Kazym Khanty non-finite forms: Multifunctionality and variability
in the amount of structure

Daria Bikina1,2 (dbikina@g.harvard.edu);
Denis Rakhman1 (drahman2@mail.ru);
Aleksey Starchenko1 (aleksey-starchenko@mail.ru);
Svetlana Toldova1 (toldova@yandex.ru)

Vsevolod Potseluev

0. Introduction

Language info:
- Khanty > Ob-Ugric > Uralic
- data: fieldwork in 2018-2020, mostly elicitation
- SOV, head-final

The two non-finite forms: -\textit{ti} (nfin.npst) and -\textit{əm} (nfin.pst) are handling almost all subordination. In her study of the Obdorsk dialect of Khanty, Nikolaeva (1999) distinguishes between Infinitive on -\textit{ti} and two participles on -\textit{ti} and on -\textit{əm} that differ in time reference (non-past and past, correspondingly).

Infinitive can occur in same-subject purpose clauses (1) and as complements of several verbs and experiential adjectives (2):

\textbf{INFINITIVAL PURPOSE CLAUSES}

(1) \textit{vasa-jen woš-a man-s motor λot-ti}

Vasya-POS 2SG city-LOC go-PST[3SG] engine buy-NFIN.NPST

‘Vasya went to the city to buy a boat engine’.

\textbf{INFINITIVAL SENTENTIAL COMPLEMENTS}

(2) \textit{waśaj-en ńań le-ti wuli-s}

Vasya-POS 2SG bread eat-NFIN.NPST stop-PST[3SG]

‘Vasya stopped eating bread’.

Participles form complement clauses, adverbial clauses, and relative clauses.

\textbf{PARTICIPIAL SENTENTIAL COMPLEMENTS}

(3) \textit{ləw wuli katəl-ti wer-l ma wo-ɬ-em}

s/he deer catch-NFIN.NPST deed-POSS.3 I know-NPST-1SG.SG

\footnote{1 Higher School of Economics; 2 Harvard University}

\footnote{2 The second possessive on proper nouns is a discourse marker. The use of possessive affixes in non-possessive contexts is typical for Uralic, see (Nikolaeva 2003; Simonenko 2014; Mikhaylov 2020) among others.}
‘I know that he is catching a deer’.

**PARTICIPIAL ADVERBIAL CLAUSES**

(4) muj ropata tāj-t-əw-ən ɣot-el mir-ew jem-a
   we job have-nfin.npst-poss.1pl-loc house-poss.3 people-poss.1pl good-dat
   tāj-t-əl-əw
   have-NPST-O-1PL

‘When we have a job, people in our house live well’.

**RELATIVE CLAUSES**

(5) ma aš-em ari-ti ar katra
   I father-POSS.1SG sing-NFIN.song ancient
a. ‘The song that my father is singing is old’.

b. ‘The song that my father will sing is old’.

(6) mutgal arij-əm ewi aškolaj-ən ropit-l
   yesterday sing-NFIN.PST girl school-LOC work-NPST[3SG]

‘The girl who was singing yesterday works at school’.

We claim that all the variety of Khanty non-finite clauses can be systematized in another way than it is done in existing grammatical descriptions and works on non-finite clauses in Khanty (Nikolaeva 1999; Koškareva 2001, 2006; Kovgan 2007; Kaksin 2010). We are going to group non-finite constructions basing on their morphosyntactic properties.

1. **Subject expression and agreement**

The basis of our classification is the way non-finite constructions express their subject and show agreement with it. Besides control clauses (infinitival clauses in Nikolaeva’s terms), all other constructions allow for the overt expression of a subject marked with nominative case. There are three subject agreement patterns in non-finite clauses. No object agreement is ever possible.

- **Pattern 1:** no agreement

(7) ma aš-em par-s-em rat xar əl-ti
   I father-POSS.1SG ask-PST-1SG.SG fireplace place set.on.fire-NFIN.NPST
   ‘I asked my father to make a bonfire’.

- **Pattern 2:** possessive markers on an extracausal element:
  o on the head noun:

---

3 The *wef*-construction can be analyzed as relativization of the factive argument in terms of (Davidson 1967; Parsons 1990). See (Bikina, Starchenko 2019) for analysis.
(8) ɭʊw ɭʊŋ-ti  kɪnškaj-ɭ
s/he  read-NFIN.NPST  book-POSS.3
‘the book she is reading’
  o  on the “auxiliary” (semantically vacuous) head noun:

(9) = (3) ɭʊw  wʊlɪ-ɭ ti  wɛɭ-ɭ  ma  wəɭ-ɭ-em
s/he  deer  catch-NFIN.NPST  deed-POSS.3  I  know-NPST-1SG.SG
‘I know that he is catching a deer’.

(10) pɛt’ə-jɛn  nɑŋti  ɭɑwɔɭ-ɭti  mɑr-ɭ  maʃəj-en  ɭɑnt  jɪŋk
Petya-POSS.2SG  you.ACC  wait-NFIN.NPST  time-POSS.3  Masha-POSS.2SG  flour  water
kawɔrt-əş
cook-PST[3SG]
‘While Petya was waiting for you, Masha cooked a soup’.
•  Pattern 3: possessive marker on the (non-finite) verb:

(11)  mɑ  jɛm-ɑ  ul-t-em  pɑtɑ  ɭɑŋk-em  amp-ɔɭ
I  sacredness-DAT  sleep-NFIN.NPST-POSS.1SG  for  mother-POSS.1SG  dog-POSS.3
jɪrɑ  wɑʃ-t-s-ɔɭ-ɭɛ
away  chase-PST-3SG-O
‘My mother chased away the dog in order for me to sleep well’.

These options are not universally acceptable for all non-finite constructions.

<table>
<thead>
<tr>
<th></th>
<th>No agreement</th>
<th>Extraclausal possessive agreement</th>
<th>Possessive agreement on the verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infinitives</td>
<td>ok</td>
<td>-</td>
<td>*</td>
</tr>
<tr>
<td>Relative clauses</td>
<td>Non-pronominal subjects only (including pro-drop) 4</td>
<td>ok (head noun)</td>
<td>*</td>
</tr>
<tr>
<td>Participial sentential complements</td>
<td>Non-pronominal subjects only (including pro-drop)</td>
<td>ok (wɛɭ ‘deed’)</td>
<td>*</td>
</tr>
<tr>
<td>Sentential different-subject complements</td>
<td>Non-pronominal subjects only (excluding pro-drop)</td>
<td>-</td>
<td>ok</td>
</tr>
<tr>
<td>Participial adverbial clauses</td>
<td>Non-pronominal subjects only (excluding pro-drop)</td>
<td>Depends on the postposition  mɑr, mɑrn, purajən ‘when’ Probably others  pɑtɑ ‘in order to’, -n (locative case, expresses simultaneity),</td>
<td>ok</td>
</tr>
</tbody>
</table>

4 This is the pattern represented in possessive noun phrases in Kazym Khanty: pronominal subject require obligatory possessive agreement, non-pronominal subjects show optional agreement.
Unlike infinitival clauses, participial ones seem to be highly diverse both in form and function. We thus suppose that this classification can be replaced by a more exact one. We do not use terms Infinitive and Participle but consider the only distinction between non-past and past non-finite forms (which is reflected in our glosses). We claim further that the uses of non-finite forms can be classified basing on their morphosyntactic peculiarities rather than on the contexts they occur in. We are going to reduce the multifunctionality of Khanty non-finite forms to the following three morphosyntactic classes:

<table>
<thead>
<tr>
<th>Bare (non-agreeing) non-finites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-finite forms bearing agreement on themselves (Verb-agreement non-finites)</td>
</tr>
<tr>
<td>Constructions with non-finite forms with agreement on the nominal head (Head noun-agreement non-finites)</td>
</tr>
</tbody>
</table>

We are going further to discuss other morphosyntactic parameters that contribute to our claim.

### 2. Interaction with argument alternations

Khanty exhibits a morpheme -a/-i- that has been traditionally described as passive (see Nikolaeva 1999): although it follows tense, it promotes object to subject position. The demoted subject bears locative case.

(12) a. pet’aj-en χʉw jem-əŋ χatl lawt-əs
   Peter-2SG long sacredness-PROP day wait-PST[3SG]
   b. jem-əŋ χatl pet’aj-en-ən χʉw lawt-s-a
      sacredness-PROP day Peter-2SG-LOC long wait-PST-PASS

‘Peter has been waiting long for the holiday’.

Non-finite forms are voice-neutral; the only difference between active and passive non-finite forms is the encoding of the Agent (nominative vs. locative, correspondingly). Most syntactic and morphosyntactic types of non-finite clauses allow for passivization, including relativization (13), relativization-like sentential complements (14), adjuncts (15) with agreement on the nominal head, as well as sentential complements (16) and adjuncts (17) with agreement on the non-finite form:

(13) a. šaš-əm lot-əm pāsan nun moŋ-s-əm
grandmother-POSS.1SG buy-NFIN.PST table up wipe-PST-1SG.SG
Some of the constructions discussed above are syntactically islands, some are not.

3. Island effects

Some of the constructions discussed above are syntactically islands, some are not.

---

5 Example courtesy of Vsevolod Potseluev.
INFINITIVAL SENTENTIAL COMPLEMENTS – NOT ISLANDS

(20) \textit{kat’aj-en} \textit{numós wer-os} \textit{won χot lot-ti}
    Kate-POSS.2SG decision do-PST[3SG] big house buy-NFIN.NPST
    ‘Kate decided to buy a big house’.
(21) \textit{mujsɔr χot kat’aj-en numós wer-s lot-ti?}
    which house Kate-POSS.2SG decision do-PST[3SG] buy-NFIN.NPST
    ‘What house did Kate decide to buy?’

ADVERBIAL PARTICIPIAL CLAUSES – ISLANDS?

(22) \textit{ma ul-ɔm mər-em-ɔn pet’aj-en ow-em-a}
    I sleep-NFIN.PST time-POSS.1SG-LOC Peter-POSS.2SG door-POSS.1SG-DAT
    seŋk-ɔs
    knock-PST[3SG]
    ‘While I was sleeping, Peter knocked on the door’.
(23) \textit{ʔχuj pet’aj-en ul-ɔm mər-al-ɔn ow-a seŋk-ɔs?}
    who Peter-POSS.2SG sleep-NFIN.PST time-POSS.3-LOC door-DAT knock-PST[3SG]
    ‘Who Peter knocked on the door, while who was sleeping?’

PARTICIPIAL SENTENTIAL COMPLEMENTS – ISLANDS?

(24) \textit{ʔmuj nəŋ lot-ɔm wer-en nom-l-en?}
    what you buy-NFIN.PST deed-POSS.2SG remember-NPST-2SG.sg
    ‘What do you remember that you bought?’

PURPOSE CLAUSES – ISLANDS

(25) \textit{ma χop lot-ti pāta woš-a jāŋχ-s-ɔm}
    I boat buy-NFIN.NPST for city-DAT go-PST-1SG
    ‘I went to the city to buy a boat’.
(26) \textit{*muj nəŋ lot-ti pāta woš-a jāŋχ-s-ɔm?}
    what you buy-NFIN.NPST for city-DAT go-PST-2SG
    Intended reading: ‘What did you go to the town to buy what?’

RELATIVE CLAUSES – ISLANDS

(27) \textit{kol’aj-en mɔrχ wonś-ti ewi ʂiwal-ɔs}
    Kolya-POSS.2SG cloudberry pick-NFIN.NPST girl see-PST[3SG]
    ‘Kolya saw a girl who was picking cloudberries’.
(28) \textit{*muj kol’aj-en wonś-ti ewi ʂiwal-ɔs?}
    what Kolya-POSS.2SG pick-NFIN.NPST girl see-PST[3SG]
    Intended reading: ‘What did Kolya see the girl who was picking what?’

Island effects show the difference between bare (infinitival) and agreeing (participial) non-finite clauses.

<table>
<thead>
<tr>
<th>Bare non-finite forms</th>
<th>Not islands</th>
</tr>
</thead>
</table>

6 Example courtesy of Polina Kasyanova.
4. Adverbial modification

The constructions in question also differ with respect to compatibility with different adverbs, which argues for the difference in the amount of functional structure they involve (Cinque 1999).

Verb-agreement non-finite clauses allow for high epistemic adverbs:

(29) ma *wașaj-en jina juxt-t-al χoř̃s-em
   I Vasya-POSS.2SG indeed come-NFIN.NPST-POSS.3 hear-PST-1SG.SG
   ‘I heard that Vasya is indeed coming’.

Sentential arguments and adverbial clauses of this type do not allow for epistemic adverbs (29) but are still compatible with most tense-related modifiers (30):

(30) *ši neñ-en ńawr-em jina *lemɔt-t-em wer ma wo-s-em
   EMPH woman-POSS.2SG child indeed put.on-TR-NFIN.PST deed I know-PST-3SG.SG
   Intended reading: ‘I knew that this woman has indeed already dressed her baby’.

Relative clauses are ungrammatical with tense-related adverbs (31) but allow for agent-modifying (32) and manner (33) adverbs:

(32) *ma joχ̃t män-ɔm lapkaj-em
   I later go-NFIN.PST shop-POSS.1SG
   Intended reading: ‘the shop I went later to’

(33) apš-ɛm-ən neman šukat-ɔm an
   younger.brother-POSS.1SG-LOC intentionally break-NFIN.PST cup
   ‘the cup that my younger brother intentionally broke’

(34) jem-a arij-ɔm ewi
   sacredness-DAT sing-NFIN.PST girl
   ‘the girl who sang well’

Bare non-finite forms are not compatible are not compatible with temporal adverbs (34). Neither can they be modified with agent-oriented adverbs (35).

(35) *pet’aj-en ɭaŋx-əl jāʃawəl woș-a män-ti
    Petya-POSS.2SG want-NPST[3SG] soon city-DAT go-NFIN.NPST
    Intended reading: ‘Peter wants to go to the city soon’.

<table>
<thead>
<tr>
<th>Head noun-agreement non-finite forms</th>
<th>Relative clauses – strong islands, other constructions – weak islands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb-agreement non-finite forms</td>
<td>Islands</td>
</tr>
</tbody>
</table>
(36) *₇₉w ₇₉j-₇₉ ₇₉neman ₇₉χop ₇₉šukat-ti  
s/he have-NPST[3SG] intentionally boat break-NFIN.NPST  
Intended reading: ‘He can intentionally break the boat’.

<table>
<thead>
<tr>
<th></th>
<th>Epistemic adverbs</th>
<th>Temporal adverbs</th>
<th>Aspectual adverbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb agreement</td>
<td>Ok</td>
<td>Ok</td>
<td>Ok</td>
</tr>
<tr>
<td>Head noun agreement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentential arguments</td>
<td>*</td>
<td>Ok</td>
<td>Ok</td>
</tr>
<tr>
<td>adverbial clauses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(wër-clauses)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative clauses</td>
<td>*</td>
<td>*</td>
<td>Ok</td>
</tr>
<tr>
<td>Bare non-finites</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

5. Results

<table>
<thead>
<tr>
<th></th>
<th>Highest adverbs</th>
<th>Island effects</th>
<th>Passive voice</th>
<th>Overt subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb agreement</td>
<td>CP</td>
<td>Strong</td>
<td>ok</td>
<td>ok</td>
</tr>
<tr>
<td>Head noun agreement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentential arguments</td>
<td>TP</td>
<td>Weak</td>
<td>ok</td>
<td>ok</td>
</tr>
<tr>
<td>adverbial clauses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(wër-clauses)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative clauses</td>
<td>AspP</td>
<td>Strong</td>
<td>Argument</td>
<td>ok</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>relativisation only</td>
<td></td>
</tr>
<tr>
<td>Bare non-finites</td>
<td>VP</td>
<td>No island</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>effects</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Bare non-finites are indeed the most distinct class of Kazym Khanty non-finites.
- Amount of verbal structure according to the adverb test: Verb agreement clauses > non-relative head noun agreement clauses > relative head noun agreement clauses > bare non-finites
- Infinitival sentential complements are not islands, while infinitives under postpositional and nominal heads are

6. Discussion

Adyghe, Caponigro and Polinsky (2011):

- DP complements
- TP complements
- no CP complements; CP relativisation
- Adverbial clauses and CP sentential complements constructed as “auxiliary” nouns modified by relative clauses or just headless relative clauses:

**ADYGHE**

(37) \[DP \{CP ć’ale-r qə-zə-re-ḳʷež’ə-s’ə\} \[NP qeba-r]\] ə-gwəreś

boy-ABS INC-REL.OBL-APPL-return-FUT-ABS news-ABS 3SG.ERG-understood

‘She understood that the boy will arrive’ [Caponigro, Polinsky 2011: 106]

cf. Kazym Khanty:

(38) = (9) = (3) ġw wuli katəl-ti wer-l ma wo-l-em

s/he deer catch-NFIN.NPST deed-POSS.3 I know-NPST-1SG.SG

‘I know that he is catching a deer’.

<table>
<thead>
<tr>
<th></th>
<th>Adyghe (Caponigro, Polinsky 2011)</th>
<th>Kazym Khanty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DP complements</strong></td>
<td>ok</td>
<td>ok</td>
</tr>
<tr>
<td>Overt non-relative</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>complementizers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**Genuine clausal CP</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>complements</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TP complements</strong></td>
<td>ok</td>
<td>*</td>
</tr>
<tr>
<td>Relative clauses</td>
<td>CP</td>
<td>TP</td>
</tr>
<tr>
<td><strong>TP</strong></td>
<td>--</td>
<td>TP relativizing “auxiliary” head nouns (always overt)</td>
</tr>
<tr>
<td><strong>complementation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“rescue strategy”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Null head nouns</strong></td>
<td>ok</td>
<td>*</td>
</tr>
<tr>
<td><strong>CP</strong></td>
<td>CP relativizing “auxiliary” head nouns (possibly null)</td>
<td>CP obtaining nominal features</td>
</tr>
<tr>
<td><strong>complementation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“rescue strategy”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proposal:
Khanty lacks both CP relativization and overt complementizers

→ use TP relativization in Adyghe-like way
→ or give nominal features to CP

Verb-agreeing CP clauses as nominals:

• postposition complements (11)
• capable of bearing case (4)
• possessive markers (11)
• triggering object agreement on the matrix verb

\[ ma \ aś-em \ οχραλ \ wer-t-αλ \ wo-λ-em \]
me father-poss.1sg sledge do-nfin.npst-poss.3sg know-pst-1sg.sg
‘I know that my father is making a sledge.’

- although this agreement cannot be plural

[a iki rat-en χορτ-μ-αλ]
little man fireplace-POSS.2SG douse-NFIN.PST-3SG

\[ pa \ [aśem \ ar \ ari-m-αλ] \ ma \ wο-λ-em/^*-λam \]
ADD father-POSS.1SG song sing-NFIN.PST-POSS.3SG I know-NPST-1SG.SG/^1SG.PL
‘Я знаю, что мальчик потушил костер и мой отец спел песню’

Hypothesis: DP – (PossP) – CP structure (see Alexiadou 2001 for Greek and Turkish nominalized clauses)

(1) to ați țirîhe
‘the that he came’

(2) Ben [siz tatil-e çı̇k-acag-iniz-i]
I YOU-GEN vacation-dat go-out-FACT,FUT-2PL-ACC
duy-du-m
hear-PAST-1SG
‘I heard that you will leave for vacation’

List of abbreviations
Acknowledgments

The results Basic Research Program at the National Research University Higher School of Economics (HSE University) in 2020 are presented in this work.

We are incredibly grateful to the speakers of the Kazym dialect we have been working with, especially to Alexey Randymov.

References


Kovgan, Elena V. 2007. Semantičeskie tipy pričastnyx opredelitel'nyx konstrukcij (na materiale zapadnyx dialektov xantyjskogo yazyka) [Semantic types of participial definitional constructions
Appendix: mirative clauses

- Independent usage of verb-agreement non-finites

(39) aś-em ḟuyə swər-t-ał
  father-POSS.1SG wood chop-NFIN.NPST-POSS.3
  ‘It turns out that my father is chopping wood’.

- no agreementless usages attested
  o besides passive voice cases:

(39) ropata jox-l-an-en ʒot oməs-ti
  work people-PL-POSS.2SG-LOC house build-NFIN.NPST
  ‘It turns out that is being built by laborers’
  (Golosov, p.c.)

  cf.

  ENGLISH

(40) That I should live to see such ingratitude!
  (Quirk et al. 1985)

  GERMAN

(41) Daß du immer noch Witze mach-en kann-st
That you still jokes do-INF can-2SG
‘That you can still make jokes about it!’

(Busch 1976)

Hypothesis: insubordination and reanalysis as a main clause structure (see Evans 2007 for the overview)

The degree of insubordination is not clear yet (conventionalized ellipsis or reanalysis as a main clause structure, see Evans 2007)