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Pilot study of Intonation Units in Khanty discourse

1. Introduction

1.1. Khanty

Khanty is a Uralic language which is spoken in Western Siberia. Together with Mansi it forms the Ob-Ugrian branch of the Uralic language family. Khanty can be divided into three distinct groups: Northern, Eastern, and Southern Khanty. These three varieties differ significantly. Under Russian influence, almost all Khanty speakers are at least bilingual. In addition, due to the oil and gas industry, traditional Khanty livelihoods are extremely endangered. Along with the endangerment of the traditional lifestyle, the language itself is also seriously endangered.

Khanty attests extensive morphosyntactic resources which differ typologically from the other Uralic languages, for example, the use of a verb of possession ('have'), the mention of the agent in the passive, a ditransitive structure ("dative shift") and a non-canonical locative subject (in Eastern Khanty; for more about the locative subject see Sosa 2017: 3, 33–61). The basic word order in Khanty is SOV. In recent decades the perspective of information structure has become a promising approach to the study of the Ob-Ugrian languages in order to describe the functions of the rich morphosyntactic resources of these languages (e.g. Nikolaeva 1999; Skribnik 2001; Filchenko 2010; Virtanen 2015; Sosa 2017; Sosa & Virtanen 2019).

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1.2. Information structure

After the term and concept "information structure" (IS) was coined by Halliday in 1967 (Halliday 1967: 199), it has been considered an important concept in discourse analysis (e.g. Brown & Yule 1983) and as a determining factor in the formal structuring of sentences (e.g. Lambrecht 1994: 3–5). In short, IS explains how different linguistic resources, such as phonetics, phonology, morphology or syntax, are marked for their pragmatic functions in discourse. These pragmatic functions are, for example, contrast of topic and focus, highlighting and de-emphasizing, newness or givenness, definitiveness and indefinitiveness. These linguistic devices for expressing these pragmatic functions – in other words, the information status – differ from language to language.

2. Theoretical background

2.1. Phonology on morphosyntax and pragmatics

Phonology has developed within the larger field of linguistics. Some scholars deal with the connection between phonology and higher levels of language such as morphology, the lexicon and syntax (Pennington 2007). Intonation, as studies have shown, is multifunctional, with many issues including linguistic issues. Paralinguistic and non-linguistic issues[1] can influence the production of intonation (Leemann 2009: 1).[2]

In fact, the concept of IS was originally inspired by phonology which can convey paralinguistic information (Halliday 1967; many in the Prague School, see e.g. Vachek 1966). Bolinger (1972) stated in an influential study that intonation is related to a speaker's intent rather than syntax. A certain utterance would only be appropriate in a certain discourse context since, for example, the intonation of an utterance is strongly related to carrying the information in discourse. Lexically and grammatically the same utterances could mean different content in the conveying of different information in different intonations. The role of intonation/phonology has been studied and described in discourse and information structuring, for example, how intonation phrasing functions with focus ("focus projection") (see e.g. Selkirk 1998). The following example demonstrates how the same sentences in different intonations provide answers to different

1. Leeman quotes Fujisaki's distinctions: Linguistic information is "the symbolic information that is represented by a set of discrete symbols and rules for their combination." Paralinguistic information is "the information that is not inferable from the written counterpart but is deliberately added by the speaker to modify or supplement linguistic information." Non-linguistic information is "not directly related to the linguistic and paralinguistic contents of the utterances and cannot generally be controlled by the speaker." (Leeman 2009: 22; Fujisaki 2004)

2. Leeman (2009: 1) enumerates the most central factors of the issues which can influence the intonation by quoting the previous studies: "–– social factors, such as sex and age (e.g. Bolinger 1989: 9ff), language-dependent factors, such as *tones* or *pitch accents* (e.g. Cruttenden 1986: 1ff), linguistic and paralinguistic functions like phrase and lexical accents, prominence, IS, focus, contrast, or conversational setting, as well as emotion and attitude.

wh- questions. These square brackets show the accented pitches in the sentence and the parentheses the appropriate questions for evoking each utterance (Example 1):

Example 1. Different intonations and the speakers' intent. (Selkirk 1996: 554)

'Mary bought a book about BATS.'

1) Mary bought a book about [BATS].
(What did Mary buy a book about?)

2) Mary bought a book [about BATS].
(What kind of book did Mary buy?)

3) Mary bought [a book about BATS].
(What did Mary buy?)

4) Mary [bought a book about BATS].
(What did Mary do?)

5) [Mary bought a book about BATS].
(What's been happening?)

2.2. Intonation Unit

In most studies on discourse analysis, the *intonation unit* (= IU; Chafe e.g. 1993, 1994) is the standard unit which corresponds to a clause/sentence in studies on syntax. The IU is both an auditory and an informational unit and thought to be the basic unit of discourse production and information flow (e.g. Chafe 1994; Croft 1995; Du Bois 1987; Du Bois et al. 1993). The IU is also called e.g. an *intonation(al) phrase* (e.g. Pierrehumbert 1980), *intonation group* (Selkirk 1984; Halliday 1967; 1985; Cruttenden 1986) or *tone unit* (Brazil 1985; Crystal 1975). All of these are similar or almost the same in principal (Helasvuo 2001).

In phonological terms, the *intonation unit* (e.g. Chafe 1993; 1994) is defined as "a stretch of speech uttered under a single coherent intonation contour" (Du Bois et al. 1993: 47) which is delimited by a boundary tone, which is positioned at the edge of a phrasal constituent, and the IU must constitute a sense unit (Selkirk 1996). In other words, speech can be divided into IUs as one of the various kinds of units in language such as vowels, consonants, syllables, words or sentences. Among them, the IU is recognized on the basis of phonetic and phonological properties: changes in fundamental frequency (= pitch), changes in duration (= shortening or lengthening of syllables or words), changes in intensity (= loudness), as well as alternations in vocalization with silence (= pausing) and so on. The intonation unit appears in many languages and in many styles of speaking (Chafe 1994: 58, 62–63).

In syntactic terms, the IU does not correspond directly to a clause or other grammatical structure (e.g. Halliday 1967: 11; Hirst & Di Cristo 1998: 36). However, cross-linguistic studies show that most substantive IUs correspond to a single clause or a boundary in other some grammatical units (e.g. Chafe 1994: 65; Helasvuo 1991; 2003; Du Bois et al. 1993; Du Bois 2003: 19; Cruttenden 1986; Croft 1995).

In terms of IS (*information flow* in Chafe 1994), Chafe claims that an IU is the proper size to express and process the information and focus of consciousness. In other words, the IU verbalizes the information active in a speaker's mind at the moment of speaking. We have vast amounts of information in our memory, but most of this information is "inactive/semiactive" or "peripheral" and is not activated in consciousness at the moment of an utterance. In other words, "active" information, which is activated in consciousness at the moment of an utterance, is quite small. This means that the IU is related to human memory and its activation, which is related to the focusing of information, too (Chafe 1993).

We cannot simply equate IUs with clauses, even though some research shows the functional similarity between a clause and an IU. For example, in conversational Japanese, new information appears in almost the same pattern in a clause and an IU: the constraints which PAS suggest as "one new full-NP per clause" and "one new argument per clause", are also found in the IU as "one new full-NP per IU" and "one new argument per IU" (Matsumoto 2000). I will examine the relationship between IUs and clauses in Khanty later.

2.3. Discussion

The definition of an IU and other alternative terms are vague and varied among scholars. For example, Aho and Yli-Luukko have presented different theories, approaches and points of view on IUs: physiology, phonetics, phonology, cognitive, etc. According to these authors, it is not always easy to find the boundary of IUs (Aho & Yli-Luukko 2005).

In addition to the above-mentioned problems, an IU differs across different languages and the intonation pattern and system of any language is complex. Even though in many studied languages the boundary of an IU falls after a pause and falling intonation, the intonation of a language is quite different depending on the respective language, and its functions are varied – even within the same language. For example, Hungarian, which is a language from the same family as Khanty, has five basic intonation patterns depending on the functions of a clause and IU (e.g. Varga 1981; 1983; Fónagy 1998: 330–332).[3] Fónagy is doubtful and is of the opinion that many leading theories are well founded only in the case of English (Fónagy 1998: 334).

3. The five patterns of Hungarian are: 1) Falling, 2) Rising–falling, 3) Falling–rising, 4) Rising and 5) Descending (Fónagy 1998: 330).

3. Data

The total data used in this study consists of about 300 minutes and represents one of the Eastern Khanty variants, Surgut Khanty, and narrative discourse. Some of these have been published (Csepregi 1998; Csepregi & Sosa 2009). I have chosen three folklore tales, about 30 minutes of recording, for a closer analysis of the IU in Khanty. Unfortunately, the sound quality of some data is not ideal for phonological analysis, because the data was not recorded for the purpose of phonological analysis but rather for collection of folklore or morphosyntactic analysis. However, these recordings give tentative, interesting information sufficient for a brief description of the characteristic features attested for the intonation unit in Khanty.

In this study, according to the basic principles of various studies, the main criteria in defining the intonation units are pausing before an intonation unit and reset of pitch. Although an IU is defined as a perceptional unit, I have also used the acoustic device Praat to help in the analysis. Praat is a widely-used computer software application for analysis of phonetics and phonology in the IS. In the examples of this study, each IU appears on a separate line, except for some occasional IUs which are so long that they will not fit on a single line. The IUs in question are underlined (on the transcription, see Du Bois et al. 1993).

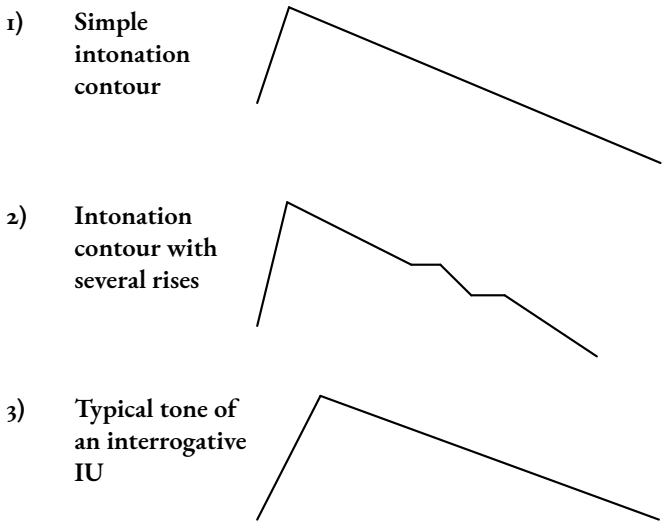
4. Intonation unit in Khanty: the relations between intonation, syntax, and information structuring

4.1. Phonology – prosody

Since many pitch lines are broken in the phonological chart of Praat due to poor sound quality, the statistics which I shall provide are indicative only. Some phonological tendencies are found nevertheless. I have thus divided the speech into IUs based on these phonological tendencies.

Generally, the tone of a IU in Khanty starts with a radical rise to a peak and begins falling more slowly than it rose. The highlight of the tone is usually the first syllable of the main word of the first NP, usually the subject NP. The main accent of a word often falls on the first syllable of a word depending on the amount and quality of the syllables in the word (Csepregi 1998: 12–13). As the pitch falls to the IU boundary, the pitch may slightly rise several times. The peaks of these small rises are usually the main accents in the words. The ending tone is generally lower than the starting one. After a pause, the pitch is reset at the new IU. The tone of an interrogative clause differs a little at the ending. In the interrogative clause, the pitch does not fall as much as in a declarative clause and both the starting and ending pitches are almost the same (Fig. 1).

Figure 1. Simplified chart of the IU in Khanty.



4.2. IU categories

Chafe (1993) categorizes the IU as: 1) substantive, 2) regulatory[4] or 3) fragmentary. Substantive IUs are "the contentful stretches of speech that include ideas of people, objects, events, and states. They are in a sense what language is about." The primary function of regulatory IUs is to regulate the flow of information like a *discourse marker* (Schiffrin 1987). Fragmentary IUs are incomplete units; most of them are begun, but not completed like the substantive IUs are. In this study, I will only analyze substantive IUs and fragmentary IUs if they are fragments of substantive IUs. In the Khanty folklore tale data, the subjective IUs represent the vast majority, about 94%. Others are quite few at about 5.5% for regulative and 0.3% for fragmentary IUs (Fig. 2).

Figure 2. IU categories in Khanty Folklore tales.

Subjective	613	(94.16%)
Regulative	36	(5.53%)
Fragmental	2	(0.31%)
Total	651 IUs	

In Khanty discourse *panə* ('and', 'then'), *t'upirnə* ('after that/this'), *mətə* ('well') and *ja* ('and') form typical regulative IUs. In the following Example 2, lines 1 and 2 are the typical regulative IUs and the line indicates the substantive IU.

4. Regulatory IUs can be divided into three subtypes as interpersonal, textual and cognitive (e.g. Halliday 1985). Interpersonal IUs are used in the interaction between speaker and hearer, textual ones regulate the linkage between IUs, and the cognitive ones signal some mental activity on the part of the speaker (Chafe 1993).

Example 2. Regulative and substantive IUs in Khanty discourse. (Csepregi 1998: 66)

(1) *panə*
and
'and'

(2) *t'u* *pırnə,*
that after
'then'

(3) *pır* *qătəλ-nə* *mən.*
following day-LOC go.PRT.3SG
'Then, she went the following day.'

In Example 3, the speaker began the speech with the agent of the passive (locative), but she corrected it to the active in the following IU. Line 1 can be categorized as a fragmentary IU and line 2 as a substantive IU.

Example 3. Fragmentary and Substantive IUs in Khanty discourse. (Csepregi 1998: 74)

(1) *ja* *t'et* *t'ăqa* *t'u* *iminə,*
And such well that, woman.LOC
'And, well, by the woman,'

(2) *t'u* *imi* *t'u* *məta* *wärλaλ* *tŏwə*
that woman that some do.PST.PTCP.3SG, to.there
tərmət, *t'u* *iminə* *λitŏtat-quλat* *wärənti.*
end that woman.LOC food.INSTFIN make.PASS.3SG
'the woman finished something, and the woman
made food (food was made by the woman).'

4.3. Syntax

4.3.1. The syntactic categories of the IU

Although an IU does not equate to a clause, many IUs are formed by a clause in Khanty, as in many other languages. In the data of folklore tales, more than 57% of the IUs are formed by a clause (Single IU). About 17% of the clauses contain more than one IU (Multi IU) and 10% of the IUs are formed from several clauses (Single IU from multiple clauses) (Fig. 3, Examples 4–6). Both the percentage of Multi IUs and Multiclausal IUs are surprisingly high compared with the studies of Croft. This indicates that 95% of clauses do not break IU boundaries and occur in a complete unit. At the same time, 97% of the IUs have no more than one finite verb and only 3% of the IUs have several finite verbs/clauses (Croft 1995: 849–850).

Figure 3. The syntactic categories of Subjective IUs based on the amounts of clauses in Khanty Folklore tales.

Single IU from single clause	354	(57.59%)
Multi IU from single clause	103	(17.29%)
Multiclausal IU	64	(10.11%)
Participle structures	39	(6.37%)
Others (e.g. Free NP)	53	(8.64%)
Total	613 IUs	

Example 4. Example of Single IU (line 1) and Multi IU in Khanty (lines 2 and 3) discourse.

(1) *Kat imiɣən wăλλəɣən.*
two woman.DU live.PRS.3SG
'Two women live. / There are two women.' (Csepregi 1998: 74)

(2) *ńoksəŋ jăwən(nə) – mŏkkəŋ jăwənnə*
ńoksəŋ river (LOC) – *mŏkkəŋ* river.LOC

(3) *kat imiɣən wăλλəɣən.*
two woman.DU live.PRS.3SG
'Two women live on the banks of *ńoksəŋ-mŏkkəŋ* river.' (Csepregi 1998: 74)

Example 5. Example of Multiclausal IU in Khanty discourse. (Csepregi 1998: 80)

tŏm sårńəŋ suntukət åməsλət, t'utət aλ
this gilded bag.PL sit.PRS.PL.3SG that.PL NEG
ńŏwaλtiλa.
touch.IMP.PL.2SG
'There are gilded bags. Don't touch them!'

The majority of single IUs with multiple clause-types comprise two clauses and only a few of them comprise three clauses (Example 6).

Example 6. Example of Multiclausal IU with 3 clauses. (Csepregi 1998: 74)

t'i mən mən, tem åλ äwtəm juɣ
this go.PST3SG go.PST3SG this year cut.PST.PTCP tree
aŋkλəta jŏwət.
tree.stump.PL.LAT come.PST.3SG
'She walked and walked. She came to a stump cut this year.'

Some of the IUs are hard to classify according to the categories mentioned above based on the number of clauses. The problematic cases have several alternatives for categories at the same time. In Example 7, the IU in question has several sentences like multi-clausal IUs, but at the end of the IU, there is a following/new clause also beginning as a Multi IU (Example 7):

Example 7. Example of boundary-case IUs. (Csepregi 1998: 74)

(1) *qăt'a t'i wŏλqən, wŏλγən, əj λatnə*
as this live.PST.3DU live.PST.3DU one when
'As they two lived, lived, once'

(2) *əj imiλ*
one woman.SG.3SG
'the best friend of her (her woman)'

(3) *λüw qutəλa*
3SG house.SG.3SG.LAT
'to her home'

(4) *λåqətλəmaλpə əntem.*
visit.PST.PTCP.3SG NEG
'didn't enter.'

'When they two lived and lived, once one of the women didn't go to her best friend's (= the other woman) house.'

In Example 8, the first IU (1) can be called a single IU with multiple clauses and also a multi IU, since there are two clauses/finite verbs and at the beginning of the following clause, an adverb. From the end of the first IU (*λatnə* 'when') to the fourth IU (4), there is one multi IU as they form a single clause.

4.3.2. The IU boundary

Cruttenden (1986) states that the intonation unit ("intonation group" in his terminology) generally correlates with major syntactic constituents with boundaries which run between clauses or between the subject and the predicate. Cruttenden claims that an IU boundary should occur either at clause boundaries or between the subject and the predicate. Studies based on English corpora indicate that the majority of the IU boundaries co-occur with boundaries for grammatical units (Crystal 1969; Brown 1977; Croft 1995) and the studies based on Finnish data claim that NPs show strong intonational unity and NPs are rarely split into two IUs (Helasvuo 2001).

Figure 4. IU boundaries in Khanty discourse.

Predicates		
Verb	403	(63.46%)
(Ellipsised V+) Pred.	36	(5.6%)
(Ellipsised V+) ADV	9	(1.4%)
(Ellipsised) Negative particle	7	(1.16%)
Others		
Adverb	86	(13.54%)
Conjunction	26	(4.09%)
Subject	17	(2.7%)
Free NP	13	(2.04%)
Addressing	9	(1.4%)
Inside NP	8	(1.26%)
Object	8	(1.26%)
Participle	5	(0.7%)
Infinitive V	4	(0.6%)
Adposition	2	(0.3%)
Passive Agent	2	(0.3%)

The data on Khanty discourse also show almost the same results as earlier cross-linguistic studies. As can be seen from Figure 4, in most cases (over 60%), the boundary appears after the verb. Also, in cases with an ellipsised verb, the boundary appears after the predicative: in another 7% of the cases (5.6% Pred + 1.4% ADV), the boundary appears after the predicative, while in 1.16% of the cases it appears after the negative particle. In sum, the boundary appears after the predicate in more than 70% of the cases. The IUs in Khanty folklore tales tend to be verb-final like a clause, even though an IU and a clause are not equal (Example 8). The difference from Examples 9 and 10 is that Example 8 has no verb mentioned, but it is elided.

Example 8. V/ellipsised V-final IU. (Csepregi 1998: 74)

qănt̮ək	*qopə*	*mük*	*qŏrasəp*	*sär?*	
Khanty	man,	what	like.ADJ	now	[be-V]

'What is a Khanty man like?'

There are a surprisingly large number of ADV-final IUs – more than 13%. There are 86 ADV-final IUs in total, 14 of them are regulative IUs and 72 are subjective IUs. Forty-six ADV-final IUs have boundaries occurring inside a clause (multi IUs), and 30 end in adverbs. This means that they are ADV-final clauses in spite of the basic rigid verb-final word order of Khanty (Examples 9 and 10).

Example 9. ADV-final IU. (Csepregi 1998: 72)

(1) *t'i* ***jəmiλ-t'uńiλnat***
this **happiness.COMINS**
'Happily,'

(2) *itpə* *wăλλət.*
more be/live.PRS.3PL
'They live more happily.'

The adverbal NP, oblique, is not a core argument in a clause. In Example 9, line 1 functions as oblique and unfastened to the main clause (line 2).

Example 10. ADV-final IU. (Csepregi 1998: 74)

əj	*məta*	*sŏŋnam*	*mənλəm*	*qăt'a*	***sär.***
one	some	direct	go.PRS.1SG	well	**now**

'I will go now.'

Example 10 shows the exceptional word order in which the clause does not end in a verb but in an adverb.

There are 17 subject-final IUs, and all of them are multi IUs. The percentage (2.7%), however, was not high (Example 11).

Example 11. Subject-final IU. (Csepregi 1998: 72)

(1) ***ar wåjəɣ***
many animal
'many animals'

(2) *əjnam*
all
'all'

(3) *jŏwət.*
come.PST3PL
'came'

'All of the animals came.'

In this Example 11, a sentence was divided into several IUs, even inside the noun phrase.

There are six object-final IUs. Five of the object-final IUs are multi IUs where a clause continues to the following IU.

Example 12. Object-final IU. (Csepregi 1998: 66)

(1) *mäŋk-ikija mənλəm pan* ***nüŋat***
Mäŋk-iki.monster.LAT go.PRS.1SG and **2SG.ACC**
'I will go to Mäŋk-iki and you'

(2) *mäŋk-ikija məλəm.*
Mäŋk-iki.monster.LAT give.PRS.1SG
'I will give (you) Mäŋk-iki monster.'

Line 1 of Example 12 ends in an object. In this example, it is interesting to see that both line 1 and 2 start with the same patterns as "*mäŋk-ikija mə-*". The word order of line 1 and the IU boundary after the object may have been chosen for rhetorical reasons.

If a clause in an exceptional word order can be divided into several IUs and the preceding IU ends in a verb, the following IU can be additional information or an afterthought. In Khanty, an afterthought argument can appear after a verb (Nikolaeva 1999; Sosa 2017), see Example 13.

Example 13. Adverb-final IU with exceptional word order (afterthought). (Csepregi 1998: 74)

(1) *panə t'ut pırnə jăqə t'i λăŋ*
And that after inside this go.PST.3SG
'And after that she went inside'

(2) ***t'u pırəs imiλa.***
that old woman.3SG.LAT
'the old woman's home'

= 'And she went inside to the old woman's home.'

NPs with IU boundaries inside them can also be found (Example 14). This, however, is only attested in 1.24% of the data. The result shows that NPs form high intonational unity and are rarely split.

Example 14. Example of split NP. (Csepregi 1998: 80)

(1) *temi čåpəŋqa*
so indeed

(2) *jəmsi qåt päləknə t'imint quλəŋ-parəŋ*
right house side.LOC such dirty.worn,

(3) *čemotanət åməsλət.*
bag.PL sit.PRS.3PL
'There are very dirty and worn bags on the right side of the house.'

4.4. Pragmatics

In the discourse analysis, both a clause and an IU have been applied as the basic unit of analysis. In this section, I will compare clauses to IUs in the pragmatics. I will pay special attention to introducing information in discourse. The methods and theories employ Du Bois's Preferred Argument Structure theory (= PAS; see Du Bois 1987, 2003).

4.4.1. Preferred Argument Structure

In studies on IS, the introduction of new/given information is one of the most important perspectives.[5] The Preferred Argument Structure theory (PAS) is one of these theories, by which Du Bois tries to find the tendencies for distribution of new information and lexical arguments in IUs and in the argument structure of natural discourse (Du Bois 1987, 2003). According to PAS, four strong tendencies for the appearance of new information are visible in discourse. Du Bois refers to them as four constraints:

Figure 5. The four constraints of PAS-theory. (Du Bois 2003: 62)

Grammatically:
"One Lexical Argument Constraint"
"Non-lexical A (= transitive subject) Constraint"

Pragmatically:
"One New Argument Constraint"
"Given A Constraint"

According to Du Bois, only 1–7% of IUs and clauses have two lexical arguments in spontaneous speech (Du Bois 2003: 35).

4.4.2. PAS in Khanty discourse

In the texts chosen from the Khanty data, only two IUs have two lexical arguments and As are marked as a lexical argument in them. In addition to the two, there is a boundary case in which the lexical argument can be taken as A or free NP. The other lexical arguments are given information in discourse. All As are main characters of the tale (Example 16).

Example 15. Examples of IUs with two lexical arguments and A marked as lexical argument. (Csepregi 1998: 78)

pɪrəs	*imi*	*əj*	*t'u*	*ăntpətnat*	*λägəλ.*
old	woman	one	that	cradle.COMINS	watch.PRS.3SG

'The old woman watches the cradle.'

5. Many scholars have presented definitions of newness and givenness from the perspective of information structure.

Pragmatically speaking, no IU has more than one new argument and no A encodes new information. This would also relate to the fact that lexical arguments encode given information to a surprising extent in the data. Generally speaking, given information, especially that with a repeatedly appearing important referent, tends to be marked as lesser, like a pronoun or ellipsis. These results are in accordance with the crosslinguistic studies on PAS. In Khanty, the constraints of PAS have been proven at the level of the clause, too. Only 2.7% of the clauses have two lexical arguments in Khanty narratives (Sosa 2017: 87–92). In other words, the IU resembles the clause in its information-processing functions.

We may guess that an IU would have more lexical arguments and new information than in a clause, since an IU in Khanty discourse can be even longer than a clause. In fact, even though the chosen texts include 64 multiclausal IUs (= one IU with several clauses), only one of them has two lexical arguments and new information in it. In other words, an IU contains lexical arguments only to the same extent as a single clause usually does. Pragmatically, from the point of introducing information into discourse, an IU and a clause are almost the same, even though they are different syntactically.

Example 16. Example of two lexical arguments in an IU. (Csepregi 1998: 70)

măč	*qo*	*λitot-quλ*	*λiλ,*
alian	man	food-fish	eat.PRS.3SG

'A guest will eat food.'

In such exceptional cases, the reason for the choice can be related to cultural issues. In Example 19, A is one of the main characters and already given information. A new lexical argument/NP, which represents the same referents mentioned before, is chosen to add new perspectives to the referent. For example, a referent 'a man' can be marked as 'a son', 'her husband', 'young man', 'a teacher', 'a neighbor', etc. The expression *măč qo* 'guest' was chosen just for the sake of politeness. In Khanty, saying '**I** will eat' as a guest is impolite, s/he should say '**A guest** will eat' (see also Sosa 2017: 91–92).

This implies that the cultural issue motivates the use of a lexical argument regardless of the PAS's grammatical constraint and strong tendency in discourse. The object, the food, is new information, which would be natural to encode as a lexical argument. In many languages, the exceptional cases of introducing new information are related to cultural aspects (Ashby et al. 2003).

Example 17 has only one core lexical argument in it, and the grammatical constraint of PAS would remain if it were turned from an active clause into a passive clause. The passive was not chosen, however – one of the possible reasons for this could be the IS in Khanty. The subject *măč qo* is the topic. In Ob-Ugrian languages, the agent of the passive is generally the place of focus, not the topic (Kulonen 1989). In addition, *măč qo* is an important topic as a "leitmotif" and continues in the episodic

unit where this clause appears. From the viewpoint of topic continuity, the discourse is more fluent with the subject of the active than the agent of the passive. The subject is the typical place for a topic and leitmotif in Khanty discourse (see also Sosa 2017).

5. Conclusion

The analysis supports the crosslinguistic tendencies in IUs: most of them are subject and single IUs. The analysis also gives evidences that IUs and clauses are similar in their functions regardless of their difference in definitions, forms and even length. These results support the crosslinguistic studies on IUs (e.g. Cruttenden 1986: 145–146, 174).

A Khanty IU could also be exceptionally long compared with the crosslinguistic studies, as the ratio of multiclausal IUs is higher than the crosslinguistic tendencies. This implies that processable information in a unit in Khanty folklore discourse is larger than other discourse. The folklore tales form their own category and differ from, for example, spontaneous speech or conversation. The telling of folklore tales and related artistic skills has traditionally been carried out throughout history in the Khanty community and oral-literary tradition.

Even though the grammatical choice in spontaneous speech can be made almost automatically, the choice should be based on some background. The choices which differ from the general tendencies, for example, have some reason to them. In the syntactic analysis, while the IU boundary tends to appear after the verb or predicative, the object-final IU provides rhetorical effect.

This is a small example, which shows us the relationship between language and culture. I should note here that such a cultural skill is also under the risk of extinction along with the endangered language itself.

Of course, the genre of discourse can have an effect on IUs. With reference to the hypothesis that the amount of active information is equal to the amount of information which the speaker's consciousness can concentrate on at the moment of an utterance (e.g. Chafe 1994), the length of IUs in different genres may vary. For example, conversation is usually spontaneous, but a narrative like a folk tale is more prepared or "practiced/repeated" many times before. This is to say that IUs in conversation may be shorter than in folklore stories since the speaker of a folk tale can activate more information at the moment of utterance by means of "practices". Conversely, Croft (1995: 845) has demonstrated that conversation data is not significantly more fragmentary or disjointed than monologue narratives, even though the former could be imagined to be more fragmentary or disjointed than the latter. This is only a pilot study on Khanty folklore discourse. The difference between the genres in Khanty discourse will be left to further studies.

Abbreviations

1	first person
2	second person
3	third person
A	subject of transitive verb
ACC	accusative
ADJ	adjective
ADV	adverb(ial)
COMINS	comitative-instrumental
DU	dual
IMP	imperative
INSTFIN	instructive-finalis
IS	information structure
IU	intonation unit
LAT	lative
LOC	locative
NEG	negation, negative
NP	noun phrase
O	object
PASS	passive
PL	plural
PRED	predicative
PRT	present
PST	past
PTCP	participle
S	subject
SG	singular
V	verb

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