

## Toward reconstructing noun classification in Longuda

Julius-Maximilian Elstermann<sup>a</sup>, Ines Fiedler<sup>a</sup>, Tom Güldemann<sup>a,b</sup>

<sup>a</sup> Humboldt University Berlin; <sup>b</sup> Max Planck Institute for the Science of Human History Jena

### 1 Introduction

#### 1.1 The Longuda language

- + spoken in Northeast Nigeria, constitutes one of 14 primary units of the Adamawa pool of Niger-Congo (Güldemann 2018), all other more detailed classifications premature
- consists of 5 or 6 dialects > language complex > Table 1

Jungrathmayr (1968/69)	Kleinwillinghöfer (1996: 86)	Hammarström et al. (2019)
Nyuwar	Gwaanda	Nya Gwanda
Jessu	Deele	Nya Dele
Wala	Wala	Nya Guyuwa
Guyuk	Guyuk	Nya Guyuwa
Banjiram	Cerii	Nya Ceriya
?	Koola	Nya Tariya

**Table 1: Longuda dialects**

- + basic typological characteristics relevant for discussion:
  - ATR vowel harmony, albeit reduced to different degrees (Kleinwillinghöfer 1996)
  - largely head-initial syntax in clause and noun phrase
  - noun classification system with both class agreement (as the basis of gender in terms of Corbett 1991) and adnominal class marking by means of suffixes
- > restricted description so far:
  - Jungrathmayr (1968/69): nominal suffixes and three contexts of agreement for Gwanda
  - Kleinwillinghöfer (1996): nominal forms and some agreement in a cross-dialectal survey
- + goal of our current work: synchronic and diachronic assessment of noun classification system in terms of both agreement~gender and nominal form system
- > reconstruction of nominal forms based initially on 80-word-list for nearly all varieties
- + present data base:
  - a) U. Kleinwillinghöfer: word lists on most dialects with diverse coverage, examples with agreement information only on Guyuk > core of our presentation (our annotation)
  - b) diverse data from publications: Meek (1931), Jungrathmayr (1968/69), Newman (1976), Newman and Newman (1977a, b) > examples cited accordingly

### 1.2 Methodology

- + theoretical and analytical framework based on Corbett (1991, 2006) and amended by 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-cʰ-ñ</i>	<i>bú-nì</i>	'this water'		
<i>ñ-cʰ-ñ</i>	<i>sú-nì</i>	'these waters/rivers'	Foodo	(Fiedler f.n.)

(1)a. "canonical" Niger-Congo class marking

(1)b. two different NF classes trigger the same AGR class

(1)c. the same NF class triggers two different AGR classes

> situations in (1)b. and (1)c. are recurrent across Niger-Congo, contrary to the traditional "noun class" approach

> necessary strict separation of agreement~gender on the one hand and nominal form on the other, even though Longuda turns out to be seemingly simple in this respect

## 2 Gender and nominal morphology in Guyuk

### 2.1 Agreement and gender

#### 2.1.1 Agreement classes overview

- + agreement classes represented in Table 2 by exponents of typical agreement contexts
- classes involve a thematic consonant or vowel that fuses with different grammatical elements
- incomplete due to lack of data on other known agreement targets, e.g. possessives in (5)

AGR	Exponent	Number	NUM	OBJ.REL	SBJ.REL	ADJ	SBJ	OBJ
1	I	SG	<i>nai-</i>	<i>in</i>	<i>inya</i>	<i>-ya</i>	<i>a</i>	<i>-i</i>
2	B	PL	<i>nab-</i>	<i>ab</i>	<i>aba</i>	<i>-ba</i>	<i>ba</i>	<i>-ba</i>
3	U	TN, SG	<i>nau-</i>	<i>un</i>	<i>unwa</i>	<i>-wa</i>	<i>a</i>	<i>-i</i>
4	H	TN, PL	<i>naha-</i>	<i>anhe</i>	<i>anha</i>	<i>-ha</i>	<i>ba</i>	<i>-ba</i>
5	L	TN, SG	<i>nal-</i>	<i>al</i>	<i>ala</i>	<i>-la</i>	<i>a</i>	?
6	A	TN, PL	<i>na(a)-</i>	<i>an</i>	<i>an</i>	<i>-[ʔ]a</i>	<i>a</i>	?
7	K	TN, SG	<i>naki-</i>	<i>anki</i>	<i>anka</i>	<i>-ka</i>	<i>a</i>	?
8	T	TN, PL	<i>na(a)-</i>	<i>anti</i>	<i>anta</i>	<i>-ta</i>	<i>a</i>	?
9	M	TN, PL	<i>na(a)-</i>	<i>am</i>	<i>ama</i>	<i>-ma</i>	<i>a</i>	?

Table 2: Agreement classes in Guyuk

#### (2) Numeral phrase

- a. *zi-ki*      *na-ki-kal*      'one snake'  
 snake-KI.7    NUM-7-one
- b. *nyu-li*      *na-l-kal*      'one eye'  
 eye-LI.5      NUM-5-one
- c. *nyi-b*      *na-b-sir*      'two persons'  
 person-B.2    NUM-2-two

#### (3) Subject relative clause

- a. *na*   *dwi*      *cau-thi*      *an-tha*      *kamna*  
 1SG   see      leg-TI.8    REL-8      be.broken  
 'I see the legs which are broken.'
- b. *na*   *dwam*      *thi-ki*      *an-ka*      *mwar*      *mwar-ka*  
 1SG   see      tree-KI.7    REL-7      become.big   big-7  
 'I have seen the tree which has grown big.'

#### (4) Object relative clause

- a. *cau-the*   *a-thi*   *na*   *dwa* ...  
 leg-TI.8    REL-8   1SG   see  
 'The legs that I have seen, ...'
- b. *thi-ki*      *an-ke*   *na*   *dwa* ...  
 tree-KI.7    REL-7   1SG   see  
 'The tree that I have seen, ...'

#### (5) Possessive phrase

- a. *zin-de*      *nyi-li*      'my name'  
 name-LI.5    1SG-5
- b. *chiba-u*      *nyu-we*      'my slave'  
 slave-U.3    1SG-3
- c. *so*            *nyu-we*      'my house'  
 house.3      1SG-3  
 (Meek 1931(2): 363-4)

### 2.2.2 Gender system

- + preliminary gender system of Guyuk based on available word list > Figure 1

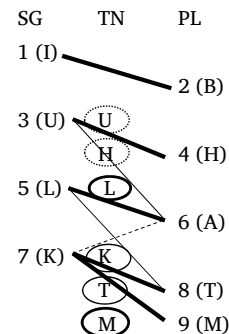


Figure 1: Gender system of Guyuk

- 9 AGR classes that are not all dedicated to single values of number (all but AGR1, 2, ?6 used for transnumeral nouns!) and gender (AGR7 in at least two genders)
- 5 class-pair genders for count nouns in **convergent** system (= number conflation toward one value: singular AGR7 with at least two plural counterparts)
- > more plural than singular forms contradict Greenberg's (1963) universal 37 (cf. Plank and Schellinger 1997)
- preliminary findings on gender semantics: 1/2 human; 3/4 (kinship), animal, staple food; 5/6 animal, non-typical human, body part, fruit; 7/8 tree; 8 abstract; 9 liquid, mass

## 2.2 Nominal morphology

- + in line with typical Niger-Congo systems, agreement-based gender system is closely matched in the nominal morphology, which is exclusively **suffixing**
- > one-to-one relation between agreement (AGR) and nominal form (NF) classes according to Kleinewillinghöfer (p.c.) with alliteration regarding thematic element > Table 3
- pending question of ∅-marked nouns like proper names, loans etc.

T-form	A-form	Example			AGR
-I	-YA	<i>mwa-i</i>	<i>mwa-ya</i>	'woman'	1
-B(E)	-BA (-ba, -be)	<i>mwau-be</i>	<i>mwau-ba</i>	'women'	2
-U	-WA (-wa, -a, -we)	<i>lara-u</i>	<i>lara-wa</i>	'elephant'	3
-HE	-HA (-ha, -he)	<i>lara-he</i>	<i>lara-ha</i>	'elephants'	4
-L(I)	-LA (-la, -da, (-ra), -le)	<i>kwanyi-l(i)</i>	<i>kwanyil-le</i>	'bush'	5
-A	-(?)A (- <sup>2</sup> a, -a, -wa, -ya)	<i>ma-a</i>	<i>ma-<sup>2</sup>a</i>	'fields, farms'	6
-KI	-KA (-ka, -ke)	<i>zi-ki</i>	<i>zi-ka</i>	'snake'	7
-TI	-TA	<i>zi-thi</i>	<i>zi-tha</i>	'snakes'	8
-M	-MA	<i>thwaki-m</i>	<i>thwaki-ma</i>	'earth'	9

**Table 3: Nominal form classes with two different exponents in Guyuk**

- + major observation: more than one NF exponent - T-form vs. A-form vs. ∅ form:
- ∅-form present in the data but rare > see below
- for T(hematic element)-form vs. A-form see (6) and (7) where:
  - (a) with A-form as citation form
  - (b) with A-form as definite subject
  - (c) with T-form in construction with an attributive adjective

- (6)a. *lara-wa* 'elephant'
- b. *lara-wa-u ha mwar-wa* 'the elephant is big'  
elephant-WA.3-DEF COP big-3
- c. *lara-u mwar-wa* 'the big elephant'  
elephant-U.3 big-3
- (7)a. *swi-la* 'heart'
- b. *swi-la-u ha mwar-la* 'the heart is big'  
heart-LA.5-DEF COP big-5
- c. *swi-l mwar-la* 'the big heart'  
heart-L.5 big-5

- + traditionally, (NF) classes of Longuda are presented by the A-form while the T-form is described as a reduced form:

An attributive adjective follows the noun which it is supposed to qualify. The concord marking element is suffixed to the adjective; the class element appears in its full shape. On the other hand, the preceding noun **loses** its class marker either **completely** or at least **the vocalic part** of it; ... (Jungraithmayr 1968/69: 176; see also Newman and Newman 1976b)

- very unlikely scenario as the T-form preserves class distinctions by means of CV vs. V and in particular between different thematic vowels that are very likely to be inherited from an earlier Niger-Congo stage while the A-form neutralizes them
- > A-form is derived from the T-form by adding a final element *-a*

- + complex distribution of the two NF types:

a) derived A-form with final *-a* on nouns:

- in isolation as citation form > (6)a./ (7)a.

- extended by determiners like the definite marker and demonstrative > (6)b./ (7)b.

- as predicate nominal > (8)

- in associative construction > (9)

b) short T-form in the **majority** of grammatical contexts, notably on nouns:

- extended by numeral (2), relative clause (3)/(4), possessive (5), adjective (6)c./ (7)c.

- as complement of adposition > (10)

- in negative non-verbal predication > (11)

- before several clausal markers (Newman and Newman 1977b: 60) > (12)

c) ∅-form on nouns:

- as compound head > (13)

- others?

(8) Predicative nominal

*ni na Baturo-wa*  
1SG COP European-WA.3  
'I am a European.' (Meek 1931(2): 364)

(9) Associative construction

a. *cau-ka lara-wa*  
leg-KA.7 elephant-WA.3  
'the leg of the elephant'

b. *nyu-la zi-ka*  
eye-LA.5 snake-KA.7  
'the eye of the snake'

## (10) Locative construction

- a. *a thu-m ye-u*  
PREP blood-M.9 in-DEF  
'in the blood'
- b. *a ku-ki ra*  
PREP fire-KI.7 on  
'on the fire'

## (11) Negative equation/identification (Newman 1976: 58)

- a. *na ma-m ga*  
NEG water-M.9 NEG  
'it isn't water.'
- b. *na mwa-ĩ ga*  
NEG woman-I.1 NEG  
'she's not a girl.'

(12) *na ningga-bə kwand-i di, ...*

1SG give-3PL chief-I.1 if  
'if I give them to the chief, ...' (Newman 1976: 43)

## (13) Compound

*zwa jujwa-la*  
child.1 dog-LA.5  
'the small dog' (diminutive also marked by final *-la* (class 5) instead of lexical *-wa* (3))

+ variation between T- and A-form also concerns agreement targets!!! > Table 2:  
predominant T-form vs. A-form on adjective, subject relative, and possessive pronoun

### 3 Summary

+ central findings:

- a) A-form represents a secondary set of class markers  
- A-form may (have) be(en) a marker with NP scope that became lexicalized in citation and, yet later, in some grammatical contexts
- b) T-form reflects original class markers with a CV or V shape  
- preserves thematic elements that are more typical for Niger-Congo classes
- c) ∅-form may represent a yet earlier stage rather than some form of affix deletion

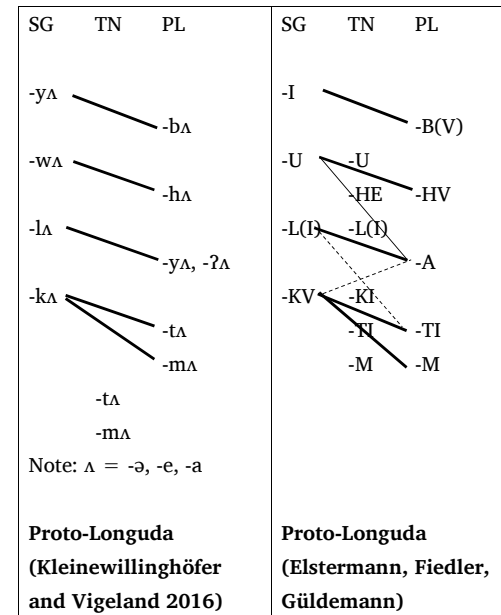


Figure 2: Partly revised Proto-Longuda system of noun classification

+ assumption of original T-form informs the reconstruction of lexical items, e.g., nouns of class 5~LI with stem changes in the plural of class 6~A (especially Guyuk and Ceri)

	'heart'		'breast'		'ear'	
	SG	PL	SG	PL	SG	PL
Proto-Longuda	*SU-LI-A	*SU-A-A	*NYU-LI-A	*NYU-A-A	*TU-LI-A	*TU-A-A
Wala	su-l-a	?	yu-l-a	yw-a-a	thú-w-á	thw-á-á
Gwaanda	tsù-l-à	tsw-a-a	nyi-l-a	nyw-a	?	?
Ceri	tsú-l-á	?	nyó-l-a ~ nywi-l-a	nyí-yá	thó-l-á ~ thwi-l-a	thwí-yá
Guyuk	swi-l-a	sw-a-'a	yu-l-a ~ ywi-l-a	yú-á	thə-w-a	th-a-a
Koola	cə-l-á	c-a-'a	nyó-l-á	nyó-ʔá	tó-l-á	tw-á-ʔá
Deele	zil-kh-à	zil-th-à	nyó-l-à	nyó-ʔà	tó-l-a	tw-á-ʔà

Table 4: Stem alternations in nouns containing NF-LI and NF-A

- vowel alternation can be explained by assuming either regressive stem assimilation or metathesis within class suffix:

SG	*TU-LI-(A) > *twi-li-(a) > twi-l-(a)
	*TU-LI-(A) > *tu-il-(a) > twi-l-(a)
PL	*TU-A-(A) > *tu-a-(a) > tw-a- <sup>2</sup> a

> singular stem may have expanded into plural:

\*twi-l-(a) (SG) > \*twi-a-(a) (PL) > \*twi-y-(a) (PL)

+ assumption of original T-form informs the reconstruction of class inventory, e.g., nouns of singular *k*-class that could represent a neutralization of \*ka vs. \*ku vs. ?\*ki, explaining the multiple plural marking in *t*-, *a*-, and *m*-class forming 2-3 genders (and the exception to Greenberg's universal 37)

a) modern ka/ta from \*ka/\*ti: tree class in Longuda and Benue-Congo (de Wolf 1971: 53ff)

b) modern ka/a from \*ku/\*a: lexical "exception" of 'arm/hand' in Koola, Wala and Guyuk may be a Niger-Congo - cf. Benue-Congo (de Wolf 1971: 53ff):

(14) 'arm/ hand'

Wala	ná-ká	na- <sup>2</sup> a	
Guyuk	na-ka	na-a	
Gwaanda	ná-ká	na-‘a	
Koola	ná-ká	ná- <sup>2</sup> á	ná-t <sup>h</sup> á
Deele	ná-k <sup>h</sup> à		ná-t <sup>h</sup> à
Cerii	ná-khá		ná-thá

## Abbreviations

ADJ adjective, AGR agreement (class), ASS associative linker, ATR advanced tongue root, C consonant, COP copula, DEF definite, DEM demonstrative, DET determiner, EMPH emphatic, NEG negation, NF nominal form (class), NUM numeral, OBJ object, PL plural, PREP preposition, PRO pronoun, PST past, REL relative marker, SBJ subject, SG singular, TN transnumeral, V vowel; Arabic number = agreement class; if followed by SG/PL = person

## References<sup>1</sup>

- Corbett, Greville G. 1991. *Gender*. Cambridge: Cambridge University Press.  
 Corbett, Greville G. 2006. *Agreement*. Cambridge: Cambridge University Press.

Wolf, Paul P. de. 1971. The noun class system of Proto-Benue-Congo. *Janua Linguarum, Series Practica* 167. The Hague/ Paris: Mouton.

Greenberg, Joseph H. 1963. Some universals of grammar with particular reference to the order of meaningful elements. In Greenberg, Joseph H. (ed.), *Universals of language*. Cambridge, Mass.: MIT Press, 73-113.

Güldemann, Tom. 2000. Noun categorization systems in Non-Khoe lineages of Khoisan. *Afrikanistische Arbeitspapiere* 63: 5-33.

Güldemann, Tom. 2018. Historical linguistics and genealogical language classification. In Tom Güldemann (ed.), *The languages and linguistics of Africa*, 58-444. Berlin: Mouton de Gruyter.

Güldemann, Tom and Ines Fiedler. 2019. Niger-Congo "noun classes" conflate gender with declension. In Francesca di Garbo and Bernhard Wälchi (eds.), *Grammatical gender and linguistic complexity*, 85-135. Berlin: Language Science Press.

Hammarström, Harald and Forkel, Robert and Martin Haspelmath. 2019. *Glottolog 4.0*. Jena: Max Planck Institute for the Science of Human History. (Available online at <http://glottolog.org>, Accessed on 2019-09-02.)

Jungrauthmayr, Herrmann. 1968/1969. Class languages of Tangale-Waja district (Bauchi Province, Northern Nigeria). *Afrika und Übersee* 52.161-206.

Kleinewillinghöfer, Ulrich. 1996. Die nordwestlichen Adamawa-Sprachen: eine Übersicht. *Frankfurter Afrikanistische Blätter: Afrikanische Sprachen zwischen gestern und morgen. Beiträge zur Dokumentation, Klassifikation und Rekonstruktion*, ed. by U. Seibert, 80-103. Köln: Köppe.

Kleinewillinghöfer, Ulrich. no date. Field notes.

Kleinewillinghöfer, Ulrich and Friederike Vigeland. 2016. Nungurama (Longuda) and Waja, languages in contact on the Longuda plateau, NE Nigeria. Paper presented at the 2nd Symposium on West African Languages, 27-29 October, 2016, Vienna.

Meek, Charles K. 1931. *Tribal Studies in Northern Nigeria*. 2 vol. London: Kegan Paul, Trench, Trübner.  
 Newman, Bonnie and John Newman. 1977a. Longuda dialect survey. Dallas: Summer Institute of Linguistics.

Newman, Bonnie and John Newman. 1977b. Longuda phonology. Dallas: Summer Institute of Linguistics.

Newman, Bonnie. 1976. Deep and surface structure of the Longuda clause. *Linguistics* 171.35-68.

Plank, Frans and Wolfgang Schellinger. 1997. The uneven distribution of genders over numbers: Greenberg Nos. 37 and 45. *Linguistic Typology* 1,1: 53-101.

Sand, Natalie. 2001. *Dictionary Gichode*. (unpublished manuscript). Nkwanta.

<sup>1</sup> Research on this topic was undertaken as part of the project 'Nominal classification in Africa between gender and declension' (PI T. Güldemann). We are very grateful to the DFG for funding this project. Special thanks go to Ulrich Kleinewillinghöfer who provided the primary data for this research. We thank him and Friederike Vigeland for their time discussing some aspects of Longuda with us.