VOICE RESTRUCTURING IN BURYAT*

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1 Introduction

In this paper I discuss the syntax of Buryat\(^1\) restructuring constructions with matrix verbs like ӡɨlxɤ (‘begin’), тʊɾʃəxɤ (‘try’), ɨɾdɪxɤ (‘manage’), which require a special non-finite form of their complement with suffix -(ə)žə- (henceforth -žə-clauses):

(1) badmə naməjə zur-əžə ӡɨlx-ʒ /turʃ-a /ʊɾd-ja
Badma.NOM 1SG.ACC draw-CONV begin-PST /try-PST /manage-PST
‘Badma began / tried / managed to draw me.’

A characteristic feature of these verbs is that they allow long-object movement (henceforth, LOM): promotion of the direct object of the embedded clause into the matrix subject position (2). In (2) we see that passive morphology and an agreement marker with the former direct object appear on the matrix predicate.

(2) bi badm-ar zur-əžə ӡɨlx-əgdʒ-ʒ-b
1SG.NOM Badma-INSTR draw-CONV begin-PASS-PST-1SG
‘Badma began to draw me.’ (Lit. ‘I was begun to draw by Badma.’)

According to (Wurmbrand 2015), (Wurmbrand & Shimamura, 2014, 2017), among others) LOM is an indicator of voice restructuring: a process by which certain matrix verbs select a reduced embedded clause with a deficient voice domain. In addition to the LOM pattern in (2), which has

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\(^1\) A Mongolic language spoken in Russia, North Mongolia and North-East China. The data discussed in this paper is from Barguzin Buryat dialect spoken in Russia.
been attested in many unrelated languages (European Portuguese, Japanese, Kannada, among others (see (Wurmbrand 2014a)), Buryat exhibits two other patterns with passive voice morphology (attested in other languages as well, for example, in Spanish (Bosque & Gallego 2011), Turkish (Kornfilt 1996), Mishar Tatar (Graschenkov 2015)): with passive marking on the embedded verb (3) and on both embedded and matrix verbs (4).

(3) bi
dadm-ar zur-āgd-āžə 3xil-ə-b
1SG.NOM Badma-INSTR draw-PASS-CONV begin-PST-1SG
‘Badma began to draw me.’ (Lit. ‘I began to be drawn by Badma.’)

(4) bi
dadm-ar zur-āgd-āžə 3xil-āgd-ə-b
1SG.NOM Badma-INSTR draw-PASS-CONV begin-PASS-PST-1SG
‘Badma began to draw me.’ (Lit. ‘I was begun to be drawn by Badma.’)

In this paper I address the following questions. First, I discuss whether there is evidence that -žə-complements are clauses that undergo restructuring (section 2). Second, I will examine the question of whether -žə-clauses contain a subject (section 3). Then I address the question of what approaches to clause reduction (complex head approaches ((Bouma & van Noord 1997), (Saito & Hoshi 1998), among others), the bare VP complementation approach (Wurmbrand 2001), the Voice restructuring approach ((Wurmbrand 2015), (Wurmbrand & Shimamura, 2014, 2017)) can account for the properties of the construction under consideration. Adapting the Voice restructuring approach, I propose an analysis of how exactly is the structure of -žə-clauses deficient and how the interaction between the matrix voice and the embedded voice takes place (section 4). Section 5 concludes the paper.

2 Properties of -žə-clauses

The matrix predicates that take -žə-clauses form a very restricted class of only five verbs: 3xilə (‘begin’) (5), dū:rgəxə (‘finish’) (6), šādəxə (‘can’) (7), ūrdəxə (‘manage’) (8), turšəxə (‘try’) (9).

(5) badmə bəšəq bəš-əžə 3xil-ə
Badma.NOM letter write-CONV begin-PST
‘Badma began to write a letter.’

(6) badmə nəme:jə zur-əžə dū:rg-ə
Badma.NOM 1SG.ACC draw-CONV finish-PST
‘Badma finished to draw me.’

(7) badmə tū:jə xəxəl-žə šad-ə
Badma.NOM wood chop-CONV can-PST
‘Badma could chop wood.’

(8) bagʃə hənə:n tū:xə xo:t-əžə ūrd-ja
teacher.NOM interesting story tell-CONV manage-PST
‘The teacher managed to tell an interesting story.’
(9) badma tuman-te nuxa-d be:-zə turš-a  
Badma.NOM Tumen-COM friend-PL be-CONV try-PST  
‘Badma tried to be friends with Tumen.’

Embedded -žə-clauses can never take an overt subject (irrespective of the its case) when they are sentential complements of the above mentioned predicates (10). The understood agent of the embedded predicate is always the same as the matrix subject (11).

(10) *bagšə badm-in /badm-ijə /badma  hōnin ju:mə  
teacher.NOM Badma-GEN /Badma-ACC /Badma.NOM interesting thing  
xō:r-əzə ürd-ja  
tell-CONV manage-PST  
Expected reading: ‘The teacher managed (to do so) that Badma told an interesting story.’

(11) bagšə hōnin ju:mə xō:r-əzə ürd-ja  
teacher.NOM interesting thing tell-CONV manage-PST  
‘The teacher managed to tell an interesting story.’

The matrix predicates that take -žə-clauses as their complements cannot take other types of sentential complements: neither finite CPs (12), nor nominalizations (13).

(12) *bagšə hōnin tü:xə xō:r-əhən /xō:r-əhən²  
teacher.NOM interesting story tell-PFCT /tell-PFCT.1SG  
gəžə ürd-ja  
COMP manage-PST  
Expected reading: ‘The teacher managed to tell an interesting story / The teacher managed (to do so) that (someone) told an interesting story.’

(13) *tuman bəshə bəš-ax-ijə-n’ /bəš-ax-3 əxil-3  
Tumen.NOM letter write-NMN-ACC-3 /write-NMN-REFL begin-PST  
Expected reading: ‘Tumen began to write a letter / Tumen began someone’s writing of the letter.’

As we can see from (12)-(13), whether the understood subject of the embedded predicate is coreferential with the matrix subject does not matter: these matrix predicates cannot take CPs and nominalizations irrespective of the referent their subject denotes. Unlike -žə-clauses, CPs and nominalizations in Buryat do not permit long object movement. The fact that matrix verbs under consideration can combine only with clauses that can undergo LOM suggests that restructuring is obligatory (see also (Wurmbrand 2015) for the same claim).

In sentences with -žə-clauses the negative marker -(ə)güj- can occur only on the matrix predicate (14), but not on the embedded one (15).

2 In cases when the 1st person marker -b- is attached to an affix with -n- as its last consonant (as -əhən- in (12)), the following alternation, followed by deletion of -b-, takes place: -n- → -m- /__-b-.
The inability of the embedded predicate in a -žə-clause to take the negation marker suggests that the embedded clause does not have the functional structure that is required to host negation. Hence, if negation is TP-internal as standardly assumed, -žə-clauses are reduced clauses that are less than a TP in size.

Despite -žə-clauses being reduced, the embedded predicate can be modified by manner adverbs (16) and by some aspectual phrases (17).

(16) badma namejə aljər türğör zur-əžə əxıl-ʒ Badma.NOM 1SG.ACC slowly quickly draw-CONV begin-PST-NEG
‘Badma slowly began to quickly draw me.’

(17) dugər xojar sag başəg baš-əžə xojar minute so əxıl-ʒ Dugar.NOM two hour letter write-CONV two minute in begin-PST
‘Dugar began in two minutes to write a letter for two hours.’

In (16)-(17) the embedded predicate and the matrix predicate receive independent adverb modification that are incompatible with each other. This suggests that the embedded clause is at least a verbal phrase (VP) (see (Wurmbrand 2007) for the same argumentation for German), and thus, -žə-complements cannot be analyzed under the complex head approaches ((Bouma & van Noord 1997), (Saito & Hoshi 1998), among others).

To sum up, -žə-complements contain not less than a verbal phrase (VP), but do not contain a TP or higher projections of the functional domain.

3 The puzzle: voice morphology in subjectless clauses

In this section I show that despite the fact that the embedded predicate can take voice markers (for example, the passive marker -(ə)lda- in (3)-(4)), there are no subjects in -žə-clauses. In section 2 I have shown that overt subjects cannot occur in -žə-complements. Here I argue that there are no null subjects (PRO) in -žə-clauses:
To diagnose whether there is PRO in -žə-clauses I use anaphor binding. Note that the possibility of anaphors occurring in -žə-clauses is itself not informative. For example, the possessive anaphor in (20) could be bound either by PRO (18) or by the matrix subject (19).

(20)  bədbaₐ PROᵈ?  öz-ᵝ-ing-ᵝ  bəsəag  bəs-ᵝ₈-ažə  ʒəxil-₈

Badma.NOM  self-POSS-REFL  letter  write-CONV  begin-PST

‘Badmaₐ began to write his letter.’

Thus, a more elaborated diagnostic has to be established. First, the embedded predicate has to be ditransitive with either an indirect object itself being an anaphor or an indirect object being modified by an anaphor. This anaphor has to be exclusively subject-oriented. Second, the LOM configuration should take place: the direct object of the embedded clause should be promoted into the matrix subject position. And there is an additional requirement that has to hold in a language under consideration: external arguments in instrumental case (“by-phrases”) should in principle be able to control PRO.

Structures with (18) and without (19) PRO make different predictions about the grammaticality of the described above configuration (table 1 in (21)):

(21)  Table 1. The anaphor binding diagnostic (with possessive anaphor  öz:ringö)

<table>
<thead>
<tr>
<th>Type of structure</th>
<th>Derivation</th>
<th>Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure with PRO</td>
<td>Initial Structure:</td>
<td>Sᵈ [PROᵈ  öz:ringöᵈ  IO_DAT DO_ACC CONV] Vᵈ *</td>
</tr>
<tr>
<td></td>
<td>Structure after LOM:</td>
<td>DO_NOM₈ by-Sᵈ [PROᵈ  öz:ringöᵈ  IO_DATTX CONV] V₈-PASS OK</td>
</tr>
<tr>
<td>Structure without PRO</td>
<td>Initial Structure:</td>
<td>Sᵈ [  öz:ringöᵈ  IO_DAT DO_ACC CONV] Vᵈ</td>
</tr>
<tr>
<td></td>
<td>Structure after LOM:</td>
<td>DO_NOM₈ by-Sᵈ [  öz:ringöᵈ  IO_DATTX CONV] V₈-PASS</td>
</tr>
</tbody>
</table>

If there is a PRO in the -žə-clause, LOM from an embedded clause with an anaphor in it should be possible: PRO would be still able to bind that anaphor. If, however, there is no PRO in the -žə-clause, LOM from the structure under consideration should result in an ungrammatical sentence: since there is no PRO, the subject-oriented anaphor inside the embedded clause will be unbound.

First I show that the introduced diagnostic can be applied to Buryat. Buryat anaphor  öz:ᵝ  (*self*, possessive form  öz:ringöᵈ, dative form  öz:ᵝ₈tö) is exclusively subject-oriented, and it is local: (22) shows that it has to be bound by a subject in the same clause that contains it.

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3 This argument goes back to (Wurmbrand 2001), see (Wurmbrand & Shimamura 2014, 2017) for similar argumentation with respect to Japanese restructuring constructions.
Buryat by-phrases (external arguments in instrumental case) can control PRO in constructions with obligatory control: in (23) the demoted matrix subject in instrumental case controls PRO in a purpose clause.

And as we have seen in section 1, long object movement is possible from -žə-clauses (2). Thus, Buryat has all the necessary conditions to apply the anaphor binding diagnostic.

The ungrammaticality of (25) suggests that there is no PRO in the -žə-clause, since if there was a PRO controlled by the by-phrase, it could serve as a binder for the possessive anaphor. This implies that the sentence in (24) is grammatical not due to the possessive anaphor being bound by PRO, but due to the fact that the reduced embedded clause does not constitute a binding domain for the local possessive anaphor and the anaphor is bound by the matrix subject. Note that (25) becomes grammatical if the possessive anaphor is removed and the indirect object has a 3rd person possessive marker instead. Thus, the ungrammaticality of (25) is due to the binding violation and not due to some independent reasons.
(26) nom-ud badm-ari nüxar-tə-n’ üg-əžə əxil-əgd-3
    book-PL.NOM Badma-INSTR friend-DAT-3 give-CONV begin-PASS-PST
    ‘Badma began to give the books to his(i) friend.’ (Lit. ‘The books were begun by Badma to give to his(i) friend.’)

Sentences in (27)-(28) illustrate that the binding diagnostic with an anaphor in the indirect object position (dative form ṛö:rtö) has the same result: LOM is impossible in the configuration under consideration.

(27) badmaɪ őr-t-ői ətkritkə əl’g3-əžə əxilə-3
    Badma.NOM self-DAT-REFL postcard send-CONV begin-PST
    ‘Badma began to send himself a postcard.’

(28) ətkritkə badmaɪ őr-t-ői əl’g3-əžə əxilə-3
    postcard.NOM Badma-INSTR self-DAT-REFL send-CONV begin-PASS-PST
    Expected reading: ‘Badma began to send himself a postcard.’ (Lit. ‘A postcard was begun by Badma to send to him(i).’)

The ungrammaticality of (28) suggests that there is no PRO in the -əžə-clause: if a PRO was present, it would be able to bind the dative anaphor even after the promotion of the embedded direct object into the matrix subject position, since Buryat allows PROs being controlled by by-phrases.

To sum up, there is no PRO in -əžə-clauses: only the structure without PRO makes correct predictions about anaphor binding in sentences with LOM.

4 Analysis

The availability of independent adverbial modification of the embedded predicate in -əžə-clauses (section 2) argues against the complex head approach (((Bouma & van Noord 1997), (Saito & Hoshi 1998), among others)). The possibility of voice morphology (ex., the passive morpheme) on embedded predicates of -əžə-clauses (section 1) argues against the bare VP-complementation approach (Wurmbrand 2001). The possibility of voice morphology on the embedded predicate is in conflict with the observation that -əžə-clauses have no subjects, even null ones (section 3). This discrepancy constitutes the main puzzle: how can an embedded verb both share its voice domain with a matrix clause (hence, have no subject of its own) and attach voice morphemes at the same time? I propose that a solution to this question can be found if a version of the Voice restructuring approach (see (Wurmbrand 2015), (Wurmbrand & Shimamura 2014, 2017)) is adapted. I argue that predicates of -əžə-clauses can have Voice projections in their structure, but they are deficient: their voice feature has to establish a relationship with the voice feature of a higher projection; their φ-feature, if present, cannot be valued by a noun phrase. In section 1.1 I discuss my assumptions and the main components of the proposal. In section 1.2 I show how this proposal derives the constructions in (1)-(4). In section 1.3 I briefly discuss one further prediction that this analysis makes and that is borne out.
1.1 The basic ingredients

I assume a split voice domain, where \( v \) functions as a verbalizer and marks transitivity (\( v_{TR} \) and \( v_{ITR} \)) and Voice introduces an AGENT/CAUSER (Kratzer 1996) or encodes PASSIVE. The Voice head has a voice feature which can be valued either as CAUS or as PASS (voice: CAUS, voice: PASS). In addition, Voice can also have interpretable \( \phi \)-features, which can be inserted unvalued (\( i\phi:___ \)) or valued (\( i\phi: val \)). I also assume Reverse Agree mechanism:

\[
\text{(29) Reverse Agree (Wurmbrand 2014b):}
\]

\[
\begin{align*}
& \text{A feature } F: ___ \text{ on } \alpha \text{ is valued by a feature } F: val \text{ on } \beta, \text{ iff} \\
& \quad \text{i. } \beta \text{ c-commands } \alpha \text{ AND} \\
& \quad \text{ii. } \alpha \text{ is accessible to } \beta. \text{ [accessible: not spelled-out]} \\
& \quad \text{iii. } \alpha \text{ does not value } \{ \text{a feature of } \beta \}/\{ \text{a feature } F \text{ of } \beta \}. 
\end{align*}
\]

My analysis of the interaction between matrix and embedded voice domains can be summed up in the following four statements:

1. **Voice Stacking:** VoicePs can be stacked: a verb can merge with several projections of Voice with different values of their voice features.

2. **Deficient VoiceP:** Restructuring verbs can have VoicePs, but they are deficient: their voice feature comes into the derivation unvalued; their \( \phi \)-feature, if present, cannot be valued by a noun phrase.

3. **Voice Agreement:** Voice features and \( \phi \)-features of restructuring verbs can be valued through agreement (Reverse Agree: upward probing, downward evaluation) with a higher Voice projection: either with an additionally merged Voice or with the Voice of the matrix clause.

4. **Voice Matching:** If the matrix verb has a VoiceP, its voice feature has to have the same value as the highest projection of Voice (see (Wurmbrand & Shimamura 2017)) in the embedded clause.\footnote{We leave the question of whether Voice Matching is achieved by Reverse Agree, other versions of Agree or some other mechanism, open.}

Matrix verbs that occur in the -\( \tilde{\omega} \)-construction are ambiguous between a transitive (with \( v_{TR} \)) and an intransitive use (with \( v_{ITR} \)). An intransitive matrix verb does not merge with Voice. A transitive matrix verb merges with Voice that can have the following features: either voice: CAUS, \( i\phi:___ \) (active voice) or voice: PASS, \( i\phi: val \)\footnote{We follow (Legate 2012) and (Wurmbrand & Shimamura 2017) in assuming that passive Voice comes with lexically valued \( i\phi \)-features corresponding to the implicit agent. Since the \( i\phi \)-features of the passive Voice are valued, no non-oblique DPs are merged.} (passive voice). Restructuring transitive verbs merge with \( v_{TR} \) and with a VoiceP that has unvalued voice features (voice:___, \( i\phi:___ \)), which can be valued only through agreement. Voice that is valued through agreement has a null spell-out.

1.2 Deriving voice restructuring with transitive verbs

In this section I apply the proposed analysis to the sentences in (1)-(4). The basic transitive configuration (1), repeated here as (30), receives the analysis in (31).
(30)  badma  namej ja  zur-əʒə  ʒxil-ʒ
Badma.NOM 1SG.ACC draw-CONV begin-PST
‘Badma began to draw me.’

(31)  Pic. 5. Transitive embedded verb, transitive configuration (30):

(32)  bi  badm-ar  zur-əʒə  ʒxil-əgd-ʒ-b
1SG.NOM Badma-INSTR draw-CONV begin-PASS-PST-1SG
‘Badma began to draw me.’ (Lit. ‘I was begun to draw by Badma.’)

(33)  Pic. 6. Transitive embedded verb, passivized matrix predicate (32):
In this case voice and φ-features of the embedded predicate are also valued through Reverse Agree with the voice and φ-features of the matrix Voice. Thus, the deficient VoiceP of the restructuring verb receives values voice: PASS and iφ: val_AG. This structure satisfies Voice matching trivially, just as in the previous case. Note that in both (30)-(31) and (32)-(33) the fact that the understood agent of the embedded predicate is the same as the matrix subject is accounted for by agreement in φ-features between the matrix and the embedded verb.

When the embedded predicate is passivized (34)-(35), voice and φ-features of the embedded predicate are valued through Reverse Agree with the voice and φ-features of the additionally merged Voice projection (voice: PASS, iφ: val_AG) that is spelled-out as -gd-. Since the matrix verb does not have a Voice projection, Voice matching is not applicable.

(34) bi  badm-ar zur-əgd-əžə ʒxil-ʒ-b  
1SG.NOM Badma-INSTR draw-PASS-CONV begin-PST-1SG
‘Badma began to draw me.’ (Lit. ‘I began to be drawn by Badma.’)

(35) Pic. 7. Transitive passivated embedded verb, intransitive matrix verb (34):

The same agreement with the voice and φ-features of the additionally merged Voice projection takes place when both the embedded predicate and the matrix predicate are passivized (36)-(37). In this structure Voice matching is satisfied: features of the merged Voice projection (highest projection of the embedded clause) match the features of the matrix Voice.6

(36) bi  badm-ar zur-əgd-əžə ʒxil-əgd-ʒ-b  
1SG.NOM Badma-INSTR draw-PASS-CONV begin-PASS-PST-1SG
‘Badma began to draw me.’ (Lit. ‘I was begun to be drawn by Badma.’)

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6 I assume that some process of identification between the two implicit agents takes place (of the merged Voice and the matrix Voice) – they are mapped onto the same individual.
1.3 One of the predictions: different voice markers on $Ve$ and $Vm$

One prediction that my analysis makes is the following: due to Voice stacking causative and passive markers should be able to co-exist on the same predicate in Buryat, but in the structure with a restructuring verb due to voice matching it should be impossible for the embedded verb to take a causative marker when the matrix verb is passivized (or for the embedded verb to be passivized when the matrix verb takes a causative marker). As (38)-(39) show, this prediction is borne out: voice morphology can be in principle stacked, but it is impossible to passivize the matrix predicate in a sentence with a -žə-clause when the embedded verb takes a causative marker.

(38) tumən əjun-ər sajənə-daemon zur-ul-əgd-a
Tumen.NOM Ojuna-INSTR Sajana-DAT draw-CAUS-PASS-PST
‘Tumen was drawn by Sajana due to Ojuna’s order.’

(39) *bi badm-ar sajənə-daemon zur-ul-žə əxil-əgd-a-b
1SG.NOM Badma-INSTR Sajana-DAT draw-CAUS-CONV begin-PASS-PST-1SG
Expected reading: ‘Badma began to order Sajana to draw me.’ (Lit. ‘I was began by Badma by Sajana to cause to draw.’)

5 Conclusions

In this paper I have shown that Buryat -žə-complements involve restructuring predicates: -žə-clauses are reduced and include more structure than a VP, but less than a TP. I have argued that -žə-clauses do not contain subjects: they can neither take an overt subject, nor have a null PRO subject. I have argued that -žə-complements cannot be analyzed neither under complex head approaches ((Bouma & van Noord 1997), (Saito & Hoshi 1998), among others), since embedded predicates
of -žə-clauses can receive independent adverbial modification, nor under the bare VP complementation approach, since embedded predicates of -žə-clauses can take voice morphology. I have argued that -žə-clauses have a Voice domain, but it is deficient (see Wurmbrand (2015), (Wurmbrand & Shimamura 2014, 2017)): the voice feature of Voice has to establish a relationship with the voice feature of a higher Voice projection; the φ-feature of Voice, if present, cannot be valued by a noun phrase. I have proposed an analysis of the interaction between the voice domain of the -žə-clause and the matrix predicate, which employs a mechanism of voice matching: if the matrix verb has a VoiceP, its voice feature has to have the same value as the highest projection of Voice in the embedded clause.

References