

Language contact and Areal Convergence in North Asia: The Case of Ket

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Abstract

Ket is the sole surviving member of the Yeniseian language family, spoken in the central part of North Asia. This large territory is also home to other language families: Samoyedic, Ob-Ugric, Tungusic, and Turkic. Apart from Yeniseian, which are strikingly different, all the language groups in the area conform to a common typological profile. A closer inspection reveals that over the course of century-long contacts, many of the core grammatical features that set Yeniseian apart from the rest of the families have undergone typological accommodation, at least in Modern Ket, to mimic the dominant language type in the area.

The aim of the present article is to provide an overview of how typological accommodation affected the phonemic tones and nominal and verbal morphology in Modern Ket as well as to show that this peculiar phenomenon is also attested at the syntactic level in formation of adverbial and relative clauses.

Keywords: *Ket, Yeniseian language, Northeast Asia, typology, morphology*

Introduction

Ket, or Yenisei Ostyak, is a highly endangered polysynthetic language, spoken in the central part of North Asia. Ket is now the only surviving member of the Yeniseian family, one of the region's oldest language families, consisting of six known languages. The extinct Yeniseian languages include: Yugh (CE 1980s), Kott (CE mid- 19th century), Assan (CE 18th century), Arin (CE 18th century), and Pumpokol (CE 18th century). The last remaining speakers¹ of the Ket language now reside in the north of Russia's Krasnoyarsk province along the river Yenisei and its tributaries.

Ket is known to differ significantly from its surrounding languages.² With its core features such as phonemic tones, possessive prefixes, and prefixing polysynthetic verbs, it clearly stands out from the region's common typological profile. At the same time, the typological profiling of Ket has revealed many complex puzzles regarding its features that complicate a clear-cut typological analysis and that have generated vigorous debates among scholars (cf. Anderson, 2004; Kotorova and Nefedov, 2006).

The influences to such complexity and typological ambiguity in Ket had not received a satisfactory explanation in scholarly literature until recent work by American linguist Edward Vajda. Vajda (2020) claims that the majority of typological complications in Ket are influenced by long-term contact with languages of a radically different structural type. Analyzing Modern Ket grammar in communication, and comparing it with the Proto-Yeniseian reconstructions, Vajda clearly demonstrates that over centuries of areal contact, Ket has gradually adapted its core phonological and morphological features to the structural type of surrounding languages without completely altering this structural type. This, in turn, has yielded a number of typologically rare phenomena in the language, for instance, the 'ditropic clitics.' This peculiar case of structural mimicry, or 'typological accommodation' (in Vajda's terms), represents a previously undescribed language contact phenomenon which cannot be captured by traditional terms such as 'grammatical calquing' or 'metatypy,' and which has significantly influenced the communication influences of speakers of Ket.

The present article aims to provide additional evidence in support of typological accommodation, and to indicate that in addition to phonology and morphology, this phenomenon can also be observed in the formation of subordinate constructions during communication in Ket. In our analysis, we claim that subordinate constructions in Modern Ket combine both prototypical features of subordination of a polysynthetic language and prominent subordinating features of the surrounding languages. Moreover, we demonstrate that the process of typological accommodation has resulted in rare cases within the domain of subordinate constructions, such as prenominal relative clauses with fully finite verbs, evidenced in speech acts during interaction in Ket.

In what follows, we first consider the language contact situation in North Asia prior to the massive Russian influence. We then outline the core features of the Yeniseian languages. Following this, we provide a concise overview of typological accommodation at the phonological and morphological

levels. Lastly, we demonstrate how the phenomenon of typological accommodation is manifested in Ket subordinate constructions in pragmatic acts of communication.

The paper thus aims to unravel the historical derivation of the Ket language, to subsequently describe Ket's current structures, and how these structures aid in communication and meaning in the present. In this way, the paper contributes to the scholarship by informing understandings of Northeast Asian languages and their historical construction in the present.

Contact Situation in North Asia

North Asia is a vast territory in Russia covering the regions east of the Ural Mountains up to the Pacific Ocean. In the present article, we mostly limit our attention to the central part of the area, also known as Central Siberia,³ which extends from the Arctic Ocean in the north to the borders of Mongolia and China in the south, along the large watershed of the Yenisei River. In the west, the area borders on the easternmost regions of the Ob river watershed, while the westernmost watershed regions of the Lena River and Lake Baikal form its border in the east, not far from the northern sections of the Pacific Ocean.

The territory of Central Siberia is home to a large and highly diverse group of peoples whose languages belong to at least five distinct genetic language units: Yeniseian (Ket, Yugh, Kott, Arin, Assan, Pumpokol), Samoyedic (Nganasan, Nenets, Enets, Selkup, Kamassian, Mator), Ob-Ugric (Khanty), Tungusic (Evenki), and Turkic (Dolgan, Chulym Turkic, Shor, Xakas, Tuvan).⁴ The map below, taken from work by Vajda (2001: ix), provides a slightly simplified illustration of the ways in which these peoples were once distributed across this territory.

The contact situation among the Yeniseian languages differs depending on whether the language or speech communities once belonged to the Northern or to the Southern Yeniseian branch, though in the latter case data is limited. As the Southern Yeniseian languages, Arin, Assan, and Pumpokol, became extinct during the 18th century CE, they were scarcely documented. A larger amount of documentation exists on Kott, another element of the Southern branch, which survived until the mid-19th century CE. Nevertheless, the existing materials on these languages show numerous Turkic loans, mainly for food, stockbreeding, farming, and metallurgy, evidencing that these communities directly associated with stockbreeding Turkic-speaking tribes. Moreover, some of the southern Yeniseian groups became later absorbed by their Turkic neighbors: The Kott and Assan mainly shifted to Xakas, while some Arin, Pumpokol, and Xakas shifted also to Chulym Turkic (Anderson, 2004: 8). Borrowing in the other direction, i.e., into Turkic varieties, also occurred. For example, Butanaev (2004: 227–228) lists a few dozen miscellaneous Yeniseian loans into Xakas, ranging thematically, such as flora and fauna, natural phenomena, and hunting and fishing.



Map 1. Ethnic groups in the central part of North Asia (ca. 1600 AD)

The Northern Yeniseian languages, Ket and Yugh, unlike their southern relatives, had no direct contact with Turkic peoples. Ket and Yugh language communities lived as small groups, nomadizing in a vast northern taiga forest along the Yenisei, surrounded by reindeer-breeding tribes. Contact with these tribes, the Nenets and Enets in the north and the Evenki in the west, was rather sporadic, and tended to be generally hostile. Therefore, only a few identifiable loans into Ket dialects (Northern and Central) from these languages occurred, all belonging to the realms of winter clothing and reindeer breeding. The number of Yeniseian loans into Northern Samoyedic and Tungusic is even smaller, with a notable example being the 2nd and 3rd person pronouns in Forest Enets which were most likely borrowed from Ket (cf. Hajdú, 1968).

Unlike its northern relatives, the Selkup, residing in the eastern territories, and hence closer to the Pacific Ocean, and speaking a Southern Samoyedic language, developed friendly relations with the Ket, to the extent that there were a considerable number of intertribal marriages.⁵ Selkup borrowings into Ket are more common, though they are likewise mostly restricted to lexical items relating to reindeer breeding and clothing. However, certain grammatical elements may have been borrowed as well (cf. Nefedov, 2018: 31). On the contrary, Ket loanwords in Selkup are rather scarce.

In general, the contact situation in this region can be characterized as a rather complex mosaic of interactions among the indigenous languages, where all the linguistic groups have borrowed from each other at some point in their histories (cf. Anderson, 2004: 21). Selkup, for example, once served as a lingua franca among the tribes inhabiting the northwest of the region, and may have provided a source of features such as the prolativ case and mutual loanwords, which spread throughout these languages (Anderson, 2004). Among these language groups, however, the Yeniseian languages seem to be both the most resistant and the least pervasive with respect to lexical borrowing (Vajda, 2009; cf. Tadmor, 2009). This fact can be accounted for by the overall complexity of the Yeniseian languages, where the number of speakers of the surrounding languages conversant in a Yeniseian language was very small (cf. Vajda, 2020: 466–467).⁶ The Yeniseian were frequently required to learn an outside language, thus restricting exposure of Yeniseian lexical and structural phenomena to the neighboring languages.

Core Typological Features of the Yeniseian Family

Apart from Yeniseian, all major linguistic families in the region, i.e., Turkic, Tungusic, Samoyedic, and Ob-Ugric, conform to a common typological profile: They are non-tonal, and have suffixing nominal and verbal inflectional morphology (c.f., Johanson and Csató, 1998; Abondolo, 1998). By contrast, the typical grammatical and phonological characteristics of the Yeniseian family present a different picture. Unlike their neighbors, the Yeniseian languages have phonemic tones (tonemes), possessive prefixes, and prefixing polysynthetic verb morphology, clearly distinguishing them from the rest of the area. We now consider these Yeniseian features in order.

Core Phonological Features

Monosyllabic phonemic tones exhibit a salient characteristic feature in Yeniseian languages. Four tones exist in Ket and Yugh: High even, abrupt rising/laryngealized, rising/falling, and falling. Table 1 provides an illustration of the tonemes with their Yugh counterparts respectively.

Ket	Yugh	Meaning	Tonal melody	Vowel length (syllable type)	Phonation type
qām	χām	arrow	high-even	half-long (closed or open)	neutral
dεʔ	dεʔ	lake	abrupt rising	short (closed or open)	laryngealized (creaky)
hîl	fîl	gut	rising-falling	long (closed or open)	neutral
qòj	χòh:j	bear	falling	short (closed only)	neutral

Table 1. Tonemes in Ket and Yugh

Although it appears difficult to verify the existence of tonemic distinctions in the other Yeniseian languages in the absence of actual audio recordings, systematic peculiarities in the transcription of these languages show rather convincingly that they also exhibited at least the high and laryngealized tonemes (cf. Werner, 1996: 85–93).

Core Morphological Features

Another distinctive core feature of the Yeniseian family that is lacking in surrounding languages is its possessive prefixes. These prefixes are capable of reflecting person, number, and gender class. Examples (1) and (2) illustrate these in both languages, respectively.

Example 1 (Ket)

naqu'si7
na-qu's
3an.pl.poss-tent
'Their birch-bark tent'

Example 2 (Yugh)

dafi'p
da-fi'b
3sg.m-son
'His son'

In the Southern Yeniseian languages, possessive morphemes also occur as prefixes. Example (3) presents a Kott possessive phrase, while Example (4) illustrates this in the Arin language.

Example 3 (Kott)

ŋa:ma
ŋ-a:ma
1sg.poss-mother
'my mother' (Werner 1997b: 66)

Example 4 (Arin)

b'ap
b'-ap
1sg.poss-father
'my father' (Werner 2005: 155)

Probably the most prominent typological feature of Yeniseian that distinguishes this family from surrounding languages is its prefixing polysynthetic verbal morphology. As claimed by Vajda (2008),

the Proto-Yeniseian verbal root was always in final position, preceded by a string of morphemes conveying personal cross-reference, TAM (tense-aspect-modality) properties, animacy, and so on. A tentative position model of the Proto-Yeniseian verb is given below in Table 2.

morphemes outside the phonological verb		P4	P3	P2	P1	
Subject NP	verbal complement (adverb, object NP)	shape classifier (d, n, hw, etc.)	animacy classifier: d (an), b (n)	tense, mood, aspect (originally auxiliary verb s, ya, a, o + suffix l, n)	undergoer subject agreement (1 or 2 p)	verb base (bare root or verb deriving prefix d, l + root)

Table 2. The Proto-Yeniseian finite verb (Vajda 2008)

A verbal form in the Yeniseian languages perfectly satisfies the generally accepted definition of a polysynthetic verb with obligatory pronominal marking of the arguments and incorporation, so that it can serve alone as ‘a free-standing utterance without reliance on context’ (Evans and Sasse, 2002, p. 3). Example (5) contains a Ket verb form that cross-references two arguments, while Example (6) presents a Yugh verb form with an incorporated object.

Example 5 (Ket)

dingutet8
d8-in2-ku1-ted0
3s8-pst2-2sg.o1-hit0
‘He hit you.’

Example 6 (Yugh)

daχusi rgetⁱ
da14-qus13-d3-ked0
3f.s14-tent13-pst3-make0
‘She made a birch-bark tent.’

Similar features in the verbal system can also be found throughout all of the Yeniseian languages, cf., the Kott finite verb form in (7).

Example 7 (Kott)

bapajaŋ
b5-a4-paj0-aŋ-3
3n.o5-npst4-make0-1sg.s-3
‘I make it.’ (Werner, 1998, p. 132)

These features are genuinely Yeniseian, i.e., they can be traced back to the Proto-Yeniseian stage, and distinguish this family from the other languages of Central Siberia that are exclusively non-tonal,

suffixing, and agglutinating. A closer inspection, though, reveals that over the centuries, these features, at least in Modern Ket, have undergone some peculiar modifications mimicking the dominant language type in the surrounding languages. This process attested on all levels of Modern Ket, is called ‘typological accommodation.’ The uniqueness of Modern Ket grammar seems to be largely a result of this process, which I now discuss.

Typological Accommodation

Vajda (2020) coined the term ‘typological accommodation’ to describe the hybridization phenomena in Modern Ket at the phonological and morphological levels. The need for a new term is justified by the fact that traditional terms such as ‘grammatical calquing’ or ‘metatypy’ are used to describe either the transfer of grammatical meanings from one language into another using inherited material to express these in the former case, or a complete typological change in the latter case (cf. Ross, 2001, 2007). Typological accommodation, on the contrary, indicates the adaptation of a language to a different morphological type which thus creates a rather unique hybrid structure. In this part, we thus present how the core Yeniseian morphological and phonological traits were affected by accommodation, and propose that this can also be observed at the syntactic or discursive level.

Typological Accommodation at the Phonological Level

Yeniseian phonemic tones in monosyllabic words are influenced by the root-initial agglutinating languages of the surrounding peoples (Vajda, 2020: 483). With the inclusion of a relational morpheme, which shifts monosyllables to polysyllables, the tonal distinctions usually become replaced by a rise and fall in pitch in the first two syllables, a process which thus resembles word-initial stress:

Example 8 (Ket)

ópdàŋa
 ōb-daŋa
 father-m.dat
 ‘to the father’ (Vajda 2020: 484)

However, the degree of prosodic erosion may vary depending on particular discourse factors, and hence the monosyllabic word may retain its full phonemic range under focus, even if augmented with a relational morpheme (Vajda, 2020, p. 484).

Example 9 (Ket)

ō·b daŋa9
 ō·b=daŋa
 father=m.dat

‘to the father (focused)’ (Vajda, 2020, p. 484)

Those few Ket disyllabic words which are pronounced with a rising-high falling pitch that resembles stress on the second syllable, for instance, qópčkùn ‘cookoos,’ likewise lose this distinction after attaching a relational morpheme, as in Example (10).

Example 10 (Ket)

qópčkùnnaŋalʲ
qóbkùn-naŋal
cookoo.pl-an.pl.abl
‘from the cookoos’ (Vajda, 2020, p. 484)

According to Vajda (2020), this replacement of phonemic tones with non-contrastive word-initial stress in Ket polysyllables mimics the phenomenon of vocal harmony, i.e., when only the initial syllable nucleus (one syllable) is capable of reflecting the full range of phonemic distinctions, whereas the quality of the other syllables becomes reduced, as in Examples (11) and (12) from Nenets.

Example 11 (Nenets, Northern Samoedic)

ŋehena
ŋe-hena
foot/leg-instr
‘with the foot’ (Tereschenko, 1966, p. 378)

Example 12 (Nenets, Northern Samoedic)

ŋuhuna
ŋu-huna
pole-instr
‘with the pole’ (Tereschenko, 1966, p. 378)

Vowel harmony is one of the widespread fundamental phonological features in the region, and while Ket (as well as other Yeniseian languages) failed to develop a true vowel harmony, it still seems to organize its phonological system, to a certain extent, analogous to surrounding languages.

Typological Accommodation at the Morphological Level

Ket contains a system of relational morphemes which are traditionally described as ‘case affixes’ (Dul’zon, 1968, pp. 70–71) or ‘case formants’ (Kasusformanten) (Werner, 1997a, p. 104). This system indeed resembles the system of nominal inflectional suffixes found in the surrounding languages, as can be seen in Table 3 below.

Language	Dative	Ablative	Instrumental
Ket, Yeniseian	ketdaŋa keʔd-daŋa person-m.dat 'to the person'	ketdaŋali keʔd-daŋal person-m.abl 'from the person'	keriasʲ keʔd-as person-instr 'with the person'
Selkup, Southern Samoedic (Prokofjeva 1966: 400)	pitonti pito-nti cradle-dat 'to the cradle'	pitokini pito-kini cradle-abl 'from the cradle'	pitisa piti-sa cradle-instr 'with the cradle'
Xakas, Turkic (Karpov 1966: 432)	čirge čir-ge ground-dat 'to the ground'	čirdeŋ čir-deŋ ground-abl 'from the ground'	čirneŋ čir-neŋ ground-instr 'with the ground'

Table 3. Dative, Ablative and Instrumental forms in Ket, Selkup and Xakas

However, these markers in Ket cannot be easily subsumed under the notion of 'suffix,' since their status fluctuates between that of suffix, clitic, and independent word, a status which is predicated on various discourse factors (cf. Section 4.1 above). According to Vajda (2020, p. 486), this ambiguous morphophonological status of Ket relational morphemes is the result of typological accommodation.¹⁰ In Modern Ket, possessive prefixes have likewise been accommodated to mimic neighboring languages in line with their possessive or genitive suffixes. When preceded by another word in the same phonological phrase, these possessive markers show suffix-like behavior, cf. Examples (13) and (14) illustrating these types of suffixes in Nenets and Selkup, with the Ket possessive phrase in Example (15).

Example 13 (Nenets, Northern Samoedic)

noxah tãwa
noxah tãwa
polar.fox-gen tail
'polar fox's tail' (Nikolaeva, 2014, p. 142)

Example 14 (Selkup, Southern Samoedic)

tabet kobi
tabe-t kobi
squirrel-gen skin
'squirrel's skin' (Vorobíjova, Novitskaja, Girfanova, and Vesnin, 2017, p. 57)

Example 15 (Ket)

qalda ki's
qal=da ki's
grandson=m.poss foot
'grandson's foot' (Vajda, 2020, p. 486)

In Example (15), the masculine possessive =da attaches to the preceding noun qàl ‘grandson,’ affecting its prosodic realization (i.e., its original falling tonal contour). Such cases have been traditionally regarded as the genitive case (cf. Dul’zon, 1968; Werner, 1997a). Note, however, that the marker can likewise encliticize to words even outside the possessive phrase, as in (16), where the clitic appears on the adverbial en ‘now.’

Example 16 (Ket)

enda ki’s
en=da ki’s
now=m.poss foot
‘now his foot...’ (Vajda, 2020, p. 486)

If there is no preceding word, or if the possessum is under focus, the possessive marker behaves like a proclitic, as illustrated in Example (17). Note that in this case, the procliticized marker leaves the tonal prosody of a monosyllabic word intact.

Example 17 (Ket)

daki’s
da=ki’s
m.poss=foot
‘his foot’ (Vajda, 2020, p.486)

Thus, this class of markers in Modern Ket cannot be attributed to either pure possessive prefixes or pure genitive suffixes. Rather, in the process of typological accommodation, they have become a cross-linguistically rare phenomenon known as a ‘ditropic clitic,’ i.e., a clitic that may attach outside of its relevant domain (cf. Cysouw, 2005).¹¹

Typological accommodation also appears in the verbal morphology of Modern Ket. Table 4 illustrates a position model of the Modern Ket verb, as presented in Nefedov and Vajda (2015, p. 36).

P8	P7	P6	P5	P4	P3	P2	P1	P0	P-1
AGR or thematic valence reducing affix	1) left semantic head or 2) noun, adj, or adverb root	AGR	thematic consonant (most are seman- tically opaque)	tense/ mood or AGR	AGR or thematic non- agreement affix	past tense / imperative	AGR or thematic valence reducing affix	1) right semantic head or 2) aspect/voice auxiliary)	AGR (in verbs that use P8 for subject)

Table 4. Position model of the Modern Ket verb

Modern Ket verbs conventionally divide into right- and left-headed verbs, a division which is predicated on the location of their semantic root (head). In right-headed verbs, the semantic head always occupies the rightmost position (slot P0), with a string of affixes preceding it, similar to the Proto-Yeniseian verb presented in Table 2 above. Verbs of this type constitute the oldest layer of verbs in the language and belong to currently unproductive patterns. An example of a right-headed verb is provided in (18).

Example 18 (Ket)

dáŋgèj
d{i}8-aŋ6-q2-ej0
1s8-3an.pl.o6-pst2-kill0
'I killed them'

All the productive verb patterns in modern Ket, however, are exclusively left-headed, i.e., with the semantic head at the leftmost margin (slot P7). As such, the positions that follow this semantic head may be regarded as a string of suffixes. The original root position (slot P0) in the left-headed verbs contains a marker expressing various derivational nuances (momentaneous vs. iterative, transitive vs. intransitive, etc.) that originates from a semantically eroded P0 verb root, compare (19) and (20) below.

Example 19 (Ket)

déjaŋgòlbet
d{u}8-ej7-aŋ6-k5-o4-l2-bed0
3s8-kill.anom7-3an.pl.o6-th5-pst4-pst2-iter0
'He was killing them.'

Example 20 (Ket)

dúbbèt
du8-b4-bed0
3s8-3n.o2-make0
'He makes it'

In Example (19), the semantic head ej 'kill' occupies the leftmost position in slot P7 (cf. also Example (18) above, in which the same semantic root occupies the rightmost position) followed by a string of affixes, including the marker of interactivity bed in slot P0. This particular marker originates from the verbal root bed 'make, do,' which occupies the same slot in the right-headed verbs, as in Example (20).

Verbs of the left-headed type clearly tend to imitate the suffixing structures dominant in surrounding languages. Nonetheless, as Vajda (2020, p. 489) notes, despite this rearrangement of the semantic head from final to initial position, the presence of the original root position is obligatory in every left-headed verb. Such behavior is not usually associated with prototypical suffixes, and therefore it is not clearly appropriate to analyze these types of Ket verbs as suffixing.

Typological Accommodation at the Syntactic Level

More significant to this study, however, is the fact that, in addition to phonology and morphology, typological accommodation in Modern Ket can be observed at the discursive as well as the syntactic levels, with regard to formation of subordinate constructions. ¹² One popular cross-linguistic generalization on polysynthetic languages presents the claim that these language are largely devoid of overtly marked subordination (Heath, 1975; Mithun, 1984). ¹³ Baker (1996), in his study of polysynthetic languages, strongly claims that polysynthesis is not compatible with the existence of nonfinite clauses, where, typological studies indicate that there is a tendency among polysynthetic languages not to have truly non-finite forms (cf. Nichols, 1992).

In general, in a majority of polysynthetic languages, subordinate constructions represent two juxtaposed independent clauses with fully finite structures. Therefore, it seems fair to assume that the tendency to avoid non-finite forms and to use fully finite verbs in complex constructions becomes a core feature of a polysynthetic language. This suggests that, from the point of view of a prototypical polysynthetic language, one would expect Ket to have subordinated structures in the form of formally independent strings of clauses, and indeed there are such constructions in the language. For example, these constructions frequently appear with various types of complements as predicates, as in Example (21) below.

Example 21 (Ket)

āt dātuŋ bū tsújabet
 ād d{i}8-a6-t5-oŋ0 bū d{u}8-suj7-a4-bed0
 1sg 18-3m6-th5-see0 3sg 38-swim.anom7-npst4-make0
 ‘I see him swimming (lit. I see him, he is swimming).’ (Nefedov, 2015, p. 145)

At the same time, in addition to such asynthetic independent constructions, Ket exhibits a rather wide range of formally distinct subordinating structures, particularly in the realm of adverbial clauses. Not surprisingly, these structures clearly resemble subordinate constructions in the other languages of North (East) Asia. Still, the important difference is that in these constructions, Ket tends to use fully finite verbs, while the surrounding languages favor non-finite constructions (Ubrjatova and Litvin, 1986; Anderson, 2004).

One of the distinctive features of North Asian languages is the use of case morphology to mark various functional types of adverbial relations. Such case-marked subordinate constructions are reported in almost all languages surrounding Ket, but to varying degrees (Anderson, 2004). In these constructions, cases usually attach to various kinds of non-finite verb forms. In Tungusic and Turkic languages, for example, these are participles, as can be seen in (22)-(23) below.

Example 22 (Evenki, Tungusic)

minduk	pekture:vunme	ganadukin	bega	ittenen
min-duk	pekture:vun-me	ga-na-duk-in	bega	itten-e-n
I-abl gun-acc	take-ptcp-abl-3	month	pass-nfut-3	

‘A month had passed since he took my gun from me.’ (Nedjalkov, 1997, p. 51)

Example 23 (Tuvan, Turkic)

men	kelgenimde	ažildaarmen
men	kel-gen-im-de	ažildaarmen
1sg	come-pst.ptcp-1-loc	work-pres/fut 1

‘When I come (here), I work’ (Anderson and Harrison, 1999, p. 73)

In the Selkup subordinate structures, case marking appears on various verbal nouns as in Example (24).

Example 24 (Selkup, Southern Samoyedic)

qumitit	kit qanti t	üptääqin	čiasiq	esikka
qum-itit	kit qan-ti	tü-ptää-qin	čiasiq	es-ikka
person-pl	river bank-ill	come-vn-loc	cold	become-hab.3.past

‘When the people were approaching the river, it was getting cold.’ (Anderson, 2004: 67)

In Enets, case markers can be attached to a bare verb stem:

Example 25 (Enets, Northern Samoyedic)

sIra?	niñ	kodiahađoñ	ŋo:ñ desuma?
sIra?	niñ	kodia-hađ-oñ	ŋo-:ñ desuma?
snow.gen	on	sleep-abl-prox.1sg	leg-1sg get.sick-aor.3sg

‘Since I was sleeping on the snow, my leg got sick.’ (Künnap, 1999, p. 35)

Finally, for Eastern Khanty, there are examples, although they seem to be quite rare, in which the locative case marker attaches to a converb to form a subordinate construction as in (26).

Example 26 (Eastern Khanty, Ob-Ugric)

tʃimlali	amisminnə,	ni	mənäyən	juyatə
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tʃiml-ali	amis-min-nə	ni	mənä-γən	juɣa-tə
a.little-dim	sit-cvb-loc	woman	go-pst0.3sg	gather.woods-pst0.3sg

‘After sitting awhile, the woman went off to gather firewood’ (Filchenko, 2010, p. 470)

Adverbial clauses in Ket make use of postposed relational morphemes in much the same fashion as in the above examples. However, while these languages attach relational morphemes to non-finite forms, in Ket these morphemes are attached to fully finite verbs, as is illustrated in the following examples:

Example 27 (Ket)

ām	dətəʁət-ka	ʌtn	bən̄	dasqansʲan
ām	da8-t5-a5-qut0-ka	ətn	bən̄	d{i}8-asqan7-s2-a0-n-1
mother	3f8-th5-npst4-lie0-loc	1pl	not	18-stories7-npst2-speak0-an.pl-1

‘When mother sleeps, we don’t speak.’ (Nefedov, 2015, p. 171)

Example 28 (Ket)

búlʲaŋ	híta	bən̄	tkóldə-din̄ten,	lʲámga	t-tólʲaraq
bul-aŋ	híta	bən̄	d{u}8-Ø6-k5-o4-l2-do0-din̄ten		
leg-pl	down	neg	38-3n.s6-th5-pst4-pst2-watch0-adess		
lamka	d{u8}-t5-o4-l2-a1-daq0				
on.a.side	3s8-th5-pst4-pst2-3ss1-fall0				

‘He fell down, because he didn’t mind his step (lit. he didn’t watch below (his) legs).’

The use of an action nominal, i.e., the only non-finite verb form in Ket, is possible in such constructions as well, but it is less frequent and much more limited with respect to the range of relational morphemes that can be attached (cf. Nefedov, 2015, p. 211). Example (29) below illustrates an action nominal with the locative marker in Ket.

Example 29 (Ket)

āb	isqə-γa	qənijəbən
āb	isqə-ka	qənij7-o4-b3-{q}on0
1sg.poss	fish.anom-loc	dark7-pst4-3n.s3-become0

‘When I was fishing, it became dark.’

Such functional-structural correspondence between non-finite forms in the surrounding languages and finite verbs in Ket is likewise attested in relative clauses. As shown in a study by Pakendorf (2012), Turkic, Tungusic, and Uralic languages share a common relativization pattern. This correspondence involves preposed participial relative clauses with a ‘gapped’ relativized noun phrase. The examples below illustrate this strategy in some of the languages surrounding Ket.

Example 30 (Evenki, Tungusic)

bi	Turudu	alaguvdžarildu	asatkardu	meņurve	bu:m
bi	Turu-du	alaguv-džari-l-du	asatka-r-du	meņur-ve	bu:-m
1sg	T.-dat	study-sim.ptcp-pl-dat	girl-pl-dat	money-acc	give.nfut-1sg

‘I gave money to the girls who study in Tura.’ (Pakendorf, 2012, p. 258)

Example 31 (Tuvan, Turkic)

bistiņ	dü:n	čora:n	čerivis	čaraš	boldu
bistiņ	dü:n	čor-a:n	čer-ivis	čaraš	bol-du
1pl.gen	yesterday	go-ppt	place-poss.1pl	beautiful	be-pstII.3sg

‘The place we went yesterday was beautiful.’ (Anderson and Harrison, 1999, p. 20)

Example 32 (Selkup, Southern Samoyedic)

qorqit	qətpiá	ɔ:tæ
qorqi-t	qət-piá	ɔ:tæ
bear-gen	kill-pst.ptcp	reindeer-nom

‘a reindeer killed by a bear’ (Spencer, 2013, p. 389)

Example 33 (Enets, Northern Samoyedic)

otīdar	enčir	ni	tu?
otī-da-r	enči-r	ni	tu?
wait-sim.ptcp-poss.2sg.nom	person-poss.2sg.nom	neg.s:3sg	come.conneg

‘The person you are waiting for didn’t come.’ (Pakendorf, 2012, p. 263)

Example 34 (Nganasan, Northern Samoyedic)

xindža	kəmaduodejné	kolī biké	kadžanu ičuo
xindža	kəma-duode-j-né	kolī biké	kadžanuičuo
at.night	catch-ppt-acc.pl-gen.poss.1sg	fish river.gen	close.to be.prs.3sg

‘The person you are waiting for didn’t come.’ (Pakendorf, 2012, p. 263)

Example 35 (Eastern Khanty, Ob-Ugric)

mä	wer-mäl rit
mä	wer-m-äl rit
1sg	do-pp-3sg canoe

‘The canoe that I’ve made.’ (Filchenko, 2010, p. 466)

These patterns closely resemble the major relativization pattern in Modern Ket (cf. Nefedov, 2015, p. 220), the only difference being that Ket usually makes use of finite verbs in the same way as the languages above use participles, which is a typologically rare phenomenon (cf. Wu, 2011, p. 596). Examples (36) and (37) illustrate prenominal relative clauses in Ket.

Example (36) Ket

āt	āp	dutaʁot	bisep t	sitejqajit
ād	āb	du8-t5-a4-qut0	biseb	d{i}8-sitej7-q5-a4-it0
1sg	1sg.poss	3s8-th5-npst4-be.in.position0	sibling	1s8-wake7-th5-3m.o4-mom0

‘I wake up my sleeping brother.’ (Nefedov, 2015, p. 262)

Example (37) Ket

hīy	díʁej	qīm	
hīk	d{u}8-i4-q2-ej0	qīm	
male3s8-3f.o4-pst2-kill0		woman	

‘The woman who the man killed.’ (Nefedov, 2015, p. 221)

Action nominals can also be found in relative clauses as illustrated in (38), but they are not that frequent and tend to be more lexicalized (Nefedov, 2015, p. 225).

Example (38) Ket

nī	bʌʔn	
nī	bəʔn	
dive.anom	duck	

‘a diving duck / a duck which (regularly) dives’

As seen in the examples above, the formation of adverbial and relative clauses in Ket clearly imitates that of the surrounding languages and does not conform to the expected ‘polysynthetic’ pattern. At the same time, Ket adverbial and relative clauses resist accommodating a participle-like morphology, and remain fully finite, a process which reflects the general tendency among polysynthetic languages to not assume truly non-finite forms (cf. Nichols, 1992; Baker, 1996).

On Typological Accommodation at the Discourse Level

As discussed in previous sections, the centuries-long process of language contact between Ket and its surrounding languages has resulted in typological accommodation, a peculiar contact phenomenon attested at different levels of Ket’s language system; phonological, morphological, and syntactic. The discursive properties of the language, that is, the symbolic repertoire built around language structures and components, are likewise affected during language contact, culminating in an areal diffusion of discourse structures, various discourse formulae, and in the ways of conveying narratives (Aikhenwald, 2006, p. 17). Therefore, our interest now lies in whether typological accommodation can occur in Ket at the discourse level.

There are two possible ways to approach this matter. The first would be by discussing Ket’s discursive factors through a historical perspective, drawing Vajda’s (2020) work on phonological and

morphological levels. However, the most significant obstacle to this approach is the absence of records of Ket texts and dialogues dating before the mid-20th century.¹⁴ Moreover, the other Yeniseian languages, other than Yugh,¹⁵ lack any text materials.

The second approach involves analyzing Ket discursive properties from a typological perspective, similar to the process used to investigate typological accommodation at the syntactic level. However, for polysynthetic languages, discursive properties have not yet been well-explored. Likewise, the surrounding Siberian languages (and Ket itself) still lack comprehensive work on discourse. Building on current knowledge, an effective starting point may be word order and its interplay with the encoding of information in the language. Polysynthetic languages such as Ket generally have ‘free word order,’ largely owing to the presence of verb-internal personal markers that cross-reference participants within the discourse context, and with which, discursive frames shift in malleable ways. Therefore, word order in polysynthetic languages is often used to encode various pragmatic roles (cf. Mithun, 1992). The Samoyedic, Ugrian, and Turkic languages which surround Ket, however, historically demonstrate a strong tendency for rigid SOV word order (cf. Kuznetsova, 1999; Koshkareva, 2007; Tikhomirov, 2018), and hence, tend to draw on means other than word order flexibility to encode pragmatic functions, for example, morphological factors such as case marking, conjugation patterns, and voice alternations (Koškareva, 2007, p. 34). The ongoing research on word order in Ket suggests that Modern Ket does seem to show a preference for SOV order at the clause level (cf. Krjukova 2012), which is in line with the areal pattern. However, Ket lacks the richness present in the morphologies of surrounding languages, one which would otherwise inform the encoding of its information. Concurrently, Ket allows discourse participants to relatively freely (re)order themselves so as to intentionally reflect their pragmatic roles, an agency typical throughout other polysynthetic languages (cf. Nefedov, 2015, p. 64-65). This all clearly sets Ket apart from the other languages in the area.

Comprehensive work involving the analysis of surrounding languages is needed to uncover whether typological accommodation can indeed emerge at the discourse level in Ket. It should be noted, though, that over the last century, Russian, which has a significantly free word order, has heavily influenced all Siberian languages, including Ket.¹⁶ As a result, many linguists note a tendency in these languages to shift from the native Siberian SOV word order to a less rigid one, in particular SVO, typical of Russian (cf. Rudnitskaya, 2017). This factor may also significantly obscure any possible typological accommodation in Ket at the discourse level.

Conclusion

In this article, we have considered Ket, a polysynthetic language belonging to the Yeniseian language family, in the areal environment of North Asia. Surrounded by languages of a radically different typological profile, Ket has undergone a number of interesting changes. On the one hand, over the centuries, Ket has remained rather resistant to lexical borrowings from the surrounding languages, with

a very small number of loanwords in its basic vocabulary.¹⁷ However, this centuries-long contact has exerted significant influence on core typological traits of Ket's grammar that have no other analog in the area, yielding a rather unique structural hybrid. Vajda (2020) calls this process 'typological accommodation,' since the affected traits were not replaced but rather accommodated to mimic the typological profile of the surrounding languages. In addition to the phonological and morphological levels, the result of structural mimicry can be observed at the syntactic level, namely, in the domain of subordinate constructions. As we have shown throughout the paper, formation of subordinate clauses in Ket does not only draw on juxtaposed independent finite clauses, a pattern one expects to see in a polysynthetic language, but in many instances it mimics the way these constructions are formed in the surrounding languages by employing preposed gapped relative clauses and by using relational morphemes to mark adverbial clauses.¹⁸ Still, unlike the other languages in the area which employ an array of various non-finite forms in such constructions, Ket retains a fully finite syntax in both adverbial and relative clauses (common among other polysynthetic languages). This can be regarded as another instance of typological accommodation.

Finally, we discussed a possible research direction that may assist to uncover typological accommodation at the discourse level in Ket. Word order and its role in encoding the information structure of Ket appears to be the most appropriate candidate for this research, as it contrasts significantly and in respective ways with that of the surrounding languages. This domain remains the least explored in the language. yet, it requires further study along with work on other Siberian languages.

Glossary

abl – Ablative, acc – Accusative, adess – Adessive, agr – verb agreement position, an – animate, anom – action nominal, aor – aorist, conneg – connegative, cvb – converb, dat – Dative, dim – diminutive, f – feminine, fut – future, gen – Genitive, hab – habitual, ill – Illative, instr – Instrumental, iter – iterative, loc – Locative, m – masculine, mom – momentaneous, n – neutrum, neg – negative, nfut – non-future, nom – Nominative, npst – non-past ; o – object ; past – past, pl – plural, poss – possessive, pp – perfective participle, ppt – past participle, pres – present, prox – proximal, pst – past, ptcp – participle, r – neutrum, s – subject, sg – singular, sim – simultaneous, ss – same-subject, th – thematic consonant, vn – verbal noun.

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¹ Speaking from the recent fieldwork experience, the present-day number of more or less competent Ket speakers does not exceed 30 people.

² It should be noted that the Yeniseian languages have no genetic ties to any of the neighboring languages. To date, the only hypothesis regarding their genetic relationships with other languages outside North Asia that has become supported by many prominent scholars is a genetic link between Yeniseian and Na-Dene (excluding Haida) in Northwest America (cf. Vajda 2008).

³ Central Siberia is a conventional term with no official geographic or administrative boundaries. In our definition, we follow Anderson (2004: 1). This definition encompasses the following present-day Russian administrative regions:

Gorno-Altai, Tuva, Xakasia, Krasnoyarsk Krai, and Tomsk Oblast, as well as eastern Khanty-Mansi Autonomous Okrug and western parts of Irkutsk Oblast.

- ⁴ The Samoyedic and Ob-Ugric languages are traditionally considered a part of the Uralic language family, while Tungusic and Turkic are argued to be a part of the very controversial Altaic family. Furthermore, they are sometimes united into the even more controversial ‘Uralic-Altaic’ genealogical unit (cf. Sinor 1988).
- ⁵ These amicable relations between Ket and Selkup peoples are best illustrated by the fact that the Ket ethnonym *laʔk* ‘Selkup’ originates from the word *ляза~ляқа* ‘friend’ in Selkup.
- ⁶ In fact, some speakers bilingual in Ket and Selkup admit that Ket is much more difficult (Olga Kazakevič, pc.).
- ⁷ The tiers provide the following information: 1) phonetic transcription; 2) phonological transcription with morpheme breaks; 3) glossing; 4) free English translation.
- ⁸ The Ket verb is glossed in accordance with the position model developed by Vajda (Nefedov and Vajda 2015: 35), also see Figure 2. The Yugh verb and the Kott verb below are analyzed according to the position model proposed by Werner (1997c: 106–107) and (1998: 127–129) respectively.
- ⁹ Note that the dative relational morpheme in this case behaves more like an enclitic, rather than a suffix as in example (9), which is important for argumentation in the following section.
- ¹⁰ It is worth to be mentioned that unlike case suffixes in the surrounding languages, these markers do not form a discrete inflectional paradigm, and therefore it is rather problematic to regard them as true inflections (cf. Vall and Kanakin 1985).
- ¹¹ It is impossible to prove whether or not the possessive prefixes in the extinct Yeniseian languages really exhibited a ‘ditropic’ behavior. Still, the fact that Kott had both possessive prefixes and genitive case suffixes, formally identical to each other, may speak in favor of their ditropic nature (cf. Werner 1997b: 67).
- ¹² In the present paper, we adopt the functional approach to subordination presented in Cristofaro (2003) which is based on semantic, pragmatic, and cognitive principles rather than on strictly morphosyntactic terms.
- ¹³ The number of polysynthetic languages mentioned in the literature as having overtly marked subordination is quite small. These include Chukotian languages, Eskimo, Dalabon, Rembarnga (Evans 2006: 57), Tlingit (Mithun 1984: 507).
- ¹⁴ There exist a couple of Ket texts that date back to the first quarter of the 20th century, but they seem to be recorded from the native speakers who were fluent in Russian.
- ¹⁵ Similar to Ket, all the available text materials in Yugh are recorded in the second half of the 20th century.
- ¹⁶ Interestingly, Mithun (1992: 43–44) argues that pragmatic principles of free word order in polysynthetic languages Cayuga, Ngandi and Coos are different from those operating in Czech, a Slavic language with free word order like Russian.
- ¹⁷ Indeed, Ket is one the languages with the lowest borrowing rate in the basic vocabulary according to the data of The World Loanword Database [available online at <http://wold.cild.org/vocabulary/18>, accessed on 2020-05-16].
- ¹⁸ A somewhat similar situation is observed by Evans (2006) in Dalabon and Rembarnga, Gunwinyguan languages spoken in Australia. Despite being polysynthetic languages, they exhibit a number of formally distinct subordinate constructions (including case-marked verb forms). As Evans (2006: 56) notes, this seems to be the result of regular contact with the Yolngu languages which are not polysynthetic and have case morphology and nonfinite constructions of various kinds.