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TONAL INVERSION IN GEJI AND PELU

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Geji and Pelu are two dialects of Geji proper, a language spoken in Bauchi State, Nigeria. It belongs to the Northern sub-group of the South-Bauchi West Chadic languages.

South Bauchi West Classification¹

Language clusters	Languages	Dialects
Sub-group North		
Geji	{ Geji	{ Bolu
		{ Pelu
Zaranda	{ Zaranda	{ Geji
		{ Zaranda
Dir	{ Dir	{ Zul
		{ Baram
Diir	{ Diir	{ Diir
		{ Buli
Polci	{ Polci	{ Langas (Luri†)
		{ Lundur
Polci	{ Polci	{ Polci
Sub-group South		
Zeem	{ Chaari	{ Zeem†, Dyarum (?)
		{ Tule†
Lushi	{ Lushi	{ Chaari
		{ Lushi†
Baraza	{ Baraza	{ B̄araza
		{ D̄ur
Dass	{ Dott	{ Zumbul
		{ Wangd̄ay
Zakshi	{ Zakshi	{ Zòd̄i
		{ Zàkshì
Boto	{ Boto	{ Boto
		{ Zari
Zari	{ Zari	{ Sigidi
		{ Zaar of Kal
Zaar	{ Zaar	{ Zaar of Marti
		{ Zaar of Bogoro

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¹ After Shimizu 1978.

Geji Dialects

Pelu and Geji are two very close dialects with very similar lexicon.

	Pelu	Geji
wasp	<i>kábàlkàn²</i>	<i>kábàlkàn</i>
ant sp.	<i>fyá: fyá:</i>	<i>fyá: fyá:</i>
dog	<i>kááí</i>	<i>kááí</i>
cat	<i>kúle</i>	<i>kúle</i>
horn	<i>nɔ:</i>	<i>nɔ:</i>
tree sp. (wild custard apple)	<i>mbwa:ki</i>	<i>mbwa:ki</i>
mahogany	<i>lànka</i>	<i>lànka</i>

Tone inversion (pre-pausal form)

However, tonal inversion is frequently observed in pre-pausal forms:

	Pelú		Gejí	
head	<i>gǎ:</i>	R	<i>gá:</i>	M
guinea-fowl	<i>dǔǒ:n</i>	R	<i>dǔo</i>	M
head	<i>gǎ:</i>	R	<i>gá:</i>	M
baboon	<i>hǔ:</i>	R	<i>hwo:mi</i>	MM
testicle	<i>ndi:sí</i>	MH	<i>ndí:sí</i>	HH
scorpion	<i>yendál</i>	MH	<i>yéndál</i>	HH
dove	<i>kulú</i>	MH	<i>kúlú</i>	HH
tongue	<i>láká</i>	MH	<i>láká</i>	HH
beans	<i>ba:lí</i>	MH	<i>bá:lí</i>	HH
millet sp.	<i>swa:ɲí</i>	MH	<i>swá:gí</i>	HH
bird	<i>ya:tí</i>	MH	<i>yá:tí</i>	HL
porcupine	<i>gusní</i>	MH	<i>gùsnì</i>	LL
dirt	<i>dàskán</i>	MH	<i>dàskàn</i>	MM
fish	<i>kwe:sí</i>	MH	<i>kwe:si</i>	MM
tree sp. (<i>Bombax costatum</i>)	<i>bi:kí</i>	MH	<i>bi:ki</i>	MM

Comments:

- 1) All corresponding Pelu patterns = rising
- 2) Geji : rising pattern possible for verbs:

Mə paki wi.
 PL.AOR finish ACC
 ‘we finished’

- 3) Geji = no rising pattern in nouns (except for a few Hausa loanwords, e.g. *dò:ríná*, ‘hippopotamus’; *àgwà:gá*, ‘duck’, etc.)

² Geji and Pelu are 3-tone language. High tone (H) is noted by an acute accent on the vowel, Low tone (L) with a grave accent, Mid tone (M) is left unmarked. Falling tone (F) is noted by a circumflex accent, and Rising tone (R) by a caron.

Floating tones in Geji

A first explanation is possible if a survey of lexical tones done with the copula *kən* ‘it is’ = Hausa stabilizer *ne:/fɛ*³:

		Geji	Pelu
bedbug	<i>búlí</i>	<i>kən</i>	<i>kən</i>
flea	<i>swa:si</i>	<i>kən</i>	<i>kən</i>
warthog	<i>dànzi</i>	<i>kən</i>	<i>kən</i>

Geji: the stabilizer has a Mid tone that copies the last tone of the noun it follows.

Pelu: the stabilizer has polar tone: M after H and H after –H (i.e. M and L).

In Geji⁴, with some nouns having L or M tone, *kən* appears with a H tone. This can be accounted for by positing a floating H tone linking with the particle:

(13) a. *dà:zi* (LL^H), ‘eleusine’: *dà:zi kən*, ‘it is eleusine’.



	Pelu		Geji	
eleusine	<i>dà:zi</i>	<i>LH</i>	<i>dà:zi (H)</i>	<i>LL (H)</i>
red sorrel	<i>d̥ʒid̥à</i>	<i>LH</i>	<i>d̥ʒid̥à (H)</i>	<i>LL (H)</i>
blood	<i>hùlàn</i>	<i>LH</i>	<i>hùlàn (H)</i>	<i>LL (H)</i>
speech	<i>gàbá</i>	<i>LH</i>	<i>gàbà (H)</i>	<i>LL (H)</i>
donkey	<i>zà:kí</i>	<i>LH</i>	<i>d̥ʒà:kì (H)</i>	<i>LL (H)</i>
bark	<i>gùl̥ʒ̥à</i>	<i>LH</i>	<i>gùb̥ʒ̥àn (H)</i>	<i>LL (H)</i>
wild yam	<i>gùl̥kí</i>	<i>LH</i>	<i>gùl̥kì (H)</i>	<i>LL (H)</i>
lungs	<i>hu:hú:</i>	<i>MH</i>	<i>hu:hu: (H)</i>	<i>MM (H)</i>
lizard	<i>bàlkàŋ</i>	<i>LH</i>	<i>balkàŋ (H)</i>	<i>MM (H)</i>
land monitor	<i>dàkál</i>	<i>LH</i>	<i>dàkəl (H)</i>	<i>MM (H)</i>
friend	<i>yelàn</i>	<i>MH</i>	<i>yelən (H)</i>	<i>MM (H)</i>
lie	<i>lali</i>	<i>MH</i>	<i>lali (H)</i>	<i>MM (H)</i>
mucus	<i>yeləl</i>	<i>MH</i>	<i>yeləl (H)</i>	<i>MM (H)</i>
hornbill	<i>burtú</i>	<i>MH</i>	<i>burtu (H)</i>	<i>MM (H)</i>
tree sp. (Grewia bicolor)	<i>hollí</i>	<i>MH</i>	<i>hollì (H)</i>	<i>MM (H)</i>
horse	<i>kapsí</i>	<i>MH</i>	<i>kapsi (H)</i>	<i>MM (H)</i>
thorn	<i>ji:lí</i>	<i>MH</i>	<i>i:li (H)</i>	<i>MM (H)</i>
citrus	<i>le:mó</i>	<i>MH</i>	<i>le:mo (H)</i>	<i>MM (H)</i>
tree sp. (Detarium S.)	<i>gàŋəl</i>	<i>MH</i>	<i>gəŋəl (H)</i>	<i>MM (H)</i>
pepper	<i>tatta:séj</i>	<i>MMH</i>	<i>tatta:fi (H)</i>	<i>MM (H)</i>
mosquito	<i>huləndí</i>	<i>MMH</i>	<i>huləndi (H)</i>	<i>MMM (H)</i>

The same floating H tone cannot link with syllables with an initial depressor consonant⁵, as can be seen with the quantifier *gwon*, pl. : *d̥ʒon*, ‘some’. The quantifier is realized with a M tone and the floating H tone links with the last syllable of the noun. This can be accounted for by saying that *gwon* has a Mid tone pattern, and D consonants act as a barrier (are “opaque”) to H tones.

³ This is a first intuitive presentation of the data. See below for another interpretation, taking into account the dialect variation.

⁴ Pelu has H and M “floating” tones that behave differently from Geji.

⁵ Cf. Caron 2009.

- (13) b. $dà:zì (LL^H) + gwon > dà:zì gwon$
-

Floating tones in Geji?

However, the tones of *gwon* in other contexts vary in a way that is difficult to explain if it has a Mid tone. Let us compare the behaviour of *gwon* with that of *kən*:

- (14) a. *kadì* ‘dog’ *kadì kən* *kadì gwòn*
 b. *kúlú* ‘dove’ *kúlú kən* *kúlú gwon*
 c. *bàlì* ‘monkey’ *bàlì kən* *bàlì gwon*
 d. *dànzi^H* ‘warthog’ *dànzi kən* *dànzi gwon*
 e. *wá:tân* rain season *wá:tân kən* *wá:tân gwòn*

Now, if *gwon* has a lexical Lo tone, and if we consider that it does not block the rightward spreading of H, the following rules⁶ for the surface realization of tone combinations apply:

	L	H	M
L	M	H	L
H	M	H	H
M	L	H	M

In Caron (2009) we hypothesized that the lexical form of *dànzi* (H) was *dànzi*, and the floating H tone was only a surface realization of the citation form, yielding the following general derivation:

- (15) a. *kadì* + *kən* > *kadì kən* (M+M > M)
 b. *kadì* + *gwòn* > *kadì gwòn* (M+L > L)

- (16) a. *kúlú* + *kən* > *kúlú kən* (H+M > H)
 b. *kúlú* + *gwòn* > *kúlú gwon* (H+L > M)

- (17) a. *bàlì* + *kən* > *bàlì kən* (L+M > L)
 b. *bàlì* + *gwòn* > *bàlì gwon* (L+L > M)

(18)	a.	<i>dànzi</i>	+	<i>kən</i>	>	<i>dànzi kən</i>	(H+M > H)
	b.	<i>dànzi</i>	+	<i>gwòn</i>	>	<i>dànzi gwon</i>	(H+L > M)

- (19) a. *wá:tân* + *kən* > *wá:tân kən* (M+M > M)⁷
 b. *wá:tân* + *gwòn* > *wá:tân gwòn* (M+L > L)

However, (18a) yields an exception : *dànzi kən* instead of **dànzi kən* as predicted by the rules. This exception can be accounted for if we state that *kən* is a clitic with no lexical tone, and the OCP applies on the domain N=clitic, *dànzi=kən*.

⁶ *idem*.

⁷ The non-H part of contour tones is M: F < H-M ; R < M-H.

Conclusion

- It is much desirable, as a rule, to find a systematic way of accounting for tonal inversion in the dialect, by presenting a unified description of the lexicon;
- this presents a further limitation of the role of Depressor Consonants in Geji: this role is limited to the diachronic explanation of the birth of a 3-tone system (Caron 2009);
- once again, we can but notice the need for distinctive features among close neighbours as a source for the development of dialects.

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