

INTONATION IN BEAVER ATHAPASKAN

Preliminary Findings

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ABSTRACT

In Beaver, an Athapaskan tone language, intonation seems to be employed for the demarcation of boundaries, for indicating prominence and for marking speaker attitude. Spontaneous and semi-spontaneous data suggest that focus can be marked in by a H* and particles. Speaker attitude is expressed by a %H for OBJECT-moves in map tasks. At final boundaries of paragraphs in stories or discourse a devoicing of the last syllable was found.

Keywords: Athapaskan languages, Beaver language, intonation, final devoicing.

1. INTRODUCTION

Studies in Athapaskan prosody are numerous but usually focus on word-level phenomena, such as tone or stress. However, there is a beginning interest in studies on Athapaskan intonation (cf. Rice & Hargus, 2005b). In this paper preliminary findings from a study of intonation of Beaver Athapaskan will be presented.

Beaver (Dane-záa) is a Northern Athapaskan language spoken by about 150 people in Northern Alberta and Northern British Columbia. It is not acquired by children anymore, the youngest speakers being in their forties. The study is based on mostly natural data from fieldtrips to Northern Alberta, and thus represents one of the four dialects of the language (cf. fig. 1). This dialect is spoken by some 30 speakers, mostly above sixty. Since a practical orthography for this dialect of Beaver has only recently been devised, reading tasks cannot be conducted.

Beaver is a polysynthetic language with lexical tone; the Northern Alberta dialect has a marked high tone. The word order is relatively free, though the basic pattern is SOV, which leaves the verb that may carry a large number of prefixes at the right edge of the sentence with the verbal stem at the right edge of the verb word. A number of particles can be employed to mark focus, yes-no-questions or guesses.



Figure 1: A map of Western Canada, the dots indicate the reserves where Beaver is or was spoken. The location of the dialects is marked by the respective abbreviations: Central (CB), Northern Alberta (NAB), Southern (SB) and Low-marked Beaver (LB).

2. MATERIAL AND METHOD

The material used in this study is drawn from 3 stories of varying length told by one male and one female speaker, and from 4 map task recordings and a guessing game (both involving one male and one female speaker), recorded on different fieldtrips from 2005–2007. The acquisition of reading data is not possible since the language has not been written until very recently and the speakers are not used to reading their language. The speakers recorded for this study were 2 female and 1 male speaker, all above 60 years of age.

The data was recorded using a Marantz PMD 670, a solid state digital recorder. The recordings were transcribed and translated with the help of native speakers, then they were cut in Soundforge and labelled in EMU.

3. RESULTS

3.1. General Inventory

In Beaver intonatory tones are employed for the demarcation of boundaries and for marking prominence. Some tunes were found with pragmatic functions and some that seem to be stylized hesitations (the latter will not be discussed here).

In table 1 the main tonal events are collected that were encountered this far with their tentative labels. In most cases the end of an IP is marked by a low boundary tone L% as in declaratives and wh-questions, while a non-final ip is marked by a high phrase accent H- indicating incompleteness, e. g. in a list. There are initial high boundary tones %H for objections the map task recordings, but also prominence lending H tones phrase internally. The yes-no-particle *góó* is marked by a short rise to a very high pitch and a very steep fall (in an expanded pitch range) H*+L with a following compression of the pitch range with a flat contour where lexical tones cannot be distinguished any more. In two instances in the corpus a rising tone L*+H was found both times produced on nouns in isolation; one with a high lexical tone, one with a low lexical tone. The lexical tones did not seem to have an influence on the shape or pitch of this contour. More examples of this kind are necessary to investigate the function of this contour – possibly a surprised question – and to analyze the interplay of lexical and intonatory tones in this case. Other labels employed for annotating the corpus were Final_Devoice% which occurs paragraph-finally and %reset indicating a reset or higher overall pitch for stretches of reported speech. Moreover, it seems that labelling pitch range expansion and compression will be useful in further analysis.

labels	contexts
L%	marks finality
H-	indicates incompleteness
%H	in OBJECT-moves
H*	corrective foci
H*+L	on particle <i>góó</i>
L*+H	function not clear
Final_Devoice%	paragraph final
%reset	marks reported speech

Table 1: A provisional survey of intonatory events found in the corpus.

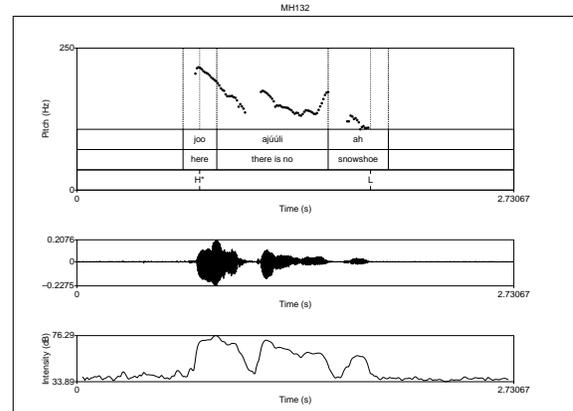


Figure 2: An example OBJECT-move from a map task game: "There is no snowshoe here."

3.2. Intonational High Tones

In the corpus, high turning points were marked that could not be due to the lexical tone, then the contexts were analyzed. Besides using intonation for marking boundaries, Beaver seems to use intonatory tones within phrases to mark information structure or emphasis. The exact nature of the function of these tones needs yet to be investigated with sets of stimuli that can trigger the contours reliably.

The first instances of an initial H were found in OBJECT-moves in the map task games, as illustrated in fig. 2 where the follower objects that on her map there is no snowshoe after the giver mentioned a snowshoe in his instructions (the Beaver examples are given in practical orthography, the acute accent indicating lexical high tone, the ogonek nasal vowels):

- (1) jɔɔ ajúúli ah.
here is.no snowshoe
"There is no snowshoe here."

The first word is lexically low, but appears as the highest point of the utterance caused by the initial H-tone. Several examples of this type were found in the corpus.

The initial %H encountered in OBJECT-moves in the map task games could be encoding a corrective focus or speaker attitude and seem to be associated with the left boundary. Corrective foci, that need not be in first position, are marked with a H* which can be used for new information as well. The H* pitch accents are usually accompanied by greater loudness. Sometimes focus is additionally marked by the particle *láá* as in fig. 3 where the first lexically low syllable of *nuzéa* "skunk" is high.

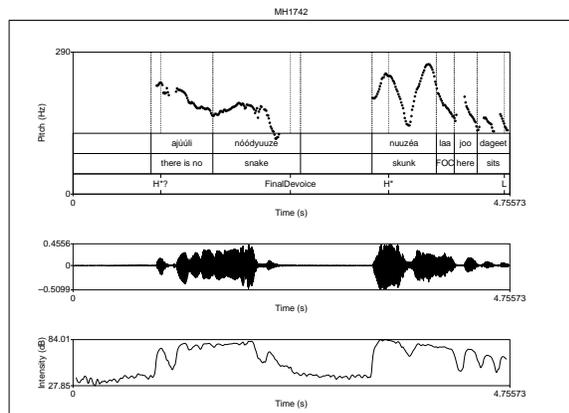


Figure 3: An OBJECT-move with a corrective focus: "There is no snake, a SKUNK is sitting here."

- (2) *ajúúli nóódyuuzé, nuuzéa laa joo dageet.*
 is.no snake skunk part here asp-sit
 "There is no snake, a SKUNK is sitting here."

The presence or absence of the focus particle does not have an influence on the contour, although the interplay of discourse particles and intonation in Beaver needs to be investigated in greater depth.

In fig. 4 a sentence from a story shows a non-initial H* on the preverb of a verb:

- (3) *yéé -ghaa ajuu xí- ty -aa?*
 what -for not out.2sg- take -q
 "Why didn't you SKIN it?"

There are two possible interpretations in the context of the story for this: (1) H* marks a broad focus on the verb or (2) H* marks a narrow focus on the preverb of the verb. The grandfather in the story asks the girl why she carried the heavy animal she caught all the way home and did not skin it where she caught it. So a translation like "Why didn't you SKIN it?" seems possible, but considering the lexical make-up of the verb a narrow focus on the preverb might be a possibility as well: The stem has very little lexical content and simply means "handle animate", this concept could be considered as given or activated since the girl already wrapped the animal up, carried it home and took it out of her bag (all these actions could be described with the same stem), and the important information lies in the preverb (which distinguishes the lexical meanings of the handling verbs) which could be trans-

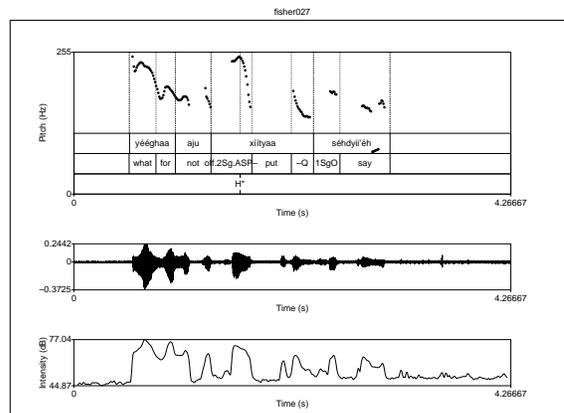


Figure 4: H* on the preverb of a verb: "Why didn't you SKIN it?"

lated as "Why didn't you take it OUT?". It needs to be investigated whether this second interpretation is possible, or if it is just the more salient lexical content or the greater prominence of the preverbal syllable that attracts the H*.

The yes-no-question particle *góó* is lexically high-marked and is often accompanied by a H*+L accent and usually occurs in the first position of the question. In fig. 5 this contour is followed by a compression of the pitch range for the rest of the ip:

- (4) *góó tsáá óli, ajúúli tsáá.*
 q beaver there.is is.no beaver
 "Is there a beaver? There is no beaver."

The shape of the contour and the following compression are very salient in the above example in fig. 5 since word *tsáá* "beaver" following the particle has a long high marked vowel, where a high pitch excursion due to lexical tone could be easily realized, but the contour drops steeply to that syllable and remains flat to the end of the phrase. In the second part, the same word *tsáá* is realized with an uncompressed pitch range and the lexical tone can be clearly seen in the pitch track.

A second type of yes-no-questions is formed with the particle *laa* which occurs sentence finally and is lexically low, these questions never show the contour that is found in questions with *góó*.

3.3. Final Devoicing

Utterance finally, the L% of the IP can be replaced by a devoicing of at least the last syllable, marking a break in a narrative, the end of an episode, but also being a cue to backchannelling from the listener.

In some cases typical echoing constructions are used of the following type, also illustrated in fig. 6:

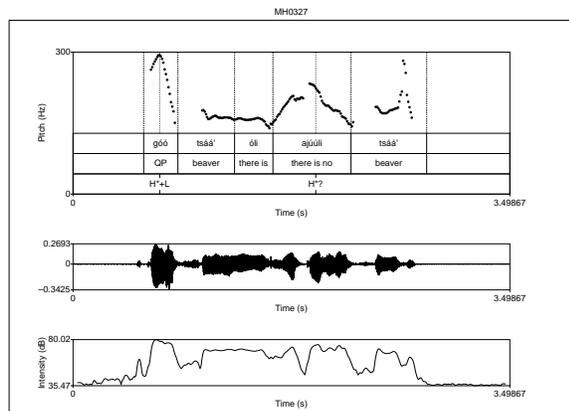


Figure 5: A yes-no-question with the initial particle *góó*, marked by a H*+L, followed by pitch range compression.

- (5) dlúk- xáá- ye- dyéh- tyii. (...) dlúk-
 laughter- out- 3S- asp- put (...) laughter-
 xáá- ye- dyéh- tyii.
 out- 3S- asp- put
 "[when she got there,] she burst out laugh-
 ing. (...) She burst out laughing [and said
 ...]"

In analogy to Final_Lo that has been introduced for Bininj Gun-wok by Bishop & Fletcher (2005, 355) Final_Devoice is used to indicate cases where the final syllable in an utterance is devoiced. The functions of the final devoicing seem to be similar to those of Final_Lo in Bininj Gun-wok (see also Fletcher & Evans, 2000), as it usually occurs in stories where a notional paragraph is finished, where the listener is expected to laugh, or where (s)he will backchannel. Nevertheless, this phenomenon should be investigated further, especially since it points to an interesting aspect noted for another Northern Athapaskan language (cf. Rice, 2005, on Hare), that is that the stem of the verb (usually the last syllable of the verb word, and thus in an SOV language usually the last syllable in the sentence) is not the most prominent part of the verb, and in many cases of final devoicing it is hardly audible which is interesting for the role of the verbal stem in speech processing in Beaver.

3.4. Lexical Tone & Intonation

Lexical tone can be masked by intonation in that a lexically low syllable, marked by intonation with a H tone, is realized as high while in some contexts even a high tone on a long syllable can be indiscernible

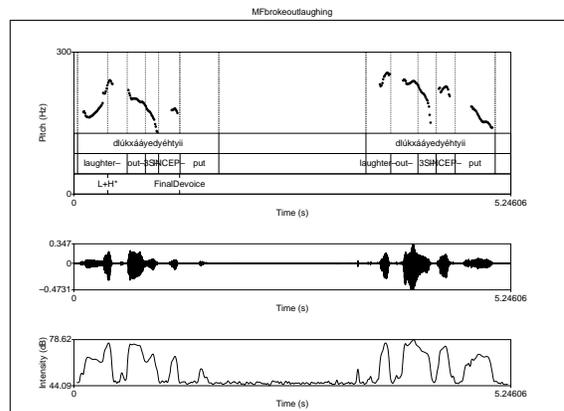


Figure 6: A typical context for final devoicing. "And she burst out laughing. ... She burst out laughing and said..."

in the signal if an expanded high intonatory tone is preceding. In fig. 5 the pitch range expansion on the question particle *góó* is followed by a strong compression of the pitch range, rendering the lexically high marked syllable indistinguishable from a low toned one.

4. CONCLUSION

In the present paper a short survey of intonation in Beaver has been attempted. There are indications that there are not only boundary tones such as L% for declaratives and most questions or %H for OBJECT-moves and phrase tones, like H- ip-finally, to be found in this Athapaskan language but also prominence leading pitch accents (H*) that play a role in the encoding of information structure. Furthermore, final devoicing seems to be a clue to a boundary of a higher level entity on the prosodic hierarchy.

5. REFERENCES

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