1. Introduction

Marking of polar questions by means of verbal morphology is a fairly widespread phenomenon cross-linguistically (Dryer 2013). By contrast, morphological marking of content questions has not been discussed in the theoretical and typological literature so far.

From the point of view of information structure, content questions consist of focus and presupposition (Lambrecht 1994: 282):

\( \text{What}_{\text{focus}} \ [\text{are you reading}]_{\text{presupposition}}? \)

Hence it is no surprise that most languages of the world employ special lexical means to encode the focus of a question, i.e. question/wh-words like who or where (Ultan 1978: 53; Siemund 2001: 1018).

In many languages content questions are structurally similar to clefted focus constructions with the question word serving as the predicate and the presupposition expressed as a headless relative clause:

**FRENCH**

(2) a. \( \text{Qu'est-ce que tu lis}? \)

\( \text{what-is-it that you read} \)

‘What are you reading?’

b. \( \text{Tu es très triste à la fin de chaque roman que tu lis}. \)

\( \text{novel that you read} \)

‘You are sad at the end of each novel that you read.’

This is the common strategy in the North Caucasian languages (Sumbatova 2009):

**WEST CIRCASSIAN** (Northwest Caucasian > Circassian; own fieldwork data)

(3) a. \( \text{sad-a wə-z-a-z' e-re-r}? \)

\( \text{what-Q 2SG.ABS-REL.IO-DAT-read-DYN-ABS} \)

‘What are you reading?’

b. \( \text{txəλ-ew wə-z-a-z' e-re-r}. \)

\( \text{book-ADV 2SG.ABS-REL.IO-DAT-read-DYN-ABS} \)

‘the book that you are reading’

The Northwest Caucasian languages Abaza and Abkhaz also employ this strategy:

**ABAZA** (Northwest Caucasian > Abkhaz-Abaza; own fieldwork data)

(4) \( \text{á-jša j-χ”on-gōl-wa ač”wə-ja}? \)

\( \text{DEF-table REL.ABS-LOC-stand-PRES.NFIN what-QN} \)

‘What is (lit. stands) on the table?’

However, overt question words in Abaza and Abkhaz are **optional**!

Abaza is typologically outstanding in that it can express both focus and presupposition of content questions morphologically in the single polysynthetic verbal form. Hence, question formation in this language is not only a syntactic, but also, and primarily, a morphological phenomenon.

Despite the fact that basically the same strategy of formation of content questions has been described for the closely related Abkhaz in Hewitt (1979a: 10–23), this typological rarissimum has remained unnoticed by typologists, not being mentioned in such surveys as Ulan (1978), Siemund (2001), Velupillai (2012: 356–359); the only exception is Idiatov (2007: 271–278), whose discussion of Abaza is based on the data from Genko (1955: 105–107).

NB The fully productive interrogative inflectional morphology of Abkhaz-Abaza should not be confused with the so called interrogative verbs like Mandarin gānmá ‘do.what’ (see Hagège 2008): the latter express interrogativity and often indefiniteness (Munro 2012) as part of their lexical meaning and always form closed classes.

This paper is primarily based on the fieldwork data of Tapanta Abaza collected in July 2017 in the village Inžič-Čukun (jənǯəg’-č’ḳʷə́n), Abaza district of the Karachay-Cherkes Republic (Russia), during the fieldtrip organized by the Higher School of Economics and the Russian State University for the Humanities. The work is financed by the Russian Science Foundation, grant # 17-18-01184.

2. Basic features of Abaza

– Polysynthesis and consistent head-marking: all arguments of the predicate are expressed by prefixal pronominal markers in the verbal word (5); by contrast, overt nominals cross-referenced in the verb do not show any case marking (6).

(5)  j-šə-z-j-a-s-hʷ-ṗ

3SG.N.ABS-2PL.IO-BEN-3SG.M.IO-DAT-1SG.ERG-say-NPST.DCL

‘I will tell this to him about you.’ (textual example)

(6)  phʷǝs-k_i  l-sabaj,  d_j-ʃa-l-q-aštala-n

woman-INDF 3SG.F.IO-child 3SG.H.ABS-DIR-3SG.F.IO-LOC-forget-PST.DCL

‘A woman forgot about her child.’ (textual example)

The verb also includes affixes expressing aspectual, modal, temporal and spatial meanings as well as the independent vs. dependent status of predication. See the schematic structure of the verbal word in Table 1.

Table 1. The structure of the Abaza verbal complex

<table>
<thead>
<tr>
<th>-11</th>
<th>-10</th>
<th>-9</th>
<th>-8</th>
<th>-7</th>
<th>-6</th>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>+1</th>
<th>+2</th>
<th>+3</th>
<th>+4</th>
<th>+5</th>
<th>+6</th>
<th>+7</th>
</tr>
</thead>
<tbody>
<tr>
<td>absolute, subordinators, negation</td>
<td>potential</td>
<td>directional preverbs</td>
<td>applicatives</td>
<td>locative</td>
<td>indirect object</td>
<td>ergative</td>
<td>negation</td>
<td>causative</td>
<td>sociative</td>
<td>root</td>
<td>directional, event operators, plural</td>
<td>aspect</td>
<td>negation</td>
<td>tense and mood</td>
<td>subordinators, force</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Agglutinating morphotactics in Abaza is coupled with a considerable degree of opacity of form–function relations, especially in the domain of TAM and negation; positional variability, grammatically conditioned allomorphy, multiple exponence and morphomic distribution of formatives are observed.

- Ergativity manifested in the **absolutive** vs. **oblique** (ergative and indirect object) series of pronominal markers, see Table 2 and (7a–c). Note the important distinction between human and nonhuman 3\(^{rd}\) person markers.

### Table 2. Pronominal prefixes

<table>
<thead>
<tr>
<th></th>
<th>absolutive</th>
<th>oblique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Sg</td>
<td>s(ə)/z-</td>
<td>1Pl</td>
</tr>
<tr>
<td>2SgM</td>
<td>w(ə)-</td>
<td>2Pl</td>
</tr>
<tr>
<td>2SgF</td>
<td>b(ə)/p-</td>
<td>3Pl</td>
</tr>
<tr>
<td>3SgM</td>
<td>d(ə)-</td>
<td>REL</td>
</tr>
<tr>
<td>3SgF</td>
<td>l(ə)-</td>
<td></td>
</tr>
<tr>
<td>3SgN</td>
<td>j(ə)/∅-</td>
<td>na/-a-</td>
</tr>
</tbody>
</table>

(7) a. **h-bzāza-d**<br>1PL.ABS-live(AOR)-DCL<br>‘We lived.’ (textual example)

b. **awáʔa ha-ca-da-r-ça-χ-nás**<br>there 1PL.ABS-LOC-3PL.ERG-CAUS-lie-RE-PURP<br>‘so that they bury us there’ (textual example)

c. **á-sabəj-kʷa-g’aj bzəj ja-ʃ-b-ʃ-j-t**<br>DEF-child-PL-ADD good 3PL.ABS-1PL.ERG-see-PRS-DCL<br>‘We love children.’ (textual example)

- A distinction between “finite” (declarative) and “non-finite” TAM-forms, see Table 3; the latter serve as the basis for negative and interrogative forms occurring as independent predicates. Note that declarative forms are often more complex.

### Table 3. Declarative vs. non-finite forms of major tenses

<table>
<thead>
<tr>
<th></th>
<th>declarative</th>
<th>non-finite</th>
</tr>
</thead>
<tbody>
<tr>
<td>static verbs</td>
<td>present</td>
<td>-p/-b</td>
</tr>
<tr>
<td></td>
<td>past</td>
<td>-n</td>
</tr>
<tr>
<td>dynamic verbs</td>
<td>present</td>
<td>-aj-t/-aj-d</td>
</tr>
<tr>
<td></td>
<td>imperfect</td>
<td>-wa-n</td>
</tr>
<tr>
<td></td>
<td>aorist</td>
<td>-t/-d</td>
</tr>
<tr>
<td></td>
<td>future</td>
<td>-wa-š-t/-wa-š-d</td>
</tr>
</tbody>
</table>

- Omnipredicativity: each content word can serve as a predicate and bear (stative) verbal morphology without any further derivational means:

(8) **j-kʷ’hj’ma-phalt**<br>3SG.N.ABS-wolf-NPST-DCL<br>‘It is a wolf.’ (Tabulova 1976: 104)

- Relativization marking of the “West Caucasian type” (Hewitt 1979b, Kibrik 1992, Caponigro & Polinsky 2011, Lander 2012): relative markers belong to the paradigm of pronominal prefixes (see REL in Table 2) and occupy the same position in the wordform (cf. the notion of “wh-agreement”, O’Herin 2002: Ch. 8):
Some adjunct verbal forms also follow this pattern:

(10) (textual examples)

a. [h-aš'-ahba d-an-ʃa-j-χ] asqan
   1PL.IO-brother-elder 3SG.H.ABS-REL.TEMP-DIR-go-RE time
   ‘when my elder brother returned home’ (lit. the time when...)

b. [h-ʔa-naχa-wá] árχ'arta
   1PL.ABS-REL.LOC-work-IPF DEF.school
   ‘the school where we work’

c. a-sabǝj-kʷa... a-rqa a-pnǝ jǝ-s-ʃ-na-r-g-wa-z
   DEF-child-PL DEF-field 3SG.N.IO-to 3PL.ABS-REL.MNR-DIR-3PL.ERG-bring-IPF-PST.NFIN
   ‘how they brought children to the field’

3. Interrogative verbal forms in Abaza

3.1. Argument questions
Relative verbal forms with a relative prefix indicating the role of the question variable in the proposition + an interrogative suffix showing the human (-da) vs. non-human (-ja) class of the variable.

– absolutive intransitive subject

(11) a. j-ʃa-ka-sá-ja?
   REL.ABS-DIR-LOC-fall(AOR)-QN
   ‘What fell?’

b. j-ʃa-ka-sá-da?
   REL.ABS-DIR-LOC-fall(AOR)-QH
   ‘Who fell?’

– absolutive transitive object

(12) a. jǝ-b-bá-da?
   REL.ABS-2SG.F.ERG-see(AOR)-QN
   ‘Whom did you see?’

b. j-ʃa-b-g-ja?
   REL.ABS-DIR-2SG.F.ERG-bring(AOR)-QN
   ‘What did you bring?’

– ergative transitive subject

(13) a. w-ʃa-z-r-há-ja?
   2SG.M.ABS-DIR-REL.ERG-Causes-fear(AOR)-QN
   ‘What frightened you?’

b. wǝ-z-bá-da?
   2SG.M.ABS-REL.ERG-see(AOR)-QN
   ‘Who saw you?’

– indirect object

(14) wǝ-z-pš-wá-da?
   2SG.M.ABS-REL.IO-look-IPF-QH
   ‘Whom are you looking at?’
– objects of applicatives (on Abaza applicatives see O’Herin 2001)

(15) \( j\-z\-z\-b\-\chi^w\-\text{tá-\text{da}}? \)
\[ 3SG.N.ABS-REL.IO-BEN-2SG.F.ERG-buy(AOR)-QH \]
‘Whom did you buy it for?’ (benefactive)

(16) \( wə\-z\-č\-ša\-wá\-ja? \)
\[ 2SG.M.ABS-REL.IO-MAL-fear-IPF-QN \]
‘What do you fear?’ (malefactive)

(17) \( bə\-z\-c\-n̓q\"a\-wa\-da? \)
\[ 2SG.F.ABS-REL.IO-COM-walk-IPF-QH \]
‘With whom do you walk?’ (comitative)

(18) \( swəp\ z\-la-r̃\-\text{žwa-ja?} \)
\[ \text{cyp REL.IO-INS-3PL.ERG-drink-IPF-QN} \]
‘What do people eat soup with?’ (instrumental)

Adnominal possessors are encoded as indirect objects (19a), and questions about the possessor are formed accordingly, cf. (19b) with the possessed noun as predicate.

(19) a. \( s-pa \)
\[ 1SG.IO-son \]
b. \( də\-z\-p\-w̱\-\text{da?} \)
\[ 3SG.H.ABS-REL.IO-son-PRS.NFIN-QH \]
‘my son’ ‘Whose son is he?’

Questioning the possessor of an argument is achieved by (i) forming a clefted structure with the relevant nominal as the predicate and (ii) questioning the possessor of the latter in the regular way, cf. (20).

(20) \( jə\-z\-c\-səb̌j\-w̱\text{da}_k \quad [a-påχ’ j\-na-\text{f\"yá-wa}] \)
\[ 3PL.ABS-REL.IO-child-PRS.NFIN-QH \text{ DEF-yard REL.ABS-LOC-run-IPF} \]
‘Whose children are running in the garden?’ (lit. Who is the one whose children are those who are running in the garden?)

Reflexivization of verbs with indirect objects is expressed by doubling the relevant pronominal prefix (21a); in relative and interrogative forms targeting the subject of such verbs the relative prefix is also doubled (21b):

(21) a. \( \text{hara} \-č\-\text{c-ra šår'da h-ha-r\-dər-d.} \)
\[ \text{we new-MSD many [3SG.N.ABS]1PL.IO-1PL.ERG-CAUS-know-DCL} \]
‘We learned (lit. caused ourselves to know) a lot of new things.’

b. \( \text{awəj} \ z\-z\-a\-r\-dər-wə\-z\-\text{da?} \)
\[ \text{that REL.IO-REL.ERG-CAUS-know-IPF-PST.NFIN-QH} \]
‘Who learned that?’

Interrogative forms, like relative forms in general (22), can attach the nominal plural suffix -\( k\"a\), appearing before the tense-aspect suffixes (23):

(22) \( [\text{awaʔa} j\-\text{fə-ta-\text{χa-k\"a-z]} abaza-k\"a \ r-ak\"a-p} \)
\[ \text{there REL.ABS-DIR-be.at-INS-PL.PST,NFIN Abaza-PL 3PL.IO-COP-NPST.DCL} \]
‘Those who remained there are the Abaza.’ (textual example)

(23) \( j\-w\-c\-k\"a-z\-\text{da?} \)
\[ \text{REL.ABS-2SG.M.IO-be.together-PL.PST,NFIN-QH} \]
‘With whom.PL were you?’ (textual example)
Independently occurring question words ‘who’ and ‘what’ in Abaza (cf. O’Herin 2002: Ch. 8) are either synchronically or transparently diachronically interrogative verbal forms of the same type (Genko 1955: 105–107; Idiatov 2007: 271–278) forming the predicate of a clefted construction:

(24) \[ d\-z\-a\-çʷə\-ja \quad awat \quad a\-ç\-kʷa \quad 5a\-z\-rə\-ha\-z? \]
\[ 3SG.H.ABS-REL.IO-belong-QH \quad \text{those} \quad \text{DEF-horse-PL} \quad \text{DIR-REL.ERG-CAUS-be.afraid-PST.NFIN} \]
‘Who frightened those horses?’, lit. ‘What does the one who frightened those horses belong to?’ (Pazov 2016)

3.2. Adjunct questions
Adverbial relative forms with the adverbial interrogative prefix -ba/-pa- immediately following the relative prefix, cf. (10a–c) above.

(25) \[ h\-an-ba\-də-r-ç’-wə-š? \]
\[ 1PL.ABS-REL.TEMP-QADV-3PL.ERG-CAUS-eat-IPF-FUT \]
‘When will they give us food?’

(26) \[ j\-ʔa\-ba\-ʕa\-z-g-wa-šə-z \]
\[ 3SG.N.ABS-REL.LOC-QADV-DIR-1SG.ERG-bring-IPF-FUT-PST.NFIN \]
‘Where would I have taken it from?’ (textual example)

(27) \[ r\-wəs \quad š-pa\-c-wə-š? \]
\[ 3PL.IO-work \quad \text{REL.MNR-QADV-go-IPF-FUT} \]
‘How will their work go on?’ (textual example)

However, questions targeting goal and purpose follow the model of argument questions and are indistinguishable from questions about indirect objects but for the fact that the reason relative prefix occurs farther from the root:

(28) \[ wə́-nbǯ’aʕʷ-ĉa-kʷa \quad z\-ʕá-wə-m-d-ja? \]
\[ 2SG.M.IO-friend-PL.H-PL \quad \text{REL.RSN-DIR-2SG.M.ERG-NEG-lead(AOR)-QN} \]
‘Why didn’t you bring your friends with you?’ (textual example)

Cross-linguistically, this pattern of encoding of goal/purpose questions is fairly common, cf. Lithuanian wh-word kam ‘to whom; what for’.

There are no independently occurring simple or complex expressions like ‘where’, ‘when’ or ‘how’ in Abaza, the morphology just described being the only way of encoding adjunct questions in this language.

4. Discussion
The expression of content questions by means of productive affixal morphology found in Abaza and, mutatis mutandis, in Abkhaz, clearly is typologically uncommon. Another language reported in the literature where some content interrogatives are expressed by verbal morphology is Baure (Arawakan, Danielsen 2007: 368–370). Nevertheless, the peculiar interrogative verbal forms in Abaza and Abkhaz seem to naturally fall out from an interaction of several more general strategies common for all Northwest Caucasian languages:
(i) formation of content questions by means of clefts;
(ii) morphological marking of relativization, coupled with
(iii) the highly elaborated expression of grammatical and semantic roles of arguments in the polysynthetic verbal complex.
Given that the interrogative suffixes themselves appear to contain the regular third person singular absolutive prefixes of the human (d-) resp. non-human (j-) class (cf. Genko 1955: 107), one might hypothesize that the argument interrogative verbal forms stem from the univerbation of the original cleft constructions with a generic question word in the predicate position:

\[(29) [wə-ə-pš-wd] \quad d-a? \quad > \quad wə-ə-pš-wd-da? \quad (= 14)\]

\[
\begin{array}{l}
2SG.M.ABS-REL.IO-look-IPF \quad 3SG.H.ABS-Q \\
\quad \text{‘Who is it that you are looking at?’} \quad > \quad \text{‘Whom are you looking at?’}
\end{array}
\]

The univerbation of the relative verbal form with the question predicate must have been due to their linear adjacency and the very general meaning of the original question word. Indeed, for Abkhaz, the human interrogative suffix -\textit{da} is claimed to go back to the independent question word \textit{d-árban} ‘who’ (cf. Aristava et al. 1968: 119, Šakryl 1961: 84).

The problem with the scenario just outlined lies in the fact that it is not fully supported by comparative evidence. In Abkhaz, the non-human interrogative suffix looks like -\textit{j} (Hewitt 1979a: 12–15) (30a), and can appear not only in argument questions but in adjunct questions as well (30b):

\[\text{ABKHAZ (Hewitt 1979a: 12, 14, transcription and glossing adapted)}\]
\[
\begin{array}{ll}
(30) \quad \text{a.} & j-a-a-\chi^{\prime}-j? \\
& \text{REL.ABS-COME-PRF-QN} \\
\quad \text{b.} & d-an-bá-ce-j? \\
& \text{3SG.H.ABS-REL.TEMP-QADV-GO-QN} \\
\end{array}
\]

\[
\begin{array}{l}
\text{‘What has already come?’} \quad \text{‘When did he go?’}
\end{array}
\]

Moreover, the admittedly cognate suffix -\textit{j} is used to mark all types of content questions in Ubykh (Fenwick 2011: 133–134), which does not employ relativization and has ordinary question words in argument positions:

\[\text{UBYKH (Fenwick 2011: 133, transcription and glossing adapted)}\]
\[
\begin{array}{ll}
(31) \quad \text{a.} & jəné \quad šə-n \quad ře-śwə-wṭw-q̇é-ne-j? \\
& \text{this who-OBL LOC-2PL.ERG-take.out-PST-PL-Q} \\
\end{array}
\]

\[
\begin{array}{l}
\text{‘From whom did you take this?’}
\end{array}
\]

This suggests that interrogative forms with -\textit{j(a)} and -\textit{da} may have different origins, and that their symmetry observed in Abaza is an innovation.

Besides that, the origins of the adverbial interrogative prefix -\textit{ba} are obscure (Idiatov 2007: 272, fn. 31), but it is clear that the adverbial interrogative forms have a different source than the argument interrogatives.

Regardless of the putative diachronic scenarios, the Abaza and Abkhaz interrogative verbal forms make a valuable and unique contribution to our understanding of the ways content questions may be formed, as well as of the array of functions that inflectional morphology can express.

**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>absolutive; ADD — additive; ADV — adverbial; AOR — aorist; BEN — benefactive; CAUS — causative; COM — comitative; COP — copula; DAT — dative; DCL — declarative; DEF — definite; DIR — directional preverb; DYN — dynamicity; ERG — ergative; F — feminine; FUT — future; H — human; INDF — indefinite; INS — instrumental; IO — indirect object; IPF — imperfective; LOC — locative; M — masculine; MAL — malefactive; MNR — manner; MSD — masdar; N — non-human; NEG — negation; NFIN — non-finite; NPST — nonpast; OBL — oblique; PL — plural; PRF — perfect; PRS — present; PST — past; PURP — purposive;</td>
</tr>
</tbody>
</table>
References