

The diachrony of nominal classification in Guang

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1 Introduction

1.1 Guang languages and noun classification

+ sub-family of close to 20 languages of the Potou-Akanic family (related to Akan) within the Benue-Kwa pool of Niger-Congo > Figure 1 (languages in *italic*), Map 1

North (15)

Gonja-Dompo (2)

Gonja (includes Choroba in Map)

Dompo

Nkonya-Nkami (2)

Nkonya

Nkami

† *Nterato*

Oti-North (10)

Mountain (4)

Foodo-Gichode-Ginyanga (3) (not according to source)

Foodo

Gichode-Ginyanga (2)

Gichode

Ginyanga

Nawuri

River (6):

Chumbuli (2)

Chumburung (= Yeji in Map)

Tchumbuli

Kplang

Krache

Nchumbulu-Dwang (2)

Dwang

Nchumbulu

South (4):

Awutu

Hill (3)

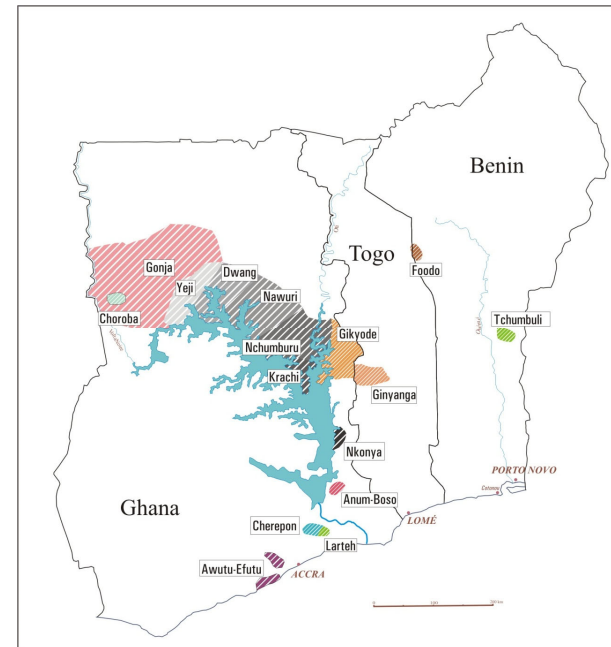
Gua-Cherepon (2)

Cherepon

Gua (= Anum-Boso in Map)

Larteh

Figure 1: The internal classification of Guang languages (after Glottolog)



Map 1: Geographical distribution of Guang (© L. Marstaller, after Perrot 1981)

- + some typological characteristics relevant for discussion
- 3 different types of vowel harmony: vowel quality of the stem determines the vowel quality of the affix concerning ATR value, rounding feature and vowel height
- largely head-initial syntax in clause and noun phrase with occasional exceptions (e.g., preverbal objects in nominalizations or prenominal possessors)
- + as Niger-Congo members, Guang languages expected to possess noun classification systems with both class agreement (as the basis of gender in terms of Corbett 1991) as well as adnominal class marking
- > description so far: elaborate nominal affixation but no agreement (cf. Dakubu 1988: 82)
- > similar assumption as premise for the two available reconstructions of the "noun class" system of Proto-Guang by Manessy (1987) and Snider (1988) which are mainly based on nominal forms and only marginally on agreement
- > **goal of this contribution:**
- a) provide a fuller and more adequate reconstruction of the noun classification system of Proto-Guang in terms of both gender and nominal morphology
- b) investigate parts of the complex dynamics of change toward the synchronic systems

1.2 Methodological approach of analyzing gender

- + theoretical and analytical framework based on Corbett (1991, 2006), Güldemann (2000), and particularly Güldemann and Fiedler (2019):
- gender = classification of nouns reflected by agreement on other words
- **FOUR** analytical concepts for gender systems that involve not only marking on the agreement *target* but also on the noun as the agreement *controller/trigger*:
- a) AGREEMENT (= AGR) CLASS (identified by Arabic number):
 - = class of concrete nominal forms established on account of identical behavior across all agreement contexts - overt reflex of gender but conflated with other features
- b) GENDER (CLASS):
 - = class of nouns or nominal bases in the lexicon with the same agreement behavior - abstracted from other agreement features, notably number
- c) NOMINAL FORM (= NF) CLASS (identified by abstract upper-case form):
 - = class of concrete nominal forms established on account of identical properties in morpho-phonological form, which often determines agreement behavior
- d) DERIFLECTION (CLASS):
 - = class of nouns or nominal bases in the lexicon established on account of identical morphological variation triggered by **inflectional** and **derivational** features
- + stereotype of Niger-Congo noun classification: one-to-one mapping between nominal form (NF) class and agreement (AGR) class, also including formal alliteration
 - > captured by the idealized but problematic philological "noun class" concept

(1) NF-NOUN-(NF) AGR-DET

a.	<i>gi-tegaa</i>	<i>gi-ko</i>	a certain plain		
	<i>i-gyo</i>	<i>i-ko</i>	some yams		
	<i>n-bii</i>	<i>n-ko</i>	some children	Gichode	(Sand Ms.)
b.	<i>ɔ-nyen</i>	<i>ɔ-ko</i>	a certain man		
	<i>ø-gyono</i>	<i>ɔ-ko</i>	a certain dog	Gichode	(Sand Ms.)
c.	<i>ñ-cɔ́-ń</i>	<i>bú-ń</i>	this water		
	<i>ñ-cɔ́-ń</i>	<i>sú-ń</i>	these waters/rivers	Foodo	(Fiedler f.n.)

- (1)a. "canonical" Niger-Congo class marking
 (1)b. two different NF classes that trigger the same AGR class
 (1)c. the same NF class that triggers two different AGR classes

- situations in (1)b. and (1)c. are recurrent, contrary to traditional "noun class" approach
- > necessary strict separation of agreement~gender on the one hand and nominal form ~deriflection on the other hand

1.3 Present Guang survey

- use of as many language-specific and modern relevant data sources as possible: all languages covered except for extinct Nterato without data > Table A1
- for each language: identification of agreement class system, gender system based thereof, nominal form class system with example nouns, declension system based thereof
- !!! caveat: quite diverse quantity and quality of data across languages, data on agreement particularly deficient (cf. Güldemann and Fiedler 2019) > Table A1
- > languages may be ignored for a certain domain if data are not available
- reconstruction of nominal forms based largely on 80-word-list for nearly all languages
- > based on Leipzig-Jakarta-list and some typical West African vocabulary (WALDS)
- > establishment of cognates for every word, reconstruction of approximate proto-form, tracking of changes vis-à-vis synchronic data

2 Comparative noun classification in Guang

2.1 Nominal form classes and deriflection

2.1.1 NF class survey

- + elaborate system of nominal form classes in modern and Proto- Guang > see Table A2
- a) class of formally unmarked nouns: *Ø
- b) 6 NF classes with CV-prefixes: *ba-, *ka-, *kI-, *kU-; Foodo only: *bU-, *dI-
- c) 4 NF classes with V~N-prefixes: *O-, *A-, *I-, *N-
- d) 2 types of prefix-suffix combinations: *Ø/O-_-ana and, in Foodo only, Ø/A-_-tɔ-ɔ
- e) unique to Foodo, prefixes are supplemented by historically partly related suffixes
- > some classes are hard to assess regarding their status as proto-classes, notably the tripartite distinction among *kV prefixes and two CV classes unique to Foodo

2.1.2 Major types of historical change

2.1.2.1 NF class innovation

- variable types of morphological changes on nouns that create incipient NF classes in individual languages and across Guang but they hardly ever impact gender system
- > only one clear relevant case that affects the agreement system (see §2.2.3.1):
 Ø/a-_-tɔ-a in Foodo, based on suffix -tɔ for abstract concepts like religion and mental states (only 7 words in database), possibly derived from tɔ 'croyance' (Plunkett ms.)

(2)

- a. Ø-cɛ̀fɛ̀lɛ̀-tɔ́-ɔ́ 'animism' < Ø-cɛ̀fɛ̀lɛ̀ 'animist' (cf. Arab. *kufr* 'godlessness')
- b. Ø-òkùtù-tɔ́-ɔ́ 'boisterousness' < òkùtù 'boisterous'
- c. à-yárùbù-tò-ɔ́ 'foolishness' < à-yárùbù-ɔ́ 'fool'

2.1.2.2 Formal change of NF class exponents

- + lenition of initial C in *KV forms in Gichode, Ginyanga and Nawuri
- + widespread loss of initial C in *CV forms > merger with various V-classes:
 - *BA > A, *KA > A, *KI > I, *KU > O, *kV^{hi} > v^{hi}
- + various types of vowel harmony and assimilation responsible for a great amount of prefix allomorphy in single languages and variation across Guang > see Table 1
- > reconstruction of prefixes has to take the vowel quality of nominal bases into account
- > affects both CV-forms and V-forms (including those derived themselves from CV)

Nominal proto-form	Possible allomorphs in individual languages
*ba-	<i>ba-, bi-, bu</i> (only Gonja)
*ka-	<i>ka-, ke-, kε-, kə-, ko-, kɔ-</i>
*kI- ~ *kV ^{hi} -	<i>ki-, kɪ-, ku-, kʊ-, kɔ-</i>
*kU- ~ *kV ^{hi} -	<i>ki-, kɪ-, ku-, kʊ-, kɔ-</i>
*bU-	<i>bi-, bɪ-, du-, dʊ-</i> (only Foodo)
*dI-	<i>di-, dɪ-, du-, dʊ-</i> (only Foodo)
*O-	<i>o-, ɔ-</i>
*a-	<i>a-, ə-, e-, ε-</i>
*I-	<i>i-, ɪ-, e-</i>
*N-	<i>n-, m-, ŋ-, ŋ-, in-</i>

Table 1: Possible allomorphs of nominal proto-forms

2.1.2.3 NF class loss

- plurals with *-ana lost in half of the languages
- *bU- and *dI- lost everywhere but in Foodo (see §3.1 for justifying this scenario)
- status of unique circumfixation in Foodo remains an open historical question

2.1.3 Derivlextion systems

- + NF classes encode besides noun classification also number (maximally singular-plural)
- intricate interaction of both domains builds up partly complex derivlextion systems - see Figure A1 for a cross-family overview
- NF classes often partake in multiple derivlextions, also involving conflation of multiple NF classes in one number value toward one NF class in the other number
- distinction of count nouns partaking in number opposition vs. transnumeral nouns
- a) count nouns build up derivlextions involving a pair of NF classes
- distinction of recurrent, regular vs. "inquate" patterns (latter marked by stippled lines)
- multiple bilateral class conflation > most languages have "crossed" systems (Corbett 1991)
- b) transnumeral nouns form single-class derivlextions, which are far more numerous than commonly expected in Niger-Congo

2.2 Agreement, agreement classes, and gender

2.2.1 Agreement~anaphor

- + pace Dakubu (1988), Snider (1988) and Manessy (1987), there are agreement systems in all Guang languages sufficiently known > see Table A3
- two major target domains: (I) NP-related vs. (II) clause-related
- quite diverse agreement systems depending on language and agreement context:
 - a) Niger-Congo system with many, often alliterative agreement classes for gender-number
 - b) reduced system with few agreement classes for gender-number (see §2.2.3-4 below)
 - c) in certain languages and contexts, restricted agreement for number only (see §2.2.3.3)
 - d) in certain languages and contexts, agreement by means of NF copying (not treated here)
- + Nawuri as a "canonical" Niger-Congo type system
- 7 AGR classes, exponents often alliterative to NF prefixes > see Table 2

AGR	Number	DEM	IDEF <i>kuu</i>	SBJ Verb*	OBJ/POSS <i>mu</i> *	Regular NF exponent
NAW1	TN, SG	ɔ-	?	ɔ = /o =	∅	ɔ-/o-, ∅
NAW2	PL	<i>ba-</i>	<i>ba-</i>	<i>ba</i>	<i>ba-</i>	<i>a-</i>
NAW3	TN, SG	<i>gi-</i>	?	<i>gi = /gi =</i>	<i>gi-</i>	<i>gi-/gi-/gu-/gu-</i>
NAW4	TN, PL	<i>a-</i>	?	<i>a</i>	?	<i>a-</i>
NAW5	TN, PL	<i>i-</i>	?	<i>i = /i =</i>	?	<i>i-/i-</i>
NAW6	SG	<i>ga-</i>	?	<i>ga</i>	?	<i>ga-</i>
NAW7	TN, PL	<i>ŋ-</i>	<i>ŋ-</i>	<i>m = /n =</i>	?	<i>n-/m-</i>

Note: * used as anaphoric pronoun rather than agreement (except for SBJ in AGR 3, 4, 6);
? no example in source

Table 2: Agreement classes of Nawuri (after Casali 1995)

- various agreement targets:

- a) within NP: on some determiners, as in (3)a., but not on such expected targets as general determiner, numerals, and adjectives
- b) within clause: subject agreement, as in (3)a., or anaphoric subject pronoun, as in (3)b.

(3)

- a. *a-tfembee a-numuv a waa gaa*
A.4-corn 4-this 4 do much
This corn grew plentiful. (Casali 1995: 71)
- b. *tfaapaa wu ɔ di*
∅:spider.1 die 1 lie
Spider lay dead. (Casali 1995: 81)

2.2.2 AGR class survey

+ elaborate system of agreement classes across Guang can be reconstructed to proto-language > see Table A4

b) 7 + 1 AGR classes with CV-exponents: *ba-, *ka-, *kI-, *kU-; Foodo: *bU-, *dI-, *sI-, tu-

c) 4 AGR classes with V~N- exponents: *O-, *a-, *I-, *N-

> some classes are hard to assess regarding their status as proto-classes, notably the tripartite distinction among *kV classes and three classes unique to Foodo

2.2.3 Major types of historical change

2.2.3.1 AGR class innovation

+ unique NF class [a/Ø-N-t̩-a] of Foodo (see §2.1.2.1) involves AGR class t̩/t̩̩, as in (4); but only incipient as some speakers employ formal agreement according to prefix

(4)

a. Ø-cèfèl̩-t̩-ɔ̩, t̩ fɛ́é 'dá-m̩ also: ð
Ø-animist-TO.10-SUF 10.SBJ be.absent goodness.1-SUF 1.SBJ
Animism is not good. (Plunkett Ms.)

b. à-màl̩bà-t̩-ɔ̩ á t̩l̩à t̩ɔ̩ also: ám̩ɔ̩
A-muslim-TO.10-SUF 1PL.SBJ find 10.OBJ 4.OBJ
It's Islam that we found. (Plunkett Ms.)

2.2.3.2 AGR class loss

+ most salient change: AGR classes for human SG *O- and PL *ba- used for animate agreement and some other AGR class(es) for inanimate agreement, replacing inherited lexicalized AGR classes that are associated with NF prefixes

> incipient stage with variable agreement, for example, in Nawuri:

(5)

a. m-bwu libi ŋ-kuv (not: mbwu libi ba.kuv)
N.7-spirit_x bad 7-IDEF_x
some bad spirits [alliterative class 7 rather than human PL class 2] (Casali 1995: 71)

b. ga-b^wi ga ɪ-ba
GA.6-goat_x 6.SBJ_x IPFV-come
The goat is coming. [alliterative class 6] (Casali 1995: 71)

c. ga-b^wi daŋ ɔ̩ sʊ ɔ̩ naa (not: gab^wi daŋ ga sʊ ɔ̩ naa)
GA.6-goat.1_x INT 1.SBJ_x have 1 walk
Goat is walking with it. [human SG class 1 rather than class 6] (Casali 1995: 81)

2.2.3.3 Changes concerning morphosyntactic agreement targets

+ original morphological status of class markers unclear - two opposite hypotheses:

a) class markers were bound to agreement targets across the board in a Bantu-type system

b) class markers were classifier like and not target-bound (Güldemann and Merrill in prep.)

> necessary investigation according to separate syntactic domains (I) NP vs. (II) clause:

(II) clausal argument cross-reference for subject, object and possessor - across Guang:

- not bound except incipient subject proclitics/prefixes (see Table 2 for Nawuri)

- predominantly anaphoric without cooccurring NP, rather than true agreement

> overall situation more compatible with scenario b) (cf. Givón 1976)

(I) NP-related agreement - cross-family variation, e.g., on indefinite determiner:

- inherited gender-number agreement with strong alliteration, as in (6) of Foodo

- reduced number agreement without alliteration, as in (7) of Larteh

- no agreement but clausal pronominal anaphor, as in (8) of Gonja

(6) Foodo

a. k̩-ɔ̩w̩ɔ̩-ù k̩-ú-kú
KU.3-snake-SUF 3-IDEF
some, a snake (Plunkett 2009: 124)

b. à-p̩úndú-m̩ á-kú
A.4-hat-SUF 4-IDEF
some hats (Fiedler, f.n.)

(7) Larteh

a. a-bobi ɔ̩-kʊ m-bobi n-kʊ
A-animal SG-IDEF N-animal PL-IDEF
an animal some animals

b. o-yuw ɔ̩-kʊ e-yuw n-kʊ
O-thief SG-IDEF E-thief PL-IDEF
a thief some thieves (Ansah 2009: 79)

(8) Gonja

a. a-ɔ̩n̩ð kó
A-dog.2 IDEF
some dogs (Painter 1970: 320)

b. kà-cé éri bé-fá à-kó
KA-woman.1 this PROG-sell 4-IDEF
This woman is selling some [= inanimate plural]. (Painter 1970: 318)

> both of the above two hypotheses are conceivable:

a) cline of decay of an original Bantu-type system: Foodo > Larteh > Gonja

b) anaphor (Gonja) > "full" agreement (Foodo) > reduced number agreement (Larteh)

2.2.4 Gender systems

+ two morphosyntactic types according to agreement targets > see Table A3:

- wider array of targets, notably both in NP and in/across clauses
- restriction to anaphoric pronouns establishing English-type "pronominal gender" systems:

Nkami, Awutu, Larteh, Cherepon

+ variety of structural class-mapping types in terms of Corbett (1991) > see Figure A2:

- parallel - no class conflation: *Krache, Gonja, Nkonya, Nkami, Awutu*
- convergent - unilateral class conflation: *Dwang, Larteh, Cherepon-Gua*
- ¹ crossed - bilateral class conflation: *Proto-Guang, Foodo*
- ² crossed with more PL classes (pace Greenberg 1963a-Universal 37, cf. Plank and Schellinger 1997): *Gichode-Ginyanga, Nawuri, Chumburung*

+ two different types according to assignment complexity, resulting from AGR class reduction referred to in §2.2.3 above > see Figure A2:

- "conservative" Niger-Congo type: gender assignment partly semantic (notably \mp human) but also strongly formal > crossed systems that are similar to deriflection systems

Proto-Guang, Foodo, Gichode-Ginyanga, Nawuri, Chumburung

- highly restructured type: simple animacy-based gender assignment > parallel or convergent systems that are dissimilar to deriflection systems

Krache, Dwang, Gonja, Nkonya, Nkami, Awutu, Larteh, Cherepon-Gua

3 Discussion

3.1 The reconstruction of Proto-Guang

+ system reconstruction based on multiple types of evidence beyond a mere synchronic family survey as in Table A5

+ some agreement and nominal form classes are viewed as inherited from Proto-Guang in spite of poor modern attestation, notably:

- NF~AGR *dI and *bU, AGR *si unique to Foodo, because:
 - classes are robustly attested in Niger-Congo outside Guang
 - Foodo has been isolated from the rest of Guang, so that retention is plausible; search for borrowing evidence from other more conservative Niger-Congo languages negative
 - evidence for intense language contact in the rest of Guang, notably with languages with highly reduced (Akanic) or without any noun classification (Ga-Adangme, Gbe)

It is therefore reasonable to assume that proto-Guang had a system at least as complex as the most complex present day Guang language ... (Snider 1988: 138)

- NF~AGR distinction between *kI and *kU, because it can be identified through distinct remnant reflexes in such Guang languages as Nkonya, Cherepon, Gua, and Foodo

> Proto-Guang with at least 12 NF classes (\emptyset class, 10 prefix classes, plural suffix *-ana (?combines with more than one prefix, without known Niger-Congo counterpart)) and 11 AGR classes

+ most NF and AGR classes inherited from Niger-Congo are not dedicated to singular or plural in being (also) transnumeral

> suggests that SG/PL specification of a class has developed later by entering a relation with another class for count nouns

+ deriflection system more complex than gender system, not only due to an inherently larger inventory of NF classes

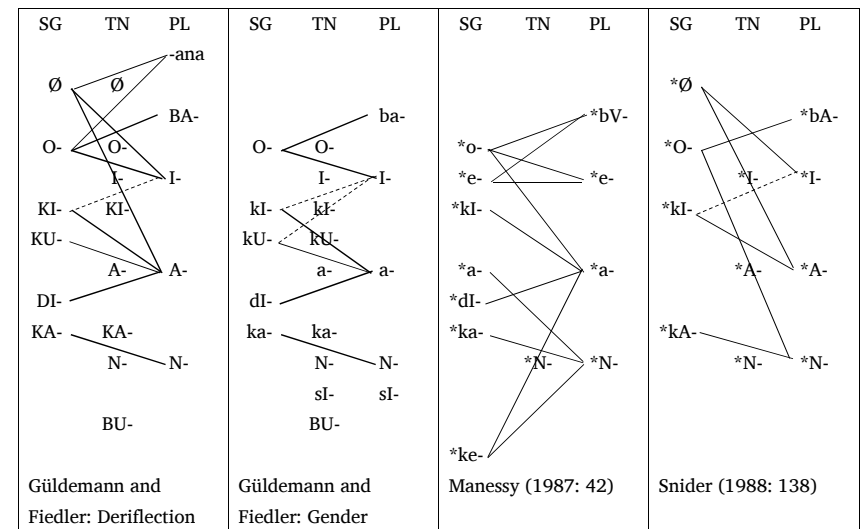


Figure 2: The reconstructions of the Proto-Guang noun classification system compared

+ our reconstruction differs crucially from those by Manessy (1987) and Snider (1988), not just because we dispose of more extensive data but in particular because we do not lump NF and AGR classes under "noun class" nor resulting deriflections and genders

3.2 The synchronic and diachronic typology of gender systems

+ numerous and complex changes concerning all components of the system: merger of AGR and/or NF classes, reassignment of nouns regarding AGR and/or NF, etc.

> cannot be discussed here - restriction to more general typological observations

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Appendix

Language	Code	No. of speakers	Monograph	Lexicon or word list	No. of articles	Personal communication	Word list	NF	AGR
Gonja	gonj1241	310.000	Painter 1970	Rytz 1970, Snider 1989	-	-	X	X	X
Dompo	domp1238	65	-	Blench 2015	-	-	X	(X)	-
Nkonya	nkon1248	20.400	Reineke 1972	Reineke 1972	1	-	X	X	X
Nkami	nkam1239	7.000	Asante 2016	-	4	R. Asante	-	X	X
Nterato	nter1234	†	-	-	-	-	-	-	-
Foodo	food1238	24.500	(Plunkett Ms.)	Plunkett ms.	4	I. Fiedler, G. Plunkett	X	X	X
Gichode	giky1238	10,400	-	Sands ms., Snider 1989	-	-	X	X	X
Ginyanga	giny1241	16.500	-	WLDS, Painter 1967	-	-	X	X	(X)
Nawuri	nawu1242	14.000	Sherwood 1982	Snider 1989	4	-	X	X	X
Chumburung	chum1261	69.000	Hansford 1990	Snider 1989	6	-	X	X	X
Tchumbuli	tchu1241	?	-	Bertho 1951	-	-	X	X	-
Kplang	kpla1238	1.600	-	Painter 1967	1	-	X	(X)	-
Krache	krac1238	58.000	-	Snider 1989	2	L. Abunya	X	X	X
Dwang	dwan1238	8.200	-	Painter 1967	-	J. Essegbey	X	X	(X)
Nchumbulu	nchu1238	1.800	-	-	-	-	-	-	-
Awutu	efut1241	129.000	Agyeman 2016, Obeng 2008	A. 2016, O. 2008	1	-	X	X	X
Cherepon	cher1271	132.000	-	Painter 1967	1	-	X	X	(X)
Gua	guaa1238	17.600	Obiri 2013	Asihene 1999	2	-	X	X	(X)
Larteh	lart1238	74.000	Ansah 2009	-	3	M. Ansah	-	X	X

Table A1: Guang languages and the present data survey

Language	*Ø	*BA-	*KA-	*KI-		*KU-	*BU-	*DI-	*O-		*A-	*I-		*N-	*-ana		
	SG, (TN)	PL	SG, (TN)	SG		SG, (TN)	TN	SG	SG, TN		TN, PL	TN, PL		TN, PL	PL		
Gonja	Ø	BV-	KA-	KV ^{+Hi} -			KV ^{+Hi} -	KV ^{+Hi} -	E-	A-	A-		N-	-ana			
Dompo	Ø	?	(K)A-	Ø			?	Ø	Ø		(A-)	Ø		N- Ø	?		
Nkonya	Ø	A-	(K)E-	I-	E-~O-		I-	I-	O-	A-	I-	N-	N-	I-	-ana		
Nkami	Ø	A-	A- E, O-	I-~ E-	Ø		E-~O-	E-	I-~ E-	O-	A-~E-		I-	N-	N-	I-	?
Foodo	Ø	A-	KA-	KV ^{+Hi} -	DV ^{+Hi} -	KV ^{+Hi} -	BU-	DV ^{+Hi} -	O- Ø	A- I-	I-	N-	(I-)	-ana			
Gichode	Ø	A-	GA-	GV ^{+Hi} -			GV ^{+Hi} -	GV ^{+Hi} -	O-	A- (I-)	I-	N-	-ana				
Ginyanga	Ø	A-	GA-	GV ^{+Hi} -			GV ^{+Hi} -	GV ^{+Hi} -	O-	A-	I-	N-	-ana				
Nawuri	Ø	A-	GA-	GV ^{+Hi} -			GV ^{+Hi} -	GV ^{+Hi} -	O-	A-	I-	N-	?				
Chumburung	Ø	A-	KA-	KV ^{+Hi} -			KV ^{+Hi} -	KV ^{+Hi} -	O- Ø	A-	I-	N-	-ana				
Tchumbuli	Ø	A-	KA-	KV ^{+Hi} -			?	KV ^{+Hi} -	O- Ø	A-	I-	N-	?				
Krache	Ø	A-	KA-	KV ^{+Hi} -			?	KV ^{+Hi} -	O- Ø	A-	I- A-	N-	-				
Dwang	Ø	A-	KA-	KV-			?	KV-	O-	A-	(I-) A-	N- A-	?				
Awutu	Ø	A-~E-	A-~E-	I-~Ø			E-	E- Ø	O-	A-~E-	I- Ø	N-	?				
Cherepon	Ø	E-	A-	Ø		O-	E-	Ø	A-	A-~E-	E- O-, Ø	N-	-ene				
Gua	Ø O-	E-	A-	Ø		O-	O-	O-, Ø	O- A-	A-~E-	(I-) O-, Ø	N-	?				
Larteh	Ø O-	E-	A-~E-	Ø		O- Ø	Ø	O-, Ø	O- Ø	A-~E-	I- E-, Ø	N-	-ene				

Table A2: Nominal form classes of Proto-Guang and synchronic reflexes in modern languages (largely based on 80-word-list)

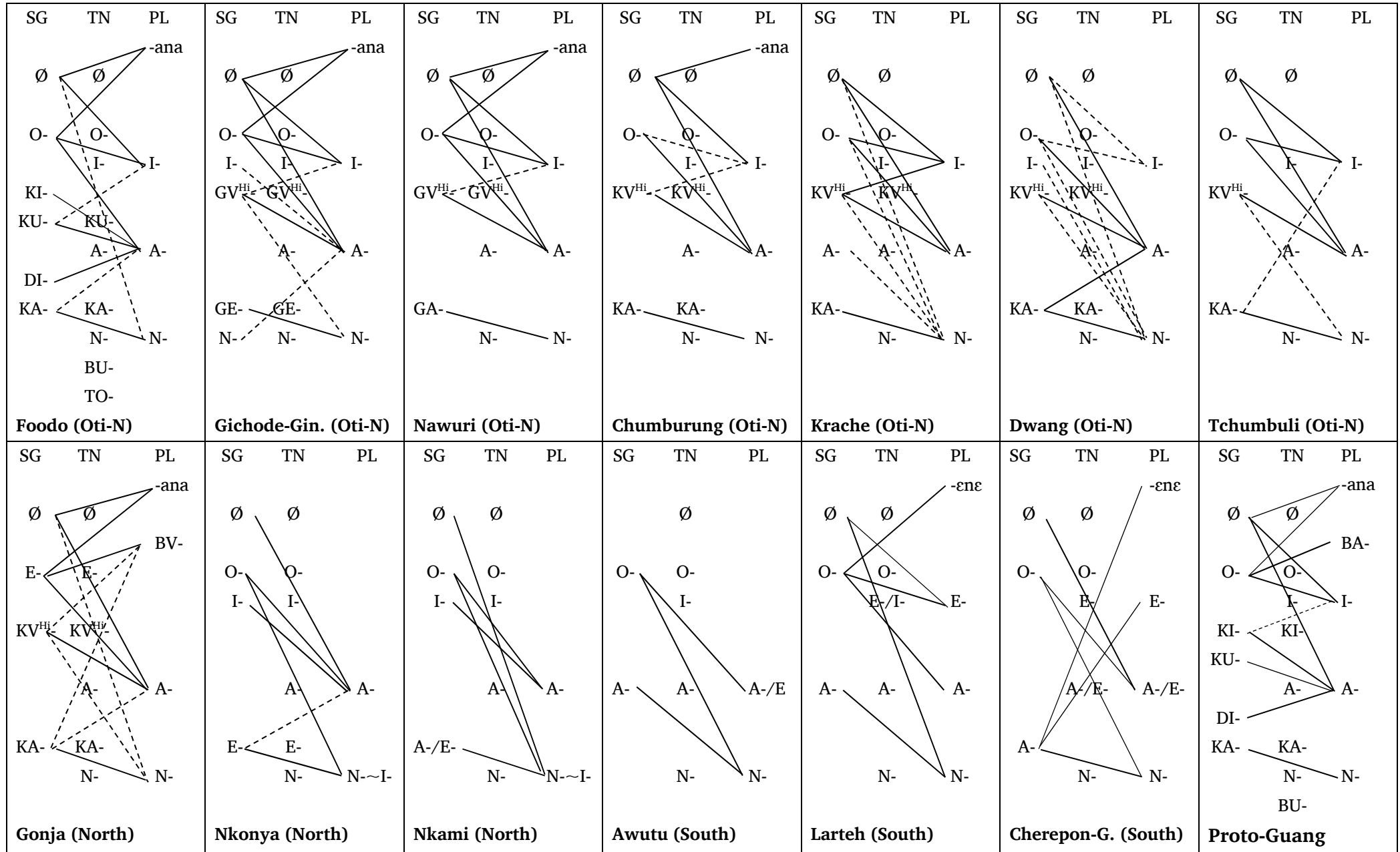


Figure A1: Deriflection systems across Guang

Language	ADJ	NUM	DEM	DEF	IDEF	REL	SBJ	OBJ	POSS	EMPH	SS-DS
Gonja	-	x	NU	NU	-	-	x	x	x	x	-
Nkonya	-	x	-	-	x	-	x	x	x	?	-
Nkami	-	NU	NU	-	HU	-	x	x	x	?	-
Foodo	NF	NF	x	x	x	x	x	x	x	x	x
Gichode	-	x	NU	-	x	x	x	x	?	?	-
Ginyanga	-	?	?	?	?	?	x	x	?	?	?
Nawuri	-	-	x	-	x	-	x	x	x	?	-
Chumburung	NU	x	NU	-	NU	-	x	x	?	?	-
Krache	NU	x	-	-	?	?	x	x	?	?	?
Dwang	-	?	x	?	?	?	x	?	?	?	?
Awutu	NU	?	NU	NU	-	-	x	x	-	-	-
Gua	?	?	?	?	?	?	?	?	?	?	?
Larteh	NU	NU	NU	-	NU	-	x	x	?	-	?

Notes: ? = insufficient information; - = no agreement; x = gender-number agreement; HU = gender agreement based on different system;

NF = agreement based on nominal form marking; NU = only number but no gender agreement

Table A3: Agreement targets across Guang

Language	*ba-	*ka-	*kI-	*kU-	*bU-	*dI-	*sI-	*O-	*a-	*I-	*N-
	PL	SG, (TN)	SG	SG, (TN)	TN	SG	PL	SG, (TN)	TN, PL	TN, PL	TN, PL
Gonja	bV-	-	kI-		-	-	-	E-	a-	-	-
Nkonya	bV-~a-	-	I-		-	-	-	O-	-	-	-
Nkami	bE-	-	E-		-	-	-	O-	-	-	-
Foodo	ba-	ka-	dU-	kU-	bU-	dU-	sU-	O-	a-	yU-	-
Gichode	a-~ mε-	gE-	gI-		-	-	-	O-	a-	I-	N-
Ginyanga	a-~ ma-	?	?		-	-	-	O-	ya-	?	?
Nawuri	ba-	ga-	gI-		-	-	-	O-	a-	I-	N-
Chumburung	bU-	ka-	kI-		-	-	-	O-	a-	I-	N-
Krache	bE-	-	I-		-	-	-	O-	-	yOO	-
Dwang	a-	-	kI-		-	-	-	O-	a-	I-	-
Awutu	amU-	a-	I-		-	-	-	(ɔ)mU-	-	-	-
Cherepon	ɔmɔ-	-	E-		-	-	-	a-	-	-	-
Gua	emU-	?	?		-	-	-	a-	-	-	-
Larteh	amU-	E-	I-		-	-	-	a-	-	-	-

- a- Nkonya = general plural in AGR targets other than pronouns (similar for Gichode/Ginyanga animate plural)
- a- Gichode = plural for animate and inanimate nouns with prefix A- in AGR targets other than pronouns
- ya Ginyanga = object pronoun for inanimate plurals, no difference in singular
- yoo Krache = object pronoun for inanimate plurals (pl. subject = I-) (inanimate sing. object reference = ∅, sg. subject I-)
- a- Dwang = trend to general plural
- a- Awutu = impersonal
- a-/emu Gua = only animates known (Obiri)
- E- Larteh = impersonal

Table A4: Agreement classes of Proto-Guang and synchronic reflexes in modern languages (largely based on 80-word-list)

Language	NF classes	Paired-class deriflections	Single-class deriflections	NF forms	AGR targets	AGR classes	Paired-class genders	Single-class genders	Basis of classification
Gonja	8	7 + 5	6	V-/CV-/(V)-.-SF	5	4	2	-	animacy
Nkonya	6	5 + 1	6	V-	4	3	2	-	animacy
Nkami	6	5	5	V-	?	3	2	-	animacy
Foodo	12	9 + 3	9	V-/CV-/(C)V)-.-SF	11	10	5 + 2	8	hum.-formal
Gichode	8	8 + 4	7	V-/CV-/(V)-.-SF	6	7	4 + 1	6	hum.-formal
Ginyanga	8	?6	6	V-/CV-/(V)-.-SF	?	?	?	?	?
Nawuri	8	8 + 1	6	V-/CV-/(V)-.-SF	5	7	4 + 1	5	hum.-formal
Chumburung	8	6 + 2	7	V-/CV-/-SF	4	7	4 + 1	6	hum.-formal
Tchumbuli	7	6 + 2	4	V-/CV-	?	?	?	?	?
Krache	7	7 + 4	6	V-/CV-	3	4	2	-	animacy
Dwang	7	5 + 6	7	V-/CV-	2	4	3	-	animacy
Awutu	5	3	6	V-	3	4	2	1	animacy
Cherepong	7	6	5	V-/V)-.-SF	?	3	2	-	animacy
Gua	7	6	6	V-	?	?3	2	-	animacy
Larteh	6	6	5	V-/V)-.-SF	2	4	2	1	animacy

Notes: - = absent; ? = insufficient information; n + n = productive + inquotate

Table A5: Overview of major features of deriflection and gender systems in Guang