Syntax and Prosody in Kashaya Phrasal Accent

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The essential challenge of phrasal phonology is to determine the correct prosodic domains (p-phrases) to which phonological rules refer. Theories differ in making direct or indirect reference to syntactic structure, but either way the syntax typically plays a central role in determining the p-phrase locations. We present the case of phrasal accent in Kashaya (Pomoan: N. California), and show that although syntactic structure defines the basic domains of phrasal groupings, the further grouping of words into p-phrases is affected by prosodic factors and often ignores syntactic constituency. There is variation in the prosodic phrasing; we provide an Optimality Theory analysis that accounts for the multiple possible realizations in our corpus.

Kashaya stress is iambic at the left edge, whether in a single word or a multiword domain, but in connected discourse not all stresses are realized with a pitch accent; some are "suppressed" and that p-phrase has no accent. When the accent does occur, however, its placement diagnoses the left edge of a p-phrase. Due to initial-syllable extrametricality, the accent often falls on the third syllable in a p-phrase (the second syllable if it is closed; Buckley 1994). The p-phrase may encompass two words, as with the binary phrasing *(ωω)(ωω)(ωω)* shown in (**1**) on the next page (Oswalt 1961; all examples are from the texts collected in Oswalt 1964). Variation in phrasing includes the following types:

- A single-word phrase (subject, object, adverbial) optionally groups with a following verb, yielding *(ω)(ω)* or *(ωω)* in (**2**).
- Strikingly, this variation also occurs in longer phrases of three words, which are found as *(ωω)(ω)* and *(ω)(ωω)*. In such phrases, a complex NP preceding the verb (subject or object) can be divided between two p-phrases, with the second consisting of half the NP and the V despite the syntactic mismatch (**3**,**4**,**5**).
- A similar pattern occurs within the DP as well (**6**), where a determiner can pull the second word of the NP into a separate p-phrase, once again forming *(ω)(ωω)*.

A single-word p-phrase that is too short for a proper iambic foot usually remains unstressed or at least unaccented; this is true of many of the initial words in the examples given here.

In sentences where the p-phrases match the syntactic structure, such as *(ωω)(ω)* for the structure [[XX]X], the constraint ALIGN-XP,R generates the desired outcome (Selkirk 1995, Truckenbrodt 1995). But to account for the grouping *(ω)(ωω)* in defiance of syntactic constituency, some prosodic factor must intervene. One option is to favor branching on the right, a sort of iambic rhythm at the p-phrase level, which can be formulated as follows.

BRANCH-R The rightmost p-phrase within an Intonation Phrase is branching.

Constraints on the binarity of p-phrases, BIN-MIN and BIN-MAX, control the size of these constituents (Selkirk 2000). Ranking of BRANCH-R over ALIGN-XP,R generates the mismatched phrasing, as illustrated by the tableau in (**7**). For the pairs of examples in (2–6), this favors the parsings in the right column. In the competing grammar where prosody matches syntax, ALIGN-XP,R is ranked above BRANCH-R as well as the two BIN constraints, favoring the left column. Truckenbrodt's WRAP-XP, requiring that every XP be contained within a single p-phrase, must be low-ranked given the non-syntactic phrasing commonly found in the language.

We also consider other prosodic pressures that may supplement, or replace, BRANCH-R. For example, syllabification across a word boundary appears to make a single p-phrase more likely. In addition, we show that accents close to the end of a p-phrase are disfavored — akin to the well known preference for final lapses (RHYTHM in Hung 1994, LAPSE-AT-END in Kager 2001). Grouping a phrase-final word (such as the verb) with the preceding word shifts the accent leftward in deference to this final-accent avoidance, but without regard to syntactic structure.

(1) [buṭaqá ʔem]$_{DP}$ [[p^{h}ala]$_{ADV}$ [cóhtoʔ]$_{V}$]$_{VP}$ [[bihše]$_{NP}$ [q^{h}áʔdiw]$_{V}$]$_{VP}$
bear the again depart deer fetch
( ) ( ) ( )
'The bear went off again to fetch the deer meat.'

(2) [[q'oʔo]$_{NP}$ [cahnóʔba]$_{V}$]$_{VP}$
song should sing
( ) ( )
'(you) should sing the song'

[[q'oʔo]$_{NP}$ [cáhnow]$_{V}$]$_{VP}$
song sang
( )
'(they) sang the song'

(3) [[[ʔihc^{h}e]$_{N}$ [míhsaʔ]$_{A}$]$_{NP}$ [dibucín'k^{h}e]$_{VP}$]$_{IP}$
rain heavy will fall
( ) ( )
'a heavy rain will fall'

[[[ʔihc^{h}e]$_{N}$ [mihsáʔ]$_{A}$]$_{NP}$ [dibuʔ]$_{VP}$]$_{IP}$
rain heavy fall
( ) ( )
'a heavy rain fell'

(4) [[[ʔama·]$_{N}$ [q'óʔdi]$_{A}$]$_{NP}$ [t'an'qaw]$_{V}$]$_{VP}$
thing good feel.SG
( ) ( )
'was happy'

[[[ʔama·]$_{N}$ [q'oʔdi]$_{A}$]$_{NP}$ [t'ác'qan]$_{V}$]$_{VP}$
thing good while feel.PL
( ) ( )
'feeling happy (PL)'

(5) [[[q^{h}aʔbe]$_{N}$ [hádu·]$_{A}$]$_{NP}$ [dihciyíc'ba]$_{V}$]$_{VP}$
rock other having picked up
( ) ( )
'after picking up another rock'

[[[naṭa]$_{N}$ [cuhse]$_{N}$]$_{NP}$ [bíʔdiyiʔ]$_{V}$]$_{VP}$
child basket clasped
( ) ( )
'clasped the baby basket'

(6) [[[bihše]$_{N}$ [qáwi]$_{A}$]$_{NP}$ [yya]$_{D}$]$_{DP}$
deer little PL
( ) ( )
'the little deer (PL)'

[[[naṭa]$_{N}$ [qawí]$_{A}$]$_{NP}$ [yya]$_{D}$]$_{DP}$
child little PL
( ) ( )
'the little children'

(7)

[[*rain*]$_{N}$ [*heavy*]$_{A}$]$_{NP}$ [*fall*]$_{VP}$	BIN-MAX	BIN-MIN	BRANCH-R	ALIGN-XP,R	WRAP-XP
a. (*rain*) (*heavy*) (*fall*)		**!*	*		*
b. (*rain heavy*) (*fall*)		*	*!		*
c. ☞ (*rain*) (*heavy fall*)		*		*	**
d. (*rain heavy fall*)	*!			*	

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