Adverbial hierarchy in Abaza: a preliminary study
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1. Introduction:

Abaza (<Northwest Caucasian) is a highly polysynthetic language spoken mainly in Karachay-Cherkessia Republic in Russia and in Turkey. The adverbial semantics has two different grammatical representations in Abaza:

(i) Adverbial meaning is expressed using different prefixes (see (Panova 2019) for greater detail)
(ii) Adverbial meaning is expressed using separate lexemes

These two possibilities could be represented with the following examples (1) - (2):

(1) (Panova 2019: 17)
\[ a-č'kwən \quad a-čə \quad ja-śwə-χ́-t \]
DEF-boy \quad DEF-horse \quad 3M.ERG-write-RE-DCL
“The boy drew the horse again.”

(2) sara \quad ᵁbabž'anč'ara \quad qagʷərčʷála \quad sə-r-pχα-č́
I \quad lunch \quad quickly \quad 1SG.ERG-CAUS-hot-DCL
“I quickly warmed my lunch”

In the examples above (1) represents the adverbial modification is performed using the refractive prefix –χ, which amongst its many semantic entries, represents the repetition of the action (being translated by English adverb *again*). In the example (2), the event is modified by the adverb *qagʷərčʷála* which is present as a separate word in the clause.

The Cinque hierarchy could be represented as follows:

(3) (Cinque 1999: 106)
\[
\text{[frankly Moodspeech act } \text{Fortunately Mood evaluative } \text{[ allegedly Mood evidential }] \text{ probably Moodspeclmc } \text{[ once T(Past) } \text{[ then T( Future) }] \text{ [ perhaps Moodimealls] necessarily Mod necessity }] \text{ possibly Mod possibility } \text{[ usually Asp habitual } \text{[ again Asp repetitive(I) } \text{[ often Asp frequentative(I) ] [ intentionally Mod volitional } \text{[ quickly Asp celerative(I) ] [ already T( Anterior) ] [ no longer Asp terminative ] [ still Asp continuous ] [ always Asp perfect ] [ just Asp retrospective ] [ soon Aspproximalive ] [ briefly Asp durative ] [ characteristically(? Asp generic/progressive ] [ almost Asp prospectivelve ] [ completely Asp Sg Completive(I) ] [ tutto Asp P1 Completive ] [ well Voice fast/early Asp celerative(I) ] [ again Asp repetitive(I) ] [ often Asp frequentative(I) ] [ completely}
\]

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1 The data used in this paper is collected by elicitation with a consultant living Karachay-Cherkessia Republic, in the village of Injich-Chukun. The dialect of Abaza spoken in Injich-Chukun is Tapanta (see [Chakdua 1970] for difference in TAM markers in Abaza dialects). I am very grateful to Dina Usha for her help with the judgments of grammaticality and translation of the stimuli.
In this essay I will present the preliminary attempt of testing the Cinque adverbial hierarchy (3) on the Abaza material. This attempt could yield intriguing results, as if the data from Abaza will fit in the hierarchy, it will once again prove the functional nature of adverbial projections in natural languages.

In this work, I will be using the transitivity principle introduced in (Cinque 1999). Namely, it goes as follows: if A > B and B > C, then A > C. This principle is used to define the relative positions of elements in cartographic projections.

2. Basic syntax and semantics of Abaza

A great syntactic description of Abaza morphosyntax could be found in (O’Herin 2002). However, for the sake of simplicity I will provide some of the basic aspects of Abaza morphosyntax here based on the description provided in (Arkadiev in print).

Abaza is a language with ergative-absolutive alignment and pro-drop. The agents are usually indexed on the verb with prefixes. Those prefixes come in three distinct series: Absolutive, Ergative and Indirect Object (IO). The table depicting the personal prefix system is presented below.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2M</th>
<th>2F</th>
<th>3M</th>
<th>3F</th>
<th>3N</th>
<th>Rel</th>
<th>Rfl</th>
<th>Rec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sg</td>
<td>Abs</td>
<td>s(ə)-</td>
<td>w(ə)-</td>
<td>b(ə)-</td>
<td>d(ə)-</td>
<td>j(ə)-</td>
<td>j(ə)-</td>
<td>ĉ(ə)-</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Erg/IO</td>
<td>s(ə)/z-</td>
<td>w(ə)-</td>
<td>b(ə)/p-</td>
<td>j(ə)-</td>
<td>l(ə)-</td>
<td>a-/na-</td>
<td>z(ə)-</td>
<td>–</td>
</tr>
<tr>
<td>Pl</td>
<td>Abs</td>
<td>h(ə)-</td>
<td>š(ə)-</td>
<td>j(ə)-</td>
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</tr>
<tr>
<td></td>
<td>Erg/IO</td>
<td>h(ə)/ř-</td>
<td>š(ə)/ř-</td>
<td>j(ə)-</td>
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<td></td>
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</tr>
</tbody>
</table>

Table 1: indexing prefixes (Arkadiev in print)

The latter aspects of Abaza grammar are not relevant for the present study and could be found in (Arkadiev in print) or in the grammars (Lomtatitze 1967), (Tabulova 1976).

3. Adverbial hierarchy in Abaza

In the present study I will be focusing on 5 different adverbial modifiers from Abaza:

(i) lasəta – quickly
(ii) χ- – again
(iii) la- – often
(iv) q”adəma – nescessarily
(v) zməf”á – completely

Cinque hierarchy suggests the following hierarchical placing in the phrasal structure:

(4) q”adəta > ( χ- > la-) > lasəta > zməf”á > ( χ- > la-)
The first observation that could be made is that the order of the refactive (χ-) and of the habitualis prefixes perfectly reflects the Cinque proposal:

\[(5) \, d-ʔa-\chi-\text{l}a-wə-n \text{ (again > often)}
\]
\[3H.ABS-DIR-go-RE-HAB-CNT-IPF-PST
\]
\[“(s)he returns again often”
\]

However, the reversed order is forbidden:

\[(6) \, *d-ʔa-\chi-\text{l}a-wə-n
\]
\[3H.ABS-DIR-go-HAB-RE-CNT-IPF-PST
\]
\[#“(s)he continued to return again often”
\]

So, the hierarchy will now look as follows as those two adverbial modifiers seem to not have lexical analogs:

\[(7) \, (?\, q^\text{\"ad}\text{\"}ma > \text{las}æ\text{\"}a > z\text{\"}m\text{\"}ả \text{\{"d\}} ) > \chi- > \text{la-}
\]

When defining the relative positions of \emph{quickly} and \emph{necessarily}, such results appeared:

\[(8) \, a-\text{q’ala} \quad \text{q’}^\text{\"}\text{adw}\text{\"}ma \quad \text{las}æ\text{\"}a \quad \text{w-\text{\"}s}a-\text{rnas}
\]
\[\text{DEF-city} \quad \text{necessarily} \quad \text{quickly} \quad 2\text{M.ABS-go-PURP}
\]
\[“You necessarily should quickly go to the city”
\]

\[(9) \, *a-\text{q’ala} \quad \text{las}æ\text{\"}a \quad \text{q’}^\text{\"}\text{adw}\text{\"}ma \quad \text{w-\text{\"}s}a-\text{rnas}
\]
\[\text{DEF-city} \quad \text{quickly} \quad \text{necessarily} \quad 2\text{M.ABS-go-PURP}
\]
\[#“You necessarily should quickly go to the city”
\]

It seems that the adverbs \text{q’}^\text{\"}\text{adw}\text{\"}ma (necessarily) and \text{las}æ\text{\"}a (quickly) are well integrated into the hierarchy, as the order in which they appear reflects the Cinque’s proposal. The order in which \text{quickly} precedes \text{necessarily} is considered ungrammatical (9). Then, the combination of \text{quickly} and \text{necessarily} is checked:

\[(10) \, a-\text{sup} \quad \text{z}\text{\"}m\text{\"}\text{a} \quad \text{q’}^\text{\"}\text{adw}\text{\"}ma \quad \text{jə-\text{\"}s}a-\text{rnas}
\]
\[\text{DEF-soup} \quad \text{completely} \quad \text{necessarily} \quad 2\text{M.ABS-drink-PURP}
\]
\[“You should necessarily completely eat the soup”
\]

\[(11) \, a-\text{sup} \quad \text{z}\text{\"}m\text{\"}\text{a} \quad \text{q’}^\text{\"}\text{adw}\text{\"}ma \quad \text{jə-\text{\"}s}a-\text{rnas}
\]
\[\text{DEF-soup} \quad \text{completely} \quad \text{necessarily} \quad 2\text{M.ABS-drink-PURP}
\]
\[“You should necessarily completely eat the soup”
\]

Here the judgments of my consultant were a bit unclear, as she suggested that both of those configurations are possible. Further investigations are needed. The relative position of \text{quickly} and \text{completely} could be demonstrated with the following examples:
In the examples (12)-(13), the order in which *quickly* precedes *completely* is favored more than the inverse one. It indicates that their relative position could be defined as follows: \( \text{las} \rightarrow q^w\text{dwa} \). 

The observations in examples (5)-(13) could be summarized as follows:

(i) \( \chi^w > \text{la}^w \)
(ii) \( q^w\text{adhma} > \text{lasata} \)
(iii) \( q^w\text{adhma} \) or \( q^w\text{adhma} > \text{las} \)
(iv) \( \text{lasata} > q^w\text{dwa} \)

The relative positions of *completely* and *necessarily* remains undefined using elicitation. However, using the transitivity principle it is possible to deduce that \( q^w\text{adhma} > \text{las} \) given (ii) and (iv). Overall, it seems that the hierarchy \( q^w\text{adhma} > \text{las} > q^w\text{dwa} > \chi^w > \text{la}^w \) holds for Abaza, showing that the hierarchy proposed in (Cinque 1999) is indeed universal and could be applicable to polysynthetic languages. Although more research is needed in order to cover the full spectrum of adverb classes presented in (ibid.).

4. Adverbial hierarchy in Abaza

This preliminary study has opened some broad prospects of cartographic study of Abaza. First of all, cartographic approaches to syntax could extend O’Herin’s proposals concerning the Abaza syntax (O’Herin 2002). Second of all, cartographic approaches to syntax could potentially explain different adverbial-related asymmetries in the causative constructions found in Abaza (see (Koshevoy 2018)). The asymmetries of the scope of the adverbials on the causative constructions could be related to their position in the Cinque’s hierarchy. Further investigations are needed, however, to check all the data on the compatibility with the Cinque’s proposal. Overall, this hierarchy is of interest to check in polysynthetic languages with adverbial meanings that could be expressed used prefixal modifiers as in Abaza.

### List of abbreviations

1 – first person; 2 – second person; 3 – third person person; ABS — Absolutive; CAUS — causative; DCL — declarative; DEF — definite; DIR — directive; DIST — indefinite; EMP — emphatic; ERG — Ergative; F — feminine; FUT — future tense; H — human; INS — Instrumental; IO — Indirect Object; LOC — locative; PST — past tense; M — man; NEG — negation; RFL — reflexive; REF — refactive; SG — singular; PL — plural; UNIT — counting suffix.
References

Panova, Anastasia. 2018. Morfologičeski svyazannye konstrukcii s sentencial'nymi aktantami v abazinskom jazyke i v tipologičeskoj perspective. NRU HSE course paper.