

Tone-prominence interaction in Hän (Athabaskan)

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Interaction between the realization of lexical tone and the placement of stress is a well-documented phenomenon in a wide variety of languages [1,2]. In such interactions, it has been claimed to always be the case that higher degrees of stress are attracted to higher tones, and vice versa [3]. This paper provides an analysis of the interaction between tone and stress in Hän, a tonal Athabaskan language spoken in eastern Alaska and western Yukon, Canada. Descriptively, the interactions in Hän are as follows:

- (1) a. Lexical low tone is prevented from spreading to a nuclear stressed syllable
 b. If a stressed syllable is underlyingly low-toned, stress shifts to the left

In this language, it has been argued that only low tone is specified underlyingly, and only low tone participates in the phonology [4]. Hän presents an interesting case then, as the preference for stress to co-occur with high tone still manifests itself as the effects in (1), despite the fact that Hän displays the characteristics of a language in which high tone only appears by default on underlyingly unspecified tone bearing units (TBUs) [5], and is thus inert in the phonology.

Before developing an analysis of the interactions in (1), the process of tone spread itself is considered. Tone spread in Hän is also of interest (though not the focus of the paper), as it is a case of bounded low tone spread, a rather uncommon process [6]. I propose that low tone spread in Hän is due to TROUGH DELAY [6], which requires low tone be allotted two syllables. A basic representation of the process of tone spread is given in (2):

- (2) *Jii nìdhänn?* ‘What do you want?’
 what 2SG.want
- | | | |
|--|---|---|
| L

Jii nìdhänn
Underlying,
only L on jii is specified | → | L H

Jii nìdhänn
Surface, L spreads rightward
onto ni-, default H inserted |
|--|---|---|

This process is blocked on a nuclear stressed syllable (1b) (rightmost stressed syllable in an Intonational Phrase (IP)):

- (3) *Jii ts'a' chèzhaa* ‘This beaver went away’
 this beaver go.away.3SG.PFV
- | | | | |
|---|---|--|--|
| L L

[Jii ts'a' chezhaa] _{IP} | → | H L L H

[Jii ts'a' che'zhaa] _{IP} | <i>Low tone fails to spread to
 nuclear stressed -zhaa</i> |
|---|---|--|--|

Hän, like other Athabaskan languages has default SOV word order, so the nuclear stressed syllable is often conflated with the verb stem (which is always final in the verb word, like *-zhaa* in (3)). However, the effect in (3) is also found in nouns (which also have default final stress [7]):

- (4)
- | | |
|---|--|
| L H

a. [Nä'ghayy] _{IP}
frog | <i>Produced in isolation, no low tone spread</i> |
| L H H H H

b. [[Näghayy tthee kayy dä'tlaa] _{IP}
frog rock on jump.3SG.PFV | <i>IP-medial position, low tone spread</i> |

The analysis developed for the facts in (3) and (4) builds on the tonal prominence scale and constraints regulating tone-prominence interaction proposed by de Lacy [1,2].

(5) *H_D/L >> *H_D/M

Low-toned heads are most marked, followed by mid-toned heads; no constraint on high-toned heads means this type is least marked

The key difference in Hän is the domain of interaction – I adapt *H_D(IP)/L, which penalizes association of low tone to the head of an IP. An interaction between tone and stress within this domain has not yet been proposed for any other language. The sample tableau in (6) shows the effect of this constraint for the form in (3): it is crucially ranked above the constraint enforcing tone spread (TROUGH_{DELAY}).

(6)

	SPECIFY T	OCP(L)	*H _D (IP)/L	TROUGH DELAY	*SPREAD
$\begin{array}{c} L \quad L \\ \quad \\ \text{[Jii ts'a' chezhaa]}_{IP} \end{array}$					
$\begin{array}{c} H \quad L \quad L \quad H \\ \vdots \quad \quad \quad \vdots \\ \text{a. [Jii ts'a' che'zhaa]}_{IP} \end{array}$		*		**	
$\begin{array}{c} H \quad L \quad L \\ \vdots \quad \quad \vdots \\ \text{b. [Jii ts'a' che'zhaa]}_{IP} \end{array}$		*	*!	*	*

The preference for high tone and prominence to co-occur in Hän is not limited to cases like (6). As stated in (1b), if a low-toned syllable is in a typically stressed position, stress shifts to the left to avoid it.

- (7) a. wëdädäh'ch'ee 'S/he depends on him/her' *no final low, final stress*
 3SG.OBJ-QF-1SG.SUBJ.GH.be.IMPFV
 b. wëdä'dähch'è 'S/he depended on him/her' *final low, antepenultimate stress*
 3SG.OBJ-QF-1SG.SUBJ.GH.be.PFV

The interaction above also suggests that (6) is not simply the result of an IP-final H% tone overwriting the spread L, because of cases like (7), where tone drive a stress shift even though there is no final H.

The key fact for both blocking of low tone spread and stress shift is that, despite the fact that Hän has the characteristics of a privative tone system in which high tone is phonologically inert, high tone is in fact active in its preference to co-occur with (nuclear) stress. This is evidence against a privative analysis of tone in Hän, and, more generally, reduces the distinction between “marked” tones and “default” tones, with both participating in the phonology, but behaving differently due simply to the ranking of the constraints regulating their behavior.

References

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