In a former publication (Cobbinah 2010) I pointed out that the Casamance constitutes an ideally suited testing ground for the research of areal phenomena, due to the high levels of multilingualism. Further exposure to the environment in which Bainouk Gubëeher is spoken and close collaboration with researchers working on other Casamance languages, has confirmed this observation. Participant observation and a preliminary questionnaire conducted with the members of the Sagna household I was living in revealed that up to seven languages are used in various contexts and constellations within the family. Some stable constellations (or at least pronounced tendencies) of language choice between individuals became apparent, and additionally, situational factors such as group constitution, context, conversational topic and register clearly determined language use as well. I would go so far as to say that monolingual language use was rather the exception than the norm. In order to fully participate in a conversation, knowledge of French and Gubëeher was in most cases not enough, as speakers would naturally switch to Wolof and to a lesser extent to various Joola languages in the course of a conversation. Preliminary analyses obtained by Friederike Lüpke on Bainouk Gujaher have revealed the impact of social networks on variation within the noun class system, (described in Lüpke and Storch 2013). The relevance of areal phenomena regarding the distribution and use of multiple infinitives has become evident throughout a series of

seminars bringing together all current UK researchers on Casamance languages (Serge Sagna on Joola Eegimaa, Rachel Watson on Joola Kujireray, Friederike Lüpke on Baïnouk Gujaher and myself on Gubëeher). A preparation of a joint project addressing these issues and other aspects of language use which are potentially influenced by multilingual practices such as gesture and intonation from a psycholinguistic perspective is under way. I strongly believe that a complementation of the results presented here with results gained from further research which integrate an areal perspective and are built on multilingual data is necessary to come to a fuller understanding of nominal classification, the subject of multiple infinitives and other aspects of Gubëeher grammar.

It can be said with certainty that borrowing between Gubëeher and its surrounding Joola languages (Eegimaa and Kujireray) is recurrent at the levels of content and function words and morphemes and constructions (calques). The large amount of Gubëeher words which are phonologically related to words in various Joola languages show that borrowing of lexical items is common between these languages, though at this point a direction of borrowing cannot be established. The following questions need to be addressed in this context considering the potential repercussions of large scale borrowing on the noun class system of a language:

1. How are loans integrated synchronically? Can different strategies be identified indicating diachronic aspects of loan integration and help determine the time of borrowing?
2. Can noun class markers or paradigms be borrowed? If yes, which class markers or paradigms have been borrowed? What is borrowed – complex forms, prefixes, roots, prefix pairs and triads or abstract semantic patterns of paradigms, or a combination?

3. How does borrowing influence the systemic balance of a noun class systems, ie. by creating new paradigms, give preference to certain strategies over others etc?
4. To what extent do noun class systems converge in languages in intense contact?

Table (214) shows examples of words having phonologically related forms in Gubëeher and Joola Eegimaa or Kujireray which are supposed to be borrowed.

Table (214) *Phonologically related words Gubëeher/Joola (Eeg=Eegimaa, Jir=Kujireray)*

<b>Gubëeher</b>	<b>Related item in a Joola language</b>	<b>Gloss</b>
<i>ba-cakuren</i>	<i>ba-cakulen (Jir)</i>	'hard boiled rice'
<i>ba-pusun</i>	<i>ba-puccen (Jir)</i>	'pressed juice'
<i>ba-wuc</i>	<i>ba-wuc (Jir)</i>	'wind'
<i>bu-rukand</i>	<i>fu-rukand (Jir)</i>	'palm rat'
<i>bu-saalut</i>	<i>bu-saalut (Jir)</i>	'salamander'
<i>fu'-lac</i>	<i>fu-lac (Eeg)</i>	'shark'
<i>gu-babar</i>	<i>ga-babar (Eeg)</i>	'planch'
<i>gu-mënggëet</i>	<i>ka-mënggët (Jir)</i>	'chair/door'
<i>gu-moy</i>	<i>ka-moy (Jir)</i>	'eye lash'
<i>gu-pol</i>	<i>ka-pol (Jir)</i>	'skin'
<i>jë-ñiix</i>	<i>e-ñiix (Eeg)</i>	'elephant'
<i>ji-gaaj</i>	<i>ji-gaj (Eeg)</i>	'panther'
<i>ji-muxoor</i>	<i>ji-muxoor (Jir)</i>	'lion'
<i>ka-cub</i>	<i>e-cub (Kaasa)</i>	'capitaine fish'
<i>ñaatat</i>	<i>ka-ñaatat (Jir)</i>	'chameleon'
<i>ram-maasix</i>	<i>e-maasix (Eeg)</i>	'crab'
<i>tukund</i>	<i>e-tuxun (Eeg)</i>	'turtle'

Borrowing must have had a noticeable influence on the noun class systems of the involved languages. It is not hard to imagine that not only lexical items but even the noun class prefixes and paradigms themselves have been borrowed, which might

explain the proliferation of noun classes in Gubëeher and Joola. One case involving the noun ‘panther’, *ji-gaj* in Gubëeher and *ji-gaaj* in Joola Eegimaa, is particularly worth mentioning in this context. There is strong evidence that points to a borrowing of a Bainounk word into Joola Eegimaa: Apart from the fact that the prefix *ji-* occurs frequently with animal names in all Bainounk languages, Doneux (1990) considers the item as of Nyun origin, because it occurs in all branches of Bainounk languages: *jigaʃ* in Gubëeher and Gujaher (recorded in Jegui, Guinea Bissau) and also in Kobiana as ‘*jiya:z*’ (Doneux 1990), whereas other varieties of Joola use *esamai* (from Joola Fogny) or cognate forms: *esame* in Bayot Ehing (field notes), *itame* in Bayot Kugere (Diagne 2009), and *asamai* in Joola Kaasa (variety of Oussouye, field notes). Further evidence for the hypothesis that *ji-gaj* has been borrowed into Joola are some irregularities concerning its semantic and morphological properties. In Eegimaa the noun class *ji-* is the diminutive class, i.e. it contains derived diminutives and some inherently small things and animals such as small birds and animal offspring. Now, panthers do not quite seem to belong to the category of sparrows, calves and the like, which is why Sagna (2008:256) proposes the explanation that the membership in the diminutive class is used to tame the panther figuratively and in this way downplay the danger emanating from this ferocious animal, responsible for the death of domestic animals and humans by minimising it through assignment to the diminutive class. However, *jigaʃ* behaves irregularly in Joola Eegimaa concerning agreement and pluralisation. Instead of entering the diminutive plural class *mu-*, which is usually paired with the agreement class *ju-/ji-*, the plural of this noun is *si-gaʃ*, and some speakers even accept the singular form *jigaʃ* as a plural (Sagna 2008). Furthermore, agreement is class *e-* for the singular and class *su-* for plural. The constellation *ji-/su-* is remarkable in that it

is exceptional for *su-* plurals to be combined with a singular noun class other than *e*, which is the regular paradigm in Eegimaa for many animals.

Regarding the topic of multiple infinitives, it is most probably an areal phenomenon. The relevance of transitivity/valency related parameters for the selection of infinitival verbal nouns which has been shown for Gubëeher, is also valid for Joola Kujireray (Rachel Watson, p.c., work in progress) and Joola Eegimaa (Serge Sagna, p.c.). It has to be shown whether or to what extent convergences in the affected domains or borrowing of prefixes play a role.

So far, the sociolinguistic patterns and implications on language use and language development resulting from the highly multilingual settings observable in the environment where Gubëeher is spoken – and possibly in many African contexts – are still not sufficiently understood. This is due to a lack of empirical research which is in turn attributable to a lack of awareness of the importance of these issues. Yet, these questions are of the highest relevance to fully understand how a language is defined, employed and shaped in relation to other languages and repertoires, with possible implications at all levels of grammar. Although in the course of this research project I could not pursue research on the socio- and psycholinguistic components of multilingualism and its impact on the affected language(s), the experiences made with Gubëeher have revealed their priority to me and I consider it as one of the major challenges of language documentation and description and a priority of any further involvement in my own research on Gubëeher to incorporate these aspects.

## References

- Adams, Karen L. 1986. "Numeral Classifiers in Austroasiatic." In *Noun Classes and Categorization*, ed. Colette Craig, 241–262. Amsterdam/Philadelphia: John Benjamins.
- Adams, Karen L., and Nancy F. Conklin. 1973. "Toward a Theory of Natural Classification." *Chicago Linguistic Society (regional Meeting)* 9: 1–10.
- Aikhenvald, Alexandra Y. 2000. "Unusual Classifiers in Tariana." In *Systems of Nominal Classification*, ed. Gunter Senft, 93–113. Cambridge: Cambridge University Press.
- . 2003. *Classifiers. A Typology of Noun Categorization Devices*. Oxford/New York: Oxford University Press.
- Allan, Keith. 1977. "Classifiers." *Language* 53: 283–310.
- Barner, David, and Alan Bale. 2002. "No Nouns, No Verbs. Psycholinguistic Arguments in Favor of Lexical Underspecification." *Lingua* 112 (10) (October): 771–791.
- Bassène, Alain-Christian. 2006. "Description Du Jóola Banjal (Sénégal)." *Sciences-New York*. PhD thesis, Université Lumière Lyon 2.
- Basso Marques, João. 1947. "Familiaridade Idiomatica Entre Cobianas e Cassangas." *Boletim Colonial Da Guine Portuguesa* 2 (8): 875–913.
- Baum, Robert M. 2004. "Crimes of the Dream World. French Trials of Diola Witches in Colonial Senegal." *International Journal of African Historical Studies* 37 (2): 201–228.
- Becher, Jutta. 2000. "Verbextensionen in Den Atlantischen Sprachen." *Hamburger Afrikanistische Arbeitspapiere* 1: 1–38.
- Vanden Bergen, Constant, and Adrien Manga. 1999. *Une Introduction à Un Voyage En Casamance: Enampor, Un Village De Riziculteurs En Casamance, Au Sénégal*. Paris: L'Harmattan.
- Berlin, Brent. 1977. "Speculations of the Growth of Ethnobotanical Nomenclature." In *Sociocultural Dimensions of Language Change*, ed. Benjamin Blount and Mary Sanches, 63–102. New York: Academic Press.
- Berlin, Brent, and Paul Kay. 1969. *Basic Color Terms*. Berkeley: University of California Press.

- Blommaert, Jan. 2004. "Writing as a Problem: African Grassroots Writing. Economies of Literacy, and Globalisation." *Language and Society* 33 (5): 643–671.
- Breedveld, J.O.. 1995a. "The Semantic Basis of Noun Class Systems. The Case of the Ki and Nge Classes in Fulfulde." *Journal of West African Languages* 25 (2): 63–74.
- . 1995b. *Form and Meaning in Fulfulde. A Morphological Study of Maasinankoore*. Leiden: Research School CNWS.
- Brisard, Frank, Gert Van Rillaert, and Dominiek Sandra. 1997. "Processing Polysemous, Homonymous, and Vague Adjectives." In *Polysemy in Cognitive Linguistics*, ed. Hubert Cuyckens and Britta Zawada, 261–284. Amsterdam/Philadelphia: John Benjamins.
- Brooks, George B. 1993. *Landlords and Strangers. Ecology, Society, and Trade in West Africa, 1000-1630*. Boulder/San Francisco, Oxford: Westview Press.
- Broschart, Jürgen. 2000. "The Gestalt-functions of Classifiers." In *Systems of Nominal Classification.*, ed. Gunter Senft, 239–269. Cambridge: Cambridge University Press.
- Bühnen, Stephan. 1988. "Lexique Comparatif Des Dialectes Bañun Et De Kasanga Et Cobiana (ms.)."
- . 1992. "Place Names as an Historical Source. An Introduction with Examples from Southern Senegambia and Germany." *History in Africa* 19 (1992): 45. doi:10.2307/3171995.
- . 1994. "Geschichte Der Bainunk Und Kasanga". Justus Liebig Universität Giessen.
- Buis, Pierre. 1990. *Essai Sur La Langue Manjako De La Zone De Basserel*. Bissau: Instituto Nacional de Estudos e Pesquisa.
- Carstens, Vicky. 1993. "On Nominal Morphology and DP Structure." In *Theoretical Aspects of Bantu Grammar*, ed. Sam A. Mchombo, 151–180. Stanford: CSLI Publications.
- . 2008. "DP in Bantu and Romance." In *The Romance Bantu Connection*, ed. Cécile De Cat and Katherine Demuth, 131–165. Amsterdam: John Benjamins.
- Clark, Eve V, and Herbert H Clark. 1979. "When Nouns Surface as Verbs." *Language* 55 (4): 767–811.
- Cobbinah, Alexander. 2010. "The Casamance as an Area of Intense Language Contact. The Case of Bainouk Gubaher." *JLC (THEMA 3)*: 175–201.
- Coly, Jules Jacques. 2010. "Morphosyntaxe Du Kuwaatay (Sénégal)." PhD Thesis.

- Comrie, Bernhard, and Sandra A. Thompson. 1985. "Lexical Nominalization." In *Language Typology and Syntactic Description Vol. 3*, ed. Timothy Shopen, 349–407. Cambridge: Cambridge University Press.
- Contini-Morava, Ellen. 1994. "Noun Classification in Swahili". PhD thesis, University of Virginia/Charlottesville.
- . 1996. "'Things' in a Noun-class Language. Semantic Functions of Agreement in Swahili." In *Toward a Calculus of Meaning. Studies in Markedness, Distinctive Features and Deixis*, 251–290. Amsterdam/Philadelphia: John Benjamins.
- . 1997. "Noun Classification in Swahili. A Cognitive-semantic Analysis Using a Computer Database." In *African Linguistics at the Crossroads. Papers from Kwaluseni*, ed. Robert K. Herbert, 599–628. Köln: Rüdiger Köppe.
- . 2000. "Noun Class as Number in Swahili." In *Between Grammar and Lexicon*, ed. Ellen Contini-Morava and Yishai Tobin, 3–30. Amsterdam/Philadelphia: John Benjamins.
- Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.
- Craig, Colette. 1986. "Jacalteco Noun Classifiers. A Study in Language and Culture." In *Noun Classes and Categorization*, ed. Colette Craig, 263–295. Amsterdam/Philadelphia: John Benjamins.
- Crisma, Paola, Lutz Marten, and Rint Sybesma. 2011. "The Point of Bantu, Chinese and Romance Nominal Classification (ms)." *Italian Journal of Linguistics* 23 (2): 251–299.
- Croft, William. 1990. "A Conceptual Framework for Grammatical Categories (or: a Taxonomy of Propositional Acts)." *Journal of Semantics* 7 (3): 245–279.
- D'Avezac, Marie Armand Pascal, ed. 1845. "Vocabulaires Guiolof, Mandingue, Foule, Saracole, Seraire, Bagnon Et Floupe." In *Mémoires De La Société Ethnologique*, 205–267. Paris.
- Dalby, David. 1971. "A Referential Approach to the Classification of African Languages." In *Papers in African Linguistics*, ed. Chin Wu Kim and Herbert Stahlke, 17–32. Carbondale/Edmonton: Linguistic Research.
- Delancey, Scott. 1986. "Toward a History of Tai Classifier Systems." In *Noun Classes and Categorization*, ed. Colette Craig, 437–452. Amsterdam/Philadelphia: John Benjamins.
- Demuth, Katherine. 2000. "Bantu Noun Class Systems. Loanwords and Acquisition Evidence of Semantic Productivity." In *Systems of Nominal Classification.*, ed. Gunter Senft, 270–202. Cambridge: Cambridge University Press.

- Demuth, Katherine, Nicolas Faraclas, and Lynell Marchese. 1985. "Niger-Congo Noun Class and Agreement Systems in Historical and Acquisition Perspective." *Studies in African Linguistics* (Supplement): 78–82.
- . 1986. "Niger-Congo Noun Class and Agreement Systems in Language Acquisition and Historical Change." In *Noun Classes and Categorization*, ed. Colette Craig, 453–472. Amsterdam/Philadelphia: John Benjamins.
- Denny, Peter J., and Chet A. Creider. 1986. "The Semantics of Noun Classes in Proto Bantu." In *Noun Classes and Categorization*, ed. Colette Craig, 217–240. Amsterdam/Philadelphia: John Benjamins.
- Diagne, Mbacké. 2009. "Le Bayot." *Societes*. PhD thesis, INALCO (Paris).
- Dingemans, Mark. 2006. "The Semantics of Bantu Noun Classification. A Review and Comparison of Three Approaches". MA essay, Leiden University.
- Diouf, Jean-Léopold, and Marina Yaguello. 1991. *J'apprends Le Wolof*. Paris: Karthala.
- Dixon, Robert M. W. 1982. *Where Have All the Adjectives Gone? And Other Essays in Semantics and Syntax*. Den Haag: Mouton.
- . 1986. "Noun Classes and Noun Classification in Typological Perspective." In *Noun Classes and Categorization*, ed. Colette Craig, 105–112. Amsterdam/Philadelphia: John Benjamins.
- Dobrin, Lise. 1995. "Theoretical Consequences of Literal Alliterative Concord." *Chicago Linguistic Society (regional Meeting)* 31 (1): 127–142.
- Don, Jan. 2004. "Categories in the Lexicon." *Linguistics* 42 (5) (July): 931–956.
- Doneux, Jean Léonce. 1975. "Hypothèse Pour La Comparative Des Langues Atlantiques." *Africana Linguistica* 6: 41–130.
- . 1990. "La Place De La Langue Buy Dans Le Groupe Atlantique De La Famille Kongo-kordofan". PhD thesis, Université Libre de Bruxelles.
- Dreyfus, Martine, and Caroline Juillard. 2004. *Le Plurilinguisme Au Sénégal*. Paris: Karthala.
- Evans, Vyvyan, Benjamin K. Bergen, and Jörg Zinken. 2007. *The Cognitive Linguistics Reader. Cognitive Linguistics*. Sheffield: Equinox Publishing.
- Farrell, Patrick. 2001. "Functional Shift as Category Underspecification." *English Language and Linguistics* 5 (01) (May 17): 109–130.
- Ferrari-Bridgers, Franca. 2008. "A Unified Syntactic Analysis of Italian and Luganda Nouns." In *The Romance-Bantu Connection*, ed. Cécile De Cat and Katherine Demuth, 239–296. Amsterdam: John Benjamins.

- Foley, William A. 1997. *Anthropological Linguistics: An Introduction*. Oxford: Blackwell.
- Forges, G. 1983. "La Classe De L'infinif En Bantu." *Africana Linguistica* 9: 259–263.
- Geeraerts, Dirk. 2006. "Proyotype Theory." In *Cognitive Linguistics. Basic Readings*, ed. Dirk Geeraerts, 141–165. Berlin, New York: Mouton de Gruyter.
- Girard, Jean. 1965. "Diffusion En Milieu Diola De L'association Du Koumpo Bainouk." *Bulletin De l'IFAN XXVII ser. (1-2)*: 42–98.
- Givón, Talmy. 1972. "Studies in ChiBemba and Bantu Grammar." *Studies in African Linguistics* (supplement).
- Goldberg, Adele E. 1995. *Constructions. A Construction Grammar Approach to Argument Structure*. Chicago, London: The University of Chicago Press.
- . 2001. "Patient Arguments of Causative Verbs Can Be Omitted. The Role of Informaton Structure in Argument Distribution." *Language Sciences* 23: 503–524.
- Greenberg, Joseph H. 1972. "Numeral Classifiers and Substantival Number. Problems in the Genesis of a Linguistic Type." *Stanford Working Papers in Language Universals* 9: 1–40.
- Grinevald, Colette. 2000. "A Morphosyntactic Typology of Classifiers." In *Systems of Nominal Classification*, ed. Gunter Senft, 50–92. Cambridge: Cambridge University Press.
- Grinevald, Colette, and Frank Seifart. 2004. "Noun Classes in African and Amazonian Languages: Towards a Comparison." *Linguistic Typology* 8 (2): 243–287.
- Hadermann, Pascale. 1999. "Les Formes Nomino-verbales De Classes 5 Et 15 Dans Les Langues Bantoues Du Nord-Ouest." In *Bantu Historical Linguistics*, ed. Larry Hyman and Jean-Marie Hombert, 431–471. Stanford: CSLI Publications.
- Haiman, J. 1980. "Dictionaries and Encyclopaedias." *Lingua* 50: 329–357.
- Haspelmath, Martin. 1989. "From Purposive to Infinitive. A Universal Path of Grammaticization." *Folia Linguistica Historica* 10 (1-2): 287–310.
- Heider, Eleanor R. 1972. "Universals in Color Naming and Memory." *Journal of Experimental Psychology* 93: 10–20.
- Heine, Bernd. 1982. "African Noun Class Systems." In *Apprehension. Das Sprachliche Erfassen Von Gegenständen. Part I: Bereich Und Ordnung Der Phänomene*, ed. H. Seiler and C. Lehmann, 189–216. Tübingen: Gunter Narr.

- . 1997. *Cognitive Foundations of Grammar*. Oxford/New York: Oxford University Press.
- Heine, Bernd, and Derek Nurse, eds. 2000. *African Languages - an Introduction*. Cambridge: Cambridge University Press.
- . 2008. *A Linguistic Geography of Africa*. Cambridge: Cambridge University Press.
- Hendrikse, Andries Petrus. 2001. "Systemic Polysemy in the Southern Bantu Noun Class System." In *Polysemy in Cognitive Linguistics*, ed. Hubert Cuyckens and Britta Zawada, 185–212. Amsterdam/Philadelphia: John Benjamins.
- Hopkins, Bradley L. 1995. *Contribution à Une Étude De La Syntaxe Diola-Fogny*. Dakar: SIL.
- Idiata, Daniel Franck. 2005. *What Bantu Child Speech Data Tells Us About the Controversial Semantics of Bantu Noun Class Systems*. München: Lincom.
- Inoue, Kyoko. 2000. "Visualizing Ability and Nominal Classification. Evidence of Cultural Operation in the Agreement Rules of Japanese Numeral Classifiers." In *Systems of Nominal Classification*, ed. Gunter Senft, 217–238. Cambridge: Cambridge University Press.
- Intumbo, Icanha. 2007. "Estudo Comparativo Da Morfossintaxe Do Crioulo Guineense, Do Balanta e Do Português". Coimbra: Faculdade de Letras, Universidade de Coimbra.
- De Jong, Ferdinand. 1995. "The Making of a Jola Identity. Jola Inventing Their Past and Future." In *Popular Culture. Beyond Historical Legacy and Political Innocence. Proceedings of the CERES/CNWS Summer School 1994*, ed. J. Van der Klie, 133–150. Utrecht: CERES.
- . 1999. "Trajectories of a Mask Performace: The Case of the Senegalese Kumpo." *Cahiers d'Études Africaines* 39 (153): 49–71.
- Karlik, Jan. 1972. "A Manjako Grammar with Special Reference to the Nominal Group". PhD thesis, Department of phonetics and linguistics, SOAS.
- Katamba, Francis. 2003. "Bantu Nominal Morphology." In *The Bantu Languages*, ed. Derek Nurse and Gérard Philippon, 103–120. London: Routledge.
- Katz, Jerrold J., and Jerry A. Fodor. 1963. "The Structure of Semantic Theory." *Language* 39: 170–210.
- Kihm, Alain. 1994. *Kriyol Syntax*. Amsterdam/Philadelphia: John Benjamins.
- . 2000. "Noun Class, Gender, and the Lexicon-syntax-morphology Interfaces: a Comparative Study of Niger-Congo and Romance Languages (ms.)." *Atlantic*.

- Kiparsky, Paul. 1982. "Word Formation and the Lexicon." In *Proceedings of the Mid-America Linguistics Conference*, ed. F. Ingemann. Lawrence/Kansas.
- Koelle, Sigismund Wilhelm. 1854. *Polyglotta Africana*. Reprint 19. London: Church Missionary Society.
- Koptjevskaja-Tamm, Maria. 1993. *Nominalizations*. London/New York: Routledge.
- Labov, William. 1973. "The Boundaries of Words and Their Meanings." In *New Ways of Analysing Variation in English*, ed. C.-J. N. Bailey and R.W. Shuy, 340–373. Washington: Georgetown University Press.
- Ladefoged, Peter, and Ian Maddieson. 1996. *The Sounds of the World's Languages*. Oxford: Blackwell Publishing.
- Lakoff, George. 1986. "Classifiers as a Reflection of Mind." In *Noun Classes and Categorization*, ed. Colette Craig, 13–52. Amsterdam/Philadelphia: John Benjamins.
- . 1987. *Women, Fire, and Dangerous Things. What Categories Reveal About the Human Mind*. Chicago, London: The Chicago University Press.
- . 2006. "Conceptual Metaphor." In *Cognitive Linguistics. Basic Readings*, ed. Dirk Geeraerts, 185–238. Berlin: Mouton de Gruyter.
- Langacker, Ronald W. 1983. *Foundations of Cognitive Grammar*. Bloomington: Indiana University Linguistics Club.
- . 1987a. "Nouns and Verbs." *Language* 63 (1): 53–94.
- . 1987b. *Foundations of Cognitive Grammar*. Stanford: Stanford University Press.
- . 1991. *Concept, Image, and Symbol. The Cognitive Basis of Grammar*. Berlin/New York: Mouton de Gruyter.
- Laurence, Stephen, and Eric Margolis. 1999. "Concepts and Cognitive Science." In *Concepts. Core Readings*, ed. Eric Margolis and Stephen Laurence, 3–81. Cambridge (MA): MIT Press.
- Leprince, Jules. 1905. "Notes Sur Deux Tribus De La Basse-Casamance." *Revue Coloniale* 33: 519–602.
- De Lespinay, Charles. 1987a. *Lexique Baynunk*. Paris: C.R.A.
- . 1987b. "La Disparition De La Langue Baynunk : Fin D'un Peuple Ou Processus Réversible?" In *Contributions à L'histoire Du Sénégal*, ed. Jean Boulègue, 23–29. Cahiers du CRA.
- . 1992. "Dictionnaire Baynunk (guñun-gujaxer-guhaca-gubòy)". Paris: C.R.A.

- . 1996. “Autochtonie Et Droit Foncier. L’existence Contestée Des Baynunk En Afrique De l’Ouest (Sénégal, Gambie, Guinée-Bissau).” *Droits Et Cultures* 32: 55–65.
- . 1997. “Un Lexique Bagnon-floupe De La Fin Du XVIIIe Siècle: Apport à L’histoire Du Peuplement De La Casamance.” *Cahier Lillois D’économie Et De Sociologie* no. spécia: 193–213.
- Levin, Beth. 1993. *English Verb Classes and Alternations. A Preliminary Investigation*. London/Chicago: University of Chicago Press.
- Linares, Olga F. 1992. *Power, Prayer and Production. The Jola of Casamance, Senegal*. Cambridge: Cambridge University Press.
- Lüpke, Friederike. 2005. *A Grammar of Jalonke Argument Structure*. Nijmegen: Radboud Universiteit Nijmegen.
- . 2009a. “At the Margin – African Endangered Languages in the Context of Global Endangerment Discourses.” *African Research and Documentation* 109: 15–41.
- . 2009b. “Data Collection Documentation Methods for Field-based Language Documentation.” *Language Documentation and Description* 6: 1–39.
- . 2010a. “Language and Identity in Flux. In Search of Bainouk.” *JLC 3 (THEMA)*: 155–174.
- . 2010b. “Multilingualism and Language Contact in WestAfrica: Towards a Holistic Perspective.” *JLC 3 (THEMA)*: 1–14.
- . 2013a. “Atlantic Classification.” In *The Oxford Handbook of African Languages*, ed. Rainer Voßen. Oxford: Oxford University Press.
- . 2013b. “Ideologies and Typologies of Language Endangerment in Africa.” In *African Responses to Language Endangerment*, ed. James Essegbey, Brent Henderson, and Fiona McLaughlin. Amsterdam/Philadelphia: John Benjamins.
- Lüpke, Friederike, and Anne Storch. 2013. *Repertoires and Choices in African Languages*. Berlin: Mouton de Gruyter.
- Maho, Jouni Filip. 1999. “A Comparative Study of Bantu Noun Classes.” *Orientalia Et Africana Gothoburgensia*. Gö: PhD thesis, University of Göteborg.
- Malchukov, Andrej L. 1994. *Nominalization/verbalization. Constraining a Typology of Transcategorical Operations*. München: Lincom Europa.
- Malchukov, Andrej L., Maria Koptjevskaja-Tamm, and Peter Cole. 2008. “Leipzig Questionnaire on Nominalizations and Mixed Categories.”

- Marantz, Alec. 1997. "No Escape from Syntax. Don't Try Morphological Analysis in the Privacy of Your Own Lexicon." In *Proceedings of the 21st Annual Penn Linguistics Colloquium*, ed. Alexis Dimitriadis and L. Siegel, 4:201–225.
- Mark, Peter. 1985. *A Cultural, Economic, and Religious History of the Basse Casamance Since 1500*. Stuttgart: Franz Steiner Verlag.
- . 1992. *The Wild Bull and the Sacred Forest*. Cambridge: Cambridge University Press.
- Mbamba, Kamariyah B. 2012. *Sun, Cows and Tasty Things - the Barbecue Class in Urban Fulfulde. What Semantic Networks Reveal About Linguists*. Kamamoto: Tunga Publishers.
- McLaughlin, Fiona. 2009. "The Ascent of Wolof as an Urban Vernacular and National Lingua Franca in Senegal." In *Globalization and Language Vitality: Perspectives from Africa*, ed. Cécile Vigoroux and Salikoko Mufwene, 203–249. London: Continuum Publishers.
- Mervis, Carolyn B., and Eleanor H. Rosch. 1981. "Categorization of Natural Objects." *Annual Review of Psychology* 32: 89–115.
- Mithun, Marianne. 1986. "The Convergence of Noun Classification Systems." In *Noun Classes and Categorization*, ed. Colette Craig, 379–398. Amsterdam/Philadelphia: John Benjamins.
- Moxley, Jeri. 1998. "Semantic Structure of Swahili Noun Classes." In *Language History and Linguistic Description in Africa*, ed. Ian Maddison and Thomas J. Hinnebusch, 229–238. Trenton (NJ)/Asmara: Africa World Press.
- Mufwene, Salikoko S. 1980. "Bantu Class Prefixes. Inflectional or Derivational." *Chicago Linguistic Society* 16: 246–258.
- Næss, Åshild. 2003. *Transitivity: From Semantics to Structure*. Amsterdam: Ponsen & Looijen BV.
- Ndiaye, Mamadou. 2006. "The Impact of Linguistic Dominance on Senegalese National Languages." <http://www.goethe.de/lhr/prj/mac/ver/de1401897.htm>.
- Noonan, Michael. 2007. "Complementation." In *Language Typology and Syntactic Description. Volume 2, Complex Constructions*, ed. Timothy Shopen, 52–150. Cambridge: Cambridge University Press.
- Nordlinger, Rachel, and Louisa Sadler. 2000. "Tense as a Nominal Category." In *Proceedings of the LFG00 Conference*, ed. Miriam Butt and Tracy H. King. Stanford: CSLI Publications.
- NTM. *Cours D'alphabétisation En Bainouke*. Dakar: New Tribes Mission.
- . 1996. "Lexique Bainouk/Français". Dakar: New Tribes Mission.

- Palmer, Gary B., and Claudia Woodman. 2000. "Ontological Classifiers as Polycentric Categories as Seen in Shona Class 3 Nouns." In *Explorations in Linguistic Relativity*, ed. Martin Pütz and Marjolijn H. Verspoor, 225–249. Amsterdam/Philadelphia: John Benjamins.
- Payne, Doris. 1986. "Noun Classification in Yagua." In *Noun Classes and Categorization*, ed. Colette Craig. Amsterdam/Philadelphia: John Benjamins.
- Payne, Stephen. 1992. *Une Grammaire Pratique (avec Phonologie Et Dictionnaire) De Joola-Kwatay*. Dakar: SIL.
- Du Plessis, J. A. 1982a. "Sentential Infinitives and Nominal Infinitives?" *South African Journal of African Languages* 2 (1): 1–18.
- . 1982b. "The Analysis of the Infinitive." *South African Journal of African Languages* 2 (2): 18–47.
- Pozdniakov, Konstantin. 1993. *Сравнительная Грамматика Атлантических Языков (Comparative Historic Grammar of the Atlantic Languages)*. Moscow: Nauka.
- . 2009. "La Classification Nominale : à La Croisée Des Paradigmes." In *Essais De Typologie Et De Linguistique Générale. Mélanges Offerts à Denis Creissels*, 87–105. Paris: ENS Editions.
- Pozdniakov, Konstantin, and Guillaume Segerer. 2010. "Classification De Langues Atlantiques. Mise à Jour Senelanges. Ndayane". Ndayane/Senegal.
- Quint, Nicolas. 2003. *Parlons Capverdien*. Paris: L'Harmattan.
- Rappaport-Hovav, Malka, and Beth Levin. 1998. "Building Verb Meanings." In *The Projection of Arguments*, ed. Miriam Butt and Wilhelm Geuder, 97–134. Stanford: CSLI Publications.
- Rehg, K. 1981. *Ponapean Reference Grammar*. Honolulu: University of Hawaii Press.
- Richardson, Irvine. 1967. "Linguistic Evolution and Bantu Noun Class Systems." In *La Classification Nominale Dans Les Langues Négro-Aaricaines*, ed. Gabriel Manessy and André Martinet, 373–390. Aix-en-Provence: Éditions du Centre National de la Recherche Scientifique.
- Roche, Christian. 1976. *Conquête Et Résistance Des Peuples De Casamance (1850-1920)*. Dakar/Abidjan: Les nouvelles éditions africaines.
- . 2000. *Histoire De La Casamance : Conquête Et Résistance 1850-1920*. Paris: Karthala.
- Rodney, Walter. 1969. "Upper Guinea and the Significance of the Origins of Africans Enslaved in the New World." *The Journal of Negro History* 54 (4): 327–345.

- Rosch, Eleanor H. 1973. "Natural Categories." *Cognitive Psychology* 4: 328–350.
- . 1978. "Principles of Categorization." In *Cognition and Categorization*, ed. Barbara B. Lloyd and Eleanor H. Rosch, 27–48. Hillsdale (NJ): Lawrence Erlbaum Associates.
- Rosch, Eleanor H., and Carolyn B. Mervis. 1975. "Family Resemblances. Studies in the Internal Structure of Categories." *Cognitive Psychology* 7: 573–605.
- Rosch, Eleanor H., Carolyn B. Mervis, Wayne D. Gray, David M. Johnson, and Penny Boyes-Braem. 1976. "Basic Objects in Natural Categories." *Cognitive Psychology* 8: 382–439.
- Rougé, Jean-Louis. 2004. *Dictionnaire Étymologique Des Creoles Portugais d'Afrique*. Paris: Karthala.
- Sagna, Serge. 2008. "Formal and Semantic Properties of the Gújjolaay Eegimaa". PhD thesis, department of linguistics, SOAS.
- . 2010a. "Overt Verb Classification in Gujjolaay Eegimaa (presentation)."
- . 2010b. "Issues in Noun Classification and Noun Class Assignment in Gújjolay Eegimaa (Banjal) and Other Jóola Languages." *Studies in African Linguistics* 39 (1): 1–33.
- Sambou, Pierre-Marie. 1979. "Diola Kaasa Esuulaalur. Phonologie, Morphophonologie Et Morphologie". PhD thesis, UCAD Dakar.
- Sapir, J. David. 1965. *A Grammar of Diola-Fogny*. Cambridge: Cambridge University Press.
- . 1971. "West Atlantic: An Inventory." In *Current Trends in Linguistics* 7, ed. T. Sebeok, 7:45–112. Den Haag/Paris: Mouton.
- Sapir, J. David, and M. Goudjabi. 1993. *Dictionnaire Jóola Kujamutay*. Charlottesville: University of Virginia.
- Sauvageot, Serge. 1967. "Note Sur La Classification Nominale En Baïnouk." In *La Classification Nominale Dans Les Langues Négro-africaines*, ed. Gabriel Manessy and André Martinet, 225–136. Aix-en-Provence: Éditions du Centre National de la Recherche Scientifique.
- . 1973. "Une Carte Des Villages Baïnouk De Casamance (Sénégal)." In *Les Langues Dans Le Monde Ancien Et Moderne. Afrique Subsaharienne*, ed. Jean Perrot, Gabriel Manessy, and Albert Valdman. Paris: CNRS.
- . 1987a. *Esquisse Du Système Verbal Du Baïnouk*. Paris: Centre national de la Recherche Scientifique (CNRS).

- . 1987b. “La Linguistique En Tant Que Témoignage Historique: Le Cas Du Baynunk.” In *Contributions à L’histoire Du Sénégal*, ed. Jean Boulègue, 17–22. Cahiers du C.R.A.
- . 2001. “De Quelques Procédés De Mise En Relief En Baynunk.” In *Leçons d’Afrique. Un Hommage à Gabriel Manessy*, ed. Robert Nicolaï, 43–55. Louvain/Paris: Peeters.
- Schadeberg, Thilo C. 2001. “Number in Swahili Grammar.” *Afrikanistische Arbeitspapiere* 68: 7–16.
- . 2003. “Derivation.” In *The Bantu Languages*, ed. Derek Nurse and Gérard Philippson, 71–89. London/New York: Routledge.
- Seiler, Hansjakob. 1986. *Apprehension. Language, Object and Order. Part III: The Universal Dimension of Apprehension*. Tübingen: Gunter Narr.
- Seiler, Hansjakob, and Christian Lehmann, eds. 1982. *Apprehension. Das Sprachliche Erfassen Von Gegenständen. Teil I: Bereich Und Ordnung Der Phänomene*. Tübingen: Gunter Narr.
- Seiler, Hansjakob, and Franz-Josef Stachowiak, eds. 1982. *Apprehension. Das Sprachliche Erfassen Von Gegenständen. Teil II: Die Techniken Und Ihr Zusammenhang in Einzelsprachen*. Tübingen: Gunter Narr.
- Selvik, Kari-Anne. 2001. “When a Dance Resembles a Tree. A Polysemy Analysis of Three Setswana Noun Classes.” In *Polysemy in Cognitive Linguistics*, ed. Hubert Cuyckens and Britta Zawada, 161–184. Amsterdam/Philadelphia: John Benjamins.
- Senft, Gunter, ed. 2000. *Systems of Nominal Classification*. Cambridge: Cambridge University Press.
- Serzisko, Fritz. 1982. “Gender, Noun Class and Numeral Classification. A Scale of Classificatory Techniques.” In *Issues in the Theory of Universal Grammar*, ed. R. Dirven and G. Radden, 95–123. Tübingen: Gunter Narr.
- Spitulnik, Debra. 1988. “Levels of Semantic Structuring in Bantu Noun Classification.” In *Current Approachs to African Linguistics, Volume 5*, ed. Paul Newman and Robert D. Botne, 207–220. Dordrecht: Foris.
- Van Staden, Miriam, Gunter Senft, Nicholas J. Enfield, and Jürgen Bohnemeyer. 2001. “Staged Events.” In *Manual for the Field Season 2001*, ed. Stephen C. Levinson and Nicholas J. Enfield, 115–125. Nijmegen: Max Planck Institut für Psycholinguistik.
- Štekauer, Pavol. 2006. “On the Meaning Predictability of Novel Context-free Converted Naming Units.” *Linguistics* 44 (3) (May): 489–539.

- Stewart, John M. 2007. "Consonant Mutation in Proto-Potou-Akanic-Bantu and in the Fula-type Languages of Senegal and Guinea." In *Guinea Languages of the Atlantic Group. Description and Internal Classification*, ed. Anne Storch, 171–195. Frankfurt am Main: Peter Lang.
- Stüwe Thanassoula, Marilena. "Towards a Grammar of the Senses. Perception in Lusese". Phd thesis, University of Cologne, Department of African Studies.
- Talmy, Leonard. 1988. "The Relation of Grammar to Cognition." In *Linguistic Categorization. Prototypes in Linguistic Theory*, ed. Brigida Rudzka-Ostyn, 165–205. Amsterdam: John Benjamins.
- . 2000. *Toward a Cognitive Semantics. Volume I: Concept Structuring Systems*. Cambridge (MA): MIT Press.
- Tastevin, G. 1936. "Vocabulaires Inédits De Sept Dialectes Sénégalais, Dont Six De La Casamance." *Journal De La Société Des Africanistes* 6 (1): 1–33.
- Taylor, John R. 1995. *Linguistic Categorization*. Oxford: Oxford University Press.
- Teixeira, Maria. 1990. "Ethnographie Bâinouk (ms.)."
- Tendeng, Odile. 2007. *Le Gusiilay: Un Essai De Systématisation*. Bern: Peter Lang.
- Trifković, Mirjana. 1969. "Le Mancagne. Etude Phonologique Et Morphologique". Dakar: IFAN.
- Tuggy, David. 2006. "Ambiguity, Polysemy and Vagueness." In *Cognitive Linguistics. Basic Readings*, ed. Dirk Geeraerts, 167–184. Berlin/New York: Mouton de Gruyter.
- Visser, Marianna. 1989. "The Syntax of the Infinitive in Xhosa." *South African Journal of African Languages* 9 (4): 154–183.
- Wilkins, David P. 2000. "Ants, Ancestors and Medicine. A Semantic and Pragmatic Account of Classifier Constructions in Arrernte (Central Australia)." In *Systems of Nominal Classification*, ed. Gunter Senft, 147–216. Cambridge: Cambridge University Press.
- Williamson, K. 1989. "Niger-Congo Overview." In *The Niger-Congo Languages*, ed. J. Bendorf-Samuel, 3–45. Lanham: University Press of America.
- Wilson, William A. 2007. *Guinea Languages of the Atlantic Group. Description and Internal Classification*. Frankfurt am Main: Peter Lang.
- Wittgenstein, Ludwig. 1953. *Philosophische Untersuchungen*. Oxford: Blackwell.
- De Wolf, P.P. 1971. *The Noun-class System of Proto-Benue Congo*. Den Haag: Mouton.

- Yap, Foong Ha, Karen Grunow-Harsta, and Janick Wrona, eds. 2011. *Nominalization in Asian Languages*. Amsterdam/Philadelphia: John Benjamins Publishing Co.
- Ylikoski, Jussi. 2003. "Defining Non-finites. Action Nominals, Converbs and Infinitives." *Journal of Linguistics* 16: 185–237.
- Zavala, Roberto. 2000. "Multiple Classifier Systems in Akatek (Maya)." In *Systems of Nominal*, ed. Gunter Senft, 114–146. Cambridge: Cambridge University Press.
- Zawada, Britta, and Mtholeni N. Ngcobo. 2008. "A Cognitive and Corpus-linguistic Re-analysis of the Acquisition of the Zulu Noun Class System." *Language Matters. Studies in the Languages of Africa* 39 (2): 316–331.
- Zulaica Hernandez, Iker. 2007. "Demonstrative Pronouns in Spanish. A Discourse Based Study." MA dissertation, Ohio State University.