

Allomorphy in Kalam Kohistani

(Dardic language, spoken in Kalam in the North-West Frontier Province of Pakistan; Baart (1999a,b, 2004))

- L- and H-tone; HL and LH only on CV:(C) or CVC → TBU=μ and codas are moraic
- two forms for nouns: a 'base' form in the singular of the direct case and an 'inflected' form in the plural of the direct case and all oblique cases

(1) C-final nouns (Baart, 1999a:36 and Baart, 1999b:96+96)

	BASE	INFLECTED		
a.	bó:r	bô:r	'lion'	H → HL
	ʃá:k	ʃæ:k	'piece of wood'	
	új	īj	'lie' (fem)	
	ʃáero:r	ʃáerê:r	'sparrow'	H.H → H.HL
b.	bòbáj	bòbáj	'apple'	L.H → L.L
	dàtær	dàtær	'cooking frame'	
	dàrin	dàrin	'ground'	
c.	múra:l	múra:l	'ram'	H.L → H.L
d.	băg	băg	'place'	LH → LH
	khân	khæn	'mountain'	

→ **Additional L on the final syllable**

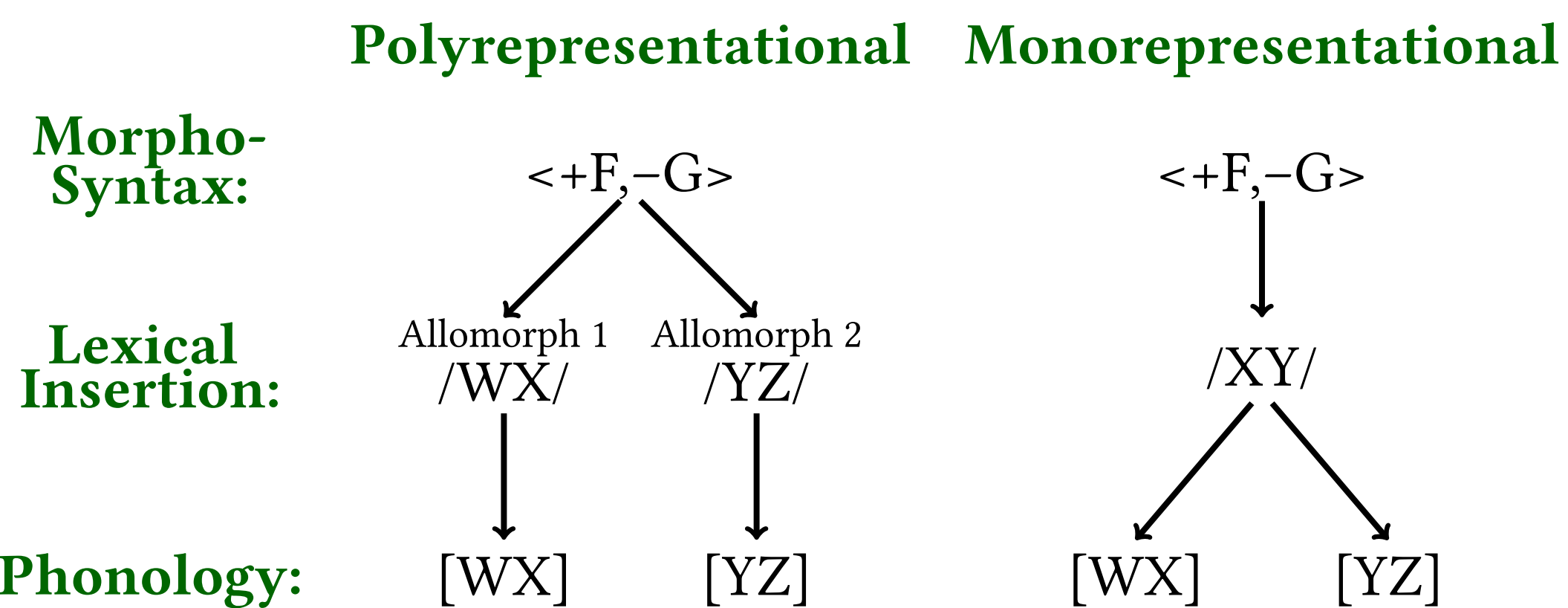
(2) V-final nouns (Baart, 1999a,b)

	BASE	INFLECTED		
a.	gò	gò: ^(L)	'ox'	L → H(L)
b.	dà:rá	dà:rá: ^(L)	'guest room'	L.H → H.H(L)
	xà:pà:ri:	xà:pà:ri: ^(L)	'fairy'	L.L.H → H.H.H(L)
c.	bá:ʃà	bá:ʃà: ^(L)	'king'	H.L → H.H(L)
	pátí:là	pátí:là: ^(L)	'pot'	H.H.L → H.H.H(L)

→ **Inflected form is H-toned and has L that is realized on following word**

→ **phonologically predictable allomorphy**

The theoretical challenge



A monorepresentational analysis for Kalam Kohistani?

- Why should the **nature of the base-final segment (C or V)** determine the choice between realizing an H- or L-tone?
- Why is the L-tone only realized at the **right edge** whereas the H-tone **overwrites** the base tone melody completely?

Main Claim

Inflection for V-final forms also involves **final V-lengthening**.

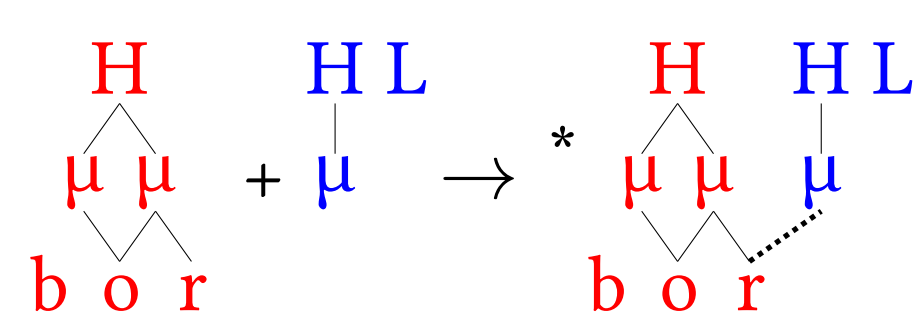
Such a **multi-modal nonconcatenative exponent** is predicted in an autosegmental account that assumes **(complex) floating autosegments** as representations for morphemes (Lieber, 1992; Wolf, 2007).

The exponent for noun inflection in Kalam Kohistani: $\begin{matrix} H & L \\ \mu & \end{matrix}$

A monorepresentational analysis

1. Complementary distribution of affix-μ and affix-L

- C-final bases: affix-μ not realized since there are no trimoraic syllables:



- V-final bases integrate affix-μ (and affix-H) but never affix-L as well:

- a new association between elements belonging to the same morpheme (b.) excluded by ALTERNATION (van Oostendorp, 2007, 2012)
- no crossing association lines (c.)

	ALT	NO CROSS	MAX μ _{Af}	MAX L _{Af}
(a)				*
b.	*!			
c.		*!		

2. A preference for associating the affix-μ

	MAX μ _{Af}	MAX H _{Af}	MAX L _{Af}
(a)			*
b.	*!	*!	

3. H-overwriting vs. minimal association of L

- spread of the affix-H avoids marked L-tones (= *L)
- preservation of L-tones in the absence of affix-tones: high-ranked DEPH and ALT

	MAX L _{Af}	*L	MAX H _{St}	MAX L _{St}
a.	*	*!*		
b.	*		*	*

*L - Predictions:
I: all affix H-tones overwrite → Indeed! E.g. /gânkáp/ 'fraud' → /gânkáp^L/ 'frauds'.
II: all floating affix-L's associate minimally → Indeed! 'Delayed fall' (underlying or derived, cf. (2)) realized on first vowel of the following word.

- minimal overwriting for affix-L except:

- polysyllabic bases with an LH melody due to *LHL
- no effect for monosyllabic LH bases due to preservation of initial H (Beckman, 1998)

4. Complementary distribution of affix-H and affix-L

- realization of the affix-L: no realization of affix-H:
- either the affix-H has two root nodes (b.), violating (4)
- or the association line between affix-H and its μ is marked as invisible (c.)

	MAX (T-μ) _{Af}	ONE RT	MAX μ _{Af}	MAX L _{Af}	*L
(a)			*		***
b.		*!	*		**
c.	*!		*		**

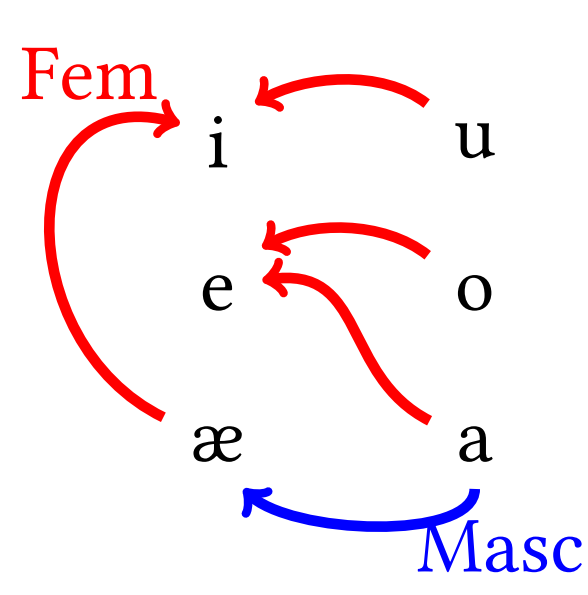
- (4) ONERT
Assign a violation mark for every tone that is phonetically dominated by two highest root nodes.
(Where 'root node' is defined as a node that is not dominated by a higher node.)

Extension: vowel mutation

- vowel mutation in several morphological contexts

(5) Vowel mutation (Baart, 1999a; Baart and Sagar, 2004)

	BASE	INFLECTED
Masc.	la:r	læ:r
	bana:l	bænæ:l
	manuʃ	mænuʃ
Fem.	úɟʒ	íɟʒ
	ʃæro:r	ʃære:r
	lumət	lumet



i	[-back,+high,-low]	u	[+back,+high,-low]
e	[-back,+high,+low]	o	[+back,+high,+low]
æ	[-back,-high]	a	[+back,-high,-low]

→ **Underspecification of /æ/**: realized as [æ, ʌ], or [ə]; mirrors the analysis in Baart (1999a) based on element theory.

MASC	FEM
-back	-back +high
	-cons

- different vowel mutation patterns (±affecting height)
- different locality conditions (±affecting all V's) since the morphemes are of **different complexity**: the floating V feature [-back] spreads through the word; the floating feature complex with a segmental root node associates locally.
- different targets (±high V) follow from different complexity as well: underlying [+high] V's are preserved; but if underlying [+high] is overwritten by affix, this faithfulness constraint is not decisive anymore