INTONATION IN TURKISH KABARDIAN

Ayla Applebaum and Matthew Gordon

University of California, Santa Barbara
ayla1@umail.ucsb.edu, mgordon@linguistics.ucsb.edu

ABSTRACT

This paper reports on intonational characteristics of the Northwest Caucasian language Kabardian as spoken by the diaspora community of Turkey. As the first instrumental study of intonation in a Northwest Caucasian language, the current research expands our typological database on intonation systems. Drawing on a combination of conversational and elicited data, several findings emerged. Both statements and most question types, including yes/no and wh-questions, are associated with falling intonation. Terminal rises are found in certain questions and non-final items in a list. H* pitch accents occur in both statements and questions, while H* on an NP in questions is followed by a HL fall.

Keywords: intonation, Kabardian, Caucasian languages, pitch accents, boundary tones

1. INTRODUCTION

Kabardian belongs to the East Circassian branch of the Northwest Caucasian language family. Although the majority of speakers of Kabardian reside in the Caucasus region of southern Russia, roughly one third (over 200,000) now live in Turkey following a mass exodus from Russia in the 19th century. The Kabardian sound system is well known for possessing a number of typologically unusual properties, including a small vowel inventory, an extensive number of fricatives, and a series of ejective fricatives. The intonation system of Kabardian, however, has not been subject to systematic instrumental investigation despite the potential for interesting interactions with its extremely complex morphology.

2. METHODOLOGY

The current research is based on approximately 4 hours of conversational data recorded from 4 speakers supplemented with a further 200 utterances collected from two additional speakers. Data consisted of various types of utterances, including declaratives (both positive and negative), questions (yes/no, wh, and echo), and imperatives. In addition, different focus conditions (broad focus, narrow focus on different elements) were represented in the data. The conversation materials also included other semantic and pragmatic data types, e.g. surprise, annoyance, disbelief, etc.

The conversation data were collected in Turkey onto a Sony DAT recorder using a high quality headworn unidirectional microphone. The elicited data consisted of approximately 200 isolated sentences collected from two speakers in Southern California. Data were converted to .wav format for analysis using pitch traces generated by Praat (www.praat.org). Text grids were generated in Praat and tonal labels were assigned to the sound files using the autosegmental/metrical model of intonation [5], which assumes that intonation contours are the result of fundamental frequency interpolation between phonological high and low tones. These phonological tones have two primary sources: pitch accents linked to certain stressed syllables and boundary tones associated with the periphery of certain prosodic constituents.

3. RESULTS

3.1. Boundary tones

In Kabardian, boundary tones are aligned with the right edge of large phrases termed “Intonational Phrases ” (abbreviated IP) in the autosegmental framework [2]. Two types of boundary tones were identified in the examined data. By far the most frequent boundary tone is an L% tone, which is associated with the end of statements (both positive and negative), imperatives, and both wh- and yes/no questions. Representative low boundary tones occurring in two statements appear in figures 1 and 2, respectively. In figure 1, an H* pitch accent is associated with the final syllable, creating a steep fall to the final L% boundary tone. In figure 2, on the other hand, the rightmost H* falls on the penultimate syllable resulting in a more gradual fall to L%. Examples of L% in yes/no and wh-questions appear later in figures 5 and 7, respectively.

Figure 1: Statement IP /istaːmbul səʃəpsow/ (Istanbul + I live) 'I live in Istanbul.'

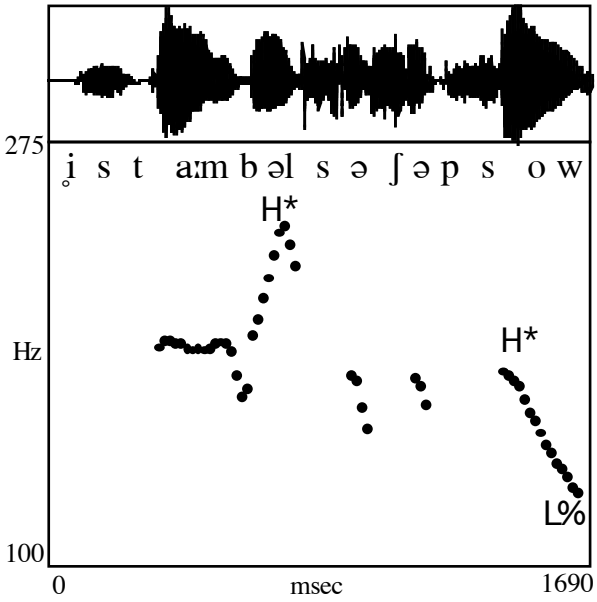
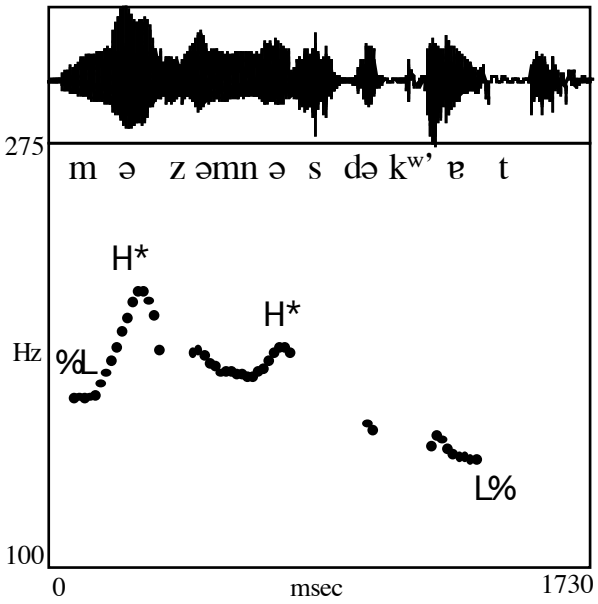


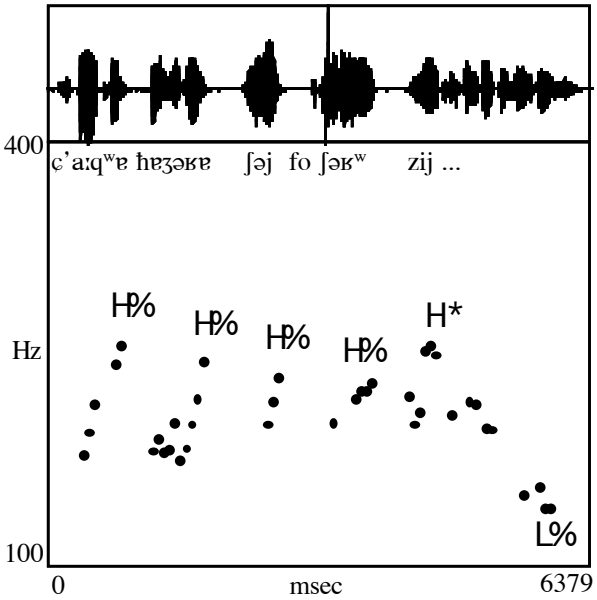
Figure 2: Statement IP /məzəm nəs dəkw'ʁt/ (forest + to + we went) 'We went to the forest.'



IP-final H% was found in three circumstances. First, non-final elements separated by an IP boundary in a list are characterized by an H% boundary tone, as in figure 3. In addition, H% occurs in questions ending in the interrogative suffix -ʔʁ, which is used when the listener is expected to confirm the proposition made by the speaker. Finally, in a wh-question ending in an NP other than a wh-word, the IP-final NP ends in rising f0 (see section 3.2.2).

The only initial boundary tone we have observed thus far is an initial %L tone found in both yes/no and wh-questions (see figures 5 and 7, respectively) as well as some statements (see figure 2).

Figure 3: List intonation in statement IP /ɕ'aːqʷʁ ħʁʒəʁʁ ʃej foʃəʁʷ zij kełəmp'ʁ qasʃoχaːs/ (bread + flour + tea + sugar + one + also + paper + bought here) 'I bought bread, flower, tea, sugar, and also a newspaper'



3.2. Pitch accents

3.2.1. Statements

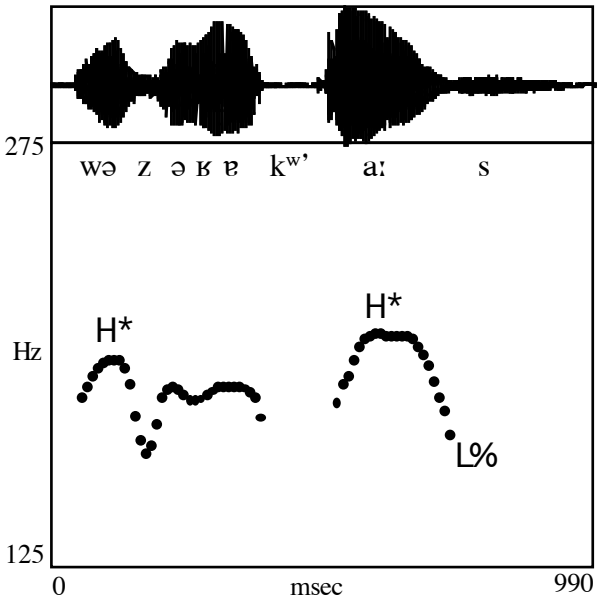
The most common pitch accent is H*, which potentially docks on any syllable carrying word level stress in an utterance. Stress in Kabardian is sensitive to the weight of syllables, falling on the final syllable of a word if it contains either a long vowel or a coda consonant [1, 3, 4]. If neither of these conditions is met, stress falls on the penultimate syllable. Certain suffixes fall outside of the stress domain meaning that stress in certain morphological constructions can fall to the left of the penult.

Although an IP may contain more than one pitch accent, there is typically one that stands out from others in being characterized by higher fundamental frequency and typically by greater duration and intensity than other accents. In statements, this "nuclear" accent typically falls on the leftmost noun in a clause containing at least one noun. This means that in transitive sentences with two overt NPs, the leftmost one, the agent in

the unmarked word order, carries the nuclear accent. Other overt NPs as well as the verb, which occurs clause-finally, may also receive a pitch accent.

In statements lacking an independent NP, the nuclear accent typically falls on the verb root, though a focused affix can attract the accent away from the verb. Prefixed verbs with broad focus characteristically have a secondary accent on the first pronominal prefix that is an argument to the verb. Figure 4 shows a statement IP with both an object (wə-) and a subject pronominal prefix (zə-), the first of which carries a pitch accent in addition to the nuclear accent on the root.

Figure 4: Statement IP with accented pronominal object prefix /wəzəʁʁkʷ'aːs/ 'I made you go'

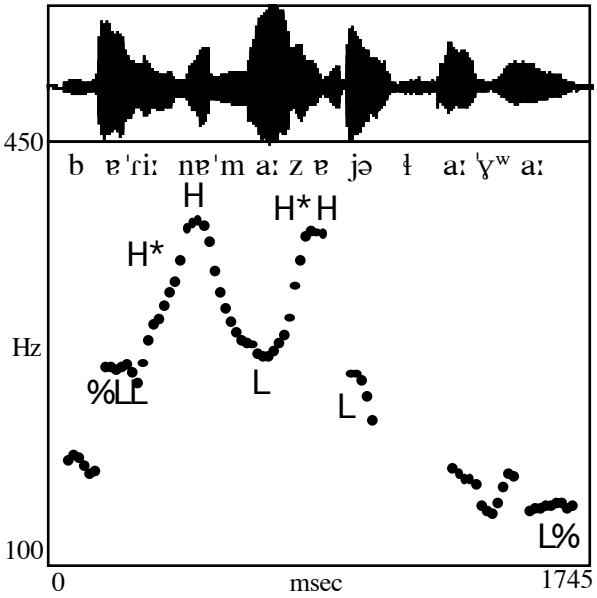


3.2.2. Questions

Accented elements in questions display a different pitch pattern from those in statements. In describing these patterns, it is important to distinguish between the non-wh NPs, on the one hand, and verbs and wh-NPs, on other hand. In verbs and wh-words carrying an accent, the accent is a simple H*, which docks on the stressed syllable, unless the stressed syllable is initial in an IP, in which case the %L initial boundary tone forces a late realization of H* on the immediately post-tonic syllable.

Non-wh NPs in both yes/no and wh-questions, on the other hand, are characterized by rising intonation followed by a steep fall. Pitch rises to the stressed syllable followed by either a high plateau or a further increase in f0 to the end of the NP. The high f0 level is followed by a steep fall to the beginning of the following word. Subsequent words after the accented word have a reduced and lowered pitch range with the occasional exception of wh-words (see figure 7). All NPs other than wh-words in a question have this same pattern, as can be seen in the transitive yes/no question with two overt NPs in figure 5.

Figure 5: Yes/no question IP /bʁɾiːnʁ maːzʁ jəɬʁːɣʷaː/ (Barina + moon + she saw) 'Did Barina see a moon?'



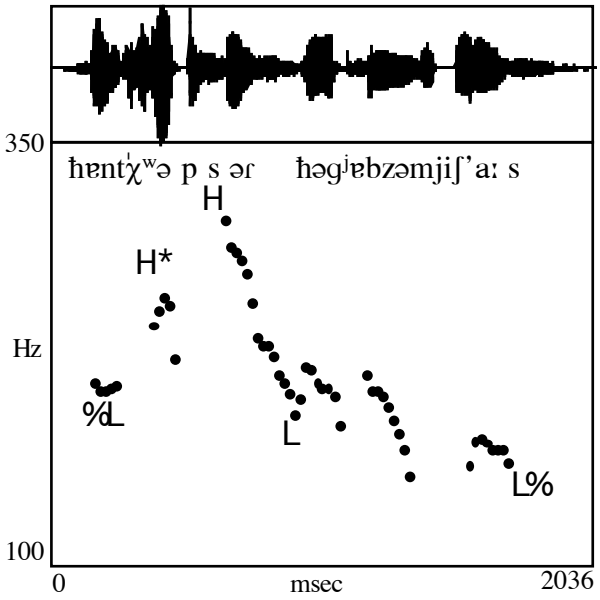
Elements carrying narrow focus are characterized by the same intonation pattern as NPs in questions. An example of a noun with narrow contrastive focus in a statement appears in figure 6. The focused object /ħʁnt ˈχʷəpsəɾ/ 'soup' is associated with a pitch rise followed by a precipitous fall onto the following subject /ħəgʲʁbzəm/ 'girl'. Note that the final consonant of /ħʁnt ˈχʷəpsəɾ/ is the absolutive marker /-ɾ/which falls outside of the stress domain; hence the stress and H* on the penult in this word.

The analysis of intonation on NPs in questions requires reference to multiple tonal targets. The pitch peak at the end of the NP followed by a fall indicates a HL sequence. The L component of the final HL fall is absent, however, in a non-wh NP occurring in final position of a wh-question.

The fact that the steepest rise within the NP occurs between the first syllable and the stressed syllable suggests that a H* pitch accent also falls on the stressed syllable in keeping with the analysis of pitch accents in statements. The H* becomes more apparent in phrasal NPs consisting

of multiple nouns, where the primary stressed syllable within the phrase is separated from the final syllable of the phrase by at least one syllable. In such cases, for example, in figure 7, pitch rises until the stressed syllable and then maintains a high plateau or rises slightly through the end of the NP. In this figure, the final L tone after the NP is suppressed since the following wh-word has an H* on its initial syllable.

Figure 6: Statement with focused object /ħɐntχʷəpsəɾ ħəgʲɐbzəm jiʃ'aːs/ 'The girl made THE SOUP'



Another interesting feature of questions is evident is found in wh-questions ending in an NP, the characteristic word order found in questions lacking an overt predicate. If a NP that is not a wh-word occurs IP-finally in a wh-question, the final fall characteristic of non-final NPs in questions is suppressed and the IP ends in rising f0 indicative of H% boundary tone (see section 3.1).

4. SUMMARY

The intonation system of the Turkish dialect of the Northwest Caucasian language Kabardian can be analyzed within an autosegmental/metrical framework. Both statements and yes/no and wh-questions end in pitch falls, analyzable as a L% boundary tone, whereas items in a list, IP-final non-wh-NPs in wh-questions, as well as questions ending in the interrogative particle –ɐʔ end in a pitch rise, suggesting a H% boundary tone. An initial %L boundary tone is also found in questions and occasionally in statements. A simple H* pitch accent is observed in statements and wh-words, while a multi-tonal H*HL sequence characterizes full NPs in questions and focused NPs in statements. Table 1 summarizes the phonological tones of Turkish Kabardian.

Figure 7: Wh-question /məz gʷaːʃəm jəwərədəɾ sət/ (forest + fairy + her song + what) 'What is the forest fairy's song?'

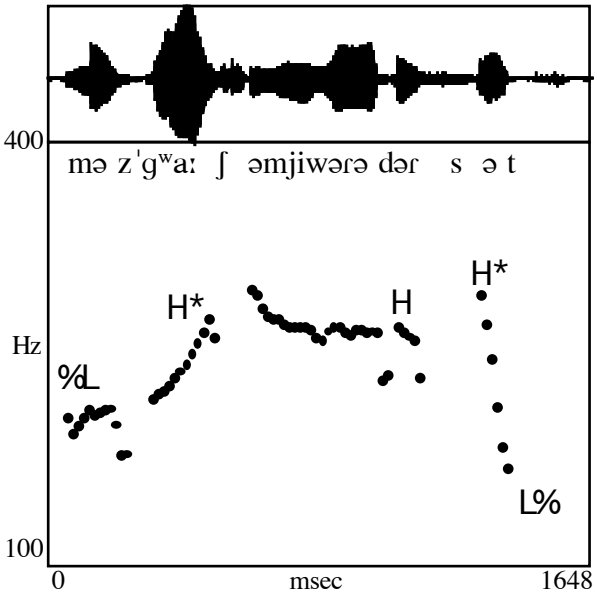


Table 1: Phonological tones of Turkish Kabardian.

Tone(s)	Context
H*	NPs in statements, wh-words, verbs
H*HL	NPs in questions, focused NPs
L%	Statements, questions
H%	Final item in list, non-wh-NPs in questions, interrogative particles
%L	questions, some statements

5. REFERENCES

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