

Multiple Exponente in Northern Toussian

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Two/three languages

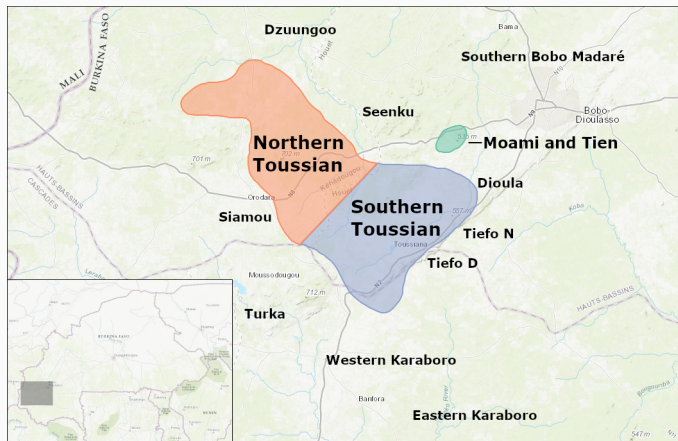
- Northern Toussian
- Southern Toussian
- Potentially another variety called Moami Kan

Genetic classification is uncertain

- Traditionally classified as a Gur language (Niger Congo)

Spoken in southwest Burkina Faso

~20,000 speakers of NT (last surveyed 1995)



A non-past morpheme composed of:

- A floating low tone
- Floating nasalization

This morpheme exhibits multiple exponence, where, in limited circumstances, the morpheme can surface several times in multiple places

The primary variety of Toussian I study is the Northern Toussian (NT) of Djigouera

- All data are from this variety

All NT glosses will be narrow transcriptions

Basic Tonology

3 tone system

- H, M, L, (á, ā, à)
- Monosyllabic lexical contours
HM, HL, LH (ã, â, ă)

Word order

S Aux O V

- Auxiliaries include tense, aspect, mood, and polarity (TAMP) markers, auxiliary verbs, etc.

(1) à wū ʼá kè pěy
3SG.HUM EVID PST 3SG.NONHUM do
'(it is known that) he/she did it'

M and L triggers downdrift (automatic downstep)

- The pitch range of the speaker is compressed after each instance of M and L, lowering the pitches of H and M tones
- Indicated with the symbol <ˊ>

(2) a. sú púpó wé
father sheep see

‘Father saw the sheep.’

b. pē ˊpī ˊlē ˊná
husband child speech hear

‘The husband heard the child’s speech.’

(3) a. Perfective

púpó bú wé
sheep cheetah see

‘The sheep saw the cheetah’

b. Non-past

púpó nè ‘bú wé
sheep NP cheetah see

‘The sheep will see the cheetah’

(4) a. Perfective

pī ʔbú wé
child cheetah see

‘The child saw the cheetah’

b. Non-past

pī nə ʔbú wé
child NP cheetah see

‘The child will see the cheetah’

(5) a. Perfective

lè ʔbú wé
uncle cheetah see

‘Uncle saw the cheetah’

b. Non-past

lè nə ʔbú wé
uncle NP cheetah see

‘Uncle will see the cheetah’

Realization—H subject, rapid speech

1. $H \rightarrow HL$
2. Nasalization of the final vowel of the subject, indicated under the vowel

(6) a. Perfective

púpó bú wé
sheep cheetah see

‘The sheep saw the cheetah’

b. Non-past

púp[̃] bú wé
sheep.NP cheetah see

‘The sheep will see the cheetah’

This suggests the morpheme is composed of floating L and floating [nasal]

Realization—M subject

1. No tonal change

- Subject expected to be ML if non-past tense morpheme has a floating L, but ML is not a permissible tone in NT

2. Nasalization of the final vowel of the subject

(7) a. Perfective

pī ʔbú wé
child cheetah see

‘The child saw the cheetah’

b. Non-past

pī̃ ʔbú wé
child.NP cheetah see

‘The child will see the cheetah’

Realization—L subject

1. No tonal change

- L already causes downdrift; the downstep on *bú* is not doubled, so the floating L is not perceptible

2. Nasalization of the final vowel of the subject

(8) a. Perfective

lè ʔbú wé
uncle cheetah see

‘Uncle saw the cheetah’

b. Non-past

lẹ̀ ʔbú wé
uncle.NP cheetah see

‘Uncle will see the cheetah’

Slow speech rate

It surfaces as the syllable nə

Normal speech rate

The final vowel of the subject is nasalized

If the tone of the final syllable of the subject is H:

- The tone of the final vowel is HL

Otherwise:

- The following word is downstepped
 - The downstep cannot be differentiated from downdrift
 - There is presumably an underlying L

Realization with auxiliaries—slow speech

Instead of a separate syllable *nà*, nasalization surfaces as a prenasalized stop, bearing the tone of the syllable which precedes it. Following elements are downstepped

- (9) a. púpó sá **ń**¹bú wé
sheep DUB NP.cheetah see
'(I doubt) the sheep will see the cheetah.'
- b. púpó p̄ **m̄**¹bú wé
sheep IS¹ NP.cheetah see
'When the cheetah will see the sheep...'

¹IS stands for 'immediate sequencing.' This morpheme indicates that the following clause occurs immediately after what happens in the current clause

Realization with auxiliaries—rapid speech

When other auxiliaries are present, the morpheme docks to them

- If the auxiliary is H, it will not receive a falling tone, but the following morpheme will be downstepped

- (10) a. púpó ś̥[↓] bú wé
sheep DUB NP.cheetah see
'(I doubt) the shee will see the cheetah.'
- b. púpó p̃[↓] bú wé
sheep IS NP.cheetah see
'When the cheetah will see the sheep...'

Auxiliary realization—multiple auxiliaries

With most auxiliaries, when several co-occur in the auxiliary domain, the non-past morpheme will be realized at the right edge of the auxiliary domain

The non-past morpheme surfaces identically when more than one auxiliary is present

- (11) à = á kə pɔ̃ m̃⁺pwó
3SG.HUM = PST NEG IS NP.come
‘When he/she did not come.’

The non-past morpheme appears to be located at the right edge of the auxiliary domain

Multiple auxiliaries—rapid speech

The non-past morpheme surfaces identically when more than one auxiliary is present

- (12) à = á kǎ p̄ ʔpwó
3SG.HUM = PST NEG IS.NP come
‘When he/she did not come.’

Multiple exponence is when a certain feature is marked morphologically several times in different locations

(13) Batsbi (Nakh-Daghestanian) (Harris, 2009)

y-ox-y-o-y-an^w k'ab
CM²-rip-CM-PRES-CM-EVID dress.ABS

‘Evidently she is ripping the dress’

²Class Marker: feminine gender (class II) singular; agrees with ‘dress’

In certain contexts, the non-past morpheme exhibits multiple exponence

- The non-past morpheme is always found at the right edge of the auxiliary domain
- Specific auxiliaries can copy the morpheme
- It can be copied leftward one or more times

Multiple exponence—slow speech

Surfaces as prenasalized stops, as before

The non-past morpheme is underlying before *bú*, ‘cheetah.’

pī/tó copies it, placing the copy to the left

- (14) a. With *tó* ‘again’

púpó *ń⁺tó* *ń⁺bú* wé
sheep again³.NP cheetah.NP see

‘The sheep will see the cheetah again’

- b. With *pī*, a future tense morpheme

púpó *ńpī* *ń⁺bú* wé
sheep FUT.NP cheetah.NP see

‘The bird will see the cheetah’

³Perhaps better glossed with an aspectual category; the distribution of this morpheme requires more research

Multiple exponence—slow speech

Here, there are three realizations of the non-past morpheme

(15) With *tó* and *pī*

púpó **ń'**tó **ń'**pī **m'**bú wé
sheep again.NP FUT.NP cheetah.NP see

‘The sheep will see the cheetah again’

Multiple exponence—rapid speech

Realized as nasalization and downstep, as before

- (16) a. With *tó* 'again'

púp_ó [↓]t_ó [↓]bú wé
sheep.NP again.NP cheetah.NP see
'The sheep will see the cheetah again'

- b. With *pī*, a future tense morpheme

púp_ó ([↓])p_ī [↓]bú wé
sheep.NP FUT.NP cheetah.NP see
'The bird will see the cheetah'

(17) With *tó* and *pī*

púp_ó [↓]t_ó ([↓])p_ī [↓]bú wé
sheep.NP again.NP FUT.NP cheetah.NP see

‘The sheep will see the cheetah again’

Multiple exponence—extra auxiliaries

Copying only occurs with *tó* and *pī*; other morphemes do not copy or transfer the morpheme

Here, *tó* copies the non-past morpheme to its left, but *sá* does not copy it

- (18) à = á s_é [†]t_ó kè pěy
3SG.HUM = PST DUB.NP again.NP 3SG.NONHUM do
'(I doubt that) he/she did it again.'

Multiple exponence—aside

The auxiliaries which copy the non-past morpheme share many phonological similarities with morphemes we had seen before

- copying *tó* vs non-copying *sá*
- copying *pī* vs non-copying *p̄*

Therefore, it does not appear that the multiple exponence is due to phonological processes such as harmony

Slow speech

- (19) a. Perfective without any auxiliary
púpó bú wé
‘The sheep saw the cheetah’
- b. Non-past without additional auxiliary
púpó nè ‘bú wé
‘The sheep will see the cheetah’
- c. Non-past with additional auxiliary
púpó ń̩tó ń̩bú wé
‘The sheep will see the cheetah again’

Comparison of prior examples

Rapid speech

- (20) a. Perfective without any auxiliary
púpó bú wé
‘The sheep saw the cheetah’
- b. Non-past without additional auxiliary
púpô⁺ bú wé
‘The sheep will see the cheetah’
- c. Non-past with additional auxiliary
púpô⁺ tó⁺ bú wé
‘The sheep will see the cheetah again’

Slow speech

púpó

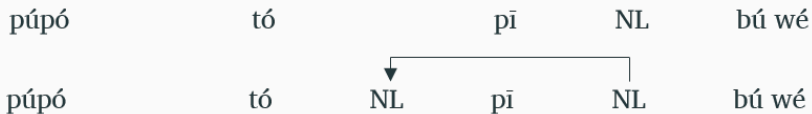
tó

pī

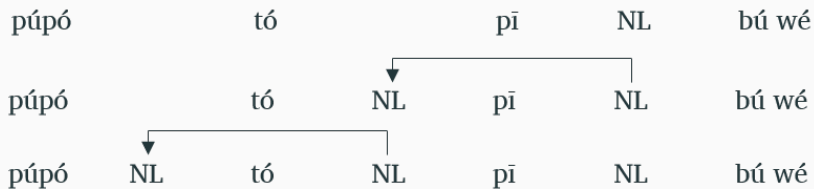
NL

bú wé

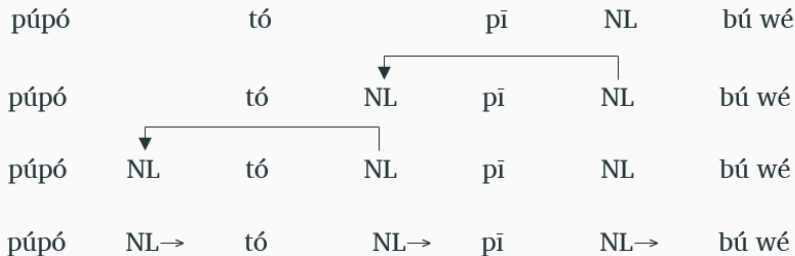
Copying mechanism—slow speech



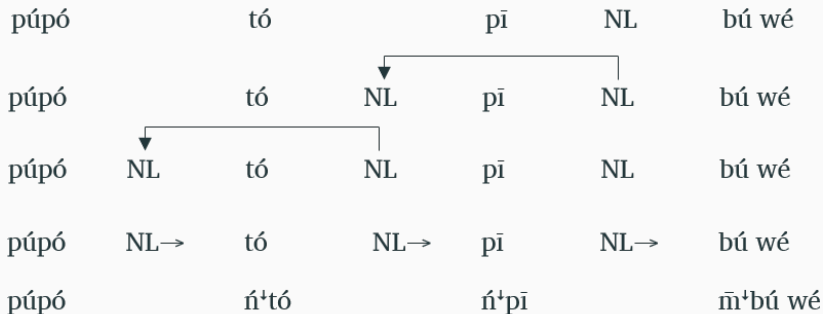
Copying mechanism—slow speech



Copying mechanism—slow speech

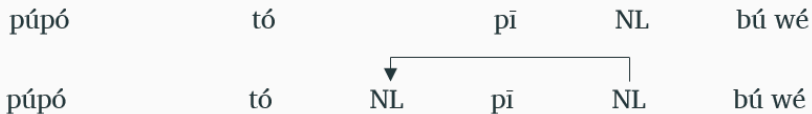


Copying mechanism—slow speech



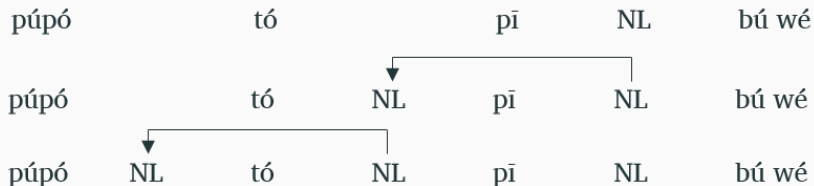
Copying mechanism—fast speech

tó and *pī* copy the morpheme and transfer it to the left



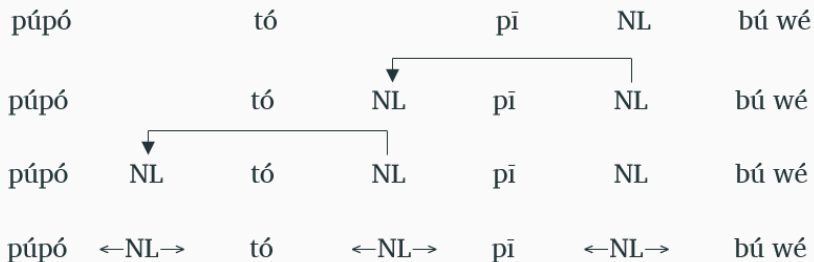
Copying mechanism—fast speech

tó and *pī* copy the morpheme and transfer it to the left



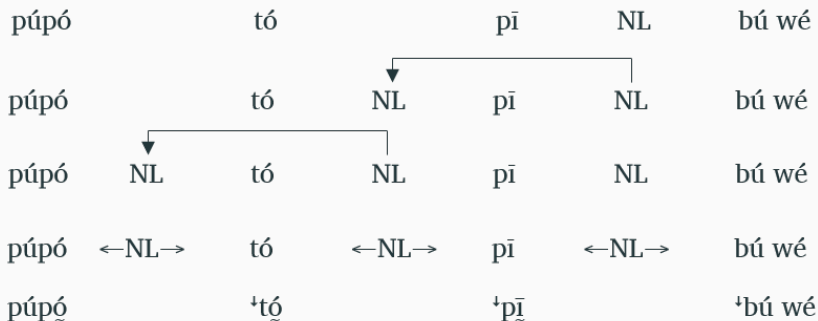
Copying mechanism—fast speech

tó and *pī* copy the morpheme and transfer it to the left



Copying mechanism—fast speech

tó and *pī* copy the morpheme and transfer it to the left



Northern Toussian exhibits an interesting form of multiple exponence

- The multiple exponence is derived from a processes where the morpheme is copied by other morphemes
- There is a small subset of auxiliaries that engage in the copying behavior
- The morphemes which copy the non-past morpheme appear to be lexically specified; it does not seem to be a phonological process

References

Harris, Alice C. 2009. Exuberant exponence in Batsbi. *Natural Language & Linguistic Theory* 27. 267–303.
doi:10.1007/s11049-009-9070-8.

Appendix—nasalization and slow speech rate

- (21) a. Phonemic transcription

kàŋ = sē

buffalo = with

‘With the buffalo’

- b. fast speech

kàŋsē~kàŋnē

- c. slow speech

kàŋ òsē

Slight differences

[kàŋ òsē] retains the /ŋ/. With the non-past morpheme, there is no nasalization on the left element

Location of the non-past morpheme

It appears to be at right edge of the auxiliary complex

- Auxiliaries in the same column cannot co-occur, e.g. you cannot have both *ká* and *kàpá* in the same clause

wū	EVID	á	PST	sá(nó)	COND (must occur with á)	rí	JUSS	sá	DUB	ká	NEG	pó	IS	(tó 'again')	'pá	IPFV	(tó 'again')	ŋ	NP
		à	COND	pá	COND (must occur with à)					kátó	'not again'				pí	FUT			
										kámé	'no longer'								
										kàpá	NEG.IMP								

Figure 1: Auxiliary order